Weatherly Index No. 310
Catalog 457010
September, 2005

Supersedes Catalog 457010
Dated September, 2002

SKF Seal Handbook

Includes stock listing for shaft sizes up to 180”

Featured products include: Speedi-Sleeve® Shaft Repair Kits, Large Diameter Seals, Metric Seals, V-Ring products, Heavy-Duty DF,® Hydraulic/Pneumatic, Scotseal®, and PTFE Shaft Seals

Introduction/Seals/Sleeves/Hydraulic/Pneumatic products

- How to use this catalog 1A
- The seal and its function 2A
- Material and compound selection guide 3A
- LongLife™ 5A
- Compound compatibility chart 6A
- Recommended operating conditions for small diameter seals 16A
- Recommended operating conditions for large diameter seals 18A
- Waveseal 20A
- Heavy duty Waveseal (HDW) 21A
- WasteWatcher 22A
- Part numbering system and introduction 23A
- Selecting replacement seals 24A
- Bore requirements 25A
- Shaft requirements 26A
- The seal — small and large diameter 28A
- Large diameter seals, HDL & HDS metal clad 29A
- Large diameter seals, metal clad and all-rubber 30A
- Large diameter seals all rubber — solid and split 32A
- V-ring seals 36A
- MVR axial shaft seals 37A
- PTFE seals 38A
- Defender bearing isolators 40A
- Axial clamp seals, selection and installation 41A
- Heavy duty-DF (HDDF) seals 42A
- Speedi-Sleeves, selection and installation 43A
- Wear sleeves, selection and installation 45A
- Troubleshooting 47A
- Installation tips, general 48A
- Installation tips, large diameter seals 49A
- Hydraulic/pneumatic products, general 51A
- Hydraulic/pneumatic products, installation 53A
- Hydraulic/pneumatic products, selection 55A
- Hydraulic/pneumatic sirvon rings 56A
- Scotseal® family 57A
- Abbreviations 58A

Section two: Complete size listings

- Complete size listing — Inches 1
- Complete size listing — Metric 127
- LDS section — HDL inch/metric 168
- V-ring seal — size listing 188
- Pressure seal — size listing 199
- Axial clamp seal — size listing 201
- Heavy Duty (HDDF) seal — size listing 204
- Axle flange gaskets & Felt washer size listing 206
- Type "J" seal — size listing 207
- Kit contents 208
- S-Series sleeves — numerical listing 210
- Speedi-Sleeve/grease seal kit — size listing 212
- Speedi-Sleeve size listing — Inches 213
- Speedi-Sleeve size listing — Metric 219
- Hydraulic/pneumatic — size listing 225

Section three: Complete stock number numerical index

- Numerical — complete index 232

Section four: Illustrations

- Illustrations, all types and styles 364
- RPM/FPM/MPM by shaft diameter 368
- Fractional/decimal/metric equivalents 369
- Glossary of seal terms 370
- General index 371
- Typical application profile 373

SKF is a QS-9000, TS16949, ISO 9001, AS-9000, and ISO 14000 registered company for the design and manufacture of seals.

How to use this catalog

This *Seal handbook* contains complete product data for the selection of SKF shaft seals, Speedi-Sleeves®, Wear Sleeves, Hydraulic/Pneumatic products, Defender Bearing Isolator, V-Rings and Heavy Duty DF® (HDDF) seals. Size listings for each style and type of seal or sleeve, material and compound selection guide, compound compatibility chart, and recommended operating conditions charts complement the product data. Installation instructions and troubleshooting guidelines are also provided.

Simply organized, the illustrative charts and detailed product data make the *Seal handbook* a valuable tool for industrial distributors, designers, engineers and anyone involved in the selection or specification of these products. SKF's team of engineers and product managers have thoroughly reviewed and updated all these listings.

Reference tables and complete size listings enable fast selection of the correct shaft seal. Concise descriptions and expanded technical data enable the user to find the correct product for their specific application.

The *Seal handbook* contains an introduction, product sections, complete size listings (inches and millimeters), numerical index and seal design illustrations. All numbers are listed two or more times – in product size sequence and in SKF stock number sequence.

Recommendations for styles, types, materials/compounds, as well as typical operating conditions appear in each basic seal or sleeve section. These will assist you in choosing the correct sealing device for your application.

The type and style illustrations (pg. 364) include all available designs as well as optional and obsolete designs for referral purposes. Every design is not available in every size.

These features make the *Seal handbook* your most valued tool in the selection, application, trouble detection and specification of SKF fluid sealing devices.

Numerical index: page 232

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
15881	1.575	2.126	.394	HMSA7	P
	W/ENCAPSULARED SPRING				
15882	1.575	2.953	.467	HMSA29	R
	W/CCW HELIX FROM AIR SIDE				
15883	1.575	2.953	.394	HMSA96	P
15884	1.575	2.087	.197	HMA76	R
15886	1.575	2.953	.472	HMSA92	P
15887	1.575	2.559	.708	HMSASPL	P
15888	1.575	2.205	.315	HMSA92	P

Size index: page 1

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.125 SHAFT				
	.100	**400030**	VR1	R
	SHAFT RANGE .110-.140			
.313	.063	451486	BUW	#
.313	.094	711800	BV	R
.313	.094	721523	BV	V
.313	.094	721578	BV	D
.156 SHAFT				
	.120	**400040**	VR1	R
	SHAFT RANGE .140 - .180			
	.120	**400044**	VR1	V
	SHAFT RANGE .140 - .180			

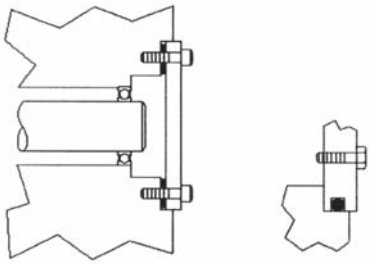
The seal and its function

Whenever a shaft rotates, it needs a bearing arrangement for smooth, effective operation. Wherever there's a bearing, you'll find a seal helping it to reach its maximum service life and reliability. In simplest terms a shaft seal is a barrier with four functions: 1) Retaining lubricants or liquids 2) Excluding contaminants 3) Separating fluids and 4) Confining pressure.

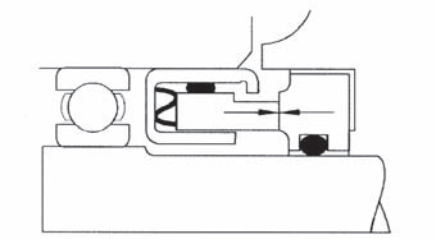
There are three basic types of seals:

Static seals. The function of a static seal is to create a barrier between non-moving surfaces. Typical examples would be a valve cover gasket or o-ring.

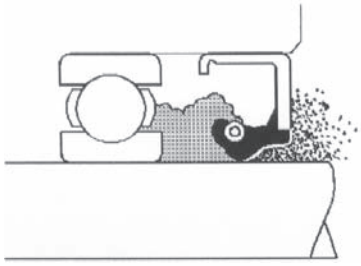
Axial mechanical seals. These are face type seals in which the sealing contact is between radially mounted components. One is usually stationary and seal contact pressure is applied by a spring mechanism.



Typical static seals - gasket and o-ring.



Axial mechanical - seals between arrows.



Dynamic seal on rotating shaft with bearing.

Dynamic "radial" seals. A dynamic radial seal creates a barrier between surfaces in relative motion. One is usually stationary while the other rotates. The cross-section shown below identifies the most common parts of a shaft seal. This is the primary type of seal described in the SKF Seal handbook.

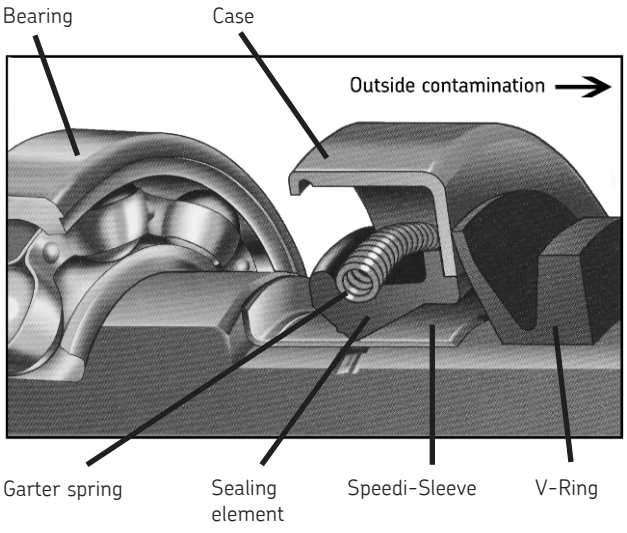
In many designs, the primary sealing lip is held in position by a garter spring. Generally, spring-loaded lips are for retaining oil and non-spring-loaded are used for low speed grease retention or excluding contaminants.

This seal has a simple L-shaped shell with the sealing material bonded to it. SKF is not only a pioneer in developing new bonding techniques, but they also have developed and used an environmentally "friendly" water-based cement wherever possible.

Some seals have an inner shell to aid in protecting the lip from damage or distortion during installation. The sealing lip should always point toward the material to be contained.

The garter spring keeps the lip in position. In large diameter seals (over 8" or 200 mm) the spring is held by a Spring-Lock. To completely enclose the spring, Spring-Kover should be used as protection against contamination or where the spring tends to pop-out during installation.

Many SKF seals have the patented Waveseal® lip design that pumps lubricant back to the oil cavity while holding out contaminants, regardless of the direction of shaft rotation. The smooth molded lip is formed in a wave-like pattern that describes a wider path on the shaft to dissipate heat and reduce wear.



Material and compound selection guide

SKF seals feature a variety of sealing materials. Each one has specific characteristics. A "lip code" designates materials in subsequent reference tables and listings.

Nitrile (Lip code: R)

Most commonly used sealing material. Nitrile is excellent with most mineral oils and greases. Variations are available for use with fuels, industrial fluids and highly compounded lubricants. Nitriles are recommended for operation at temperatures from -40° to 250°F (-40° to 121°C). Nitrile also works in dry running applications but only for intermittent periods.

Because of environmental considerations, SKF uses water carried adhesives whenever possible. Some water based fluids however, such as some cutting fluids, can destroy the nitrile/plain steel bond when operating temperatures exceed 150°F (66°C). The nitrile compound itself is not affected by the water.

Duralip® (Lip code: D)

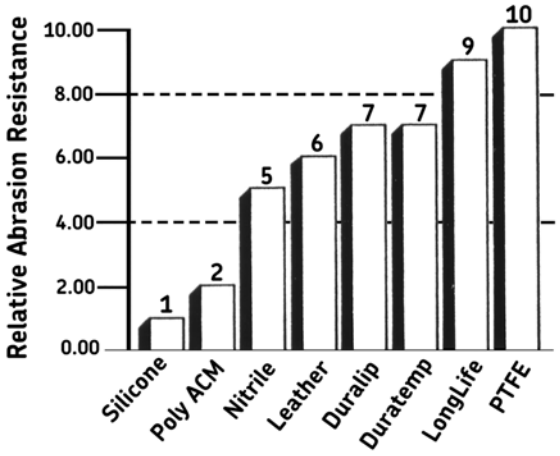
Offers superior resistance to abrasion. Duralip is SKF's special carboxylated nitrile compound developed for extreme abrasion resistance in applications where scale, sand, grit, dirt or other abrasive material is likely to collect at the point of shaft contact. Like nitrile, Duralip works in dry running applications but only for intermittent periods. Other characteristics of this special compound are similar to those of the standard nitrile.

Duratemp® (Lip code: H)

SKF's special high temperature compound based on hydrogenated nitrile (HNBR) offers improved tensile strength and resistance to heat, abrasion, hardening in hot oil, ozone and weathering effects. In some cases aerated oils can be a problem for HNBR. It is more widely used for demanding applications. Its temperature range is -40° to 300°F (-40 to 149°C).

Polyacrylate (Lip code: P)

For use with EP lubricants or higher operating temperatures. Polyacrylate elastomers have good compatibility with higher temperatures up to 300°F (149°C), and even to 350°F (177°C) with some fluids. They are well suited for use with extreme pressure (EP) lubricants and have higher resistance to oxidation and ozone. They should not be used with water or at temperatures below -40°F (-40°C). Polyacrylates are not recommended for dry running applications.



Silicone (Lip code: S)

For high/low temperature ranges and low-friction applications. Silicone seals can operate at temperatures ranging from -100° to 325°F (-73° to 163°C). The high lubricant absorbency of silicone minimizes friction and wear. However, it has poor compatibility with oxidized oils, some extreme pressure additives and abrasive contaminants. Silicone should not be used in dry running applicants.

LongLife™ (Fluoroelastomers) (Lip code: V)

Premium lip material for the widest temperature range and chemical resistance. LongLife will handle temperatures from -40° to 400°F (-40° to 204°C). They resist most special lubricants and chemicals that can destroy nitrile, polyacrylates or silicones. This premium material, with its superior resistance to abrasion and high temperatures, provides superior performance and wear. LongLife works in dry running applications but only for intermittent periods.

It must be noted that although Fluoropolymers such as FKM and PTFE are classed as resistant to high temperatures, they will thermally degrade on exposure to extreme temperatures with the evolution of hazardous fumes containing hydrofluoric acid (HF).
The threshold temperatures in question are:

- Fluoroelastomers (FKM) - 600°F/316°C
- Polytetrafluoroethylene (PTFE) - 700°F/371°C

In the unlikely event of such a high temperature incident, allow the components in question to cool, douse with limewater (Calcium hydroxide solution), handle with PVC gloves until neutral pH confirmed, then discard.

PTFE (Lip code: T)

PTFE offers wider media resistance in comparison to standard elastomers with a temperature range of -100° to 500°F (-73° to 260°C). With the addition of appropriate fillers, PTFE has excellent mechanical properties, low friction and wear resistance.

Ethylene-Propylene (Lip code: M)

Special compound for exposure to weather, water, caustics and steam. Offers exceptionally good weather aging and ozone resistance, suitable for extended outdoor weather exposure. Recommended for operation -40°F to 300°F (-40 to 149°C). Often used with phosphate ester type (ie fire resistant) lubricants and water based hydraulic fluids. Resists polar solvents such as MEK and acetone, also silicone oils and greases, dilute acids and alkalies, alcohols and brake fluid. Good compression set, cold flex, abrasion resistance and tensile strength properties. Must never be exposed to mineral oils, petroleum based agents or aromatic fuels.

Other sealing materials (Lip code: #)

These are generally non-standard compounds for specific applications. If the material you require is not listed, contact SKF for availability.

Note: Temperature ranges are based on sump temp. When approaching temperature extremes contact SKF for technical assistance.

Material and compound selection guide-(cont.)

Multi-lip codes

When a seal has sealing elements of different compounds, the first lip code identifies the primary lip and the second lip code identifies the auxiliary lip; i.e. "RL" is "nitrile and leather", "RD" is "nitrile and Duralip".

Case materials

Unless noted, the inner and outer case of seals listed in this catalog are formed of SAE 1006-1008 cold-rolled steel. They are oiled or specially treated for protection against corrosion during ordinary handling and storage.

Seal cases can be furnished in stainless steel (SAE 304) for corrosion resistance and extreme conditions. Contact SKF for price and availability.

Spring materials

Most springs supplied in large diameter HDS metal clad and HS all-rubber seals, split and solid, are SAE 302 stainless steel. Unless specified, the springs supplied with other seals in this catalog are hard-drawn steel wire. Springs in these other seals can be furnished in SAE 302 stainless steel if required. Contact SKF for price and availability.

Bore-Tite®

Bore-Tite: A water based acrylic polymer. This pliable sealant helps fill small imperfections in the bore. Bore-Tite can withstand heat up to 400°F (204°C). It is resistant to most oils, greases, gasoline, mild acids, mild alkalis, aliphitics, salts and glycols. Bore-Tite is not recommended with aromatics, ketones and alcohols. However splash contact that is wiped off will have little or no effect. The Bore-Tite coating is .001/.003" (.025/.076 mm) thick as measured on the seal diameter (specified seal OD does not include the thickness of the Bore-Tite).

Glossary of symbols for common industrial rubber compounds

Elastomers

Chemical description of the base polymer	Symbols in accordance with ASTM D 1418	ISO 1629	SKF Tradename (Lip code)
Acrylonitrile-butadiene-rubber	NBR	NBR	
Hydrogenated-acrylonitirle-butadiene-rubber	(NEM)	(HNBR)	Duratemp (H)
Chlorobutadiene-rubber	CR	CR	
Carboxylated nitrile-rubber	XNBR	XNBR	Duralip (D)
Acrylate-rubber	ACM	ACM	
Ethylene-acrylate-rubber	AEM	AEM	
Silicone-rubber			
Methyl-polysiloxane	MQ	MQ	
Vinyl-methyl-polysiloxane	VMQ	MVQ	
Phenyl-methyl-polysiloxane	PMQ	MPQ	
Fluorosilicone-rubber			
Fluoromethyl-polysiloxane	FVMQ	FVMQ	
Fluoro-rubber	FKM	FPM	LongLife (V)
Perfluoro-rubber	FFKM		
Polyurethane-rubber			
Polyester-urethane-rubber	AU	AU	
Ethylene-oxide - epichlorhydrin-rubber	ECO	ECO	
Epichlorhydrin-polymer	CO	CO	
Chlorosulphonated-polyethylene	CSM	CSM	
Natural-rubber	NR	NR	
Isoprene-rubber	IR	IR	
Polybutadiene-rubber	BR	BR	
Styrene-butadiene-rubber	SBR	SBR	
Ethylene-propylene-diene-rubber	EPDM	EPDM	EPDM (M)
Ethylene-propylene-copolymer	EPM	EPM	
Butyl-rubber	IIR	IIR	
Chlorobutyl-rubber	CIIR	CIIR	
Bromobutyl-rubber	BIIR	BIIR	

ASTM = American society for testing and materials
ISO = International organization for standardization

LongLife™ story

SKF uses the "tough" LongLife material for super performance

SKF LongLife seals resist degradation from hundreds of different fluids over broad temperature ranges. Proven effective, SKF LongLife seals can be used where temperatures or other environmental conditions are beyond nitrile, polyacrylate, and silicone capabilities. SKF offers these seals in many of the popular shaft sizes from .125" to over 62" and 5 mm to over 1260 mm. No other supplier has LongLife as a standard stocked line.

In many cases, it is impossible for the equipment designer to reduce the operating temperature of the application. The designer may find it necessary to select *premium* materials in order to *extend life*. It is necessary to state that the effective service life of a rubber component cannot be totally predicted. The service life of the rubber components can also depend on abrasive wear resistance, compression set, resistance to fluid swelling, flex cracking resistance, and many other factors.

Excellent fluid compatibility

One of the most effective fluoroelastomers against these types of stresses in these sealing environments is LongLife. LongLife seals have excellent resistance to oils, fuels, lubricants, most mineral acids, and hydraulic fluids. They can resist regular, and chlorinated, aliphatic or aromatic hydrocarbons (e.g. iso-octane, carbon tetrachloride, benzene, and chlorotoluene) that are used as solvents.

No other elastomer resists as many fluids as LongLife. However, LongLife is not recommended for service in low molecular weight esters and ethers, ketones, certain amines, hot anhydrous hydrofluorics or chlorosulfonic acids and alkyl phosphate esters. (See the *compatibility chart* for more details; page 6A.)

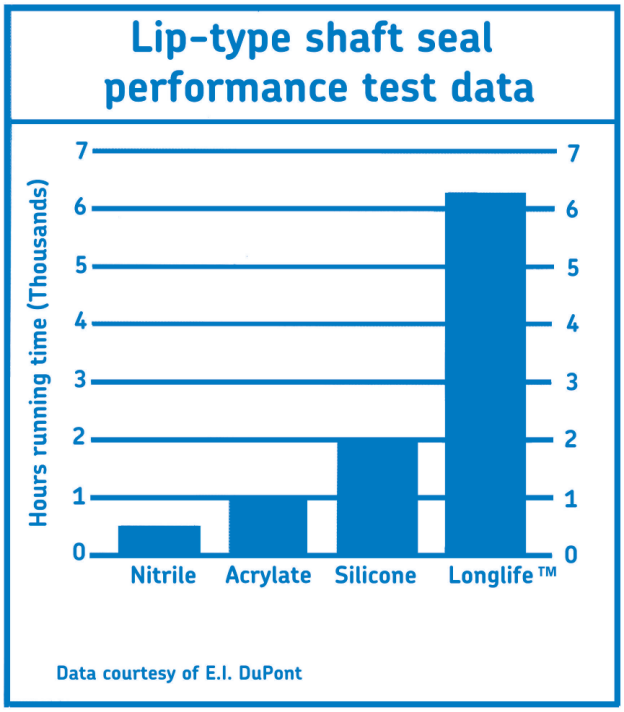
Superior temperature ranges

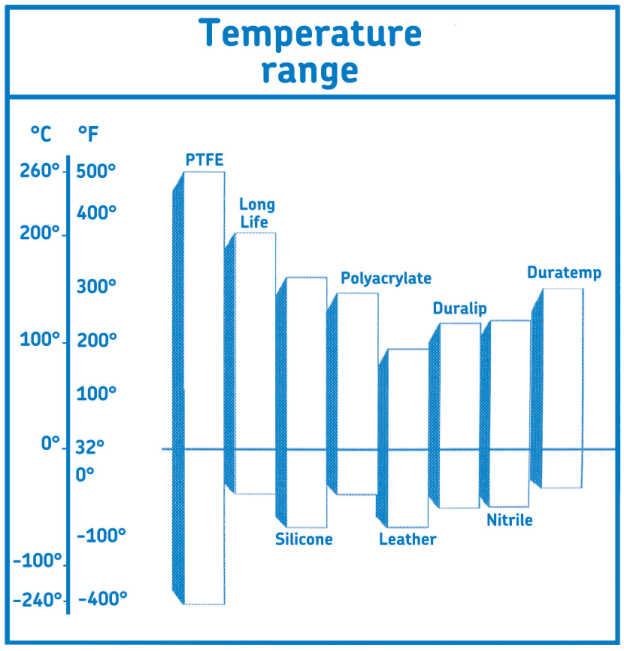
Actually, at low temperatures the seal lip will have to overcome eccentricity and shrinkage problems. At high temperatures the seal lip has to overcome pliability, hardness, and cracking or heat checking problems that cause shaft and seal damage.

The LongLife material has a temperature range of -40° to 204°C (-40° to 400°F). Under high temperature conditions, a LongLife seal may have a service life over 500% better than a nitrile seal.

Other special materials

The optimum solution for some applications will require other materials with special properties. These include PTFE with excellent chemical resistance, wear characteristics and temperature capabilities to 500°F (260°C). SKF's exclusive Duratemp hydrogenated nitrile compound can outperform standard nitriles in wear and heat resistance. Contact SKF for assistance to extend bearing and seal life in your demanding applications.





Compound compatibility chart

Compatibility ratings are general with respect to different polymers and are dependent on the specific compound, specific fluid and degrees of exposure of immersion. They apply only within the range of operating temperatures specified.

Lip materials	Nitrile (Code R) Duralip (Code D) Duratemp (Code H)	Polyacrylates (Code P)	Silicones (Code S)	LongLife (Code V)	Ethylene-Propylene (Code M)
Temperature	R/D(-40° to 250°F) (-54° to 121°C) H(-40° to 300°F) (-40° to 149°C)	(-40° to 300°F)	(-100° to 325°F)	(-40° to 400°F)	(-40° to 300°F) (-40° to 149°C)
Range	-40° to 149 °C	-40° to 149°C	-73° to 163°C	-40° to 204°C	
Mechanical properties					
Durometer	70/80	70/80	75/85	80/90	40/90
Compression set	Good	Fair	Good	Good	Good
Dry running	See page 3A	See page 3A	See page 3A	See page 3A	See page 3A
Swell	Low	Low	Medium	Low	Good*
Abrasion resistance	Good (R) Excellent (H) (D)	Fair	Poor	Excellent	Good

* Not for use with petroleum lubricants, fuels, diesters.

	Lip material					
	R/D	H	P	S	V	M
1-BUTENE, 2 ETHYL	1	1	-	4	1	4
1-CHLORO-1-NITRO ETHANE	4	4	4	4	4	4
51-F-23	1	1	1	3	1	4
ACETALDEHYDE	4	1	4	2	4	1
ACETAMIDE	1	1	4	2	2	1
ACETIC ACID GLACIAL	3	3	4	2	3	1
ACETIC ACID, 30%	2	2	4	1	2	1
ACETIC ACID, 5%	2	2	-	1	1	1
ACETIC ACID, HOT HIGH PRESSURE	4	4	-	4	4	1
ACETIC ANHYDRIDE	3	3	4	3	4	1
ACETONE	4	4	4	3	4	2
ACETOPHENONE	4	4	4	4	4	2
ACETYL ACETONE	4	4	-	4	4	2
ACETYL CHLORIDE	4	4	4	3	1	4
ACETYLENE	1	1	4	2	1	4
ACETYLENE TETRABROMIDE	4	4	-	-	1	1
ACRYLONITRILE	4	4	4	4	3	2
ADIPIC ACID	1	1	-	-	-	1
AERO LUBRIPLATE	1	1	-	2	1	4
AERO SAFE 2300	4	4	-	4	4	1
AERO SAFE 2300W	4	4	-	4	4	1
AERO SHELL 17 GREASE	1	1	-	2	1	4
AERO SHELL 750	2	2	-	4	1	4
AERO SHELL 7A GREASE	1	1	-	2	1	4
AERO SHELL IAC	1	1	-	2	1	4
AEROZENE 50 (50% HYDRAZINE, 50% UDMH)	4	4	-	4	4	3
AIR ABOVE 300 F	4	2	-	1	1	1
AIR BELOW 300 F	2	1	-	1	1	1
ALKAZENE (DIBROMOETHYLBENZENE)	4	4	4	4	2	3
ALUMINUM ACETATE (AQ)	1	1	4	4	4	1
ALUMINUM BROMIDE	1	1	-	1	1	1
ALUMINUM CHLORIDE (AQ)	1	1	1	2	1	1
ALUMINUM FLUORIDE (AQ)	1	1	-	2	1	1
ALUMINUM NITRATE (AQ)	1	1	-	2	1	1
ALUMINUM PHOSPHATE (AQ)	1	1	-	1	1	1
ALUMINUM SALTS	1	1	-	1	1	1
ALUMINUM SULFATE (AQ)	1	1	4	1	1	1
ALUM-NH3-CR-K (AQ)	1	1	4	1	4	1
AMBREX 33 MOBILE	1	1	-	4	1	4
AMMONIA AND LITHIUM IN SOLUTION	2	2	-	4	4	1

	Lip material					
	R/D	H	P	S	V	M
AMMONIA ANHYDROUS	2	2	4	3	4	1
AMMONIA GAS (COLD)	1	1	4	1	4	1
AMMONIA GAS (HOT)	4	2	4	1	4	1
AMMONIUM CARBONATE (AQ)	4	4	4	-	-	1
AMMONIUM CHLORIDE (AQ)	1	1	-	-	1	1
AMMONIUM HYDROXIDE (CONC.)	4	4	4	1	2	1
AMMONIUM NITRATE (AQ)	1	1	2	-	-	-
AMMONIUM NITRITE (AQ))	1	1	-	2	-	-
AMMONIUM PERSULPHATE (AQ)	4	4	4	-	-	1
AMMONIUM PERSULPHATE 10 %	4	4	-	-	-	1
AMMONIUM PHOSPHATE	1	1	-	1	-	-
AMMONIUM PHOSPHATE (AQ)	1	1	-	1	-	1
AMMONIUM PHOSPHATE DIBASIC	1	1	-	1	-	-
AMMONIUM PHOSPHATE TRIBASIC	1	1	-	1	-	-
AMMONIUM SALTS	1	1	-	1	4	1
AMMONIUM SULFATE (AQ)	1	1	4	-	4	1
AMMONIUM SULFIDE	1	1	-	-	4	1
AMOCO RYKON PREMIUM #2	1	1	1	1	1	4
AMOCO RYKOTEC EP	1	1	1	1	1	4
AMYL ACETATE (BANANA OIL)	4	4	4	4	4	2
AMYL ALCOHOL	2	2	4	4	2	1
AMYL BORATE	1	1	-	-	1	-
AMYL CHLORIDE	4	4	-	4	1	-
AMYL CHLORONAPHTHALENE	4	4	4	4	1	-
AMYL NAPHTHALENE	4	4	2	4	1	-
ANDEROL L-774 (MIL-L-7808D)	2	2	4	1	1	-
ANDEROL L-826 (DIESTER)	2	2	-	4	1	1
ANDEROL L-829 (DIESTER)	2	2	-	4	1	1
ANG (DIESTR BASE) (TG749)	2	2	-	2	1	1
ANG (GLYCERAL ESTER)	2	2	-	2	1	1
ANHYDROUS AMMONIA	2	2	-	2	4	1
ANHYDROUS HYDRAZINE	4	4	-	-	4	1
ANHYDROUS HYDROGEN FLUORIDE	4	4	-	-	4	1
ANILINE	4	4	4	4	3	2
ANILINE DYES	4	4	4	3	2	1
ANILINE HYDROCHLORIDE	2	1	4	4	2	1
ANILINE OILS	4	4	-	4	4	1
ANIMAL FATS (BUTTER)	1	1	1	2	1	4
AN-O-3 GRADE M	1	1	-	2	1	-
AN-O-366	1	1	-	4	1	-

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	R/D	Lip material H	P	S	V	M
AN-0-6	1	1	-	4	1	-
ANSUL ETHER (ANESTHETICS)	3	3	4	4	4	3
AN-VV-0-366B HYDR. FLUID	1	1	-	4	1	-
API GL-5	2	2	1	4	1	-
AQUA REGIA	4	4	4	4	2	1
ARGON	1	1	2	2	1	1
AROCLOR, 1248	3	3	4	2	1	2
AROCLOR, 1254	4	4	4	3	1	2
AROCLOR, 1260	1	1	4	2	1	2
AROMATIC FUEL 50%	2	2	-	4	1	4
ARSENIC ACID	1	1	3	1	1	1
ARSENIC TRICHLORIDE (AQ)	1	1	-	-	-	-
ASKREL	2	2	4	4	1	-
ASPHALT	2	2	2	4	1	4
ASTM #1 METHOD D-471	1	1	1	3	1	4
ASTM #2 METHOD D-471	1	1	1	3	1	4
ASTM #3 METHOD D-471	1	1	1	3	1	4
ASTM #4 METHOD D-471	2	1	-	4	1	4
ASTM REF FUEL A (MIL-S-3136B (TYPE 1)	1	1	2	4	1	4
ASTM REF FUEL B (MIL-S-3136B (TYPE 3)	1	1	-	4	1	4
ASTM REFERENCE FUEL C	2	2	4	4	1	4
ATF TYPE (MERCON)	1	1	1	2	1	4
ATF TYPE A	1	1	1	2	1	4
ATF TYPE F	1	1	1	2	1	4
ATF TYPE I	1	1	1	2	1	4
ATF TYPE II	1	1	1	2	1	4
ATL-857	2	2	-	4	1	4
ATLANTIC DOMINION	1	1	-	4	1	4
AUREX 903R MOBIL	1	1	-	4	1	4
AUTOMOTIVE BRAKE FLUID	3	2	-	1	4	1
BAKING SODA	1	1	4	1	1	1
BANANA OIL (AMYL ACETATE)	4	4	4	4	4	2
BARDOL	4	4	-	4	1	4
BARIUM CHLORIDE (AQ)	1	1	1	1	1	1
BARIUM HYDROXIDE (AQ)	1	1	4	1	1	1
BARIUM SULFATE (AQ)	1	1	4	1	1	1
BARIUM SULFIDE (AQ)	1	1	4	1	1	1
BEER	1	1	4	1	1	1
BEET SUGAR LIQUORS	1	1	4	1	1	1
BEL RAY SE 140	1	1	-	-	1	1
BEL RAY SE 290	2	2	-	-	4	-
BENZALDEHYDE	4	4	4	2	4	1
BENZENE (BENZOL)	4	4	4	4	2	4
BENZENE SULFONIC ACID	4	4	4	4	1	4
BENZINE (LIGROIN) (NITROBENZINE)	1	1	1	4	1	-
BENZINE (PET ETHER)	1	1	1	4	1	4
BENZOIC ACID	3	3	3	3	1	1
BENZOPHENONE	-	-	-	-	1	1
BENZOYL CHLORIDE	4	4	4	-	1	4
BENZYL ALCOHOL	4	4	4	2	1	1
BENZYL BENZOATE	4	4	4	-	1	1
BENZYL CHLORIDE	4	4	4	4	1	-
BIODIESEL	2	1	4	2	2	4
BIOFLO AW32/46	1	1	4	1	1	4
BIOFLO FG32	1	1	4	1	1	4
BIPHENYL (DIPHENYL) (PHENYLBENZENE)	4	4	4	4	1	4
BLACK POINT 77	1	1	-	4	1	1
BLACK SULPHATE LIQUORS	2	2	-	2	1	1
BLAST FURNACE GAS	4	4	4	1	1	-
BLEACH SOLUTIONS	4	2	4	2	1	1

	R/D	Lip material H	P	S	V	M
BORAX	2	2	2	2	1	1
BORDEAUX MIXTURE	2	2	4	2	1	1
BORIC ACID	1	1	4	1	1	1
BORON FLUIDS (HEF)	2	2	-	4	1	-
BP,ISO 220 MINERAL OIL, PM-220	1	1	1	2	1	4
BRAKE FLUID (NON-PETROLEUM)	4	2	-	4	4	1
BRAKE FLUID (WAGNER 21B)	3	2	-	3	4	1
BRAY GG-130	2	2	-	4	1	1
BRAYCO 719-R (VV-H-910)	4	4	-	2	4	1
BRAYCO 885 (MIL-L-6085A)	2	2	-	4	1	4
BRAYCO 910	2	2	-	4	4	1
BRET 710	2	2	-	4	4	1
BRINE	1	1	4	1	1	1
BROM - 113	4	4	-	4	-	-
BROM - 114	2	2	-	4	2	-
BROMINE	4	4	-	4	1	4
BROMINE TRIFLUORIDE	4	4	4	4	4	4
BROMINE WATER	4	4	4	4	1	4
BROMINE-ANHYDROUS	4	4	4	4	1	-
BROMINE-PENTAFLUORIDE	4	4	-	4	4	-
BROMOBENZENE	4	4	4	4	1	4
BROMOCHLORO TRIFLUROETHANE	4	4	-	4	1	-
BUNKER OIL	1	1	1	2	1	4
BUTADIENE	4	4	4	4	1	4
BUTANE	1	1	1	4	1	4
BUTANE 2, 2-DIMETHYL	1	1	-	4	1	4
BUTANE 2, 3-DIMETHYL	1	1	-	4	1	4
BUTANOL (BUTYL ALCOHOL)	1	1	-	2	1	4
BUTTER (ANIMAL FAT)	1	1	1	2	1	4
BUTYL ACETATE	4	4	4	4	4	1
BUTYL ACETYL RICINOLEATE	3	3	-	-	1	1
BUTYL ACRYLATE	4	4	4	-	4	-
BUTYL ALCOHOL	1	1	4	2	1	2
BUTYL AMINE	3	3	4	4	4	1
BUTYL BENZOATE	4	4	4	-	1	1
BUTYL BUTYRATE	4	4	-	-	1	1
BUTYL CARBITOL	4	4	4	4	1	1
BUTYL CELLOSOLVE	3	3	4	-	4	1
BUTYL CELLOSOLVE ADIPATE	4	4	-	2	2	1
BUTYL ETHER	4	4	-	4	4	3
BUTYL OLEATE	4	4	-	-	1	1
BUTYL STEARATE	2	2	-	-	1	-
BUTYLENE	2	2	4	4	1	4
BUTYRALDEHYDE	4	4	4	4	4	1
BUTYRIC ACID	4	4	-	-	2	1
CALCINE LIQUORS	1	1	-	-	1	1
CALCIUM ACETATE (AQ)	2	2	4	4	4	1
CALCIUM BISULFITE (AQ)	4	4	4	1	1	3
CALCIUM CARBONATE	1	1	-	1	1	1
CALCIUM CHLORIDE (AQ)	1	1	1	1	1	1
CALCIUM CYANIDE	1	1	-	1	-	1
CALCIUM HYDROXIDE (AQ)	1	1	4	1	1	1
CALCIUM HYPOCHLORIDE	4	4	-	-	1	1
CALCIUM HYPOCHLORITE (AQ)	2	2	4	2	1	1
CALCIUM NITRATE (AQ)	1	1	1	2	1	1
CALCIUM PHOSPHATE	1	1	-	1	1	1
CALCIUM SALTS	1	1	-	-	1	1
CALCIUM SULFIDE (AQ)	1	1	4	2	1	1
CALCIUM SULFITE	1	1	-	1	1	1
CALCIUM THIOSULPHATE	2	2	-	1	1	1

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
CALICHE LIQUORS	1	1	-	2	1	1
CANE SUGAR LIQUORS	1	1	4	1	1	1
CAPORIC ALDEHYDE	-	-	-	2	4	1
CARBAMATE	3	3	4	-	1	1
CARBITOL	2	2	4	2	2	2
CARBOLIC ACID (PHENOL)	4	4	4	4	1	3
CARBON BISULFIDE	3	2	3	4	1	4
CARBON DIOXIDE (WET OR DRY)	1	1	-	2	1	1
CARBON DISULFIDE	4	4	-	-	1	1
CARBON MONOXIDE	1	1	-	1	1	1
CARBON TETRACHLORIDE	3	3	4	4	1	4
CARBONIC ACID	2	2	-	1	1	1
CASTOR OIL	1	1	1	1	1	1
CASTROL SYN GL 75W90	1	1	2	2	1	4
CAUSTIC SODA	2	2	3	2	2	1
CELLOSOLVE	4	4	4	4	3	1
CELLOSOLVE ACETATE	4	4	4	4	4	1
CELLOSOLVE BUTYL	4	4	-	4	4	1
CELLUGUARD	1	1	-	1	1	1
CELLULUBE (FRYQUEL)	4	4	4	1	1	4
CELLULUBE 220 (SEE MIL-L-19457)	4	4	4	3	3	1
CELLULUBE 90,100,150,220,300,500	4	4	-	1	1	1
CELLUTHERM 2505A	2	2	-	4	1	4
CETANE (HEXADECANE)	1	1	-	4	1	4
CHEVRON 50	1	1	1	2	1	4
CHEVRON DELO GREASE	1	1	1	2	1	4
CHEVRON DELO SPECIAL	1	1	1	2	1	4
CHINA WOOD OIL (TUNG OIL)	1	1	-	4	1	4
CHLORACATIC ACID	4	4	-	-	4	1
CHLOREXTOL	2	2	-	4	1	4
CHLORINATED SALT BRINE	4	4	-	4	1	4
CHLORINATED SOLVENTS (WET OR DRY)	4	4	-	4	1	4
CHLORINE (DRY)	4	4	4	4	1	4
CHLORINE (WET)	4	4	4	4	1	2
CHLORINE DIOXIDE	4	4	4	-	1	2
CHLORINE TRIFLUORIDE	4	4	4	4	4	4
CHLOROACETIC ACID	4	4	4	-	4	1
CHLOROACETONE	4	4	4	4	4	1
CHLOROBENZENE	4	4	4	4	1	4
CHLOROBENZENE (MONO)	4	4	-	4	1	4
CHLOROBROMOMETHANE	4	4	4	4	1	2
CHLOROBUTADIENE	4	4	4	4	1	3
CHLORODANE	2	2	-	4	1	-
CHLORODODECANE	4	4	4	4	1	3
CHLOROFORM	4	4	4	4	1	4
CHLOROSULFONIC ACID	4	4	4	4	4	1
CHLOROTOLUENE	4	4	4	4	1	4
CHLOROX (SODIUM HYPOCHLORITE	2	2	4	2	1	2
CHROM ALUM	1	2	-	1	1	1
CHROME PLATING SOLUTIONS	4	4	4	2	1	4
CHROMIC ACID	4	4	4	3	1	1
CHROMIC OXIDE .88 WT. %	4	4	-	2	1	1
CIRCO LIGHT PROCESSING OIL	1	1	-	4	1	4
CITRIC ACID	1	1	-	1	1	1
CITY SERVICE #'S 65,120, &250	1	1	-	4	1	4
CITY SERVICE KOOL MOTOR-AP	1	1	-	4	1	4
CITY SERVICE PACEMAKER #2	1	1	-	4	1	4
CM COOLANT #5	1	1	-	-	-	-
COAL TAR (CREOSOTE)	1	1	1	4	1	4
COBALT CHLORIDE (2N)	1	1	-	1	1	1
COBALT CHLORIDE (AQ)	1	1	4	2	1	1
COCOANUT OIL	1	1	1	1	1	4
COD LIVER OIL	1	1	1	2	1	4
COFFEE (BASICALLY WATER)	1	1	-	-	1	1
COKE OVEN GAS	4	4	4	2	1	4
COLICHE LIQUORS	2	2	-	-	-	2
CONVELEX 10	4	4	-	4	-	-
COOLANOL (MONSANTO)	1	1	-	4	1	4
COOLANOL 45 (MONSANTO)	1	1	-	4	1	3
COPPER ACETATE (AQ)	2	2	4	4	4	1
COPPER CHLORIDE (AQ)	1	1	1	1	1	1
COPPER CYANIDE (AQ)	1	1	1	1	1	1
COPPER SALTS	1	1	-	1	1	1
COPPER SULFATE (AQ)	1	1	4	1	1	1
COPPER SULFATE 10%	1	1	-	1	1	1
COPPER SULFATE 50%	1	1	-	1	1	1
CORN OIL	1	1	1	1	1	4
COTTONSEED OIL	1	1	1	1	1	3
CREOSOTE (COAL TAR)	1	1	1	4	1	4
CREOSOTE (WOOD)	1	1	-	4	1	4
CRESOL	4	4	4	4	1	4
CRESYLIC ACID	4	4	4	4	1	2
CRUDE OIL	2	2	-	4	1	4
CUMENE	4	4	4	4	1	3
CUTTING OIL	1	1	-	4	1	4
CYCLOHEXANE	1	1	1	4	1	4
CYCLOHEXANOL	3	3	-	4	1	4
CYCLOHEXANONE	4	4	4	4	3	2
DC44M (DOW CORNING)	3	3	3	3	1	-
DC44M HI TEMP SILICONE GREASE	3	3	3	3	1	1
DECALIN	4	4	-	4	1	-
DECANE	1	1	1	2	1	4
DELCO BRAKE FLUID	4	2	-	4	4	1
DENATURED ALCOHOL	1	1	4	1	1	1
DETERGENT SOLUTIONS	1	1	4	1	1	1
DEVELOPING FLUIDS	1	1	-	1	1	1
DEXRON	1	1	1	4	1	4
DIACETONE	4	4	4	4	4	1
DIACETONE ALCOHOL	4	4	4	2	4	1
DIAZION	4	4	-	4	2	4
DIBENZYL ETHER	4	4	-	-	4	1
DIBENZYL SEBECATE	4	4	4	3	2	1
DIBROMOETHYLBENZENE (ALKAZENE)	4	4	4	4	2	4
DIBUTYL AMINE	4	4	4	3	4	1
DIBUTYL ETHER	4	4	3	4	3	4
DIBUTYL PHTHALATE	4	4	4	2	3	1
DIBUTYL SEBECATE	4	4	4	2	2	1
DICHLORO-BUTANE	2	2	-	4	1	4
DICHLORO-ISOPROPYL ETHER	4	4	3	4	3	3
DICYCLOHEXYLAMINE	3	3	4	-	4	4
DIESEL FUEL	1	1	1	4	1	4
DI-ESTER LUBRICANT (MIL-L-7808)	2	2	-	4	1	4
DI-ESTER SYNETHIC LUBRICANT	2	2	-	4	1	4
DIETHYL BENZENE	4	4	-	4	1	4
DIETHYL ETHER	4	4	3	4	4	4
DIETHYL SEBECATE	2	2	4	2	2	1
DIETHYLAMINE	2	2	4	2	4	1
DIETHYLENE GLYCOL	1	1	2	2	1	1
DIFLUORODIBROMOMETHANE	4	4	-	4	-	2
DIISOBUTYLENE	2	2	4	4	1	4

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
DIISOOCTYL SEBACATE	4	2	-	4	2	1
DIISOPROPYL BENZENE	4	4	-	-	1	4
DIISOPROPYL KETONE	4	4	4	4	4	1
DIISOPROPYLIDENE ACETONE	4	4	4	4	4	1
DIMETHYL ANILINE (XYLIDINE)	3	3	4	4	4	1
DIMETHYL DISULFITE (DMS)	4	4	4	4	4	-
DIMETHYL ETHER (METHYL ETHER)	2	2	4	4	4	3
DIMETHYL ETHER(MONOMETHYL ETHER)	1	1	4	1	1	-
DIMETHYL FORMAMIDE	2	2	4	2	4	
DIMETHYL PHTHALATE	4	4	4	-	2	1
DINITROTOLUENE	4	4	4	4	4	4
DINITROTOLUENE40/60	4	4	4	4	2	4
DIOCTYL PHTHALATE	3	3	4	3	2	1
DIOCTYL SEBECATE	4	4	4	3	2	1
DIOXANE	4	4	4	4	4	1
DIOXOLANE	4	4	4	4	4	1
DIPENTENE	2	2	4	4	1	4
DIPHENYL (BIPHENYL) (PHENYBENZENE)	4	4	4	4	1	4
DIPHENYL OXIDES	4	4	4	3	1	4
DMS (DIMETHYL DISULFITE)	4	4	4	4	4	-
DOW CHEMICAL 50-4	3	3	-	-	4	1
DOW CHEMICAL ET378	4	4	-	4	-	-
DOW CHEMICAL ET588	4	4	-	-	4	1
DOW CORNING -11	1	1	-	4	1	1
DOW CORNING -1208	1	1	-	4	1	1
DOW CORNING -200	1	1	-	4	1	1
DOW CORNING -220	1	1	-	4	1	1
DOW CORNING -3	1	1	-	4	1	1
DOW CORNING -33	1	1	-	4	1	1
DOW CORNING -4	1	1	-	4	1	1
DOW CORNING -4050	1	1	-	4	1	1
DOW CORNING -44	1	1	-	4	1	1
DOW CORNING -5	1	1	-	4	1	-
DOW CORNING -510	1	1	-	4	1	1
DOW CORNING -55	1	1	-	4	1	-
DOW CORNING -550	1	1	-	4	1	1
DOW CORNING -6620	1	1	-	4	1	1
DOW CORNING -704	2	2	-	4	1	1
DOW CORNING -705	2	2	-	-	1	1
DOW CORNING -710	1	1	-	4	1	1
DOW CORNING -F60	1	1	-	4	1	1
DOW CORNING -F61	1	1	-	2	1	1
DOW CORNING -XF61	1	1	-	4	1	-
DOW GUARD	1	1	-	1	1	1
DOWTHERM 209, 50% SOLUTION	4	2	-	4	4	1
DOWTHERM A OR E	4	4	-	4	1	4
DOWTHERM OIL	4	4	4	3	1	4
DRINKING WATER (SEE NOTE RE. WATER)	1	1	-	1	1	1
DRY CLEANING FLUIDS	3	3	4	4	1	4
ELF TRANSGEAR 75W85	2	1	1	4	1	4
EMERY EMGARD 75W85	2	1	1	4	1	4
ELCO 28-EP LUBRICANT	1	1	-	4	1	4
ENGINE OIL (DIESTER MOTOR OIL)	3	2	4	4	2	4
ENGINE OIL (HYDROCARBON	2	2	1	1	1	4
EP LUBES	1	1	1	1	1	4
EPICHLOROHYDRIN	2	1	1	4	1	4
EPOXY RESINS	4	4	4	4	4	1
ESAM-6 FLUID	-	-	-	-	4	1
ESSO FUEL 208	-	-	-	-	4	1
ESSO GOLDEN GASOLINE	1	1	-	4	1	4
ESSO GX 80W90 (GL-5)	2	2	-	4	1	4
ESSO MOTOR OIL	2	1	1	4	1	4
ESSO TRANSMISSION FLUID (TYPE A)	1	1	-	4	1	4
ESSO WS3812 (MIL-L-7808)	1	1	-	4	1	4
ESSO XP90 EP LUBRICANT	1	1	-	4	1	4
ESSTIC 42, 43	1	1	-	4	1	4
ESTERS	1	1	-	4	1	1
ETHANE	2	2	-	4	1	4
ETHANOL (ETHYL ALCOHOL)	1	1	-	4	1	1
ETHANOLAMINE	2	2	4	1	3	1
ETHYL ACETATE	4	4	4	2	4	1
ETHYL ACETATE-ORGANIC ESTER	4	4	4	2	4	1
ETHYL ACETOACETATE	4	4	-	2	4	1
ETHYL ACRYLATE	4	4	4	2	4	1
ETHYL ACRYLIC ACID	4	4	4	2	4	1
ETHYL ALCOHOL (ETHANOL)	2	2	4	4	3	1
ETHYL BENZENE	1	1	4	1	1	4
ETHYL BENZOATE	4	4	4	4	1	1
ETHYL BROMIDE	4	4	4	4	1	4
ETHYL CELLOSOLVE	2	2	-	4	1	1
ETHYL CELLULOSE	2	2	4	4	4	3
ETHYL CHLORIDE	2	2	4	3	2	1
ETHYL CHLOROCARBONATE	4	4	4	4	1	4
ETHYL CHLOROFORMATE	4	4	4	4	1	4
ETHYL CYCLOPENTANE	1	1	4	4	1	4
ETHYL ETHER	2	2	-	4	1	3
ETHYL FORMATE	3	3	4	4	2	2
ETHYL HEXANOL	2	2	-	-	1	2
ETHYL MERCAPTAN	4	2	-	2	2	1
ETHYL OXALATE	4	4	-	3	2	2
ETHYL PENTACHLOROBENZENE	4	4	4	4	1	4
ETHYL SILICATE	1	1	4	4	1	1
ETHYLENE	1	1	-	-	1	4
ETHYLENE CHLORIDE	4	4	-	-	1	3
ETHYLENE CHLOROHYDRIN	4	4	4	4	2	2
ETHYLENE DIAMINE	3	3	4	3	4	1
ETHYLENE DIBROMIDE	4	4	4	1	1	2
ETHYLENE DICHLORIDE	4	4	-	4	1	3
ETHYLENE GLYCOL	2	1	4	4	1	1
ETHYLENE OXIDE	4	4	3	1	1	2
ETHYLENE TRICHLORIDE	4	4	4	4	1	3
ETHYLMORPHOLENE STANNUS	4	4	4	4	1	-
FATTY ACIDS	1	1	-	-	2	3
FC-43 HEPTACOSOFLUOROTRI-	2	2	-	3	1	1
FC75 FLOUROCARBON	1	1	-	1	1	1
FERRIC CHLORIDE (AQ)	1	1	-	1	2	1
FERRIC NITRATE (AQ)	1	1	1	2	1	1
FERRIC SULFATE (AQ)	1	1	1	3	1	1
FISH OIL	1	1	1	2	1	4
FLUORINE (LIQUID)	4	4	-	-	2	3
FLUOROBENZENE	4	4	4	4	2	4
FLUOROBORIC ACID	4	4	4	4	1	1
FLUOROLUBE	1	1	4	1	2	1
FORMALDEHYDE (RT)	1	1	-	1	2	1
FORMIC ACID	3	3	4	2	1	1
FREON 11	2	1	-	2	3	4
FREON 112	2	1	-	4	1	4
FREON 113	1	1	-	4	1	4
FREON 114	1	1	-	4	2	4
FREON 114B2	1	1	-	4	2	4

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
FREON 115	2	1	-	4	2	1
FREON 12	1	1	-	-	2	3
FREON 12 AND ASTM #2 OIL (50/50)	1	1	1	4	2	4
FREON 12 AND SUNISO 4G (50/50)	1	1	-	4	1	4
FREON 13	1	1	-	4	1	1
FREON 134A	1	1	-	4	1	-
FREON 13B1	1	1	4	4	2	1
FREON 14	1	1	-	4	1	1
FREON 142B	1	1	-	4	1	1
FREON 152A	1	1	-	-	4	1
FREON 21	4	4	-	-	4	4
FREON 218	1	1	-	4	1	1
FREON 22	4	4	-	-	1	2
FREON 22 AND ASTM #2 OIL (50/50)	4	4	4	4	1	4
FREON 31	4	4	-	4	2	1
FREON 32	4	4	-	-	4	1
FREON 502	1	1	-	-	2	1
FREON BF	2	1	-	-	2	4
FREON C316	1	1	-	4	1	2
FREON C318	1	1	-	-	1	1
FREON MF	1	1	-	-	2	4
FREON PCA	1	1	-	4	2	1
FREON TA	1	1	-	1	2	1
FREON TC	1	1	-	3	3	2
FREON TF	1	1	-	4	1	4
FREON TMC	2	1	-	4	2	2
FREON T-P35	1	1	-	2	1	1
FREON T-WD602	2	2	-	1	1	2
FUEL OIL	2	2	-	4	1	4
FUEL OIL, #6	1	1	1	4	1	4
FUEL OIL, ACIDIC	2	2	-	4	1	4
FUMARIC ACID	1	1	-	4	1	2
FUMING SULPHURIC ACID	4	4	4	4	1	4
FURAN, FURFURAN	4	4	-	4	2	3
FURARYL ALCOHOL	4	4	4	-	-	1
FURFURAL	4	4	-	4	4	1
FURFURALDEHYDE	4	4	4	4	4	1
FYRQUEL (CELLULUBE)	4	4	4	1	1	4
FYRQUEL 90,100,150,220,300,500	4	4	4	1	1	2
FYRQUEL A60	4	4	-	1	1	4
GALLIC ACID	3	2	-	-	1	2
GASAHOL (10% ETHANOL	2	2	4	-	1	4
GASOLINE (LEAD AND NO-LEAD)	2	2	4	4	1	4
GEAR OIL	2	1	2	4	1	4
GELATIN	1	1	4	1	1	1
GIRLING BRAKE FLUID	2	1	4	1	1	1
GLACIAL ACETIC ACID	4	3	-	4	4	1
GLAUBER'S SALT (AQ)	2	1	-	2	2	1
GLUCOSE	1	1	4	2	1	1
GLUE	1	1	2	1	1	1
GLYCEROL TRIOLEATE	1	1	4	1	1	2
GLYCEROL/GLYCERIN	1	1	-	1	1	1
GLYCOL	1	1	-	1	1	1
GLYCOL BASE	1	1	3	1	1	1
GREASE, ESTER BASE	1	1	3	1	1	1
GREASE, PAO BASE	2	2	4	3	1	2
GREASE, PETROLEUM BASE	1	1	1	2	1	4
GREEN SULFATE LIQUOR	1	1	1	2	1	4
GULF ENDURANCE OILS	1	1	2	1	1	1
GULF FR FLUIDS (EMULSION)	2	1	2	1	1	4

	Lip material					
	R/D	H	P	S	V	M
GULF FRG FLUIDS	1	1	2	4	1	4
GULF FRP FLUIDS	1	1	4	1	1	4
GULF HARMONY OILS	1	1	4	1	1	4
GULF HIGH TEMPERATURE GREASE	1	1	1	4	1	4
GULF LEGION OILS	1	1	1	4	1	4
GULF PARAMOUNT OILS	1	1	1	4	1	4
GULF SECURITY OILS	1	1	1	4	1	4
GULFCROWN GREASE	1	1	1	4	1	4
HALOTHANE	1	1	1	4	1	4
HALOWAX OIL	4	4	4	4	1	4
HANNIFIN LUBE A	4	4	4	4	1	4
HEAVY WATER (DUTERIUM)	1	1	1	3	1	4
HEF (HIGH ENERGY FUEL) 2 & 3	1	1	4	2	-	1
HELIUM	2	2	4	1	1	4
HEXANE	1	1	-	4	1	2
HEXYL ALCOHOL	1	1	1	4	1	4
HIGH VISCOSITY LUBRICANT, H2	2	2	4	2	1	1
HIGH VISCOSITY LUBRICANT, U4	1	1	4	1	1	2
HILO MS #1	1	1	4	1	1	2
HOUGHTO-SAFE 1010,	4	4	4	2	4	1
HOUGHTO-SAFE 1055,	4	4	4	4	2	1
HOUGHTO-SAFE 1120,	4	4	4	4	2	1
HOUGHTO-SAFE 271 H20 AND	4	4	4	4	1	1
HOUGHTO-SAFE 5040,WATER/OIL	2	1	4	2	1	1
HOUGHTO-SAFE 620 WATER/GLYCOL	1	1	4	2	2	4
HYDRAULIC OIL (PETROLEUM)	1	1	4	2	1	1
HYDRAZINE	1	1	-	2	2	4
HYDROBROMIC ACID	2	2	-	3	1	1
HYDROCARBONS (SATURATED)	3	3	4	3	2	1
HYDROCHLORIC ACID (COLD) 37%	1	1	2	4	1	4
HYDROCHLORIC ACID (HOT) 37%	2	2	4	4	1	1
HYDROCHLORIC ACID 3 MOLAR	3	3	4	3	1	1
HYDROCYANIC ACID	4	4	4	4	2	1
HYDRO-DRIV, MIH-10	1	1	1	2	1	4
HYDRO-DRIV, MIH-50 (PETROLEUM BASE)	1	1	1	2	1	4
HYDROFLUORIC ACID - ANHYDROUS	3	3	4	2	1	2
HYDROFLUORIC ACID (CONC.) COLD	3	3	4	2	1	1
HYDROFLUORIC ACID (CONC.) HOT	4	4	4	4	3	2
HYDROFLUOSILICIC	2	2	4	4	1	1
HYDROGEN GAS	1	1	2	3	2	2
HYDROGEN PEROXIDE (90%)	3	2	4	4	1	3
HYDROGEN SULFIDE (WET) COLD	2	2	4	4	1	2
HYDROGEN SULFIDE (WET) HOT	4	4	4	4	2	2
HYDROLUBE-WATER/ETHYLENE	1	1	4	2	2	1
HYDROQUINONE	4	4	4	3	1	2
HYDYNE	2	2	4	2	1	1
HYJET	3	3	4	-	3	1
HYJET III	3	3	-	4	4	1
HYJET S	4	4	4		4	1
HYJET W	4	4	4	-	4	1
HYPOCHLOROUS ACID	4	4	4	4	2	1
INDUSTRON FF44	1	1	1	4	1	4
INDUSTRON FF48	1	1	1	4	1	4
INDUSTRON FF53	1	1	1	4	1	4
INDUSTRON FF80	1	1	1	4	1	4
IODINE	2	1	-	3	1	2
IODINE PENTAFLUORIDE	4	4	-	4	4	4
I-PROPYL ACETATE	4	4	4	4	4	1
IRM 903 OIL	1	1	2	3	1	4
ISOBUTYL ALCOHOL	4	4	4	1	4	1

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
ISO-BUTYL N-BUTYRATE	4	4	4	4	1	1
ISODODECANE	2	2	4	4	1	4
ISOOCTANE	1	1	1	4	1	4
ISOPHORONE	4	4	4	4	4	1
ISOPROPANOL	2	1	4	1	1	1
ISOPROPYL ACETATE	4	4	4	4	4	1
ISOPROPYL ALCOHOL	2	1	4	1	1	1
ISOPROPYL CHLORIDE	4	4	4	4	1	4
ISOPROPYL ETHER	2	2	3	4	4	4
JP3, JP4, JP5 (SEE MIL-J-5624G)	2	2	4	4	1	4
JP6 (SEE MIL-F-25656B)	2	2	3	4	1	4
JPX (SEE MIL-F-25604)	1	1	2	4	4	4
KEL-F LIQUIDS	1	1	-	4	2	1
KEROSENE	1	1	2	4	1	4
KEYSTONE #87 HX-GREASE	1	1	-	1	2	-
KEYSTONE (KSL) DIESTER LUBE	1	1	-	4	1	4
KRYTOX, LVP (DUPONT)	1	1	1	1	1	1
LACQUER SOLVENTS	4	4	4	4	4	4
LACQUERS	4	4	4	4	3	4
LACTAMS-AMINO ACIDS	4	4	4	4	4	2
LACTIC ACID (COLD)	2	2	4	1	2	1
LACTIC ACID (HOT)	3	3	4	2	2	2
LARD	1	1	4	1	1	2
LAVENDER OIL	2	2	3	4	1	4
LEAD ACETATE (AQ)	1	1	-	4	1	1
LEAD NITRATE (AQ)	1	1	-	4	1	1
LEAD SULFAMATE (AQ)	2	2	4	2	1	1
LEGROIN (BENZINE)	1	1	-	2	1	4
LEGROIN (NITROBENZINE)	2	2	4	3	1	4
LEGROIN (PET ETHER)	1	1	3	4	1	4
LEHIGH X1169	1	1	1	4	1	4
LEHIGH X1170	1	1	1	4	1	4
LEMON OIL	2	2	4	4	1	3
LIGHT GREASE, HYDROCARBON BASE	1	1	1	4	1	4
LIME BLEACH	1	1	-	4	1	1
LIME SULFUR	1	1	-	2	1	2
LIME WATER (CALCIUM HYDROXIDE-AQ)	1	1	4	2	1	1
LINDOL (HYDRAULIC FLUID)	4	4	4	3	2	1
LINOLEIC ACID	2	2	4	1	2	4
LINSEED OIL	1	1	4	2	1	3
LIQUEFIED PETROLEUM GAS	1	1	3	4	1	4
LIQUID OXYGEN	4	3	3	2	2	3
LUBRICATING OILS (DI-ESTER)	2	2	3	-	1	4
LUBRICATING OILS (PETROLEUM)	1	1	1	2	1	4
LYE	2	2	3	1	1	1
MAGNESIUM CHLORIDE (AQ)	1	1	-	1	1	1
MAGNESIUM HYDROXIDE (AQ)	1	1	3	2	1	1
MAGNESIUM SALTS	1	1	2	1	1	1
MAGNESIUM SULFATE (AQ)	1	1	4	2	1	1
MAGNESIUM SULFITE	1	1	4	1	1	1
MALATHION	2	2	-	4	1	4
MALEIC ACID	3	3	4	4	1	1
MALEIC ANHYDRIDE	4	4	4	-	2	4
MALIC ACID	2	2	4	2	1	4
MCS 312	4	4	4	2	1	4
MCS 352,463	4	4	4	3	4	1
MEK (METHYL ETHYL KETONE)	4	4	4	4	3	1
MERCURY	1	1	-	2	1	1
MERCURY CHLORIDE (AQ)	2	2	4	1	2	2
MERCURY VAPORS	1	1	-	-	1	1

	Lip material					
	R/D	H	P	S	V	M
MESITYL OXIDE	4	4	-	4	4	1
METHANE	1	1	4	-	1	4
METHANE, SULFURATED	4	2	4	4	1	4
METHANOL (METHYL ALCOHOL)	1	1	4	1	3	1
METHYL ACETATE	4	4	4	4	4	1
METHYL ACETOACETATE	4	4	4	1	4	2
METHYL ACETONE	4	4	4	4	4	1
METHYL ACRYLATE	4	4	-	4	4	1
METHYL BENZOATE	4	4	4	4	1	4
METHYL BROMIDE	3	2	3	-	1	4
METHYL BUTYL KETONE	4	4	4	4	4	1
METHYL CARBONATE	4	4	4	-	1	4
METHYL CELLOSOLVE	3	3	4	4	4	1
METHYL CELLULOSE	2	2	4	2	4	2
METHYL CHLORIDE	4	4	4	4	1	4
METHYL CHLOROFORMATE	4	4	4	4	1	4
METHYL CYCLOPENTANE	3	3	4	4	1	4
METHYL D-BROMIDE	4	4	4	4	1	4
METHYL ETHER	2	2	4	2	2	2
METHYL ETHYL KETONE (MEK)	4	4	4	4	4	1
METHYL ETHYL KETONE PEROXIDE	4	4	4	2	4	4
METHYL FORMATE	4	4	4	2	4	1
METHYL ISOBUTYL KETONE	4	4	4	3	4	2
METHYL METHACRYLATE	4	4	4	2	4	4
METHYL OLEATE	4	4	4	-	1	2
METHYL PROPYL SALICYLATE	4	4	4	4	2	2
METHYLACRYLIC ACID	4	4	-	-	2	2
METHYLENE CHLORIDE	4	4	-	4	2	2
METHYLENE DICHLORIDE	4	4	4	4	2	4
MILK	1	1	-	4	1	2
MIL-A-6091	2	2	2	1	1	1
MIL-A-8243 B	1	1	3	2	2	1
MIL-C-4339 C	1	1	3	3	1	4
MIL-C-5545 A	2	2	2	4	1	4
MIL-C-6529 C	2	2	2	4	1	4
MIL-C-8188 C	2	2	3	4	2	4
MIL-E-9500	1	1	4	1	1	1
MIL-F-16884	1	1	1	4	1	4
MIL-F-16929 A	1	1	3	3	1	4
MIL-F-17111	1	1	1	4	1	4
MIL-F-19605	1	1	-	4	1	4
MIL-F-25172	1	1	-	4	1	4
MIL-F-25524 A	1	1	-	4	1	4
MIL-F-25558 B (RJ-1)	1	1	1	4	1	4
MIL-F-25576 C (RP-1)	1	1	1	4	1	4
MIL-F-25656 B	1	1	2	4	1	4
MIL-F-5566	2	2	4	2	1	1
MIL-F-5602	1	1	1	3	1	4
MIL-F-7024 A	1	1	3	4	1	4
MIL-G-10924	1	1	1	3	1	4
MIL-G-10924 B	1	1	2	4	1	4
MIL-G-15793	1	1	2	4	1	4
MIL-G-18709 A	1	1	1	3	1	4
MIL-G-2108	1	1	1	3	1	4
MIL-G-23827 A	1	1	3	3	1	4
MIL-G-25013 D	1	1	2	4	1	4
MIL-G-25537 A	1	1	2	4	1	4
MIL-G-25760 A	2	2	2	4	1	4
MIL-G-27343	1	1	-	4	1	1
MIL-G-27617	4	4	-	4	1	1

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
MIL-G-3278	2	1	1	4	1	4
MIL-G-5572	1	1	1	4	1	4
MIL-G-4343 B	2	1	1	3	1	2
MIL-G-7118 A	2	2	3	4	1	4
MIL-G-7187	1	1	1	4	1	4
MIL-G-7421 A	2	2	4	4	1	1
MIL-G-7711 A	1	1	2	2	1	4
MIL-G-81322	1	1	-	3	1	4
MIL-H-13862	1	1	1	3	1	4
MIL-H-13866 A	2	1	1	3	-	4
MIL-H-13910 B	1	1	3	4	1	1
MIL-H-13919 A	1	1	1	3	1	4
MIL-H-19457 B	4	4	4	4	3	1
MIL-H-22072	1	1	3	2	2	1
MIL-H-22251	2	2	-	4	1	1
MIL-H-25598	1	1	1	3	1	4
MIL-H-27601 A	2	2	2	4	1	4
MIL-H-46001 A	1	1	1	3	1	4
MIL-H-46004	1	1	1	3	1	4
MIL-H-5606 B RED OIL	1	1	2	4	1	3
MIL-H-6083 C	1	1	1	4	1	4
MIL-H-7083 A	1	1	3	2	2	1
MIL-H-7644	2	2	2	4	1	1
MIL-H-81019 B	1	1	3	3	1	1
MIL-H-83282	1	1	2	4	1	4
MIL-H-8446 B (MLO-8515)	2	2	-	4	1	4
MIL-I-8660B	1	1	1	4	1	1
MIL-I-27686 D	1	1	3	2	2	1
MIL-J-5161 F	1	1	2	4	1	4
MIL-J-5624 G JP-3, JP-4, JP-5	1	1	3	4	1	4
MIL-L-10295 A	1	1	1	3	1	4
MIL-L-10324 A	1	1	1	4	1	4
MIL-L-11734 B	1	1	3	1	1	4
MIL-L-14107 B	3	2	-	4	1	4
MIL-L-15016	1	1	1	4	1	4
MIL-L-15017	1	1	1	4	1	4
MIL-L-15018 B	1	1	1	3	1	4
MIL-L-15019 C	1	1	1	3	1	4
MIL-L-15719 A	2	2	2	4	1	2
MIL-L-16958 A	1	1	1	3	1	4
MIL-L-17331 D	1	1	1	4	1	4
MIL-L-17353 A	1	1	-	3	1	4
MIL-L-17672 B	1	1	1	3	1	4
MIL-L-18486 A	1	1	1	3	1	4
MIL-L-19457	1	1	1	3	1	4
MIL-L-19701	1	1	3	4	1	4
MIL-L-2104 B	1	1	1	4	1	4
MIL-L-2105 B	1	1	1	3	1	4
MIL-L-2105 C (API GL-5)	2	2	-	4	1	-
MIL-L-21260	1	1	1	4	1	4
MIL-L-22396	1	1	1	3	1	4
MIL-L-23699 A	2	2	3	4	1	4
MIL-L-25336 B	1	1	3	3	1	4
MIL-L-25681 C	2	2	2	4	1	1
MIL-L-25968	1	1	3	3	1	4
MIL-L-26087 A	1	1	1	3	1	4
MIL-L-27694 A	1	1	-	4	1	1
MIL-L-3150 A	1	1	2	4	1	4
MIL-L-3503	1	1	2	4	1	4
MIL-L-3545 B	1	1	1	4	1	4

	Lip material					
	R/D	H	P	S	V	M
MIL-L-46000 A	1	1	3	3	1	4
MIL-L-46002	1	1	-	3	1	4
MIL-L-5020 A	1	1	2	4	1	4
MIL-L-6082 A	1	1	2	4	1	4
MIL-L-6082 C	1	1	1	2	1	4
MIL-L-6085 A	2	2	3	4	1	4
MIL-L-6086 B	1	1	1	3	1	4
MIL-L-6387 A	2	2	2	4	1	4
MIL-L-644 B	1	1	2	3	1	3
MIL-L-7645	2	2	3	3	1	4
MIL-L-7808 C	2	2	2	3	1	4
MIL-L-7808 F	1	1	2	2	1	4
MIL-L-7808 H	1	1	2	3	1	4
MIL-L-7870 A	1	1	1	4	1	4
MIL-L-8383 B	1	1	1	3	1	4
MIL-L-9000 F	1	1	2	4	1	4
MIL-L-9236 B	2	2	3	4	1	4
MIL-M-5559A	1	1	3	2	2	1
MIL-O-11773	1	1	3	3	1	4
MIL-O-5606	1	1	2	3	1	-
MIL-O-6081 C	1	1	1	4	1	4
MIL-O-7808	2	2	2	3	1	4
MIL-P-12098	2	2	2	2	1	1
MIL-P-27402	2	2	-	4	-	1
MIL-P-46046 A	2	2	2	4	1	1
MIL-S-21568 A	1	1	1	4	1	4
MIL-S-3136 B TYPE I	2	1	2	4	1	4
MIL-S-3136 B TYPE II	2	2	2	4	1	4
MIL-S-3136 B TYPE III	2	2	2	4	1	4
MIL-S-3136 B TYPE IV	1	1	1	2	1	4
MIL-S-3136 B TYPE V	1	1	1	3	1	4
MIL-S-3136 B TYPE VI	1	1	1	3	1	4
MIL-S-3136 B TYPE VII	1	1	1	4	1	4
MIL-S-81087	1	1	1	3	1	4
MIL-T-9188 B	4	4	4	4	4	1
MINERAL OIL	1	1	1	2	1	4
MINERAL SPIRITS	1	1	1	4	1	4
MOBILFLUID 424	1	1	2	4	1	4
MOBILITH 220	1	1	1	2	1	4
MOBILITH #2	1	1	1	2	1	4
MOBIL GLYGOYLE	1	1	4	1	2	1
MOBIL SHC 50T	2	1	1	3	1	4
MOBILITH SHC 007	1	1	1	2	1	4
MOBIL SHC 525	2	1	-	4	1	4
MOBIL SHC 624	1	1	4	4	3	4
MOBIL SHC 626	2	1	4	4	3	4
MOBIL SHC 629	2	1	4	4	3	4
MOBIL SHC 630	2	1	3	4	2	4
MOBIL SHC 632	2	1	2	4	1	4
MOBIL SHC 634	2	1	1	4	1	4
MOBIL SHC 75W90	1	1	1	4	1	4
MONOETHANOLAMINE	2	2	3	4	4	1
MONOBROMOBENZENE	4	4	4	4	1	4
MONOCHLOROBENZENE	4	4	4	4	1	4
MONOMETHYL ANILINE	4	4	4	-	2	4
MONOMETHYL ETHER	2	2	4	-	2	1
MONOMETHYL HYDRAZINE	2	2	4	4	-	1
MONONITROTOLUENE	4	4	4	4	2	4
MOPAR BRAKE FLUID	3	2	4	3	4	1
MOTOR OIL, HYDROCARBON	1	1	1	2	1	4

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
MUSTARD GAS	4	4	4	1	1	1
MYSTIC SYNGUARD SX-7000 75W90	2	1	2	4	1	4
MYVACET 9-45	-	-	-	1	-	-
NAOC 1	1	1	-	-	1	-
NAPHTHA	1	1	2	3	1	4
NAPHTHAIENIC ACID	2	2	2	4	1	2
NAPHTHALENE	3	3	4	4	1	4
NATURAL GAS	1	1	2	4	1	4
NEATSFOOT OIL	1	1	2	2	1	2
NEON	1	1	1	2	1	1
NEVILLE ACID	4	4	-	4	1	2
N-HEPTANE	1	1	2	4	1	4
N-HEXALDEHYDE	4	4	-	4	4	1
N-HEXENE-1	2	2	2	4	4	4
NICKEL ACETATE (AQ)	2	2	4	4	4	1
NICKEL CHLORIDE (AQ)	2	2	4	1	1	2
NICKEL SALTS	1	1	3	1	1	1
NICKEL SULFATE (AQ)	1	1	3	1	1	1
NITER CAKE	1	1	4	1	1	1
NITRIC ACID - RED FUMING	4	4	4	4	2	4
NITRIC ACID (CONC.)	4	4	4	3	1	3
NITRIC ACID (DILUTE)	4	4	4	2	1	2
NITROBENZENE	4	4	4	3	3	1
NITROBENZINE	1	1	-	4	1	4
NITROETHANE	4	4	4	4	4	2
NITROGEN	1	1	1	1	1	1
NITROGEN TETROXIDE	4	3	4	4	4	3
NITROMETHANE	4	4	4	4	4	1
NITROPROPANE	4	4	4	4	4	2
NO. 5 CM COOLANT	4	2	-	4	4	1
N-OCTANE	1	1	3	4	1	4
N-PENTANE	1	1	3	4	1	4
N-PROPYL ACETATE	4	4	-	4	4	2
O-A-548A	1	1	3	2	2	1
O-CHLORONAPTHALENE	4	4	4	4	2	4
O-CHLOROPHENOL	4	4	4	4	2	4
OCTACHLOROTOLUENE	4	4	4	4	1	4
OCTADECANE	1	1	2	4	1	4
OCTYL ALCOHOL	1	1	4	2	1	1
O-DICHLOROBENZENE	4	4	4	4	2	4
OIL #15 (MIL-L-7808A)	2	1	4	4	1	4
OLEIC ACID	1	1	2	4	1	3
OLEUM (FUMING SULFURIC ACID)	4	4	4	4	2	4
OLEUM SPIRITS	2	2	-	4	1	4
OLIVE OIL	1	1	2	4	1	3
ORANGE OIL	1	1	-	4	1	-
ORONITE 8200 (SEE MIL-H-8446B)	2	2	3	4	1	4
ORTHOCHLORO ETHYL BENZENE	4	4	4	4	1	4
OS 45 TYPE III (OS45)	2	2	4	4	1	4
OS 45 TYPE IV (OS45-1)	2	2	4	4	1	4
OS 70	2	2	-	4	1	4
O-T-634B	2	2	-	4	1	4
OXALIC ACID	2	2	-	2	1	1
OXYGEN - (200 - 400 DEGREES F.)	4	2	2	2	1	2
OXYGEN - COLD	4	1	1	1	2	1
OZONE	4	1	1	1	1	1
PAINT THINNER, DUCO	4	4	4	1	1	4
PALMITIC ACID	1	1	4	4	1	2
PARA-DICHLOROBENZENE	4	4	4	4	1	4
PARAGON EP-3 GREASE	1	1	2	2	1	4

	Lip material					
	R/D	H	P	S	V	M
PARALKETONE	4	4	-	4	4	4
PARKER O-LUBE	1	1	1	2	1	4
P-CYMENE	4	4	4	4	1	4
P-D-680	1	1	3	4	1	4
P-D-680B	1	1	3	4	1	4
PEANUT OIL	1	1	1	1	1	3
PENTANE, 2 METHYL	1	1	1	4	1	4
PENTANE, 2-4 DIMETHYL	1	1	1	4	1	4
PENTANE, 3 METHYL	1	1	1	4	1	4
PENNZOIL SYNTHETIC G.O. 80W90	2	1	2	4	2	4
PERCHLORIC ACID	4	4	-	4	2	2
PERCHLOROETHYLENE	4	4	4	4	1	4
PETROLEUM - ABOVE 250 DEG. F.	2	1	3	4	1	4
PETROLEUM - BELOW 250 DEG. F.	1	1	2	4	1	4
PHENOL (CARBOLIC ACID)	4	4	4	2	1	4
PHENOL, 70%/30% WATER)	4	4	4	4	1	4
PHENOL, 85%/15% WATER)	4	4	4	4	1	4
PHENYL ETHYL ETHER	4	4	-	4	3	4
PHENYL HYDRAZINE	4	4	4	4	1	3
PHENYLBENZENE	4	4	4	4	1	4
PHORONE (DISOPROPYLIDENE)	4	4	4	4	4	1
PHOSPHATE ESTERS	4	4	4	4	4	1
PHOSPHORIC ACID - 20%	2	2	4	1	1	1
PHOSPHORIC ACID - 45%	4	4	4	2	1	1
PHOSPHORIC ACID, CONCENTRATED	4	4	4	3	1	2
PHOSPHORUS TRICHLORIDE	4	4	4	-	1	1
PICKLING SOLUTION	4	4	4	4	1	3
PICRIC ACID	4	4	4	4	2	2
PINE OIL	1	1	2	4	1	4
PINENE	2	2	4	4	1	4
PIPERIDINE	4	4	4	4	4	4
PLATING SOLUTION - CHROME	4	4	4	4	1	1
PLATING SOLUTION - OTHERS	2	2	4	4	1	1
POLYALKYLENE GLYCOL	1	1	4	4	1	1
POTASSIUM ACETATE (AQ)	2	2	4	4	4	1
POTASSIUM CHLORIDE (AQ)	2	2	2	4	1	1
POTASSIUM CUPRO CYANIDE (AQ)	1	1	1	1	1	1
POTASSIUM CYANIDE (AQ)	1	1	1	1	1	1
POTASSIUM DICHROMATE (AQ)	1	1	1	1	1	1
POTASSIUM HYDROXIDE (AQ)	2	2	3	2	1	1
POTASSIUM NITRATE (AQ)	1	1	1	1	1	1
POTASSIUM SALTS	1	1	1	1	1	1
POTASSIUM SULFATE (AQ)	1	1	1	1	1	1
POTASSIUM SULFITE	1	1	4	1	1	1
PRESTONE ANTI FREEZE	1	1	4	1	1	1
PRL-HIGH TEMP HYDR OIL	2	1	1	1	1	4
PRODUCER GAS	1	1	2	2	1	4
PROPANE	1	1	4	2	1	4
PROPANE PROPIONITRILE	1	1	1	4	1	4
PROPYL ACETONE	4	4	4	4	4	1
PROPYL ALCOHOL	1	1	4	3	2	1
PROPYL NITRATE	4	4	4	3	1	2
PROPYLENE	4	4	4	4	1	4
PROPYLENE OXIDE	4	4	4	4	4	2
PYDRAUL 10E	4	4	4	4	1	1
PYDRAUL 115E, 230E, 312C, 540C	4	4	4	4	1	4
PYDRAUL 29ELT, 30E, 50E, 65E, 90E	4	4	4	1	1	2
PYRANOL	1	1	4	3	1	4
PYRANOL, TRANSFORMER OIL	1	1	1	4	1	4
PYRIDINE	4	4	4	4	4	2

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
PYROGARD 42,43,53,55	4	4	4	4	1	1
PYROGARD C, D	1	1	4	2	1	4
PYROLIGNEOUS ACID	4	4	4	1	4	2
PYROLUBE	4	4	4	2	1	2
PYRROLE	4	4	4	2	4	4
QUAKER 613-AS	4	4	4	2	4	1
RADIATION	2	2	3	1	4	2
RAPESEED OIL	1	1	2	4	1	1
RED LINE 100 OIL	1	1	1	4	1	4
RED OIL (MIL-H-5606)	1	1	2	4	1	3
RESCO ULTRA-KOATE XP	1	1	3	1	2	1
RJ-1 (MIL-F-25558B)	1	1	1	4	1	4
PONEX MP GREASE	1	1	1	2	1	4
RP-1 (MIL-F-25576C)	1	1	1	4	1	4
SAE 30	1	1	1	3	1	4
SAE 90	1	1	1	1	1	4
SAE 90 EP (GL-5)	1	1	1	4	1	4
SAL AMMONIAC	1	1	1	3	1	1
SALICYLIC ACID	2	2	4	2	1	1
SALT WATER	1	1	4	1	1	1
SANTO SAFE 300	4	4	4	1	1	3
SEWAGE	1	1	4	1	1	1
SHELL ALVANIA GREASE #2 & #3	1	1	1	2	1	4
SHELL CARNEA 19 AND 29	1	1	1	2	1	4
SHELL DIALA	1	1	-	4	1	4
SHELL 3XF MINE FLUID (FIRE REST)	1	1	4	-	1	4
SHELL IRUS 902 & 905	1	1	1	4	1	4
SHELL TELLUS #27 & #33	1	1	1	4	1	4
SHELL SPIRAX HD 80W90	1	1	1	4	1	4
SHELL SPIRAX HD 80W140	1	1	1	4	1	4
SHELL SPIRAX LONG LIFE EW 80W901	1	1	1	4	1	4
SHELL UMF (5% AROMATIC)	1	1	1	4	1	4
SHELL LO HYDRAX 27 AND 29	1	1	-	4	1	4
SHELL MACOMA 72	1	1	-	4	1	4
SILICATE ESTERS	1	1	4	4	1	4
SILICONE GREASES	1	1	1	3	1	1
SILICONE OILS	1	1	1	3	1	1
SILVER NITRATE	1	1	1	1	1	1
SINCLAIR OPALINE CX-EP LUBE	1	1	1	4	1	4
SPELLY SOLVENT B, C, E	1	1	-	-	1	4
SKYDROL 500	4	4	4	3	4	1
SKYDROL 7000	4	4	4	3	2	1
SOAP SOLUTIONS	1	1	4	1	1	1
SOCONY MOBIL TYPE A	1	1	1	4	1	4
SOCONY VACUUM AMV AC781 (GREASE)	1	1	1	4	1	4
SOCONY VACUUM PD959B	1	1	1	4	1	4
SODA ASH	1	1	2	1	1	1
SODIUM ACETATE (AQ)	2	2	4	1	4	1
SODIUM BICARBONATE (AQ)	1	1	4	1	2	1
SODIUM BISULFITE (AQ)	2	2	4	1	1	2
SODIUM BORATE (AQ)	1	1	4	1	1	1
SODIUM CARBONATE (SODA ASH)	1	1	4	1	1	1
SODIUM CHLORIDE (AQ)	1	1	2	1	1	1
SODIUM CYANIDE (AQ)	1	1	-	1	1	1
SODIUM HYDROXIDE (AQ)	1	1	4	1	1	1
SODIUM HYPOCHLORITE (AQ)	2	2	4	2	2	1
SODIUM METAPHOSPHATE (AQ)	1	1	-	1	1	1
SODIUM NITRATE (AQ)	1	1	-	3	1	1
SODIUM PERBORATE (AQ)	2	2	-	4	1	1
SODIUM PEROXIDE (AQ)	2	2	4	3	1	1

	Lip material					
	R/D	H	P	S	V	M
SODIUM PHOSPHATES (AQ)	1	1	1	4	1	2
SODIUM SALT	1	1	1	1	1	1
SODIUM SILICATE (AQ)	1	1	-	1	1	1
SODIUM SULFATE (AQ)	1	1	4	1	1	1
SODIUM SULFITE	1	1	4	1	1	1
SODIUM SULPHIDE	1	1	4	1	1	1
SODIUM THIOSULFATE (AQ)	1	1	4	1	1	1
SOLVASOL #1, 2, 3	2	2	2	4	1	4
SOLVASOL #73, 74	2	2	2	4	1	4
SOYBEAN OIL	2	1	1	4	1	3
SPRY	1	1	1	1	1	2
SR-10 FUEL	1	1	2	4	1	4
SR-6 FUEL	2	2	2	4	1	4
STANNIC CHLORIDE (AQ)	1	1	-	2	1	1
STANNOUS CHLORIDE (AQ)	1	1	-	-	1	2
STAUFFER 7700	2	2	2	4	1	4
STEAM OVER 300 DEG F. (WATER)	4	4	4	4	3	1
STEAM UNDER 300 DEG F. (WATER)	4	4	4	3	2	1
STEARIC ACID	1	1	4	2	2	2
STODDARDS SOLVENT	1	1	1	4	1	4
STYRENE	4	4	4	4	2	4
SUCROSE SOLUTION	1	1	2	1	1	1
SULFITE LIQUORS	2	2	4	4	1	2
SULFUR CHLORIDE (AQ)	4	4	4	3	1	4
SULFUR DIOXIDE (DRY)	4	4	4	2	1	2
SULFUR DIOXIDE (WET)	4	4	4	2	2	2
SULFUR DIOXIDE LIQUID	4	4	4	2	2	1
SULFUR HEXAFLUORIDE	2	2	4	2	3	1
SULFUR LIQUORS	2	2	4	4	1	2
SULFUR TRIOXIDE	4	4	-	4	1	2
SULFURIC ACID (20% OLEUM)	4	4	4	4	1	4
SULFURIC ACID (CONC.)	4	4	4	4	1	2
SULFURIC ACID (DILUTE)	2	2	4	2	1	1
SULFURIC ACID 3 MOLAR	3	3	4	2	1	1
SULFUR-MOLTEN	4	2	4	2	1	1
SULFUROUS ACID	4	4	4	4	1	1
SUNOCO #3661	1	1	1	4	1	4
SUNOCO ALL PURPOSE GREASE	1	1	1	4	1	4
SUNOCO SAE 10	1	1	1	4	1	4
SUNSAFE (FIRE RESISTANT HYDR FLUID)	1	1	4	-	1	4
SUPER SHELL GAS	1	1	2	4	1	4
SWAN FINCH EP LUBE	1	1	1	4	1	4
SWAN FINCH HYPOID	1	1	1	-	1	4
TANNIC ACID	1	1	4	2	1	1
TAR, BITUMINOUS	2	2	4	2	1	4
TARTARIC ACID	1	1	4	1	1	2
TERPINEOL	2	2	-	-	1	3
TERTIARY BUTYL ALCOHOL	2	2	4	2	1	2
TEXACO MULTIGEAR 85W140	1	1	2	4	1	4
TEXACO SYN-STAR 75W90	1	1	2	4	1	4
TEXACO SYN-STAR 80W140	1	1	2	4	1	4
TEXACO SYN-TORQ GL-5 75W90	1	1	2	4	1	4
TIN SALTS	1	1	-	2	1	2
TOLUENE	3	3	4	4	1	4
TRANSMISSION FLUID TYPE A	1	1	1	2	1	4
TRICHLORETHANE	4	4	4	4	1	4
TRICHLOROETHYLENE (TRIAD)	4	4	4	4	1	4
TRICRESYL PHOSPHATE (TCP)	4	4	4	3	1	1
TRIETHANOLAMINE (TEA)	2	2	4	4	4	1
TRISODIUM PHOSPHATE (TSP)	1	1	4	1	1	1

Ratings: 1 = Minor effect 2 = Moderate effect 3 = Static only 4 = Not recommended - = Insufficient data (AQ) = Aqueous

Compound compatibility chart - (cont.)

	Lip material					
	R/D	H	P	S	V	M
TURBO OIL #35	1	1	1	4	1	4
TURPENTINE	1	1	2	4	1	4
TYPE I FUEL (MIL-S-3136)	1	1	2	4	1	4
TYPE II FUEL (MIL-L-3136)	3	2	2	4	1	4
TYPE III FUEL (MIL-L-3136)	2	1	2	4	1	4
UCON HYDROLUBE J-4	1	1	4	1	1	1
UCON LUBRICANT 50-HB100	1	1	-	1	1	1
UCON LUBRICANT 50-HB260	1	1	-	1	1	1
UCON LUBRICANT 50-HB5100	1	1	-	1	1	1
UCON LUBRICANT 50-HB55	1	1	-	1	1	1
UCON LUBRICANT 50-HB660	1	1	-	1	1	1
UCON LUBRICANT LB-1145	1	1	-	1	1	1
UCON LUBRICANT LB-135	1	1	-	1	1	1
UCON LUBRICANT LB-285	1	1	-	1	1	1
UCON LUBRICANT LB-300X	1	1	-	1	1	1
UCON LUBRICANT LB-625	1	1	-	1	1	1
UCON LUBRICANT LB-65	1	1	-	1	1	1
UCON OIL LB-385 & 400X	1	1	-	1	1	1
ULTRA-VIOLET LIGHT	1	1	-	1	1	1
UNIVIS 40 (HYDRAULIC FLUID)	1	1	1	4	1	4
UNOCAL 85W140	1	1	1	4	1	4
UNIVOLT #35 (MINERAL OIL)	1	1	1	4	1	4
VARNISH	2	2	4	4	1	4
VEGETABLE OILS	1	1	2	1	1	2
VERSILUBE F-44, F-50 & F55	1	1	1	3	1	3
VINEGAR	2	2	4	1	1	1
VINYL CHLORIDE	4	4	4	-	1	2
VV-B-680, BRAKE FLUID	2	2	2	4	1	1
VV-G-632	1	1	1	3	1	4
VV-G-671C	1	1	1	3	1	4
VV-H-910	3	3	4	4	1	1
VV-I-530A	1	1	1	3	1	4
VV-K-211D	1	1	-	4	1	4
VV-K-220A	1	1	2	4	1	4
VV-L-751B	2	2	2	4	1	4
VV-L-800	1	1	1	3	1	4
VV-L-820B	1	1	1	3	1	4
VV-L-825A TYPE I	1	1	1	3	1	4
VV-L-825A TYPE II	1	1	1	3	1	4
VV-L-825A TYPE III	2	2	2	4	1	4
VV-O-526	1	1	1	3	1	4
VV-P-216A	1	1	1	3	1	4
VV-P-236	2	2	2	4	1	4
WAGNER 21B BRAKE FLUID	3	3	4	3	4	1
WATER (DEIONIZED)	1	1	-	2	1	1
WATER (DISTILLED)	1	1	-	3	1	1
WATER (FRESH)	1	1	4	3	1	1
WATER (SEA)	1	1	4	2	1	1
WEMCO C	1	1	1	4	1	4
WHISKEY & ALCOHOLIC BEVERAGES	1	1	4	1	1	1
WHITE GAS	1	1	4	1	1	4
WHITE OIL	1	1	1	4	1	4
WHITE PINE TAR/OIL	2	2	-	4	1	4
WINES	1	1	4	1	1	1
WOLMAR SALTS	1	1	2	1	1	1
WOOD ALCOHOL	1	1	4	1	3	1
WOOD OIL	1	1	1	4	1	4
XENON	1	1	1	1	1	1
XYLENE (XYLOL)	1	1	4	4	1	4
XYLIDINE (DI-METHYL ANILINE)	4	4	4	4	1	4
YEAST	1	1	-	2	1	1
ZEOLITES	1	1	-	-	1	1
ZINC ACETATE (AQ)	1	1	4	-	3	1
ZINC CHLORIDE (AQ)	1	1	4	2	1	1
ZINC SALTS	1	1	4	1	1	1

(B) Stainless steel case recommended.

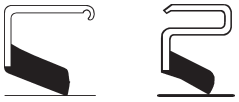
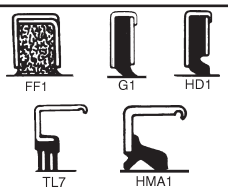
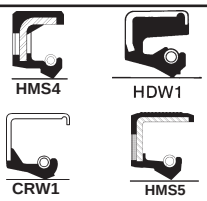
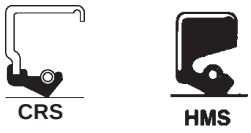
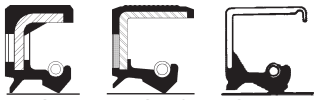
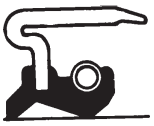
Standard steel case suitable for temperatures under 150°F or 66°C. For environmental considerations, SKF uses water-based adhesives whenever possible. Some water base fluids, such as some cutting fluids, can destroy the nitrile/plain steel bond, while the nitrile compound is not affected by the water.

Material shelf life: When kept under common commercial warehouse and distributor store conditions, SKF seals will have a shelf life as shown below:

Nitriles	(HNBR, NBR, XNBR)	5 years	+
Fluoroelastomer	(FKM)	10 years	+
Silicones	(VMQ)	10 years	+

Seals should be protected from dust, light, high temperatures high ozone concentrations, excessive humidity and chemical house environments. These factors are not normally present to a degree that will significantly affect the performance of our product.
Certifications and batch controls are available for specific production runs of seals upon request. Contact SKF for costs and availability.

Small diameter seals

Group no.	Standard line (Preferred design)	Other or obsolete designs (For reference)	Group description
1	VR1	VR2 VR3	All rubber V-Ring seals for dirt exclusion. Hand-fitted; no housing required. Will run against case of seal or housing. For use as primary or secondary seal in motors, conveyors, appliances, tools and general machinery.
2	 HM14 HM21	 FF1 G1 HD1 TL7 HMA1	Non-spring-loaded seal for grease retention or dirt exclusion in applications with slower speeds. Not for oil retention. Install with lip facing outward for maximum dirt exclusion. Typical applications are conveyor rollers and vehicle wheels. Heavy-duty type TL handles severe conditions such as disc harrows.
3	 HMS4 HDW1 CRW1 HMS5	 CRS HMS	Single lip, spring-loaded design without inner cases. Most economical general purpose seals. Typical applications include engines, drive axles, transmissions, pumps, electric motors and speed reducers. Where operating conditions exceed standard materials, type CRW offers a wide range of special materials. **See page 21A for Heavy duty (HDW) waveseal.
4	CRWH1	P W CRSH HMSH	Single lip, spring-loaded design with inner cases for greater strength and protection of sealing lip. Recommended where assembly of shaft is against the lip. Type CRWH offers a wide range of special materials. Greater strength generally is not required for seals under 2" in shaft size.
5	 HMSA7 HMSA10 CRWA1	CRWA6 CRSA HMSA	Dual lip design without inner cases. Provides light dirt exclusion enhancing the service life of the lubricant retaining spring-loaded main lip. Where operating conditions exceed standard materials, CRWA offers a wide range of special materials.
6	CRWHA1	CRSHA1 HMSHA3	Dual lip design with inner cases. For greater strength and protection of the sealing lip. Recommended where assembly of the shaft is against the seal lip. Where operating conditions exceed standard material, CRWHA offers a wide range of special materials. Provides medium dirt exclusion.
7	 CRWA5	CRWAR5 CRW5 CRWHA5	Single and dual lip designs for pressure applications. Capable of operating at internal pressures up to 90 psi. Performs significantly better than conventional lip seals. Can be used to replace some mechanical seals. Ideal for smaller pump and general purpose machinery with pressurized seal cavities. (See page 199.)
8	D7	C F	Dual lip, dual element designs. Type D7 to separate two fluids. Type C is available for maximum dirt exclusions. A wide variety of materials are available.
9	X15	X X12	External lip seals. Designs press-fit on shaft or spindle with sealing element contacting bore. Spring-loaded styles to handle retention of fluid are also available. All styles may be used with lip facing outward to exclude dirt and permit flushing bearing and seal cavities from within. Commonly used in agricultural equipment.
10	HDDF		Heavy-duty DF mechanical seals. Dual metal-face constructions, premium materials. Use where positive lubrication retention and dirt exclusion are both required. Installed by hand as a cartridge. Ideal for mixers, mining equipment, grinders, rollers or wherever abrasive contamination would cause failure of other seals.

Note: When operation conditions approach temperature extremes contact SKF for technical assistance.

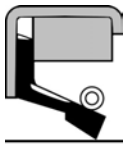
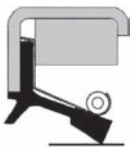
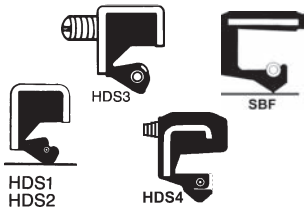
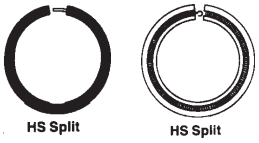
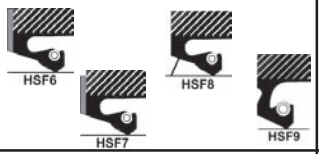
Recommended operating conditions

Operating temperature range °F	°C	Lip code ★★	Maximum shaft to bore misalignment (STBM)*		Maximum pressure PSI @ FPM	Maximum shaft surface speed FPM
-40° to 212°F -50° to 392°F	-40° to 100°C -58° to 200°C	R V	0.4mm (.016") 0.5mm (.020") 0.7mm (.028") 1.2mm (.047") 2.0mm (.079")	20.00-38.00mm(.787-1.496") 40.00-65.00mm(1.574-2.559") 70.00-100.00mm(2.756-3.937") 110.00-150.00mm(4.330-5.906") 160.00-199.00mm(6.299-7.835")	10 PSI	Back-up required: None: 0-1600 FPM Axial: 1600-2000 FPM Axial and Radial: 2000-3000 FPM
-65° to 200°F -65° to 200°F -40° to 300°F -40° to 250°F -100° to 325°F	-54° to 93°C -54° to 93°C -40° to 149°C -40° to 121°C -73° to 163°C	F L P R S	.003" TIR @ 0-2000 RPM	.005" @ 0-2000 FPM except TL .010" @ 0-500 FPM	3 PSI @ 0-2000 FPM except 0 PSI for FF	500 FPM TL 1000 FPM FF 2000 FPM all others
-40° to 300°F -40° to 250°F -100° to 325°F -40° to 400°F	-40° to 149°C -40° to 121°C -73° to 163°C -40° to 204°C	P R S V	.020" TIR @ 0-1000 RPM .015" TIR @ 1000-2500 RPM .010" TIR @ 2500-4500 RPM	.015" @ 0-1000 FPM .010" @ 1000-3600 FPM (See page 21A for Type HDW)	10 PSI @ 0-1000 FPM 5 PSI@ 1000-2000 FPM 0 PSI @ 2000-3600 FPM (HDW: 50-35 PSI)	3600 FPM (Type HDW: 5000 + FPM)
-40° to 300°F -40° to 250°F -100° to 325°F -40° to 400°F	-40° to 149°C -40° to 121°C -73° to 163°C -40° to 204°C	P R S V	.020" TIR @ 0-1000 RPM .015" TIR @ 1000-2500 RPM .010" TIR @ 2500-4500 RPM	.015" @ 0-1000 FPM .010" @ 1000-3600 FPM	10 PSI @ 0-1000 FPM 5 PSI @ 1000-2000 FPM 0 PSI @ 2000-3600 FPM	3600 FPM
-40° to 300°F -40° to 250°F -100° to 325°F -40° to 400°F	-40° to 149°C -40° to 121°C -73° to 163°C -40° to 204°C	P R S V	.020" TIR @ 0-1000 RPM .015" TIR @ 1000-2500 RPM .010" TIR @ 2500-4500 RPM	.015" @ 0-1000 FPM .010" @ 1000-3600 FPM	10 PSI @ 0-1000 FPM 5 PSI @ 1000-2000 FPM 0 PSI @ 2000-3600 FPM	3600 FPM
-40° to 300°F -40° to 250°F -100° to 325°F -40° to 400°F	-40° to 149°C -40° to 121°C -73° to 163°C -40° to 204°C	P R S V	.020" TIR @ 0-1000 RPM .015" TIR @ 1000-2500 RPM .010" TIR @ 2500-4500 RPM	.015" @ 0-1000 FPM .010" @ 1000-3600 FPM	10 PSI @ 0-1000 FPM 5 PSI 1000-2000 FPM 0 PSI @ 2000-3600 FPM	3600 FPM
-40° to 250°F -40° to 300°F	-40° to 121°C -40° to 149°C	R V	.005" TIR @ 0-2000 RPM	.005" @ 0-2000 FPM	90 PSI @ 0 FPM 50 PSI @ 1000 FPM	2000 FPM
-40° to 300°F -40° to 250°F	-40° to 149°C -40° to 121°C	PP RR	.010" TIR @ 0-1000 RPM .005" TIR @ 1000-2500 RPM	.010" @ 0-1000 FPM .005" @ 1000-2000 FPM	10 PSI @ 0-1000 FPM 5 PSI @ 1000-2000 FPM	2000 FPM
Type X -40° to 250°F Type XTL (X15) -40° to 250°F	-40° to 121°C -40° to 121°C	R R	.010" TIR @ 0-1000 RPM .005" TIR @ 1000-2500 RPM .003" TIR @ 0-2500 RPM	.015" @ 0-1000 FPM .005" @ 1000-2000 FPM .010" TIR @ 0-500 FPM	10 PSI @ 0-1000 FPM 5 PSI @ 1000-2000 FPM 3 PSI @ 0-500 FPM	2000 FPM 500 FPM
-40° to 250°F	-40° to 121°C	R	.020 - .030"	.020 - .030"	Intermittent to 50 PSI Continuous to 25 PSI	Intermittent to 750 FPM Continuous to 350 FPM

★★ Lip Code: F - Felt; D - Duralip; H - Duratemp; P - Polyacrylate; R - Nitrile; L - Leather; S - Silicone; V - LongLife™; T - PTFE

* V-rings seal axially, DRO is normally less important than shaft to bore misalignment. Contact SKF for STBM on shafts < 20.00mm (.787")

Large diameter seals

Group no.	Standard line (Preferred design)	Other basic line designs	Group description
1	HDS7	HDS6	The HDS7 is a metal cased seal with springless lip optimized for superior exclusion and bearing protection from water and particles or for grease retention. Can be combined in common case with other HDS lip elements. Spacer lugs are optional. HDS6 is a rubber O.D. springless seal with integral spacer lugs (limited number of sizes available).
2	 HDL	 HDLA	The HDL is especially designed to operate in high speed, high dynamic run-out conditions that are also subject to misalignment. Features a secure combination cantilever and garter spring. It can accept high-temperatures and demanding operating conditions including paper and steel mills, shredders and crushers. It adds to the capability of HDS1, 4 & 7 lines. The MP version adds a dust-lip while the TE has an external lip for rotating housings or outside facing contact.
3	HDS2	 HDS3 SBF HDS1 HDS2 HDS4	HDS metal clad seals have a single spring loaded lip sealing element. HDS1 features Spring-Lock to enclose the garter spring. HDS2 & 3 add Spring-Kover to bond the spring for extra retention. Optional spacer lugs are used to provide a gap between seals for lubrication. HDS3 has standard Duralip material. HDS4 is a rubber O.D. seal with a special lip section that features a molded in garter spring for complete protection from displacement or mechanical distortion. Available in limited size range. The rubber O.D. SBF has a single lip with open spring and no lug option.
4	HDSA1 HDSA2	HDSB1 HDSB2 HDSC1 HDSC2	Similar to basic HDS1-3 seals but increases protection against water and scale ingress by adding a dirt-lip (Duralip or leather). Compact, used where there is insufficient groove width for two separate seals. HDSA & B also retain oil. Dust lip selected according to installation direction (HDSA from spring side, HDSB from air side) while HDSC is designed for maximum exclusion (both elements face the contamination).
5	HDSD1 HDSD2	HDSE1 HDSE2	Dual HDS elements in a single case for easier installation. The HDSD with opposed lips is intended for separation of dual media while the HDSE with tandem seal is intended for high exclusion service. Cavity between elements should be packed with lubricant, and lubrication holes in the case can be provided. The type 2 option adds Spring-Kover.
6	HS Solid	HS3 HS4 HS5	All rubber, single element, spring-loaded solid seals that minimize bore damage. HS3 has an open groove, the HS4 has a Spring-Lock groove and HS5 adds Spring-Kover which bonds the spring in for retention during difficult assembly or where contamination could affect the spring. All control grease or oil. Requires cover plate for installation.
7	 HS Split HS Split	HS7 HS8 HS9	All rubber, single element, spring loaded split seals. Especially useful to minimize lost machine time where the shaft cannot be dismounted. The HS6 has a Spring-Lock groove, the HS8 adds Spring-Kover. Both seal oil. For grease retention, the HS9 is an open groove seal with garter spring while the HS7 has a control wire for easy installation particularly where axial space is limited. All require a cover plate for assembly.
8	HSF5	 HSF6 HSF7 HSF8 HSF9	All rubber, single element, spring-loaded solid seals with fabric reinforced O.D. that minimize bore damage. Optional Spring-Kover. HSF5 has a Spring-Lock groove, HSF6 offers radial grooves for lubrication between stacked seals, HSF7 has radial grooves and circumferential grooves, HSF8 has a dust-lip and HSF9 has a pressure profile. All require a cover plate for assembly.
9	HSF1	HSF2 HSF3 HSF4	All rubber, single element, spring loaded split seals with fabric reinforced O.D. that minimize bore damage. Especially useful to minimize lost machine time where the shaft cannot be dismounted. The HSF1 has a Spring-Lock groove, the HSF2 has radial grooves for lubrication between stacked seals, the HSF3 has radial and circumferential grooves while HSF4 has a dust-lip. All require a cover plate for assembly.
10	VR4	VR1 VR3 VR5	All rubber V-ring seal. Mounts directly on the shaft and seals axially against the counterface, housing, etc. Used as the primary or secondary back-up seal. Elasticity allows positioning without unit disassembly. Seals for shafts 16.000" (405 mm) and over can be cut and respliced on location to ease installation.

* For information on CT seals, please see page 41A.

Note: When operation conditions approach upper limits contact SKF for technical assistance.

Recommended operating conditions

Operating temperature range °F	Operating temperature range °C	Lip code ★★	Max pressure range	Maximum Shaft to bore misalignment (STBM)	Maximum shaft dynamic runout (DRO)	Maximum shaft surface speed FPM	Ease of installation	Ability to seal light lubes and excl. water
-40° to 250°F -65° to 225°F -40° to 300°F	-40° to 121°C -54° to 107°C -40° to 149°C	R D H	Not recommended	0.062" (1.57mm)	0.093" TIR (2.36mm)	5,000+ FPM (25.4 M/S)	Excellent	Excellent (grease retention only)
-40° to 250°F -40° to 300°F -40° to 400°F	-40° to 121°C -40° to 149°C -40° to 204°C	R H V	10-15 PSI (.07-.103 MPa)	0.098" (2.5mm)	0.093" TIR (2.36mm)	5000+ FPM (25.4 M/S)	Good	Excellent incl. high speeds and misalignment
-40° to 250°F -65° to 225°F -40° to 300°F -40° to 400°F	-40° to 121°C -54° to 107°C -40° to 149°C -40° to 204°C	R D H	10-15 PSI (.07-.103 MPa)	0.062" (1.57mm)	0.093" (2.36mm)	5000+ FPM (25.4 M/S)	Excellent(HDS2, 3) Good(HDS1)	Excellent for grease and oil lubricants
-40° to 250°F -65° to 225°F -40° to 300°F -40° to 400°F	-40° to 121°C -54° to 107°C -40° to 149°C -40° to 204°C	R D H V	10-15 PSI (.07-.103 MPa)	0.062" (1.57mm)	0.093" (2.36mm)	5000+ FPM (25.4 M/S)	Excellent to good, varies with equipment design.	Excellent (HDSC exclusion only)
-40° to 250°F -65° to 225°F -40° to 300°F -40° to 400°F	-40° to 121°C -54° to 107°C -40° to 149°C -40° to 204°C	R D H V	10-15 PSI (.07-.103 MPa)	0.062" (1.57mm)	0.093" (2.36mm)	5000+ FPM (25.4 M/S)	Excellent(HDSD & E2) Good(HDSD & E1)	Excellent
-40° to 250°F -65° to 225°F -40° to 300°F -40° to 400°F	-40° to 121°C -54° to 107°C -40° to 149°C -40° to 204°C	R D H V	10-15 PSI (.07-.103 MPa) for HS4 & 5 HS3 to 5 PSI (.03 MPa)	0.062" (1.57mm)	0.093" (2.36mm)	HS3 2000/10.2 M/S HS4 3000/15.2 M/S HS5 2500/12.7 M/S	Excellent(HS4, 5) Good(HS3)	Excellent(HS4, 5) Good(HS3)
-40° to 250°F -65° to 225°F -40° to 300°F -40° to 400°F	-40° to 121°C -54° to 107°C -40° to 149°C -40° to 204°C	R D H V	Not Recommended	0.062" (1.57mm)	0.093" (2.36mm)	HS6 2000/10.2 M/S HS7 1500/7.62 M/S HS8 2000/10.2 M/S HS8 1500/7.62 M/S	Fair (HS6, HS9) Excellent (HS7) Good (HS8)	Fair (HS7, HS9) Good (HS8)
-40° to 250°F -40° to 400°F	-40° to 121°C -40° to 204°C	R V	5 PSI (.03 MPa)	0.060" (1.5mm)	0.093" (2.36mm)	5000+ FPM (25.4 M/S) depending on the operating cond.	Good to Excellent depending on mounting space	Excellent
-40° to 250°F -40° to 400°F	-40° to 121°C -40° to 204°C	R V	Not Recommended	0.060" (1.5mm)	0.093" (2.36mm)	5000+ FPM (25.4 M/S) depending on the operating conditions	Fair to Good depending on mounting space	Good
-40° to 250°F -9° to 300°F (Dynamic)	-40° to 121°C -23° to 149°C	R V	Not Recommended	Shaft Dia. To 7.835"(199mm) 7.875" Up(200mm)	Max STBM .079"(2.0mm) .157"(4.00mm)	Support @ FPM Required: None: 1-1600 FPM Axial: 1600-2000 FPM Axial and Radial: 2000-3000 FPM	Excellent	Excellent when operated as an excluder

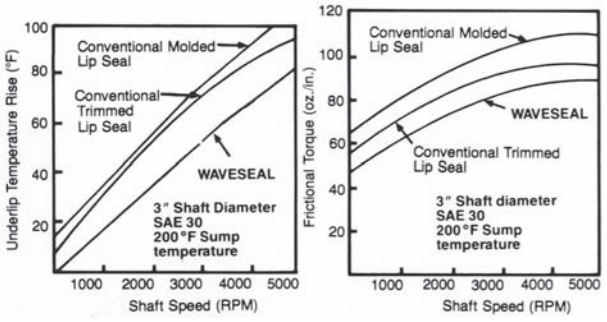
★★ Lip Code: F - Felt; D - Duralip; H - Duratemp; P - Polyacrylate; R - Nitrile (Buna); L - Leather; S - Silicone; V - LongLife™; T - PTFE

Waveseal®

The only standard stock line of molded lip, bi-rotational hydrodynamic shaft seals available anywhere. The *Seal handbook* (457010) lists 2000 + part numbers in over 200 shaft sizes (inch and metric) from .250" through 12.250". Choices allow selection of inner case, dust lip or pressure profiles as needed to solve specific application problems. Rubber materials include nitrile, LongLife™ fluoroelastomer, silicone and polyacrylate to accommodate a wide range of operating conditions.

Zero-interference

The double-lip Waveseals, CRWA1 and CRWHA1 designs, have a special zero-interference dirt lip. It acts as a dirt excluder without actually touching the shaft. There is no heat build-up under the dirt lip because there is no friction and the zero-interference dirt lip reduces the possibility of trapping contamination at the shaft. The primary Waveseal lip provides cool-running, long-lasting, hydrodynamic benefits without the adverse effects of most conventional double lip seals.



Underlip temperature rise vs. shaft speed. At 2,000 rpm, the Waveseal offers up to 35% less heat built-up under the lip than conventional lip seals.

Frictional torque vs. shaft speed. At 2,100 rpm, the Waveseal offers more than 20% less frictional torque than conventional lip seals.

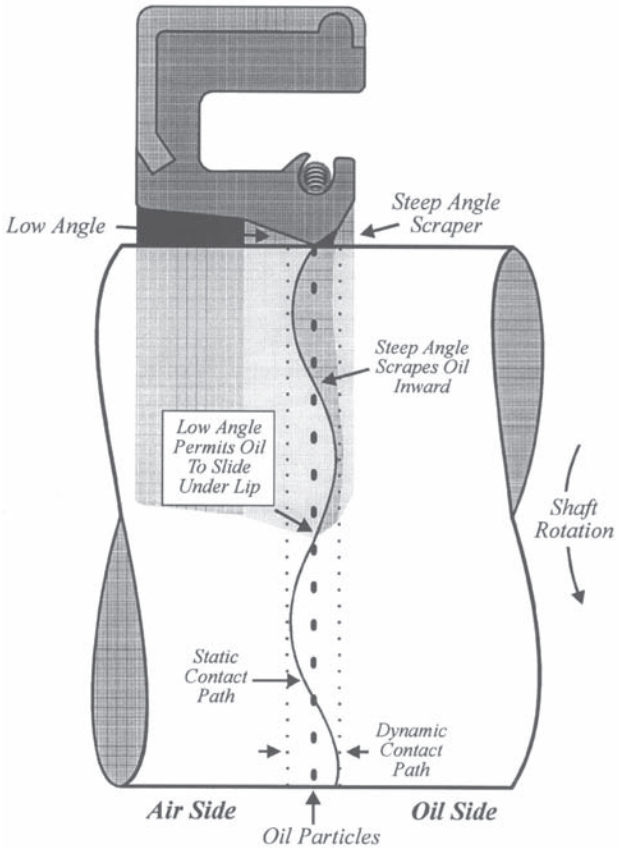
Waveseal features:

- Bi-rotational, hydrodynamic radial lip design
- Smooth molded lip
- Provides exceptional sealing performance with less lip pressure and a wider contact pattern than required by conventional trimmed lip seals (including other hydro-dynamic types)
- Generates a hydrodynamic action that provides better lip lubrication and greatly reduces shaft wear
- Pumps lubricant in while sealing out contaminants
- Boretite coating on seal O.D.

Waveseal benefits:

- Allows seal to run cooler
- Creates less drag
- Reduces shaft wear
- Extends seal service life
- Ingests fewer contaminants
- Maintains fresh oil film
- Bore-Tite fills small bore imperfections and resists heat and chemical attack

Conventional trimmed lip has sharp edge & rough surface on lube side.



The SKF Waveseal touches the shaft in a wide 'sine' or wave pattern. Due to this unique design, contact pressure and grooving are minimized, heat generation and friction are reduced. Lubricant is pumped back to the bearing while dirt is pushed away from the lip/shaft interface.

Size listing starts on page 1.

Heavy-duty waveseal

Capabilities

Seal tests conducted on a 6.250" shaft had a mean life of more than 900 hours for the SKF HDW seal vs less than 40 hours for brand "X" seals. Proven in SKF's standard line seals, the Waveseal design features promoting extended seal life are incorporated in the HDW heavy-duty Waveseal.

Temperature range
Nitrile ..... -40°/+250°F (-40°/+121°C)
Operating pressures ..... 50 psi static
35 psi dynamic
Shaft speed ..... 3600 FPM under 8"shaft dia.
5000 FPM over 8" shaft dia.
STBM/TIR ..... 0.020"

Application data

For shafts 5" and larger, the SKF HDW seal is designed for general use as a grease or oil retainer on heavy duty rotating applications, such as found in gear boxes, reducers, winches, drills, grinders, transmissions, motors and rollers.

User benefits

Proven in SKF's standard line seals, the hydrodynamic molded lip runs 25-30% cooler, and lasts up to three times longer than trimmed lip seals, with 20% less drag on the shaft. The rigid seal body withstands rough handling and the molded springs groove prevents spring pop-out and lip roll-over, while being capable of handling up to 35 psi dynamic for pressure lubrication systems.

Design features

Standard HDW design features are, a heavy-duty body shell, a molded Spring-Lock lip, Bore-Tite O.D. sealant, a molded smooth lip hydrodynamic sealing element and a stainless steel spring. Axial and radial (I.D./O.D.) cross-sections in compliance with RMA/SAE standards to fit the broadest range of shaft/bore sizes most commonly used.

HDW1

Size, range, materials, availability

All sizes are available from stock. Contact factory for availability of stainless steel case. Stock shaft diameters range from 5" to 7.938". Contact SKF for availability on larger sizes.

Waveseal for heavy-duty applications

Stock no.	Shaft	Bore	Width
49951	5.000	6.125	0.500
50186	5.000	7.125	0.500
50620	5.063	6.125	0.500
51277	5.125	6.625	0.500
51320	5.125	7.000	0.500
51800	5.188	6.250	0.500
52651	5.250	6.750	0.500
52655	5.250	7.125	0.500
53100	5.313	6.375	0.500
54300	5.438	6.625	0.500
58709	5.875	6.875	0.500
58710	5.875	7.000	0.500
59300	5.938	7.000	0.500
60009	6.000	7.250	0.500
60650	6.063	7.500	0.500
61215	6.125	7.125	0.500
61230	6.125	7.250	0.500

Stock no.	Shaft	Bore	Width
61235	6.125	7.375	0.500
62480	6.250	7.250	0.500
63717	6.375	7.500	0.500
64330	6.438	7.500	0.500
66217	6.625	7.625	0.500
66219	6.625	7.750	0.500
66222	6.625	7.875	0.500
66230	6.625	8.000	0.500
67510	6.750	7.750	0.500
67600	6.750	8.750	0.500
68730	6.875	8.250	0.500
68760	6.875	8.500	0.500
70036	7.000	8.375	0.500
70041	7.000	8.375	0.500
71220	7.125	8.250	0.500
73720	7.375	8.375	0.500
73730	7.375	8.500	0.500

Stock no.	Shaft	Bore	Width
75046	7.500	8.750	0.500
75069	7.500	9.250	0.500
76225	7.625	8.875	0.500
77506	7.750	8.750	0.500
78710	7.875	8.875	0.500
79620	7.938	9.125	0.625

WasteWatcher

SKF WasteWatcher

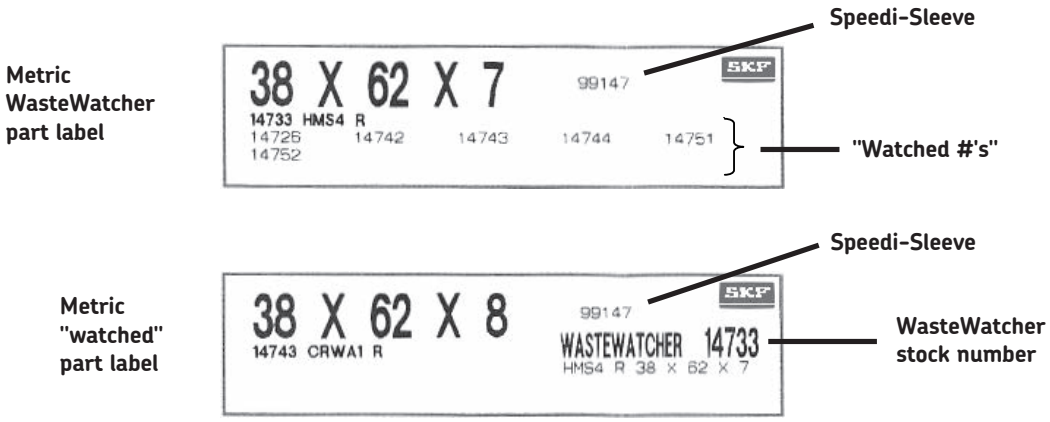
SKF WasteWatcher is a powerful tool developed for our distributors to maximize sales opportunities by streamlining inventories and reducing look-up time, all with fewer stock-keeping-units (SKUs). WasteWatcher numbers are the most popular standard stock number items that have been identified by size and construction type to provide the broadest application coverage. WasteWatcher numbers are usually equal to or narrower than the seals it can replace and are generally the most cost effective part. This allows the WasteWatcher seal to "cover for" different seal design types of the same size to help avoid lost sales.

SKF WasteWatcher inventory stocks are custom planned and built to provide the desired market coverage (service level) that the distributor chooses.

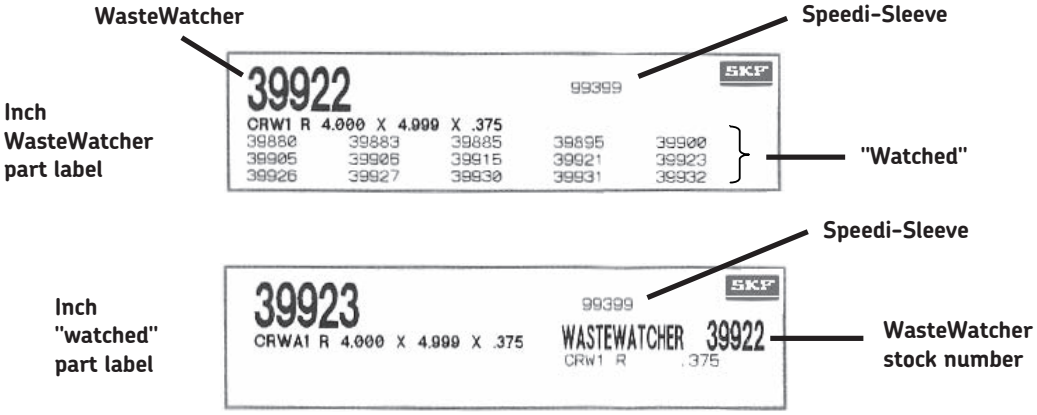
While the SKF Master seal interchange (Catalog #457012) lists over 190,000 interchanges to competitors' item numbers, and this SKF Seal handbook lists over 10,000 seals, the SKF WasteWatcher program allows the distributor to stock the fewest number of seals necessary to achieve the desired coverage level. Programs range from stocking less than 500 part numbers achieving 75% coverage of all inquiries to higher inventory levels with higher rates of coverage.

The SKF WasteWatcher system is complete. All WasteWatcher numbers in this catalog are identified with a triangle (▲) for easy use. For more details on the WasteWatcher system, please contact your SKF Representative for your free copy of WasteWatcher stocking guide #457021.

New WasteWatcher bin box labels – metric



New WasteWatcher bin box labels – inch



Part numbering system and introduction

Since SKF's invention and patent of the first integrated shaft seal in 1928, there has been continuous seal research and development. From a selection limited to leather seals and a handful of sizes, SKF's product line has evolved to a standardized line of bonded, molded lip seals in more than 3,000 stock sizes. Leather, at one time the only sealing element material available, has been almost entirely replaced by modern synthetic rubber compounds.

New manufacturing processes, sealing techniques and the compounding and molding of complex elastomer-based systems are only part of this development. The most significant seal advancement has been SKF's introduction of the Waveseal - a birotational, smooth-lip, hydrodynamic design with unparalleled performance, service life and universal applications.

These advancements underlie the contents of this Seal handbook. Here you will find complete details, including:

- Seal selection, servicing, and troubleshooting.
- Seal types and styles -small and large diameter, solid and split, SKF Waveseals, V-rings, heavy-duty DF seals and axial clamp type seals.
- Shaft and bore requirements.
- Illustrated seal installation instructions.

SKF Part numbering system

Each SKF stock number identifies the shaft size for which the seal is designed. For small diameter seals, the approximate shaft size is indicated by inserting a decimal point to the left of the last four digits in the number. For example: #54960 (5.4960) indicates a 5.500" (140 mm) shaft. **Note that metric shaft sizes are cataloged by their inch equivalents in the inch size listing section. A complete size listing of metric seals arranged by metric shaft, bore and widths can be found in the metric-complete size listing section.**

For large diameter seals - over 10" (254 mm) in shaft diameter - you can find the approximate shaft size by inserting a decimal point to the left of the last five digits. For example: #1600560 (16.00560) indicates a 16" (406.5 mm) shaft.

Most HDS metal clad seals and split seals under 10.000" (254 mm), as well as all axial clamp type seals

and special designs are listed under the assigned 500,000 series part numbers which do not relate to shaft size.

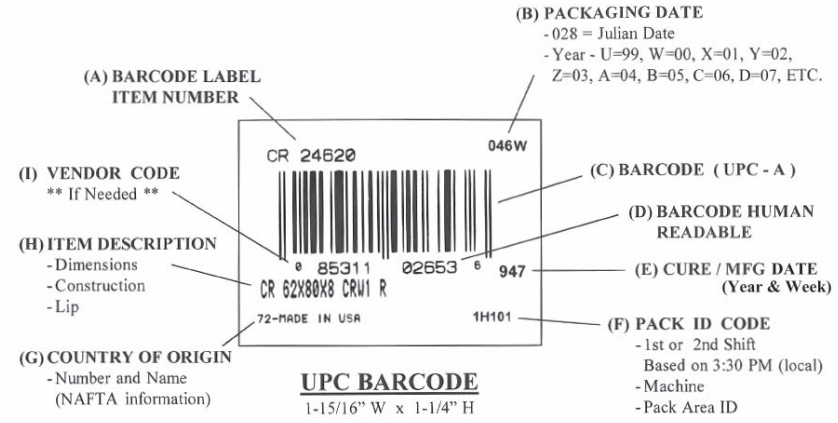
SKF Metric seals include the metric dimensions and additional information directly beneath the stock number on the end flap. This line lists the seal shaft x bore x width in millimeters, the seal construction and lip material code.

***** Warning *****

The SKF seal part number system has been developed by SKF as a support tool for those using and specifying SKF products. Only SKF products are entitled to be designated or identified by these numbers. Use of the SKF seal part numbering or designation system by others constitutes infringement of SKF's proprietary rights, including protection afforded by U.S. and foreign copyright laws, trademark laws, and the laws of unfair competition.

Questions concerning possible misuse or improper use of these numbers, or requests for permission to use such numbers, should be placed in writing and addressed as follows:

SKF Automotive Division
890 N. State St., Suite 200
Elgin, Illinois 60123
Attn: Catalog Manager



Selecting replacement seals

How to select replacement seals

Part number: A seal normally bears a part number which can be identified through the SKF Master interchange (Catalog #457012) or the numerical index (pgs. 232-363) in this handbook.

Size: If there is no number or if the number is illegible, replacements can be selected by matching the sizes to those listed. If an equivalent seal in the same width is not available, select one slightly narrower, or wider if the bore depth permits.

Estimating shaft diameter: At times, seals are not only unmarked, they also have missing sealing elements making size estimation even more difficult. The following charts can help to determine an approximate shaft size, with or without a sealing element, keeping in mind that seal designs vary among manufacturers.

Shaft diameter approximation

Lip inside diameter range	Add to lip I.D.	Metal inside diameter range	Subtract from metal I.D.
Up to 1.000"	.031"	Up to 1.390"	.109"
1.001 - 2.000"	.047"	1.391 - 2.203"	.171"
2.001 - 6.000"	.063"	2.204 - 2.952"	.203"
6.001 - 8.000"	.094"	2.953 - 4.296"	.234"
8.001 - 12.000"	.125"	4.297" Up	.250"

Example
1.464 + .047 = 1.511
(use seal designed for 1.500" or 38 mm shaft)

Example
1.790 - .171 = 1.619
(use seal designed for 1.625" or 41 mm shaft)

Seal design: With the size identified, a style or design may be selected. In many applications it is possible to substitute different seal designs. The recommended operating condition charts (pgs. 16A-19A) are helpful in selecting the most appropriate seal design and type.

Operating conditions: Check the operating limits for the SKF seal selected and refer to the operating conditions charts (pgs. 16A-19A). If a lip material to match the old seal cannot be found in the size listings, contact SKF for assistance.

Pressure: Most seals are designed for maximum service life at 0 psi. As pressure increases, service life usually decreases. Bonded seals in this catalog are normally suitable for use with pressures up to 10 psi., however, the CRW5 and CRWA5 pressure seals are designed for pressures to 50 psi dynamic / 90 psi static.

Sealing element materials: For sealing lip materials, refer to the material and compound selection guide (page 3A) and compound compatibility chart (pages 6A-15A).

Special note: The SKF Waveseal is designed to pump lubricants back into the sump. The spring side of the seal should therefore normally face the lubricant. If contaminant exclusion is more important than lubricant retention, the seal may be turned around. However, a loss of lubricant is to be expected.

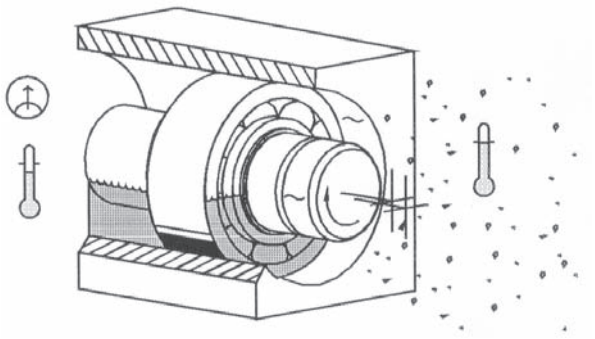
How to select seals for new applications

If the type of seal required is known, refer directly to the size listing (pgs. 1-124) and select the size. Specify **preferred designs** (identified in size listings in bold print) whenever possible. For specific seal selection guidelines, refer to the recommended operating conditions charts for small diameter seals or large diameter seals. Each includes ample information to make a preliminary selection of seal types. The final choice can be made from the size listings.

Selecting alternate materials

Caution should be observed when changing or substituting lip compounds. Hardening, swell or other effects can occur which can significantly reduce service life.

Technical questions can be answered by calling the SKF toll-free line: 1-800-882-0008.



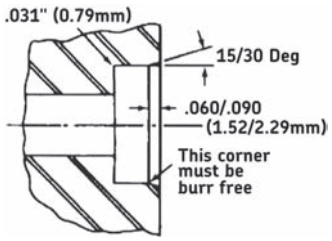
The bore requirements

In addition to the application, characteristics and makeup of the seal, conditions of the bore and shaft must be checked prior to seal mounting. These include configuration, tolerance, hardness, materials, and finish of both shaft and bore, plus shaft speed and eccentricity.

Requirements for the bore and shaft appear on these two pages. Special installation and mounting requirements, other than those listed below, appear within the appropriate seal sections.

Bore configurations

The lead corner, or entering edge, of the bore should be chamfered (as shown below) and free of burrs. The inside corner of the bore should have a maximum radius of .031" (.079 mm).



Bore tolerance

SKF seals are manufactured to RMA/ISO/DIN standards. Seal O.D.'s are manufactured larger than the bore diameter to assure the proper press-fit interference.

The bore tolerances in these charts apply only to ferrous metals. For aluminum housings, no change is needed if rubber O.D. seals are used. Metal O.D. seals and bore diameters greater than 3.000" (76.20mm) and at temperatures above 300°F (149°C), reduce the nominal bore diameter by .001" (.03mm).

Note: The metal case or rubber-covered O.D. is determined by averaging at least three measurements taken at equally spaced positions.

In an inch size stepped bore the depth should exceed the width of the seal by a minimum of .016" (.04mm). For metric sizes add .30mm (.012") to the seal width. For HS and HSF designs, see pages 32A-35A "HS solid and split seals".

Bore hardness

No specific Rockwell hardness is recommended; however, bore hardness should be high enough to maintain interference with the seal's outside diameter.

Bore material

Ferrous and other commonly used metallic materials, like aluminum, are acceptable. However, when non-ferrous bore materials are used, the differential rates of thermal expansion must be considered. Call SKF for an evaluation. For assistance with bore materials, contact your SKF distributor.

Bore finish

A finish of 100 microinches Ra (2.5 micrometers) or smoother should be maintained on applications where a lubricant head up to 3 P.S.I. (20 kPa) is present against the outside diameter of the seal. For aluminum, the finish should be 100 to 200 micro inches Ra (2.5 to 5.0 micro.)

Bore tolerance charts

Inches

	RMA OS-4	Nominal press-fit		Seal O.D. tolerance	
Bore diameter	Bore tolerance	Metal O.D.	Rubber O.D.	Metal O.D.	Rubber O.D.
Up to 2.000	.001	.005	.008	.002	.003
2.001 to 3.000	.001	.0055	.010	.0025	.003
3.001 to 5.000	.0015	.0065	.0105	.003	.003
5.001 to 7.000	.0015	.007	.012	.003	.004
7.001 to 12.000	.002	.0085	.0125	.0035	.004
12.001 to 20.000	.003	.012	.015	.005	.005
20.000 to 40.000	.004	.013	.018	.005	.006
40.001 to 60.000	.006	.016	.020	.006	.007

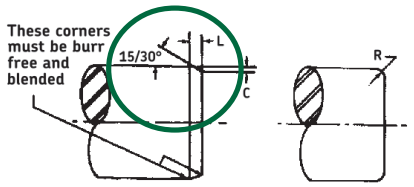
Millimeters

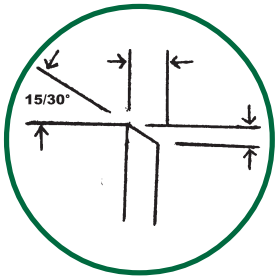
	(ISO/H8)	Seal O.D. diametral tolerance	
	Bore tolerance	Metal case	Rubber covered
Diameter			
Over 6 to 10	+ 0.022 - 0.000	+ 0.20 + 0.08	+ 0.30 + 0.15
Over 10 to 18	+ 0.027 - 0.000	+ 0.20 + 0.08	+ 0.30 + 0.15
Over 18 to 30	+ 0.033 - 0.000	+ 0.20 + 0.08	+ 0.30 + 0.15
Over 30 to 50	+ 0.039 - 0.000	+ 0.20 + 0.08	+ 0.30 + 0.15
Over 50 to 80	+ 0.046 - 0.000	+ 0.23 + 0.09	+ 0.35 + 0.20
Over 80 to 120	+ 0.054 - 0.000	+ 0.25 + 0.10	+ 0.35 + 0.20
Over 120 to 180	+ 0.063 - 0.000	+ 0.28 + 0.12	+ 0.45 + 0.25
Over 180 to 250	+ 0.072 - 0.000	+ 0.35 + 0.15	+ 0.45 + 0.25
Over 250 to 300	+ 0.081 - 0.000	+ 0.35 + 0.15	+ 0.45 + 0.25
Over 300 to 315	+ 0.081 - 0.000	+ 0.45 + 0.20	+ 0.55 + 0.30
Over 315 to 400	+ 0.089 - 0.000	+ 0.45 + 0.20	+ 0.55 + 0.30
Over 400 to 500	+ 0.097 - 0.000	+ 0.45 + 0.20	+ 0.55 + 0.30
Over 500 to 630	+ 0.110 - 0.000	+ 0.51 + 0.22	+ 0.65 + 0.35
Over 630 to 800	+ 0.125 - 0.000	+ 0.51 + 0.24	+ 0.75 + 0.40
Over 800 to 1000	+ 0.140 - 0.000	+ 0.56 + 0.25	+ 0.85 + 0.45
Over 1000 to 1250	+ 0.165 - 0.000	+ 0.61 + 0.27	+ 1.00 + 0.55
Over 1250 to 1600	+ 0.195 - 0.000	+ 0.66 + 0.31	+ 1.00 + 0.55

The shaft requirements

Shaft configurations

A burr-free chamfer or radius is required as illustrated below (C = chamfer depth).





Shaft diameter

Shaft diameter (inches)	C	R	Preferred L@15°	Optional L@30°
Up to 4.000	.093	.188	.347	.156
4.001 to 7.000	.125	.250	.466	.218
7.001 to 40.000	.188	.375	.702	.323
40.001 and larger	.250	.500	.933	.433

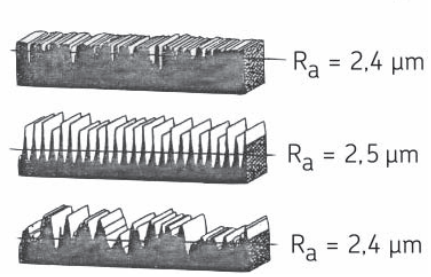
Shaft diameter (millimeters)	C	R	Preferred L@15°	Optional L@30°
Up to 100.0	2.5	4.5	8.5	4.0
100.1 to 180.0	3.0	6.0	11.5	5.0
180.1 to 1000.0	5.0	9.5	18.0	8.0
1000.1 and larger	6.5	12.7	24.0	11.0

Shaft material/finish/hardness

Seals perform best on medium to high carbon steel (SAE 1035, 1045) or stainless steel. Soft shafts with good chrome-plated or nickel-plated surfaces, properly finished, are also acceptable. Soft materials such as brass, zinc, aluminum, magnesium or plastics are not recommended except at low surface speeds (less than 0.50 M/S 100 FPM) and clean environments. Shafts should be hardened to Rockwell C30 or higher to prevent handling damage or abrasive wear.

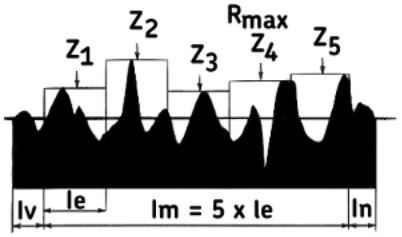
For optimum sealing performance, new industry research recommends that seal countersurfaces should be plunge ground to 9-17 micro inches R_a roughness (0.23-0.43 micro-meters) with a machine lead angle of 0±0.05 degrees. However, shaft finish may still be a cause of seal failure even when this standard is held within the limit. This is because R_a does not fully describe the surface profile. Within the same R_a value, a shaft surface may have very different profiles.

Different finishes with the same R_a



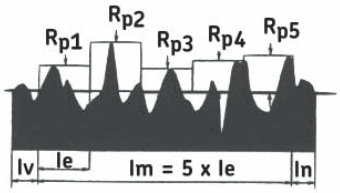
To fully characterize the shaft surface, three additional parameters should be observed:

R_z (DIN) - Average peak to valley height. The arithmetic average of the maximum peak-to-valley height of roughness values Z_1 to Z_5 within five consecutive sampling lengths (le) over the assessment length of the filtered profile. (According to DIN 4768/1)



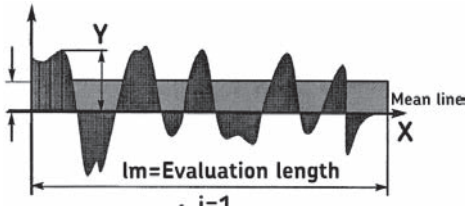
$$R_z = \frac{1}{5}(Z_1 + Z_2 + Z_3 + Z_4 + Z_5)$$

R_{pm} - Average peak to mean height. The arithmetic average value of the five singles highest peaks above the mean line R_{p1}-R_{p5}, similar to the R_z (DIN) definition specified in DIN 4768. (According to DIN 4762/1E, ISO/DIS 4287/1)



$$R_{pm} = \frac{1}{5}(R_{p1} + R_{p2} + R_{p3} + R_{p4} + R_{p5})$$

R_a - The arithmetic value of filtered roughness profile determined from deviations about the center line within the evaluatino length lm. (According to DIN 4768/1, DIN 4762/1E, ISO/DIS 4287/1)



$$Ra = \frac{1}{n}\sum_{i-n}^{i=1} |Y_i|$$

The shaft requirements-(cont.)

Further, to avoid distortions of the measurement, the cut-off or assessment length has been shortened from 0.762mm (.030 inch) to .254mm (.010 inch). An M1 filter should be used. The new standard also specifies a shaft lead of <0±0.05 degrees as well as other critieria as shown in the chart below:

Shaft recommendations for non-hydrodynamic seals

	Shaft manufacturing methods
	Plunge ground (preferred method)
Shaft lead	<0±0.05°
Grinding chatter	No grinding chatter allowed > 45 cycles
Roundness	Out of roundness must be less than 0.00508 mm (0.0002 inch) and a minimum number of lobes.
Lobing	Maximum of 7 lobes at 0.00254 mm (0.0001 inch)
Surface finish	R_a=0.23-0.43mm (9-17min) & Rz (din)=1.65-2.90mm (65-115min) & Rpm=0.50-1.25mm(20-50min) M1 filter & 0.254mm(0.010 in) cutoff

Significantly, hydrodynamic seals were found to be less sensitive to shaft lead and finish. The study group of 204 seals included 110 SKF Waveseals. There were no failures of the Waveseals while 88 of 94 plain trimmed lips experienced failure.

Shaft eccentricity

Two types of shaft eccentricity affect seal performance; both must be considered.

- Shaft-to-bore misalignment (STBM) - The amount by which the shaft is off center, with respect to the bore's center. Shaft-to-bore misalignment is caused by machining and assembly inaccuracies. To measure, attach a dial indicator to the shaft (between the shaft and bore), rotate the shaft and read the indicator. STBM is half of the Total Indicator Reading (TIR).
- Dynamic run-out (DRO) - The amount by which the shaft does not rotate around the true center. Misalignment, shaft bending, lack of shaft balance and other manufacturing inaccuracies are common causes. To measure, slowly rotate the shaft and read the total movement (TIR) of a dial indicator attached to the bore and held against the side of the shaft.

For specific limitations, see the recommended operating conditions charts for small diameter seals (page 16A) and large diameter seals (page 18A).

Shaft speed

Maximum speeds for effective seal operation depend on shaft finish, pressure, temperature, eccentricity, lubricant or fluid being retained, seal type and other conditions. For example, shaft speeds may be increased when shaft finish is improved or eccentricity (dynamic run-out) is reduced.

Surface speed at the contact point between the seal and shaft expressed in FPM (feet per minute) generally is a better measure for seal selection than RPM (revolutions per minute) See chart on pg. 368 for conversions. For maximum speeds by seal type, refer to the charts on pgs. 16A-19A.

Shaft tolerance

For satisfactory sealing performance, be sure the shaft diameter is within the following RMA or ISO recommended tolerances.

Inches

Nominal shaft diameter (RMA OS-4)	Tolerance
Up to and including 4.000	.003
4.001 to 6.000	.004
6.001 to 10.000	.005
10.001 and larger	.006

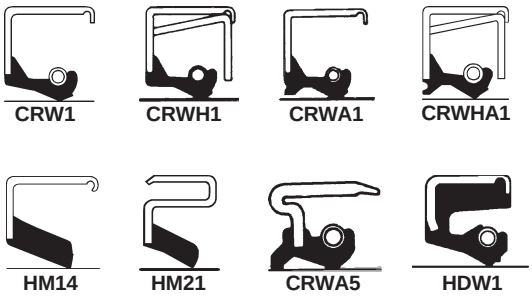
Millimeters

Nominal shaft diameter (ISO h11)	Tolerance
Over 6 to 10	+ 0.000 - 0.090
Over 10 to 18	+ 0.000 - 0.110
Over 18 to 30	+ 0.000 - 0.130
Over 30 to 50	+ 0.000 - 0.160
Over 50 to 80	+ 0.000 - 0.190
Over 80 to 120	+ 0.000 - 0.220
Over 120 to 180	+ 0.000 - 0.250
Over 180 to 250	+ 0.000 - 0.290
Over 250 to 315	+ 0.000 - 0.320
Over 315 to 400	+ 0.000 - 0.360
Over 400 to 500	+ 0.000 - 0.400
Over 500 to 630	+ 0.000 - 0.440
Over 630 to 800	+ 0.000 - 0.500
Over 800 to 1000	+ 0.000 - 0.560
Over 1000 to 1250	+ 0.000 - 0.660
Over 1250 to 1600	+ 0.000 - 0.780
Over 1600 to 2000	+ 0.000 - 0.920
Over 2000 to 2500	+ 0.000 - 0.110
Over 2500 to 3150	+ 0.000 - 0.135

The seal – small and large diameter

Small diameter seals

Generally small diameter seals fit shafts ranging from .125" to 12.500" (3.2 mm to 317.5 mm) in diameter. They are available in a variety of types, styles and lip materials. A SAE 304 stainless steel case and/or SAE 302 spring is standard on some stock numbers and optional on a production basis.



The preferred designs for inch sized small diameter seals are the Wave series: CRW1, CRWA1, CRWH1, CRWHA1, CRW5, CRWA5 and HDW1. They are also offered for selected metric sizes. These SKF Waveseals feature a smooth lip with a birotational hydrodynamic design (see page 20A). The high performance Waveseals are suitable for the widest range of operating conditions. Other preferred designs for special applications are HM14, VR1 and VR4. Rubber covered, plain lip HMS4 and HMSA7 seals are the preferred design for most metric shaft and bore combinations. Metal outer diameter CRS and other designs are also available for many metric sizes.

The single lip designs, CRW1 and CRWH1, are general purpose seals recommended for most applications. Reinforced with an inner shell, CRWH suits shaft sizes over 2" (50.8 mm). CRWA and CRWHA are auxiliary lip designs recommended for applications requiring a lip for dirt exclusion. Designed with an auxiliary lip, CRWA5 is recommended for medium pressure applications. The CRW5 seal is the single lip version of the medium pressure Waveseal.

Rubber covered seals are often specified for metric installations. The rubber covering helps compensate for rougher bores, retaining light media and split housings. The HMS4 has a single plain lip while the HMSA7 adds a dust-lip and are the preferred metric designs. Metric CRS type constructions are generally similar to the CRW series except the lip does not have a Wave feature. They are also used for some inch sizes.

Types HM14 and HM21 are non-spring loaded seals used for grease retention or dirt exclusion in applications with slower speeds.

Type VR1 is an all rubber V-Ring seal. It mounts directly on the shaft and seals axially against a counterface.

Type D7 is a dual element (lip) design used to separate two fluids.

The external, X15 design press-fits on the shaft or spindle, with its sealing (lip) element contacting the bore.

Type HDDF1 is a dual-face seal used where positive lubrication retention and dirt exclusion are both required.

Large diameter seals

Heavy basic industries such as primary metals, construction, wind energy, forestry, mining, and pulp & paper provide a challenging environment for radial shaft seals. Operating in a wide range of speeds, temperatures, and environmental conditions, shaft seals are asked to reliably retain lubrication while keeping harsh contamination from penetrating and potentially damaging capital equipment. Generally, seals for shaft diameters larger than 8 inches (203 mm) are known as large diameter seals (LDS). HDS2 is the preferred design for most applications. The HDL is preferred for conditions including high speeds and run-out.

SKF's LDS are available in a variety of heavy duty styles, configurations and materials.

Several large diameter designs are available: HD metal clad designs (including the HDL ultra high performance series, the technologically advanced EP-2000 grease seal, and the dependable HDS series), all-rubber seals like the premium SBF seal, the HSF fabric reinforced series, solid or split, HS (solid & split), quill wipers, V-Rings and CT clamp seals.

Metal clad seal family

The most popular seal group in the SKF LDS line is the metal clad seal family with the HD seal designs.

The HD designs include the ultrahigh performance HDL, the reliable HDS1, HDS2, HDS3 and the highly engineered EP-2000 (HDS7). SKF's HD seals are specifically designed to withstand the extreme conditions encountered in heavy duty applications.

The seals work exceptionally well in the highly contaminated environment of metal rolling mills, the high speed, high temperature environment of the paper mills, as well as more universal applications such as industrial gearboxes. The metal clad seal family has a product to perform in almost any industrial application.

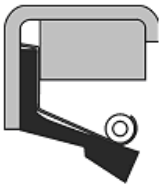
The HDL seal

The HDL is a premium metal clad oil seal that is especially designed to operate in severe conditions including high speeds and temperatures, high run-out, and high misalignment. The excellent high-speed performance characteristics of the HDL make it the preferred design in the severe environment encountered in the rolls of the papermaking machines.

Large diameter seals – HDL & HDS metal clad

The HDL features a stainless steel garter spring that is entrapped by individual finger springs, also made of stainless steel, around the entire circumference of the seal. The spring combination allows the seal to compensate for severe conditions in order to maintain high levels of sealing performance, operational life, and equipment reliability.

The HDL is available in nitrile, Duratemp and Longlife, ensuring that the HDL will perform regardless of speed or temperature. Spacer lugs are available for all products within the HDL line. Available HDL sizes can be found in the complete size listing sections.



HDL

HDS metal clad seals

SKF's HDS metal clad seals are specifically designed to withstand the conditions encountered in heavy-duty applications. They work exceptionally well in rolling mills from the slow speed, abrasive conditions of a scale breaker to the high speed of finishing stands.

HDS1, HDS2, and HDS3

The most commonly used metal clad seal is the HDS series for general purpose applications. HDS seals are divided into the HDS1, HDS2, and HDS3 categories. All three seal versions are encased in a heavy-duty steel shell and a 302 series stainless steel spring is standard. The basic HDS1 has its stainless steel spring mounted in a protective Spring-Lock groove. The Spring-Lock surrounds most of the springs diameter and improves retention under most installations. Where blind installations may increase the risk of spring displacement, the type HDS2 adds a Spring-Kover that bonds the spring into the groove. The HDS3 adds a spark-free inner diameter, standard Duralip material and adjustable spacer lugs. The adjustable lugs are optional on all other HDS models as are fixed width lugs. (See page 30A for the section describing spacer lugs).

The HDS seal product line is available in a wide variety of rubber materials in all sizes ranging from 8 to 62 inches (203 to 1575 mm). Nitrile is standard on all HDS seals (with the exception of the HDS3 where Duralip is standard), however all seal types can also be ordered in Duralip, Duratemp or LongLife elastomers. See the recommended operating conditions chart for large diameter seals (page 18A).

Bearing side →

HDS7

EP-2000

The newest member of the HD seal family is the EP-2000 (extra performance construction type HDS7).

Water and solid contamination ingress is a common cause for bearing failure. SKF has developed the EP-2000 as a grease seal with enhanced exclusion capabilities.

The highly engineered EP-2000 features a computer optimized, springless lip profile designed to retain lubricants and aggressively pump contamination away from the lip. The increased ability of the EP-2000 to exclude contamination makes it an ideal equipment protector in heavily contaminated environments such as the water and scale present in rolling mill applications.

The springless lip concept of the EP-2000 also reduces radial load. Radial load can be thought of as the 'squeeze' force that the seal exerts on the shaft. High radial load can lead to increased seal wear and elevated underlip temperatures decreasing seal life.

Current customers are reporting easier installation, fewer seal replacements (translating into longer seal life) and an increase in process run time.

The EP-2000 is available in nitrile for common applications, Duratemp® for higher temperature conditions, and Duralip® for applications where extra abrasion resistance is necessary.

It is important to note that the EP-2000 is not available in LongLife™ material.

As with the HDS line, the EP-2000 is available in all shaft sizes ranging from 8 to 62 inches (203 to 1575 mm). Spacer lugs are available for any configuration. See below for specification parameters:

HDS7

	Inch	Metric
Bore diameter	9.250 to 64.500	234.95 to 1638.30
Shaft size	8.000 to 62.000	203.20 to 1574.80
Difference between Shaft and bore	1.250 to 2.500	31.75 to 63.50
Width	.625 to 1.250	15.88 to 31.75

Note: SKF Large diameter seals are manufactured to order and are non-returnable and non-refundable. See inside back cover for additional information.

Large diameter seals - metal clad and all-rubber

HDS4 and HDS6

Also new are two rubber covered seals, the HDS4 and HDS6. The HDS4 features a patented molded-in garter spring which cannot be displaced during difficult installations and provides superior oil "sealability" while minimizing wear. The HDS6 is a springless version designed for grease retention or contamination exclusion. Nitrile rubber is standard and can be ordered in the full range of HDS rubber compounds. Both are equipped with molded .500" (12.7mm) spacer lugs which can be trimmed or removed as necessary. The HDS4 and 6 are stocked in a limited range of sizes. Contact SKF for information on availability and new sizes additions.

HDS4

HDS6

The HDS4 with molded-in spring and HDS6 without spring are currently available for the 6 inch sizes shown below in standard nitrile rubber. Other SKF materials are also offered. New sizes will be progressively added to the line. Contact SKF for specific availability.

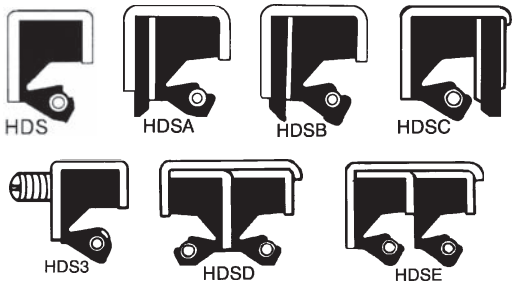
16.000 x 18.000 x .813	21.000 x 23.000 x .750
16.500 x 18.500 x .813	22.000 x 24.000 x .875
18.000 x 20.000 x .875	27.500 x 29.500 x .875

HDS metal clad styles

HDSA, HDSB, HDSC: These are designed with a single, spring-loaded rubber sealing element and an auxiliary Duralip exclusion element. These styles are generally used where there is insufficient space for two seals.

HDSD: These are designed with dual spring-loaded elements with lips facing in opposite directions. They are used for applications requiring the separation of two fluids. A means of lubricating the sealing elements should be provided; the cavity between the elements may be packed with grease or holes may be drilled from the O.D. into the cavity between the lips.

HDSE: These seals feature dual spring-loaded elements with lips facing in the same direction. They are used where a back-up seal is desired for retention or exclusion. As with the HDSD, a means of lubricating the sealing elements should be provided.



Spacer lugs

Spacer lugs may be furnished on all metal clad designs to separate seals in multiple installations and provide space for lubrication.

The traditional fixed-width lugs are .375" (9.5 mm) in diameter and are available in widths from .125" to .500" in increments of .063". The fixed-width lug is an available option on all metal clad seals except HDS3.

All standard adjustable lugs are .375" (9.50mm) in diameter and .375" (9.53mm) wide. Lugs with .500" (12.70mm) are available upon request. They may be adjusted to smaller widths in .063" (1.60mm) increments simply by removing the steel washers however the optional .500" lengths may be harder to adjust. Also, they may be removed entirely.

Certain small cross sections may require special narrow .210" (5.33 mm) lugs with a depth range of .063" to .125" (1.6 to 3.18 mm).

The lugs are placed around the heel of the seal in four, six or eight equally-spaced locations, depending on the seal O.D.

HDS3

.313/.625" greater than shaft diameter (depending on shaft size)

Lugs	Seal O.D.	
4 Spacer lugs	O.D. up to 30"	O.D. up to 762mm
6 Spacer lugs	O.D. over 30" to 45"	O.D. 763 to 1143mm
8 Spacer lugs	O.D. over 45"	O.D. over 1144mm

Note: SKF Large diameter seals are manufactured to order and are non-returnable and non-refundable.
See inside back cover for additional information.

Large diameter seals - metal clad and all-rubber-(cont.)

HDS sizes not listed

HDS seal sizes not listed in this handbook are available, providing that the size falls within the ranges shown in the table below.

Preferred standard HDS metal clad seal sizes and cross-sections [1]

HDS1, 2, 3 & 7		
	Inches	Millimeters
Shaft diameter	6.000-62.000"	152.40-1574.80mm
Bore diameter	7.160-64.210"	181.86-1580.13mm
Shaft-to-bore difference [2]	1.160-2.210"	29.46-56.13mm
Bore depth (width)	.591-1.250"	15.01-31.75mm
HDSA, HDSB & HDSC		
	Inches	Millimeters
Shaft diameter	8.000-40.000"	203.20-1016.00mm
Bore diameter	9.160-42.210"	232.66-1072.13mm
Shaft-to-bore difference [2]	1.160-2.210"	29.46-56.13mm
Bore depth (width)	.841-1.500"	21.36-38.10mm
HDSD & HDSE		
	Inches	Millimeters
Shaft diameter	8.000-50.000"	203.20-1270.00mm
Bore diameter	9.160-64.210"	232.66-1326.13mm
Shaft-to-bore difference [2]	1.160-2.210"	29.46-56.13mm
Bore depth (width)	1.216-1.750"	30.89-44.45mm

	Inches	Millimeters	Radial limit (STBM)
STBM limits:	Up to 8.000"	203.20mm	.060"/1.52mm
	8.001"-13.000"	203.22-330.20mm	.090"/2.29mm
	13.001-62.000"	330.22-1574.80mm	.125"/3.18mm

[1] Not all cross-sections and widths are possible with every shaft diameter. Contact SKF for availability on dimensions at the extreme limits or for sizes outside the standard range.

[2] Double cup construction over 2.500" difference.

Spring-Lock

Standard on most HDS and HS seals is Spring-Lock, a sealing lip feature that surrounds most of the garter spring's diameter. The Spring-Lock helps hold the spring in position during seal handling, installation and removal. It is standard on all HDS and HS seals (except for the HS3 and HS9 styles which have an open groove).

Spring-Kover

In applications where dirt, water or other contaminants may pose serious problems or where installation could jar the spring out of place, SKF Spring-Kover can be specified. Spring-Kover is a flexible covering which fits over the exposed portion of the stainless steel garter spring. It protects the spring without adversely affecting the spring's capability. Spring-Kover is not available in the open groove designs (HS3 and HS9).

Springs

Springs supplied for most HS series are SAE 302 stainless steel.

Generally, the spring connection for split seals is of the hook and eye type for shafts over 18.000" (457.20mm) and a threaded-type for smaller diameters. HS7 uses a special control wire connector based on SAE 302 outer spring and carbon steel inner wire.

HS solid and split seals

Type HS seals, available in solid round and split versions, are all-rubber, large diameter seals designed without an outer shell or metal case. Two types are available - solid and split. The HS style seals featured in this handbook are HS4, HS5, HS6, HS7 and HS8. Older HS3 and HS9 types are only available on a limited basis.

HS solid and split large diameter seals are cataloged by shaft size and priced by the dimensions of the bore for which they are designed. The actual seal is finished oversize to the housing to allow proper compression and stability. All HS seals require a cover plate to compress the seal within the cavity, helping seal the split joint and prevent leakage. The bore depth for HS seals should be +/- .005" (0.13mm) and +/- .004" (0.10mm) for HSF designs. A garter-type spring in the sealing element reinforces lip pressure against the shaft.

HS solid seal designs

The standard styles and types run from 8" to 62.500" (203 mm to 1588 mm) in shaft size. There are three types:

HS3: HS3 is a discontinued seal profile with a single spring-loaded lip element, open groove and no Spring-Kover. A cover plate is required for proper installation. HS4 or 5 should be considered for new installations. Contact SKF for additional information.

HS4: The HS4 seal is an all-rubber solid seal with a single spring-loaded element. It features a Spring-Lock and is recommended for vertical and horizontal shafts. For proper fit, a cover plate is required.

Spring lock feature

HS5: HS5 is the same as HS4 with the addition of a Spring-Kover for added protection against spring-popout and contamination.

Size listing starts on page 1.

Large diameter seals all-rubber – solid and split

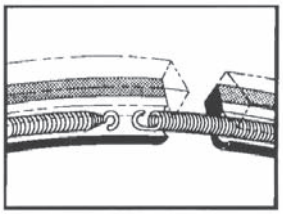
HS split styles

Where downtime is critical and shaft removal is impractical, type HS all-rubber split seals are ideal. They are simply placed around the shaft and pushed into the seal bore, then held firmly by a cover plate which compresses the split joint together. Generally, the spring connection is a threaded type for shafts up to 18" and a hook and eye type for shafts above that (ex. HS7). All HSF types have a threaded connector. Contact SKF regarding other connector requirements.

HS split seals perform best with grease or heavy lubricants on horizontal shafts. The "split" should be located at the top (12 o'clock) position. Light lubricants can be contained if the level is kept well below the shaft centerline, particularly at higher surface speeds. Vertical shafts can only be used in grease lubricant. For secure sealing, HS split seals must never be flooded or loaded with pressure.

HS split seals are available in a wide variety of types, styles and materials. There are four types.

HS6: HS6 is an all-rubber split seal with a single spring-loaded element and a Spring-Lock. HS6 features a separate loose spring and a positive spring connection.

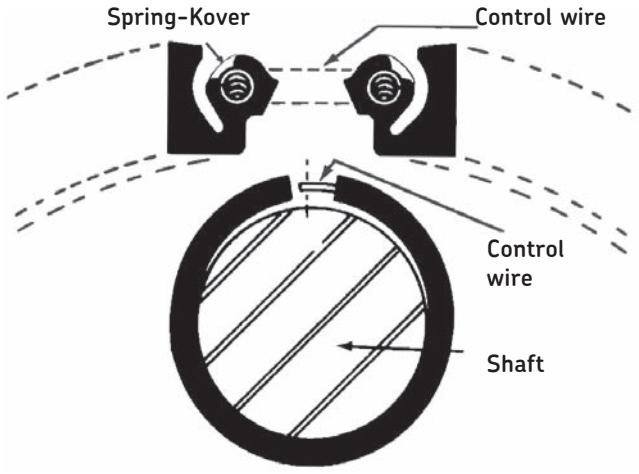


HS7: HS7 is an all-rubber split seal with a single spring-loaded element which has both a Spring-Lock and a Spring-Kover. A control-wire spring connector is used to join the seal together. HS7 is not as positive as other HS types, but it is the easiest to install. The spring is completely enclosed and the connection is made simply by running the control wire into the center of the spring coil across the split (butt joint). Spring tension to hold the sealing lip on shaft is built-in at the factory. For proper fit, a cover plate is required. Due to the unique design that permits easier installation, please note that a gap may occur at the joint even after the cover plate is installed. Special attention to place the gap at the 12 o'clock position during installation is necessary.

HS8: HS8 is an all-rubber split seal with a single spring-loaded element, Spring-Lock, Spring-Kover and a positive spring connection. The spring is entirely enclosed except for a small portion on either side of the split. HS8 provides the most positive seal of all the split types and is the preferred design for use with lighter lubricant retention and water exclusion. It is recommended for sealing light oils as well as heavy greases. HS8 performs best on horizontal shafts, but may be used on vertical shafts. For proper fit, a cover plate is required.

HS9: HS9 is a discontinued seal profile with limited availability. It has a single spring-loaded lip element, open groove and no Spring-Kover. It is used for grease retention on horizontal shafts. A cover plate is required for proper installation. HS6, 7 or 8 should be considered for new installations. Contact SKF for additional information.

HS7 seal control wire feature, used on HS7



Large diameter seals all-rubber-solid and split-(cont.)

HS seals selection chart

Features	Solid types			Split types★			
	HS3	HS4	HS5	HS6	HS7	HS8★	HS9
Spring groove type	Open groove	Spring-Lock	Spring-Lock	Spring-Lock	Spring-Lock	Spring-Lock	Open Groove
Spring connection	Factory made	Factory made	Factory made	Threaded/ hook & eye	Control wire	Threaded/ hook & eye	Threaded/ hook & eye
Spring Kover	Not available	None	100% covered	None	100% covered	Covered except ends	Not available
Ability to seal light lubes	Good	Good	Good	Good	Poor	Good	Fair
Misalignment tolerance (STBM)	.062" (1.57mm)	.062" (1.57mm)	.062" (1.57mm)	.062" (1.57mm)	.062" (1.57mm)	.062" (1.57mm)	.062" (1.57mm)
Eccentricity tolerance (TIR)	.093" (2.36mm)	.093" (2.36mm)	.093" (2.36mm)	.093" (2.36mm)	.093" (2.36mm)	.093" (2.36mm)	.093" (2.36mm)
Maximum speed, FPM (M/S)	2,000 (10.16mm)	3,000 (15.24mm)	2,500 (12.70mm)	2,000 (10.16mm)	1,500 (7.62mm)	2,000 (10.16mm)	1,500 (7.62mm)
Pressure tolerance	Fair	Good	Good	Poor	Poor	Poor	Poor
Ease of installation	Good	Good	Good	Fair	Excellent	Good	Good

★ Preferred design

Note: HS3 and 9 are discontinued designs with limied availability. They can be replaced, and upgraded, by other HS types. Contact SKF for additional information.

HS standard cross sections and width options

Shaft diameter range	Bore diameter range	Difference between shaft and bore	Bore depth	STBM (max.)
6.000 - 73.000" (152.40 - 1854.20mm)	7.000 - 74.000" (177.80 - 1879.60mm)	1.000" (25.40mm)	.500 - .525" (12.70 - 13.34mm)	.060 (1.52mm)
8.000 - 180.000" (203.20 - 4572.00mm)	8.984 - 182.050" (228.19 - 4624.07mm)	.984 - 2.050" (25.00 - 52.07mm)	.500 - .800" (12.70 - 20.32mm)	.090 (2.29mm)
13.000 - 180.000" (330.20 - 4572.00mm)	14.148 - 182.050" (359.36 - 4624.07mm)	1.148 - 2.050" (29.15 - 52.07mm)	.625 - 1.000" (15.87 - 25.40mm)	.125 (3.18mm)

Note: Contact SKF for availability outside the listed size ranges.
Applies only to HS construction. HSF are based on specific sizes.

Large diameter seals all-rubber - solid and split-(cont.)

Rubber covered designs-SBF & HSF

The SKF family of all-rubber seals includes metal inserted (SBF) and fabric-reinforced (HSF) products. The fabric-reinforced versions are available as solid round or with an open joint or split.

The all-rubber seal family offers designers and operators of rotating equipment a number of important operating and installation benefits. All-rubber seals do not score the bore even after repeated installations and extractions. This prevents damage to the metal that can cause bypass leakage. All-rubber seals accept rougher bore finishes, reducing machining costs. They are especially helpful for split housings. They resist corrosion and will not seize in the bore even years after assembly.

Due to lower press-in forces, rubber covered seals are often easier to install particularly in the field or confined spaces. They can be fitted by hand or with simple hand tools even when the diameters are very large. Further, in the case of split seals there is no need to dismount the shaft or other machine components.

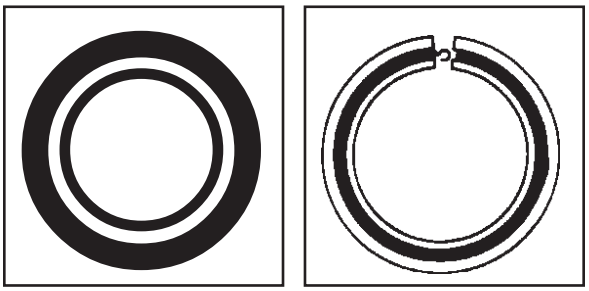
SBF

The SBF seal design is a new rubber OD seal with a flexible metal stiffening ring that allows mounting without the use of a cover plate. The SBF seal can be used as an upgrade to non-split rubber fabric seals in many applications that are either grease or oil lubricated. The SBF seals are available in both NBR and FKM materials with optional Spring-Kover.

SBF

HSF seals: rubber fabric products

The HSF seals have a rubber outer diameter reinforced with a strong, flexible textile wrap instead of a rigid metal case. The HSF1 (split) and 5 (solid) are the standard general purpose designs. HSF2 (split) and 6 (solid) add a radial lubrication groove. The HSF3 (split) and 7 (solid) have both radial and circumferential lubrication grooves. HSF4 (split) and 8 are dust-lip versions without grooves. HSF9 is a pressure profile, solid type only. The HSF series are mainly used in heavy-duty applications including gear drives, propeller shafts, cold and hot mill bearing chocks, pumps and paper making machines.



HSF solid HSF split

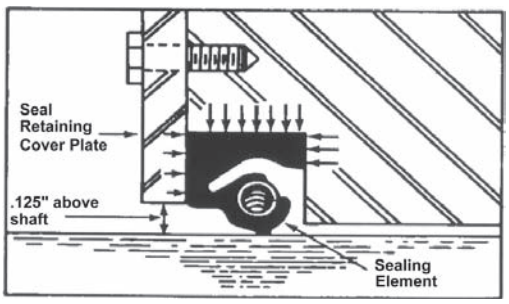
Bore depth for HSF seals should be + / - .004" (.10mm)

To attain optimum sealing performance, a retaining or cover plate is necessary to properly install and apply all HSF seals. The plate creates an axial preload that ensures reliable static sealing performance of the seal. The plate should also be designed to avoid seal distortion upon assembly. The HSF seal types are available in NBR and FKM material.

HSF seal features	Seal construction	
	Split	Solid
universal type	HSF1	HSF5
w/ radial grease ports	HSF2	HSF6
w/ radial and axial grease ports	HSF3	HSF7
dust-lip	HSF4	HSF8
pressure profile	-	HSF9

Cover plates

All HSF type seals, split or solid, are finished oversize to the housing to allow for proper compression and stability in the groove when installed behind a cover plate. This plate is either part of the original machine or is fabricated by the assembler. It should be thick enough not to bend or distort. Generally, a thickness of .250" to .500" (6.35 to 12.70mm) is sufficient. The inner diameter should be .250" (6.35mm) greater than the shaft diameter.



Check SKF for SBF and HSF size listing availability.

Large diameter seals all-rubber - solid and split-(cont.)

The plate should be secured with bolts, no more than six inches apart, on a bolt circle located as close to the seal housing bore as practical. The cover plate should be flat and the housing bore depth uniform. Splitting the cover plate at 180° will make seal replacement easier, particularly in confined areas.

To block surges of lubricant toward the seal from the inside and to protect the seal from damage from the outside, it is recommended that the cover plate I.D. be as close as practical to the shaft. Generally, .250" (6.35mm) over shaft diameter is sufficient in the presence of shaft misalignment and runout.

Sometimes, supplementary sealing needs to be added. It is impractical to machine the original housing to provide the seal cavity required. In such instances, the seal cavity may be incorporated into a new plate which is bolted into place as illustrated on the bottom right of page 34A.

Multiple seal installation

When mounting two HS split seals in one cavity, the locations of the split joints should be staggered 30° to 60°. This will minimize the chance of leakage through the joint. The splits should be located towards the top of the bore. Grease the cavity between the seals to provide lip lubrication for the outer seal.

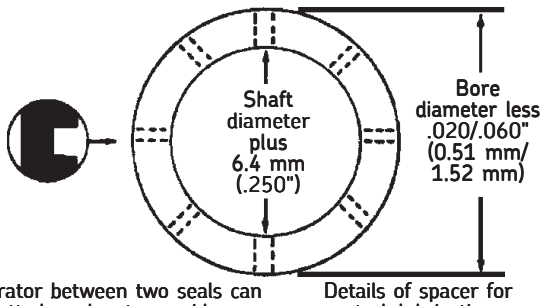
Seal separators

Where split seals are used in multiples, it is sometimes necessary to provide lubrication between the seals. For best results, a slotted washer can be fabricated and installed between the seals. It should be slotted as shown below (Illus. A) to bring lubricant between the seals through a central groove in the seal housing bore.

Quill wiper seal

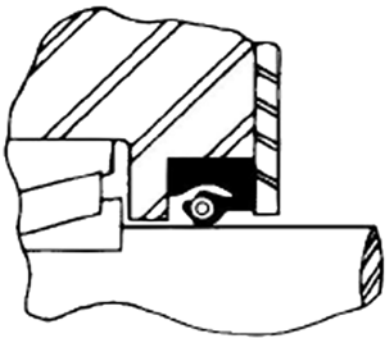
Quill wiper seal (HD1): This non-spring-loaded design features a single Duralip sealing element in a narrow width. It can be used anywhere a large diameter seal is required but width restriction is a problem. Applications include steel and aluminum mills, paper-pulp processing equipment, quarries and mines. It also is ideal as a wiper seal (linear motion) for scrap compactors, ramps and similar applications.

Illustration A

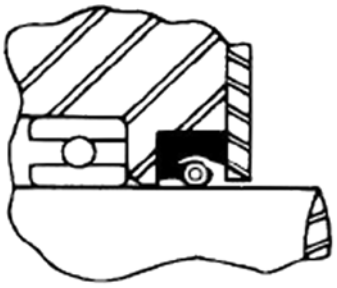


A separator between two seals can be a slotted washer to provide lubrication circulation.

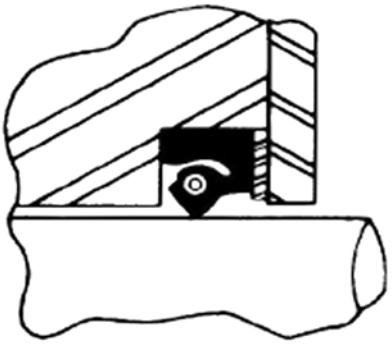
Details of spacer for central lubrication.



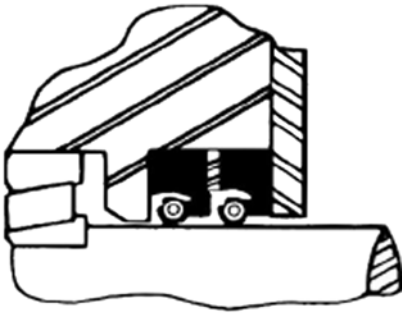
Type HS or HSF seal mounted to retain lubricant.



Type HS or HSF seal mounted to exclude foreign material.



Gasket employed to fill out bore depth.



Type HS or HSF seals in tandem arrangement for maximum lubricant retention. Note use of separator between seal elements.

V-ring seals

The V-ring seal is an all-rubber seal that mounts directly on the shaft and seals axially against a counterface, housing, seal case or similar surface.

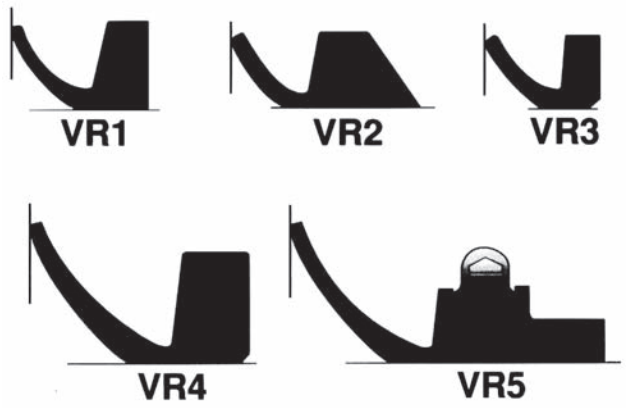
Designed with a long flexible lip, it acts like a mechanical face seal. It can retain lubricants and exclude contaminants. The V-ring can be used as the primary seal or as a secondary back-up seal.

Because it is all rubber and very elastic, it can be stretched over flanges or other assemblies for positioning without any unit disassembly. The V-ring performs well in dry applications and is capable of handling a greater amount of eccentricity and misalignment than most radial lip type seals. Axial movement should however not exceed the axial sealing range of the lip. Each V-ring can be used for a range of different shaft sizes.

In certain applications, V-rings can handle up to 10 psi on the body side only. V-rings should not be used on shafts mounted below sump level.

For greater fluid and heat resistance, LongLife V-rings are available. They can be readily identified by a purple dot marked on the seal or by use of brown seal material. Check SKF for specific availability.

The V-ring comes in five styles:



VR1 - The most common style. Available in the widest range of sizes, from .110" to 79.530" (2.79 mm to 2020 mm) shafts. Nitrile and fluoroelastomer materials. Ideal for conveyor rollers and appliances.

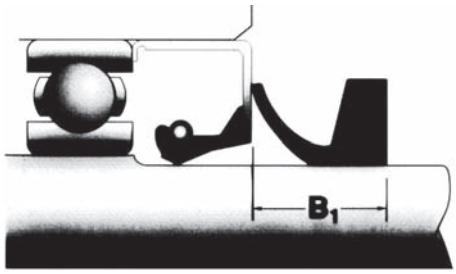
VR2 - The original V-ring, designed with a wide body and tapered heel to firmly hold the ring on the shaft. Available in all sizes from .180" to 8.270" (4.57 mm to 210 mm) shafts. Commonly used in automotive and agricultural applications.

VR3 - Very narrow axial cross-section used in pillow-blocks to replace labyrinth seals. Available for shaft sizes from 4.134" to 24.800" (105 mm to 630 mm).

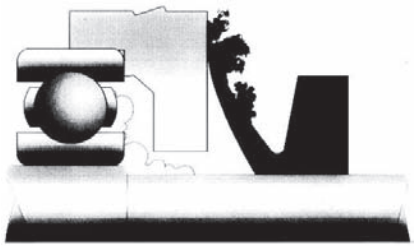
VR4 - The heavy-duty large diameter style commonly used in rolling mills as a dirt/water excluder seal. Available for shaft sizes from 11.811" to 79.134" (300 mm to 2010 mm). Can be stretched up to 2 1/2 times its diameter.

VR5 - This heavy-duty large diameter style can easily be fitted with a standard clamping band for axial fixation in high speed applications. Ideal for steel mills, ball mills and paper mills. Available for shaft sizes from 11.811" to 79.134". (Approx. 300 mm to 2010 mm).

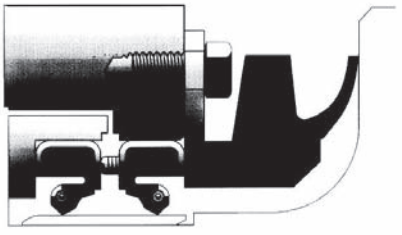
Note: V-ring types VR1, VR3, VR4 and VR5 for shaft sizes larger than 78.740 (2000 mm) are made to special order. The seal profile remains unchanged.



A V-ring can operate directly on metal cased shaft seals. The highly effective "flinger" action extends the life of the main oil seal. Accurate axial positioning (B_1) is important for optimum performance.



V-rings can also run against machine components. Stampings or simple turned surfaces (without sharp peaks or scratches) are sufficient. The roughness can range from 16 to 120 μin (0.4 to 3.0 μm) depending on the application. Steel, cast iron, cold rolled steel stampings and aluminum can be used. Higher hardness is recommended in abrasive condition. SKF brochure 457941 contains additional details.



V-rings can be combined with other components to form a highly effective "sealing system." Here, a VR4 is mounted on a bolted-on shoulder to run against a roll face. The V-ring provides improved protection for both the exclusion and oil retaining shaft seals which are running on an LDSLV4 wear sleeve.

Size listing starts on page 1. See 457941 brochure for additional information.

MVR axial shaft seals

For added protection in extremely contaminated applications, in addition to our standard V-ring; SKF also offers the type MVR. The MVR seal also seals axially and functions by combining positive lip contact with centrifugal "slinging" action. However, the MVR seal is different in that the rubber element is stretch fitted into a metal shell. The metal shell is then press-fitted onto the shaft. This shell provides excellent protection from heavy debris and it automatically accommodates high rotating speeds without auxiliary clamping devices.

Advantages/user benefits:

- The metal shell serves as a support and deflector. The rubber body and lip are protected from damage and displacement by external debris (i.e. rocks, viscous media).
- In most cases, the shell also functions as a holder that keeps the rubber lip in position during high surface speeds. No additional axial retention is required. Contact SKF regarding radial retention limits.
- Due to its compact design, narrow installation widths are possible.
- Frictional heat build-up and torque drag are very low compared to contacting radial shaft seals. As rotary speed increases, the MVR seal lip lifts off the counter-surface starting at about 2362 FPM (12 M/S) and drops to zero contact by 3937 FPM (20 M/S). Like the V-ring, the high rotary speed prevents contamination ingress while minimizing power loss.
- Service life is considerably higher than radial seals in contaminated environments and can extend to thousands of hours.

Construction:

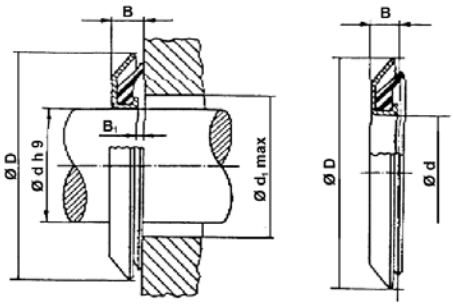
The MVR seal lip is made from an 80 durometer nitrile rubber with very good wear resistance. Other elastomers are possible in production lot orders. There are two versions of the metal shell, the MVR1 and the MVR2 with shell extension. Please refer to the illustrations below for details. The stock metal element is zinc plated cold-rolled carbon steel. Acid resistant steel similar to SAE 316 is available by special order.

Temp range:

Generally the same as NBR V-rings or -40°C to 100°C (-40°F to 212°F).

Contact SKF for information on availability.

MVR1

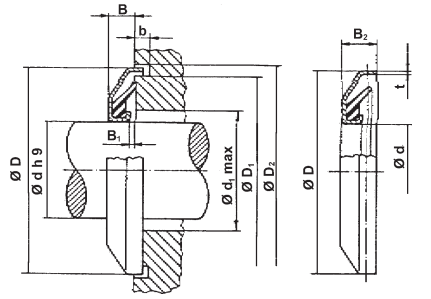


Stock No	Ø d	Ø D	B	B_1	$Ød_1$	Stock No	Ø d	Ø D	B	B_1	$Ød_1$
MVR1-10	10	24	3.5	1.0	15	MVR1-53	53	73	5.5	1.0	61
MVR1-12	12	26	3.5	1.0	17	MVR1-55	55	75	5.5	1.0	63
MVR1-15	15	30	4.0	1.0	21	MVR1-58	58	78	5.5	1.0	66
MVR1-16	16	32	4.0	1.0	23	MVR1-60	60	80	5.5	1.0	68
MVR1-17	17	32	4.0	1.0	23	MVR1-62	62	82	5.5	1.0	70
MVR1-18	18	33	4.0	1.0	24	MVR1-65	65	85	5.5	1.0	73
MVR1-20	20	35	4.0	1.0	26	MVR1-68	68	88	5.5	1.0	76
MVR1-22	22	40	4.0	1.0	28	MVR1-70	70	90	5.5	1.0	78
MVR1-24	24	40	4.0	1.0	30	MVR1-72	72	92	5.5	1.0	80
MVR1-25	25	40	4.0	1.0	31	MVR1-75	75	95	5.5	1.0	83
MVR1-26	26	40	4.0	1.0	32	MVR1-78	78	98	5.5	1.0	86
MVR1-28	28	43	4.0	1.0	34	MVR1-80	80	100	5.5	1.0	88
MVR1-30	30	47	4.5	1.0	37	MVR1-85	85	105	5.5	1.0	93
MVR1-32	32	49	4.5	1.0	39	MVR1-90	90	110	5.5	1.0	98
MVR1-35	35	52	4.5	1.0	42	MVR1-95	95	115	5.5	1.0	103
MVR1-40	40	57	4.5	1.0	47	MVR1-100	100	120	5.5	1.0	108
MVR1-45	45	62	4.5	1.0	52	MVR1-105	105	125	5.5	1.0	113
MVR1-48	48	65	4.5	1.0	55	MVR1-125	125	148	6.5	1.0	133
MVR1-50	50	70	5.5	1.0	58	MVR1-135	135	159	6.5	1.0	145
MVR1-52	52	72	5.5	1.0	60						

Special designs are available and new sizes are added gradually. At present sizes with outer diameters to 250mm are manufactured.

*** Check for availability on all stock numbers listed above.**

MVR2



Stock No	Ø d	Ø D	B	B_1	B_2	b	$Ød_1$	$ØD_1$	$ØD_2$	t
MVR2-15	15	32	4.0	1.0	6.0	3	21	29	34	0.5
MVR2-17	17	34	4.0	1.0	6.0	3	23	31	36	0.5
MVR2-20	20	37	4.0	1.0	6.0	3	26	34	39	0.5
MVR2-25	25	42	4.0	1.0	6.0	3	31	39	44	0.5
MVR2-30	30	48	4.5	1.0	6.5	3	37	45	50	0.5
MVR2-35	35	53	4.5	1.0	6.5	3	42	50	55	0.5
MVR2-40	40	58	4.5	1.0	6.5	3	47	55	60	0.5
MVR2-45	45	63	4.5	1.0	6.5	3	52	60	65	0.5
MVR2-50	50	72	5.5	1.0	7.5	3	58	68.5	74	0.75
MVR2-55	55	77	5.5	1.0	7.5	3	63	73.5	79	0.75
MVR2-60	60	82	5.5	1.0	7.5	3	68	78.5	84	0.75
MVR2-65	65	87	5.5	1.0	7.5	3	73	83.5	89	0.75
MVR2-70	70	92	5.5	1.0	7.5	3	78	88.5	94	0.75
MVR2-75	75	97	5.5	1.0	7.5	3	83	93.5	99	0.75
MVR2-80	80	102	5.5	1.0	7.5	3	88	98.5	104	0.75
MVR2-85	85	107	5.5	1.0	7.5	3	93	103.5	109	0.75
MVR2-90	90	112	5.5	1.0	7.5	3	98	108.5	114	0.75
MVR2-95	95	117	5.5	1.0	7.5	3	103	113.5	119	0.75
MVR2-100	100	122	5.5	1.0	7.5	3	108	118.5	124	0.75

Special designs are available and new sizes are added gradually. At present sizes with outer diameters to 250mm are manufactured.

*** Check for availability on all stock numbers listed above.**

See 457941 brochure for additional information.

PTFE seals®

SKF PTFE seals are assembled, made-to-order radial shaft seals based on PTFE (polytetrafluoroethylene). This thermoplastic material offers a solution for designers and engineers faced with operating conditions that exceed the capabilities of rubber compounds. PTFE has enhanced capabilities in several key seal performance areas:

Extreme temperature: PTFE can accept a wide thermal range from –200 to over 500 °F (-128 to 260 °C). However, temperature must be considered in the context of the total operating conditions.

Chemical resistance: PTFE is chemically inert, which means resistance to degradation by lubricants or agents that can destroy other materials. This includes synthetic oils, acids and oxidizing agents.

High speed: SKF PTFE seals offer reliable sealing performance even where surface speeds exceed 6,000 fpm (30 m/s). Highly specialized versions have operated successfully in excess of 15,000 fpm (76 m/s).

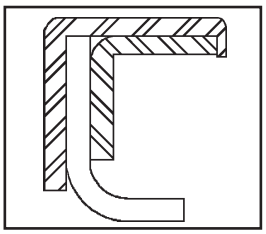
Pressure: Appropriate PTFE seal designs can operate over 500 psi (35 bar). Where lubricating oil is present, a PV factor (fpm x psi) in excess of 250,000 can be accommodated.

Other customer benefits of special PTFE seal designs include dry running capability, acceptance of dynamic run-out of .150" (3.8mm) TIR and the possibility of extremely low torque drag.

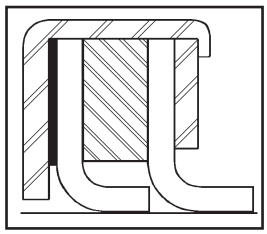
SKF PTFE seals consist of a metal outer diameter case that press-fits into a bore. Various inner metal components locate and retain one or more PTFE elements depending on the application conditions. Internal gaskets prevent by-pass leakage. Different PTFE blends and fillers are matched to the specifications, and can include glass, carbon, graphite, moly and plastic reinforcers and friction modifiers. The metal components are formed by various methods. They are available in cold rolled steel, stainless, titanium and high strength alloys such as Hastelloy and Inconels plus non-ferrous metals including aluminum.

The assembled design permits a wide range of inch and metric sizes from .500 to 50.00 inches (12.7-1270mm). Seal width and cross-section ranges are determined by the seal design. Small or large production runs are possible with minimal or no tooling charge. Larger quantities can be more economically handled by using stampings, many of which are already available.

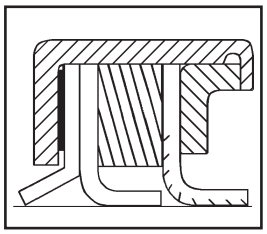
PTFE seals require a high shaft hardness (up to 65HRc depending on conditions) for successful operation. Heat treatable steels and cast iron are preferred. Hard nickel or chrome plating or ceramic coating may be needed in corrosive environments. Plunge grinding with no lead is recommended. Standard finish is 12-20 min Ra (.30-.50 mm) in lubricated service, 6-10 Ra min (.13-.25 mm) in vacuum or dry running conditions. Due to their design, PTFE seals need special handling and installation techniques to avoid damage. In some cases assembly cones are helpful. SKF can assist with assembly tool design and information.



General purpose design for lubricated media and moderate pressure and surface speeds.



Pressure design for service to 500 psi (35 bar). Variations for vacuum and high shaft speeds.



Seal for oil retention with high surface speeds, pressure and protection from outside contamination.

PTFE seals® -(cont.)

Installation

Typically PTFE seal lip elements are fabricated with interference to the shaft and are not as flexible as rubber. Special care should be taken during installation to avoid damaging the lip. If the seal lip will be oriented facing away from the bearings (i.e. for exclusion or vacuum applications) and the shaft has been prepared with a correct chamfer or radius, then the seal can usually be pressed into the bore and the lip will ride up over the nose of the shaft without difficulty. However, when installing the seal with the lip facing in (i.e. to retain lubricant) then an installation cone or bullet tool is recommended. The tool is fabricated so that it slides over the nose of the shaft and provides a smooth "ramp" to expand the seal lip to the shaft diameter. See figure 1 below. Normal press-in practices for the seal outer diameter into the bore should be observed (See page 48A).

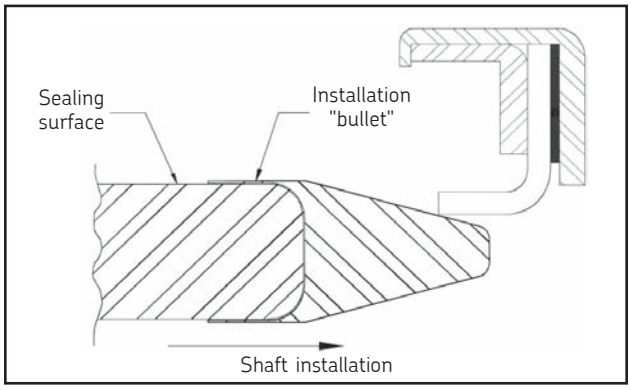


Figure 1

Size range

Most PTFE seals are made to order and assembled from formed metal components and machined lip elements. Due to the flexibility of this process, a wide range of seal sizes and designs to solve many application conditions are possible. The table below can be used as a general reference for hardware dimensions. Normally no tooling charges are necessary.

Plastic seals solve extreme service problems

Problem:

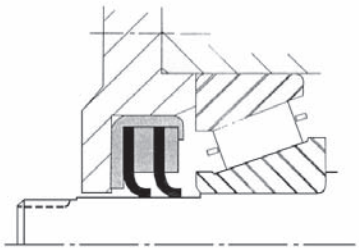
Intense demand for higher productivity has created extreme service conditions for motors, pumps, gearboxes, clutches and drives in metal and ore crushing operations; food processing and printing plants; pump and paper facilities and other heavy industrial applications. Premature shaft seal and equipment failures result from higher running speeds, elevated operating temperatures, harsh solvents, and lubricants that are chemically aggressive to common seal materials.

Solution:

Switching to assembled seals with lip elements based on polytetrafluoroethylene (PTFE) or other plastics can greatly extend service life and extend maintenance intervals in the most severe service environments including:

- Surface speeds in excess of 12,000 FPM (60.90 m/s)
- Very wide temperature range of -200 to 575°F (-129 to 301.7°C)
- Pressure capability in excess of 250,000 PV (shaft speed in SFM x pressure in psi)
- Acids, bases, solvents, dry running conditions

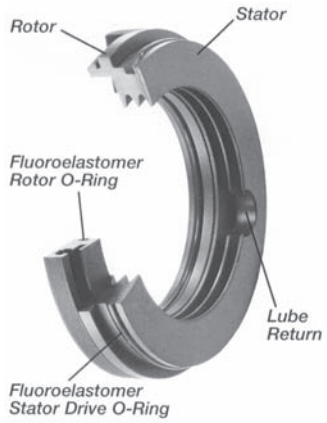
These seals are usually custom manufactured based on specific operating data, with cases formed of carbon, aluminum, stainless grades, Inconels, Hastelloy and other metals depending on requirements. In some cases, a solid seal eliminates the need for a metal case at all. However, optimum functioning PTFE or plastic seals require a high quality, lead free surface with higher than usual hardness, often 50 HRc or more.



	Shaft	Cross-section by shaft range	Width
Seal size	0.250 to 60.000" (6.35 to 1524.00mm)	0.250-2.000" (6.35-50.80mm) = min. 0.156" (3.96mm) 2.001-4.000" (50.82-101.60mm) = min. 0.188" (4.78mm) 4.001 - 10.000" (101.63-254mm) = min. 0.250" (6.35mm) 10.001-20.000" (254.02-508mm) = min. 0.375" (9.53mm) >20.001 (508.03mm) = 0.438" (11.13mm)	Depends on the style Single lip standard is min. 0.090 to 2.000" (2.29 -50.80mm) or wider for some designs. Double lip min. 0.250" (6.35mm)

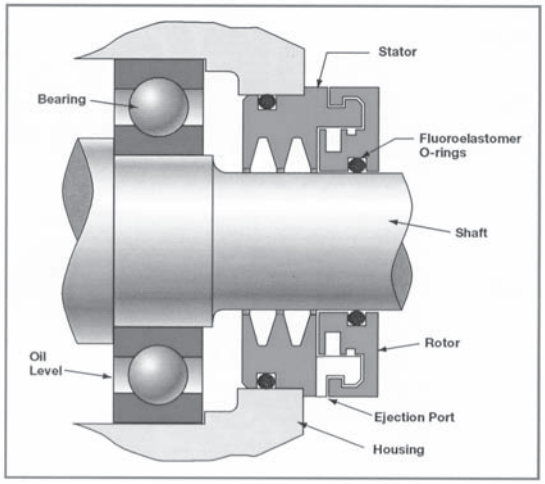
Defender™ bearing isolators

The best solution for some demanding applications is a Defender™ bearing isolator. Bearing isolators have provided outstanding protection for bearings and mechanical components for over 15 years. These labyrinth type seals have distinct advantages over most contacting lip seals. The Defender's proprietary design results in very effective exclusion ability. Instead of a contacting radial lip element, they utilize a labyrinth, or maze like, internal structure to collect and eject contamination before it can enter a mechanism. Therefore they can protect bearings and internal machine components from extreme levels of fluid spray and particle contamination.



Typically these seals have a stator pressed into housing and a rotor fixed to and turning with the shaft. The two components are locked together for easier assembly and to prevent handling damage. However, they are non-contacting which minimizes seal wear. Additional benefits are high reliability and extended service life along with very low torque drag and heat build-up. SKF's Defender™ bearing isolator uses PTFE as the structural body material along with fluoroelastomer o-rings for chemical and temperature resistance (up to 400° F / 204° C in special version). High surface speeds to 5000 feet per second (25 M/S) can be accepted. The standard Defender™ is available for inch and metric shaft diameters from .500 to 6.00" (12.70 - 152.40mm) and can be produced to larger sizes.

A special edition was developed for split pillow block bearing housings. It features a bronze metal carrier which replaces the typical triple ring stock seal and fits into the seal groove machined into the top cap and bottom of the bearing. The bronze carrier is centered in the groove with a PTFE pad which prevents bypass leakage or contamination ingress and is compatible with either square or tapered seal ring grooves. A Defender™ isolator is pressed into the outside of the carrier to seal the shaft. The carrier and seal assembly is then free to pivot and align to the shaft, not the housing. This permits the seal to accept the full range of misalignment offered by the bearing without causing contact and destructive wear within the seal itself. Bearing oil or grease lubricant is retained by collection grooves on the inside of the carrier. These Defender™ seals are available for many standard SAF, SNL and other popular inch and metric split bearing housings.



General specifications

Shaft range:	0.500" to 6.00" (12.70 to 152.40mm) basic sizes (Larger sizes possible on quote basis)
Shaft speed:	up to 5,000 fpm (25 m/s)
Shaft & Bore Tolerance:	±0.002" (0.05mm)
Temp range:	-40°F to 250°F (400°F specials) -40°C to 121°C (204°C specials)
DRO:	0.020" TIR (0.51 mm)
Axial limit:	±0.015" (0.38 mm)
Pressure allowance:	0 psi

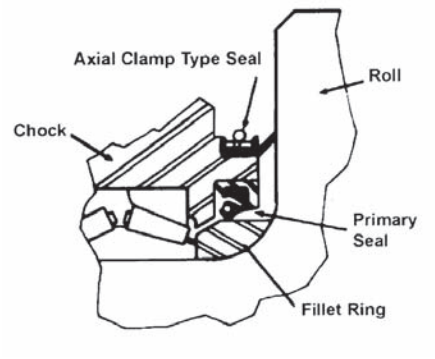
Standard design

- Carbon/graphite filled PTFE std. under 4.00" shaft, stainless steel filled to 6.000" and beyond.
- .690" OAL with .316" insertion into bore.
- Shaft sizes under 1.750" have diametric cross-sections between .700" - 1.00".
- Over 1.750" have diametric cross sections between .700" - 1.250".

Defender™ bearing isolators can add productive life to pumps, meters, fans, blowers, pillow-blocks, conveyors, rollers, turbines, centrifuges, gearboxes, or virtually any rotating equipment in your plant.

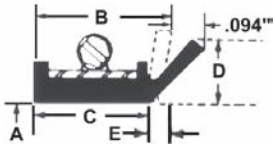
For custom specifications contact SKF for application assistance and specification details.

Axial clamp seals selection and installation

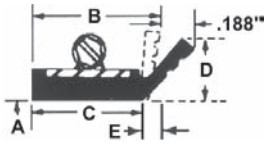


The SKF axial clamp seal (split) is designed especially for large diameter applications where a stationary shroud device is required to exclude water or other foreign material from the primary seal/bearing area. For contaminant drainage and installation ease, a 1" (25.40 mm) installed gap is provided. Best results are obtained when the gap is placed in the 6 o'clock position. Butt-joint seals (no gap) are available upon request. This compact nitrile seal operates against a rotating step or roll face. A stainless steel screw type clamp holds the seal securely in place. Axial clamp seals may be used in vertical or horizontal installation.

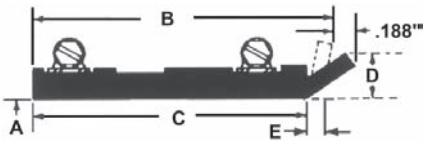
Axial clamp seals come in three styles - style 1, 3 and 4, to cover various operating ranges.



Style 1: The most commonly used configuration, with a flat face sealing lip. Maximum operating interference is .094" (2.38 mm).



Style 3: - Same as style 1 except the lip face is grooved to trap contaminants that may start to pass through the face area. Maximum operating interference is .188" (4.8 mm).



Style 4: - Extra wide, double clamp design. Maximum operating interference is .188" (4.8 mm).

Unlimited sizes

Axial clamp seals can be furnished in sizes from 6" to 180" (152 mm to 4572 mm) shoulder diameter.

Installation

Shipped in a rolled up coil, the assembly is placed around the shaft onto the shoulder or step and the clamp is connected. The shoulder must provide a fixed and stationary stop for the axial clamp seal. The clamp is tightened to no more than 60 inch-lbs. (6.779 newton-meters) of torque. Where no shoulder exists but a clamp type seal is desired, SKF can propose a variety of installation alternatives for fabricating a supplementary seal housing.

Operating ranges

Style no.	1		3		4	
	Tolerances	Range	Tolerances	Range	Tolerances	Range
A Shoulder diameter	±0.063"	6" to 180"	±0.063"	6" to 180"	±0.063"	12" to 45"
B Operating width	±0.031"	1.125" to 1.500"	±0.063"	0.875" to 1.000"	±0.031"	1.501" to 3.750"
C Shoulder width	±0.125"	.688" to 1.063"	±0.125"	0.688" to 0.812"	±0.125"	1.063" to 3.312"
D Lip height	±0.031"	0.500"	±0.063"	0.594	±0.031"	0.500"
E Operating/ shoulder width difference	0.437"		0.188"		0.437"	

Size listing starts on page 1.

Heavy-duty DF® seals

SKF's HDDF seals are mechanical seals used for positive sealing. They are recommended for low speed, severe service applications requiring positive lubricant retention, contaminant exclusion and long life. Initially designed for off-the-road vehicles, they are also recommended for use in mixing or grinding units, mills or other mechanisms where abrasives would cause premature failure of general purpose seals.

Extensive laboratory testing has proven the heavy-duty seal's capabilities. These tests indicate that the heavy-duty DF seal performs dependably at least ten times better than previous soft-face designs, and three times longer than other metal face designs. Used on tractors in the tropics and the arctic, heavy-duty DF seals have performed continuously for thousands of hours with no failures or leaks.

Applications

The heavy-duty DF seal operates on the principle that two lapped mating surfaces, a sealing ring and a mating ring, rotating one against the other at right angles to the shaft (but not in contact with the shaft), form an ideal leakproof seal. With the high cost of maintenance downtime, improved bearing protection is critical. Using a seal with tested, improved performance, such as the heavy-duty DF seal, is a justifiable alternative to costly downtime.

Seal construction

Comprised of four components, the heavy-duty DF seal has two identical, high alloy, corrosion resistant steel sealing rings carefully lapped and mated, and two similar, opposed Belleville washers of specially compounded nitrile elastomer, one with a patented retainer lip. The washers provide uniform face loading throughout life of the seal, and provide positive sealing at the inner and outer diameters. The seal fits easily into conventional straight-wall or square-bore housings, with neither special machining nor polishing of the bore required.

Prior to installation, the seal is unitized as a one-piece cartridge unit for convenient handling, shipping, storing and mounting.

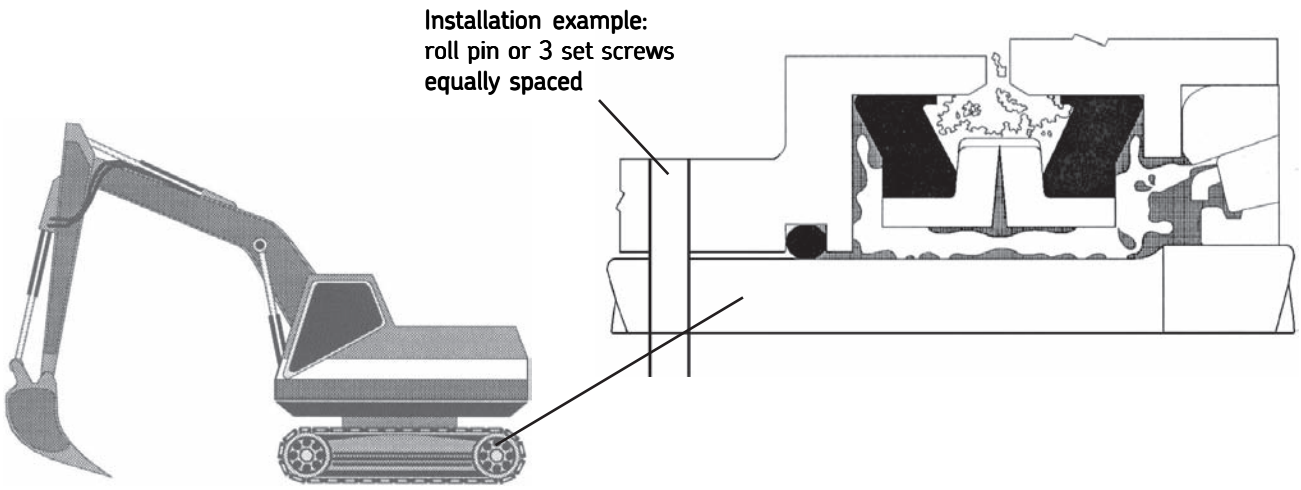
Installation

The one-piece DF seal installs by hand. No special tools or jigs are required. A small interference lip on the O.D. edge of one of the washers holds and centers the entire seal in the bore while the assembler installs the companion bore or flange.

Recommended operating conditions

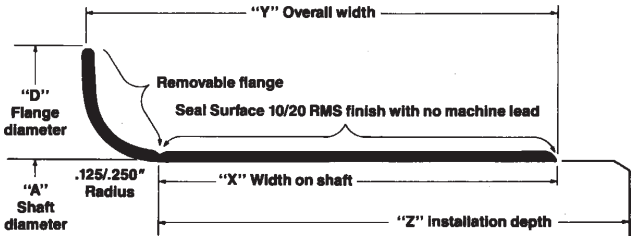
Speed ..... Up to 750 FPM★
Lubricant ..... 10W40 oil recommended; oil level should be to center line of shaft
Pressure (internal) ..... Up to 50 psi★
Temperature ..... -65° to 225°F (-54° to 107°C)

★Limiting conditions for continuous operation are 350 FPM (107 MPM), and 25 psi. If grease is used speed should be limited to 150 FPM maximum.



Size listing starts on page 1.

Speedi-Sleeve® selection and installation



SKF Speedi-Sleeves

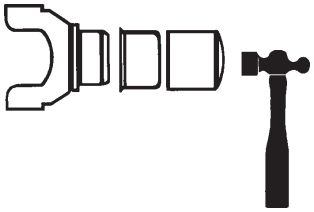
When a new seal cannot compensate for excessive damage in small diameter shafts, select an SKF Speedi-Sleeve. This ultra-thin wear sleeve provides a snug, leak-proof fit on shafts up to 8" (203 mm) in diameter.

Excessive water, dirt, heat, lack of lubrication or high shaft speed can all cause a sealing lip to groove the shaft and ultimately create a leak. Speedi-Sleeve is the cost-effective alternative to resizing, metalizing or replacing the severely damaged surface. It installs easily, without excessive machine downtime.

Unlike conventional wear sleeves which add bulk to the shaft and require a change in seal size, Speedi-Sleeves fit snugly with only .022" (.6 mm) added to shaft diameter. The result is a leak-proof, corrosion-free sealing surface that will not require a change in seal size.

Speedi-Sleeve® Gold

Speedi-Sleeve Gold is an enhanced version of the popular Speedi-Sleeve, which offers improved resistance to abrasive wear. Designed to be used in applications where extended seal system life is needed, Speedi-Sleeve Gold bridges the performance gap between the regular Speedi-Sleeve and expensive custom shaft treatments. A thin metallic film applied to the base stainless steel imparts a gold color and significantly increases durability and surface hardness (to 2300 Vickers). The Gold version is particularly effective in high dust and grit environments. Yet installation is as easy as the original Speedi-Sleeve and the same seal size can still be used. Speedi-Gold is available from stock for dozens of shaft sizes or run from production in small quantities. The Gold sleeves are noted by a ★ in the size listing sections of this catalog. Also see publication #457027 for additional information.



Construction

Speedi-Sleeve is a highly engineered, precision part of SAE 304 stainless steel. Its surface is factory finished to 10-20 micro-inches (.25 - .50 Micrometers) Ra (arithmetic average) with a machine lead angle of zero ±0.05°. Speedi-Sleeve requires no expensive shaft preparation or machining before installation. Once in place, it provides a sealing surface that is superior to most original shaft finishes and materials.

Selection

Correct size selection requires that three measurements be taken and averaged. Measure the shaft diameter just ahead of the wear path (not in the track worn by the seal) at three positions: 12-6 o'clock, 2-8 o'clock and 4-10 o'clock. The average of these readings will compensate for an out-of-round shaft.

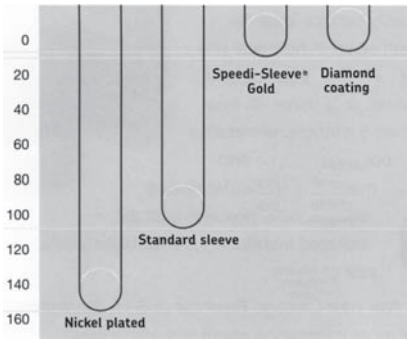
Compare your average diameter with the size ranges in the Speedi-Sleeve selection charts. When this diameter falls within a range, there is sufficient press-fit built into the sleeve to keep it properly positioned. Cement, such as a powdered metal epoxy filler is necessary only to fill deep grooves or scratches.

If shaft grooves do not require filling, apply a light layer of non-hardening sealant to the inner surface of the sleeve.

Shaft diameters a few thousandths under the minimum may be sleeved if the Speedi-Sleeve is cemented into place. Diameters larger than the maximum can be sleeved if the shaft is first machined to a size within the cataloged range, with a finish of 125 micro-inches Ra, or smoother.

Abrasion resistance

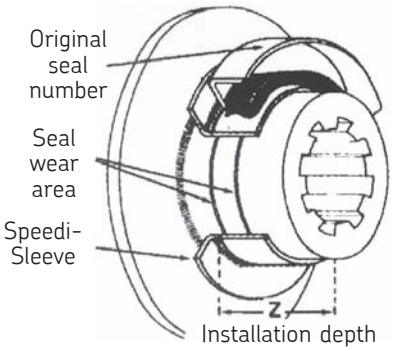
Comparison of various Speedi-Sleeve® coatings



Testing in highly abrasive conditions demonstrates how the hardened surface of Speedi-Sleeve® Gold resists wear.

Size list starts page 1. See 457027 brochure for additional information.

Speedi-Sleeve® installation



Installation

Each Speedi-Sleeve is built with a removable installation flange. Also included is a tool for easy "pull-on" installation. Pull-on installation avoids the possibility of distortion from heating or other installation methods. The Speedi-Sleeve is designed to install without removing the shaft, for reduced equipment downtime.

Only a minimum of surface preparation is required. First, clean the old seal surface and file down any burrs or rough spots.

Note how far back the sleeve must be positioned to cover the old seal's wear tracks. Measure to a convenient point or mark directly on the shaft.

Speedi-Sleeves may be installed to any depth required. Installation depth (see illustration) indicates the minimum distance from the end of the shaft that will be resurfaced when installed with the standard tool. If the sleeve must be positioned further down the shaft than the kit installation tool permits (the "Z" installation depth dimension) then a custom driver tool can be fabricated based on the desired depth. This can be a length of plastic or metal tubing or similar material. Reference the inner diameter to match the driver tool supplied with the kit. This will insure proper contact with the base of the sleeve flange. Square and deburr the ends.

If the shaft is deeply scored, fill the groove with powdered metal epoxy filler and install the Speedi-Sleeve before the filler hardens, otherwise apply a non-hardening sealant to shaft.

Drop Speedi-Sleeve into the installation tool end so that only the flange projects. Note that the flanged end of the sleeve goes on the shaft first. Then, gently pound the center of the tool until the sleeve reaches the point which was measured. Use a wood block or large face mallet on larger sizes to avoid the possibility of caving in the back of the installation tool.

If clearance is required after installation, the Speedi-Sleeve flange can be removed easily. Prior to installation, use side cutters to cut through the flange to the tear groove (pre-cut line). Pry the flange away from the seal surface horizontally along the shaft axis after the sleeve is in position. The flange will separate along the tear groove.

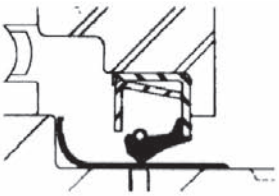
Removal

Speedi-Sleeve can be removed in a number of ways depending upon personal preference and/or shaft configuration.

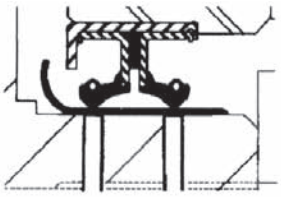
Suggested methods are:

1. The application of heat will often cause the sleeve to expand sufficiently to permit removal.
2. A pair of wire cutters may be effective to "rip" or tear the sleeve from the shaft, by starting at or near the flange using a twisting motion.
3. With the flange removed, the sleeve may be stretched by employing a small ball-peen hammer to "peen" one or more lines across the full width of the sleeve.

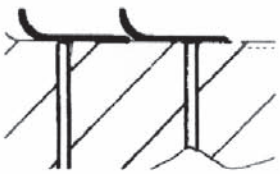
Note: Speedi-Sleeves are not designed to pass over ports, keyways or splines. If these can not be avoided, their diameters should be reduced. Taping, filling or other temporary covers are not reliable solutions.



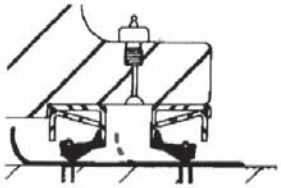
Speedi-Sleeve with standard single-lip seal.



Speedi-Sleeve with combination lip seal.



Two sleeves for double seal installation.



Flange removed for double seal installation.

Wear sleeves selection and installation

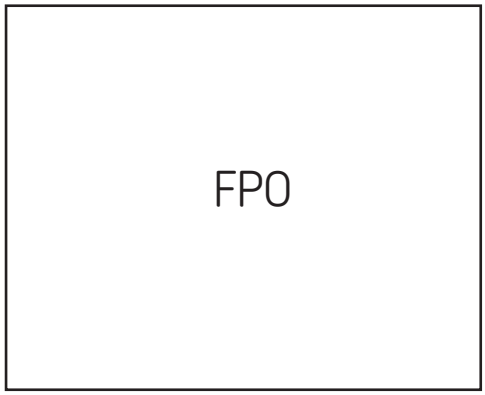
Continuous contact between a rotating shaft and a seal always causes shaft polishing friction. As demands increase in the sealing environment, wear can accelerate. Dust, heat, dirt, shaft speed and lack of lubrication can all cause a seal lip to groove the shaft. The ultimate result is a leak.

The shaft surface can groove and wear so much that installing a new seal will no longer eliminate the leak, nor compensate for the damage.

That's where SKF wear sleeves can help. Applied over the damaged shaft, a wear sleeve makes the shaft usable again. It eliminates shaft leaks and smooths out damaged surfaces at a cost much less than the expense of remetalizing or replacing the shaft.

SKF offers two types of wear sleeves

- For shafts 8.313" (211.50 mm) and larger, SKF's large diameter wear sleeves repair shafts and coordinate in size with large diameter seals.
- For shafts 8" (203 mm) and smaller, SKF's Speedi-Sleeve - so thin it requires no change in seal size - is the fast, permanent solution. See page 43A for detailed information.
- Both large diameter wear sleeves and Speedi-Sleeves are easily installed, cost-effective alternatives to rebuilding damaged shafts. They are explained in depth on the following pages. For convenience, SKF also offers seal and wear sleeve kits. All styles, sizes and kits for SKF wear sleeve are listed in the complete numerical index (pgs. 232-363).



SKF large diameter wear sleeves-Installation

Polishing friction and shaft scoring from abrasive contamination during operation between a rotating shaft and a seal lip makes severe shaft damage a common occurrence. Without checking the problem, premature leakage can occur, reducing service life and production efficiency.

SKF's large diameter wear sleeve provides a high quality sealing surface without shaft replacement. These heavy-duty sleeves are used extensively on large 8.313" to 45.000" (211.15-1143.00mm) diameter shafts in primary metals mills, rolling mills, chemical and mineral processing plants, crushers and power generation applications.

Construction

Standard LD sleeves are custom made from high quality SAE 1008 steel of approximately Rockwell B96 hardness. The sleeve is specially finished to provide a high quality sealing surface for radial shaft seals. A hard chrome plating with a relative surface hardness of HRc 40-65 is applied to provide wear and corrosion resistance. Other sleeve materials and properties can be specified according to the application conditions and quoted upon request.

Selection tables

Dimensions: Standard wear sleeve thickness is .094" (2.4 mm). Two styles are available:

LDSLV3 is designed with a flange to provide assistance in final positioning of the sleeve. It has a sealing surface width .250" (6.35mm) narrower than the overall sleeve width. The flange adds a nominal 1.000" over the shaft diameter.

SKF style	Shaft range [1]	* Wd min.	* Wd max
LDSLV3 w/flg	8.313" -29" 211.50mm-736.6mm	.688" 17.5mm	2.500" 63.5mm
	30" -45" 762mm-1143mm	1.000" 25.4mm	2.500" 63.5mm

*Overall (1.5" to 2" max. at 45" shaft diameter; 38.1mm to 50.8mm at 1143mm shaft diameter)

LDSLV4 is the same except without the flange. This version can be made slightly narrower.

SKF style	Shaft range [1]	* Wd min.	* Wd max
LDSLV4 w/o flg	8.313" -29" 211.50mm-736.6mm	.500" 12.7mm	2.500" 63.5mm
	30" -45" 762mm-1143mm	.750" 19.1mm	2.500" 63.5mm

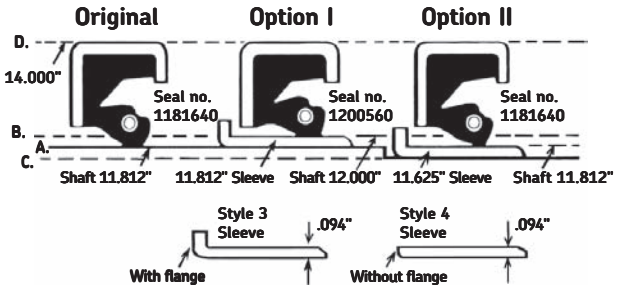
*Overall (1.5" to 2" max. at 45" shaft diameter; 38.1mm to 50.8mm at 1143mm shaft diameter)

[1] Contact SKF for large diameter sleeves outside the primary shaft range.

Wear sleeves selection and installation-(cont.)

All SKF large diameter wear sleeves are designed for heated slip-fit installation. For most applications, install sleeves by using a bearing heater (either hot air, hot oil or electric induction). For proper expansion, heat the sleeve to approximately 350°F (177°C). Caution should be used not to exceed 400°F (204°C).

Note: since the mass of the cold shaft is considerable greater than the mass of the hot sleeve, caution should be exercised as the sleeve temperature will drop very rapidly as it comes in contact with the shaft.



A. Original shaft diameter
B. Original shaft with sleeve installed
C. Original shaft machined for sleeve installation
D. Bore diameter

LDSLV3 is designed with a flange to provide assistance in final positioning of the sleeve. An initial heated slip-fit is still required. If the sleeve should cool too quickly when slipping onto the shaft, the flange may assist in final positioning or to square it on the shaft. Use a hydraulic press and tool which clears the sleeve O.D. Bring pressure to bear at the base of the flange in at least three equally spaced locations. Such axial sleeve movement should be held to a minimum to avoid flange deformation.

LDSLV4 wear sleeves, designed without a flange, also must have a heated slip fit. Positioning on the shaft should be done carefully since attempts to move the sleeve from the initial location is not recommended as damage to the O.D. chamfer, and consequently to seals passing over it, can occur.

Installation tables

Option I - No shaft machining is required. However, a seal designed for a nominal shaft size .188" (4.8 mm) larger than the original must be used. SKF's broad size coverage and wide range of shaft/bore combinations for large diameter seals makes this the more popular installation method.

Option II - Before installation, the shaft must be machined to .188" (4.8 mm) under its original size and finished to 10-125 micro-inches Ra (arithmetic average), to allow use of the same size original seal. This method will eliminate the problems of creating new seal numbers and additional seal inventories.

Shaft		Sleeve (metal I.D.)	
Diameter	Tolerance	Nominal press fit	I.D. tolerance
Up to 2.000" Up to 50.8mm	±.001" .025mm	.005" .127mm	.002" .051mm
2.001" to 3.000" 50.8mm to 76.2mm	±.001" ±.025mm	.005" .127mm	+.002" -.003" +.051mm -.076mm
3.001" to 5.000" 76.2mm to 127mm	±.0015" ±.038mm	.005" .127mm	+.002" -.004" +.051mm -.102mm
5.001" to 7.000" 127mm to 177.8mm	±.0015" ±.038mm	.006" .152mm	+.002" -.004" +.051mm -.102mm
7.001" to 12.000" 177.8mm to 304.8mm	±.002" ±.051mm	.007" .178mm	+.002" -.005" +.051mm -.127mm
12.001" to 20.000" 304.8mm to 508mm	+.004" -.002" +.102mm -.051mm	.008" .203mm	+.002" -.008" +.051mm -.203mm
20.001" to 40.000" 508mm to 1016mm	+.008" -.002" +.203mm -.051mm	.008" .203mm	+.002" -.008" +.051mm -.203mm
40.001" to 60.000" 1016mm to 1524mm	+.010" -.002" +.254mm -.051mm	.008" .203mm	+.002" -.010" +.081mm -.254mm

Note: Please contact us for recommendations concerning large diameter wear sleeves that will operate in systems with sustained oil sump temperatures greater than 170°F (76.7°C) and surface speed in excess of 3950 FPM (20.07 M/S).

Troubleshooting

Performance improvement through proper installation

Large diameter solid or split seal performance is optimized with proper installation and operating practices. Listed here are a number of recommendations and comments which will aid in both installation and troubleshooting. See pages 49A-50A for additional installation instructions.

Complaint	Explanation
1. Seal looks too big.	1. In a free state (uninstalled) and with the spring removed, SKF HS solid and HS Split seal outside diameters are .5%-2% larger than the seal housing bore.
2. The all-rubber seal is wider than the one it's replacing.	2. To assure cover plate compression, the thickness of an all-rubber seal should exceed bore depth by .016" (.41 mm-1.02 mm).
3. Split seal ends overlap when installed.	3. Seal ends should be butted at the start of installation. Do not press the seal into the bore proceeding from one end to the other.
4. Split seal ends do not come together when installed.	4. Lubricate the shaft and bore, or seal inner and outer diameters, before pressing the seal into the bore. If a gap exists, compare bore and seal diameters for size discrepancies. Larger cross-sections have their ends cut square and may have a small angled gap which is closed by the cover plates compression. Smaller cross-sections are cut with angled ends and tend to butt square in the bore. Compression may eliminate the gap, so check after the cover plate has been tightened. Note: Due to a unique control wire design that permits easier installation, HS7 seals may have a gap at the joint even after the cover plate is installed. Special attention to place the gap at the 12 o'clock position during installation is necessary.
5. Seal wears out too fast.	5. Check the shaft diameter; it may be larger than originally thought. Lubricate the seal at installation. Adjust the bearings to reduce shaft run-out. Reduce pressure by venting and oil draining to carry lubricant from seal cavity to the reservoir. Consider a seal with improved materials, like Duralip, to resist abrasion.
6. Wear is all on one side of seal.	6. Try to correct shaft-to-bore housing alignment.
7. Seal lip is hardened.	7. Be sure the seal is adequately lubricated during operation. Eliminate excess pressure. Either reduce temperature or upgrade the seal material.

Seal optimization check list

You can help extend the life of all types of seals by checking these conditions:

- ☐ Never re-use a worn seal.
- ☐ Seal stored properly in cool area (not work area) at 40-70% humidity.
- ☐ Packaging intact, seal lip not distorted by handling or hanging on a peg or nail.
- ☐ Installation tools correct.
- ☐ Area clean and free of grit or contamination.
- ☐ Correct seal for speed.
- ☐ Correct seal for media.
- ☐ Check operating temperature against lip material specifications.
- ☐ Lubricant, including additives, must be compatible with seal lip material (Check compatibility table or contact your SKF rep.)
- ☐ The leading edge of the shaft should be chamfered. Shaft finish should be 9-17 micro inches Ra (.23 - .43 micro meters) with a machine lead angle of 0 ± 0.05 degrees.
- ☐ Shaft hardened to Rockwell C 30 or harder.
- ☐ Tolerances for shaft diameter must be within range.
- ☐ Shaft-to-bore misalignment within .010" (0.25 mm)
- ☐ Dynamic run-out within .010" (.025 mm) TIR.
- ☐ Whenever possible equipment should be vented to the atmosphere to help prevent pressure build-up.

Installation tips

Installation checklist

1. *Check the bore*. Remove any burrs from the leading edge. The inside corner of the bore should have a maximum radius of .031" (.78mm).
2. *Check the shaft*. Remove burrs, nicks, grooves and spiral machine marks (machine lead).
3. *Check the shaft end*. Remove burrs or sharp edges. If the shaft enters the seal against the sealing lip, the end must have a radius or chamfer or a special installation tool can be used.
4. *Check splines and keyways*. Sharp edges should be covered with a lubricated assembly sleeve, shim stock or tape to protect the seal lip.
5. *Check the dimensions*. Make sure that shaft and bore diameters match those specified for the seal being used.
6. *Check for part interference*. Watch out for other machine parts that might rub against the seal and cause friction and damaging heat.
7. *Check the seal*. Damage may have occurred before installation. A sealing lip that is turned back, cut or otherwise damaged should be replaced.
8. *Check seal direction*. Make sure the new seal faces in the same direction as the original one. Generally, the lip faces the lubricant or fluid being retained.
9. *Pre-lubricate the sealing element*. Before installation, wipe the sealing element and shaft with the lubricant being retained. While the O.D. of a metal clad seal can be lightly lubricated to ease installation, the O.D. of a rubber covered seal should always be lubricated. (Fig. A)
10. *Select the correct installation tool*. Press-fitting tools should have an outside diameter approximately .010" (.25mm) smaller than the bore size. For best results, the center of the tool should be open so pressure is applied only at the seal outer edge.
11. *Never hammer directly on the surface of the seal*. Use proper driving force such as a soft-face tool arbor press or soft workpiece (wood). To avoid cocking the seal, apply force evenly around the outer edge.
12. To avoid cocking the seal, bottom out the tool on the shaft (Fig. B), the housing (Fig. C, E) or bottom out the seal in the housing cavity (Fig. D).

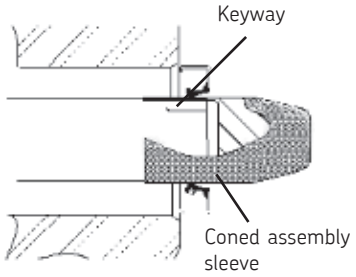


Fig. A *A lubricated assembly sleeve prevents damage to seal lip from keyways, splines & unchamfered shafts.*

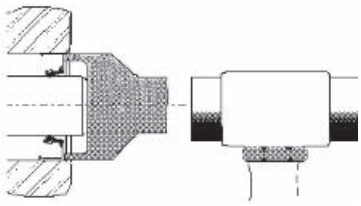


Fig. B *Through bore - installation tool bottoms on shaft.*

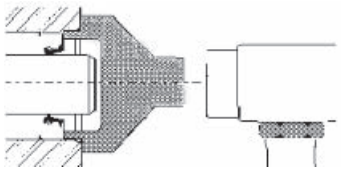


Fig. C *Through bore - machined face of installation tool bottoms on machined housing face.*

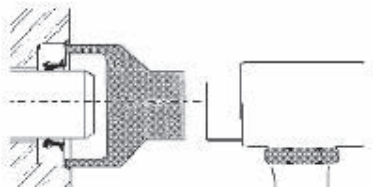


Fig. D *Stepped bore - seal bottoms in housing.*

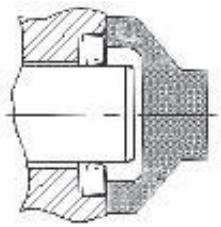


Fig. E *Stepped bore - seal flush with bore face.*

Post-installation tips

When painting, be sure to mask the seal. Avoid getting paint on the lip, or the shaft where the lip rides. Also, mask the vents so they will not become clogged. If the paint is to be baked or the mechanism otherwise subjected to heat, the seals should not be heated to temperatures higher than their materials can tolerate.

In cleaning or testing, do not subject seals to any fluids or pressures that could damage them. Check the compound selection chart in the *Seal handbook* when in doubt. Improper installation or test procedures will result in early seal failure.

Installation tips – large diameter seals

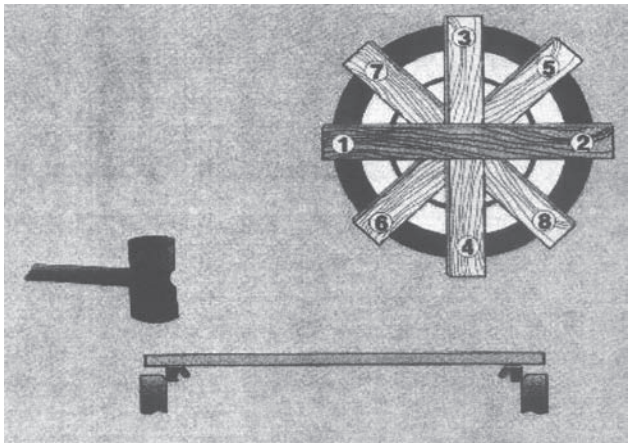
Installation tips – large diameter metal clad seals

1. The general instructions for confirming dimensions, preparing the housing bore and pre-lubrication of the lip element(s) as outlined under "The bore requirements" and "Installation of split seal" sections must be observed.

2. Generally, arbor press methods are not practical for large metal clad seals. Therefore, once squarely positioning the seal O.D. in the bore chamfer, a wood board or similar device long enough to span the seal can be used to buffer manual hammer strikes. Impacts should be delivered sequentially (see illustration below) while insuring that the seal does not tilt or cock in the bore.

3. Drive the seal in gradually, working around the circumference in sequence; do not drive one point in fully and then move on.

4. Multiple, small hammer strikes are better than a few heavy blows.



Installation of split and solid HS seals

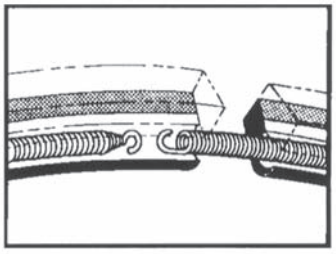
1. Before installing any seal the leading edge of the bore should be deburred and a rounded corner or chamfer provided for ease in installing. Check the shaft for nicks, burrs, grooves or spiral machine marks (machine lead) that could cause leakage. A burr-free chamfer or radius is required for best results.

2. Be sure the shaft and bore diameters match those specified for the seal selected, and make sure the new seal faces in the proper direction. Generally the lip faces the lubricant or fluid to be retained.

3. Pre-lubricate the sealing element and shaft with the lubricant being retained.

4. When installing a split seal with the threaded spring connector, rotate each end of the spring approximately two revolutions "backwards". Pull the ends together, then allow the ends to rotate "forward", so that the small end screws into the other end. Tighten by rotating the ends towards each other. The connection will be secure even if one coil of the small diameter remains exposed. When installing the Type HS8 split seal, roll the spring (which is now connected) into the seal spring cavity making sure the seal lip and butt ends of the seal line up correctly. In the case of the HS9 split seal, the entire spring must be rolled into the seal spring cavity before installation.

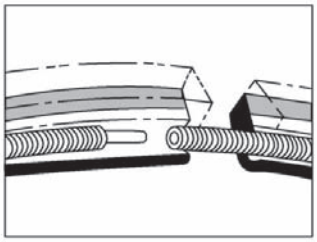
5. When installing the split seal with hook and eye, pull the ends toward each other and simply insert the open end of one hook into the eye of the other end. In making either spring connection, the spring should not be stretched further than necessary. Over stretching may cause permanent separation of the spring coils.



Installation tips - large diameter seals-(cont.)

Installation of split and solid HS seals (cont.)

6. When installing the type HS7 split seal with the control wire connector, simply insert the wire into the core of the garter spring. All other installation procedures are the same.



7. In the free state, HS seals measure oversize to the bore diameter, with the spring removed. To install any of the SKF HS design split seals it is important that the butt ends of the seal be installed first (together) and that the butt be installed as high as possible (12 o'clock position - see Illustration A) from the lubrication level on horizontal shaft applications. Press the butt ends "home" before installing the remainder of the seal. Next, start the remainder of the seal into the housing at the 3 and 9 o'clock positions. Finally, start the seal into the housing at the 6 o'clock position. On shafts over 48 inches, it may be desirable, after installing the butt ends of the seal at the 12 o'clock position, to start portions of the seal at the 3 - 6 - 9 o'clock positions. Once the seal is fully started into the housing, it may be "pushed home" so that the cover plate can be installed. (see Illustration B)

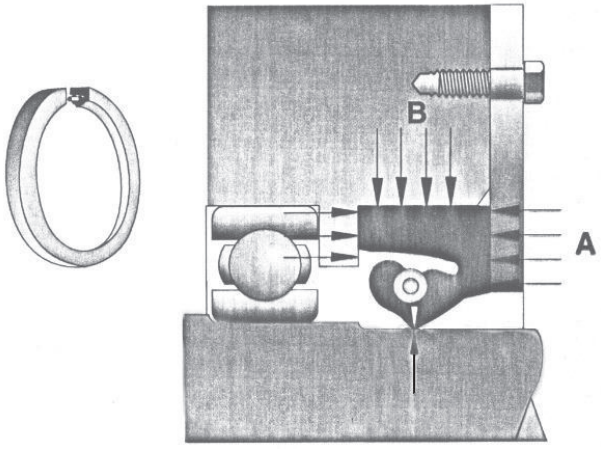
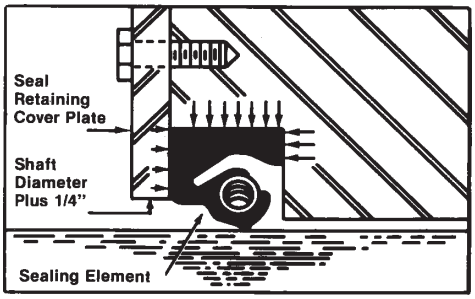


Illustration A

8. After the seal is completely seated in the housing, apply the coverplate and tighten the bolts. This will compress the seal which seals the housing both axially and radially giving positive sealing action. The cover plate can be split 180° apart if needed for installation without dismounting the shafts. (see Illustration C) With care, the butt ends of the seal can be bonded together, if desired, using any of the rubber bonding agents on the market today. However, it is imperative that the sealing lip contacts the shaft in a straight, unbroken line and the cover plate has the recommended clearance to the shaft as shown below.



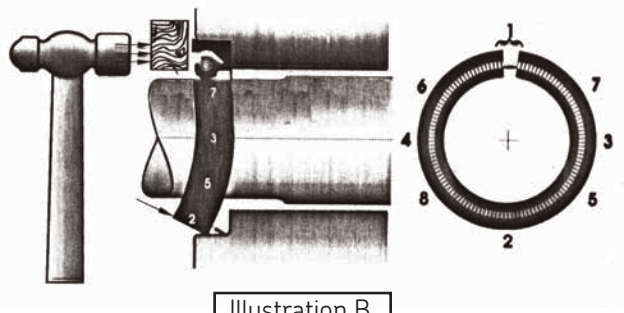


Illustration B

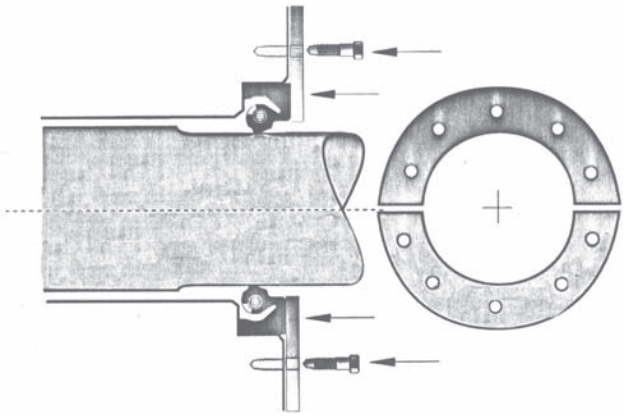


Illustration C

Hydraulic/pneumatic products

SKF offers three types of seals designed to seal out dirt or retain lubricants in applications involving reciprocating motion. Used primarily in hydraulic and pneumatic cylinders and similar applications, these types are Block Vee packings, Wiper-Scraper seals and double lip rod Wiper-seals. Following is complete information on each type, including specific application data, styles and sizes available, and installation guidelines.

Block Vee packings

SKF's Block Vee packing makes an excellent static seal where there is slight movement or vibration between the sealed parts, such as the joint between a cylinder tube and an end cap. It features a unique cross section. Compared to "U" packings, the block vee is more compact and performs efficiently under higher pressures, up to 4000 psi and more.

Applications

Select the block vee for a combination of reciprocating and rotating motion applications, or rotation only in low speed applications such as hand-actuated valves. Valves and control mechanisms, brakes, clutches, accumulators, jacks, pumps and vacuum devices are ideal environments for Block Vee usage.

Temperature

Operating temperature ranges for Block Vee packing are per the compound compatibility chart, page 6A. Duralip packings used in hydraulic or pneumatic applications at operating temperatures of 32°F (0°C) or below may experience "Blow-By" when air is introduced into the cylinder.

Selection

Illustrations of a Block Vee cross-section and typical piston and rod applications appear below. Also shown is a groove design easing installation in small bores.

Surface recommendations

Metal surfaces contacting Block Vees should be smooth and free from tool marks. Rubbing surfaces, should have a finish of 10-20 micro-inches Ra (arithmetic average).

Pressure

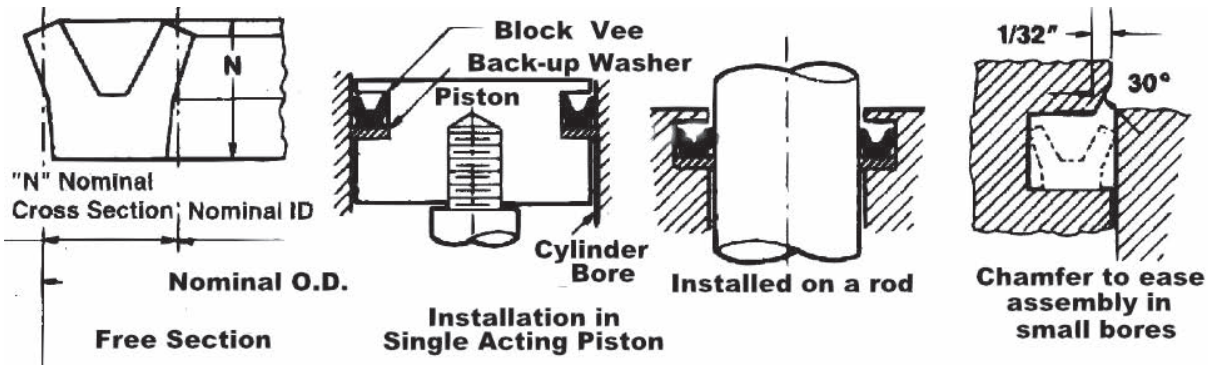
When pressures exceed 500 psi, use of a backup washer is recommended with the necessary groove width allowance. Operating pressures in excess of 4000 psi requires special attention. Minimum recommended operating pressure in hydraulic (oil) cylinder is 50 psi, and 100 psi in pneumatic (air) cylinders.

Back-up washer

Back-up washers are made from a special cellulose fiber base impregnated with a protein and glycerine binder. These washers offer excellent chemical resistance to gasoline, hydraulic fluid, petroleum oils, fuel oils and many organic solvents. Back-up washers are not intended for sealing water where intermittent wet and dry conditions exist. Temperature at the back-up washer should not exceed 200°F (93°C). See size listings for availability.

Installation

Correct dimensions and pre-lubing of the parts enclosing the block vee are critical for correct installation and operation. The radial depth of the groove in which the block vee is placed should not be less than the block vee's nominal cross-section. Keep the maximum diametral clearance (minimum diametral clearance plus tolerance on the two parts) as small as practical. Refer to the table of maximum clearance values (see page 52A), which is based on prior experience with standard applications. Examples clarify the chart's details.



Hydraulic/pneumatic products (cont.)

Piston packing example

Assume a nominal 3" cylinder. Service is normal; operating pressure is above 1000 psi. The designer has chosen actual cylinder I.D.
(dimension A) as 3.000" +.005/-.000
N is 7/32" or .218 (part #711831).

1. First determine the minimum piston O.D. (B min):
   B min = A max - Y
   = 3.005" - .010" = 2.995"

2. Groove diameter (C), then will be:
   C = B min - 2N = 2.995" - .438"
   = 2.557" + .000/-.005

3. Groove width (D) = N + 1/32" + back-up thickness (if used).
   D = 7/32" + 1/32" + 1/16" = 5/16" +.010/-.005
   .218 + .031 + .063 = .312 +.010/-.005

Rod packing example

For this cylinder, assume a nominal 1 5/8" piston rod. Service and pressure are as above. The actual rod diameter (dimension E) is chosen by the designer as: 1.625" +.000/-.005N is 3/16" or .188 (part #711823)

1. Now determine the max housing diameter (F):
   F max = E min + Y
   = 1.620" + .010" = 1.630"

2. Groove diameter (G), then will be
   G = F max + 2N = 1.630" + .375"
   = 2.005" +.005/-.000

3. Groove width (D) = N + 1/32" + back-up thickness (if used).
   D = 3/16" + 1/32" + 1/16" = 9/32" +.010/-.000
   .188 + .031 + .063 = .282 +.010/-.000

Availability

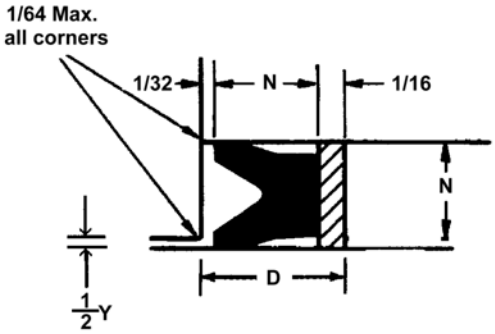
The standard sizes listed in this handbook are carried in stock.

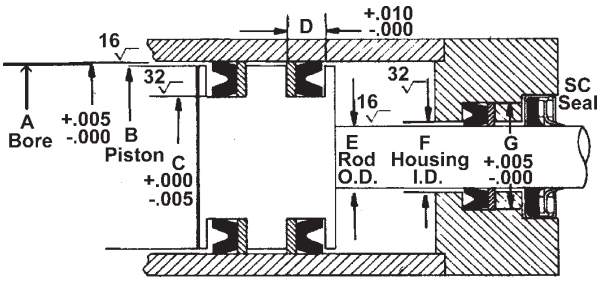
Table Y
Maximum diametral clearance

Pressure	Under 1000 PSI	Above 1000 PSI
Light service	Y = .020"	Y = .015"
Normal service	Y = .015"	Y = .010"
Hard service	Y = .010"	Y = .005"

Table of dimensions

N = Block vee nominal cross-section (axial and radial)
Y = Maximum diametral clearance
A = Cylinder bore (size and tolerance +.005 -.000 set by designer)
B min = A max - Y
C = B min - 2N
D = Groove width = N + 1/32" + back-up thickness (if used).
E = Rod diameter (size and tolerance +.000-.005 set by designer)
F max = E min + Y
G = F max + 2N





Size listing starts on page 1.

Hydraulic/pneumatic products installation

Wiper-scraper seals

Sealing dirt out of hydraulic cylinders and removing solid contaminants from the rod can be done effectively by one sealing device: SKF's wiper-scraper seal. This unique all-in-one seal works consistently, at a cost comparable to that of standard spring-loaded shaft seals.

Simple and compact in design, SKF's wiper-scraper seal consists of a thin spring brass scraper and a pliable nitrile wiping member assembled in tandem position, securely clamped and enclosed in a steel shell. The seal's inner diameter is slightly under shaft size. When assembled over the shaft or rod, it fits snugly. Designed for reciprocating shafts only, wiper-scrapers will not withstand pressure. In applications involving pressure, select a block vee packing.

Due to its highly effective scraper action, these seals generate considerable drag. Designers should conduct functional tests to evaluate their performance in non-hydraulic cylinder applications.

Selection

Correct selection of SKF wiper-scraper seals depends on shaft diameter, cross-section and width dimensions. Refer to table below.

Shaft diameter	Radial cross-section	Width
.500" (12.7 mm)	.250" (6.35 mm)	.250" (6.35 mm)
.625 - 3.000" (15.9 mm - 76.2 mm)	.250" (6.35 mm)	.281" (7.14 mm)
3.125 - 5.250" (79.3 mm - 133 mm)	.313" (7.9 mm)	.328" (8.3 mm)
5.313 - 6.000" (135 mm - 152 mm)	.313" (7.9 mm)	.359" (9.12 mm)

Operation

The scraper's self-aligning feature not only accommodates rod eccentricity during assembly; it also permits the scraper to follow the rod's side movement up to .020" (.5 mm) misalignment. The brass scraper lip fits snugly, removing dried or frozen mud, tar and other materials stuck to the rod on the inward stroke. The nitrile wiping member then removes any water, dust or abrasive particles which might pass by the scraper.

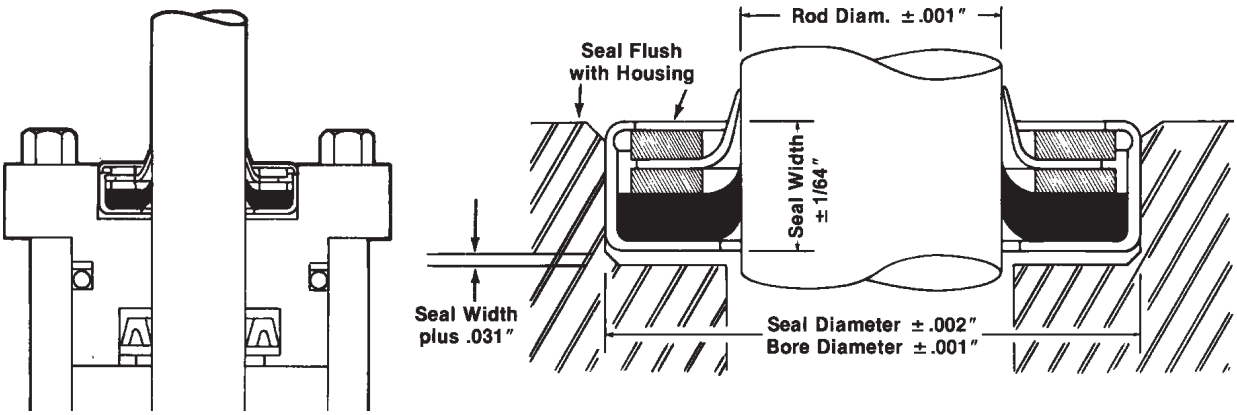
Recommended operating condition

The wiper-scraper seal should function adequately under the following conditions.

Shaft diameter-Tolerance of plus or minus .001" (.03mm) required to assure efficient scraping action.
Shaft eccentricity- Accommodates up to .020" (.5 mm) misalignment.
Shaft finish-10-20 micro-inches Ra. Shaft hardness-Rockwell C30 minimum.
Shaft material-Steel or stainless steel. If chrome-plated, the entire surface should be plated.
Shaft speed -Designed for reciprocating applications; not suitable for rotating shafts. No practical limit to speed of reciprocation.
Pressure-Not designed to withstand pressure.
Temperature- From -20° to 250°F (short peaks only) (-29° to 121°C).

Wiper-Scraper seal installation

The Wiper-Scraper seal is retained in steel housings by simple press-fit. It does not require special machining for snap rings. To avoid restriction of the scraper's floating feature, SKF engineers recommend that the seal housing bore depth be machined .031" greater than the seal width and the seal installed flush with the face of the housing. Do not "bottom out" the seal.



Hydraulic/pneumatic products installation-(cont.)

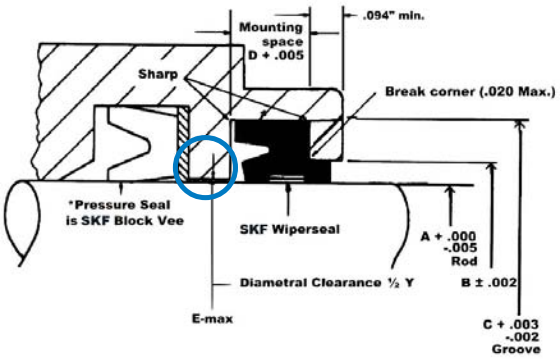
Wiperseal

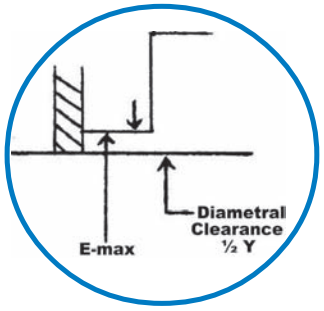
SKF's double lip Wiperseal is designed for reciprocating rods. As a wiper, it excludes dirt and contaminants protecting the rod seal and internal components.

Applications

A molded elastomer part, SKF's Wiperseal features dual opposed lips for dirt exclusion in an internal groove. Valuable in rod applications, it increases the packing life and protects the rod finish. This improved wiping performance extends internal component life and reduces maintenance.

Double lip rod Wiperseals are not recommended for pressure applications. In those situations, use a block vee packing (page 52A). Wiperseals are available in nitrile and fluoroelastomer (LongLife) compounds.





Installation

Correct dimensioning of the parts enclosing the double lip rod wiperseal are critical to installation and operation. Radial depth of the groove in which the seal is placed should not be less than its nominal cross-section. Keep the maximum diametral clearance (minimum diametral clearance plus tolerances on the two parts) as small as practical.

Example

For this cylinder, assume a nominal 1.625" piston rod, normal service, no pressure. The actual rod diameter (dimension A) is chosen by the designer as: 1.625" +.000/-.005 From the size list, D is .218" (part #709011)

1. Now determine the maximum housing diameter (E):
   E max = A min + Y = 1.620" + .015" = 1.635"

2. The balance of the dimensions can be determined from the table below.

All metal surfaces contacting double lip rod wiperseals should be smooth and free from tool marks. A finish of 10-20 micro-inches Ra (arithmetic average) is recommended for the rod surface.

Quick reference standard stock size list for WS Nitrile rod wipers

Nominal rod size	Part no.	A	B	C	D
.500	709001	.500	.618	.802	.203
.625	709002	.625	.743	.927	.203
.688	709003	.688	.806	.990	.203
.750	709004	.750	.868	1.052	.203
.875	709005	.875	1.009	1.240	.218
1.000	709006	1.000	1.134	1.365	.218
1.125	709007	1.125	1.259	1.490	.218
1.250	709008	1.250	1.384	1.615	.218
1.375	709009	1.375	1.509	1.740	.218
1.500	709010	1.500	1.634	1.865	.218
1.625	709011	1.625	1.759	1.990	.218
1.750	709012	1.750	1.884	2.115	.218
2.000	709014	2.000	2.134	2.365	.218
2.125	709015	2.125	2.259	2.490	.218
2.250	709016	2.250	2.384	2.745	.281
2.500	709018	2.500	2.634	2.995	.281
2.750	709019	2.750	2.884	3.245	.281
3.000	709020	3.000	3.134	3.495	.281
3.250	709021	3.250	3.384	3.745	.281
3.500	709022	3.500	3.634	3.995	.281
3.750	709023	3.750	3.884	4.245	.281
4.000	709024	4.000	4.134	4.495	.281
4.250	709025	4.250	4.384	4.745	.281
4.500	709026	4.500	4.634	4.995	.281
5.000	709029	5.000	5.134	5.495	.281
5.250	709030	5.250	5.384	5.745	.281
5.500	709031	5.500	5.634	5.995	.281
6.000	709034	6.000	6.134	6.495	.281

See complete hydraulic/pneumatic size listing on page 225.
Contact SKF for availability of LongLife Wiperseals.

Sirvon rings

SKF Sirvon (TFE base) (lip code T) piston rings are designed for hydraulic and pneumatic applications. They may replace conventional metal or segmented carbon rings in pneumatic applications, or rubber and leather packings.

Advantages

1. Sirvon rings require no lubrication. They operate dependably in dry running applications, such as in compressors, food pumps and in any applications where oil might contaminate the air, gas or liquid in the system.
2. Friction is greatly reduced, permitting smaller h.p. motors.
3. Sirvon rings greatly increase service life, eliminate scoring, galling and stick-slip.
4. Piston design may be simplified, reducing production costs. While many pistons with metal rings require multiple parts, Sirvon rings do not.
5. Easy stretch installation reduces assembly costs. A 7% maximum stretch is recommended.
6. A cylinder bore finish of 10-20 micro-inches Ra (arithmetic average) is recommended. More expensive machining is not required.

Design factors

Pressure- While the practical limits for Sirvon rings have not been conclusively determined, pressures up to 8,000 psi have been applied successfully.

Stretch limit- Varies with diameter and cross-section of the Sirvon ring. For example, a 2.000" diameter ring is stretched 13% during installation; a 4.000" diameter ring is stretched 6.1% with satisfactory snap-back, to correct tolerances in the respective ring grooves.

Cross-sections increase with bore diameter:

.500"	to	1.500"	at	.070"	sq.
1.562"	to	1.938"	at	.109"	sq.
2.000"	to	5.500"	at	.115"	sq.
5.750"	to	12.250"	at	.143"	sq.

O-ring back-up- If a slight leakage can be tolerated in hydraulic pistons, no o-ring is required. If no leakage can be tolerated and o-rings are compatible with the temperature and medium, they are recommended. The groove dimensions shown allow for the installation of an appropriate o-ring.

Standard sirvon rings- A guide for recommended groove dimensions and tolerances is given for each of the four size ranges listed (.500"-1.500", 1.563"-1.938", 2.000"-5.500", and 5.750"-12.250").

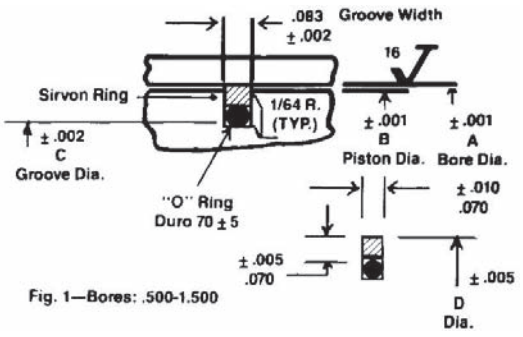


Fig. 1—Bores: .500-1.500

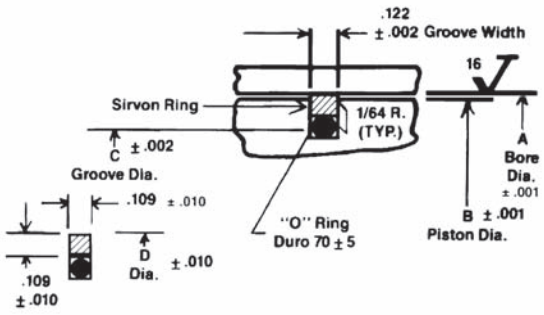


Fig. 2—Bores: 1.562-1.938

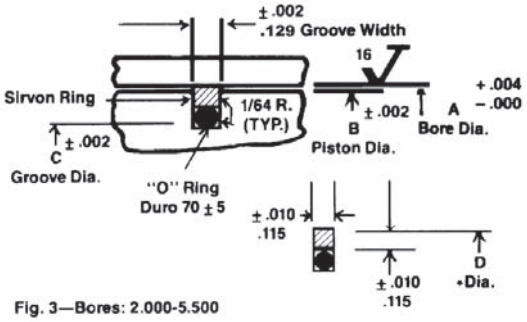


Fig. 3—Bores: 2.000-5.500

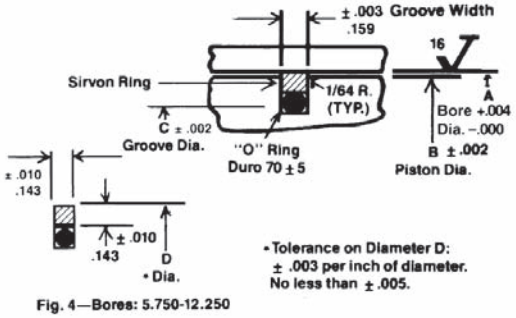


Fig. 4—Bores: 5.750-12.250

Hydraulic/pneumatic sirvon rings

Design guide for solid stock sirvon rings
★(Temperature range: -400°F to +500°F) (-200°C to 260°C)

SKF part no.	A bore dia.	B pist. dia.	C groove dia.	D ring. dia.	O-ring dash no.
•714583	0.500	0.497	0.240	0.511	-009
•714584	0.625	0.622	0.366	0.636	-011
•714585	0.750	0.747	0.490	0.761	-013
•714586	0.875	0.875	0.615	0.886	-016
714587	1.000	0.997	0.741	1.011	-017
•715040	1.125	1.122	0.866	1.136	-019
715041	1.250	1.247	0.991	1.261	-021
•715042	1.375	1.372	1.116	1.386	-023
715043	1.500	1.497	1.241	1.511	-025
•715044	1.562	1.559	1.172	1.583	-122
•715045	1.625	1.622	1.233	1.636	-123
•715046	1.687	1.684	1.297	1.708	-124
715047	1.750	1.747	1.360	1.771	-125
•715049	1.875	1.872	1.485	1.896	-127
713397	2.000	1.996	1.606	2.024	-129
•713312	2.125	2.121	1.729	2.149	-131
713313	2.250	2.246	1.858	2.274	-133
•713314	2.375	2.371	1.983	2.390	-135
713315	2.500	2.496	2.106	2.524	-137
713316	2.750	2.746	2.356	2.774	-141
713317	3.000	2.996	2.606	3.026	-145
713318	3.250	3.246	2.856	3.276	-149
713319	3.500	3.496	3.108	3.526	-151
713320	3.750	3.746	3.358	3.776	-152
713321	4.000	3.996	3.608	4.026	-153
714493	4.250	4.246	3.858	4.278	-154
714494	4.500	4.496	4.108	4.528	-155
714495	4.750	4.746	4.358	4.778	-156
714427	5.000	4.996	4.608	5.028	-157
714496	5.250	5.246	4.858	5.280	-158
714497	5.500	5.496	5.108	5.530	-159
714498	5.750	5.746	5.232	5.780	-251
•715101	5.875	5.871	5.357	5.905	-252
714499	6.000	5.996	5.482	6.030	-253
714500	6.250	6.246	5.732	6.282	-255
714501	6.500	6.496	5.982	6.532	-257
714502	6.750	6.746	6.232	6.782	-258
714503	7.000	6.996	6.482	7.032	-259
717479	7.250	7.245	6.732	7.286	-260
715182	7.500	7.495	6.982	7.537	-261
•715209	7.750	7.745	7.232	7.789	-262
715284	8.000	7.995	7.482	8.040	-263
715146	8.250	8.245	7.732	8.291	-264
717404	8.500	8.494	7.982	8.543	-265
715181	9.000	8.994	8.482	9.045	-267
717613	10.000	9.994	9.482	10.050	-271

• Check SKF for availability
★ Fluorocarbon base materials sublimate at 620°F (327°C)
Contact SKF for availabiliity of Sirvon rings for select cylinder bore dia. up to 16.000"

Scotseal® family

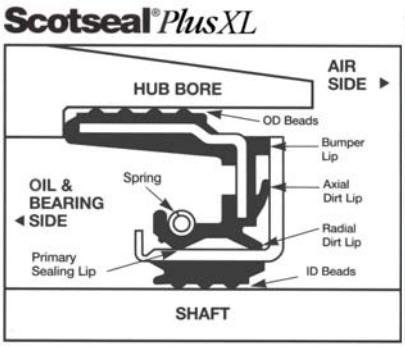


Figure 1

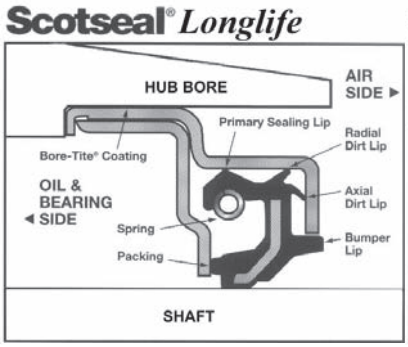


Figure 2

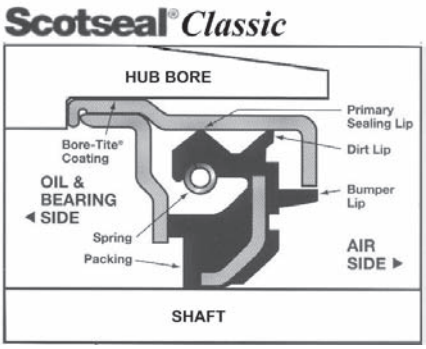


Figure 3

SKF Scotseal® ***PlusXL*** is a rubber unitized, one piece design. The Scotseal *PlusXL* consists of four sealing lips: a spring loaded primary sealing lip with patented Waveseal® design that is factory pre-lubed, a radial and axial dirt lip, plus an outer bumper lip that acts as a preliminary dirt excluder. Scotseal *PlusXL* requires no special installation tools and maintains a rubber-to-metal contact between the seal O.D. and the hub bore surface as well as a rubber-to-metal contact between the packing I.D. and spindle. (see Figure 1)

SKF Scotseal® ***Longlife*** is also a unitized, one piece design consisting of a sealing element (packing) that is assembled between a metal outer and inner case. The Scotseal *Longlife's* packing, however, consists of four sealing lips: a spring-loaded primary sealing lip that is factory pre-lubed, a radial and axial dirt lip, plus an outer bumper lip that acts as a preliminary dirt excluder. The Scotseal *Longlife* is pressfit into the hub bore using Scotseal installation tools. The Scotseal *Longlife* maintains a metal-to-metal contact between the seal O.D. and the hub bore surface as well as a metal-to-metal contact between the packing I.D. and the spindle. (see Figure 2)

SKF Scotseal® ***Classic*** is a unitized, one piece design consisting of a sealing element (packing) that is assembled between a metal outer and inner case. The packing consists of three sealing lips: a spring-loaded primary sealing lip that is factory pre-lubed, a dirt exclusion lip, and an outer bumper lip that acts as a preliminary dirt excluder. The seal is pressfit into the hub bore using Scotseal installation tools. The Scotseal *Classic* maintains a metal-to-metal contact between the seal O.D. and the hub bore surface as well as a metal-to-metal contact between the packing I.D. and the spindle. (see Figure 3)

Scotseal family truck wheel seal operating conditions

	Scotseal Classic	Scotseal Longlife & Scotseal PlusXL
Surface speed	2000 F.P.M. max	5000 F.P.M. max
Temperature range	-40° to 250°F (-40° to 121°C)	-40° to 300°F (-40° to 149°C)
Pressure	2 p.s.i.	2 p.s.i.
Spindle finish	100 microinches MAX.	100 microinches max.
Spindle hardness	Rockwell C28	Rockwell C28
Spindle dia. tolerances	±0.003" Up to 4.000"	±0.003" Up to 4.000"
	±0.004" 4.001 to 6.000"	±0.004" 4.001 to 6.000"
	±0.005" 6.001 to 10.000"	±0.005" 6.001 to 10.000"
Bore runout.	0.015" (TIR) max	0.015" (TIR) max
Spindle to bore misalignment	0.020" (TIR) max	0.020" (TIR) max
Seal O.D. tolerances	±0.004"	±0.004"
Bore tolerances	±0.0015" from 3.001 to 7.000"	±0.0015" from 3.001 to 7.000"
	±0.002" 7.001 to 12.000"	±0.002" 7.001 to 12.000"

Abbreviation list

ADJ	Adjustable
ASTM	American society of testing materials
AUTO	Automotive
AUX	Auxilliary
B.C.	Bolt circle
BI-DIR	Bi-directional
BMP	Bumper
CAD	Cadmium
CCW	Counter-clockwise
CONST.	Construction (type and style)
CW	Clockwise
DIA	Diameter
DIAM	Diameter
DIN	German industrial standard
DRO	Dynamic runout
EA	Each
FL	Flange
FPM	Feet per minute
FR HSG	From housing
GRD	Ground
I.D.	Inside diameter
ISO	International standardization organization
LT	Light
MAX	Maximum
MIN	Minimum
MM	Millimeters
MPM	Meters per minute
M/S	Meters per second
NO	Number
OAL	Over all length
O.D.	Outside diameter
P.F.	Press fit
PSI	Pounds per square inch
PV	Pressure x velocity
RA	Arithmetic average
RC	Rubber covered
RMA	Rubber manufacturers assoc., inc.
RMS	Root mean square
RPM	Revolutions per minute
S-K	Spring-Kover
SAE	Society of automotive engineers, inc.
SH	Shaft
SLV	Sleeve
SPEC	Special
SPL	Special
SS	Stainless steel
STBM	Shaft-to-bore misalignment
SZ	Size
THK	Thick
TIR	Total indicator reading
TYP	Typical
W/	With
W/O	Without
WD	Width
WS	Wiperseal

NOTES

NOTES

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.118 SHAFT				
	.100	**400034**	VR1	V
		SHAFT RANGE .110 - .140		
.125 SHAFT				
	.100	**400030**	VR1	R
		SHAFT RANGE .110 - .140		
.313	.063	451486	BUW	#
.313	.094	711800	BV	R
.313	.094	721523	BV	V
.313	.094	721578	BV	D
.156 SHAFT				
	.120	**400040**	VR1	R
		SHAFT RANGE .140 - .180		
	.120	**400044**	VR1	V
		SHAFT RANGE .140 - .180		
.188 SHAFT				
	.120	**400050**	VR1	R
		SHAFT RANGE .180 - .210		
	.120	**400054**	VR1	V
		SHAFT RANGE .180 - .210		
	.180	400051	VR2	R
		SHAFT RANGE .180 - .210		
	.180	400055	VR2	V
		SHAFT RANGE .180 - .210		
.375	.094	711801	BV	R
.375	.094	721519	BV	V
.375	.094	★721522	BV	D
.438	.125	711802	BV	R
.500	.125	▲1850	HM1	R
.250 SHAFT				
	.120	**400060**	VR1	R
		SHAFT RANGE .210 - .260		
	.120	**400064**	VR1	V
		SHAFT RANGE .210 - .260		
	.180	400061	VR2	R
		SHAFT RANGE .210 - .260		
	.180	400065	VR2	V
		SHAFT RANGE .210 - .260		
.499	.188	▲**2450**	HM14	R
.499	.188	2452	HMA14	V
.500	.125	711803	BV	R
.500	.125	721526	BV	V
.562	.188	▲**2470**	†HM14	R
.626	.250	▲**2490**	HM14	R
.749	.188	▲**2560**	HM14	R
.749	.250	**2513**	CRW1	V
		W/SS CASE & SPRING		
.749	.250	**2514**	†CRW1	R
		W/SS CASE & SPRING		
.258 SHAFT				
.449	.109	700036	BV	R
.281 SHAFT				
	.120	**400070**	VR1	R
		SHAFT RANGE .260 - .310		
	.120	**400074**	VR1	V
		SHAFT RANGE .260 - .310		
	.180	400071	VR2	R
		SHAFT RANGE .260 - .310		
	.180	400075	VR2	V
		SHAFT RANGE .260 - .310		
.313 SHAFT				
	.120	**400080**	VR1	R
		SHAFT RANGE .310 - .370		
	.120	**400084**	VR1	V
		SHAFT RANGE .310 - .370		
	.180	400081	VR2	R
		SHAFT RANGE .310 - .370		
	.180	400085	VR2	V
		SHAFT RANGE .310 - .370		
.500	.094	700054	BV	R
.500	.125	3044	HM4	R
.563	.125	711804	BV	R
.563	.125	721512	BV	V
.626	.156	▲**3060**	†HM14	R
.626	.156	**3061**	HM14	V
.626	.203	3050	†HM1	R
.633	.141	**3080**	HM14	R
.686	.313	▲**3094**	CRWA5	R
.749	.250	▲**3101**	CRWA5	R
.749	.250	**3103**	CRWA5	V
.749	.250	▲**3140**	HM14	R
.750	.250	3141	HM3	R
.862	.250	**3086**	HM14	R
.999	.313	▲**3171**	CRWA5	R
1.250	.375	3230	P1	L
.370 SHAFT				
.606	.310	3626	HMSA76	R
.375 SHAFT				
	.180	**400100**	VR1	R
		SHAFT RANGE .370 - .450		
	.180	**400104**	VR1	V
		SHAFT RANGE .370 - .450		
	.260	400101	VR2	R
		SHAFT RANGE .370 - .450		
	.260	400105	VR2	V
		SHAFT RANGE .370 - .450		
.563	.094	▲3621	HM3	R
.625	.063	451056	BUW	#
.625	.125	711805	BV	R
.625	.125	721502	BV	V
.625	.125	721521	BV	D
.625	.125	▲527935	BB	R
.625	.125	528759	BB	R
		W/STAINLESS STEEL CASE		
.628	.197	3632	HMA10	P
.687	.156	▲**3645**	†HM14	R
.749	.250	▲**3683**	HM14	R
.749	.250	▲**3687**	CRW1	R
.749	.250	**3688**	†CRW1	V
.749	.250	**3689**	CRW5	R
		W/SS CASE & SPRING		
.750	.250	**3680**	†CRWA1	R
.836	.188	▲**3719**	†CRW1	P
.875	.250	▲**3725**	†CRW1	R
.875	.250	▲**3727**	HM14	R
.999	.250	▲**3751**	CRW1	R
.999	.250	**3752**	†CRW1	V
1.124	.250	▲**3806**	CRW1	R
1.124	.375	**3807**	†CRW5	V
.404 SHAFT				
.620	.188	▲**4010**	HM14	R
.862	.250	**4012**	HM14	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.425 SHAFT				
.875	.313	**4100**	CRWH3	R
.438 SHAFT				
.688	.063	★451232	BUW	#
.688	.125	700101	BV	R
.688	.125	721510	BV	D
.688	.125	721527	BV	V
.836	.188	▲**4231**	HM14	R
.875	.313	4247	†HMS1	D
		W/SS CASE & SPRING		
.875	.375	**4261**	CRWA1	R
.875	.375	**4262**	†CRWA1	V
.875	.250	**4249**	†CRW1	P
.875	.250	▲**4251**	CRW1	R
.875	.250	**4260**	CRWA6	R
.879	.180	4256	HM8	R
.999	.250	▲**4340**	HM14	R
.999	.250	**4356**	†CRW1	V
.999	.375	▲**4355**	†CRW1	R
1.124	.250	▲**4390**	†CRW1	R
.469 SHAFT				
.836	.188	**4623**	HM14	P
.875	.219	▲**4628**	HM14	R
.999	.313	▲4641	†P2	R
.500 SHAFT				
		480050	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.250	**99050**	SSLEEVE	
		SHAFT RANGE .498 - .502		
	.180	**400120**	VR1	R
		SHAFT RANGE .450 - .530		
	.180	**400124**	VR1	V
		SHAFT RANGE .450 - .530		
	.260	400121	VR2	R
		SHAFT RANGE .450 - .530		
	.260	400125	VR2	V
		SHAFT RANGE .450 - .530		
.688	.094	▲4911	HM3	R
.688	.170	4909	HMS1	R
		P.F. WIDTH .100		
.749	.125	▲4913	HMS1	R
		O.A. WIDTH .156		
.750	.063	451225	BUW	#
.750	.125	711806	BV	R
.750	.125	721513	BV	V
.750	.125	721518	BV	D
.750	.125	▲**4912**	†HM14	R
.802	.203	709001	WS	R
.820	.156	▲**4914**	†HM14	R
.843	.250	▲**4923**	†HM14	R
.875	.125	**4925**	HM14	R
.875	.250	▲**4931**	†CRW1	R
.875	.250	**4932**	†CRW1	V
.875	.250	**4933**	†CRWA1	V
.875	.250	**4935**	†CRWA1	V
		W/SS CASE & SPRING		
.875	.250	**4936**	†CRW1	D
.875	.250	▲**4938**	HM14	R
.875	.313	**4939**	†CRWA1	R
.875	.313	**4940**	†CRWA5	R
.875	.313	**4941**	†CRWA5	V
.987	.250	▲**4943**	†CRW1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.500 SHAFT (Cont.)				
.987	.250	4944	HMS1	R
		W/STAINLESS STEEL SPRING		
.999	.188	▲**4950**	†HM14	R
.999	.250	**4980**	†CRW1	V
		W/STAINLESS STEEL SPRING		
.999	.250	**4982**	†CRWA1	P
.999	.250	▲**4984**	†CRW1	R
.999	.250	**4985**	†CRWA1	R
.999	.250	**4990**	†HM14	R
.999	.250	**4991**	†CRWA5	V
		W/STAINLESS STEEL SPRING		
.999	.313	**4996**	†CRWA5	R
1.000	.281	504260	†SC	R
1.010	.204	**5008**	HMSA7	V
1.124	.250	**5045**	†CRW1	P
1.124	.250	**5062**	†CRWA1	R
1.124	.250	**5066**	†CRW1	V
1.124	.250	**5067**	†CRWA1	V
1.124	.250	▲**5068**	†CRW1	R
1.124	.250	**5069**	†CRWA5	R
1.124	.250	**5072**	†CRWA5	V
1.124	.250	▲**5085**	†HM14	R
1.124	.313	**5046**	†CRW1	P
1.249	.188	**5131**	CRWH3	R
		W/SS CASE & SPRING		
1.250	.250	▲**5133**	†CRW1	R
1.250	.250	**546966**	†CRW1	V
1.375	.250	▲**5150**	†CRW1	R
1.375	.250	**5151**	†CRW1	V
.531 SHAFT				
	.180	**400130**	VR1	R
		SHAFT RANGE .490 - .570		
	.180	**400134**	VR1	V
		SHAFT RANGE .490 - .570		
.999	.250	**5321**	†CRWA1	S
1.124	.313	5334	CRSA1	R
.546 SHAFT				
.875	.250	**5385**	CRW1	P
.551 SHAFT				
.945	.394	5553	D8-SPL	P
1.024	.787	5507	HMSASPL	P
1.124	.203	▲5399	†HM21	R
.554 SHAFT				
.999	.250	**5605**	†CRW1	R
		W/SS CASE & SPRING		
.561 SHAFT				
1.000	.254	**5425**	HMSA7	P
.563 SHAFT				
	.250	**99056**	SSLEEVE	
		SHAFT RANGE .560 - .566		
	.180	**400144**	VR1	V
		SHAFT RANGE .530 - .610		
	.260	400141	VR2	R
		SHAFT RANGE .530 - .610		
	.260	400145	VR2	V
		SHAFT RANGE .530 - .610		
.750	.094	5500	HM3	R
.813	.063	★451240	BUW	#
.813	.125	710696	BV	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.563 SHAFT (Cont.)				
.813	.125	721557	BV	D
.813	.125	721569	BV	V
.813	.126	▲5510	HMS1	R
.875	.188	▲**5522**	†HM14	R
.875	.188	**5523**	†CRW1	D
.999	.219	▲**5569**	†HM14	R
.999	.250	**5542**	†CRW1	V
.999	.250	**5543**	†CRW1	R
		W/SS CASE & SPRING		
.999	.250	**5606**	†CRWA1	R
.999	.256	▲**5541**	†CRW1	R
1.124	.250	**5650**	†CRW1	V
1.124	.250	▲**5652**	†CRW1	R
1.124	.250	**5662**	†CRWA1	R
1.124	.250	▲**5685**	HM14	R
1.250	.250	▲**5707**	†CRW1	R
1.375	.250	▲**5756**	†CRW1	R
.570 SHAFT				
	.180	**400140**	VR1	R
		SHAFT RANGE .530 - .610		
.591 SHAFT				
.827	.197	5904	HMAS7	P
1.102	.591	6103	HMS15	V
		P.F. WIDTH .236 (6MM)		
.594 SHAFT				
1.124	.250	▲**5946**	†HM14	R
1.124	.313	▲**5926**	†CRW1	R
1.250	.313	5950	CRSA1	R
1.375	.313	▲5966	†CRSA1	R
.624 SHAFT				
1.131	.188	**6243**	†HM14	R
.625 SHAFT				
	.313	**99062**	SSLEEVE	
		SHAFT RANGE .623 - .627		
	.313	99810	GSLEEVE	
		SHAFT RANGE 0.623 - 0.627		
	.180	**400160**	VR1	R
		SHAFT RANGE .610 - .690		
	.180	**400164**	VR1	V
		SHAFT RANGE .610 - .690		
	.260	400161	VR2	R
		SHAFT RANGE .610 - .690		
	.260	400165	VR2	V
		SHAFT RANGE .610 - .690		
.812	.094	▲6105	HM3	R
.813	.094	6106	HM3	V
.875	.063	451081	BUW	#
.875	.125	710212	BV	R
.875	.125	712130	BV	V
.875	.125	721503	BV	V
.875	.125	721520	BV	D
.875	.188	▲6120	HMS1	R
		P.F. WIDTH .125		
.875	.188	6119	HMSA1	R
		P.F. WIDTH .125		
.927	.203	709002	WS	R
.927	.203	712120	WS	V
.933	.188	▲**6125**	†HM14	R
.933	.188	**6126**	†HM14	V
.937	.188	▲**6130**	†HM14	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.625 SHAFT (Cont.)				
.987	.250	**6134**	†CRW1	R
		W/STAINLESS STEEL SPRING		
.999	.250	**6139**	†CRWA1	V
		W/STAINLESS STEEL SPRING		
.999	.250	**6141**	†CRWA1	R
.999	.250	▲**6143**	†CRW1	R
.999	.250	▲6147	HMSA11	R
		W/SS CASE & SPRING		
.999	.250	**6151**	†CRWA5	R
1.000	.125	▲**6152**	†HM14	P
1.063	.250	**6157**	†CRW1	R
1.063	.250	▲**6158**	†HM14	R
1.124	.281	504261	SC	R
1.124	.250	**6191**	†CRW5	R
1.124	.250	▲**6203**	†CRW1	R
1.124	.250	**6204**	†CRWA1	R
1.124	.250	**6213**	†CRW1	V
1.124	.250	**6215**	†CRWA1	V
1.124	.250	▲**6225**	†HM14	R
1.124	.374	**6231**	†CRWA5	V
1.124	.375	**6184**	†CRWHA5	R
		W/SS CASE & SPRING		
1.124	.375	▲**6229**	†CRWA5	R
1.125	.125	▲527937	BB	R
1.126	.250	▲**6232**	†CRW5	R
		W/SS CASE & SPRING		
1.181	.250	▲**6247**	†CRWA1	R
1.181	.256	**6248**	†CRWA1	V
1.250	.250	**6309**	†CRW1	V
1.250	.250	▲**6315**	†CRW1	R
1.250	.250	**6316**	†CRWA1	R
1.250	.250	▲**6323**	†HM14	R
1.250	.313	▲**6280**	CRWA5	R
		W/SS CASE & SPRING		
1.250	.313	**6285**	CRWA5	V
		W/SS CASE & SPRING		
1.259	.250	▲**6330**	†HM14	R
1.375	.250	**6367**	CRWH3	R
		W/SS CASE & SPRING		
1.375	.250	▲**6370**	†HM14	R
1.375	.250	**6371**	†CRW5	P
1.375	.250	▲**6372**	†CRW1	R
1.375	.250	**6373**	†CRWA1	R
1.375	.250	**6379**	†CRW1	V
1.375	.250	**6383**	†CRWA1	V
1.375	.375	**6388**	†CRWA5	R
		W/SS CASE & SPRING		
1.377	.250	▲**6391**	†CRWHA1	R
1.499	.250	▲**6386**	†CRW1	R
1.500	.313	**6393**	†CRW5	V
		W/STAINLESS STEEL SPRING		
1.850	.276	**534948**	CRWA1	V
.630 SHAFT				
.827	.157	6113	HMA1	R
1.024	.250	**6293**	HMSA7	P
1.102	.595	6413	HMS-SPL	P
1.220	.787	6539	HMSA12	R
1.757	.554	6295	HM-SPL	R
2.205	.256	6455	J-TYPE	V
		W/CW HELIX FROM AIR SIDE		
.656 SHAFT				
1.124	.313	▲**6521**	†CRW1	R
1.250	.250	▲**6541**	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.656 SHAFT (Cont.)				
1.375	.313	▲ **6556**	† CRW1	R
1.575	.250	▲ **6580**	† CRW1	R
.669 SHAFT				
.999	.188	**6595**	† CRW1	R
1.064	.250	**6728**	† CRW1	R
		W/SS CASE & SPRING		
1.064	.250	▲ **6729**	† CRW1	R
1.250	.250	▲ **6806**	† HM14	R
1.339	.311	6992	CRSA1	P
1.378	.276	6641	HMSA124	P
		W/1.703 FLANGE		
1.573	.281	▲ **6597**	CRW1	V
		W/SS CASE & SPRING		
.684 SHAFT				
	.313	**99060**	SSLEEVE	
		SHAFT RANGE .682 - .686		
.685 SHAFT				
1.181	.276	**6757**	HMSA7	R
.688 SHAFT				
	.180	**400180**	VR1	R
		SHAFT RANGE .690 - .750		
	.180	**400184**	VR1	V
		SHAFT RANGE .690 - .750		
	.260	400181	VR2	R
		SHAFT RANGE .690 - .770		
	.260	400185	VR2	V
		SHAFT RANGE .690 - .770		
.938	.063	451284	BUW	#
.938	.125	711807	BV	R
.938	.125	★ 721555	BV	D
.938	.125	721570	BV	V
.990	.203	709003	WS	R
.999	.188	**6720**	† HM14	R
1.124	.190	**6738**	† CRW1	R
1.124	.250	▲ **6741**	† CRW1	R
1.124	.250	**6743**	† CRW1	R
		W/SS CASE & SPRING		
1.124	.250	**6745**	† CRW1	V
		W/STAINLESS STEEL SPRING		
1.124	.250	▲ **6759**	† HM14	R
1.187	.125	**6762**	† HM14	R
1.187	.188	**6770**	† CRW1	V
1.188	.188	▲ **6763**	† CRW1	R
1.250	.256	**6751**	† CRWHA1	V
1.250	.256	**6765**	† CRWA1	R
1.250	.256	**6888**	† CRWA1	S
1.250	.313	▲ **6767**	† CRW1	R
1.250	.313	**6768**	† CRW1	V
1.252	.220	**6769**	† CRWH1	V
1.375	.125	**6915**	HM14	R
1.375	.250	**6814**	† CRWA1	R
1.375	.250	▲ **6920**	† HM14	R
1.375	.313	▲ **6816**	† CRW1	R
1.375	.313	**6817**	† CRW1	V
1.499	.250	▲ **6935**	† CRW1	R
1.624	.250	**6990**	† CRWA1	R
.703 SHAFT				
1.160	.250	7010	HMS2	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.709 SHAFT				
1.339	.315	7089	CRSA1	P
.736 SHAFT				
1.378	.276	**7400**	HMSA7	R
.747 SHAFT				
1.500	.375	7566	KIT	R
.748 SHAFT				
1.496	.300	**7251**	HMSA7	R
		P.F. WIDTH .276 SPECIAL CONST		
2.047	.276	**534956**	† CRWA1	V
.750 SHAFT				
		480074	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.236	**400200**	VR1	R
		SHAFT RANGE .750 - .830		
	.240	**400204**	VR1	V
		SHAFT RANGE .750 - .830		
.999	.125	▲ **7410**	HM14	R
1.000	.063	451245	BUW	#
1.000	.125	711825	BV	R
1.000	.125	721516	BV	V
1.000	.125	★ 721551	BV	D
1.000	.125	**7408**	† HM14	D
1.004	.156	7409	HM8	R
1.006	.125	▲ **7411**	† HM14	R
1.012	.226	**7535**	CRW1	R
1.031	.313	7412	HMA6	R
1.052	.203	709004	WS	R
1.062	.188	▲ **7413**	HM14	R
1.124	.156	▲ **7415**	† HM14	R
1.124	.188	▲ **7414**	† CRW1	R
1.124	.188	**7417**	† CRW1	V
1.187	.156	▲ **7421**	HM14	R
1.249	.188	**7467**	CRW1	V
		W/STAINLESS STEEL SPRING		
1.250	.281	504262	SC	R
1.250	.125	▲ 527938	BB	R
1.250	.125	528762	BB	R
		W/STAINLESS STEEL CASE		
1.250	.188	▲ **7439**	† CRW1	R
1.250	.188	**7478**	CRW1	R
1.250	.250	**7434**	† CRWA5	R
1.250	.250	**7438**	† CRW1	R
		W/BRASS CASE & SS SPRING		
1.250	.250	**7440**	† CRW1	R
1.250	.250	**7443**	† CRWA1	R
1.250	.250	**7450**	† CRW1	V
1.250	.250	**7453**	† CRWA1	V
1.250	.250	**7455**	† CRWA1	V
		W/SS CASE & SPRING		
1.250	.250	▲ **7464**	† HM14	R
1.250	.313	**7465**	CRWA7	R
1.250	.375	▲ **7449**	† CRWA5	R
1.252	.188	▲ **7469**	† CRW1	R
1.259	.250	**7477**	† HM14	R
1.260	.250	▲ **7473**	† CRW1	R
1.301	.250	**7481**	† HM14	R
1.312	.250	▲ **7474**	† CRW1	R
1.312	.250	**7475**	† CRWA1	R
1.375	.250	**7509**	† CRWA5	V
1.375	.250	▲ **7512**	† CRW1	R
1.375	.250	**7513**	† CRWA1	R

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.750 SHAFT (Cont.)				
1.375	.250	**7515**	† CRW1	V
1.375	.250	**7517**	† CRWA1	V
1.375	.250	**7533**	† CRWA1	P
1.375	.250	▲ **7536**	HM14	R
1.375	.250	**7537**	HM14	P
1.416	.266	7541	HMS2	S
1.437	.250	**7550**	† HM14	R
1.499	.250	**7567**	† CRW1	V
1.499	.250	▲ **7571**	† HM14	R
1.499	.250	▲ **7572**	CRW1	R
1.499	.250	**7573**	† CRWA1	R
1.575	.250	▲ **7591**	† CRW1	R
1.624	.250	**7623**	† CRW1	V
		W/STAINLESS STEEL SPRING		
1.624	.250	**7624**	† CRWA1	V
		W/STAINLESS STEEL SPRING		
1.624	.250	▲ **7627**	† CRW1	R
1.624	.250	**7628**	† CRWA1	R
1.752	.250	▲ **7636**	† CRW1	R
1.752	.250	**7638**	† CRWA1	V
1.828	.250	**7661**	† CRW1	R
1.874	.250	▲ **7690**	† CRW1	R
2.047	.313	▲ **7693**	† CRW1	R
.760 SHAFT				
	.313	**99081**	SSLEEVE	
		SHAFT RANGE .759 - .761		
.762 SHAFT				
1.160	.250	7750	HMS2	R
.763 SHAFT				
1.177	.390	★ 7620	SPLINSL	V
.781 SHAFT				
	.313	**99080**	SSLEEVE	
		SHAFT RANGE .780 - .784		
1.375	.197	▲ **7831**	† HM14	R
1.375	.313	**7824**	† CRW1	V
1.375	.313	▲ **7829**	CRW1	R
1.499	.313	▲ **7849**	† CRW1	R
1.624	.313	▲ **7872**	† CRW1	R
1.752	.313	8213	CRSHA1	R
1.828	.250	▲ **7889**	† CRW1	P
.787 SHAFT				
1.124	.188	▲ **7740**	† CRW1	R
1.181	.276	**7861**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.375	.250	**7539**	CRWH3	R
		W/SS CASE & SPRING		
1.457	.276	**8046**	† CRW1	V
.788 SHAFT				
1.262	.250	**536589**	CRWA6	R
.813 SHAFT				
	.375	**99083**	SSLEEVE	
		SHAFT RANGE .811 - .815		
	.350	400201	VR2	R
		SHAFT RANGE .770 - .830		
	.350	400205	VR2	V
		SHAFT RANGE .770 - .830		
1.063	.063	451246	BUW	#
1.063	.125	711809	BV	R
1.063	.125	721506	BV	D

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.813 SHAFT (Cont.)				
1.063	.125	721507	BV	V
1.063	.125	8009	HM3	R
1.187	.313	**8013**	† CRWA1	V
		W/SS CASE & SPRING		
1.250	.188	▲ **8017**	CRW1	R
1.250	.375	**8019**	HMS4	R
1.375	.234	▲ **8080**	CRW	R
		NO SPRING		
1.375	.375	**8053**	† CRW1	V
1.375	.375	▲ **8060**	† CRW1	R
1.499	.250	▲ **8088**	CRW1	R
1.624	.250	▲ **8178**	† CRW1	V
1.752	.375	▲ **8215**	† CRW1	R
.815 SHAFT				
1.623	.248	536599	HMS-SPL	R
.827 SHAFT				
1.260	.315	**8278**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
.844 SHAFT				
1.828	.313	▲ 8485	CRSA1	R
.859 SHAFT				
	.250	901	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.250	**99086**	SSLEEVE	
		SHAFT RANGE .857 - .861		
1.574	.630	550189	HMSA127	R
.875 SHAFT				
	.313	**99087**	SSLEEVE	
		SHAFT RANGE .873 - .877		
	.313	99812	GSLEEVE	
		SHAFT RANGE 0.873 - 0.877		
	.240	**400220**	VR1	R
		SHAFT RANGE .830 - .950		
	.240	**400224**	VR1	V
		SHAFT RANGE .830 - .950		
	.350	400221	VR2	R
		SHAFT RANGE .830 - .950		
	.350	400225	VR2	V
		SHAFT RANGE .830 - .950		
1.125	.063	451242	BUW	#
1.125	.125	711810	BV	R
1.125	.125	721514	BV	V
1.125	.125	721524	BV	D
1.125	.125	**8619**	† HM14	V
1.125	.125	▲ **8620**	HM14	R
1.240	.219	709005	WS	R
1.246	.188	▲ **8625**	† HM14	R
1.250	.188	▲ **8624**	† CRW1	R
1.250	.250	**8621**	† CRW1	V
1.250	.250	**8634**	† CRWA5	V
1.251	.188	▲ **8627**	HM14	R
1.251	.188	8631	HM3	R
		W/STAINLESS STEEL CASE		
1.255	.188	▲ **8632**	† HM14	R
1.308	.250	▲ **8637**	† HM14	R
1.308	.250	**8649**	† CRW1	V
1.312	.250	▲ **8645**	† HM14	R
1.375	.281	504263	SC	R
1.375	.188	▲ **8677**	† HM14	R
1.375	.246	**8786**	† CRWA1	R

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.875 SHAFT (Cont.)				
1.375	.250	**8646**	† CRW1	V
1.375	.250	▲ **8660**	† CRWA5	R
1.375	.250	**8665**	† CRWA5	V
1.375	.256	▲ **8648**	† CRW1	R
1.437	.250	▲ **8690**	† HM14	R
1.437	.250	**8691**	† CRW1	R
1.497	.313	▲ **8694**	† CRWA5	V
		W/STAINLESS STEEL SPRING		
1.499	.250	▲ **8700**	† CRW1	R
1.499	.250	**8702**	† CRWA1	R
1.499	.250	**8704**	† CRW1	V
1.499	.250	**8707**	† CRWA1	V
		W/STAINLESS STEEL SPRING		
1.499	.250	▲ 8741	† HM21	R
1.499	.313	8698	HMSW87	R
		W/SS CASE & SPRING		
1.499	.313	**8703**	CRW1	R
1.499	.453	8749	† DH2	RR
1.502	.313	▲ **8748**	† CRWA1	R
1.562	.250	▲ **8761**	HM14	R
1.575	.250	▲ **8763**	† CRW1	R
1.575	.250	▲ **8772**	HM14	R
1.624	.188	8802	HM8	R
1.624	.250	**8782**	† CRWA1	R
1.624	.250	**8795**	† CRW1	V
1.624	.250	▲ **8796**	† CRW1	R
1.624	.256	**534953**	† CRWA1	V
1.688	.375	9963	† KIT	R
		SEE KIT SECTION		
1.752	.250	▲ **8821**	† CRW1	R
1.828	.250	▲ **8842**	† CRW1	R
1.874	.250	▲ **8860**	† CRW1	R
2.000	.250	▲ **8870**	† CRW1	R
2.050	.375	**8871**	† CRWH1	V
2.060	.359	▲ 8885	W28	P
.878 SHAFT				
1.249	.188	★ **8891**	CRWH3	R
		W/SS CASE & SPRING		
.882 SHAFT				
2.088	.313	**9000**	† CRWHA1	R
.906 SHAFT				
1.338	.315	**9065**	HMSA7	R
		W/CCW HELIX FROM AIR SIDE		
1.339	.256	**9006**	HMS4	R
1.575	.276	**9068**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
.910 SHAFT				
	.313	**99091**	SSLEEVE	
		SHAFT RANGE .908 - .912		
	.313	99860	GSLEEVE	
		SHAFT RANGE 0.908 - 0.912		
.917 SHAFT				
1.476	.236	9176	HMSH4	R
.938 SHAFT				
1.188	.063	451032	BUW	T
1.188	.125	711811	BV	R
1.188	.125	★ 721511	BV	D
1.250	.156	711812	BV	R
1.250	.156	721528	BV	V

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
.938 SHAFT (Cont.)				
1.250	.156	★ 721580	BV	D
1.375	.250	▲ **9243**	† HM14	R
1.375	.250	▲ **9244**	† CRWA1	R
1.499	.250	▲ **9298**	† HM14	R
1.500	.250	▲ **9303**	† CRW1	R
1.500	.250	**9304**	† CRW1	V
1.500	.375	671	FELT	F
1.624	.250	▲ **9307**	† CRW1	R
1.624	.250	**9308**	† CRW1	V
1.734	.250	**9354**	† HM14	R
1.752	.250	▲ **9347**	† CRW1	R
1.828	.250	▲ **9409**	† CRW1	R
.942 SHAFT				
2.110	.990	9420	END CAP	P
.945 SHAFT				
1.575	.315	9515	CRS1	R
		W/CW HELIX FROM AIR SIDE		
2.441	.315	**534949**	CRWA1	V
.950 SHAFT				
1.358	.275	▲ **9520**	† CRW1	P
2.060	.359	9510	HMS11	P
.969 SHAFT				
	.313	**99094**	SSLEEVE	
		SHAFT RANGE .966 - .970		
	.625	**99096**	SSLEEVE	
		SHAFT RANGE .966 - .970		
1.406	.250	▲ **9604**	† CRWA1	P
1.499	.313	**9611**	† CRW1	V
1.499	.313	▲ **9613**	CRW1	R
1.624	.250	▲ **9646**	† CRW1	R
1.624	.250	**9647**	† CRW1	V
1.686	.313	**9663**	† CRWA1	R
1.686	.313	▲ **9664**	† CRW1	R
1.752	.250	▲ **9667**	† CRW1	R
1.828	.313	▲ **9681**	† CRW1	R
1.828	.578	★ 9684	† E3	RR
2.048	.375	9688	† CRS1	R
.981 SHAFT				
1.376	.313	**9888**	CRW1	V
		W/SS CASE & SPRING		
.984 SHAFT				
1.383	.151	9808	HMS4N	R
1.496	.236	**9701**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
1.499	.250	▲ **9686**	† CRW1	V
		W/SS CASE & SPRING		
1.596	.250	▲ **9700**	† CRWA5	R
1.732	.394	9752	HMSHA7	P
		W/CW HELIX FROM AIR SIDE		
1.749	.375	**9803**	CRWA1	V
		W/SS CASE & SPRING		
1.752	.313	▲ **9805**	† CRWA5	V
		W/SS CASE & SPRING		
1.850	.250	**9786**	CRWA1	V
		W/SS SPRING		
1.000 SHAFT				
	.313	480097	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.000 SHAFT (Cont.)				
	.313	480098	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.313	480099	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.313	**99100**	SSLEEVE	
		SHAFT RANGE .998 - 1.002		
	.313	99814	GSLEEVE	
		SHAFT RANGE 0.998 - 1.002		
	.240	**400250**	VR1	R
		SHAFT RANGE .950 - 1.070		
	.240	**400254**	VR1	V
		SHAFT RANGE .950 - 1.070		
	.350	400251	VR2	R
		SHAFT RANGE .950 - 1.070		
	.350	400255	VR2	V
		SHAFT RANGE .950 - 1.070		
1.250	.125	711080	BV	R
1.250	.125	721558	BV	V
1.250	.125	★721581	BV	D
1.250	.125	712131	BV	V
1.250	.125	▲ **9815**	† HM14	R
1.312	.125	▲ **9818**	† HM14	R
1.313	.063	451047	BUW	#
1.313	.156	701084	BV	D
1.313	.156	721529	BV	V
1.365	.219	709006	WS	R
1.365	.219	712121	WS	V
1.367	.313	**9822**	† CRW1	R
1.375	.188	▲ **9820**	† HM14	R
1.375	.250	▲ **9814**	† CRWA5	R
1.375	.250	▲ **9826**	CRW1	P
1.375	.250	**9831**	† CRW1	V
1.437	.250	**9833**	† CRW1	V
1.437	.250	▲ **9835**	† HM14	R
1.437	.250	▲ **9837**	† CRW1	R
1.437	.250	**9838**	† CRWA1	R
1.437	.250	**9847**	† CRWA1	V
1.442	.250	550074	HMS1	P
1.496	.390	**9850**	† CRW1	R
1.499	.188	▲ **9859**	† HM14	R
1.499	.250	▲ **9843**	† CRWA5	R
1.499	.250	**9852**	† CRW1	R
		W/SS CASE & SPRING		
1.499	.250	**9854**	† CRW1	V
1.499	.250	**9855**	CRW5	R
		W/SS CASE & SPRING		
1.499	.250	**9858**	† CRWA5	V
1.499	.250	▲ **9876**	† CRW1	R
1.499	.250	**9878**	† CRWA1	R
1.499	.250	**9879**	† CRWA1	V
1.499	.315	**9862**	† CRWA1	V
1.499	.374	**544167**	† CRWA5	P
1.500	.250	712589	BV	R
1.500	.281	504264	SC	R
1.500	.250	**9863**	† CRWA5	R
1.500	.374	**9811**	HMS4	R
1.510	.219	▲ 9853	† HM21	R
1.513	.536	9889	HMSHA31	R
		SEAL OD 1.513, MINOR OD 2.250		
1.561	.250	▲ **9894**	† CRW1	R
1.561	.250	▲ **9900**	† HM14	R
1.563	.188	▲ 527939	BB	R
1.575	.250	▲ **9903**	† HM14	R
1.575	.313	▲ **9907**	† CRWA1	R
1.624	.250	▲ **9932**	† HM14	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.000 SHAFT (Cont.)				
1.624	.250	▲ **9934**	† CRW1	R
1.624	.250	**9935**	† CRWA1	R
1.624	.250	**9937**	† CRW1	V
1.624	.250	**9939**	† CRWA1	V
1.686	.256	**544257**	† CRW1	V
1.686	.256	▲ **9960**	† CRW1	R
1.752	.250	**9982**	† CRW1	V
1.752	.250	**9983**	† CRWA1	V
		W/STAINLESS STEEL SPRING		
1.752	.250	▲ 9995	† HM21	R
1.752	.250	▲ **9997**	† CRW1	R
1.752	.250	**9998**	† CRWA1	R
1.752	.313	**9967**	† CRWA5	R
1.781	.250	530484	HM21	R
1.781	.469	▲ **10034**	† HM14	R
1.781	.469	▲ 10035	† HM18	R
		CLEARANCE D .265		
1.828	.250	**10046**	† CRW1	V
1.828	.250	**10047**	† CRW1	P
1.828	.250	▲ **10049**	† CRW1	R
1.828	.250	**10050**	† CRWA1	R
		W/STAINLESS STEEL SPRING		
1.851	.250	▲ **10071**	† CRW1	R
1.851	.250	▲ **10074**	† HM14	R
1.874	.250	▲ **10075**	† CRW1	R
1.938	.250	▲ **10104**	† CRW1	R
1.938	.250	▲ **10112**	† HM14	R
1.983	.250	**10111**	† CRWA1	V
1.983	.313	▲ **10114**	† CRWA1	R
2.000	.250	▲ **10123**	† CRW1	R
2.000	.250	**10124**	† CRWA1	R
2.000	.250	**10127**	† CRWA1	R
		W/SS CASE & SPRING		
2.000	.250	**10128**	† CRW1	V
2.000	.250	**10129**	† CRWA1	V
2.000	.250	▲ 10153	† HM21	R
2.000	.313	**10131**	† CRWA5	R
2.047	.250	▲ **10157**	† CRWA1	R
2.062	.250	▲ **10158**	† CRW1	R
2.250	.250	▲ **10169**	† CRW1	R
2.250	.250	**10172**	† HM14	R
2.356	.270	538266	X15	R
2.441	.375	▲ **10178**	HMSA7	R
1.024 SHAFT				
1.811	.276	10205	† HMS1	P
		W/CW HELIX FROM AIR SIDE		
1.062 SHAFT				
1.507	.374	10523	J-TYPE	R
2.125	.313	10781	† KIT	R
1.063 SHAFT				
1.375	.156	711814	BV	R
1.375	.156	★721582	BV	D
1.499	.250	▲ **10515**	† CRW1	R
1.499	.250	**10518**	† CRW1	V
1.512	.256	**532866**	† CRW1	P
1.561	.250	▲ **10581**	† CRW1	R
1.575	.315	**10584**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
1.577	.250	▲ **10583**	† CRW1	R
1.624	.250	▲ **10598**	† CRW1	R
1.686	.250	▲ **10632**	† CRW1	R

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.063 SHAFT (Cont.)				
1.693	.355	**10634**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
1.693	.355	**10661**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.693	.276	**10494**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.752	.250	▲**10653**	†CRW1	R
1.752	.250	**10655**	†CRW1	V
1.828	.250	▲**10681**	†CRW1	R
1.874	.250	▲**10700**	†CRW1	R
1.979	.250	**10728**	†CRW1	R
1.983	.250	▲**10733**	†CRW1	R
2.000	.250	▲**10740**	†CRW1	R
2.062	.250	**10766**	†CRW1	R
2.125	.625	★11904	KIT	P
		SEE KIT SECTION		
1.089 SHAFT				
	.313	**99108**	SSLEEVE	
		SHAFT RANGE 1.087 - 1.091		
1.100 SHAFT				
2.205	.394	**11000**	HMSA7	P
1.102 SHAFT				
1.614	.276	**10944**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
1.693	.315	**10927**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.732	.354	10938	HMSH78	P
		W/CW HELIX FROM AIR SIDE		
1.890	.550	10966	D3	P
1.913	.315	10956	HMS	P
		W/CW HELIX FROM AIR SIDE		
1.969	.315	**11076**	HMSA7	P
2.087	.378	10983	HMSA96S	P
1.122 SHAFT				
1.624	.236	**11122**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.125 SHAFT				
	.313	**99112**	SSLEEVE	
		SHAFT RANGE 1.123 - 1.127		
	.313	99816	GSLEEVE	
		SHAFT RANGE 1.123 - 1.127		
	.375	**99116**	SSLEEVE	
		SHAFT RANGE 1.123 - 1.127		
	.240	**400280**	VR1	R
		SHAFT RANGE 1.070 - 1.140		
	.240	**400284**	VR1	V
		SHAFT RANGE 1.070 - 1.140		
	.350	400281	VR2	R
		SHAFT RANGE 1.070 - 1.140		
	.350	400285	VR2	V
		SHAFT RANGE 1.070 - 1.140		
1.375	.125	▲**11050**	HM14	R
1.375	.125	**11052**	†HM14	V
1.438	.063	451286	BUW	#
1.438	.156	711816	BV	R
1.438	.156	721508	BV	D
1.438	.156	721530	BV	V
1.438	.203	▲**11055**	†HM14	R
1.490	.219	709007	WS	R
1.499	.188	▲**11060**	†HM14	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.125 SHAFT (Cont.)				
1.499	.188	▲**11061**	CRW1	R
1.561	.250	**11066**	†CRW1	P
1.561	.250	▲**11067**	†CRW1	R
1.561	.250	**11071**	†CRW1	V
1.562	.188	11065	HM8	R
1.562	.250	▲**11081**	HM14	R
1.565	.250	**11082**	†CRW1	R
1.624	.250	**11111**	†CRW1	P
1.624	.250	▲**11123**	†CRW1	R
1.624	.250	▲11130	†HM21	R
1.624	.250	**11133**	†CRW1	V
1.624	.256	**11124**	†CRWA1	R
1.624	.256	**11134**	†CRWA1	V
1.626	.250	**11139**	†CRWA5	V
1.628	.281	504265	SC	R
1.630	.313	11143	HMS4N	R
1.693	.256	11136	HMSA1	R
1.750	.250	▲**11150**	†HM14	R
1.752	.250	▲**11138**	†CRW1	R
1.752	.250	**11144**	†CRW1	V
1.781	.250	▲11161	†HM21	R
1.781	.469	▲11164	HM18	R
		CLEARANCE D .265		
1.781	.469	11194	HM18	R
		CLEARANCE D .265		
1.781	.406	**11180**	†HMSA7	R
1.828	.250	▲**11170**	†CRW1	R
1.828	.250	**11171**	†CRWA1	R
1.828	.250	**11172**	†CRW1	V
1.828	.250	**11175**	†CRWA1	V
1.828	.250	▲11191	HM21	R
1.852	.313	▲**11197**	†CRWH1	R
1.852	.313	**11200**	†CRWHA1	R
1.874	.250	**11207**	†CRW1	V
1.874	.250	**11208**	†CRWA1	V
1.874	.250	▲**11209**	†CRW1	R
1.874	.250	**11223**	†CRWA1	R
1.938	.343	▲**11269**	HM14	R
		CLEARANCE D .352		
1.938	.625	▲11284	HD2	R
		CLEARANCE D .415		
1.983	.250	▲**11299**	†CRW1	R
2.000	.250	▲11334	†HM21	R
2.000	.250	**11344**	†CRW1	V
2.000	.256	▲**11340**	†CRW1	R
2.000	.375	**11343**	†CRWA1	R
2.047	.250	▲11352	†HM21	R
2.047	.313	▲**11353**	†CRWA1	R
2.062	.250	**11368**	†CRWA1	V
2.062	.313	▲**11366**	†CRW1	R
2.125	.375	11377	†KIT	R
2.125	.313	▲**11372**	†CRW1	R
2.250	.250	▲**11378**	†CRW1	R
2.441	.250	▲**11392**	†CRW1	R
2.835	.375	11405	†CRSA1	R
2.875	.469	11410	†CRSH1	R
1.126 SHAFT				
1.575	.236	▲**11086**	†CRWA1	R
1.142 SHAFT				
1.614	.236	**11417**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.693	.315	**11422**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.142 SHAFT (Cont.)				
1.772	.315	**11429**	HMSA7	R
		W/CCW HELIX FROM AIR SIDE		
2.047	.433	**14116**	HMSA7	R
		W/BI-DIR HELIX FROM AIR SIDE		
1.156 SHAFT				
	.375	**99120**	SSLEEVE	
		SHAFT RANGE 1.154 - 1.158		
1.686	.250	▲**11518**	† CRWA1	R
1.686	.312	**11513**	CRWA6	R
1.686	.313	**11512**	CRWA6	V
		W/STAINLESS STEEL SPRING		
1.752	.250	▲**11514**	† CRWA1	R
1.874	.250	▲**11524**	† CRW1	R
1.875	.375	**11536**	CRWA1	R
		W/SS CASE & SPRING		
2.000	.250	**11544**	† CRW1	R
2.000	.250	▲**11545**	† CRWA1	R
2.000	.250	**11550**	† CRW1	V
2.062	.313	▲**11557**	† CRW1	R
2.125	.438	▲11566	† CRSH1	R
1.175 SHAFT				
	.313	**99122**	SSLEEVE	
		SHAFT RANGE 1.173 - 1.178		
1.771	.275	11700	† HMS1	R
		W/CW HELIX FROM AIR SIDE		
1.828	.375	★1202	† KIT	P
		SEE KIT SECTION		
2.031	.500	▲**11553**	† CRW1	R
1.177 SHAFT				
2.448	.500	11778	CRSA4	V
		W/CW HELIX FROM AIR SIDE		
2.559	.433	18108	HMSA57	P
		W/BI-DIR HELIX FROM AIR SIDE		
1.178 SHAFT				
2.073	.335	**11650**	† CRW1	S
1.181 SHAFT				
1.693	.315	**11672**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
1.732	.276	**11612**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.772	.313	11619	HMSA93	P
		W/CCW HELIX FROM AIR SIDE		
1.772	1.181	11618	HMSA90	P
		W/CCW HELIX FROM AIR SIDE		
1.772	.276	**11589**	HMSA7	P
1.772	.276	**11804**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.126	.354	**11673**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.126	.354	★**11674**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
2.283	.315	11690	† HMSHA4	P
2.440	.315	11703	J2	#
		SEE TYPE J SECTION (HMSA LIP)		
2.563	1.331	▲11702	† HMSW108	R
		P.F. WIDTH .386 SPECIAL CONST.		
1.188 SHAFT				
	.313	**99118**	SSLEEVE	
		SHAFT RANGE 1.185 - 1.190		
1.188 SHAFT (Cont.)				
	.240	**400300**	VR1	R
		SHAFT RANGE 1.140 - 1.220		
	.240	**400304**	VR1	V
		SHAFT RANGE 1.140 - 1.220		
	.350	400301	VR2	R
		SHAFT RANGE 1.140 - 1.220		
	.350	400305	VR2	V
		SHAFT RANGE 1.140 - 1.220		
1.500	.063	451063	BUW	T
1.500	.156	711817	BV	D
1.500	.156	721531	BV	V
1.561	.313	▲**11710**	CRW1	V
		W/SS CASE & SPRING		
1.686	.250	**11728**	† CRW1	P
1.687	.250	**11711**	CRWH3	R
		W/SS CASE & SPRING		
1.687	.250	▲**11730**	† CRW1	R
1.716	.270	11733	HMS2	R
1.752	.250	▲**11734**	† CRW1	R
1.752	.250	**11736**	† CRW1	V
1.828	.375	▲**11740**	† CRW1	R
1.875	.250	**11763**	† CRW1	P
1.875	.250	**11764**	CRW7	R
1.875	.375	▲**11585**	† CRW1	R
1.983	.250	▲**11776**	† CRW1	R
1.983	.250	**11777**	† CRWA1	R
1.996	.250	11771	HD1	R
		QUILL WIPER		
2.000	.250	▲**11800**	† CRW1	R
2.000	.250	**11801**	† CRWA1	R
2.000	.250	**11806**	† CRW1	V
2.000	.250	▲11836	HM1	R
2.062	.250	▲**11878**	† CRW1	R
2.062	.250	**11879**	† CRW1	P
2.125	.313	▲**11907**	† CRW1	R
2.165	.250	**11911**	† CRW1	R
2.250	.256	▲**11914**	† CRW1	R
2.437	.250	▲**11923**	† CRW1	R
2.441	.250	▲**11930**	† CRW1	R
1.189 SHAFT				
1.654	.236	535107	HM3	H
1.190 SHAFT				
1.996	.250	▲11846	† HM1	R
2.125	.313	**11908**	† CRWHA1	R
1.192 SHAFT				
2.122	.350	11899	HMSH87	R
		W/AXIAL SLINGER		
1.219 SHAFT				
1.979	.406	**12124**	† HM14	R
1.979	.475	▲12165	† HMA85	D
		P.F. WIDTH .375		
2.000	.438	12131	† CRSH1	R
1.220 SHAFT				
1.969	.315	**12220**	HMSA7	V
2.402	.354	12187	HMSA92S	R
		W/AXIAL DIRT LIP		
1.221 SHAFT				
1.811	.315	**12301**	HMSA7	R
		W/CCW HELIX FROM AIR SIDE		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.234 SHAFT				
2.250	.250	**12590**	†CRW1	R
1.245 SHAFT				
1.750	.312	536587	HMS-SPL	R
1.750	.390	536588	HMS-SPL	R
1.248 SHAFT				
2.044	.378	12494	HMSA16	R
		W/3M BEAD ON O.D.		
1.250 SHAFT				
	.313	480125	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.313	**99125**	SSLEEVE	
		SHAFT RANGE 1.247 - 1.253		
	.313	99817	GSLEEVE	
		SHAFT RANGE 1.247 - 1.253		
	.240	**400320**	VR1	R
		SHAFT RANGE 1.220 - 1.300		
	.240	**400324**	VR1	V
		SHAFT RANGE 1.220 - 1.300		
	.350	400321	VR2	R
		SHAFT RANGE 1.220 - 1.300		
	.350	400325	VR2	V
		SHAFT RANGE 1.220 - 1.300		
1.500	.125	▲**12330**	†HM14	R
1.563	.063	451080	BUW	#
1.563	.156	710989	BV	R
1.563	.156	721532	BV	V
1.615	.219	709008	WS	R
1.624	.250	▲**12325**	†HM14	R
1.625	.188	**11096**	HM14	R
1.625	.188	▲**12329**	†CRW1	R
1.686	.188	▲**12334**	†HM14	R
1.687	.250	▲**12335**	†CRW1	V
1.687	.250	▲**12336**	†CRW1	R
1.687	.250	**12337**	†CRWA1	V
1.687	.313	**12333**	†CRWA5	R
1.687	.313	**12350**	†CRWA1	R
1.750	.250	**12339**	†CRWA5	V
1.750	.250	▲**12360**	†CRWA5	R
1.751	.290	12327	DL	D
1.752	.281	504266	SC	R
1.752	.188	▲12361	†HM21	R
1.752	.250	**12340**	†CRW1	V
1.752	.250	**12343**	†CRWA1	V
1.752	.250	▲**12363**	†CRW1	R
1.752	.250	**12364**	†CRWA1	R
1.752	.250	12369	HM21	R
1.752	.313	▲**12371**	HMS4	R
1.752	.391	**12355**	HMSA7	R
1.752	.968	12392	KIT	RR
		SEE KIT SECTION		
1.828	.188	▲12375	HM8	R
1.874	.250	▲12379	†HM21	R
1.874	.250	**12382**	†CRW1	P
1.874	.250	**12383**	†CRWA1	V
1.874	.250	▲**12384**	†CRW1	R
1.874	.250	**12386**	†CRWA1	R
1.938	.250	▲**12391**	†CRW1	R
1.955	.250	▲**12396**	†CRWA1	R
1.968	.438	**12398**	†HM14	R
1.968	.469	▲12399	†HM18	R
		CLEARANCE D .254		
1.979	.250	▲12407	†HM21	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.250 SHAFT (Cont.)				
1.979	.406	**12404**	†HM14	R
1.979	.406	▲12411	HM18	R
		CLEARANCE D .200		
1.980	.406	12506	†HMA22	R
1.983	.250	▲**12427**	†CRW1	R
1.983	.250	**12428**	†CRWA1	R
1.983	.250	**12432**	†CRW1	V
1.983	.250	▲12437	HM21	R
1.997	.438	▲**12438**	†CRWA5	V
		W/STAINLESS STEEL SPRING		
2.000	.250	**12445**	†CRW1	V
2.000	.250	**12446**	†CRWA1	V
		W/STAINLESS STEEL SPRING		
2.000	.250	▲**12456**	†CRW1	R
2.000	.250	**12458**	†CRWA1	R
2.000	.250	▲12481	†HM21	R
2.000	.438	**12483**	†CRW1	P
2.000	.625	12459	†D7	RR
2.062	.250	▲12508	†HM21	R
2.062	.250	**12531**	†CRWA1	V
2.062	.433	**12533**	†CRWHA1	V
2.062	.438	▲**12530**	†CRWH1	R
2.100	.460	12536	CRSH	R
2.125	.250	**12544**	†CRW1	V
2.125	.250	▲**12545**	†CRW1	R
2.125	.250	**12551**	†CRWA1	R
2.125	.250	▲12565	†HM21	R
2.125	.256	**534955**	†CRWA1	V
2.250	.250	▲**12577**	†CRW1	R
2.250	.250	▲**12582**	†HM14	R
2.250	.313	12578	†KIT	R
2.327	.500	▲**12610**	†CRW1	R
2.328	.500	**12609**	†CRWA5	R
		W/STAINLESS STEEL SPRING		
2.328	.500	12611	†HM18	R
		CLEARANCE D .286		
2.374	.313	▲**12613**	†CRW1	R
2.374	.313	**12614**	†CRWA1	R
2.374	.315	**12612**	†CRW1	V
2.402	.382	12320	HMSA12	R
2.437	.250	▲**12621**	†CRW1	R
2.441	.250	▲**12631**	†CRW1	R
2.500	.310	**12638**	†CRW1	V
2.502	.313	▲**12637**	†CRW1	R
2.502	.500	**12640**	†CRWA5	R
		W/STAINLESS STEEL SPRING		
2.561	.500	12655	CRSH1	R
2.713	.469	12660	†CRSH1	R
2.835	.375	▲**12668**	HMSA7	R
3.156	.500	▲12678	CRSH1	R
4.305	.484	12685	J6	R
		SEE TYPE J SECTION (HMA LIP)		
1.260 SHAFT				
1.654	.394	12698	HMSA6	V
1.732	.236	**12706**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.811	.236	**12718**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.842	.276	**12595**	HMS4	V
		W/CW HELIX FROM AIR SIDE		
1.850	.236	**12724**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.890	.354	12754	HMSA92	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.260 SHAFT (Cont.)				
1.969	.315	**12756**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.047	.394	**12679**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
2.087	.276	**12747**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.126	.394	12751	HMSA12	P
		W/2.677 FLANGE		
2.402	.551	12587	UNITZED	P
1.266 SHAFT				
1.632	.500	**12693**	CRWASPL	P
		BORE LISTED IS PRESSFIT I.D.		
1.272 SHAFT				
1.890	.270	12817	HMSASPL	R
		W/CW HELIX FROM AIR SIDE		
1.281 SHAFT				
2.000	.375	▲**12830**	HMSA7	R
2.047	.625	550224	HMSA92	R
		P.F. WIDTH .451		
1.298 SHAFT				
2.093	.286	**12975**	HMS4	V
1.299 SHAFT				
1.810	.276	**12812**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.850	.313	**12886**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.969	.472	**12900**	HMSA7	R
2.205	.315	12912	HMSA35	P
2.323	.669	▲13005	HMSA92	P
		P.F. WIDTH .315 & 3.125 FLANGE		
1.301 SHAFT				
2.000	.438	12905	CRSA1	P
2.046	.492	▲**12907**	†CRWA1	R
2.621	1.331	▲12925	†HMSW108	R
		P.F. WIDTH .315 & 3.125 FLANGE		
1.312 SHAFT				
1.627	.331	13144	CRS-SPL	R
		HUB SEAL		
1.813	.280	536585	HMS-SPL	R
2.062	.315	**534950**	CRWA1	V
1.313 SHAFT				
	.500	**99131**	SSLEEVE	
		SHAFT RANGE 1.310 - 1.316		
	.250	**99129**	SSLEEVE	
		SHAFT RANGE 1.308 - 1.314		
1.625	.063	★451258	BUW	#
1.625	.156	711818	BV	R
1.625	.156	721559	BV	V
1.828	.375	▲**13021**	†CRW1	P
1.874	.375	▲13027	†CRSA1	R
2.000	.313	13037	CRSA1	R
2.062	.313	▲**13050**	†CRW1	R
2.062	.313	**13052**	†CRWA1	R
2.062	.313	**13054**	†CRW1	V
2.063	.250	▲13060	HM3	R
2.106	.375	13084	†CRSA1	R
2.125	.313	▲**13092**	†CRW1	R
2.250	.313	▲**13112**	†CRW1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.313 SHAFT (Cont.)				
2.281	.906	▲13165	†HMS15	R
		P.F. WIDTH .350		
2.281	1.150	13168	HMS15	R
		P.F. WIDTH .350		
2.282	.250	**13157**	†CRWA1	R
2.620	1.281	▲13246	HMS15	R
		P.F. WIDTH .350 W/SLINGER		
2.996	.500	13275	†CRSH1	R
1.328 SHAFT				
2.031	.313	**13415**	CRW1	R
2.061	.313	▲**13350**	†CRW1	R
2.227	.313	▲**13418**	†CRW1	R
2.312	.433	13419	†CRS1	R
1.339 SHAFT				
1.889	.315	**13429**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.929	.315	**13427**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.087	.315	**13435**	HMSA7	R
2.126	.354	13439	HMSA92	P
		W/AXIAL DIRT LIP		
2.126	.354	13441	HMSA92	V
2.480	.361	▲13478	HMSA92	P
		HELIX-CCW, P.F. WIDTH .354		
2.559	.460	13484	HMSA24	P
1.344 SHAFT				
2.106	.313	▲**13421**	†CRW1	R
2.125	.313	▲**13437**	†CRW1	R
2.250	.500	13451	†P1	L
1.350 SHAFT				
2.571	.540	▲**13492**	CRW90	R
1.358 SHAFT				
2.756	1.602	13495	CRS-SPL	P
1.359 SHAFT				
2.188	.375	13499	†HMSA30	R
		P.F. WIDTH .250 & SS CASE		
1.362 SHAFT				
2.191	.250	▲13500	CRS1	P
1.365 SHAFT				
1.956	.438	▲**13985**	†CRW1	R
2.081	.313	▲**13598**	†CRW1	R
2.261	.313	▲**13700**	†CRW1	R
1.367 SHAFT				
3.319	.496	13627	HMSA97	P
		W/BI-DIR HELIX FROM AIR SIDE		
1.375 SHAFT				
	.313	**99133**	SSLEEVE	
		SHAFT RANGE 1.371 - 1.377		
	.500	**99138**	SSLEEVE	
		SHAFT RANGE 1.371 - 1.377		
	.500	99819	GSLEEVE	
		SHAFT RANGE 1.371 - 1.377		
	.512	99820	GSLEEVE	
		SHAFT RANGE 1.375 - 1.381		
	.240	**400350**	VR1	R
		SHAFT RANGE 1.300 - 1.420		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.375 SHAFT (Cont.)				
	.240	**400354**	VR1	V
		SHAFT RANGE 1.300 - 1.420		
	.350	400351	VR2	R
		SHAFT RANGE 1.300 - 1.420		
	.350	400355	VR2	V
		SHAFT RANGE 1.300 - 1.420		
1.688	.063	451094	BUW	#
1.688	.156	711826	BV	D
1.688	.156	721533	BV	V
1.688	.156	712132	BV	V
1.740	.219	709009	WS	R
1.740	.219	712122	WS	V
1.750	.197	**13509**	† HM14	V
1.750	.197	▲**13529**	HM14	R
1.750	.250	▲**13514**	† CRW1	R
		W/STAINLESS STEEL SPRING		
1.828	.250	**13510**	† CRWA1	V
1.828	.313	▲**13537**	† CRW1	R
1.834	.188	▲13533	† HM8	R
1.835	.250	▲**13536**	† CRW1	R
1.873	.313	**13511**	† CRWA1	V
1.874	.281	504267	SC	R
1.874	.188	▲**13543**	HM14	R
1.874	.250	**13512**	† CRW1	P
1.874	.250	**13545**	† HM14	P
1.874	.250	**13548**	† HM14	R
1.874	.256	▲**13534**	† CRW1	R
1.874	.256	**13538**	† CRW1	V
1.874	.313	**13535**	† CRWA1	R
1.938	.250	▲**13552**	† CRWA1	R
1.938	.250	▲**13556**	† HM14	R
1.947	.563	550095	F2	RF
1.955	.433	▲**13527**	† CRWA1	P
1.983	.313	▲**13557**	† CRW1	P
2.000	.250	▲13573	† HM21	R
2.000	.313	**13562**	† CRWA1	P
2.000	.313	▲**13568**	† CRW1	R
2.000	.313	**13569**	† CRWA1	R
2.000	.313	**13571**	† CRWH1	R
2.000	.313	**13579**	† CRW1	V
2.000	.313	**13581**	† CRWA1	V
2.047	.276	**534952**	† CRWA1	V
2.062	.313	**13582**	† CRW1	V
2.062	.313	▲**13585**	CRW1	R
2.062	.313	**13588**	† CRWA1	P
2.063	.375	**13596**	HMS4	R
2.106	.250	13612	† HM21	R
2.106	.313	**13602**	CRWA1	R
2.106	.313	▲**13614**	† CRW1	P
2.125	.250	▲13662	† HM21	R
2.125	.313	▲**13649**	† CRW1	R
2.125	.313	**13650**	† CRWA1	R
2.125	.313	**13661**	† CRWA1	V
2.125	.313	**13663**	† CRW1	V
2.162	.578	★13668	† HMSHA4	S
		P.F. WIDTH .350 W/SLINGER		
2.162	.578	13750	† HMSHA4	E
2.244	.374	13759	HMSA123	P
		W/BOOT		
2.250	.250	▲**13689**	† HM14	R
2.250	.250	**13698**	† CRWA1	R
2.250	.313	▲**13671**	† CRW1	R
2.250	.313	**13676**	† CRWA1	R
2.250	.313	**13688**	† CRW1	V
2.250	.313	**13691**	† CRWA1	V

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.375 SHAFT (Cont.)				
2.250	.313	**13869**	† CRW1	P
2.250	.386	▲13685	CRSA3	R
		P.F. WIDTH .433" W/BOOT 1.188"		
2.282	.250	▲**13710**	† HM14	R
2.328	.406	▲13711	HM18	R
		CLEARANCE D .188		
2.374	.250	▲13758	† HM21	R
2.374	.313	**13734**	† CRW1	V
2.374	.313	▲**13738**	† CRW1	R
2.374	.313	**13739**	† CRWA1	R
2.437	.250	▲13796	† HM21	R
2.437	.250	▲**13797**	† CRW1	R
2.438	.250	13807	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.441	.313	▲**13810**	† CRW1	R
2.441	.313	**13812**	† CRWA1	R
2.500	.328	▲13839	HMSA36	R
2.502	.250	▲13862	† HM21	R
2.502	.313	▲**13865**	† CRW1	R
2.502	.313	**13867**	† CRW1	V
2.562	.375	▲**13875**	† CRW1	R
2.562	.375	**13876**	† CRWA1	R
2.562	.375	**13878**	† CRWA1	V
2.623	.313	▲**13882**	† CRWA1	V
2.686	.500	▲**13892**	† CRW1	R
2.716	.313	▲**13900**	† CRW1	R
2.750	.500	13906	† CRSH1	R
2.812	.375	**13912**	† CRWHA1	R
2.835	.313	**13918**	† CRWA1	R
2.835	.313	▲**13920**	† CRW1	R
2.835	.313	**13925**	† CRWA1	P
2.835	.594	13916	† TL8	R
		SPECIAL CONST.		
2.875	.313	**13929**	† CRWA1	P
3.000	.500	13937	CRSHA1	R
3.125	.500	13936	CRSH1	R
3.350	.469	13934	† CRSH1	R
4.555	.547	▲13508	J8	R
		SEE TYPE J SECTION (HMSA LIP)		
4.577	.259	13955	J5	R
		SEE TYPE J SECTION (HMS LIP)		
4.577	.259	13956	J5	R
		SEE TYPE J SECTION (HMS LIP)		
1.377 SHAFT				
1.949	.276	**14560**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.126	.276	14020	HMSA92	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.874	.693	★13731	HMSA97	R
		W/BI-DIR HELIX FROM AIR SIDE		
1.378 SHAFT				
1.614	.359	13911	HMS41	R
		P.F. WIDTH .217		
1.811	.276	**13745**	HMSA7	P
1.850	.276	**534951**	CRWA1	V
1.851	.276	**555364**	HMSA7	R
1.890	.315	**13709**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
1.890	.591	▲13931	HMSA12	P
		W/2.165 FLANGE		
1.929	.295	13845	HMSA92	R
		W/EXCLUDER LIP		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.378 SHAFT (Cont.)				
1.929	.236	**13857**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.969	.472	13850	HMSASPL	P
		W/CCW HELIX FROM AIR SIDE		
1.969	.275	▲**13943**	HMS4	S
		W/CW HELIX FROM AIR SIDE		
1.983	1.549	13958	HMSA122	P
		W/HELIX-CCW & P.F. WIDTH .368		
2.008	.472	13794	HMSA123	P
		W/CCW HELIX FROM AIR SIDE		
2.097	.315	▲**13953**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.126	.315	13703	HMSA92	V
		W/BI-DIR HELIX FROM AIR SIDE		
2.126	.315	**13744**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.126	.315	13897	HMSA56	R
		W/2.667 FLANGE O.D.		
2.126	.315	**14125**	HMSA7	R
		W/CCW HELIX FROM AIR SIDE		
2.159	.354	13720	HMSA92	R
2.165	.209	13780	X-SPL	R
		O.D. LISTED IS PRESSFIT I.D.		
2.165	.354	14021	HMSA92	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.204	.354	14006	HMSA92	P
2.204	.354	14129	HMSA92S	P
2.205	.315	13741	HMSA92	R
2.205	.630	14007	HMSA92S	V
		P.F. WIDTH .394 W/2.507 FLANGE O.D., W/ROCK GUARD		
2.240	.875	▲**13959**	†CRWA21	S
		P.F. WIDTH .420 W/2.540 FLANGE		
2.244	.601	13735	HMSA16	R
2.283	.315	13726	HMSA92	R
		W/CW HELIX FROM AIR SIDE		
2.283	.394	13792	ALH1	R
2.441	.394	14018	HMSA92	P
2.441	.472	14921	HMSA35	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.480	.354	13858	HMSA92	R
2.480	.394	13725	HMSA35	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.638	.472	13742	HMSA57	R
		W/CCW HELIX FROM AIR SIDE		
2.638	.472	13971	HMSA96	P
		W/CW HELIX FROM AIR SIDE		
2.638	.709	13978	HMSA35	P
		W/HELIX-CW P.F. WIDTH .472		
2.677	.354	13748	HMSA35	P
2.835	.313	**13926**	†CRWA1	V
		W/STAINLESS STEEL SPRING		
2.874	.655	13853	†HMSHA4	R
2.992	.492	▲13981	HMSA92	P
		W/CCW HELIX FROM AIR SIDE		
2.992	.315	13849	HMSA92	P
		W/CW HELIX FROM AIR SIDE		
3.268	.320	13729	†HMSHA4	R
1.379 SHAFT				
2.047	.236	**13760**	HMS4	P
1.380 SHAFT				
2.282	.354	13757	HMSA97	V
1.387 SHAFT				
2.295	.559	13704	HMSA16	P
		W/BI-DIR HELIX & PARTIAL OD RUBBER COVERED		
1.398 SHAFT				
1.950	.276	**11152**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
1.399 SHAFT				
1.964	.235	538565	SPL	R
2.252	.313	**13988**	CRWA6	P
2.283	.500	14002	†HMSA16	R
		P.F. WIDTH .310		
2.292	.469	13992	†CRSA1	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.292	.500	▲13990	†CRSA1	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.292	.500	13995	D8	R
		W/BI-DIR & 2.750 FLG & SS SPG		
2.482	.536	14387	†HMSA16	V
		P.F. WIDTH .500 & 2.672 FLANGE		
2.484	.515	▲14393	HMSA16	V
		P.F. WIDTH .280 & 2.672 FLANGE		
1.400 SHAFT				
2.282	.547	14119	HMSA25	V
		W/BI-DIR HELIX FROM AIR SIDE		
2.484	.550	▲14381	†HMSA16	R
		P.F. WIDTH .500 & 2.672 FLANGE		
1.414 SHAFT				
2.250	.250	14035	†CRSA1	R
1.417 SHAFT				
1.732	.197	**14058**	HMSA7	R
1.811	.394	**14033**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
1.892	.906	14014	HMSASPL	P
		P.F. WIDTH .472		
1.929	.276	**14008**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.950	.395	14032	HMSA33	P
		W/CW HELIX FROM AIR SIDE		
2.126	.354	14028	HMSASPL	R
		W/EXCLUDER BOOT,W/BI-DIR HELIX		
2.165	.433	14782	ALA1	R
2.520	.748	14054	HMSA56	R
		P.F. WIDTH .433 W/SLINGER		
2.559	.472	14057	HMSA96	P
		W/CW HELIX FROM AIR SIDE		
2.616	.313	**14092**	†CRW1	R
3.543	.394	14087	HMSA7SP	R
		W/CW HELIX FROM AIR SIDE		
1.437 SHAFT				
1.987	.276	**14477**	HMSA7	S
		W/CW HELIX FROM AIR SIDE		
2.012	.312	14215	HMSA7SP	V
1.438 SHAFT				
	.375	**99144**	SSLEEVE	
		SHAFT RANGE 1.435 - 1.441		
	.563	**99143**	SSLEEVE	
		SHAFT RANGE 1.432 - 1.438		
	.563	99821	GSLEEVE	
		SHAFT RANGE 1.432 - 1.438		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.438 SHAFT (Cont.)				
	.240	**400380**	VR1	R
	SHAFT RANGE 1.420 - 1.500			
	.240	**400384**	VR1	V
	SHAFT RANGE 1.420 - 1.500			
	.350	400381	VR2	R
	SHAFT RANGE 1.420 - 1.500			
	.350	400385	VR2	V
	SHAFT RANGE 1.420 - 1.500			
1.750	.063	451079	BUW	#
1.750	.156	711820	BV	R
1.750	.156	721571	BV	V
1.875	.250	▲**14208**	† CRWAR5	V
	W/STAINLESS STEEL SPRING			
2.000	.125	14209	HM4	R
2.003	.313	▲**14211**	CRWAR5	V
	W/STAINLESS STEEL SPRING			
2.003	.313	**14384**	CRWAR5	R
2.003	.313	**14391**	CRWAR5	H
	W/STAINLESS STEEL SPRING			
2.062	.313	**14212**	CRW1	V
2.062	.313	▲**14214**	† CRWA1	R
2.125	.313	▲**14223**	† CRW1	R
2.125	.313	**14225**	† CRWA1	V
2.250	.250	**14257**	† HM14	R
2.250	.313	**14247**	† CRWA1	R
2.250	.313	**14259**	† CRWA1	V
2.250	.313	**14260**	† CRW1	V
2.250	.313	▲**14262**	† CRW1	R
2.374	.313	▲**14282**	† CRW1	R
2.374	.313	**14283**	† CRWA1	R
2.437	.250	▲14359	† HM21	R
2.437	.313	▲**14363**	† CRW1	R
2.502	.313	▲**14383**	† CRW1	R
2.623	.313	▲**14404**	† CRW1	R
2.686	.313	▲**14423**	† CRW1	R
2.750	.313	▲**14458**	† CRW1	R
1.457 SHAFT				
1.650	.315	14496	ENDCAP	P
2.047	.328	14600	HMA11	R
	P.F. WD .228 W/AXIAL DIRT LIP			
2.165	.315	14514	HMSA96	P
2.205	.354	**14566**	HMS4	R
2.205	.354	14787	HMSASPL	V
	W/BI-DIR HELIX FROM AIR SIDE			
2.378	.433	14569	CRSA3	P
	W/BOOT			
2.378	.433	15714	CRSA3	P
	W/CCW HELIX & BOOT			
2.402	.315	14520	HMSA35	P
2.441	.492	14510	ALH1	P
2.441	.276	14502	HMA12	P
2.441	.483	14500	HMSA92	R
3.071	.472	14484	HMS4SPL	R
	W/BI-DIR HELIX FROM AIR SIDE			
1.465 SHAFT				
2.372	.433	14652	HMS-SPL	R
2.372	1.508	14635	CRSA3	P
	W/AUX DIRT BOOT & P.F. .433			
1.469 SHAFT				
2.374	.375	▲14641	† CRSA1	R
1.470 SHAFT				
2.913	1.688	14694	† HMS-SPL	#
1.473 SHAFT				
1.971	.563	14631	HMA10	R
1.475 SHAFT				
2.509	.350	14634	CRS-SPL	R
	HUB SEAL			
1.479 SHAFT				
2.563	.470	14700	† HM79	R
1.484 SHAFT				
2.254	.313	**14907**	† CRW1	R
1.491 SHAFT				
2.191	.250	▲14780	CRSA1	R
1.494 SHAFT				
2.060	.270	▲**14789**	† CRW1	R
1.496 SHAFT				
1.937	.354	14773	HMSA1	P
1.969	.315	**14713**	HMSA7	S
	W/CW HELIX FROM AIR SIDE			
1.969	.394	**14936**	HMSA7	V
	HELIX-CW FROM AIR SIDE			
1.969	.315	**14956**	HMSA7	V
2.008	.512	14790	HMSA25	P
2.047	.236	★14775	† WP2	R
2.047	.335	▲550270	HMSA33	R
	W/2.266 FLANGE			
2.051	.335	▲550217	HMSA33	R
	W/2.275 FLANGE			
2.087	.304	14759	HMSHA7	V
	HELIX-CCW & INNER CASE			
2.165	.315	★**550250**	† CRWA1	R
2.166	.512	14722	HMSA122	P
	W/CCW HELIX FROM AIR SIDE			
2.275	.427	**14958**	HMSA7	P
2.283	.315	14731	KIT	R
	SEE KIT SECTION			
2.283	.394	14747	HMSA92	R
2.323	.354	14738	HMSA6	P
	W/CW HELIX FROM AIR SIDE			
2.362	.315	14739	HMSA92	V
	HELIX-CW,/OVERALL WIDTH 14.58			
2.362	.433	14756	HMSA-SP	S
	W/BI-DIR HELIX FROM AIR SIDE			
2.362	.433	14900	HMSA123	P
	W/CCW HELIX FROM AIR SIDE			
2.480	.394	14749	HMSA29	P
	W/AXIAL DIRT LIP			
2.559	.354	14934	HMSA35	P
	W/BI-DIR HELIX FROM AIR SIDE			
2.559	.394	14758	HMSA29	P
	W/AXIAL DIRT LIP			
2.564	.315	**14922**	HMS4	R
	W/BI-DIR HELIX FROM AIR SIDE			
2.913	.433	14891	HMSA96	P
	W/BI-DIR HELIX FROM AIR SIDE			
2.913	.433	14766	HMSA29	P
	W/AXIAL DIRT LIP			

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.500 SHAFT				
	.563	480148	†KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.563	480150	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.563	480151	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.563	480152	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.375	**99150**	SSLEEVE	
		SHAFT RANGE 1.497 - 1.503		
	.375	99823	GSLEEVE	
		SHAFT RANGE: 1.497 - 1.503		
	.563	**99149**	SSLEEVE	
		SHAFT RANGE 1.497 - 1.503		
	.563	99822	GSLEEVE	
		SHAFT RANGE: 1.497 - 1.503		
	.280	**400400**	VR1	R
		SHAFT RANGE 1.500 - 1.700		
	.280	**400404**	VR1	V
		SHAFT RANGE 1.500 - 1.700		
	.430	400401	VR2	R
		SHAFT RANGE 1.500 - 1.700		
	.430	400405	VR2	V
		SHAFT RANGE 1.500 - 1.700		
	.563	15243	J6-KIT	R
		SEE TYPE J SECTION (CRW LIP)		
1.813	.156	711878	BV	R
1.865	.219	709010	WS	R
1.874	.188	**14804**	HM14	R
1.874	.188	**14808**	†HM14	V
1.874	.250	▲**14807**	CRW1	R
		W/STAINLESS STEEL SPRING		
1.874	.250	▲**14810**	†HM14	R
1.875	.063	451487	BUW	#
1.875	.188	711822	BV	R
1.875	.188	721556	BV	V
1.918	.250	**14809**	CRW1	V
		W/STAINLESS STEEL SPRING		
1.938	.250	▲**14816**	†HM14	R
1.983	.188	▲**14840**	HM14	R
1.983	.250	**14821**	†CRW1	V
1.983	.250	**14824**	†CRWA1	R
1.983	.250	**14834**	†CRWA1	V
1.983	.313	▲**14832**	†CRW1	R
1.989	.250	▲14848	†HMA22	R
1.997	.250	▲**14844**	†CRWA5	V
		W/STAINLESS STEEL SPRING		
2.000	.281	504268	SC	R
2.000	.250	▲**14857**	†HM14	R
2.000	.313	**14846**	†CRWA1	R
2.000	.313	▲**14855**	†CRW1	R
2.000	.313	**14861**	†CRW1	V
2.000	.313	**546953**	CRW1	V
2.000	.188	14869	HM8	R
2.048	.313	▲**14858**	†CRWA1	R
2.062	.210	▲**14863**	†HM14	R
2.062	.313	▲**14864**	†CRW1	R
2.062	.313	**14867**	†CRW1	V
2.064	.375	**14868**	†CRWA5	V
		W/STAINLESS STEEL SPRING		
2.125	.250	**14872**	CRWH3	V
		W/SS CASE & SPRING		
2.125	.313	▲**14875**	†CRW1	R
2.125	.313	**14876**	†CRWA1	R
2.125	.313	**14886**	†CRW1	V
1.500 SHAFT (Cont.)				
2.125	.313	**14887**	†CRWA1	V
2.187	.500	14896	X1	L
		O.D. LISTED IS PRESSFIT I.D.		
2.222	.313	**14903**	†CRW1	R
2.250	.250	▲14960	HM21	R
2.250	.313	**14935**	†CRW1	S
2.250	.313	▲**14938**	†CRW1	R
2.250	.313	**14939**	†CRWA1	R
2.250	.313	**14940**	†CRW1	V
2.250	.313	**14942**	†CRWA1	V
2.250	.500	**15012**	†CRWH1	R
2.254	.250	▲14966	†HM21	R
2.260	.406	**14968**	†CRW1	R
2.286	.270	▲14970	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.286	.420	14971	XH15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.311	.500	**14979**	†CRWA5	V
		W/STAINLESS STEEL SPRING		
2.328	.390	▲14975	HM18	R
		CLEARANCE D .188		
2.328	.500	**14972**	†HM14	R
2.328	.500	▲14974	HM18	R
		CLEARANCE D .286		
2.328	.500	**14977**	†CRWA5	R
		W/STAINLESS STEEL SPRING		
2.372	.375	▲**14978**	†CRWA41	R
		W/EXTENDED RADIAL DIRT LIP		
2.372	1.500	14982	†KIT	R
2.374	.250	▲15032	†HM21	R
2.374	.313	**14992**	†CRW1	V
2.374	.313	**14994**	†CRWA1	V
2.374	.313	▲**15004**	†CRW1	R
2.374	.313	**15005**	†CRWA1	R
2.374	.500	**15039**	†CRWH1	R
2.374	.563	15330	KIT	R
2.376	.815	15047	†HMSA25	P
		HELIX-CCW & P.F. WIDTH .402"		
2.377	.450	15054	KIT	R
2.377	.453	▲**15041**	†CRWA1	R
2.437	.250	▲**15080**	†HM14	R
2.437	.313	▲**15076**	†CRW1	R
2.441	.313	**15092**	CRW1	R
2.441	.313	**15093**	†CRWA1	R
2.441	.313	**15097**	†CRW1	V
2.462	.290	▲15174	X13	R
		O.D. LISTED IS PRESSFIT I.D.		
2.500	.375	15145	KIT	R
2.502	.250	▲15160	†HM21	R
2.502	.313	**15138**	†CRW1	V
2.502	.313	**15141**	†CRW1	R
2.502	.313	**15142**	†CRWA1	R
2.502	.625	15120	†C8	RR
2.561	.313	▲**15176**	†CRW1	R
2.623	.250	▲15190	HM21	R
2.623	.313	▲**15194**	†CRW1	R
2.686	.500	▲**15207**	†CRW1	R
2.716	.250	▲15209	†HM21	R
2.716	.438	▲**15204**	†CRW1	R
2.750	.313	▲**15214**	†CRW1	R
2.758	.313	▲**15230**	†CRW1	R
2.835	.313	▲**15234**	†CRW1	R
2.875	.313	▲**15235**	†CRW1	R
2.996	.500	▲15240	CRSH1	R
3.000	.375	15241	CRSA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.500 SHAFT (Cont.)				
3.125	.625	15250	C8	RR
1.502 SHAFT				
2.132	1.080	14234	CRSA3	R
1.503 SHAFT				
2.374	.374	15133	† CRSA3	P
		W/CCW HELIX FROM AIR SIDE		
2.375	.720	15023	HMSA26	V
		W/CCW HELIX		
2.375	.720	15025	CRSA3	P
		W/CCW HELIX & PF.314"		
1.504 SHAFT				
1.937	.475	15270	HMSA76	P
		W/HELIX-CCW & P.F. WIDTH .315		
1.512 SHAFT				
2.207	.354	15128	† HMSHA4	#
1.515 SHAFT				
2.087	.315	**15500**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
1.520 SHAFT				
2.656	.425	▲15306	HMSA16	R
		HELIX-CCW & PF WIDTH .388		
1.523 SHAFT				
	.438	**99152**	SSLEEVE	
		SHAFT RANGE 1.520 - 1.526		
1.524 SHAFT				
2.374	.375	15343	† CRSH1	R
2.656	.424	★15305	† HMSA12	R
		W/CW HELIX FROM AIR SIDE		
2.656	.424	15315	HMSA16	E
		W/CW HELIX FROM AIR SIDE		
2.714	.500	15376	HMS9	R
1.535 SHAFT				
1.968	.335	▲15445	HMSA3	R
1.969	.315	**15394**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
1.969	.276	15451	HMSHA7	V
		W/CCW HELIX FROM AIR SIDE		
1.969	.453	15359	HMS4SPL	P
2.047	.248	15298	HMSA96	P
2.047	.276	**15300**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.126	.236	15363	HMA1	R
2.165	.315	**15302**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.244	.844	15312	HMSA92	P
		W/AXIAL DIRT LIP		
2.244	.669	15310	HMSA92	P
		W/AXIAL DIRT LIP		
2.244	.512	15463	F2	PF
2.244	.380	**15345**	HMSA7	V
		W/CW HELIX		
2.323	.472	15353	D7-SPL	PP
2.323	.669	▲15372	HMSA92	R
		W/AXIAL DIRT LIP		
2.559	.472	★550235	HMSA35	R
		W/AXIAL DIRT LIP		
2.913	.433	550234	† HMSA2	R
1.535 SHAFT (Cont.)				
2.953	.647	15382	HMSA56	P
3.228	.512	15357	HMSA24	P
1.550 SHAFT				
	.563	480149	† KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
1.552 SHAFT				
	.438	**99155**	SSLEEVE	
		SHAFT RANGE 1.549 - 1.555		
2.446	.500	15560	† D8	RT
2.447	.500	15440	HMSA78	RT
		W/EXTENDED RADIAL DIRT LIP		
2.447	.500	15529	HMSA57	V
		W/CW HELIX		
2.502	.500	▲**15450**	† CRWA1	R
2.686	.500	▲**15460**	† CRW1	R
2.750	.500	**15462**	† CRWHA1	P
2.750	.590	15502	CRSA8	R
		W/BI-DIR HELIX FROM AIR SIDE		
3.160	.530	15791	CRSHA8	V
3.160	.546	15503	KIT	V
		W/BI HELIX & 3M BEAD ON OD		
3.160	.546	15545	HMSHA26	V
		W/BI-DIR HELIX & 3M BEAD ON O.D.		
3.160	.546	15566	HMSHA25	P
		W/BI-DIR HELIX & 3M BEAD ON O.D.		
3.160	.630	15525	HMSHA25	V
		W/BI-DIR HELIX & 3M BEAD ON O.D.		
3.160	.665	▲**15788**	CRWA31	P
		P.F. WIDTH .250		
1.562 SHAFT				
2.442	.500	15629	HMSA97	R
2.460	.374	**15662**	† CRWA1	V
2.460	.374	★**538338**	CRWA1	V
2.625	.562	15696	† KIT	R
		SEE KIT SECTION		
1.563 SHAFT				
	.563	**99156**	SSLEEVE	
		SHAFT RANGE 1.559 - 1.565		
	.563	99824	GSLEEVE	
		SHAFT RANGE: 1.559 - 1.565		
2.047	.276	**534958**	† CRWA1	V
2.062	.203	▲**15509**	† HM14	R
2.062	.250	**15506**	† CRW1	V
2.062	.250	▲**15508**	† CRW1	R
2.125	.313	▲**15517**	CRW1	R
2.125	.313	**15518**	† CRWA1	P
2.237	.290	15530	X4	R
		O.D. LISTED IS PRESSFIT I.D.		
2.250	.250	**15532**	† HM14	R
2.250	.313	▲**15522**	† CRW1	R
2.250	1.520	15535	CRSA3	R
		P.F. WIDTH .327 & 2.515 FLANGE		
2.250	1.520	15536	KIT	R
2.372	1.070	▲15546	HMSA31	P
		W/HELIX-CCW & 2.255 FLANGE		
2.374	.250	15544	† HM21	R
2.374	.313	**15540**	CRW1	P
2.374	.313	▲**15542**	† CRW1	R
2.374	.313	**15543**	† CRWA1	R
2.374	.313	**15549**	† CRWA1	V
2.437	.313	▲**15592**	CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.563 SHAFT (Cont.)				
2.441	.500	▲**15620**	†CRWA1	R
2.441	.500	**15729**	HMSA7	R
2.465	.374	**15624**	†CRWA1	P
2.502	.250	▲15649	†HM21	R
2.502	.313	**15635**	†CRWA1	R
2.502	.313	▲**15655**	†CRW1	R
2.502	.313	**15656**	†CRW1	V
2.531	.500	15660	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.561	.313	▲**15677**	†CRW1	R
2.623	.313	▲**15699**	†CRW1	R
2.684	.438	15702	X	R
		O.D. LISTED IS PRESSFIT I.D.		
2.686	.313	▲**15707**	†CRW1	R
2.686	.375	▲**15730**	†HM14	R
2.687	.250	15719	†HM21	R
2.716	.469	15748	†CRSH1	R
2.750	.500	▲**15761**	†CRWH1	R
2.758	.500	15766	W4	R
2.875	.313	▲**15773**	†CRW1	R
2.875	.313	**15779**	†CRWA1	P
2.920	.409	15790	HMSA96S	R
		W/CW HELIX FROM AIR SIDE		
1.568 SHAFT				
2.620	1.000	15692	HMS15	R
		P.F. WIDTH .350		
1.569 SHAFT				
	.625	**99159**	SSLEEVE	
		SHAFT RANGE 1.566 - 1.572		
1.574 SHAFT				
2.598	.315	15891	HMSA96	P
		W/CW HELIX FROM AIR SIDE		
1.575 SHAFT				
2.040	.290	15731	HMSA32	R
2.047	.276	15703	CRSA1	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.047	.276	16022	HMSHA7	V
		W/CCW HELIX FROM AIR SIDE		
2.047	.276	**15800**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.047	.260	15802	HMSA92	R
		W/AXIAL DIRT LIP		
2.048	.354	15724	HMSA33	R
2.049	.354	▲550247	HMSA32	R
		W/2.204 FLANGE		
2.087	.906	15809	HMSA8	R
		P.F.WD .472, W/2.835 FLG O.D.		
2.087	.315	**15701**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.087	.197	15884	HMA76	R
2.126	.517	15843	HMS15	R
		P.F. WIDTH .315		
2.126	.315	15967	HMSA1	R
2.126	.394	**15881**	HMSA7	P
		W/ENCAPSULARED SPRING		
2.161	.511	15716	†HMSA16	P
2.165	.328	▲15746	†HMA9	R
		P.F. WIDTH .220 & 2.550 FLANGE		
2.165	.236	**15818**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.205	.315	15888	HMSA92	P

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.575 SHAFT (Cont.)				
2.205	.276	★**550259**	HMS4	R
2.205	.354	15669	HMSA35	P
		W/CW HELIX FROM AIR SIDE		
2.205	.354	**15709**	HMSA7	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.244	.512	15706	HMSA7S	P
2.281	.472	15721	HMSHA4	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.283	.394	**15370**	HMSA7	P
2.283	.354	▲**15750**	†CRWA3	R
		W/2.519 FLANGE		
2.283	.236	**15736**	HMSA7	P
2.283	.354	15742	HMSA92	P
		W/CCW HELIX FROM AIR SIDE		
2.283	.415	15727	HMSA25	V
2.284	.315	15796	HMSA92	P
2.362	.315	15842	HMSA35	R
		W/AXIAL DIRT LIP		
2.362	.198	**15718**	HMS4	V
		W/CW HELIX FROM AIR SIDE		
2.441	.354	15902	HMSA55	P
		P.F. WIDTH .455 W/2.600 FLANGE		
2.441	.365	15978	HM4SPL	R
2.461	.433	**15558**	HMSA7	R
2.480	.354	15737	HMSHA83	V
		W/CCW HELIX FROM AIR SIDE		
2.480	.315	15733	HMSA92	P
2.520	.394	15704	HMSA96	P
2.520	.688	15849	HMSA92S	P
		P.F. WD .472 W/ROCK GUARD		
2.520	.472	15753	HMSA12	P
		W/3.085 FLANGE		
2.559	.472	15892	HMSA92	R
2.559	.708	15887	HMSASPL	P
2.677	.500	15900	D8-SPL	P
		P.F. WIDTH .455 W/2.988 FLANGE		
2.835	.433	14762	HMSA92	P
2.953	.394	15883	HMSA96	P
2.953	.467	15882	HMSA29	R
		W/CCW HELIX FROM AIR SIDE		
2.953	.669	15799	HMSA35	R
		W/3.327 FLANGE P.F. WIDTH .551		
2.953	.472	15886	HMSA92	P
2.992	.492	15866	HMSA92	P
		HELIX-CW & P.F. WIDTH 9MM		
2.992	.492	15867	HMSA92	P
		HELIX-CCW,P.F. WIDTH .354(9MM)		
1.578 SHAFT				
2.082	.250	**15510**	†CRW1	R
2.165	.295	15512	HMSA96	P
2.408	.313	▲**15557**	†CRWHA1	R
1.592 SHAFT				
2.406	.354	15974	HMSA96	P
		W/BI-DIR HELIX FROM AIR SIDE		
1.594 SHAFT				
2.067	.236	**15910**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.125	.313	▲**15915**	†CRW1	P
2.283	.315	**15920**	HMSA7	P
2.437	.313	**15940**	†CRW1	P
2.437	.313	▲**15955**	†CRW1	R
2.502	.313	▲**15960**	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.594 SHAFT (Cont.)				
2.623	.313	**15968**	† CRW1	R
2.758	.313	**15975**	† CRW1	R
3.150	.390	15984	D7	P
1.598 SHAFT				
2.476	.394	15966	† CRSA3	P
		W/CCW HELIX FROM AIR SIDE		
2.476	.394	15977	† CRSA3	P
		W/CCW HELIX, LONG BOOT		
1.605 SHAFT				
	.500	**99160**	SSLEEVE	
		SHAFT RANGE 1.602 - 1.608		
1.609 SHAFT				
1.906	.250	▲16020	HM3	R
		W/STAINLESS STEEL CASE		
1.614 SHAFT				
2.126	.236	**16003**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
2.165	.275	16036	HMSA29	R
		W/AXIAL DIRT LIP		
2.165	.276	**16147**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.244	.315	16013	HMSA96	P
		W/CCW HELIX FROM AIR SIDE		
2.284	.512	16015	HMS15	P
		P.F. WIDTH .354 (9MM)		
2.323	.394	16037	HMSA92	P
		W/AXIAL DIRT LIP, CW HELIX		
2.323	.315	**16023**	HMS4	R
		W/CW HELIX FROM AIR SIDE		
2.402	.394	16038	HMSA92	P
		W/CCW HELIX & AXIAL DIRT LIP		
2.569	.433	16139	HMSA25	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.677	.456	16017	DB-SPL	P
2.677	.354	16019	HMSA92	R
		W/CW HELIX FROM AIR SIDE		
2.913	.354	16021	HMSA29	R
2.950	.430	16114	HMSA96	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.950	.430	16144	HMSA57	P
		W/CCW HELIX FROM AIR SIDE		
1.618 SHAFT				
2.254	.235	**533803**	CRW1	R
2.531	.438	**16040**	† CRWA1	R
2.575	.500	▲16044	† CRSA1	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.841	.500	▲16146	† CRSA4	R
		W/3.179 FLANGE O.D.		
1.619 SHAFT				
2.000	.250	**▲16046**	† CRW1	R
1.625 SHAFT				
	.313	**99161**	SSLEEVE	
		SHAFT RANGE 1.622 - 1.628		
	.563	**99162**	SSLEEVE	
		SHAFT RANGE 1.622 - 1.628		
	.563	99826	GSLEEVE	
		SHAFT RANGE 1.622 - 1.628		
1.990	.219	709011	WS	R
2.000	.063	451046	BUW	#

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.625 SHAFT (Cont.)				
2.000	.188	711823	BV	D
2.000	.188	721515	BV	V
2.000	.250	**16039**	† CRW1	V
2.116	.313	**16047**	† CRWA1	R
2.125	.281	504269	SC	R
2.125	.250	**16048**	† CRW1	V
		W/STAINLESS STEEL SPRING		
2.125	.250	**▲16054**	† CRW1	R
2.125	.250	**▲16055**	† HM14	R
2.125	.250	**16045**	CRWAR5	V
		W/STAINLESS STEEL SPRING		
2.248	.313	**▲16062**	† CRWA1	R
2.250	.250	▲16065	† HM21	R
2.250	.313	**▲16061**	† CRW1	R
2.250	.313	**16078**	CRW1	V
		W/STAINLESS STEEL SPRING		
2.250	.375	**16049**	† CRW1	P
2.282	.313	**16083**	† CRW1	R
2.328	.438	16064	TL7	R
2.328	.438	▲16069	† HM18	R
		CLEARANCE D .235		
2.374	.250	▲16092	† HM21	R
2.374	.250	**16094**	CRW1	R
2.374	.313	**16072**	† CRWH1	R
2.374	.313	**16077**	† CRW1	V
2.374	.313	**▲16084**	† CRW1	R
2.374	.313	**16085**	† CRWA1	R
2.374	.313	**16091**	CRWA1	P
2.374	.500	**16079**	† CRWH1	R
2.375	.250	**16095**	HM14	R
2.375	.395	**16110**	CRWA6	R
2.375	.395	**▲16115**	CRWA6	V
		W/STAINLESS STEEL SPRING		
2.403	.360	16116	CRSA4	R
		W/2.675 FLANGE O.D.		
2.409	.545	16262	HMSA24	R
2.437	.250	▲16168	† HM21	R
2.437	.313	**▲16117**	† CRW1	R
2.437	.313	**16118**	† CRWA1	R
2.437	.313	**16119**	† CRW1	V
2.437	.313	**16120**	† CRWA1	V
2.437	.313	16225	† HMS14	S
		W/CW HELIX FROM AIR SIDE		
2.437	.374	16121	CRSHA1	R
2.441	.313	**▲16180**	† CRW1	R
2.441	.313	**16201**	† CRWA1	R
2.441	.625	**16189**	CRWHA3	RR
2.443	.640	16204	† C8	RR
2.462	.250	▲16286	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.502	.250	**16242**	CRWH3	V
		W/SS CASE & SPRING		
2.502	.250	▲16270	† HM21	R
2.502	.313	**16243**	† CRWA1	V
2.502	.313	**▲16245**	† CRW1	R
2.502	.313	**16246**	† CRWA1	R
2.502	.313	**16247**	CRWA1	P
2.502	.374	**16257**	† CRWHA1	V
2.502	.375	**16254**	† CRWHA1	R
2.562	.250	▲16284	† HM21	R
2.562	.313	**16290**	† CRWA1	V
2.562	.438	▲16289	† HM18	R
		CLEARANCE D .210		
2.565	.750	16295	† HMSHASP	R
		W/BI-DIR HELIX FROM AIR SIDE		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.625 SHAFT (Cont.)				
2.623	.250	▲16322	†HM21	R
2.623	.313	▲**16314**	†CRW1	R
2.623	.313	**16315**	†CRWA1	R
2.623	.313	**16316**	†CRW1	V
2.686	.313	▲**16337**	†CRW1	R
2.686	.313	**16338**	†CRW1	V
2.722	.406	16342	FF2	F
2.750	.250	▲16362	†HM21	R
2.750	.250	▲**16364**	†CRW1	R
2.750	.313	**16368**	†CRWH1	R
2.781	.313	**16384**	†HM14	R
2.808	.500	16392	†HMSHA4	P
		W/3.065 FLANGE O.D.		
2.835	.469	16386	†CRSH1	R
2.875	.313	▲**16406**	†CRW1	R
3.000	.313	▲**16422**	†CRWH1	R
3.062	.500	16431	†CRSH1	R
3.251	.500	16440	CRSH1	R
1.627 SHAFT				
2.365	.389	16271	HMSA25	R
		W/CCW HELIX FROM AIR SIDE		
1.645 SHAFT				
2.656	.400	16500	†CRSA1	P
1.648 SHAFT				
2.332	.591	16122	†HMSA1	V
1.652 SHAFT				
2.520	.390	16626	HMSHA4	R
1.654 SHAFT				
2.094	.275	**16487**	HMSA7	V
2.165	.315	**16893**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.165	.276	**16471**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.205	.315	**16473**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.213	.236	▲16506	HMA1	R
2.213	.374	▲16508	HMA101	R
		P.F. WIDTH .236		
2.217	.315	16546	HMSA12	R
2.283	.270	16497	CRSA1	R
2.283	.472	16456	CRS1SPL	P
		W/CW HELIX FROM AIR SIDE		
2.283	.472	16549	HMSA123	P
		W/CW HELIX FROM AIR SIDE		
2.323	.303	**16536**	HMS4	R
		W/CW HELIX FROM AIR SIDE		
2.362	.276	**16489**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.362	.335	**16533**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.441	.315	16622	HMS-SPL	R
2.441	.472	16485	D6	P
2.480	.276	★**550253**	HMS4	R
2.480	.433	16474	CRSA3	P
		W/BI-DIR HELIX & BOOT		
2.520	.390	▲16901	HMSHA4	R
2.520	.472	16524	D	PP
2.550	.530	16491	HMSA95	R
2.550	.550	16499	HMSA56	P
1.654 SHAFT (Cont.)				
2.551	.531	16542	HMSA95	R
		W/HELIX-CW P.F. WIDTH .375		
2.559	.433	16551	D7	P
2.992	.472	16564	HMSA92	P
3.543	.472	16596	D8-SPL	P
		W/AXIAL DIRT LIP		
3.543	.394	16594	D8SPL	P
		W/AXIAL DIRT LIP		
1.656 SHAFT				
	.550	**99165**	SSLEEVE	
		SHAFT RANGE 1.653 - 1.659		
2.502	.500	16532	†CRSH1	R
2.623	.375	▲**16545**	†CRWA1	P
1.660 SHAFT				
2.440	.594	16520	HM11	R
1.673 SHAFT				
2.146	.236	**16889**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.162	.290	▲16599	†HMA9	R
		W/2.608 FLANGE		
1.675 SHAFT				
2.000	.200	16787	WIPER	R
		WIPER SEAL		
1.685 SHAFT				
2.165	.433	**16620**	HMSA7	R
1.688 SHAFT				
	.835	480168	†KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.313	**99167**	SSLEEVE	
		SHAFT RANGE 1.685 - 1.691		
	.563	**99168**	SSLEEVE	
		SHAFT RANGE 1.684 - 1.690		
		16906	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
2.183	.313	509543	SC	R
2.279	.500	▲**16650**	†CRWH1	R
2.328	.313	▲**16657**	†CRWA1	R
2.328	.500	▲16667	HM18	R
		CLEARANCE D .286		
2.328	.531	▲16659	HMA5	R
2.374	.313	16669	CRSA1	R
2.437	.250	**16692**	†CRW1	S
2.437	.313	▲**16679**	†CRW1	R
2.437	.313	**16680**	†CRWA1	R
2.437	.469	**16696**	†CRW1	S
2.502	.281	▲16743	†HM21	R
2.502	.313	▲**16719**	†CRW1	R
2.502	.500	▲**16871**	†CRWA3	R
		W/2.750 FLANGE		
2.502	.835	▲**16725**	†CRWA41	R
		P.F. WIDTH .360 & 2.750 FLANGE		
2.502	1.535	16727	†KIT	R
2.502	2.120	★16729	†KIT	R
2.551	.375	16747	HMSA95	R
2.551	.470	▲**16735**	HMSA7	R
2.551	.595	16578	D8	RRT
		W/CW HELIX FROM AIR SIDE		
2.562	.250	▲16754	†HM21	R
2.605	.250	▲**16757**	†HM14	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.688 SHAFT (Cont.)				
2.623	.313	**16814**	† CRWA1	R
2.623	.375	▲16811	† HM21	R
2.623	.500	▲**16816**	† CRW1	R
2.623	.500	**16817**	† CRWA1	V
2.623	.500	**16945**	CRW2	P
2.623	.531	▲16805	HMSA16	R
		W/CW HELIX FROM AIR SIDE		
2.650	.290	▲16818	X4	R
		O.D. LISTED IS PRESSFIT I.D.		
2.686	.313	▲**16842**	† CRW1	R
2.688	.250	▲16820	X9	R
		O.D. LISTED IS PRESSFIT I.D.		
2.716	.313	▲**16854**	† CRW1	R
2.750	.313	▲**16900**	CRW1	R
2.750	.375	**16903**	† CRWA1	R
2.760	.974	16904	HDDF1	R
2.835	.469	▲16960	CRSA1	R
2.875	.313	▲**16999**	† CRW1	R
3.061	.375	**17035**	† CRW1	R
3.091	.500	▲17037	† CRSA4	R
		W/3.453 FLANGE & BI-DIR HELIX		
3.125	.375	**17038**	† CRWA1	R
1.692 SHAFT				
2.303	.295	16924	HMSA96	P
1.693 SHAFT				
2.126	.295	16891	CRSHA1	R
2.283	.276	**16896**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.480	.394	16926	CRSA3	R
2.480	.354	16894	HMSA92	R
		W/CCW HELIX FROM AIR SIDE		
2.756	.354	16917	HMSA29	R
1.704 SHAFT				
3.034	.500	▲**17100**	† CRWA1	R
1.705 SHAFT				
3.034	.562	17327	HMSA25	V
3.080	.550	17005	† HMSA25	R
3.084	.500	▲17053	CRS1	R
1.709 SHAFT				
2.209	.355	▲17106	† HMSA23	P
		HELIX-CW,W/2.505 FLG,PF WD.295		
2.209	.355	17107	† HMSA23	V
		HELIX-CW,W/2.505 FLG,PF WD.295		
1.719 SHAFT				
	.563	**99171**	SSLEEVE	
		SHAFT RANGE 1.715 - 1.721		
2.437	.469	17124	P1	L
2.561	.315	**17144**	† CRWA1	R
2.562	.500	▲17146	† HM18	R
		CLEARANCE D .286		
2.623	.500	17136	† CRSH1	R
2.875	.469	17162	P1	L
1.720 SHAFT				
2.921	.468	17259	† HMSA57	P
		W/BI-DIR HELIX FROM AIR SIDE		
1.730 SHAFT				
2.336	.250	▲17115	HMA85	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.730 SHAFT (Cont.)				
2.336	.470	17110	HMA95	R
		P.F. WIDTH .250 & SLINGER		
1.732 SHAFT				
2.165	.236	**17122**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.283	.315	**17300**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.283	.276	**17298**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.320	.260	**17134**	HMS4	R
		W/CW HELIX FROM AIR SIDE		
2.362	.315	**17154**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.362	.394	★**17330**	HMSA7	V
2.441	.315	17147	HMSA45	R
		W/AXIAL DIRT LIP		
2.614	.394	17296	HMSA97	V
		W/3.012 FLG O.D. & .394 PRESS		
2.653	.375	17407	HMSASPL	P
		W/BI-DIR HELIX FROM AIR SIDE		
3.150	.354	17191	HMSA92	P
3.543	.787	17194	HMSASPL	P
3.622	.748	17193	† HMSA7SP	R
		P.F. WIDTH .492		
1.734 SHAFT				
2.328	.270	▲17815	† HM19	R
		W/2.625 FLANGE		
2.401	.210	▲17187	† G2	R
2.449	.250	17131	† HM21	R
2.726	.512	▲17145	† HM18	R
		CLEARANCE D .218		
1.739 SHAFT				
	.375	**99170**	SSLEEVE	
		SHAFT RANGE 1.736 - 1.742		
2.812	.594	▲17190	† HMSA16	R
		W/HELIX-CW, W/3.270 FLANGE		
3.000	.500	▲**17727**	CRWA4	P
1.747 SHAFT				
2.623	.365	▲17458	† HMS14	E
		W/HELIX-CW & 2.870 FLANGE		
2.623	.365	17459	† KIT	E
1.750 SHAFT				
	.563	480173	† KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.563	480176	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.375	**99172**	SSLEEVE	
		SHAFT RANGE 1.747 - 1.753		
	.531	**99180**	SSLEEVE	
		SHAFT RANGE 1.747 - 1.753		
	.563	**99174**	SSLEEVE	
		SHAFT RANGE 1.747 - 1.753		
	.563	99827	GSLEEVE	
		SHAFT RANGE 1.747 - 1.753		
	.750	**99175**	SSLEEVE	
		SHAFT RANGE 1.747 - 1.753		
	.750	99828	GSLEEVE	
		SHAFT RANGE 1.747 - 1.753		
	.280	**400450**	VR1	R
		SHAFT RANGE 1.700 - 1.890		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.750 SHAFT (Cont.)				
	.280	**400454**	VR1	V
		SHAFT RANGE 1.700 - 1.890		
	.430	400451	VR2	R
		SHAFT RANGE 1.700 - 1.890		
	.430	400455	VR2	V
		SHAFT RANGE 1.700 - 1.890		
2.115	.219	709012	WS	R
2.115	.219	712123	WS	V
2.125	.063	451264	BUW	#
2.125	.188	702011	BV	D
2.125	.188	721552	BV	V
2.125	.188	712564	BV	V
2.125	.188	▲17227	†HMS1	R
2.250	.281	504270	SC	R
2.250	.188	▲**17240**	†HM14	R
2.250	.313	▲**17231**	†CRW1	R
2.250	.313	**17234**	†CRW1	V
2.326	.275	17490	KIT	R
2.328	.438	17257	CRS1	R
2.374	.250	▲17277	HM21	R
2.374	.313	**17261**	†CRWA1	V
2.374	.313	▲**17270**	†CRW1	R
2.374	.313	**17271**	†CRWA1	R
2.374	.438	★17265	HMS6	R
2.411	.375	▲**17280**	†CRW1	P
2.437	.250	▲17310	HM21	R
2.437	.313	**17283**	†CRW1	R
		W/SS CASE & SPRING		
2.437	.313	▲**17284**	†CRW1	R
2.437	.313	**17292**	†CRW1	V
2.437	.315	**17285**	†CRWA1	R
2.437	.315	**17293**	†CRWA1	V
2.441	.250	▲17340	†HM21	R
2.441	.250	17341	†HM21	R
		W/STAINLESS STEEL CASE		
2.441	.313	▲**17315**	†CRW1	R
2.441	.313	**550154**	†CRWA1	R
2.441	.375	**17320**	†CRWA1	V
2.441	.469	▲17359	†HM18	R
		CLEARANCE D .254		
2.500	.484	17353	D7	P
2.502	.250	**17385**	CRWH3	V
		W/SS CASE & SPRING		
2.502	.250	▲17392	†HM21	R
2.502	.313	**17379**	†CRW1	V
		W/STAINLESS STEEL SPRING		
2.502	.313	**17381**	†CRWA1	V
2.502	.313	▲**17386**	†CRW1	R
2.502	.313	**17387**	†CRWA1	R
2.502	.375	**17395**	†CRWHA1	V
2.502	.375	**17399**	†CRW1	S
2.502	.500	**17374**	†CRWA5	R
		W/STAINLESS STEEL SPRING		
2.561	.250	▲17415	†HM21	R
2.561	.313	▲**17404**	†CRW1	R
2.562	.500	▲17406	†HM18	R
		CLEARANCE D .286		
2.565	.313	▲**17413**	†CRWA1	R
2.620	.354	17520	HMSA97	V
2.623	.250	▲17461	HM21	R
2.623	.313	▲**17442**	†CRW1	R
2.623	.313	**17443**	†CRWA1	R
2.623	.313	**17444**	†CRW1	S
2.623	.313	**17448**	†CRWA1	V
2.623	.375	**17456**	†CRWH1	R
2.686	.313	▲**17484**	CRW1	R
2.716	.250	▲17488	†HM21	R
2.717	.438	▲**17607**	†CRWA1	R
2.718	.294	17485	X4	R
		O.D. LISTED IS PRESSFIT I.D.		
2.718	.359	▲17617	†HM18	R
		CLEARANCE D .160		
2.718	.359	17618	TL2	R
2.750	.250	▲17544	†HM21	R
2.750	.313	**17523**	†CRWA1	R
2.750	.313	▲**17557**	†CRW1	R
2.750	.313	**17558**	†CRW1	V
2.750	.484	17599	†HM21	R
2.758	.313	▲**17605**	†CRW1	R
2.786	.294	▲17620	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.810	.313	▲**17624**	CRWA1	R
2.810	.313	**17627**	†CRWA1	V
2.830	.375	▲17633	†HM21	R
2.875	.250	▲17671	†HM21	R
2.875	.313	▲**17653**	†CRW1	R
2.875	.313	**17657**	†CRW1	V
2.875	.375	**17645**	†CRWHA1	R
2.875	.500	17674	TL7	R
2.981	.438	▲**17675**	CRWHA1	R
2.997	.313	**17678**	†CRWHA1	R
2.997	.313	▲**17695**	†CRW1	R
3.000	.250	▲17702	†HM21	R
3.000	.313	**17699**	†CRWA1	R
3.000	.313	▲**17707**	†CRW1	R
3.000	.313	**17709**	†CRW1	V
3.061	.313	▲**17716**	†CRW1	R
3.061	.375	**17718**	†CRWA1	R
3.061	.484	17722	D	R
		SPECIAL CONST.		
3.062	.485	▲17720	D7	RT
3.149	.290	17724	TL6	R
3.154	.313	▲17726	CRS1	R
3.189	.313	▲**17746**	†CRW1	R
3.371	.625	▲17751	C8	RR
3.543	.438	▲**17756**	†CRW1	R
3.625	.438	▲**17761**	†CRW1	R
3.937	.313	17771	†CRSA1	R
1.766 SHAFT				
	.563	480177	†KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.563	**99176**	SSLEEVE	
		SHAFT RANGE 1.761 - 1.767		
	.563	99829	GSLEEVE	
		SHAFT RANGE 1.761 -1.767		
2.412	.370	17775	HMSA1	P
		W/CW HELIX FROM AIR SIDE		
2.412	.375	▲17286	†HMSA1	R
		W/CW HELIX FROM AIR SIDE		
1.768 SHAFT				
2.363	.313	▲**17780**	†CRWHA1	V
1.770 SHAFT				
2.364	.427	▲17781	†HMSA21	P
1.771 SHAFT				
2.362	.495	17502	D7	PP
2.835	.450	17673	HMSA21	E

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.772 SHAFT				
1.969	.512	17943	END CAP	P
2.323	.315	17113	HMA83	P
		W/FELT 'A' LIP WASHER		
2.362	.276	**17629**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.401	.315	17919	HMSA92	R
		W/CCW HELIX FROM AIR SIDE		
2.402	.315	17701	HMSA35	R
		W/CCW HELIX FROM AIR SIDE		
2.441	.394	17662	HMSA32	R
2.441	.394	17666	CRSA1	R
2.441	.472	17824	HMSASPL	R
		W/EXCLUDER LIP		
2.480	.294	17788	HMA16	R
		W/2.835 FLANGE		
2.500	.432	▲17787	†HMSA16	S
		HELIX-CW & 3.046 FLG,PF WD.359		
2.520	.472	17658	CRSHA1	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.520	.354	▲17789	HMA101	R
		W/AXIAL DIRT LIP		
2.520	.354	17801	HMA101	P
		W/AXIAL DIRT LIP		
2.520	.807	17922	HMSA97	P
		W/DIRT LIP		
2.559	.315	17696	HMSA85	P
		W/CCW HELIX FROM AIR SIDE		
2.561	.197	17435	†CRSA1	R
2.598	.394	17670	HMSA92	V
		W/BI-DIR HELIX FROM AIR SIDE		
2.638	.315	**17907**	HMSA7	P
2.638	.394	**17921**	HMSA7	V
2.756	.433	17677	HMSA16	V
		W/BI-DIR HELIX FROM AIR SIDE		
2.835	.228	▲17792	J2	R
		SEE TYPE J SECTION (HMA LIP)		
2.835	.472	17667	HMSA-DL	P
		W/CW HELIX, 19MM OVERALL WIDTH		
2.913	.433	17803	HMSA96	P
		W/CW HELIX FROM AIR SIDE		
2.953	.472	17686	HMSA92S	P
		W/CW HELIX		
3.071	.433	17808	HMSA96	P
		W/CW HELIX FROM AIR SIDE		
3.130	.571	17683	HMSA7S	V
3.346	.740	17799	D8	R
		W/STAINLESS STEEL CASE		
3.858	.413	17813	HMSA96	P
		W/BI-DIR HELIX FROM AIR SIDE		
1.781 SHAFT				
	.667	**99179**	SSLEEVE	
		SHAFT RANGE 1.778 - 1.784		
2.126	.250	**17802**	HM14	R
		W/STAINLESS STEEL CASE		
2.252	.313	▲**17806**	†CRWA1	R
2.502	.313	▲**17810**	†CRWH1	R
2.502	.313	**17811**	†CRWH1	V
2.623	.313	▲**17821**	†CRW1	R
2.686	.313	▲**17832**	CRW1	R
2.750	.500	17847	CRSH1	R
2.758	.500	17851	†CRSH1	R
1.787 SHAFT				
3.234	.335	▲17849	†HMSH22	S
1.792 SHAFT				
2.500	.600	▲17846	XHA79N	R
		O.D. LISTED IS PRESSFIT I.D.		
1.797 SHAFT				
2.726	.516	▲**17836**	†HM14	R
1.809 SHAFT				
2.361	.370	▲18009	†HMA9	R
		P.F. WIDTH .340 & 2.865 FLANGE		
1.811 SHAFT				
2.283	.276	**17897**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
2.323	.457	17905	HMSA56	P
2.362	.276	**17914**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
2.480	.291	**18101**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.480	.300	**18014**	HMS4	P
		W/CW HELIX FROM AIR SIDE		
2.520	.354	18015	HMSA92	P
		W/CW HELIX FROM AIR SIDE		
2.667	.315	**18124**	HMS4	P
		W/CW HELIX FROM AIR SIDE		
2.697	.295	17955	HMA8	R
2.732	.433	▲17691	HMSA45	P
		W/AXIAL DIRT LIP & 3.146 FLANGE		
2.740	.583	17915	HMSA45	P
		P.F. WIDTH .315		
2.874	.394	★18122	HMSHA7	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.874	.572	18102	UNITIZE	V
		VITON,W/HNBR SLEEVE		
3.189	1.090	19324	HMSA97S	P
3.543	.630	18000	HMSA7SP	P
		P.F. WIDTH .433 (11MM)		
4.016	.394	18003	CRSSPL	R
1.813 SHAFT				
	.563	**99181**	SSLEEVE	
		SHAFT RANGE 1.809 - 1.815		
		18257	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
2.279	.313	▲**18025**	†CRW1	R
2.408	.300	18030	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.437	.313	▲**18039**	†CRW1	R
2.562	.313	▲**18049**	†CRWA1	V
2.562	.313	18098	SL1	T
2.562	.438	▲18050	†HM18	R
		CLEARANCE D .224		
2.623	.313	▲**18104**	†CRW1	R
2.623	.500	▲**18100**	CRW79	R
		P.F. WIDTH .375		
2.686	.313	**18114**	†CRWA1	P
2.719	.270	▲18127	TL7	R
2.750	.313	▲**18159**	†CRW1	R
2.776	.432	18136	181367	R
		W/CW HELIX FROM AIR SIDE		
2.777	.432	▲18190	†HMSA25	R
		W/CW HELIX FROM AIR SIDE		
2.875	.313	▲**18242**	†CRW1	R
2.965	.250	18258	FF1	F
3.000	.375	▲**18264**	†CRWA1	P

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.813 SHAFT (Cont.)				
3.001	.563	▲18833	†HMSA25	P
		P.F. WIDTH .375 W/3.313 FLANGE		
3.003	.892	18259	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
3.092	.469	▲18024	HMSA25	R
1.825 SHAFT				
2.570	.250	▲18415	†HM21	R
2.623	.250	▲18055	†HM21	R
2.750	.484	▲18149	†HM18	R
		CLEARANCE D .275		
1.842 SHAFT				
2.748	.426	18472	†HMSA16	V
		W/BI-DIR HELIX FROM AIR SIDE		
1.844 SHAFT				
2.502	.375	18412	†CRSA1	R
2.623	.313	▲**18425**	†CRW1	R
2.750	.313	▲**18444**	†CRW1	P
2.750	.375	18446	†CRSA1	R
1.849 SHAFT				
2.717	.398	▲18436	D7	P
1.850 SHAFT				
2.283	.276	**18496**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.402	.276	**18512**	HMSA7	V
		W/CW HELIX FROM AIR SIDE		
2.441	.354	18452	HMS9	P
2.520	.550	▲18454	HMA5	R
		P.F. WIDTH .236		
2.520	.276	18458	D8	R
2.598	.433	▲18465	HMSA29	R
		P.F. WD .236 W/AXIAL DIRT LIP		
2.698	.354	18499	CRSA3	P
		WBI-DIR HELIX		
2.756	.472	18507	HMSA123	P
2.835	.394	18513	HMSA92	P
3.150	.511	18488	HMSASPL	P
		W/.276 P.F. WIDTH		
3.307	.374	18489	HMA101	P
3.976	.472	18505	HMSA92	P
1.851 SHAFT				
2.441	.354	18862	†HMS1	R
1.859 SHAFT				
	.563	**99185**	SSLEEVE	
		SHAFT RANGE 1.857 - 1.863		
1.868 SHAFT				
	.889	480184	†KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.889	**99186**	SSLEEVE	
		SHAFT RANGE 1.866 - 1.872		
2.518	.315	▲**18492**	†CRWA1	P
1.872 SHAFT				
2.684	.544	18510	X13	R
		O.D. LISTED IS PRESSFIT I.D.		
2.750	.677	18758	†HMSA96	V

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.873 SHAFT				
2.716	.281	18630	X13	R
		O.D. LISTED IS PRESSFIT I.D.		
1.874 SHAFT				
2.496	.351	18724	HMSA92	V
1.875 SHAFT				
	.563	480185	†KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.563	480186	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.563	480187	†KIT	S
		SPEEDI-SLEEVE & SEAL KIT		
	.175	**99190**	SSLEEVE	
		SHAFT RANGE 1.872 - 1.878		
	.295	**99188**	SSLEEVE	
		SHAFT RANGE 1.872 - 1.878		
	.375	**99184**	SSLEEVE	
		SHAFT RANGE 1.872 - 1.878		
	.563	**99187**	SSLEEVE	
		SHAFT RANGE 1.872 - 1.878		
	.563	99832	GSLEEVE	
		SHAFT RANGE 1.872 - 1.878		
2.250	.063	451249	BUW	#
2.250	.188	711824	BV	R
2.250	.188	721509	BV	D
2.250	.188	721560	BV	V
2.318	.203	▲18536	HMSA11	V
		W/2.333 NOSE GASKET		
2.375	.281	504271	SC	R
2.398	.250	18550	†KIT	R
		SEE KIT SECTION		
2.398	.250	18551	KIT	R
		SEE KIT SECTION		
2.398	.256	▲**18549**	†CRW1	R
2.401	.275	▲**18543**	†HM14	R
2.441	.315	**534957**	CRWA1	V
2.471	.313	▲**18545**	†CRWA1	R
2.500	.313	▲**18555**	†CRW1	P
2.502	.250	▲18558	†HM21	R
2.502	.313	▲**18565**	†CRW1	R
2.561	.600	18544	†HMSA16	V
		W/HELIX-CW P.F. WIDTH .582		
2.561	.600	▲18548	†HMSA16	P
		W/HELIX-CW, P.F. WIDTH .528		
2.562	.313	**18546**	†CRWA1	V
2.562	.313	**18562**	†CRW1	P
2.623	.250	▲18591	†HM21	R
2.623	.313	▲**18580**	†CRW1	R
2.623	.313	**18581**	†CRWA1	R
2.623	.313	**18582**	†CRW1	V
2.623	.313	**18584**	†CRWA1	V
2.623	.374	**18592**	†CRW1	S
2.625	.375	**18508**	HMS4	S
		W/CW HELIX FROM AIR SIDE		
2.628	.328	▲**18603**	†HM14	R
2.628	.415	18761	HMSA16	R
2.686	.313	▲**18626**	†CRW1	R
2.716	.394	**18623**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
2.721	.266	▲**18640**	HM14	R
2.750	.250	▲18659	†HM21	R
2.750	.313	**18652**	†CRW1	V
2.750	.313	▲**18657**	†CRW1	R
2.750	.313	**18658**	†CRWA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.875 SHAFT (Cont.)				
2.750	.313	**18666**	† CRW1	P
2.750	.500	▲18662	† HMSA26	R
2.750	.500	▲18771	† D8	ET
		P.F. WD .500, W/2.950 FLG O.D.		
2.750	1.370	18687	CRSA3	P
2.758	.313	▲**18671**	† CRW1	P
2.758	.313	**18679**	† CRW1	S
2.758	.531	18676	D5	RR
2.760	.400	▲18692	† HMS14	S
		W/CW HELIX FROM AIR SIDE		
2.780	.250	▲18704	† HM21	R
2.782	.438	▲**18693**	† CRWH1	R
2.782	.438	**18695**	† CRWHA1	R
2.804	.300	▲18697	HMA22	R
2.813	.500	▲18708	† HMSA16	R
		W/CW HELIX FROM AIR SIDE		
2.830	.391	**550185**	HMS4	R
2.868	.544	▲18710	HMSA95	R
		P.F. WD .450 W/2.898 RIBBED OD		
2.868	.375	▲18731	HMSA95	R
2.875	.250	▲18750	† HM21	R
2.875	.313	**18732**	† CRW1	V
2.875	.313	▲**18733**	† CRW1	R
2.875	.313	**18734**	† CRWA1	R
2.875	.313	**18737**	† CRWA1	V
2.875	.315	**542726**	CRWH1	R
2.903	.424	▲18765	HMA84	R
		W/3.150 FLANGE		
2.965	.234	▲**18772**	† HM14	R
2.997	.250	▲**18808**	† HM14	R
2.997	.313	▲**18785**	† CRW1	R
3.000	.250	▲18823	† HM21	R
3.000	.313	▲**18817**	† CRW1	R
3.000	.313	**18818**	† CRW1	V
3.000	.625	18829	† UNITIZE	S
		P.F. WIDTH .562		
3.061	.313	▲**18872**	† CRWA1	R
3.061	.485	18752	D7	RT
3.105	.500	▲**18880**	† CRWA1	R
3.105	.500	▲**18912**	CRW2	R
		W/3.266 FLANGE		
3.125	.313	18879	† CRSA1	R
3.150	.930	▲18881	HMSA41	R
3.150	.250	▲18889	† HM21	R
3.160	.531	▲**18888**	CRWA32	P
		P.F. WIDTH .254 W/O BUMPER		
3.160	.695	18896	CRSA8	V
		P.F. WIDTH .250 & BUMPER		
3.160	.770	▲**18891**	CRWA31	P
		P.F. WIDTH .254 & BUMPER		
3.189	.469	▲**18899**	† CRWH1	R
3.249	.484	▲**18922**	† CRWA1	R
3.371	.438	▲**18916**	† CRWH1	R
3.375	.313	18961	J2	R
		SEE TYPE J SECTION (HMS LIP)		
3.496	.438	▲**18924**	† CRWA1	R
3.500	.438	**18926**	† CRW1	R
3.744	.430	▲18948	HMSH1	R
1.877 SHAFT				
2.503	.341	**18757**	HMSA7	V
1.885 SHAFT				
2.700	.552	18999	HMSA25	#
		W/HELIX-CW W/3.000 FLANGE O.D.		
1.886 SHAFT				
2.561	.250	▲18990	HM22	R
2.690	.350	18860	CRSA3	P
		W/CCW HELIX FROM AIR SIDE		
2.700	.550	▲18992	† HMSA16	P
		W/HELIX-CCW & 3.000 FLANGE		
2.700	1.000	18998	† KIT	P
2.750	.469	18994	HMSA92S	P
		W/BI-DIR HELIX FROM AIR SIDE		
1.889 SHAFT				
2.440	.276	17588	CRSA1	R
2.685	.512	18878	† D8-SPL	P
2.750	.520	18892	HMSA92	P
		W/BI-DIR HELIX FROM AIR SIDE		
3.110	.688	18983	CRSA1	P
1.890 SHAFT				
2.362	.276	**18857**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.362	.276	**18897**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.440	.405	18443	† HMSA23	E
		P.F WIDTH .354		
2.441	.945	18964	HMA31	R
2.441	.236	18864	HMA1	R
2.441	.296	18865	† CRSHA1	R
2.441	.354	550242	HMA31	R
		P.F. WIDTH .354		
2.520	.472	18984	HMSA96	R
2.520	.540	▲18959	HMSA65	R
		W/2.815 FLANGE		
2.520	.472	18866	CRSA1	R
2.559	.315	18877	HMSA1	R
2.624	.315	**18895**	HMS4	S
2.677	.433	**18854**	HMSA7	R
		W/CW HELIX FROM AIR SIDE		
2.677	.433	19317	CRSA3	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.756	.354	**18873**	HMSA7	R
2.756	.669	18876	D8-SPL	R
2.810	.700	18844	X-SPL	P
		HUB SEAL		
2.835	.394	18531	D7	R
2.874	.276	18979	CRSA1	P
2.910	.390	18987	HMSA92	P
3.071	.551	18782	HMSA35	R
3.160	.620	18871	KIT	R
3.160	.620	18875	CRSHA32	R
1.893 SHAFT				
2.434	.250	▲**19000**	CRW1	R
2.533	.250	19011	KIT	R
		SEE KIT SECTION		
2.533	.250	19012	† KIT	R
		SEE KIT SECTION		
2.811	.468	18852	HMSA97	P
		W/BI-DIR HELIX & 3M BEAD & FLG		
1.906 SHAFT				
2.752	.375	**19017**	† CRWA1	P
3.189	.313	19062	CRSA1	P
1.912 SHAFT				
	.375	**99192**	SSLEEVE	
		SHAFT RANGE 1.909 - 1.915		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.915 SHAFT				
2.533	.250	**19010**	†CRW1	R
1.927 SHAFT				
2.910	1.210	19208	†HMS-SPL	#
1.929 SHAFT				
2.441	.315	▲19090	HMSA45	R
		W/AXIAL DIRT LIP & SS SPRING		
2.441	.441	19097	HMSA45	P
2.520	.492	19200	HMA16	R
		P.F. WIDTH .236 & 2.805 FLANGE		
2.677	.394	**19293**	HMSA7	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.756	.394	19192	HM-SPL	R
		W/BI-DIR HELIX FROM AIR SIDE		
2.756	.472	19095	HMSA-SP	R
		W/3.031 FLANGE O.D.		
2.843	.315	▲19100	HMA22	R
		P.F. WIDTH .236 - RC		
1.930 SHAFT				
3.940	.315	19333	HM83	R
1.937 SHAFT				
2.650	.350	19377	†AHL1FLG	S
2.650	.360	144	KIT	#
		HALF SEAL		
2.687	.375	19252	KIT	R
1.938 SHAFT				
	.563	**99193**	SSLEEVE	
		SHAFT RANGE 1.934 - 1.940		
	.563	99833	GSLEEVE	
		SHAFT RANGE 1.934 - 1.940		
2.412	.313	▲**19215**	†CRW1	R
2.437	.250	▲**19210**	†CRW1	R
2.437	.250	**19212**	†CRW1	R
		W/SS CASE & SPRING		
2.471	.313	▲19206	†HMSA1	V
2.500	.300	19013	†HMA9	R
2.500	.380	▲19214	†HMA9	R
		P.F. WIDTH .306		
2.502	.281	▲**19219**	†HM14	R
2.502	.281	▲19221	HMA4	R
2.502	.375	▲**19220**	†CRWA1	R
2.563	.313	▲**19211**	†CRW1	R
2.578	.294	▲19223	HMA4	R
		W/2.840 FLANGE		
2.621	.570	▲19500	†HMA8	R
		P.F. WIDTH .255		
2.623	.313	▲**19226**	†CRW1	R
2.623	.313	**19227**	†CRWA1	V
2.623	.313	▲**19229**	†CRWA1	R
2.675	.250	**19213**	†CRWA5	R
2.680	.500	19255	†D3	R
2.686	.304	**19234**	†CRWA1	P
2.686	.304	▲**19236**	†CRW1	R
2.686	.304	**19237**	†CRWA1	R
2.686	.304	**19243**	†CRWA1	V
2.686	.304	**19244**	†CRW1	P
2.686	.375	**19240**	†CRW1	S
2.686	.594	19251	†TL8	R
2.693	.507	19372	D8	R
2.750	.313	▲**19264**	†CRW1	R
2.750	.313	▲**19267**	†CRW1	V
2.750	.360	19387	†HMSA16	V
2.762	.500	▲19273	†CRSA1	R
		W/CW HELIX FROM AIR SIDE		
2.813	.500	▲19277	HMSA23	R
		W/CCW HELIX FROM AIR SIDE		
2.825	.500	19274	CRSH1	P
2.835	.250	**19278**	†CRWA5	R
2.875	.250	▲19306	†HM21	R
2.875	.313	▲**19300**	†CRW1	R
2.875	.313	**19301**	†CRWA1	R
2.875	.313	**19304**	†CRWH1	V
2.875	.563	19286	KIT	RR
		SEE KIT SECTION		
2.875	.718	19305	KIT	P
		SEE KIT SECTION		
2.884	.313	**19310**	†CRWA1	P
2.997	.313	▲**19350**	†CRW1	R
3.000	.313	▲**19359**	†CRW1	R
3.000	.313	**19360**	CRWA1	R
3.000	.313	**19368**	†CRWA1	V
3.000	.375	573	FELT	F
3.061	.313	▲**19380**	†CRW1	R
3.062	.500	**19438**	†CRW1	S
3.125	.500	▲**19400**	†CRW1	R
3.189	.313	▲**19407**	†CRW1	R
3.251	.313	**19433**	†CRWA1	V
3.251	.313	▲**19434**	†CRW1	R
3.350	.469	**19445**	†CRWHA1	R
3.543	.313	▲**19449**	†CRW1	R
3.622	.375	19455	FF1	F
3.751	.500	19466	†CRSH1	R
1.940 SHAFT				
2.900	.400	19428	HMSA16	R
2.909	.516	▲19314	CRSA6	R
		HELIX-CW & 3.583 FLG,PF WD.370		
1.945 SHAFT				
2.892	.294	▲19510	†TL6	R
1.968 SHAFT				
2.362	.236	19599	HMA10	R
1.969 SHAFT				
2.368	.276	**19651**	HMSA7	V
2.559	.384	19647	HMA8	P
2.571	.315	19623	HMSA24	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.618	.591	▲19612	HMSA92	R
		P.F. WD .750 W/AXIAL DIRT LIP		
2.623	.313	▲**19607**	†CRWA1	R
2.638	.216	19624	HMA90	R
2.638	.354	▲19628	CRSA1	R
2.638	.433	▲19626	HMA76	R
2.638	.354	19627	HMA8	R
2.657	.531	19579	CRSHA1	R
2.677	.270	19613	HMSA45	R
		W/AXIAL DIRT LIP		
2.677	.354	19596	CRSHA1	R
2.686	.375	▲19610	HMS2	S
2.686	.500	19615	CRSH1	R
2.742	.500	19620	CRSH1	P
2.750	.530	19569	CRSHA1	R
2.756	.315	19635	HMSA92	P
		W/CW HELIX FROM AIR SIDE		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
1.969 SHAFT (Cont.)				
2.835	.570	19689	D8SPL	R
		AXIAL DIRT LIP-SEAL		
2.835	.640	▲19639	D5-SPL	R
		SPECIAL CONST.		
2.874	.468	▲19644	KIT	R
		DISCONTINUE BUILDING KIT		
2.875	.469	▲19643	CRSH1	R
2.913	.354	19656	HMSA92	P
2.953	.354	20012	CRSA1	P
2.960	.250	▲19660	HD1	R
		QUILL WIPER		
3.150	.433	19578	HMSA96	P
		W/CCW HELIX FROM AIR SIDE		
3.150	.630	★19672	HMSA92	P
		W/BI-DIR HELIX FROM AIR SIDE		
3.228	.315	19677	HMSA96	P
3.386	.748	19682	HMSA96	R
		W/CCW HELIX FROM AIR SIDE		
1.980 SHAFT				
	.563	20146	†KIT	V
		SEE KIT SECTION		
	.563	**99198**	SSLEEVE	
		SHAFT RANGE 1.977 - 1.983		
1.988 SHAFT				
3.051	.354	19709	HMSA96	P
1.991 SHAFT				
2.900	.290	19720	X4	R
		O.D. LISTED IS PRESSFIT I.D.		
1.995 SHAFT				
2.620	.492	19955	KIT	
1.996 SHAFT				
3.111	.344	19730	†HMSA16	V
		W/HELIX-CW W/3.425 FLANGE		
2.000 SHAFT				
	.563	480198	KIT	S
		SPEEDI-SLEEVE & SEAL KIT		
	.563	**99199**	SSLEEVE	
		SHAFT RANGE 1.997 - 2.003		
	.563	99834	GSLEEVE	
		SHAFT RANGE 1.997 - 2.003		
	.875	**99200**	SSLEEVE	
		SHAFT RANGE 1.997 - 2.003		
	.875	99835	GSLEEVE	
		SHAFT RANGE 1.997 - 2.003		
	.193	400509	VRINGSP	R
		SHAFT RANGE 1.890 - 2.090		
	.280	**400500**	VR1	R
		SHAFT RANGE 1.890 - 2.090		
	.280	**400504**	VR1	V
		SHAFT RANGE 1.890 - 2.090		
	.430	400501	VR2	R
		SHAFT RANGE 1.890 - 2.090		
	.430	400505	VR2	V
		SHAFT RANGE 1.890 - 2.090		
	.562	20168	J2-KIT	R
		SEE TYPE J SECTION (HM LIP)		
2.365	.219	709014	WS	R
2.365	.219	712124	WS	V
2.371	.250	▲**19737**	†HM14	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.000 SHAFT (Cont.)				
2.375	.063	451037	BUW	#
2.375	.188	702028	BV	D
2.375	.188	721534	BV	V
2.375	.188	19731	HMS1	R
2.375	.188	**19733**	HM14	R
2.500	.250	▲19748	HM1	R
2.500	.438	**19739**	†CRW1	S
2.502	.281	504272	SC	R
2.502	.250	▲**19754**	†HM14	R
2.502	.313	▲**19745**	†CRW1	P
2.560	.224	19984	†HMA84	R
2.560	.234	19784	†HMA85	R
2.562	.234	**19753**	†HM14	R
2.562	.335	▲**19852**	CRW2	R
		W/2.860 FLANGE		
2.565	.500	▲**19757**	†HM14	R
2.620	.355	20018	HMSA96	VT
2.622	.280	▲19743	†HMA9	R
		W/3.000 FLG & AXIAL DIRT LIP		
2.623	.281	504273	SC	R
2.623	.250	19746	†HM21	V
2.623	.250	▲19763	†HM21	R
2.623	.313	▲**19760**	†CRW1	R
2.623	.313	**19762**	†CRWA1	R
2.623	.313	**19777**	†CRWA1	V
2.623	.313	**19782**	†CRWA1	V
		W/STAINLESS STEEL SPRING		
2.623	.311	19905	HMSA1	V
		W/CW HELIX FROM AIR SIDE		
2.627	.234	▲**19768**	†HM14	R
2.631	.272	20016	HMA94	R
		P.F. WD IS.257",MINOR OD=2.628		
2.635	.234	**19770**	†HM14	R
2.652	.365	19773	HMA2	R
2.686	.250	▲19783	†HM21	R
2.686	.375	▲**19778**	†CRW1	R
2.716	.375	▲**19785**	†CRW1	R
2.716	.375	**19786**	†CRWA1	R
2.720	.210	19793	X	R
		O.D. LISTED IS PRESSFIT I.D.		
2.742	.375	▲19799	†HMS13	P
		W/CW HELIX FROM AIR SIDE		
2.745	.234	▲**19803**	HM14	R
2.746	.375	▲**19807**	†CRW1	S
2.750	.250	▲19834	†HM21	R
2.750	.313	**19823**	†CRW1	V
2.750	.313	▲**19831**	†CRW1	R
2.750	.313	**19832**	†CRWA1	R
2.750	.313	**19839**	†CRWA1	V
2.750	.313	**19840**	†CRW1	V
		W/SS CASE & SPRING		
2.752	.188	▲**19820**	†HM14	R
2.754	.302	19966	†HMS14	S
2.802	.250	▲19844	X15	D
		O.D. LISTED IS PRESSFIT I.D.		
2.834	.197	19841	SL2	T
		W/ALUMINUM CASE		
2.835	.469	▲**19848**	†CRWH1	R
2.874	.703	19876	†C8	RR
2.875	.256	19882	XHM	R
		O.D. LISTED IS PRESSFIT I.D.		
2.875	.250	▲19880	†HM21	R
2.875	.313	**19884**	†CRW1	V
2.875	.313	▲**19886**	†CRW1	R
2.875	.313	**19887**	†CRWA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.000 SHAFT (Cont.)				
2.875	.375	**19896**	† CRWHA1	R
2.875	.500	**19900**	† CRWH1	R
		W/SS CASE & SPRING		
2.880	.368	19939	† HMS14	R
		W/CW HELIX FROM AIR SIDE		
2.880	.375	▲ **19922**	† CRWA1	R
2.880	.375	**19923**	† CRWA1	P
2.962	.250	▲ 20113	† HM20	R
		W/3.209 FLANGE		
2.965	.313	▲ **19940**	† HM14	R
2.965	.500	**19938**	† HM14	R
		CLEARANCE D .275		
2.968	.313	▲ **20118**	† HM14	R
2.997	.250	▲ 19965	HM21	R
2.997	.375	▲ **19969**	† CRWH1	R
2.997	.375	**19970**	† CRWHA1	R
2.997	.375	**19974**	† CRWHA1	V
2.997	.375	**19979**	† CRWH1	V
2.997	.438	19982	† HMSA24	P
3.000	.250	▲ 20006	† HM21	R
3.000	.313	▲ **19992**	† CRW1	R
3.000	.313	**19993**	† CRWA1	R
3.000	.313	**19995**	† CRWA1	V
3.000	.375	**20002**	† CRWH1	V
3.000	.375	**20004**	† CRWH1	R
3.000	.375	**20005**	† CRWHA1	R
3.061	.250	▲ 20044	† HM21	R
3.061	.375	▲ **20045**	† CRW1	R
3.061	.500	**20053**	† CRWH1	R
3.061	.500	**20054**	† CRWHA1	R
3.125	.375	▲ **20070**	† CRW1	R
3.125	.375	★ 584	FELT	F
3.125	.500	596	FELT	F
3.148	.250	▲ **20078**	HM14	R
3.150	.375	▲ **20079**	† CRW1	R
3.189	.469	▲ **20098**	† CRWH1	R
3.189	.469	**20100**	† CRWHA1	R
3.251	.437	20108	KIT	R
3.251	.438	▲ **20109**	† CRWH1	R
3.370	1.031	20136	CRSA4	P
		HELIX-CW & 3.800 FLG,PF WD.358		
3.371	.438	**20122**	† CRW1	V
3.371	.438	▲ **20124**	† CRWH1	R
3.371	.438	**20125**	† CRWHA1	R
3.371	.438	**20127**	CRWH1	V
3.543	.433	▲ **20140**	† CRWH1	R
3.623	.250	▲ 20148	HM21	R
3.623	.438	▲ **20144**	† CRWH1	R
4.003	.438	▲ **20158**	† CRWH1	R
2.008 SHAFT				
2.480	.470	20209	HMSA96	R
		P.F. WIDTH .337"		
2.598	.413	20215	HMSA96	R
		P.F. WIDTH .295 (7.5MM)		
2.756	.433	20216	HMSASPL	P
		W/CCW HELIX FROM AIR SIDE		
2.043 SHAFT				
2.835	.315	20403	HMSA29	R
2.045 SHAFT				
2.835	.618	20445	HMSA7SP	P
2.047 SHAFT				
2.441	.217	20417	XA-SPL	P
		O.D. LISTED IS PRESSFIT I.D.		
2.561	.315	▲ **20420**	† CRW1	R
2.561	.354	20433	† CRS1	R
2.590	.290	20038	HMSA96	P
2.599	.295	▲ 20431	HMSA96	P
2.638	.264	▲ 20422	X	P
		O.D. LISTED IS PRESSFIT I.D.		
2.677	.315	20455	HMSA96	P
2.677	.276	20427	HMA8	P
		W/AXIAL DIRT LIP		
2.677	.512	▲ 20428	HMSA7SP	R
		SPECIAL CONST.		
2.717	.583	20448	D7-SPL	P
2.756	.294	▲ 20439	X	R
		O.D. LISTED IS PRESSFIT I.D.		
2.756	.354	20457	HMSA1	R
2.756	.374	20432	HMSA1	V
		W/CW HELIX FROM AIR SIDE		
2.835	.315	20463	HMSA96	R
2.835	.315	20438	HMSA35	P
		W/CW HELIX FROM AIR SIDE		
2.874	.315	20446	KIT	P
2.953	.294	20429	HMSA29	R
		W/AXIAL DIRT LIP		
2.953	.390	22075	KIT	P
3.071	.368	▲ 20465	X	P
		O.D. LISTED IS PRESSFIT I.D.		
3.268	.315	20501	KIT	R
		SEE KIT SECTION		
3.268	.709	20700	KIT	R
2.048 SHAFT				
2.727	.570	▲ 20425	† HMA8	R
		W/AXIAL DIRT LIP		
2.063 SHAFT				
	.781	**99205**	SSLEEVE	
		SHAFT RANGE 2.057 - 2.063		
	.348	20766	J2-KIT	R
		SEE TYPE J SECTION (CRWH LIP)		
2.561	.313	**20520**	† CRW1	V
2.661	.188	**20525**	HMS4	R
2.661	.188	20526	KIT	R
		SEE KIT SECTION		
2.750	.313	**20530**	CRWH1	R
2.842	.438	▲ **20538**	† CRWH1	R
2.875	.375	550085	† CRSA1	R
2.875	.438	▲ **20554**	† CRWH1	R
2.938	.344	20560	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.997	.438	▲ **20586**	† CRWH1	R
3.000	.313	▲ 20608	† HM21	R
3.000	.375	▲ **20594**	† CRW1	R
3.000	.375	**20599**	† CRWA1	V
3.061	.313	▲ **20643**	† CRWH1	R
3.125	.375	**20659**	† CRW1	R
3.149	.250	20669	† HM21	R
3.149	.500	20672	† TL6	D
		P.F. WIDTH .395		
3.150	.266	▲ 20674	TL7	R
3.189	.375	▲ **20702**	† CRW1	R
3.250	.294	▲ 20735	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
3.251	.438	**20747**	† CRWHA1	R

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.063 SHAFT (Cont.)				
3.251	.438	▲ **20749**	† CRWH1	R
2.086 SHAFT				
2.685	.276	**20906**	HMSA7	R
2.087 SHAFT				
2.795	.453	20866	CRSA1	R
3.203	.610	20875	† HMSA9	R
2.088 SHAFT				
2.911	.500	20880	HMSA97	V
		W/3.309 FLANGE O.D.		
2.094 SHAFT				
2.718	.359	▲ 20952	† HM18	R
		CLEARANCE D .160		
3.149	.550	20965	† HM21	R
2.102 SHAFT				
3.038	.315	21020	HMSW7	V
2.122 SHAFT				
3.030	.430	21241	HMSA97	V
2.123 SHAFT				
2.737	.438	21962	† KIT	R
2.125 SHAFT				
	.500	**99210**	SSLEEVE	
		SHAFT RANGE 2.123 - 2.128		
	.781	**99212**	SSLEEVE	
		SHAFT RANGE 2.124 - 2.130		
	.781	99836	GSLEEVE	
		SHAFT RANGE 2.124 - 2.130		
		21307	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
	.280	**400550**	VR1	R
		SHAFT RANGE 2.090 - 2.290		
	.280	**400554**	VR1	V
		SHAFT RANGE 2.090 - 2.290		
	.430	400551	VR2	R
		SHAFT RANGE 2.090 - 2.290		
	.430	400555	VR2	V
		SHAFT RANGE 2.090 - 2.290		
2.490	.219	709015	WS	R
2.500	.063	451069	BUW	#
2.500	.188	710087	BV	D
2.500	.188	721535	BV	V
2.750	.250	▲ 21059	† HM21	R
2.750	.375	**21063**	† CRW1	V
2.750	.500	▲ **21061**	† CRWA1	R
2.763	.250	**21069**	† CRW1	R
2.763	.250	21070	KIT	R
		SEE KIT SECTION		
2.763	.500	21285	HMSA97	V
		W/CW HELIX FROM AIR SIDE		
2.875	.250	▲ **21101**	† HM14	R
2.875	.375	▲ **21103**	† CRW1	S
2.875	.438	**21091**	† CRW1	V
2.875	.438	▲ **21098**	† CRW1	R
2.875	.438	▲ **21100**	† CRWA1	R
2.875	.438	**21108**	† CRWHA1	R
2.880	.500	▲ 21110	† HMSA16	R
		W/CW HELIX FROM AIR SIDE		
2.880	.550	▲ **21111**	† CRWA3	P
		W/HELIX-CCW & 3.180 FLANGE		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.125 SHAFT (Cont.)				
2.880	.552	21236	† HMSA25	V
2.884	.401	21239	D8	V
2.891	.250	▲ **21121**	† HM14	R
2.953	.472	**21128**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
2.960	.669	▲ 21045	HMSA45	R
		W/P.F. WIDTH 8.00MM (.315)		
2.997	.438	▲ **21134**	† CRWH1	R
2.997	.438	**21136**	† CRWHA1	R
3.000	.250	▲ 21159	† HM21	R
3.000	.313	**21167**	† CRWHA1	V
3.000	.375	▲ **21163**	† CRW1	R
3.000	.375	**21164**	† CRWA1	R
3.000	.438	**21171**	† CRWH1	V
3.000	.438	**21172**	† CRWH1	R
3.000	.438	**21173**	† CRWHA1	R
3.058	.235	21294	KIT	R
		FLG OD 3.266		
3.061	.250	▲ 21208	† HM21	R
3.061	.438	▲ **21203**	† CRWH1	V
		W/STAINLESS STEEL SPRING		
3.061	.500	▲ **21210**	† CRW1	R
3.061	.500	**21211**	CRWA1	R
3.061	.500	**21213**	† CRWHA1	R
3.125	.438	▲ **21234**	† CRWH1	R
3.125	.438	**21245**	† CRWHA1	P
3.189	.250	▲ 21265	† HM21	R
3.189	.375	▲ **21267**	† CRWA1	R
3.189	.375	**21269**	† CRWA1	V
3.189	.469	**21270**	† CRWHA1	S
3.250	.900	21306	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
3.250	.270	▲ 21298	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
3.251	.438	▲ **21302**	† CRWH1	R
3.350	.438	▲ **21336**	† CRWH1	R
3.371	.375	▲ **21352**	† CRWA1	R
3.371	.438	▲ **21353**	† CRWH1	R
3.500	.750	22587	KIT	R
3.543	.438	▲ **21358**	† CRWH1	R
3.623	.469	▲ 21379	CRSA1	P
2.126 SHAFT				
2.559	.512	21043	CRSA1	R
2.559	.276	21247	HMS18SP	P
2.598	.315	21048	HMSA96	P
2.717	.296	21052	D5SPL	R
2.756	.374	▲ 21064	HMSHA1	R
		P.F. WIDTH .276		
2.992	.315	21248	HMSA96	P
2.992	.563	21327	D6	P
		RUBBER COVERED		
3.228	.315	21281	HMSA96	V
2.128 SHAFT				
3.150	.532	21244	HMSA95	R
2.130 SHAFT				
2.745	.958	21291	HM-SPL	R
2.136 SHAFT				
2.904	.453	▲ 21400	† HMS17	R
		P.F. WIDTH .310 & 3.110 FLANGE		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.141 SHAFT				
3.484	.329	21410	HMS14	P
		W/CW HELIX		
2.145 SHAFT				
3.188	.469	▲21538	CRSH1	R
2.165 SHAFT				
	.787	99863	GSLEEVE	
		SHAFT RANGE 2.162 - 2.169		
2.670	.310	21652	HMSA56	P
2.913	.276	21628	HMA8	P
		W/AXIAL DIRT LIP		
3.150	.315	21639	HMSA16	V
2.172 SHAFT				
2.426	.484	21650	SL1	T
		W/3.000 FLANGE		
2.180 SHAFT				
3.059	.300	21735	†HMA22	R
2.186 SHAFT				
3.131	.729	21918	VACBOOT	R
		HUB SEAL		
2.188 SHAFT				
	.781	480219	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.781	**99218**	SSLEEVE	
		SHAFT RANGE 2.186 - 2.192		
2.875	.438	▲**21736**	†CRWH1	R
2.997	.438	▲**21749**	†CRWH1	R
3.000	.256	21756	HMA22	R
3.000	.256	21756-AP	HMA22	R
3.000	.340	★21769	†HMA22	R
3.000	.375	▲**21759**	†CRWA1	R
3.000	.375	**21763**	†CRWA1	V
3.000	.500	**21764**	†CRWH1	R
3.000	.500	▲21771	†HMA22	R
3.061	.500	▲**21775**	†CRWH1	R
3.063	.250	515	FELT	F
3.188	.469	21820	KIT	R
		SEE KIT SECTION		
3.188	.688	21814	KIT	R
		SEE KIT SECTION		
3.189	.640	▲21938	HMA4	R
3.251	.438	▲**21840**	†CRWH1	R
3.350	.438	▲**21890**	†CRWH1	R
3.371	.438	▲**21910**	†CRWH1	R
3.500	.250	★668	FELT	F
3.623	.500	21950	CRSHA1	R
2.191 SHAFT				
3.055	.170	21915	X-SPL	P
		O.D. LISTED IS PRESSFIT I.D.		
2.199 SHAFT				
2.737	.438	▲21952	†HMA90	R
2.804	.300	21953	HMA85	P
		W/ALUMINUM CASE		
2.201 SHAFT				
2.738	.197	21961	HMA73	R
		W/2.913 FLG & AXIAL DIRT LIP		
3.519	.591	▲21955	†HMSA16	R
		W/CW HELIX FROM AIR SIDE		
2.205 SHAFT				
2.638	.217	22005	X	R
		O.D. LISTED IS PRESSFIT I.D.		
2.677	.433	22454	HMA8	R
2.835	.453	22022	HMSA57	R
		P.F. WIDTH .453 W/3.032 FLANGE		
2.835	.433	22048	†HMSA56	R
2.835	.492	22027	†HMAS21	R
2.843	.315	22024	HMS4SPL	P
2.846	.315	22026	HMSA92	R
2.870	.315	22041	HMSA96	P
2.874	.315	▲22037	HMSA96	P
2.874	.315	22047	KIT	P
2.953	.315	22033	HMSA96	P
2.953	.433	22031	HMSA7SP	R
		W/CW HELIX FROM AIR SIDE		
2.992	.435	▲22125	HMSA57	R
		W/AXIAL DIRT LIP		
2.992	.472	22035	†CRSA9	R
		P.F. WIDTH .236 SPECIAL CONST.		
2.992	.484	22013	HMSA101	R
		W/AXIAL DIRT EXCLUDER & BUMPER		
3.031	.472	22049	CRSA3	P
		P.F. WIDTH .472 & 13.398 WIDTH		
3.031	.394	22029	CRSA3	R
		W/BOOT & 3.360" FLG OD		
3.054	.551	▲22028	HMSASPL	R
		P.F. WIDTH .276		
3.071	.295	22042	HMSA96	R
		W/AXIAL DIRT LIP		
3.471	.876	22045	HMSASPL	P
2.208 SHAFT				
2.913	.394	22120	HMSA57	R
		W/3.268 FLANGE O.D.		
2.222 SHAFT				
3.543	.750	22175	UNITZED	SR
2.230 SHAFT				
	.500	**99229**	SSLEEVE	
		SHAFT RANGE 2.227 - 2.233		
	.781	**99230**	SSLEEVE	
		SHAFT RANGE 2.227 - 2.233		
2.240 SHAFT				
	.764	**99226**	SSLEEVE	
		SHAFT RANGE 2.237 - 2.243		
3.189	.610	**22614**	†HM14	R
2.244 SHAFT				
2.638	.236	▲**22225**	HMSA7	R
2.835	.331	22224	HMSA21	P
3.110	.531	▲22230	HMSA55	R
		W/3.366 FLG & AXIAL DIRT LIP		
3.150	.402	19676	HMSA56	R
3.189	.450	22250	HMSA96	P
4.810	.413	22284	HMS83	R
		P.F. WIDTH .315 (8MM)		
2.250 SHAFT				
	.313	**99227**	SSLEEVE	
		SHAFT RANGE 2.249 - 2.255		
	.500	22562	†KIT	V
		SEE KIT SECTION		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.250 SHAFT (Cont.)				
	.781	**99225**	SSLEEVE	
	SHAFT RANGE 2.249 - 2.255			
	.781	99837	GSLEEVE	
	SHAFT RANGE 2.249 - 2.255			
	.469	★ **400578**	VR1	R
	SHAFT RANGE 2.090 - 2.290			
2.625	.063	451078	BUW	#
2.625	.188	711856	BV	R
2.625	.188	721536	BV	V
2.625	.188	▲ **22306**	† HM14	R
2.745	.281	709016	WS	R
2.750	.281	504275	SC	R
2.875	.250	▲ 22325	HM21	R
2.875	.313	▲ **22328**	† CRWA1	R
2.891	.563	**22319**	† CRWA1	R
2.997	.438	▲ **22338**	† CRWH1	R
2.997	.438	**22340**	† CRWHA1	R
3.000	.250	▲ 22368	† HM21	R
3.000	.375	▲ **22353**	† CRW1	R
3.000	.375	**22354**	† CRWA1	R
3.000	.375	**22361**	† CRWA1	V
3.000	.375	**22363**	† CRW1	V
3.000	.438	**22358**	† CRWH1	R
3.000	.438	**22359**	† CRWHA1	R
3.000	.438	**22367**	† CRWH1	V
3.035	.374	22371	HMSH4	R
3.061	.250	▲ 22392	HM21	R
3.061	.375	▲ **22382**	† CRW1	R
3.061	.438	**22390**	† CRWH1	R
3.061	.438	**22391**	† CRWHA1	R
3.061	.438	**22394**	† CRWHA1	S
3.110	.469	▲ **22311**	VR1	R
	SHAFT RANGE 2.090 - 2.290			
3.125	.375	▲ **22400**	† CRWA1	R
3.125	.375	**22405**	† CRWA1	V
3.125	.500	**22407**	CRWH1	R
3.125	.563	22411	HM18	R
	CLEARANCE D .214			
3.189	.438	▲ **22424**	† CRW1	R
3.189	.438	**22425**	† CRWA1	P
3.250	.270	▲ 22430	X15	R
	O.D. LISTED IS PRESSFIT I.D.			
3.251	.250	▲ 22468	HM21	R
3.251	.375	▲ **22440**	† CRW1	R
3.251	.375	**22441**	† CRWA1	R
3.251	.375	**22450**	† CRWA1	P
3.251	.438	**22446**	† CRWH1	R
3.251	.438	**22448**	† CRWHA1	R
3.251	.438	**22449**	† CRWH1	V
3.251	.520	22640	† HMSHA16	P
	W/CCW HELIX			
3.310	.375	▲ 22483	† HM18	R
	CLEARANCE D .130			
3.350	.375	**22484**	† CRW1	P
3.350	.438	▲ **22492**	CRWH1	R
3.350	.438	**22493**	† CRWHA1	R
3.350	.438	**22495**	† CRWH1	V
3.371	.375	▲ **22550**	† HM14	R
3.371	.375	22573	† CRSH1	V
3.371	.438	**22532**	† CRWHA1	R
3.371	.438	▲ **22558**	† CRWH1	R
3.371	.438	**22561**	† CRWH1	V
3.400	.294	▲ 22563	X15	R
	O.D. LISTED IS PRESSFIT I.D.			
3.440	.250	▲ **22565**	† HM14	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.250 SHAFT (Cont.)				
3.500	.438	**22582**	† CRWHA1	R
3.500	.438	▲ **22583**	† CRWH1	R
3.500	.438	**22590**	† CRWHA1	V
3.565	.438	▲ **22610**	† CRWA1	R
3.623	.438	▲ **22618**	† CRWH1	R
3.623	.438	**22619**	† CRWHA1	R
3.751	.438	▲ **22626**	† CRWH1	R
3.876	.438	▲ **22644**	† CRWH1	R
4.003	.438	▲ **22647**	† CRWH1	R
4.063	1.220	**22653**	† CRWA3	P
	W/4.438 FLANGE			
2.272 SHAFT				
2.656	.250	22742	SL1	T
	W/BRASS CASE			
2.281 SHAFT				
3.154	.375	▲ 22835	† HM21	R
3.500	.313	★ 645	FELT	F
2.283 SHAFT				
	.787	**99219**	SSLEEVE	
	SHAFT RANGE 2.280 - 2.286			
2.874	.507	22808	HMSA57	R
2.910	.390	**22842**	HMSA7	P
	W/CCW HELIX FROM AIR SIDE			
2.913	.512	22819	D7	P
2.951	.292	22841	HMSA45	P
2.953	.276	22840	HMS4SPL	P
2.992	.276	22821	HMSA29	R
2.992	.630	20447	HMSASPL	R
3.031	.335	22826	HMS83	R
3.070	.394	22845	HMSA92	R
	W/CCW HELIX FROM AIR SIDE			
4.055	.435	22878	HMSA96	P
	W/CW HELIX FROM AIR SIDE			
2.297 SHAFT				
3.148	.359	▲ 22870	HM18	R
	CLEARANCE D .185			
2.313 SHAFT				
	.781	**99231**	SSLEEVE	
	SHAFT RANGE 2.309 - 2.315			
2.997	.375	▲ **23030**	† CRW1	R
3.000	.250	▲ **23035**	† HM14	R
3.000	.438	▲ **23040**	† CRWH1	V
3.061	.313	▲ **23046**	† CRW1	R
3.065	.281	23050	HM1	R
3.125	.375	▲ **23061**	† CRW1	R
3.125	.375	**23063**	† CRWA1	V
3.251	.438	▲ **23093**	† CRWH1	R
3.251	.438	**23099**	CRWHA1	V
3.310	.375	▲ 23130	† HM21	R
3.350	.438	▲ **23152**	† CRWH1	R
3.371	.438	▲ **23167**	† CRW1	R
3.374	.438	▲ **23169**	† CRWHA1	R
3.500	.250	▲ 23240	† HM21	R
3.500	.313	▲ **23184**	CRW1	R
3.751	.500	**23277**	† CRW1	R
3.751	.500	23279	† KIT	R
2.322 SHAFT				
3.937	.394	23284	D8-SPL	P

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.323 SHAFT				
2.835	.472	**23228**	HMSA7	R
3.080	.315	23297	HMSA92	P
3.083	.315	23299	HMSA24	R
3.937	.394	23286	HMSA7SP	P
2.324 SHAFT				
3.541	.591	23244	HMSA97	R
		W/4 .018" FLANGE O.D.		
2.327 SHAFT				
3.130	.315	23276	†RRH1	R
2.328 SHAFT				
	.750	480233	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.750	**99233**	SSLEEVE	
		SHAFT RANGE 2.327 - 2.333		
3.000	.395	▲**23300**	†CRW1	P
2.343 SHAFT				
3.350	.625	★1303	KIT	V
		SEE KIT SECTION		
2.359 SHAFT				
3.938	.686	23590	PLUS XL	P
		SCOTSEAL PLUS XL		
2.362 SHAFT				
2.953	.465	▲23432	HMSA	R
		W/P.F. WIDTH 5.80MM (.228)		
2.954	.208	23615	†HMSA56	R
3.228	.472	**23446**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
3.374	.395	23450	HMS14	S
		W/CW HELIX FROM AIR SIDE		
3.386	.276	23458	HMSA29	R
3.543	.866	23464	D5-SPL	R
3.937	1.063	23483	KIT	R
		SEE KIT SECTION		
4.055	.472	23484	HMSA96	P
2.375 SHAFT				
	.526	**99240**	SSLEEVE	
		SHAFT RANGE 2.374 - 2.380		
	.594	**99238**	SSLEEVE	
		SHAFT RANGE 2.372 - 2.378		
	.781	**99237**	SSLEEVE	
		SHAFT RANGE 2.374 - 2.380		
	.781	99839	GSLEEVE	
		SHAFT RANGE 2.374 - 2.380		
	.280	**400600**	VR1	R
		SHAFT RANGE 2.290 - 2.480		
	.280	**400604**	VR1	V
		SHAFT RANGE 2.290 - 2.480		
	.430	400601	VR2	R
		SHAFT RANGE 2.290 - 2.480		
	.430	400605	VR2	V
		SHAFT RANGE 2.290 - 2.480		
	.275	23870	J1-KIT	R
		SEE TYPE J SECTION (CRW LIP)		
2.750	.063	★451058	BUW	#
2.750	.188	711828	BV	R
2.750	.188	721572	BV	V
2.997	.250	▲23630	†HM21	R
2.997	.438	▲**23632**	†CRWH1	R
3.000	.250	▲23640	HM21	R
2.375 SHAFT (Cont.)				
3.000	.375	▲**23641**	†CRW1	V
3.061	.438	▲**23644**	†CRWH1	R
3.061	.438	**23645**	†CRWH1	P
3.061	.438	**23655**	†CRWH1	V
		W/STAINLESS STEEL SPRING		
3.125	.375	▲**23646**	†CRW1	R
3.125	.375	**23659**	†CRW1	S
3.125	.438	**23652**	†CRWH1	R
3.125	.438	**23654**	†CRWHA1	R
3.125	.438	**23656**	†CRWHA1	V
3.189	.438	▲**23666**	†CRWH1	R
3.251	.433	**23678**	†CRWHA1	V
3.251	.433	**541651**	†CRWHA1	R
3.251	.453	▲**23685**	†CRW1	P
3.251	.625	▲**23691**	†CRWA3	P
		P.F. WIDTH .528 & 3.841 FLANGE		
3.251	.625	**23698**	†CRWA3	V
		P.F. WIDTH .528 & 3.841 FLANGE		
3.350	.250	▲23725	†HM21	R
3.350	.375	▲**23701**	†CRW1	R
3.350	.375	**23702**	†CRWA1	R
3.350	.375	**23703**	†CRW1	P
3.350	.375	**23706**	†CRW1	S
3.350	.438	**23708**	†CRWH1	R
3.350	.438	**23710**	†CRWHA1	R
3.350	.669	23695	†HMSA24	V
3.371	.438	▲**23742**	†CRWH1	R
3.371	.438	**23746**	†CRWH1	V
3.428	1.000	1244	KIT	P
		SEE KIT SECTION		
3.471	.250	▲23744	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
3.481	.438	▲**23755**	†CRWH1	R
3.481	.438	**23756**	CRWHA1	R
3.500	.375	**23770**	†CRWA1	P
3.500	.375	**23771**	†CRWH1	V
3.500	.375	▲**23779**	†CRWH1	R
3.500	.438	**23782**	†CRWHA1	R
3.543	.250	23815	†HM21	R
3.543	.438	▲**23808**	†CRWH1	R
3.543	.438	**23809**	†CRWHA1	V
3.601	.438	▲**23820**	†CRW1	R
3.623	.438	▲**23839**	†CRWH1	R
3.623	.438	**23841**	†CRWHA1	P
3.623	.438	**23843**	†CRWHA1	V
		W/STAINLESS STEEL SPRING		
3.876	.438	▲**23844**	†CRWH1	R
3.876	1.150	23806	CRSA4	P
		P.F. WIDTH .402 W/4.250 FLANGE		
4.063	1.094	**23857**	†CRWA3	P
		W/4.438 FLANGE		
4.498	.391	23751	†HMSA25	V
4.498	1.150	▲23860	CRSA4	P
		HELIX-CW W/4.875 FLG,PF WD.402		
4.938	1.000	1245	KIT	P
		SEE KIT SECTION		
2.402 SHAFT				
2.992	.276	23885	HMSA96	P
		W/AXIAL DIRT LIP		
3.071	.531	23888	D7-SPL	P
3.460	.284	23880	X-SPL	R
		O.D. LISTED IS PRESSFIT I.D.		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.420 SHAFT				
3.000	.280	24017	HMA9	R
3.000	.402	24012	HMHASPL	R
3.554	.276	▲24097	HMA7	R
		W/AXIAL DIRT LIP		
2.430 SHAFT				
	.375	199	KIT	S
		W/CCW HELIX FROM AIR SIDE		
2.432 SHAFT				
3.070	.227	▲24110	CRSA1	P
		W/BI-DIR HELIX FROM AIR SIDE		
2.437 SHAFT				
2.565	.550	87823	S7	
		BORE SLEEVE		
2.438 SHAFT				
	.500	**99242**	SSLEEVE	
		SHAFT RANGE 2.435 - 2.441		
	.781	**99243**	SSLEEVE	
		SHAFT RANGE 2.434 - 2.440		
3.125	.500	▲**24255**	†CRWH1	R
3.251	.438	▲**24263**	†CRWH1	R
3.350	.375	▲**24286**	†CRW1	R
3.350	.375	**24287**	†CRWA1	R
3.371	.438	▲**24320**	†CRWH1	R
3.481	.438	▲**24340**	†CRWH1	R
3.500	.438	▲**24370**	†CRWH1	R
3.500	.438	**24372**	†CRWH1	V
3.543	.438	▲**24445**	†CRWH1	R
3.623	.359	▲24459	†G2	L
		CLEARANCE D .156		
3.751	.750	24466	†KIT	R
2.441 SHAFT				
2.699	.350	24441	HMA8	P
		W/FLANGE		
3.071	.276	24283	HMA8	R
3.346	.394	24642	HMSHA96	P
2.450 SHAFT				
	.375	187	KIT	S
		HALF SEAL		
	.223	★200	KIT	R
		HALF SEAL		
2.470 SHAFT				
	.217	194	KIT	P
		HALF SEAL		
2.474 SHAFT				
3.543	.290	▲24670	TL1	R
2.480 SHAFT				
3.314	.500	24920	FF4	F
3.543	.276	24800	HMSA96	P
4.035	.236	24816	HMSHA16	P
2.492 SHAFT				
	.781	**99249**	SSLEEVE	
		SHAFT RANGE 2.489 - 2.495		
2.496 SHAFT				
3.672	.313	▲25078	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
2.497 SHAFT				
3.245	.420	▲24888	HM16	R
2.500 SHAFT				
	.781	480249	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.781	480250	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.555	**99253**	SSLEEVE	
		SHAFT RANGE 2.497 - 2.503		
	.781	**99250**	SSLEEVE	
		SHAFT RANGE 2.500 - 2.506		
	.781	99840	GSLEEVE	
		SHAFT RANGE 2.500 - 2.506		
	.500	**99248**	SSLEEVE	
		SHAFT RANGE 2.500 - 2.506		
		25097	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
	.280	**400650**	VR1	R
		SHAFT RANGE 2.480 - 2.680		
	.280	**400654**	VR1	V
		SHAFT RANGE 2.480 - 2.680		
	.430	400651	VR2	R
		SHAFT RANGE 2.480 - 2.680		
	.430	400655	VR2	V
		SHAFT RANGE 2.480 - 2.680		
	.410	400659	VR1-SPL	R
		SHAFT RANGE 2.480 - 2.680		
	.438	25160	J1-KIT	R
		SEE TYPE J SECTION (CRW LIP)		
2.875	.063	451253	BUW	#
2.875	.188	711829	BV	R
2.875	.188	721566	BV	V
2.875	.188	750551	BV	D
2.938	.063	451248	BUW	#
2.938	.219	★712135	BV	V
2.995	.281	709018	WS	R
2.995	.281	712125	WS	V
3.000	.281	504277	SC	R
3.000	.250	▲**24863**	†HM14	R
3.000	.313	24865	HM1	R
3.125	.281	505774	SC	R
3.125	.250	▲24875	†HM21	R
3.130	.315	24868	KIT	T
		W/CW HELIX FROM AIR SIDE		
3.150	.250	▲24880	†HM21	R
3.189	.438	▲**24881**	†CRWH1	R
3.189	.438	**24883**	†CRWH1	V
3.223	.728	25009	VACBOOT	R
3.223	.728	25050	†KIT	R
3.226	.190	▲24886	HMA73	R
		W/3.405 FLG & AXIAL DIRT LIP		
3.245	.438	▲**24889**	†CRWH1	R
3.251	.250	▲24904	†HM21	R
3.251	.350	**24892**	†CRWA5	R
		W/SS CASE & SPRING & GRD O.D.		
3.251	.375	▲**24897**	†CRW1	R
3.251	.375	**24898**	†CRWA1	R
3.251	.375	**24899**	†CRWA1	V
3.251	.438	**24910**	†CRWH1	R
3.251	.438	**24911**	†CRWHA1	R
3.251	.438	**24914**	†CRWH1	V
3.251	.438	**24916**	†CRWHA1	V
3.251	.500	**24913**	†CRW1	V
3.301	.453	▲24917	†HMSA16	R
		P.F. WIDTH .330 & 3.580 FLANGE		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.500 SHAFT (Cont.)				
3.305	.276	25013	† KIT	R
3.350	.438	23000	† CRSA3	R
3.350	.438	▲ **24931**	† CRWH1	R
3.350	.438	**24932**	† CRWHA1	R
3.351	.433	★ **24926**	† CRWH1	V
3.371	.375	**24934**	CRWHA1	R
3.371	.438	**24936**	† CRWHA1	V
3.371	.438	▲ **24954**	† CRWH1	R
3.371	.500	**24941**	† CRWH1	S
		W/STAINLESS STEEL SPRING		
3.428	.375	**24949**	† CRWA1	P
3.428	.375	▲ **24951**	† CRWA1	R
3.428	.709	24964	† HMSA25	V
3.500	.250	▲ 25007	† HM21	R
3.500	.375	**24971**	† CRWA1	V
3.500	.438	▲ **24980**	† CRW1	R
3.500	.438	**24982**	† CRWA1	R
3.500	.438	**24984**	† CRWH1	V
		W/STAINLESS STEEL SPRING		
3.500	.438	**24986**	† CRWH1	R
3.500	.438	**24988**	† CRWHA1	R
3.500	.438	**24989**	† CRWH1	P
3.500	.438	**24990**	† CRWHA1	V
3.500	.625	★ **24960**	CRWH	R
3.502	.406	**25082**	† CRW1	S
3.505	.250	▲ 25028	† HM21	R
3.543	.438	▲ **25043**	† CRWH1	R
3.543	.438	**25065**	CRWHA1	P
3.543	.875	25066	D5	R
3.544	.433	**25037**	† CRWHA1	V
3.623	.375	▲ **25074**	† CRW1	R
3.623	.375	**25075**	† CRWA1	R
3.623	.375	**25076**	† CRWA1	V
3.623	.438	**25071**	CRWH1	R
3.623	.500	25077	† HMSA16	R
		W/BI-DIR HELIX FROM AIR SIDE		
3.695	.500	25085	† ALH1	S
3.751	.438	▲ **25091**	CRWH1	R
3.761	.907	25096	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
3.876	.438	▲ **25100**	† CRWH1	R
3.876	.469	**25102**	† CRWHA1	P
3.876	.559	25106	† HMSA25	V
4.003	.375	▲ **25108**	† CRWA1	R
4.003	.375	**25110**	† CRWA1	V
4.035	.640	25140	CRSA9	V
4.035	.640	25445	HMSA14	P
		W/BUMPER		
4.040	.634	★ 25006	CRSA9	R
4.938	.500	▲ **25146**	CRWA22	P
2.502 SHAFT				
3.628	.559	25005	† HMSA25	V
2.516 SHAFT				
	.781	**99251**	SSLEEVE	
		SHAFT RANGE 2.510 - 2.516		
2.519 SHAFT				
5.236	.511	25190	HMSA7SP	R
		SPECIAL CONST.		
2.520 SHAFT				
3.032	.276	25176	HMS-SPL	R
3.228	.354	25196	XA-SPL	R
		O.D. LISTED IS PRESSFIT I.D.		
2.559 SHAFT				
3.189	.276	**25518**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
3.228	.354	25418	HMSASPL	R
3.230	.334	25004	† HMSA96	R
3.307	.354	**25419**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
3.465	.394	**25584**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
2.560 SHAFT				
3.094	.256	▲ 25515	HMA7	R
2.562 SHAFT				
3.625	.438	**25652**	† CRWA1	V
2.563 SHAFT				
	.781	**99256**	SSLEEVE	
		SHAFT RANGE 2.560 - 2.566		
3.000	.063	451268	BUW	#
3.000	.219	711831	BV	D
3.000	.219	721517	BV	V
3.481	.500	▲ **25561**	† CRWHA1	R
3.500	.438	▲ **25577**	† CRWH1	R
3.500	.500	25587	CRSHA1	P
3.531	.344	528	FELT	F
3.623	.438	▲ **25641**	† CRWH1	R
3.623	.469	**25661**	† CRWA1	P
3.625	.313	654	FELT	F
3.751	.438	▲ **25713**	† CRWH1	R
3.751	.438	**25714**	† CRWHA1	R
3.751	.438	**25725**	† CRWH1	V
3.873	.438	▲ **25745**	CRWHA1	R
3.876	.438	▲ **25748**	† CRWH1	R
2.598 SHAFT				
3.481	.438	▲ **25970**	† CRWHA1	P
3.999	.787	▲ **25990**	CRWA3	P
		W/4.600 FLANGE		
2.607 SHAFT				
3.350	.375	▲ **25950**	† CRWH1	P
2.621 SHAFT				
	.781	**99261**	SSLEEVE	
		SHAFT RANGE 2.618 - 2.624		
2.624 SHAFT				
3.946	.891	26247	UNITIZE	R
2.625 SHAFT				
	.781	480260	† KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.781	480261	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.781	480262	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.500	**99260**	SSLEEVE	
		SHAFT RANGE 2.622 - 2.628		
	.781	**99262**	SSLEEVE	
		SHAFT RANGE 2.625 - 2.631		
	.781	**99264**	SSLEEVE	
		SHAFT RANGE 2.621 - 2.627		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.625 SHAFT (Cont.)				
	.781	99842	GSLEEVE	
		SHAFT RANGE 2.625 - 2.631		
	.185	★692	SPLIT	F
		295	KIT	V
		W/CCW HELIX FROM AIR SIDE		
3.251	.438	▲**26110**	†CRWH1	R
3.350	.375	**26122**	†CRW1	V
3.350	.375	▲**26123**	†CRW1	R
3.350	.375	**26124**	†CRWA1	R
3.350	.438	**26128**	CRW1	R
3.371	.250	▲**26144**	†HM14	R
3.371	.438	▲**26153**	†CRWHA1	R
3.374	.438	▲**26141**	†CRWHA1	R
3.481	.438	**26163**	†CRWH1	R
3.500	.374	26196	†KIT	R
3.500	.375	**26177**	†CRW1	V
3.500	.375	▲**26186**	†CRWA1	R
3.500	.438	▲**26189**	†CRWH1	R
3.500	.438	**26190**	†CRWHA1	R
3.500	.438	**26191**	†CRWA1	P
3.543	.438	▲**26194**	†CRWH1	R
3.623	.250	▲26260	†HM21	R
3.623	.375	**26204**	†CRW1	V
3.623	.375	**26220**	†CRWA1	P
3.623	.375	▲**26237**	†CRW1	R
3.623	.375	**26238**	†CRWA1	R
3.623	.438	**26208**	†CRWH1	V
3.623	.438	**26209**	†CRWH1	R
3.623	.438	**26211**	†CRWHA1	R
3.623	.460	26239	†HMSA24	V
3.751	.375	▲**26284**	†CRWA1	R
3.751	.438	**26297**	†CRWH1	R
3.751	.438	**26298**	†CRWHA1	R
3.751	.438	**26299**	†CRWHA1	V
3.751	.715	26289	TL4	RR
		P.F. WIDTH .640		
3.813	.415	▲26310	TL5	R
		P.F. WIDTH .300		
3.876	.438	▲**26328**	†CRWH1	R
3.936	.438	▲**26346**	†CRWH1	R
4.003	.375	▲**26354**	†CRWA1	R
4.003	.438	**26356**	†CRWH1	R
4.063	1.094	▲**26358**	†CRWA3	P
		W/4.438 FLANGE		
4.370	.438	▲**26359**	†CRWHA1	R
4.438	.438	▲**26368**	†CRWH1	R
4.562	.468	26378	†HMSA25	V
		REMOVE OEM SLINGER		
4.563	.719	▲**26373**	†CRWA3	P
2.630 SHAFT				
	.215	208	KIT	R
		HALF SEAL		
2.638 SHAFT				
3.228	.315	26388	HMSASPL	P
		W/CCW HELIX FROM AIR SIDE		
3.503	.354	**26387**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
2.645 SHAFT				
	.386	★192	KIT	V
		HALF SEAL, CCW HELIX		
2.648 SHAFT				
3.812	.500	26877	CRS1	R
2.650 SHAFT				
	.213	★206	KIT	R
		HALF SEAL		
2.667 SHAFT				
3.751	.500	26620	HM1	R
2.677 SHAFT				
3.307	.335	**26625**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
4.882	1.063	26695	HMSA	P
		W/HELIX-CW, P.F. WIDTH .453		
2.688 SHAFT				
3.125	.063	451488	BUW	#
3.125	.219	711833	BV	R
3.125	.219	721573	BV	V
3.500	.219	662	FELT	F
3.751	.438	▲**26761**	†CRWH1	R
3.876	.438	▲**26921**	†CRWH1	R
4.003	.469	▲**26975**	†CRWH1	R
2.690 SHAFT				
	.380	216	KIT	S
		HALF SEAL		
2.700 SHAFT				
	.313	212	KIT	R
		HALF SEAL,HELIX-CCW		
		450176	AXGSKT1	
		.406 DIA BOLT HOLE		
3.498	.475	▲26747	†HMS17	R
		W/3.704 FLANGE		
2.717 SHAFT				
3.380	.310	**26749**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.386	.276	27117	CRSA79	P
3.386	.315	**26748**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
2.730 SHAFT				
	.781	**99268**	SSLEEVE	
		SHAFT RANGE 2.727 - 2.733		
2.743 SHAFT				
	.781	**99273**	SSLEEVE	
		SHAFT RANGE 2.740 - 2.746		
2.748 SHAFT				
3.543	.591	27486	HM-SPL	P
2.750 SHAFT				
	.781	480273	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.781	480274	†KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.781	480275	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.781	480278	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	1.438	**99267**	SSLEEVE	
		SHAFT RANGE 2.747 - 2.753		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.750 SHAFT (Cont.)				
	.406	**99272**	SSLEEVE	
		SHAFT RANGE 2.750 - 2.756		
	.781	**99274**	SSLEEVE	
		SHAFT RANGE 2.745 - 2.751		
	.781	**99275**	SSLEEVE	
		SHAFT RANGE 2.750 - 2.756		
	.781	99843	GSLEEVE	
		SHAFT RANGE 2.745 - 2.751		
	.781	99844	GSLEEVE	
		SHAFT RANGE 2.750 - 2.756		
	1.125	**99269**	SSLEEVE	
		SHAFT RANGE 2.750 - 2.756		
		27535	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
	.310	★ 229	KIT	R
		HALF SEAL		
	.350	**400700**	VR1	R
		SHAFT RANGE 2.680 - 2.880		
	.350	**400704**	VR1	V
		SHAFT RANGE 2.680 - 2.880		
	.530	400701	VR2	R
		SHAFT RANGE 2.680 - 2.880		
	.530	400705	VR2	V
		SHAFT RANGE 2.680 - 2.880		
	.500	27630	J2-KIT	R
		SEE TYPE J SECTION (CRWHA LIP)		
3.125	.188	27210	HM1	R
3.188	.063	451290	BUW	#
3.188	.219	711832	BV	R
3.188	.219	721537	BV	V
3.245	.281	709019	WS	R
3.250	.281	504279	SC	R
3.250	.313	▲ 27225	HM1	R
3.481	.438	▲ **27251**	CRW1	R
3.500	.250	▲ **27271**	† HM14	R
3.500	.250	**546751**	† HM14	V
3.500	.375	▲ **27268**	† CRW1	R
3.500	.375	**27269**	† CRWA1	R
3.500	.375	**27272**	† CRWA1	V
3.500	.438	**27280**	† CRWH1	R
3.538	.438	▲ **27284**	† CRWH1	R
3.543	.433	**27293**	† CRWH1	V
3.543	.438	▲ **27292**	† CRWH1	P
3.543	.438	**27295**	† CRWHA1	P
3.543	.500	27558	† HMSA25	V
3.544	.433	**27230**	† CRWHA1	V
3.623	.438	**27324**	† CRWH1	V
3.623	.438	▲ **27334**	† CRWH1	R
3.751	.250	▲ 27394	† HM21	R
3.751	.438	▲ **27361**	† CRW1	R
3.751	.438	**27362**	† CRWA1	R
3.751	.438	**27365**	† CRWH1	V
3.751	.438	▲ **27368**	† CRWH1	R
3.751	.438	**27370**	† CRWHA1	R
3.751	.438	**27377**	† CRWA1	P
3.765	.438	▲ **27426**	† CRWH1	R
3.773	.350	▲ 27430	HMA84	R
3.779	.762	27438	† SCOT1	R
		SCOTSEAL		
3.876	.433	**27452**	† CRWHA1	P
3.876	.438	**27467**	† CRWA1	R
3.876	.438	▲ **27470**	† CRWH1	R
3.876	.438	**27471**	† CRWHA1	R
3.876	.591	27461	† HMSA25	V
3.876	.703	27501	† B5	PL
2.750 SHAFT (Cont.)				
3.936	.438	▲ **27525**	† CRWH1	R
3.937	.438	**27526**	† CRWA1	P
4.001	.500	27542	† HMSA25	V
4.003	.375	**27539**	† CRWA1	V
4.003	.438	▲ **27541**	† CRWH1	R
4.003	.438	**27565**	CRWHA1	P
4.030	.918	27536	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
4.125	.438	27576	† CRS1	P
4.125	.563	27577	CRSA1	R
4.249	.438	▲ **27600**	† CRWH1	R
4.249	.438	**27601**	† CRWHA1	P
4.331	.500	▲ **27625**	† CRWHA1	R
5.501	1.375	▲ **27642**	† CRWA2	P
		P.F. WIDTH .500		
2.756 SHAFT				
3.425	.335	**27723**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
2.761 SHAFT				
	.227	287	KIT	V
		HALF SEAL		
2.813 SHAFT				
	.594	**99281**	SSLEEVE	
		SHAFT RANGE 2.809 - 2.815		
3.250	.063	451100	BUW	#
3.250	.219	711834	BV	D
3.250	.219	721538	BV	V
3.751	.438	▲ **28035**	† CRWH1	R
3.876	.438	▲ **28116**	† CRWH1	R
4.003	.438	▲ **28175**	† CRWH1	R
4.249	.313	▲ **28270**	† CRW1	R
4.249	.438	**28275**	† CRWH1	R
4.250	.438	**28276**	† CRWH1	P
2.832 SHAFT				
3.622	.374	**28332**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
2.835 SHAFT				
3.370	.709	28305	HMS1	R
		P.F. I.D. FOR 84MM SHOULDER		
3.780	.354	**28308**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
2.838 SHAFT				
	.500	**99282**	SSLEEVE	
		SHAFT RANGE 2.838 - 2.844		
	.500	99845	GSLEEVE	
		SHAFT RANGE 2.838 - 2.844		
2.844 SHAFT				
3.939	.500	▲ **28425**	† CRWA1	R
3.939	.550	**28426**	† CRWHA1	R
3.939	.550	28446	† KIT	R
4.003	.438	▲ **28464**	† CRWH1	R
4.003	.500	**28474**	† CRWH1	V
		W/STAINLESS STEEL SPRING		
2.854 SHAFT				
3.932	.748	28554	UNITIZE	P

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.869 SHAFT				
	.781	**99286**	SSLEEVE	
		SHAFT RANGE 2.866 - 2.872		
2.875 SHAFT				
	.781	**99287**	SSLEEVE	
		SHAFT RANGE 2.873 - 2.879		
	.781	99846	GSLEEVE	
		SHAFT RANGE 2.873 - 2.879		
	.205	★140	KIT	R
		HALF SEAL, CCW HELIX		
	.218	★209	KIT	R
		HALF SEAL		
3.434	.294	28646	† CRSA1	R
3.623	.438	▲ **28654**	† CRWH1	R
3.623	.438	**28655**	† CRWHA1	R
3.623	.500	28656	† AL1	S
3.751	.250	▲ 28700	† HM21	R
3.751	.375	▲ **28669**	† CRWA1	R
3.751	.375	**28670**	† CRWA1	V
3.751	.438	▲ **28686**	† CRWH1	R
3.751	.438	**28687**	† CRWHA1	R
3.751	.438	**28697**	† CRWH1	P
3.751	.438	**28698**	† CRWH1	V
3.751	.438	**28699**	† CRWHA1	V
3.751	.625	1243	KIT	P
		SEE KIT SECTION		
3.875	.781	28758	† SCOT1	R
		SCOTSEAL		
3.876	.188	▲ 28725	† HM1	R
3.876	.250	28751	† HM21	R
3.876	.438	▲ **28745**	† CRWH1	R
3.876	.438	**28746**	† CRWHA1	R
3.876	.438	**28748**	† CRWHA1	V
3.876	.610	▲ 28720	† HMSHA16	R
		P.F. WIDTH .365 & 4.150 FLANGE		
3.876	.610	28754	HMSHA16	V
4.003	.250	▲ 28800	† HM21	R
4.003	.375	▲ **28778**	† CRWA1	R
4.003	.375	**28779**	† CRWA1	V
4.003	.438	▲ **28760**	† CRWH1	R
4.003	.438	**28761**	† CRWHA1	R
4.003	.750	28790	C8	RR
		P.F. WIDTH .688		
4.125	.375	▲ **28817**	† CRWH1	R
4.125	.813	▲ 28828	† HMSH12	R
		P.F. WIDTH .375		
4.126	.844	28820	† SCOT1	R
		SCOTSEAL		
4.176	.813	▲ **28830**	† CRWH2	R
		P.F. WIDTH .375		
4.176	.844	28832	† SCOT1	R
		SCOTSEAL		
4.331	.438	▲ **28841**	† CRWA1	P
4.501	.433	▲ **28848**	† CRWH1	R
2.900 SHAFT				
	.315	★213	KIT	R
		SEE KIT SECTION HELIX-CCW		
	.216	★207	KIT	R
		SEE KIT SECTION		
	.450	101	KIT	P
		HALF SEAL		
2.906 SHAFT				
3.813	.313	663	FELT	F
2.913 SHAFT				
3.543	.394	29105	CRSA1	P
		W/CCW HELIX FROM AIR SIDE		
3.858	.472	**29112**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
2.938 SHAFT				
	.781	480294	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.500	**99290**	SSLEEVE	
		SHAFT RANGE 2.937 - 2.943		
	.781	480293	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.781	99847	GSLEEVE	
		SHAFT RANGE 2.937 - 2.943		
3.375	.063	451489	BUW	#
3.375	.219	711835	BV	R
3.378	.180	29208	HMS1	R
3.623	.375	▲ **29218**	† CRW1	R
3.751	.375	▲ **29223**	† CRW1	R
3.751	.375	**29224**	† CRWA1	R
3.751	.375	**29226**	† CRWA1	V
3.784	.500	29250	HM23	RT
3.876	.375	▲ **29260**	CRWHA1	R
3.876	.375	**29262**	† CRWHA1	V
3.937	.438	▲ **29273**	† CRWA1	P
3.937	.591	29288	† HMSA25	V
4.003	.438	▲ **29316**	† CRWH1	R
4.003	.438	**29317**	CRWHA1	R
4.003	.438	**29322**	† CRWA1	P
4.003	.619	29292	† HMSA24	V
4.004	.433	**29383**	† CRWHA1	V
4.125	.375	▲ **29384**	† CRWH1	R
4.125	.375	**29385**	† CRWHA1	R
4.501	.438	▲ **29465**	† CRWH1	R
4.938	1.375	▲ **29471**	† CRWA3	P
		W/5.375 FLANGE		
2.940 SHAFT				
	.781	**99293**	SSLEEVE	
		SHAFT RANGE 2.937 - 2.943		
2.941 SHAFT				
3.882	.774	29472	UNITIZD	P
2.948 SHAFT				
4.725	.630	29480	PLUS XL	
		SCOTSEAL PLUS XL		
2.952 SHAFT				
3.708	.327	★ **29518**	HMSA7	R
4.409	.688	29520	HMSA8	R
		P.F. WIDTH 10MM		
2.953 SHAFT				
3.425	.276	29505	X-SPL	R
		O.D. LISTED IS PRESSFIT I.D.		
4.724	.320	29590	† TL1	R
2.974 SHAFT				
	.813	**99292**	SSLEEVE	
		SHAFT RANGE 2.972 - 2.976		
2.975 SHAFT				
	.314	214	KIT	R
		HALF SEAL		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
2.992 SHAFT				
3.623	.385	**29862**	HMSA7	V
	W/CCW HELIX FROM AIR SIDE			
3.661	.394	29675	HMSA6	S
	W/CCW HELIX FROM AIR SIDE			
3.692	.354	**29519**	HMSA7	V
3.741	.370	29987	HMSA83	V
	W/CW HELIX FROM AIR SIDE			
3.858	.472	**29685**	HMSA7	S
	W/CW HELIX FROM AIR SIDE			
4.213	.315	**29918**	HMSA7	V
	W/CCW HELIX FROM AIR SIDE			
4.370	.512	29804	UNITIZD	V
	W/FELT "A" LIP			
2.993 SHAFT				
	.813	**99299**	SSLEEVE	
	SHAFT RANGE 2.990 - 2.996			
	.484	**99291**	SSLEEVE	
	SHAFT RANGE 2.990 - 2.996			
	.563	**99298**	SSLEEVE	
	SHAFT RANGE 2.990 - 2.996			
3.000 SHAFT				
	.813	480299	KIT	R
	SPEEDI-SLEEVE & SEAL KIT			
	.813	480300	KIT	P
	SPEEDI-SLEEVE & SEAL KIT			
	.813	480303	KIT	P
	SPEEDI-SLEEVE & SEAL KIT			
	.813	**99300**	SSLEEVE	
	SHAFT RANGE 3.000 - 3.006			
	.813	99848	GSLEEVE	
	SHAFT RANGE 3.000 - 3.006			
	.813	**99296**	SSLEEVE	
	SHAFT RANGE 2.997 - 3.003			
	.625	**99303**	SSLEEVE	
	SHAFT RANGE 3.000 - 3.006			
	.625	86062	S1	
	.500	682	SPLIT	F
		450166	AXGSKT6	
	4-.328 DIA BOLT HOLES			
	.350	**400750**	VR1	R
	SHAFT RANGE 2.880 - 3.070			
	.350	**400754**	VR1	V
	SHAFT RANGE 2.880 - 3.070			
	.530	400751	VR2	R
	SHAFT RANGE 2.880 - 3.070			
	.530	400755	VR2	V
	SHAFT RANGE 2.880 - 3.070			
3.438	.063	451265	BUW	#
3.438	.219	703023	BV	D
3.438	.219	721539	BV	V
3.438	.219	712136	BV	V
3.495	.281	709020	WS	R
3.495	.281	712126	WS	V
3.500	.281	504281	SC	R
3.500	.313	▲29840	HM1	R
3.500	.375	**29841**	†CRW1	V
3.600	.322	285	KIT	V
	HALF SEAL			
3.623	.250	▲**29850**	HM14	R
3.683	.540	**30015**	CRWA86	P
	W/4.180 FLANGE			
3.751	.250	▲29863	†HM21	R
3.751	.375	▲**29865**	CRW1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.000 SHAFT (Cont.)				
3.751	.375	**29866**	†CRWA1	R
3.751	.375	**29867**	†CRWA1	P
3.751	.375	**29868**	†CRW1	V
3.751	.375	**29870**	†CRWA1	V
3.751	.438	**29871**	†CRWH1	R
3.751	.438	**29872**	†CRWHA1	R
3.751	.452	30007	†HMSA25	V
3.876	.313	**29877**	†CRW1	V
3.876	.438	▲**29887**	†CRWH1	R
3.876	.469	**29891**	†CRWH1	V
	W/STAINLESS STEEL SPRING			
4.000	.500	▲29900	X2	L
	O.D. LISTED IS PRESSFIT I.D.			
4.003	.250	▲29968	HM21	R
4.003	.312	29961	†HMSA25	V
	W/CCW HELIX FROM AIRSIDE			
4.003	.312	29967	HMSA25	V
	W/CW HELIX FROM AIRSIDE			
4.003	.375	▲**29906**	†CRW1	R
4.003	.375	**29907**	†CRWA1	R
4.003	.375	**29912**	†CRWA1	V
4.003	.375	**29950**	†CRWH1	P
4.003	.438	**29925**	CRWHA1	P
4.003	.438	**29951**	CRWH1	R
4.003	.438	**29952**	†CRWHA1	R
4.003	.438	**29958**	†CRWH1	V
4.125	.438	▲**30000**	†CRWH1	R
4.125	.438	**30003**	†CRWH1	V
4.249	.250	▲30049	†HM21	R
4.249	.438	▲**30033**	CRWH1	R
4.249	.438	**30055**	†CRWHA1	P
4.249	.438	30057	†HMSA25	V
4.331	.438	▲**30060**	†CRWH1	R
4.376	.438	▲**30070**	†CRWH1	R
4.500	.438	▲**30087**	†CRWH1	R
4.500	.438	**30095**	†CRWHA1	R
4.501	.383	30100	†HMSA25	V
4.501	.438	**30098**	†CRWH1	V
4.525	.375	▲30108	X12	R
	O.D. LISTED IS PRESSFIT I.D.			
4.936	.755	30153	†HMSA25	V
4.939	.750	▲**30145**	†CRWA1	P
	P.F. WIDTH .438 W/5.690 FLANGE			
4.939	.662	29917	†UNITIZE	P
4.999	.438	▲**30125**	†CRWH1	R
5.501	1.375	**30144**	CRWHA6	P
5.750	.840	▲30148	HMSA16	P
	P.F. WIDTH .400 W/6.250 FLANGE			
5.750	.982	30140	HMSA25	V
5.750	1.300	▲30147	HMSA16	P
	HELIX-CW W/6.250 FLG,PF WD.400			
3.002 SHAFT				
3.751	.991	30026	†UNITIZE	V
	HD PINION SEAL			
3.010 SHAFT				
	.953	1240	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)			
3.011 SHAFT				
	.500	**99301**	SSLEEVE	
	SHAFT RANGE 3.008 - 3.014			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.040 SHAFT				
3.937	.250	**30360**	HMS4	R
3.060 SHAFT				
	.213	103	KIT	R
		HALF SEAL, CCW HELIX		
3.063 SHAFT				
		30654	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
3.500	.063	451291	BUW	#
3.500	.219	711836	BV	R
4.500	1.016	30651	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
3.071 SHAFT				
6.417	.630	30771	HMSA7SP	R
3.075 SHAFT				
3.540	.380	▲30772	HMA18	P
		W/3.790 FLANGE O.D.		
3.109 SHAFT				
	.325	31361	J2-KIT	R
		SEE TYPE J SECTION (CRW LIP)		
	.500	31385	J1-KIT	R
		SEE TYPE J SECTION (CRW LIP)		
	.500	31390	J1-KIT	R
		SEE TYPE J SECTION (CRW LIP)		
	1.016	31378	J1-KIT	R
		SEE TYPE J SECTION (CRW LIP)		
3.125 SHAFT				
	.551	**99307**	SSLEEVE	
		SHAFT RANGE 3.124 - 3.132		
	.688	**99311**	SSLEEVE	
		SHAFT RANGE 3.120 - 3.126		
	.813	**99312**	SSLEEVE	
		SHAFT RANGE 3.120 - 3.126		
	.813	99849	GSLEEVE	
		SHAFT RANGE 3.120 - 3.126		
	.350	**400800**	VR1	R
		SHAFT RANGE 3.070 - 3.270		
	.350	**400804**	VR1	V
		SHAFT RANGE 3.070 - 3.270		
	.530	400801	VR2	R
		SHAFT RANGE 3.070 - 3.270		
	.530	400805	VR2	V
		SHAFT RANGE 3.070 - 3.270		
3.751	.250	▲31129	†HMA1	R
3.811	.355	**31132**	†CRW1	V
3.811	.355	▲**31135**	†CRW1	R
3.936	.512	31144	†CRSHA1	V
4.003	.375	▲**31139**	†CRWA1	R
4.003	.375	**31152**	†CRWHA1	V
4.003	.438	▲**31147**	†CRWH1	R
4.003	.438	**31148**	†CRWHA1	R
4.049	.438	31158	P2	R
4.125	.250	▲31192	HMA1	R
4.125	.375	▲**31177**	†CRW1	R
4.125	.375	**31179**	†CRWA1	V
4.125	.437	31247	†SL1	T
		W/CW HELIX FROM AIR SIDE		
4.125	.438	**31173**	†CRWHA1	P
4.125	.438	**31185**	†CRWHA1	S
4.125	.438	**31189**	CRWH1	R
3.125 SHAFT (Cont.)				
4.126	.781	31175	†SCOT1	R
		SCOTSEAL		
4.174	.290	▲31203	HMA1	R
4.249	.438	▲**31227**	†CRWH1	R
4.249	.438	**31228**	†CRWHA1	R
4.249	.438	**31237**	†CRWHA1	V
4.373	.781	31244	†SCOT1	R
		SCOTSEAL		
4.376	.438	▲**31250**	†CRWH1	R
4.376	.438	**31261**	†CRWHA1	P
4.438	.781	31266	†SCOT1	R
		SCOTSEAL		
4.500	.672	31281	†SCOT1	R
		SCOTSEAL		
4.501	.438	▲**31269**	†CRWH1	R
4.562	.750	▲**31284**	CRWH2	R
4.626	.438	▲**31299**	†CRWH1	R
4.626	.672	31307	†SCOT1	R
		SCOTSEAL		
4.626	.750	1306	KIT	R
		SEE KIT SECTION		
4.751	.438	▲**31316**	†CRWH1	R
4.999	.438	▲**31333**	†CRWH1	R
5.251	.438	▲**31353**	†CRWH1	R
5.495	1.003	31372	J2	R
		SEE TYPE J SECTION (CRSH LIP)		
5.985	.953	31362	CRS-SPL	R
3.149 SHAFT				
4.448	.866	31490	HMSA8	R
		P.F. WIDTH 12MM		
3.150 SHAFT				
	.750	**99313**	SSLEEVE	
		SHAFT RANGE 3.142 - 3.150		
3.740	.551	▲31504	HMA18	P
		W/3.990 FLANGE O.D.		
3.780	.354	**31506**	HMSA7	R
		W/CCW HELIX FROM AIR SIDE		
3.858	.393	**31497**	HMSA7	R
		W/CCW HELIX FROM AIR SIDE		
3.858	.393	**31507**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.946	.335	31494	HMSA92	R
		W/CCW HELIX FROM AIR SIDE		
3.946	.394	**31492**	HMSA7	S
3.946	.394	**31511**	†CRW1	V
3.946	.394	**31582**	HMSA7	R
3.994	.591	31514	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
3.175 SHAFT				
	.215	201	KIT	R
		HALF SEAL		
3.188 SHAFT				
4.180	.750	▲31753	†HMSHA4	R
		W/4.500 FLANGE		
4.249	.438	▲**31758**	†CRWH1	R
4.376	.438	▲**31825**	†CRWH1	R
4.501	.438	▲**31855**	†CRWH1	R
4.626	.438	▲**31870**	†CRWH1	R
4.999	.438	▲**31955**	†CRWH1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.189 SHAFT				
3.801	.630	31897	HMA8	R
		W/FLANGE		
3.226 SHAFT				
3.858	.394	**32243**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
3.228 SHAFT				
	.660	**99328**	SSLEEVE	
		SHAFT RANGE 3.225 - 3.231		
3.791	.315	**32283**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.920	.500	**32289**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.937	.394	**32290**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
3.937	.394	**14190**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
4.134	.512	32304	HMSA12	S
		W/4.331 FLANGE		
3.250 SHAFT				
	.813	480325	†KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.595	**99324**	SSLEEVE	
		SHAFT RANGE 3.250 - 3.256		
	.595	99850	GSLEEVE	
		SHAFT RANGE 3.250 - 3.256		
		1725	KIT	P
		SEE KIT SECTION		
	.688	**99326**	SSLEEVE	
		SHAFT RANGE 3.250 - 3.256		
	.813	**99325**	SSLEEVE	
		SHAFT RANGE 3.250 - 3.256		
	.813	99851	GSLEEVE	
		SHAFT RANGE 3.250 - 3.256		
	.813	**99322**	SSLEEVE	
		SHAFT RANGE 3.247 - 3.253		
3.625	.063	451275	BUW	#
3.625	.188	711838	BV	R
3.625	.188	721540	BV	V
3.745	.281	709021	WS	R
3.750	.250	32325	†HMA1	R
3.875	.328	504283	SC	R
3.876	.375	▲**32330**	†CRW1	P
3.876	.375	32332	†CRS1	V
		W/CW HELIX FROM AIR SIDE		
4.003	.375	▲**32344**	†CRW1	R
4.003	.375	**32347**	†CRWA1	P
4.125	.563	32362	†CRSH1	R
4.249	.250	▲**32412**	†HM14	R
4.249	.375	**32392**	†CRWA1	V
4.249	.375	▲**32393**	†CRW1	R
4.249	.375	**32395**	†CRWA1	R
4.249	.438	**32380**	CRWH1	P
4.249	.438	**32385**	†CRWHA1	P
4.249	.438	**32396**	†CRWH1	R
4.249	.438	**32397**	†CRWHA1	R
4.249	.438	**32403**	†CRWH1	V
4.249	.670	32410	†HMSWD26	V
4.249	.750	32394	†F1	LF
4.249	.750	33659	KIT	P
		SEE KIT SECTION		
4.328	.500	**32532**	CRWA5	R
4.376	.438	▲**32424**	†CRWH1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.250 SHAFT (Cont.)				
4.468	.315	32437	X4	R
		O.D. LISTED IS PRESSFIT I.D.		
4.500	.313	▲32441	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
4.500	.438	**32448**	†CRWA1	P
4.500	.610	★32519	†HMSHA4	R
		BI-DIRECTIONAL P.F. WIDTH .436		
4.500	.610	32527	†HMSHA4	V
		BI-DIRECTIONAL P.F. WIDTH .436		
4.501	.250	▲32510	†HM21	R
4.501	.375	▲**32477**	†CRW1	R
4.501	.438	**32501**	†CRWH1	R
4.501	.438	**32502**	†CRWHA1	R
4.501	.672	32470	†SCOT1	R
		SCOTSEAL		
4.626	.433	**32514**	CRWHA1	R
4.626	.438	▲**32540**	†CRWH1	R
4.718	.438	▲**32555**	†CRWH1	R
4.751	.438	▲**32560**	†CRWH1	R
4.999	.438	▲**32582**	†CRWH1	R
4.999	.438	**32583**	†CRWHA1	R
5.501	.650	32535	†UNITIZE	P
5.501	.650	32870	†UNITIZE	P
5.501	.650	33254	HMSA25S	P
		W/EXTRA 'A' LIP, DL PINION		
3.262 SHAFT				
4.626	.500	**32710**	CRWA1	R
		W/4.910 FLANGE		
3.268 SHAFT				
3.937	.354	**32715**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.298 SHAFT				
4.125	.563	32815	†CRSA1	R
3.307 SHAFT				
3.813	.354	30370	HMSASPL	V
		W/CCW HELIX FROM AIR SIDE		
4.094	.433	**33007**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.094	.433	**33405**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.310 SHAFT				
	.813	**99331**	SSLEEVE	
		SHAFT RANGE 3.307 - 3.313		
3.312 SHAFT				
5.000	.562	33251	KIT	R
3.313 SHAFT				
3.750	.063	451490	BUW	#
3.750	.219	711840	BV	R
4.125	.438	▲**33033**	†CRWH1	R
4.249	.438	▲**33073**	†CRWH1	R
4.500	.438	▲**33136**	†CRWH1	R
4.999	.438	**33206**	†CRWH1	R
3.346 SHAFT				
4.055	.315	**33861**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.094	.354	**33454**	HMSA7	P
4.134	.394	**33408**	HMSA7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.346 SHAFT (Cont.)				
5.039	.826	33460	HMSA8	R
		P.F. WIDTH 11MM		
3.375 SHAFT				
	.375	**99338**	SSLEEVE	
		SHAFT RANGE 3.373 - 3.379		
	.813	**99337**	SSLEEVE	
		SHAFT RANGE 3.373 - 3.379		
	.213	204	KIT	R
	.350	**400850**	VR1	R
		SHAFT RANGE 3.270 - 3.470		
	.350	**400854**	VR1	V
		SHAFT RANGE 3.270 - 3.470		
	.530	400851	VR2	R
		SHAFT RANGE 3.270 - 3.470		
	.530	400855	VR2	V
		SHAFT RANGE 3.270 - 3.470		
3.875	.063	451273	BUW	#
3.875	.250	711839	BV	R
3.875	.250	721575	BV	V
3.948	.375	**33628**	HMSA7	P
4.045	.500	33624	J-TYPE	R
		W/4 EA .254 HOLES		
4.125	.375	▲ **33645**	† CRW1	R
4.125	.375	**34647**	† CRWA1	V
4.249	.438	**33665**	† CRWHA1	R
4.280	.406	**33654**	† CRWA1	S
4.376	.375	**33699**	† CRWA1	V
4.376	.375	▲ **33700**	† CRW1	R
4.376	.375	**33701**	† CRWA1	R
4.376	.438	**33711**	† CRWH1	R
4.376	.438	**33712**	† CRWHA1	R
4.501	.438	**33733**	† CRWA1	V
4.501	.438	▲ **33735**	† CRWH1	R
4.626	.438	▲ **33772**	† CRWH1	R
4.626	.438	**33773**	† CRWHA1	R
4.626	.438	**33775**	† CRWHA1	V
4.686	.438	▲ **33807**	CRWH1	R
4.999	.438	▲ **33837**	CRWH1	R
5.251	.438	**33866**	† CRWHA1	R
3.400 SHAFT				
4.500	.281	34000	† X14	V
		O.D. LISTED IS PRESSFIT I.D.		
3.425 SHAFT				
3.937	.295	**34115**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.937	.315	**34120**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
3.438 SHAFT				
	.781	**99339**	SSLEEVE	
		SHAFT RANGE 3.435 - 3.441		
4.249	.375	▲ **34256**	† CRW1	R
4.501	.375	**34279**	† CRWA1	R
4.501	.438	▲ **34282**	† CRWH1	R
4.501	.438	**34283**	† CRWHA1	R
4.626	.438	▲ **34336**	† CRWH1	R
4.626	.438	**34338**	† CRWHA1	R
4.751	.438	**34379**	† CRWA1	R
4.756	.438	▲ **34383**	† CRWH1	R
4.757	.859	34387	† SCOT1	R
		SCOTSEAL		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.438 SHAFT (Cont.)				
4.757	.700	34384	PLUS XL	H
		SCOTSEAL PLUS XL		
4.758	.750	1307	KIT	R
		SEE KIT SECTION		
4.876	.438	▲ **34398**	† CRWH1	R
4.999	.438	▲ **34407**	† CRWH1	R
4.999	.438	**34408**	† CRWHA1	R
3.465 SHAFT				
4.252	.427	▲ **34611**	HMS4	V
		W/CCW HELIX FROM AIR SIDE		
4.252	.453	**34116**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.469 SHAFT				
4.626	.625	▲ 34700	CRSA1	R
3.480 SHAFT				
	.781	**99340**	SSLEEVE	
		SHAFT RANGE 3.477 - 3.483		
3.500 SHAFT				
	.813	480350	KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.313	**99347**	SSLEEVE	
		SHAFT RANGE 3.500 - 3.506		
	.625	**99346**	SSLEEVE	
		SHAFT RANGE 3.497 - 3.503		
	.813	**99350**	SSLEEVE	
		SHAFT RANGE 3.500 - 3.506		
	.813	99852	GSLEEVE	
		SHAFT RANGE 3.500 - 3.506		
		35079	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
	.206	198	KIT	R
		HALF SEAL		
	.350	**400900**	VR1	R
		SHAFT RANGE 3.470 - 3.660		
	.350	**400904**	VR1	V
		SHAFT RANGE 3.470 - 3.660		
	.530	400901	VR2	R
		SHAFT RANGE 3.470 - 3.660		
	.530	400905	VR2	V
		SHAFT RANGE 3.470 - 3.660		
3.995	.281	709022	WS	R
3.995	.281	712542	WS	V
4.000	.063	451065	BUW	#
4.000	.250	711841	BV	D
4.000	.250	721541	BV	V
4.000	.300	34835	HM1	R
4.003	.250	▲ **34840**	† HM14	R
4.125	.328	504285	SC	R
4.125	.250	▲ **34848**	HM14	R
4.125	.250	**546770**	† HM14	V
4.249	.438	▲ **34857**	† CRWHA1	V
4.260	.500	35116	HMSA7S	RT
4.376	.375	▲ **34860**	† CRW1	R
4.376	.375	**34861**	† CRWA1	R
4.376	.375	**34866**	† CRWA1	V
4.376	.433	**34869**	† CRWHA1	V
4.376	.438	**34867**	† CRWH1	R
4.376	.438	**34868**	† CRWHA1	R
4.438	.438	34890	X1	L
		O.D. LISTED IS PRESSFIT I.D.		
4.450	.531	▲ 34885	HM12	R

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.500 SHAFT (Cont.)				
4.499	.500	34882	† HMSA25	V
4.501	.250	▲ 34967	HM21	R
4.501	.375	**34883**	† CRWA1	V
4.501	.375	▲ **34886**	† CRW1	R
4.501	.375	**34887**	† CRWA1	R
4.501	.438	**34888**	† CRWH1	R
4.501	.438	**34889**	† CRWHA1	R
4.501	.438	**34891**	CRWHA1	P
4.501	.438	**34892**	† CRWH1	V
4.547	.740	▲ **34980**	† CRWHA2	R
		P.F. WIDTH .640		
4.547	.862	34975	† SCOT1	R
		SCOTSEAL		
4.547	.900	34971	PLUS XL	H
		SCOTSEAL PLUS XL		
4.626	.438	▲ **34985**	† CRWH1	R
4.626	.986	35000	† SCOT1	R
		SCOTSEAL		
4.682	.451	34928	† HMSHA16	V
4.750	.706	34994	PLUS XL	H
		SCOTSEAL PLUS XL		
4.751	.250	▲ 35042	† HM21	R
4.751	.375	**35039**	† CRWA1	V
4.751	.375	▲ **35040**	† CRWA1	P
4.751	.438	▲ **35012**	† CRWH1	R
4.751	.438	**35020**	† CRWHA1	R
4.751	.625	**35029**	† CRWH1	R
4.814	.906	35060	† SCOT1	R
		SCOTSEAL		
4.842	.904	35066	† SCOT1	R
		SCOTSEAL		
4.842	.904	35103	† SCOTLL	H
		SCOTSEAL LONGLIFE		
4.842	.906	▲ **35062**	CRWHA2	R
		P.F. WIDTH .737		
4.842	.903	35058	PLUS XL	H
		SCOTSEAL PLUS XL		
4.852	.904	35072	† SCOT1	R
		SCOTSEAL		
4.953	1.096	35076	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
4.999	.438	**35080**	† CRWA1	V
4.999	.438	▲ **35082**	† CRWH1	R
4.999	.438	**35083**	† CRWHA1	P
5.000	.891	35075	† SCOT1	R
		SCOTSEAL		
5.126	.438	▲ **35086**	† CRWH1	R
5.126	.438	**35095**	† CRWHA1	R
5.251	.438	▲ **35096**	† CRWH1	R
5.251	.718	36381	KIT	P
		SEE KIT SECTION		
5.251	.750	▲ **35098**	† CRWHA11	P
5.750	.413	35105	† HMSA25	V
5.751	.563	35111	† CRSH1	R
3.504 SHAFT				
4.173	.354	**35120**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.543 SHAFT				
4.094	.433	35833	HMSA1	V
4.134	.394	**35405**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.252	.394	35418	HMA7	P

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.543 SHAFT (Cont.)				
4.291	.354	35407	HMSA35	V
		W/CCW HELIX FROM AIR SIDE		
4.331	.354	**35409**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
4.528	.512	**35422**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
6.299	.800	35495	HMSHASP	R
		P.F. WIDTH .669 & 6.713 FLANGE		
3.563 SHAFT				
	.813	**99356**	SSLEEVE	
		SHAFT RANGE 3.560 - 3.566		
4.501	.438	▲ **35556**	† CRWH1	R
4.626	.438	▲ **35593**	† CRWH1	R
4.751	.438	▲ **35649**	† CRWH1	R
4.876	.438	▲ **35676**	† CRWH1	R
4.999	.438	▲ **35716**	† CRWH1	R
3.574 SHAFT				
4.758	.625	35810	† HMSA16	P
3.582 SHAFT				
4.370	.374	**35828**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.583 SHAFT				
4.094	.433	35836	UNITIZE	VR
4.370	.394	▲ 35905	† HMSA1	V
		W/CCW HELIX FROM AIR SIDE		
3.620 SHAFT				
4.626	.500	▲ 36120	† ALH1	S
3.621 SHAFT				
	.813	**99360**	SSLEEVE	
		SHAFT RANGE 3.618 - 3.624		
3.622 SHAFT				
4.331	.374	**36005**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.370	.315	**36204**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
3.625 SHAFT				
	.500	**99363**	SSLEEVE	
		SHAFT RANGE 3.623 - 3.629		
	.813	**99362**	SSLEEVE	
		SHAFT RANGE 3.623 - 3.629		
4.235	.195	539171	SLINGER	R
4.240	.380	▲ **36147**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.376	.375	**36153**	† CRWA1	V
4.376	.375	**36155**	† CRWA1	R
4.376	.375	▲ **36157**	† CRWH1	R
4.376	.375	**36158**	† CRWH1	P
4.500	.294	36172	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
4.501	.375	**36166**	† CRW1	R
4.626	.375	▲ **36177**	† CRW1	R
4.626	.375	**36179**	† CRWA1	V
4.626	.438	**36185**	† CRWH1	R
4.626	.438	**36186**	† CRWHA1	R
4.695	.395	36221	X13	R
		O.D. LISTED IS PRESSFIT I.D.		
4.751	.438	▲ **36220**	† CRWH1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.625 SHAFT (Cont.)				
4.751	.500	**36234**	† CRWA1	S
		W/STAINLESS STEEL SPRING		
4.751	.500	36250	† SL1	T
		W/HELIX-CW W/INSTALLATION SLV		
4.813	.906	36285	† SCOT1	R
		SCOTSEAL		
4.814	.906	**36282**	CRWA2	R
		W/ZINC PLATED CASE, W/.433 P.F		
4.839	.500	36289	P1	L
4.876	.375	**36337**	CRW	R
		NO SPRING		
4.876	.438	162	KIT	#
4.876	.438	▲ **36314**	† CRWH1	R
4.876	.750	36340	C8	RR
4.999	.375	**36359**	† CRWA1	V
4.999	.375	**36361**	† CRWA1	R
4.999	.438	▲ **36363**	† CRWH1	R
4.999	.438	**36364**	† CRWHA1	R
5.000	.859	36358	† SCOT1	R
		SCOTSEAL		
5.001	.891	36365	† SCOT1	R
		SCOTSEAL		
5.251	.375	▲ **36382**	† CRWA1	R
5.375	.438	**36391**	† CRWHA1	R
3.661 SHAFT				
4.252	.394	**36660**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
4.331	.512	**36614**	HMSA7	V
		W/CCW HELIX		
4.331	.276	**36658**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.488	.551	**36601**	HMSA7	V
6.063	.315	36650	J-TYPE	P
		W/7-.320 HOLES AT 5.000 B.C.		
6.649	.449	36655	J-TYPE	P
		W/4-.477" HOLES		
3.675 SHAFT				
	.216	205	KIT	R
		SEE KIT SECTION		
3.688 SHAFT				
	.813	**99365**	SSLEEVE	
		SHAFT RANGE 3.685 - 3.691		
	.313	**99368**	SSLEEVE	
		SHAFT RANGE 3.684 - 3.690		
4.501	.438	▲ **36740**	† CRWHA1	R
4.751	.438	▲ **36770**	† CRWH1	R
4.999	.438	▲ **36880**	† CRWH1	R
5.126	.438	**36895**	† CRWA1	R
5.250	.718	36944	KIT	P
		SEE KIT SECTION		
5.626	.438	**36910**	† CRWA1	R
3.730 SHAFT				
	.469	**99359**	SSLEEVE	
		SHAFT RANGE 3.727 - 3.733		
	.781	**99366**	SSLEEVE	
		SHAFT RANGE 3.727 - 3.733		
3.740 SHAFT				
4.440	.315	**37795**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.740 SHAFT (Cont.)				
4.646	.394	**37030**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
5.118	.472	**37076**	† CRW1	V
5.196	.866	37408	HMSA8	R
		P.F. WIDTH 12MM		
3.743 SHAFT				
	.344	**99374**	SSLEEVE	
		SHAFT RANGE 3.740 - 3.746		
	.469	**99364**	SSLEEVE	
		SHAFT RANGE 3.740 - 3.746		
3.745 SHAFT				
6.161	.305	37442	J-TYPE	P
3.749 SHAFT				
	.563	**99376**	SSLEEVE	
		SHAFT RANGE 3.746 - 3.752		
3.750 SHAFT				
	.688	900	† KIT	P
		SPEEDI-SLEEVE & SEAL KIT		
	.688	99853	GSLEEVE	
		SHAFT RANGE 3.750 - 3.756		
	.350	**400950**	VR1	R
		SHAFT RANGE 3.660 - 3.860		
	.350	**400954**	VR1	V
		SHAFT RANGE 3.660 - 3.860		
	.530	400951	VR2	R
		SHAFT RANGE 3.660 - 3.860		
	.530	400955	VR2	V
		SHAFT RANGE 3.660 - 3.860		
4.245	.281	709023	WS	R
4.250	.063	451068	BUW	#
4.250	.250	★ 711844	BV	R
4.250	.250	721563	BV	V
4.375	.328	504287	SC	R
4.376	.250	▲ **37320**	† HM14	R
4.376	.250	**37325**	† HM14	V
4.500	.381	**37338**	HMSA7	P
		W/CW HELIX FROM AIR SIDE		
4.501	.375	**37327**	CRW1	R
4.501	.375	**37328**	† CRW1	V
4.501	.469	▲ **37330**	† CRWHA1	P
4.501	.376	**37341**	HMS4	V
		W/CCW HELIX FROM AIR SIDE		
4.501	.380	▲ **37340**	HMS4	S
		W/CCW HELIX FROM AIR SIDE		
4.501	.380	**37342**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.502	.469	**37332**	† CRWHA1	V
4.532	.482	37504	HMA11	VT
4.573	.571	37507	S1	T
4.750	.438	**37403**	† CRWHA1	P
4.751	.375	**37387**	† CRW1	P
4.751	.375	▲ **37388**	† CRW1	R
4.751	.375	**37389**	† CRWA1	R
4.751	.438	**37390**	† CRWA1	P
4.751	.438	**37395**	† CRWHA1	S
4.751	.438	**37396**	† CRWH1	R
4.751	.438	**37405**	† CRWH1	V
4.751	.500	37410	† HMSA24	V
4.751	.875	37381	† E3	RR
4.876	.438	▲ **37433**	† CRWH1	R
4.999	.375	**37524**	† CRW1	V

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.750 SHAFT (Cont.)				
4.999	.375	▲ **37525**	† CRW1	R
4.999	.375	**37526**	† CRWA1	R
4.999	.438	**37532**	† CRWH1	R
4.999	.438	**37533**	† CRWHA1	R
4.999	.469	★ 37565	† HM21	R
5.251	.438	▲ **37574**	† CRWH1	R
5.251	.438	**37577**	† CRWH1	V
		W/STAINLESS STEEL SPRING		
3.753 SHAFT				
	.688	**99372**	SSLEEVE	
		SHAFT RANGE 3.750 - 3.756		
	.344	**99367**	SSLEEVE	
		SHAFT RANGE 3.750 - 3.756		
4.720	.607	37520	† UNITIZE	V
		UNITIZED TRANSMISSION SEAL		
3.777 SHAFT				
4.567	.508	37775	† UNITIZD	V
3.778 SHAFT				
4.567	.354	**37570**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.780 SHAFT				
4.606	.472	**37825**	HMSA7	S
		W/CCW HELIX FROM AIR SIDE		
3.785 SHAFT				
	.217	211	KIT	R
		HALF SEAL		
3.813 SHAFT				
4.501	.250	▲ 38040	† HD1	R
		QUILL WIPER		
4.501	.250	38041	† HD1	V
		QUILL WIPER		
4.999	.469	38160	CRSH1	R
5.251	.469	38220	CRSH1	R
3.819 SHAFT				
4.724	.512	**38196**	HMSA7	R
		W/CCW HELIX FROM AIR SIDE		
3.858 SHAFT				
4.567	.394	**38585**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
3.868 SHAFT				
5.376	.844	★ 1206	KIT	R
		SEE KIT SECTION		
3.871 SHAFT				
	.813	**99386**	SSLEEVE	
		SHAFT RANGE 3.868 - 3.874		
3.875 SHAFT				
	.813	**99387**	SSLEEVE	
		SHAFT RANGE 3.873 - 3.879		
		38741	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
		38752	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
4.751	.375	**38646**	† CRW1	R
		W/SS CASE & SPRING		
4.751	.375	**38647**	† CRWA1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.875 SHAFT (Cont.)				
4.751	.375	**38649**	† CRWA1	V
4.751	.438	▲ **38653**	† CRWH1	R
4.876	.438	**38673**	† CRWHA1	R
4.876	.500	▲ **38669**	† CRWH1	R
4.876	.500	**38678**	† CRWHA1	V
4.999	.375	▲ **38691**	† CRW1	R
4.999	.375	**38692**	† CRWA1	R
4.999	.375	**38694**	† CRWA1	V
5.126	.438	**38702**	† CRWHA1	V
5.126	.438	▲ **38703**	† CRWH1	R
5.126	.438	**38713**	† CRWHA1	R
5.129	.844	38709	† SCOT1	R
		SCOTSEAL		
5.248	.844	38736	† SCOT1	R
		SCOTSEAL		
5.251	.438	▲ **38730**	† CRWH1	R
5.251	.438	**38731**	† CRWHA1	R
5.251	.438	**38739**	† CRWHA1	P
5.312	1.102	38740	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
5.376	.438	▲ **38745**	† CRWH1	R
5.376	1.016	38747	† SCOT1	R
		SCOTSEAL		
5.390	.375	▲ 38590	X12	R
		O.D. LISTED IS PRESSFIT I.D.		
5.501	.500	38749	† CRSHA1	R
5.501	.550	1214	KIT	R
		SEE KIT SECTION		
5.501	.938	38750	† SCOT1	R
		SCOTSEAL		
5.562	1.267	38751	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
5.626	.433	**38758**	† CRWHA1	R
5.690	.500	**38774**	† CRWH1	R
5.690	.750	▲ 38777	CRSHA2	R
5.691	.938	38780	† SCOT1	R
		SCOTSEAL		
5.691	.892	38776	PLUS XL	H
		SCOTSEAL PLUS XL		
5.693	.968	1308	KIT	R
		SEE KIT SECTION		
5.751	.563	38810	CRSH1	R
6.000	.625	38845	HMSA1	R
3.898 SHAFT				
4.331	.276	**38883**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.680	.370	**38880**	HMSA7	VR
3.907 SHAFT				
5.708	1.023	39070	HMSA8	R
		P.F. WIDTH 14.8MM		
3.937 SHAFT				
4.724	.374	**39361**	HMSA7	V
4.882	.512	**39367**	HMSA7	V
		W/CCW HELIX		
3.938 SHAFT				
	.813	**99393**	SSLEEVE	
		SHAFT RANGE 3.935 - 3.941		
	.813	99854	GSLEEVE	
		SHAFT RANGE 3.935 - 3.941		
4.876	.438	▲ **39245**	† CRWH1	R
4.906	.484	511853	HS9	R

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
3.938 SHAFT (Cont.)				
4.999	.438	▲ **39275**	† CRWH1	R
4.999	.438	**39276**	† CRWH1	V
4.999	.438	**39277**	† CRWH1	R
		W/SS CASE & SPRING		
5.126	.472	▲ **39304**	† CRWHA1	V
5.251	.438	▲ **39320**	† CRWH1	R
5.372	1.031	▲ **39385**	CRWH2	R
		P.F. WIDTH .527		
5.373	.500	1321	† KIT	R
		SEE KIT SECTION		
5.374	1.016	39380	† SCOT1	R
		SCOTSEAL		
5.375	.438	▲ **39350**	† CRWH1	R
5.501	.438	▲ **39423**	† CRWH1	R
5.501	.550	★ 1219	KIT	R
		SEE KIT SECTION		
5.501	.938	39420	† SCOT1	R
		SCOTSEAL		
5.504	1.016	39425	† SCOT1	R
		SCOTSEAL		
5.512	.591	39426	SCOTPLS	R
		SCOTSEAL PLUS		
4.000 SHAFT				
	.500	**99401**	SSLEEVE	
		SHAFT RANGE 3.998 - 4.006		
	.600	**99395**	SSLEEVE	
		SHAFT RANGE 3.998 - 4.006		
	.650	**99400**	SSLEEVE	
		SHAFT RANGE 3.998 - 4.006		
	.813	**99399**	SSLEEVE	
		SHAFT RANGE 3.998 - 4.006		
	.813	99855	GSLEEVE	
		SHAFT RANGE 3.998 - 4.006		
		450194	AXGSKT1	
		6-.469 DIA BOLT HOLES		
	.350	**401000**	VR1	R
		SHAFT RANGE 3.860 - 4.140		
	.350	**401004**	VR1	V
		SHAFT RANGE 3.860 - 4.140		
	.530	401001	VR2	R
		SHAFT RANGE 3.860 - 4.140		
	.530	401005	VR2	V
		SHAFT RANGE 3.860 - 4.140		
4.495	.281	709024	WS	R
4.495	.281	714884	WS	V
4.500	.063	451266	BUW	#
4.500	.250	704009	BV	R
4.500	.250	721542	BV	V
4.500	.250	★ 714885	BV	V
4.501	.250	▲ **39835**	† HM14	R
4.562	.375	39838	HMS2	P
4.625	.328	504289	SC	R
4.876	.250	▲ 39860	† HM21	R
4.876	.438	▲ **39851**	† CRW1	R
4.999	.250	▲ 39961	† HM21	R
4.999	.375	**39895**	† CRW1	P
4.999	.375	**39921**	† CRWA1	V
4.999	.375	▲ **39922**	† CRW1	R
4.999	.375	**39923**	† CRWA1	R
4.999	.438	**39930**	† CRWHA1	P
4.999	.438	**39932**	† CRWH1	V
4.999	.438	**39933**	† CRWH1	R
4.999	.438	**39934**	† CRWHA1	R
4.999	.438	**39935**	† CRWH1	S

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
4.000 SHAFT (Cont.)				
4.999	.438	39946	† D	SS
		P.F. WIDTH .438 SPECIAL CONST.		
5.122	.953	39979	PLUS XL	H
		SCOTSEAL PLUX XL		
5.126	.438	▲ **39975**	† CRWH1	R
5.126	1.047	39988	† SCOT1	R
		SCOTSEAL		
5.251	.438	**39996**	† CRWH1	V
5.251	.438	▲ **39997**	† CRWH1	R
5.251	.438	**40000**	† CRWA1	R
5.310	.500	▲ **40020**	† CRWHA1	R
5.376	.438	▲ **40036**	† CRWH1	R
5.376	1.016	40040	† SCOT1	R
		SCOTSEAL		
5.501	.438	▲ **40049**	† CRWH1	R
5.505	.750	1322	† KIT	R
		SEE KIT SECTION		
5.626	.375	▲ **40077**	† CRWA1	R
5.626	.438	▲ **40078**	† CRWH1	R
5.626	.688	40086	† SCOT2	R
		SCOTSEAL		
5.626	.688	40091	PLUS XL	H
		SCOTSEAL PLUS XL		
5.751	.438	▲ **40108**	† CRWH1	R
5.754	1.079	40136	† SCOT1	R
		SCOTSEAL		
5.754	.995	40129	PLUS XL	H
		SCOTSEAL PLUS XL		
5.760	1.079	40139	† SCOT1	R
		SCOTSEAL		
5.813	.500	40131	X	R
		O.D. LISTED IS PRESSFIT I.D.		
6.001	.500	▲ **40138**	† CRWH1	R
6.250	.500	▲ **40158**	† CRWH1	R
4.012 SHAFT				
5.693	.813	▲ 40210	† HMSA16	P
4.050 SHAFT				
5.501	.550	▲ **40360**	† CRWH6	R
		W/5.750 FLANGE		
4.063 SHAFT				
5.390	.375	40510	X12	R
		O.D. LISTED IS PRESSFIT I.D.		
4.125 SHAFT				
	.813	**99412**	SSLEEVE	
		SHAFT RANGE 4.122 - 4.130		
4.999	.438	▲ **41125**	† CRWH1	R
4.999	.438	**41126**	CRWH1	V
4.999	.438	**41130**	† CRWH1	S
4.999	.718	41152	KIT	P
		SEE KIT SECTION		
5.126	.438	▲ **41170**	† CRWH1	R
5.126	.438	**41171**	† CRWH1	V
5.251	.438	▲ **41185**	† CRWH1	R
5.251	.438	**41186**	† CRWH1	V
5.501	.438	▲ **41265**	† CRWH1	R
5.750	.438	633	FELT	F
5.751	.438	▲ **41287**	† CRWH1	R
6.001	.438	▲ **41305**	† CRWH1	R
6.001	.438	**41307**	† CRWH1	V

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
4.134 SHAFT				
4.724	.433	**41401**	HMSA7	S
4.165 SHAFT				
5.625	.210	41555	J5SPLIT	R
		W/8 EA .390 DIA. HOLES		
4.166 SHAFT				
5.501	.600	▲41550	†HMSHA3	R
4.188 SHAFT				
	.813	**99418**	SSLEEVE	
		SHAFT RANGE 4.183 - 4.191		
4.999	.469	▲41751	CRSHA1	R
5.251	.469	▲41761	CRSH1	R
5.501	.500	▲41813	†HMSHA3	R
5.501	.500	41814	†HMSHA3	V
5.751	.500	41833	CRSHA1	R
4.234 SHAFT				
	.781	**99423**	SSLEEVE	
		SHAFT RANGE 4.226 - 4.234		
4.250 SHAFT				
	.813	**99424**	SSLEEVE	
		SHAFT RANGE 4.248 - 4.256		
	.750	86071	S1	
	.410	**401100**	VR1	R
		SHAFT RANGE 4.140 - 4.530		
	.410	**401104**	VR1	V
		SHAFT RANGE 4.140 - 4.530		
	.610	401101	VR2	R
		SHAFT RANGE 4.140 - 4.530		
	.610	401105	VR2	V
		SHAFT RANGE 4.140 - 4.530		
4.745	.281	709025	WS	R
4.750	.063	451276	BUW	#
4.750	.250	711845	BV	R
4.750	.250	721564	BV	V
4.813	.313	**42340**	HM14	R
4.875	.328	504291	SC	R
5.126	.250	42380	†HM21	R
5.251	.250	▲42470	†HM21	R
5.251	.375	▲**42419**	†CRWA1	R
5.251	.375	**42422**	†CRW1	S
5.251	.438	**42426**	†CRWH1	R
5.251	.438	**42427**	†CRWHA1	R
5.251	.438	**42433**	†CRWH1	V
5.251	.374	**534954**	†CRWA1	V
5.373	.438	▲**42474**	†CRWA1	V
5.376	.438	▲**42475**	†CRWH1	R
5.501	.438	▲**42528**	†CRWH1	R
5.501	.750	42540	C8	RR
5.501	.938	42550	†SCOT1	R
		SCOTSEAL		
5.626	.438	**42557**	†CRWA1	R
5.751	.438	▲**42573**	†CRWH1	R
5.876	.500	**42592**	†CRWH1	V
		W/STAINLESS STEEL SPRING		
6.001	.500	▲**42616**	†CRWH1	R
6.008	.984	42631	†SCOTLL	
		SCOTSEAL LONGLIFE		
6.009	.984	42623	†SCOT1	R
		SCOTSEAL		
4.250 SHAFT (Cont.)				
6.009	1.122	42625	SCOTPLS	R
		SCOTSEAL		
6.009	.971	42627	PLUS XL	H
		SCOTSEAL PLUS XL		
6.043	.984	42624	†SCOT1	R
		SCOTSEAL		
6.126	.500	▲**42635**	†CRWH1	R
6.250	.500	▲**42644**	†CRWH1	R
6.254	1.250	42672	†SCOT1	R
		SCOTSEAL		
6.254	1.245	42673	PLUS XL	H
		SCOTSEAL PLUS XL		
4.266 SHAFT				
6.066	.875	42800	†SCOT1	R
		SCOTSEAL		
4.312 SHAFT				
		43136	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
		43149	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
5.823	1.102	43135	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
6.000	1.320	43150	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
4.313 SHAFT				
5.501	.433	**43072**	†CRWHA1	P
5.501	.438	▲**43073**	†CRWHA1	R
5.751	.500	43131	CRSH1	R
6.250	.500	43201	HMSH1	R
4.331 SHAFT				
5.626	.472	**43345**	†CRWHA1	V
4.374 SHAFT				
5.737	.207	43746	SPLIT	R
4.375 SHAFT				
	.813	**99437**	SSLEEVE	
		SHAFT RANGE 4.370 - 4.378		
5.373	.570	▲44269	X1	V
		O.D. LISTED IS PRESSFIT I.D.		
5.376	.438	▲**43650**	†CRWH1	R
5.501	.438	▲**43691**	†CRWH1	R
5.751	.438	▲**43751**	†CRWH1	R
5.751	1.016	43752	†SCOT1	R
		SCOTSEAL		
5.751	.995	43754	PLUS XL	H
		SCOTSEAL PLUS XL		
5.900	1.000	43761	PLUS XL	H
		SCOTSEAL PLUS XL		
5.905	1.000	43764	†SCOT1	R
		SCOTSEAL		
5.907	.984	▲**43762**	†CRWHA2	R
		P.F. WIDTH .640		
6.001	.500	▲**43771**	†CRWH1	R
6.003	1.047	43800	†SCOT1	R
		SCOTSEAL		
6.063	.500	**541974**	CRWH1	R
6.250	.500	▲**43820**	†CRWH1	R
6.254	.922	43860	†SCOT1	R
		SCOTSEAL		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
4.375 SHAFT (Cont.)				
6.254	1.047	43865	† SCOT1	R
		SCOTSEAL		
6.311	1.125	43875	† SCOT1	R
		SCOTSEAL		
4.400 SHAFT				
5.230	.375	**44000**	HMSA7	P
		W/CCW HELIX FROM AIR SIDE		
4.438 SHAFT				
	1.000	**99439**	SSLEEVE	
		SHAFT RANGE 4.434 - 4.442		
5.000	.281	712548	BV	V
5.501	.500	▲ **44275**	† CRWH1	R
5.501	.500	**44276**	† CRWH1	V
5.751	.500	▲ **44295**	† CRWH1	R
6.001	.500	▲ **44320**	† CRWH1	R
6.250	.500	▲ **44350**	† CRWH1	R
4.477 SHAFT				
6.250	.500	▲ **44630**	† CRWH1	R
4.500 SHAFT				
	.813	480450	KIT	R
		SPEEDI-SLEEVE & SEAL KIT		
	.813	**99450**	SSLEEVE	
		SHAFT RANGE 4.496 - 4.504		
	.813	99856	GSLEEVE	
		SHAFT RANGE 4.496 - 4.504		
4.995	.281	709026	WS	R
4.995	.281	712127	WS	V
5.000	.063	451352	BUW	#
5.000	.250	711857	BV	D
5.000	.250	721543	BV	V
5.125	.328	504293	SC	R
5.251	.438	▲ **44913**	† CRWH1	R
5.251	.438	**44917**	† CRWHA1	V
5.375	.984	44922	† SCOT1	R
		SCOTSEAL		
5.375	.975	44916	PLUS XL	H
		SCOTSEAL PLUS XL		
5.376	.438	▲ **44920**	† CRWH1	R
5.376	.438	**44926**	† CRWHA1	V
5.501	.250	▲ **45025**	HM14	R
5.501	.375	▲ **44959**	† CRW1	R
5.501	.375	**44960**	† CRWA1	R
5.501	.435	**44980**	† CRWH1	V
		W/STAINLESS STEEL SPRING		
5.501	.438	**44967**	† CRWH1	R
5.501	.438	**44968**	† CRWHA1	R
5.501	.438	**44973**	† CRWH1	V
5.501	.500	45001	† KIT	S
		SEE KIT SECTION		
5.501	.750	44964	† SCOT1	R
		SCOTSEAL		
5.501	.938	45010	† SCOT1	R
		SCOTSEAL		
5.626	.438	▲ **45032**	† CRWH1	R
5.626	.438	**45033**	† CRWHA1	V
5.751	.375	**45064**	† CRWA1	V
5.751	.438	▲ **45069**	† CRWH1	R
5.751	.438	**45070**	† CRWHA1	R
5.751	1.016	45099	† SCOT1	R
		SCOTSEAL		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
4.500 SHAFT (Cont.)				
5.751	.767	45093	PLUS XL	H
		SCOTSEAL PLUS XL		
5.876	.984	45103	† SCOT1	R
		SCOTSEAL		
5.876	1.009	45095	PLUS XL	H
		SCOTSEAL PLUS XL		
6.001	.500	▲ **45110**	† CRWH1	R
6.001	.500	**45111**	† CRWHA1	R
6.001	.500	**45112**	† CRWHA1	V
6.015	.550	▲ 44892	X12	R
		O.D. LISTED IS PRESSFIT I.D.		
6.126	.563	▲ **45140**	† CRWH1	R
6.250	.500	▲ **45150**	† CRWH1	R
6.254	1.047	45160	† SCOT1	R
		SCOTSEAL		
6.254	.750	45157	PLUS XL	H
		SCOTSEAL PLUS XL		
6.311	1.125	45152	† SCOT1	R
		SCOTSEAL		
6.409	.415	45161	X12	D
		O.D. LISTED IS PRESSFIT I.D.		
6.441	.938	45162	† SCOT1	R
		SCOTSEAL		
4.528 SHAFT				
6.142	1.063	45280	HMSA8	R
		P.F. WIDTH 15.6MM		
4.563 SHAFT				
5.751	.500	▲ 45550	CRSHA1	R
6.250	.500	45560	CRSH1	R
4.606 SHAFT				
6.850	1.063	46060	HMSA8	R
		P.F. WIDTH 15.6MM		
4.625 SHAFT				
	.438	**99465**	SSLEEVE	
		SHAFT RANGE 4.621 - 4.629		
	1.000	**99463**	SSLEEVE	
		SHAFT RANGE 4.621 - 4.629		
	.260	401208	VR1-SPL	#
		SHAFT RANGE 4.531 - 4.917		
	.410	**401200**	VR1	R
		SHAFT RANGE 4.530 - 4.920		
	.410	**401204**	VR1	V
		SHAFT RANGE 4.530 - 4.920		
	.610	401201	VR2	R
		SHAFT RANGE 4.530 - 4.920		
	.610	401205	VR2	V
		SHAFT RANGE 4.530 - 4.920		
5.501	.500	46125	† ALH1	S
5.626	.500	▲ **46144**	† CRWH1	R
5.626	.500	**46155**	† CRWH1	V
5.751	.500	▲ **46200**	† CRWH1	R
5.751	.500	▲ **46208**	† CRWH1	S
6.000	1.063	46308	† SCOTLL	H
		SCOTSEAL LONGLIFE		
6.001	1.063	46305	† SCOT1	R
		SCOTSEAL		
6.001	.500	▲ **46285**	† CRWH1	R
6.001	.912	46300	PLUS XL	H
		SCOTSEAL PLUS XL		
6.186	1.250	▲ 46309	HMSA8	R
		P.F. WIDTH .813		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
4.625 SHAFT (Cont.)				
6.250	.500	▲**46324**	†CRWH1	R
6.623	1.093	46396	OILBATH	R
6.623	1.094	▲**46395**	†CRWA79	R
		P.F. WIDTH .484		
4.635 SHAFT				
6.009	1.031	46390	†SCOT1	R
		SCOTSEAL		
4.646 SHAFT				
4.705	.625	84041	S1	
		SEE SLEEVE & WIPER SECTION		
5.751	.625	47385	KIT	V
		SEE KIT SECTION		
4.688 SHAFT				
	.813	**99468**	SSLEEVE	
		SHAFT RANGE 4.685 - 4.693		
		46976	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
		80184	S1	
		SEE SLEEVE & WIPER SECTION		
5.250	.063	451491	BUW	#
5.250	.281	711846	BV	R
5.751	.250	▲46851	†HD1	R
		QUILL WIPER		
5.751	.512	**46790**	†CRWH1	S
5.751	.512	▲**46800**	†CRWH1	R
5.751	.625	1200	KIT	S
		SEE KIT SECTION		
5.755	.750	1201	KIT	PP
		SEE KIT SECTION		
6.000	.375	653	FELT	F
6.001	.266	▲46920	†HD1	P
		QUILL WIPER		
6.001	.380	▲46935	†HMSW90	P
		P.F. WIDTH .281		
6.250	.500	**46950**	†CRWH1	R
6.400	1.525	46975	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
4.724 SHAFT				
5.906	.590	47245	SCOTPLS	R
		SCOTSEAL PLUS		
4.750 SHAFT				
	.500	**99475**	SSLEEVE	
		SHAFT RANGE 4.746 - 4.754		
5.375	.313	**47378**	†HM14	R
5.749	.438	**47375**	†CRW1	P
5.751	.500	**47379**	†CRW1	V
5.751	.500	**47382**	†CRWA1	V
		W/STAINLESS STEEL SPRING		
5.751	.500	**47383**	†CRW1	R
5.751	.500	▲**47394**	†CRWH1	R
5.751	.500	**47395**	†CRWHA1	R
5.875	.500	▲**47441**	†CRWH1	R
6.001	1.063	47483	†SCOT1	R
		SCOTSEAL		
6.001	.500	▲**47474**	†CRWH1	R
6.001	.500	**47475**	†CRWHA1	R
6.001	.500	**47481**	†CRW1	V
6.002	.300	47455	X15	R
		O.D. LISTED IS PRESSFIT I.D.		
6.250	.500	▲**47583**	†CRWH1	R
4.750 SHAFT (Cont.)				
6.250	.500	**47586**	†CRWHA1	V
6.250	.500	47587	†KIT	R
6.250	.610	47591	†HMSA24	R
6.619	1.181	▲47660	†HMSA28	R
		P.F. WIDTH .550		
4.766 SHAFT				
		81774	S6	
		SEE SLEEVE & WIPER SECTION		
6.001	1.063	47690	†SCOT1	R
		SCOTSEAL		
6.254	1.047	48000	†SCOT1	R
		SCOTSEAL		
6.254	.795	48002	PLUS XL	H
		SCOTSEAL PLUS XL		
6.310	1.188	1211	KIT	R
		SEE KIT SECTION		
6.310	1.359	1215	KIT	R
		SEE KIT SECTION		
6.311	1.125	47697	†SCOT1	R
		SCOTSEAL		
6.500	1.063	1212	KIT	R
		SEE KIT SECTION		
6.998	1.188	1213	KIT	R
		SEE KIT SECTION		
7.000	1.250	47699	†SCOT1	R
		SCOTSEAL		
4.767 SHAFT				
6.308	1.035	47691	†PLUS XL	
		DRIVE AXLE ABS VERSION		
6.308	1.420	47692	PLUS XL	H
		SCOTSEAL PLUS XL		
6.313	1.125	47698	†SCOT1	R
		SCOTSEAL		
6.316	1.125	47693	†SCOTLL	H
		SCOTSEAL LONGLIFE		
4.811 SHAFT				
5.543	.472	**48046**	HMSA7	V
		W/CCW HELIX FROM AIR SIDE		
4.813 SHAFT				
5.751	.563	▲**48060**	†CRWH1	P
5.751	.563	**48062**	†CRWH1	V
5.751	.563	**48065**	†CRWH1	S
5.751	.813	48070	†D7	VV
5.755	.750	48075	†D7	PP
4.824 SHAFT				
6.310	.875	54930	†KIT	R
		SEE KIT SECTION		
6.311	1.125	48297	†SCOT1	R
		SCOTSEAL		
6.500	.875	54935	†KIT	R
		SEE KIT SECTION		
6.501	1.125	48298	†SCOT1	R
		SCOTSEAL		
6.998	.875	55165	†KIT	R
		SEE KIT SECTION		
4.841 SHAFT				
5.751	.750	49921	KIT	V
		SEE KIT SECTION		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
4.875 SHAFT				
	.625	**99487**	SSLEEVE	
		SHAFT RANGE 4.871 - 4.879		
5.501	.250	**48650**	HM14	R
6.000	.750	48697	KIT	S
		SEE KIT SECTION		
6.001	.875	48690	† SCOT1	R
		SCOTSEAL		
6.001	.500	**48689**	† CRWHA1	R
6.001	.500	**48692**	† CRWH1	V
6.001	.500	▲ **48693**	† CRWH1	R
6.126	.500	▲ **48726**	† CRWH1	R
6.250	.500	**48768**	† CRWHA1	R
6.250	.500	▲ **48769**	† CRWH1	R
6.254	1.047	★ 48792	† SCOT1	R
		SCOTSEAL		
6.375	.516	**48883**	CRW3	R
6.379	.938	48794	† SCOT1	R
		SCOTSEAL		
6.440	.500	**48886**	† CRW3	R
		P.F. WIDTH .375 W/6.735 FLANGE		
6.441	.938	48796	† SCOT1	R
		SCOTSEAL		
6.503	1.063	48884	† SCOT1	R
		SCOTSEAL		
4.881 SHAFT				
6.693	.571	48881	X14	R
		O.D. LISTED IS PRESSFIT I.D.		
4.902 SHAFT				
6.309	.709	**49050**	† CRWA3	R
		W/6.695 FLANGE		
7.085	.475	49060	X12	R
		O.D. LISTED IS PRESSFIT I.D.		
4.921 SHAFT				
6.375	.500	**49274**	† CRWHA1	V
4.938 SHAFT				
5.500	.063	★ 451493	BUW	#
5.500	.281	711848	BV	R
5.500	.281	★ 721565	BV	V
6.001	.500	▲ **49251**	† CRWH1	R
6.250	.500	▲ **49301**	† CRWH1	R
5.000 SHAFT				
	.813	218	† KIT	V
		SEE KIT SECTION		
	.813	**99499**	SSLEEVE	
		SHAFT RANGE 4.998 - 5.006		
	.813	99858	GSLEEVE	
		SHAFT RANGE 4.998 - 5.006		
	.540	**99501**	SSLEEVE	
		SHAFT RANGE 4.998 - 5.006		
	.688	**99498**	SSLEEVE	
		SHAFT RANGE 4.998 - 5.006		
	.688	99857	GSLEEVE	
		SHAFT RANGE 4.998 - 5.006		
5.495	.281	709029	WS	R
5.495	.281	712128	WS	V
5.563	.281	711849	BV	D
5.563	.281	712138	BV	V
5.751	.500	▲ 49920	† HMS1	V
		W/STAINLESS STEEL SPRING		
6.000	.500	49935	† AL1	S

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
5.000 SHAFT (Cont.)				
6.001	.500	**49927**	† CRWHA1	V
6.001	.500	▲ **49928**	† CRWH1	R
6.001	.500	**49929**	† CRWHA1	R
6.125	.500	**49951**	† HDW1	R
6.126	.500	**49960**	† CRW1	V
6.250	.250	▲ 50070	† HM21	R
6.250	.500	▲ **49966**	† CRWH1	R
6.250	.500	**49984**	† CRW1	R
6.250	.500	**49985**	† CRWA1	R
6.250	.500	**49990**	CRWH1	P
6.250	.500	**49991**	† CRWH1	V
6.250	.500	**49998**	† CRWHA1	R
6.254	1.047	50124	† SCOT1	R
		SCOTSEAL		
6.375	.500	▲ **50130**	† CRWH1	R
6.375	.500	**50138**	† CRWHA1	R
6.500	.500	▲ **50148**	† CRWH1	R
6.500	.500	**50151**	† CRWH1	V
6.623	.906	▲ **50167**	† CRWA79	R
6.750	.500	▲ **50168**	† CRWH1	R
6.750	.500	**50172**	† CRWHA1	R
7.000	.500	50185	CRSHA1	R
7.125	.500	**50186**	† HDW1	R
7.500	.500	50195	CRSHA1	R
5.047 SHAFT				
		450431	AXGSKT1	
		8-.531 DIA BOLT HOLES		
5.062 SHAFT				
		50656	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
6.750	1.280	50655	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
5.063 SHAFT				
6.125	.500	**50620**	† HDW1	R
6.126	.500	▲ **50618**	† CRWH1	R
6.310	1.313	**50640**	CRWH2	R
6.375	.500	**50650**	† CRWH1	R
5.125 SHAFT				
	.866	**99491**	SSLEEVE	
		SHAFT RANGE 5.117 - 5.125		
	.813	**99513**	SSLEEVE	
		SHAFT RANGE 5.120 - 5.128		
		450024	AXGSKT1	
		8-.516 DIA BOLT HOLES		
	.410	**401300**	VR1	R
		SHAFT RANGE 4.920 - 5.320		
	.410	**401304**	VR1	V
		SHAFT RANGE 4.920 - 5.320		
	.610	401301	VR2	R
		SHAFT RANGE 4.920 - 5.320		
	.610	401305	VR2	V
		SHAFT RANGE 4.920 - 5.320		
5.750	.063	451293	BUW	#
5.750	.313	★ 705012	BV	R
6.126	.500	▲ **51240**	† CRWHA1	R
6.126	.500	**51243**	† CRW1	V
6.126	.500	**51247**	† CRW1	R
6.126	.750	51242	† KIT	V
		SEE KIT SECTION		
6.250	.500	▲ **51252**	† CRWHA1	R
6.250	.500	**51253**	† CRWA1	V

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
5.125 SHAFT (Cont.)				
6.375	.500	▲ **51248**	CRWH1	R
6.375	.500	**51255**	† CRWH1	V
6.408	.625	51260	X	D
		O.D. LISTED IS PRESSFIT I.D.		
6.500	.500	51276	CRSHA1	R
6.625	.500	**51277**	† HDW1	R
7.000	.500	**51320**	† HDW1	R
5.188 SHAFT				
6.250	.500	**51800**	† HDW1	R
6.501	.625	★ **51851**	† CRWH1	R
6.501	.625	▲ **51852**	† CRWH1	V
5.250 SHAFT				
	.813	**99525**	SSLEEVE	
		SHAFT RANGE 5.246 - 5.254		
	.750	86076	S1	
		450189	AXGSKT1	
		6-.469 DIA BOLT HOLES		
5.745	.281	709030	WS	R
6.001	.375	▲ **52440**	† CRW1	R
6.001	.500	**52443**	† CRWH1	V
6.250	.500	▲ **52445**	† CRWH1	R
6.250	.500	**52447**	† CRWH1	V
6.250	.250	▲ 52475	HM4	R
6.375	.500	**52492**	CRWHA1	R
6.375	.500	**52498**	CRWHA1	V
6.500	.500	▲ **52488**	† CRWH1	R
6.500	.500	**52489**	† CRWH1	V
6.750	.500	▲ **52648**	† CRWH1	R
6.750	.500	**52649**	† CRWH1	V
6.750	.500	**52651**	† HDW1	R
7.125	.500	**52655**	† HDW1	R
7.376	.945	52658	† SCOT1	R
		SCOTSEAL		
7.379	2.500	★ 52664	† SCOT1	R
		SCOTSEAL		
5.311 SHAFT				
	.807	**99533**	SSLEEVE	
		SHAFT RANGE 5.307 - 5.315		
5.313 SHAFT				
6.375	.500	**53100**	† HDW1	R
6.500	.500	53151	CRSHA1	R
5.375 SHAFT				
	.813	**99537**	SSLEEVE	
		SHAFT RANGE 5.371 - 5.379		
6.000	.063	★ 451439	BUW	#
6.000	.313	711850	BV	D
6.000	.313	712549	BV	V
6.000	.313	721545	BV	V
6.374	.500	53688	† CRSHA1	R
6.499	.563	53692	CRSH1	R
6.625	.500	▲ **53701**	† CRWH1	R
6.625	.500	**53702**	† CRWH1	V
6.750	.500	**53771**	† CRWH1	V
6.750	.500	▲ **53775**	† CRWH1	R
6.876	1.000	▲ **53790**	† CRWHA2	R
		P.F. WIDTH .375		
5.400 SHAFT				
		54001	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
5.400 SHAFT (Cont.)				
6.990	1.310	54000	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
5.438 SHAFT				
	1.500	**99548**	SSLEEVE	
		SHAFT RANGE 5.434 - 5.442		
6.625	.500	**54300**	† HDW1	R
6.688	.625	521726	HS9	R
5.476 SHAFT				
	.563	**99547**	SSLEEVE	
		SHAFT RANGE 5.472 - 5.480		
5.500 SHAFT				
	.518	**99550**	SSLEEVE	
		SHAFT RANGE 5.498 - 5.506		
	.813	**99549**	SSLEEVE	
		SHAFT RANGE 5.498 - 5.506		
	.310	401402	VR3	R
		SHAFT RANGE 5.320 - 5.710		
	.310	401406	VR3	V
		SHAFT RANGE 5.320 - 5.710		
	.410	**401400**	VR1	R
		SHAFT RANGE 5.320 - 5.710		
	.410	**401404**	VR1	V
		SHAFT RANGE 5.320 - 5.710		
	.610	401401	VR2	R
		SHAFT RANGE 5.320 - 5.710		
	.610	401405	VR2	V
		SHAFT RANGE 5.320 - 5.710		
5.995	.281	709031	WS	R
5.995	.281	712129	WS	V
6.125	.063	451495	BUW	#
6.125	.313	711851	BV	D
6.127	.359	504297	SC	R
6.250	.500	**54925**	† CRWA1	R
6.310	1.188	▲ **54929**	† CRWHA9	R
		P.F. WIDTH .500		
6.499	1.063	**54940**	† CRWHA2	R
6.500	.500	▲ **54931**	† CRWH1	R
6.500	.500	**54934**	† CRWH1	V
6.500	.500	**54936**	† CRWH1	P
6.625	.875	56103	KIT	P
		SEE KIT SECTION		
6.626	.563	54949	CRSHA1	R
6.750	.750	595055	HS7	R
6.750	.500	**54959**	† CRW1	R
6.750	.500	**54960**	† CRWA1	R
6.750	.500	**54971**	† CRWHA1	R
6.750	.500	▲ **54972**	† CRWH1	R
6.750	.500	**54974**	† CRWH1	V
6.780	.380	55152	X	R
		O.D. LISTED IS PRESSFIT I.D.		
6.876	.563	55157	CRSHA1	R
6.998	1.188	▲ **55170**	† CRWHA2	R
		SEE KIT SECTION		
7.126	1.187	55172	OILBATH	R
		OILBATH		
7.250	.625	▲ **55175**	† CRWHA22	R
		P.F. WIDTH .536 & 7.625 FLANGE		
7.250	1.187	55177	OILBATH	R
7.501	.563	55179	CRSH1	R
5.512 SHAFT				
6.693	.591	**562456**	HMSA7	V

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
5.512 SHAFT (Cont.)				
6.693	.591	55122	SCOTPLS	R
		SCOTSEAL PLUS		
5.625 SHAFT				
	.875	**99560**	SSLEEVE	
		SHAFT RANGE 5.621 - 5.629		
		56171	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
6.625	.500	▲ **56101**	† CRWH1	R
6.625	.500	**56102**	† CRWH1	V
6.750	.750	56112	D5	VV
6.875	.500	▲ **56136**	† CRWH1	R
6.875	.500	**56137**	† CRWH1	V
7.125	.500	▲ **56160**	† CRWHA1	R
7.250	1.366	56170	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
5.688 SHAFT				
	.035	450447	AXGSKT1	
		8-.688 DIA BOLT HOLES		
5.734 SHAFT				
	.563	**99562**	SSLEEVE	
		SHAFT RANGE 5.726 - 5.734		
5.750 SHAFT				
	.813	**99575**	SSLEEVE	
		SHAFT RANGE 5.746 - 5.754		
6.375	.250	57502	HMA1	R
6.625	.500	▲ **57505**	† CRWH1	R
6.625	.500	**57506**	† CRW1	V
6.750	.500	▲ **57510**	† CRWH1	R
6.750	.500	**57522**	† CRWH1	V
6.751	.500	**57509**	CRWHA1	R
6.876	.563	57519	CRSHA1	R
7.000	.500	▲ **57521**	† CRWH1	R
7.000	.500	**57523**	† CRWH1	V
7.000	.500	**57531**	† CRWHA1	R
7.003	.250	57571	HMA21	R
7.126	.563	57578	CRSHA1	R
7.202	.750	597304	HS6	R
7.502	.563	▲ 57584	CRSHA1	R
5.875 SHAFT				
	1.000	**99587**	SSLEEVE	
		SHAFT RANGE 5.871 - 5.879		
	1.000	99862	GSLEEVE	
		SHAFT RANGE 5.871- 5.879		
		58776	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
	.310	401502	VR3	R
		SHAFT RANGE 5.710 - 6.100		
	.310	401506	VR3	V
		SHAFT RANGE 5.710 - 6.100		
	.410	**401500**	VR1	R
		SHAFT RANGE 5.710 - 6.100		
	.410	**401504**	VR1	V
		SHAFT RANGE 5.710 - 6.100		
	.610	401501	VR2	R
		SHAFT RANGE 5.710 - 6.100		
	.610	401505	VR2	V
		SHAFT RANGE 5.710 - 6.100		
6.875	.500	**58709**	† HDW1	R
		W/STAINLESS STEEL SPRING		
7.000	.500	**58710**	† HDW1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
5.875 SHAFT (Cont.)				
7.125	.500	▲ **58716**	† CRWH1	R
7.125	.500	**58717**	† CRWH1	V
7.125	.500	**58741**	† CRWHA1	R
7.500	.500	▲ **58760**	† CRWH1	R
7.641	1.510	58775	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
5.938 SHAFT				
	1.000	**99596**	SSLEEVE	
		SHAFT RANGE 5.934 - 5.942		
6.801	1.125	▲ 59380	J2	R
		SEE TYPE J SECTION (HMSA LIP)		
7.000	.500	**59300**	† HDW1	R
6.000 SHAFT				
	.500	210	KIT	V
		SEE KIT SECTION		
	.500	**99601**	SSLEEVE	
		SHAFT RANGE 5.995 - 6.003		
	1.000	**99599**	SSLEEVE	
		SHAFT RANGE 5.995 - 6.003		
.687	.875	596161	CT3	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
6.495	.281	709034	WS	R
6.750	.437	59997	† SL1	T
		HELIX-CCW & INSTALLATION SLV		
6.750	.500	**59999**	† CRWA1	V
6.750	.500	▲ **60000**	† CRW1	V
7.000	.625	595826	HSF1	R
7.002	.500	▲ 60006	† CRSHA1	R
7.126	.500	▲ **60012**	† CRWHA1	R
7.126	.500	**60013**	† CRWHA1	V
7.126	.563	★ 60004	CRSHA1	R
7.250	.500	**60009**	† HDW1	R
7.500	.535	**60037**	HS8	R
7.500	.250	▲ 60075	HM4	R
7.500	.500	**60016**	† CRWA1	R
7.500	.500	**60026**	† CRWHA1	V
7.500	.500	**60028**	† CRWHA1	R
7.702	.734	**595126**	HS8	R
6.062 SHAFT				
6.772	.551	60620	CRSA1	R
6.063 SHAFT				
7.500	.500	**60650**	† HDW1	R
6.125 SHAFT				
7.125	.500	**61215**	† HDW1	R
7.125	.550	▲ **61212**	† CRWA	V
		P.F. WIDTH .500 & SS SPRING		
7.125	.625	▲ **61210**	CRWH1	R
7.250	.500	**61230**	† HDW1	R
7.375	.500	**61235**	† HDW1	R
7.502	.563	61248	CRSHA1	R
7.625	.687	**HDL-1299-R**	HDL	R
7.625	.625	▲ **61255**	CRWH1	R
7.625	.625	**61256**	CRWH1	P
6.151 SHAFT				
7.865	.210	61500	SPLIT	R
6.188 SHAFT				
7.500	.563	61840	CRSH1	P

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
6.203 SHAFT				
	.813	**99620**	SSLEEVE	
		SHAFT RANGE 6.198 - 6.208		
6.204 SHAFT				
7.330	.500	62000	†ALH1	S
6.250 SHAFT				
	1.031	**99625**	SSLEEVE	
		SHAFT RANGE 6.245 - 6.255		
	.310	401602	VR3	R
		SHAFT RANGE 6.100 - 6.500		
	.310	401606	VR3	V
		SHAFT RANGE 6.100 - 6.500		
	.275	401608	VR1-SPL	#
		SHAFT RANGE 6.100 - 6.500		
	.470	**401600**	VR1	R
		SHAFT RANGE 6.100 - 6.500		
	.470	**401604**	VR1	V
		SHAFT RANGE 6.100 - 6.500		
	.710	401601	VR2	R
		SHAFT RANGE 6.100 - 6.500		
	.710	401605	VR2	V
		SHAFT RANGE 6.100 - 6.500		
1.000	1.437	595079	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.000	1.437	597334	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
7.250	.500	▲**62480**	†HDW1	R
7.252	.500	▲**62482**	CRWH1	R
7.500	.500	▲**62495**	CRWH1	R
7.500	.500	**62497**	CRWH1	V
7.750	.350	62530	X	R
		O.D. LISTED IS PRESSFIT I.D.		
7.750	.500	▲**62535**	†CRWH1	R
7.875	.625	**62572**	†CRWH1	R
6.299 SHAFT				
	1.000	**99630**	SSLEEVE	
		SHAFT RANGE 6.289 - 6.299		
6.375 SHAFT				
		63797	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
7.000	.063	451066	BUW	#
7.000	.313	711852	BV	D
7.000	.313	712550	BV	V
7.000	.313	★721547	BV	V
7.375	.625	▲**63700**	†CRWH1	R
7.500	.500	**63717**	†HDW1	R
7.875	.563	▲**63734**	†CRWHA1	R
7.875	.625	**63733**	CRWH1	R
8.120	1.265	63796	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
6.438 SHAFT				
7.500	.500	**64330**	†HDW1	R
7.688	.625	594760	HS7	R
7.688	.625	**596043**	HS5	R
7.688	.625	**596362**	HS8	R
6.500 SHAFT				
	1.000	**99650**	SSLEEVE	
		SHAFT RANGE 6.495 - 6.505		
7.500	.625	527301	HS7	R
6.500 SHAFT (Cont.)				
7.500	.350	511193	HD1	D
		QUILL WIPER		
7.500	.500	**64993**	†CRWA1	R
7.500	.500	▲**64994**	CRWH1	R
7.500	.500	**64998**	†CRWH1	V
8.000	.500	**65021**	†CRW1	R
8.000	.500	★**65036**	CRWH1	R
8.000	.500	**65037**	CRWHA1	R
6.614 SHAFT				
7.638	.512	**594536**	HS8	D
6.625 SHAFT				
.688	1.125	529489	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
.688	1.125	594334	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
7.625	.500	**66217**	†HDW1	R
7.750	.500	**66219**	†HDW1	R
7.875	.500	**66222**	†HDW1	R
8.000	.500	**66230**	†HDW1	R
8.125	.500	▲**66241**	CRWH1	R
8.125	.875	594828	HDSA2	V
6.688 SHAFT				
	1.250	**99640**	SSLEEVE	
		SHAFT RANGE 6.683 - 6.693		
6.750 SHAFT				
	.813	**99675**	SSLEEVE	
		SHAFT RANGE 6.745 - 6.755		
		67561	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
	.310	401702	VR3	R
		SHAFT RANGE 6.500 - 6.890		
	.310	401706	VR3	V
		SHAFT RANGE 6.500 - 6.890		
	.470	**401700**	VR1	R
		SHAFT RANGE 6.500 - 6.890		
	.470	**401704**	VR1	V
		SHAFT RANGE 6.500 - 6.890		
	.710	401701	VR2	R
		SHAFT RANGE 6.500 - 6.890		
	.710	401705	VR2	V
		SHAFT RANGE 6.500 - 6.890		
7.750	.500	**67510**	†HDW1	R
7.750	.625	67512	HDS1	V
7.750	.625	595389	HDS1	R
8.000	.625	**592519**	HS8	R
8.000	.625	**595014**	HS8	V
8.000	.500	▲**67515**	†CRWH1	R
8.125	.750	**595762**	HS8	R
8.250	.750	**594890**	HS8	R
8.250	.500	▲**67533**	CRWH1	R
8.419	1.563	**67540**	†CRWH19	R
		W/SLINGER		
8.620	1.375	67560	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
8.750	.500	**67600**	†HDW1	R
6.875 SHAFT				
8.125	.625	**595206**	HS8	R
8.250	.500	**68730**	†HDW1	R
8.375	.750	595958	HS7	R
8.375	.500	▲**68745**	CRWH1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
6.875 SHAFT (Cont.)				
8.500	.500	**68760**	† HDW1	R
6.890 SHAFT				
	1.102	**99687**	SSLEEVE	
		SHAFT RANGE 6.880 - 6.890		
6.938 SHAFT				
9.000	.625	596465	HDS1	V
9.000	.625	596556	HDS1	V
7.000 SHAFT				
	1.000	**99700**	SSLEEVE	
		SHAFT RANGE 6.995 - 7.005		
	.310	401802	VR3	R
		SHAFT RANGE 6.890 - 7.290		
	.310	401806	VR3	V
		SHAFT RANGE 6.890 - 7.290		
	.470	**401800**	VR1	R
		SHAFT RANGE 6.890 - 7.290		
	.470	**401804**	VR1	V
		SHAFT RANGE 6.890 - 7.290		
	.710	401801	VR2	R
		SHAFT RANGE 6.890 - 7.290		
	.710	401805	VR2	V
		SHAFT RANGE 6.890 - 7.290		
		450155	AXGSKT1	
		8-.688 DIA BOLT HOLES		
1.063	1.500	523586	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	594648	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
8.000	.500	**595093**	HS8	V
8.000	.500	**70008**	HS8	D
8.000	.630	▲ **70016**	† CRWH1	R
8.250	.625	594768	HS6	R
		W/HOOK & EYE SPRING CONNECTOR		
8.250	.625	▲ **70028**	CRWH1	R
8.250	.625	594744	HDS1	R
8.375	.625	**594975**	HS8	R
8.375	.688	**594972**	HS8	R
8.375	.625	70034	CRSHA1	R
8.375	1.000	70037	KIT	P
		SEE KIT SECTION		
8.500	.750	594846	HS6	R
		W/HOOK & EYE SPRING CONNECTOR		
8.500	.350	511220	HD1	D
		QUILL WIPER		
8.500	.500	**70080**	† CRWA1	R
8.500	.625	**595267**	HDS2	R
8.500	.625	▲ **70052**	† CRWH1	R
8.500	.625	**70053**	† CRWHA1	R
8.500	.625	**70054**	† CRWHA1	V
8.500	.625	70055	HDS1	V
7.025 SHAFT				
8.500	.625	**596076**	HDS2	V
7.086 SHAFT				
.688	.876	595109	CT3	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
7.087 SHAFT				
	1.299	**99721**	SSLEEVE	
		SHAFT RANGE 7.077 - 7.087		
8.087	.500	**594341**	HS8	V

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
7.125 SHAFT				
8.125	.500	**595761**	HS5	R
8.250	.750	**HDL-3011-R**	HDL	R
8.250	.500	**71220**	† HDW1	R
8.625	.625	▲ **71245**	CRWH1	R
7.188 SHAFT				
8.640	.625	595323	HS7	R
8.640	.625	**595643**	HS5	R
8.640	.625	**596128**	HDS2	R
7.250 SHAFT				
	1.250	**99725**	SSLEEVE	
		SHAFT RANGE 7.244 - 7.254		
		450158	AXGSKT1	
		10-.656 DIA BOLT HOLES		
8.250	.500	**595012**	HS8	R
8.250	.625	▲ **72515**	CRW1	R
8.250	.500	528377	HS7	R
8.750	.625	**595348**	HDS2	R
8.750	.625	**72510**	HDS2	V
8.750	.625	▲ **72539**	† CRWHA1	R
8.750	.750	**72542**	CRWH1	P
8.750	.625	595617	HDS1	V
		W/4 EA .250 LUGS		
8.750	.625	72543	HDS1	V
8.750	.875	72594	HDSA2	VD
9.055	.625	▲ **72570**	† CRWHA1	R
7.283 SHAFT				
8.850	.625	**72805**	HDS2	R
7.375 SHAFT				
8.000	.063	451096	BUW	#
8.000	.313	711853	BV	D
8.000	.313	721548	BV	V
8.375	.500	**73720**	† HDW1	R
8.500	.500	**73730**	† HDW1	R
8.875	.625	▲ **73745**	CRWH1	R
7.438 SHAFT				
		74311	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
8.438	.500	**594508**	HS8	V
9.400	1.656	74310	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
7.453 SHAFT				
	.813	**99745**	SSLEEVE	
		SHAFT RANGE 7.444 - 7.454		
8.500	.750	▲ 74540	† ALH1	S
7.480 SHAFT				
8.480	.500	**594211**	HS8	D
8.858	.630	**74814**	HMSA7	V
		W/STAINLESS STEEL SPRING		
7.500 SHAFT				
	.813	**99750**	SSLEEVE	
		SHAFT RANGE 7.495 - 7.505		
	.310	401902	VR3	R
		SHAFT RANGE 7.290 - 7.680		
	.310	401906	VR3	V
		SHAFT RANGE 7.290 - 7.680		
	.470	**401900**	VR1	R
		SHAFT RANGE 7.290 - 7.680		

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
7.500 SHAFT (Cont.)				
	.470	**401904**	VR1	V
	SHAFT RANGE 7.290 - 7.680			
	.710	401901	VR2	R
	SHAFT RANGE 7.290 - 7.680			
	.710	401905	VR2	V
	SHAFT RANGE 7.290 - 7.680			
	1.918	75090	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)			
8.500	.625	**75038**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
8.500	.625	▲**75030**	CRWH1	R
8.750	.625	**595822**	HS5	D
8.750	.500	**75046**	†HDW1	R
8.750	.625	75048	HDS1	V
9.000	.625	▲**75050**	†CRWH1	R
9.000	.625	**75052**	†CRWHA1	P
9.000	.625	75053	HDS1	V
9.000	.750	**75054**	HDS2	V
9.250	.500	**75069**	†HDW1	R
9.250	.625	75067	HDS1	V
7.625 SHAFT				
8.625	.563	▲**76215**	CRWH1	R
8.875	.625	**595207**	HS8	R
8.875	.500	**76225**	†HDW1	R
9.125	.625	▲**76255**	CRWH1	R
7.680 SHAFT				
9.250	.500	**596425**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
7.750 SHAFT				
	1.000	**99775**	SSLEEVE	
	SHAFT RANGE 7.745 - 7.755			
8.750	.500	**529601**	HS8	R
8.750	.625	**595813**	HS5	D
8.750	.500	**77506**	†HDW1	R
9.000	.625	77531	HDS1	R
9.250	.625	**595146**	HDS2	D
	W/SPARK FREE I.D.			
9.250	.625	595474	HDS1	V
9.250	1.250	596375	HDSE2	VV
9.250	.625	77539	HDS1	V
9.250	.625	▲**77540**	CRWH1	R
7.800 SHAFT				
		78021	HDDFBV1	R
10.000	1.750	78020	HDDF1	R
7.813 SHAFT				
	2.250	85106	LDSLV4	
	FOR SEAL SH SIZE 8.000		(203.20MM)	
7.835 SHAFT				
9.500	.625	**596080**	HDS2	V
7.874 SHAFT				
9.055	.625	**531194**	HDS2	R
9.252	.591	**78760**	HMSA7	R
	W/STAINLESS STEEL SPRING			
7.875 SHAFT				
	1.359	**99787**	SSLEEVE	
	SHAFT RANGE 7.869 - 7.879			

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
7.875 SHAFT (Cont.)				
	.790	**402000**	VR1	R
	SHAFT RANGE 7.480 - 8.270			
	.790	**402004**	VR1	V
	SHAFT RANGE 7.480 - 8.270			
8.875	.500	**78710**	†HDW1	R
9.250	1.000	▲**78725**	CRWHA1	R
9.375	.687	**HDL-9176-R**	HDL	R
9.375	.625	**595145**	HDS2	D
	W/SPARK FREE I.D.			
9.375	.625	595475	HDS1	V
9.375	.625	▲**78738**	CRWH1	R
9.375	1.281	595063	HDSE1	RR
9.500	.625	**596079**	HDS2	V
10.234	.625	**78790**	HDS2	R
7.938 SHAFT				
	1.000	**99799**	SSLEEVE	
	SHAFT RANGE 7.933 - 7.943			
8.750	.344	**79302**	HM14	R
9.125	.500	**79620**	†HDW1	R
9.500	.625	**596078**	HDS2	V
9.500	.625	**596207**	HDS2	R
8.000 SHAFT				
	1.000	**99800**	SSLEEVE	
	SHAFT RANGE 7.995 - 8.005			
	1.500	87577	LDSLV4	
	FOR SEAL SH SIZE 8.188			
	.310	402002	VR3	R
	SHAFT RANGE 7.680 - 8.270			
	.310	402006	VR3	V
	SHAFT RANGE 7.680 - 8.270			
	.470	**401990**	VR1	R
	SHAFT RANGE 7.680 - 8.270			
	.470	**401994**	VR1	V
	SHAFT RANGE 7.680 - 8.270			
	.710	401991	VR2	R
	SHAFT RANGE 7.680 - 8.270			
	.710	401995	VR2	V
	SHAFT RANGE 7.680 - 8.270			
.688	.875	528035	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
.688	.875	528745	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
9.000	.500	**595022**	HS8	V
9.000	.625	**594935**	HS8	V
9.000	.350	511195	HD1	D
	QUILL WIPER			
9.000	.625	▲**79960**	CRWH1	R
9.000	.625	**79961**	CRWHA1	R
9.250	.625	**592376**	HS8	R
9.250	.625	77996	HDS1	V
9.250	.625	▲**79997**	CRWH1	R
9.250	.625	**79998**	†CRWHA1	R
9.375	.750	595732	HDS1	R
9.500	.625	**595404**	HS5	R
9.500	.687	**HDL-3921-R**	HDL	R
9.500	.350	511196	HD1	D
	QUILL WIPER			
9.500	.625	596567	HDS7	H
9.500	.625	▲**80010**	†CRWH1	R
9.500	.687	**80009**	HDS2	V
9.750	.750	**595036**	HDS2	V
9.750	.750	80030	HDS1	V

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
8.000 SHAFT (Cont.)				
10.000	.688	**595888**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.000	.750	590326	HS7	R
10.000	.750	595326	HS6	R
10.000	.750	**595327**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.000	1.375	595437	HDSE2	R
	W/8 EA LUBE HOLE			
10.000	.625	★ **80037**	† CRWH1	R
10.000	.625	**80038**	CRWHA1	R
10.000	.625	80086	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.000	.688	590725	HDS1	R
10.000	.750	590463	HDS1	R
10.000	.750	**590726**	HDS2	R
	W/3 EA .125 LUGS			
10.000	.750	**593446**	HDS2	R
10.000	.750	80087	HDS1	R
	W/3 EA .125 LUGS			
10.000	.875	591977	HDSA1	RD
10.000	.875	**592493**	HDS2	D
10.000	.906	592161	HDSB1	RD
10.000	1.000	592328	HDSB1	RD
10.000	1.000	80088	HDS1	R
10.000	1.000	80091	HDS1	V
10.000	1.125	592075	HDSA2	RD
10.000	1.250	590727	HDSC1	RD
10.000	1.250	592336	HDSA1	RD
10.002	1.000	590733	HDSB1	RD
10.125	1.250	80092	HDSB1	RD
11.000	1.000	592982	HDS1	R
11.625	1.079	80097	CRSHA2	R
8.063 SHAFT				
10.062	1.000	590376	HDS1	R
10.190	.875	592826	HDS1	R
8.071 SHAFT				
9.843	.630	596346	HDS1	R
8.125 SHAFT				
9.378	.625	593198	HDS1	R
10.000	.625	**593239**	HDS2	R
10.125	.625	593340	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.125	.625	▲ **81245**	CRWH1	R
10.125	.625	**81246**	CRWHA1	R
10.125	.750	590312	HDS1	R
10.125	.750	81252	HDS1	V
10.125	1.000	81253	HDS1	R
10.135	.750	592800	HDS1	R
10.250	.875	590739	HDS1	R
8.188 SHAFT				
10.000	.750	**595328**	HDS2	R
10.188	1.000	592707	HDS1	R
8.250 SHAFT				
		82541	HDDFBV1	R
.688	1.125	527820	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
9.250	.625	▲ **82510**	CRWH1	R
9.252	.500	▲ **82512**	† CRWH1	R
9.500	.625	592180	HS7	R
8.250 SHAFT (Cont.)				
9.500	.625	**593342**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
9.500	.625	595675	HDS1	R
9.500	.578	▲ **82521**	CRW1	R
9.500	.625	592723	HDS1	R
	W/4 EA .125 LUGS			
9.500	.625	**592835**	HDS2	R
	W/4 EA .125 LUGS			
9.500	.625	**592942**	HDS2	D
9.500	.625	**82524**	HDS2	R
9.500	.625	**82526**	HDS2	V
9.500	.875	592780	HDS1	R
9.750	.625	590720	HDS1	R
10.000	.750	590729	HDS1	R
10.000	.750	**593511**	HDS2	R
10.062	1.560	82540	HDDF1	R
10.250	.750	591929	HS7	R
10.250	.750	**592556**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.250	.812	**HDL-4499-R**	HDL	R
10.250	.625	**82559**	HDS2	V
10.250	.625	▲ **82560**	CRWH1	R
10.250	.688	590252	HDS1	R
10.250	.750	**593644**	HDS2	D
10.250	.750	82561	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.250	.750	82562	HDS1	R
10.250	.750	82563	HDS1	V
10.250	.813	590237	HDS1	R
10.250	.813	**82555**	HDS2	V
10.250	.875	590741	HDS1	R
10.250	.875	591921	HDSB1	RD
10.250	1.000	590358	HDS1	R
10.250	1.250	590357	HDSB1	RD
10.250	1.750	592380	HDSE1	RR
10.385	.875	593434	HDS1	R
10.500	.875	590750	HDS1	R
11.500	.750	593344	HDS3	D
	W/4 EA .500 ADJ. LUGS			
11.500	.750	**595376**	HDS2	D
11.500	.750	82570	HDS1	R
8.313 SHAFT				
	1.250	85885	LDSLV4	
	FOR SEAL SH SIZE 8.500		(215.90MM)	
	2.000	85995	LDSLV4	
	FOR SEAL SH SIZE 8.500		(215.90MM)	
8.319 SHAFT				
	2.500	87923	LDSLV4	
	FOR SEAL SH SIZE 8.507			
8.345 SHAFT				
10.750	1.250	594186	HDS1	R
8.353 SHAFT				
	1.500	86907	LDSLV4	
	FOR SEAL SH SIZE 8.541		(216.94MM)	
8.375 SHAFT				
9.625	.625	592092	HS7	R
9.750	.750	596198	HDS7	R
9.750	.625	83702	HDS3	D
	W/4 EA .500 ADJ. LUGS			

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
8.375 SHAFT (Cont.)				
9.750	.750	523886	HDS1	R
9.750	.750	**83701**	HDS2	V
9.875	.687	**HDL-3933-R**	HDL	R
9.875	.687	596111	HDS1	R
9.875	.625	83705	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.375	.750	592830	HS7	R
10.375	.750	**593346**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
10.375	.750	591978	HDS1	R
10.375	.750	593345	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.375	1.000	590746	HDS1	R
10.500	.875	593212	HDS1	R
10.625	.875	590765	HDS1	R
8.438 SHAFT				
10.000	.625	84369	HDS1	R
10.000	.625	84385	HDS1	V
10.438	.875	590465	HDS1	R
8.500 SHAFT				
	1.000	85158	LDSLV3	
	FOR SEAL SH SIZE 8.688		(220.68MM)	
	2.125	86167	LDSLV3	
	FOR SEAL SH SIZE 8.688		(220.68MM)	
.813	1.000	594343	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
9.500	.500	594503	HS7	V
9.500	.500	**594745**	HS8	V
9.750	.562	**HDL-1705-R**	HDL	R
9.750	.625	595304	HS7	R
9.750	.625	**595457**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
9.750	.750	HDLA-3066-R	HDLA	R
9.750	.870	595513	HDSA2	D
9.750	.625	593020	HDS1	R
9.750	.625	**593768**	HDS2	D
9.750	.625	595279	HDS1	D
		W/ LT. SPRING		
9.750	.625	▲ **85002**	† CRWH1	R
10.000	.500	**592631**	HS8	R
10.000	.500	**594941**	HS8	D
10.000	.625	**594318**	HS8	R
10.000	.687	**HDL-8453-R**	HDL	R
10.000	.625	595473	HDS1	V
10.000	.875	596196	HDSA1	V
10.000	.625	590503	HDS1	R
10.000	.625	**593740**	HDS2	D
10.000	.625	**593782**	HDS2	R
10.000	.625	596415	HDS7	R
10.000	.625	85007	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.000	.625	▲ **85009**	CRWH1	R
10.000	.625	85019	HDS1	V
10.000	.688	590730	HDS1	R
10.000	.688	85008	HDS1	R
		W/6 EA .063 LUGS		
10.000	.750	592480	HDS1	R
10.000	.750	**85012**	HDS2	V
10.000	1.000	590731	HDSA1	RD
10.000	1.250	595527	HDSD1	DD
		W/LUBE HOLES ON O.D.		
10.500	.625	**592692**	HS8	R
10.500	.625	593349	HS7	R
8.500 SHAFT (Cont.)				
10.500	.625	**593392**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
10.500	.625	**595493**	HS8	H
		W/HOOK & EYE SPRING CONNECTOR		
10.500	.750	590578	HS7	R
10.500	.750	**590848**	HS8	R
10.500	.625	**594967**	HDS2	V
10.500	1.000	594902	HDSA2	VD
10.500	.625	85013	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.500	.625	★ **85014**	CRWA1	R
10.500	.625	▲ **85015**	CRWH1	R
10.500	.625	85018	HDS1	V
10.500	.688	590751	HDS1	R
10.500	.688	**85017**	HDS2	R
		W/4 EA .125 LUGS		
10.500	.750	592572	HDS1	R
10.500	.875	592488	HDSA1	RD
10.500	.875	592798	HDSA1	VD
10.500	1.000	590244	HDS1	R
		W/4 EA .188 LUGS		
10.500	1.000	590754	HDS1	R
10.500	1.000	592149	HDSB1	RD
10.500	1.125	590755	HDSA1	RD
10.500	1.250	590245	HDSA1	RD
10.500	1.250	590756	HDS1	R
10.500	1.250	590757	HDSD1	RR
10.625	.625	▲ **85085**	CRWHA1	R
8.540 SHAFT				
9.750	.625	**593855**	HDS2	D
8.625 SHAFT				
	2.750	85643	LDSLV3	
	FOR SEAL SH SIZE 8.813		(223.85MM)	
.688	1.125	529490	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
10.000	.625	593907	HDS1	R
10.000	.750	590732	HDS1	R
10.125	.609	513529	HS9	R
10.125	.609	**595566**	HS5	R
10.125	.625	592404	HS7	R
10.125	.687	**HDL-3939-R**	HDL	R
10.125	.750	592217	HS7	R
10.125	.625	86225	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.125	.688	590735	HDS1	R
10.125	.750	592206	HDS1	R
10.250	.625	86230	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.250	.750	592661	HDS1	R
10.500	.750	590758	HDS1	R
10.500	.750	86235	HDS1	V
10.625	.625	593350	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.625	.625	▲ **86260**	CRWH1	R
10.625	.688	590766	HDS1	R
10.625	.750	**592358**	HDS2	R
10.625	.750	592433	HDS1	R
10.625	.750	86240	HDS1	V
10.625	1.000	592652	HDS1	R
10.750	.875	592576	HDS1	R
10.750	1.000	591939	HDS1	R
11.750	1.000	590828	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
8.653 SHAFT				
10.039	.630	596174	HDS1	R
8.661 SHAFT				
	1.000	87319	LDSLV4	
	FOR SEAL SH SIZE 8.849		(224.77MM)	
	1.181	87143	LDSLV4	
	FOR SEAL SH SIZE 8.850		(224.79MM)	
	.787	**402200**	VR1	R
	SHAFT RANGE 8.268 - 9.252			
9.661	.500	596054	HS6	V
	W/HOOK & EYE SPRING CONNECTOR			
9.843	.630	**86607**	HMSA7	V
	W/STAINLESS STEEL SPRING			
9.911	.625	**86612**	HS8	V
10.228	.625	**86610**	HDS2	R
10.819	.950	590778	HDS1	R
8.662 SHAFT				
	2.250	87707	LDSLV3	
	FOR SEAL SHAFT SIZE 8.850			
8.687 SHAFT				
	2.250	86543	LDSLV3	
	FOR SEAL SH SIZE 8.875		(225.43MM)	
8.688 SHAFT				
		86851	HDDFBV1	R
10.500	.625	593487	HDS1	R
10.911	1.924	86850	HDDF1	R
8.750 SHAFT				
	1.500	87196	LDSLV3	
	FOR SEAL SH SIZE 8.938		(227.03MM)	
	.310	402202	VR3	R
	SHAFT RANGE 8.270 - 9.170			
	.310	402206	VR3	V
	SHAFT RANGE 8.270 - 9.170			
	.790	**402204**	VR1	V
	SHAFT RANGE 8.270 - 9.250			
9.750	.500	**87440**	HS8	V
9.750	.350	511501	HD1	D
	QUILL WIPER			
10.000	.625	590723	HS7	R
10.000	.625	**592627**	HS8	R
10.000	.625	**593393**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.000	.625	**595042**	HS8	D
10.000	.625	★87460	†HMS1	R
10.000	.750	594939	HDS1	V
10.000	.625	590408	HDS1	R
10.000	.625	**592626**	HDS2	R
10.000	.625	593351	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.250	.609	518386	HS9	R
10.250	.687	**HDL-3946-R**	HDL	R
10.250	.625	594934	HDS1	R
10.250	.625	87490	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.250	.625	**87492**	HDS2	V
10.250	.688	593352	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.250	.688	87491	HDS1	R
10.250	.688	87493	HDS1	V
10.250	.750	590546	HDS1	R
8.750 SHAFT (Cont.)				
10.250	.875	594333	HDSC1	RD
10.500	.750	590448	HDS1	R
10.500	.750	87496	HDS1	V
10.625	.750	592428	HDS1	R
10.625	.750	**593975**	HDS2	R
10.750	.625	▲**87541**	CRWH1	R
10.750	.750	592483	HDS1	R
10.750	.750	593353	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.750	.750	87499	HDS1	V
10.750	.875	590769	HDS1	R
10.750	.875	592492	HDSA1	RD
10.750	1.000	590770	HDS1	R
10.750	1.375	592327	HDSE1	RR
10.750	1.750	590773	HDSE1	RR
11.000	.875	590568	HDS1	R
8.812 SHAFT				
	2.000	86551	LDSLV4	
	FOR SEAL SH SIZE 9.000		(228.60MM)	
8.813 SHAFT				
	1.000	85688	LDSLV3	
	FOR SEAL SH SIZE 9.000		(228.60MM)	
	2.250	85920	LDSLV3	
	FOR SEAL SH SIZE 9.000		(228.60MM)	
	2.250	85999	LDSLV4	
	FOR SEAL SH SIZE 9.000		(228.60MM)	
9.375	.250	528232	HD1	D
	QUILL WIPER			
10.125	.625	596233	HDS3	D
	W/4 EA .500 ADJ. LUGS			
8.858 SHAFT				
11.016	.906	592795	HDS1	R
8.866 SHAFT				
	2.500	87166	LDSLV4	
	FOR SEAL SHAFT SIZE 9.054			
	2.500	87524	LDSLV4	
	FOR SEAL SH SIZE 9.055			
8.867 SHAFT				
	1.000	87462	LDSLV4	
	FOR SEAL SH SIZE 9.055			
8.875 SHAFT				
	1.250	85973	LDSLV3	
	FOR SEAL SH SIZE 9.063		(230.20MM)	
	1.250	87526	LDSLV4	
	FOR SEAL SH SIZE 9.063			
.688	.875	524375	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
.688	.875	530096	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
10.125	.625	592458	HS7	R
10.125	.625	**592459**	HS8	R
10.125	.625	**593394**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.125	.875	595127	HDSA2	DD
10.125	.625	592289	HDS1	R
10.125	.625	**593779**	HDS2	D
10.125	.625	▲**88710**	CRWH1	R
10.125	.750	88702	HDS1	R
10.375	.625	**596061**	HS8	V

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
8.875 SHAFT (Cont.)				
10.375	.750	**592991**	HS8	R
10.875	.625	88706	HDS1	V
10.875	.625	▲**88760**	CRWH1	R
10.875	.750	590780	HDS1	R
10.875	.750	593354	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.875	.875	591984	HDSA1	RD
10.875	1.000	590781	HDS1	R
11.000	.875	592650	HDS1	R
11.000	.875	593355	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.250	.875	592464	HDSA1	RD
8.900 SHAFT				
10.625	.625	595752	HDS1	R
8.938 SHAFT				
	2.500	86546	LDSLV4	
	FOR SEAL SH SIZE 9.126		(231.80MM)	
.688	1.125	531635	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
9.938	.625	595004	HS7	R
9.000 SHAFT				
	1.000	87555	LDSLV3	
	FOR SEAL SH SIZE 9.188			
	1.750	85846	LDSLV4	
	FOR SEAL SH SIZE 9.188		(233.38MM)	
.688	1.125	524204	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.688	1.125	527819	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
10.000	.500	**590419**	HS8	R
10.000	.500	590724	HS7	R
10.000	.625	590492	HS7	R
10.000	.625	**593357**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.000	.750	HDLA-3031-R	HDLA	R
10.000	.625	▲**90006**	CRWH1	R
10.125	.625	**594829**	HS8	R
10.125	.625	**595683**	HS8	R
10.125	.750	590738	HDS1	R
10.187	.625	**595485**	HDS2	V
10.187	.625	**592514**	HDS2	R
10.250	.625	592581	HS7	R
10.250	.625	**593395**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.250	.625	**595248**	HS8	V
10.250	.625	**593729**	HDS2	D
	W/4 EA .500 LUGS			
10.250	.625	90018	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.250	.625	90019	HDS1	R
10.250	.750	592669	HDS1	D
10.250	.750	90017	HDS1	R
10.250	.875	90054	HDSA2	VD
10.375	.625	590062	HDS1	R
10.375	.750	590622	HDS1	R
10.498	.750	596199	HDS7	R
	W/4 EA .250 LUGS			
10.498	.750	596200	HDS7	R
10.500	.609	510966	HS9	R
10.500	.625	528720	HS7	R
10.500	.625	**593396**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
9.000 SHAFT (Cont.)				
10.500	.625	**594641**	HS5	R
10.500	.687	**HDL-3954-R**	HDL	R
10.500	.750	**592600**	HS8	R
10.500	.750	**595536**	HS8	D
10.500	.750	**595718**	HDS2	R
	W/4 EA .250 LUGS			
10.500	.625	**593138**	HDS2	D
10.500	.625	**593743**	HDS2	R
10.500	.625	**90020**	HDS2	V
10.500	.625	90022	HDS1	V
10.500	.625	90023	HDS1	R
10.500	.625	90027	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.500	.688	590761	HDS1	R
10.500	.750	90024	HDS1	R
10.500	.875	597343	HDSA1	RD
10.625	.625	592214	HDS1	R
10.674	.703	**592779**	HS8	R
10.750	.750	590774	HDS1	R
10.750	.250	596227	HD1	D
	QUILL WIPER			
11.000	.625	**593362**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
11.000	.750	**595438**	HDS2	H
11.000	1.000	594903	HDSA2	VD
11.000	.625	▲**90036**	CRWH1	R
11.000	.625	90062	HDS3	D
	W/4 EA .500 ADJ. LUGS			
11.000	.625	90065	HDS1	V
11.000	.750	**590787**	HDS2	R
11.000	.750	90063	HDS1	R
11.000	.750	90066	HDS1	V
11.000	.750	**90067**	HDS2	V
11.000	.875	**590788**	HDS2	D
11.000	1.000	90064	HDS1	R
11.000	1.250	592028	HDSD1	RR
11.000	1.250	594007	HDSD1	VV
11.054	.750	592714	HDS1	R
11.062	.750	592914	HDS1	R
11.250	.875	592654	HDS1	R
11.500	1.000	590811	HDS1	R
9.016 SHAFT				
10.236	.625	**593460**	HS8	R
9.048 SHAFT				
10.630	.625	**90056**	HDS2	V
9.055 SHAFT				
	1.000	89943	LDSLV3	
	FOR SEAL SH SIZE 9.243			
	1.575	85881	LDSLV4	
	FOR SEAL SH SIZE 9.243		(234.77MM)	
	2.500	87089	LDSLV4	
	FOR SEAL SH SIZE 9.243		(234.77MM)	
10.236	.591	596394	HDS1	V
10.621	.630	592683	HDS1	R
9.063 SHAFT				
	1.500	85931	LDSLV4	
	FOR SEAL SH SIZE 9.250		(234.95MM)	
10.300	.625	595189	HDS1	R
10.750	.625	593302	HDS1	R
11.214	1.257	595276	HDSD2	DD
11.214	1.000	592580	HDSA1	RD

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
9.125 SHAFT				
	1.000	86547	LDSLV4	
	FOR SEAL SH SIZE 9.313		(236.55MM)	
	1.500	90130	LDSLV4	
	FOR SEAL SHAFT SIZE 9.313			
10.375	.625	592653	HDS1	R
10.625	.687	**HDL-3957-R**	HDL	R
10.625	.625	91250	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.625	.688	590270	HDS1	R
10.625	.688	593363	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.625	.750	590442	HDS1	R
10.750	.250	515028	HD1	D
	QUILL WIPER			
10.750	.625	91255	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.750	.750	91256	HDS1	R
11.000	.750	590567	HDS1	R
11.125	.812	**91202**	HDS2	R
11.125	.812	**91235**	HDS2	R
	W/4 EA .500 ADJ. LUGS			
11.125	.625	91260	HDS3	D
	W/4 EA .500 ADJ. LUGS			
11.125	.688	590174	HDS1	R
11.125	.688	91261	HDS1	V
11.125	.813	592345	HDS1	R
11.125	1.000	590609	HDS1	R
11.375	.875	592013	HDS1	R
9.134 SHAFT				
10.624	.688	**593607**	HDS2	D
9.188 SHAFT				
10.375	.750	**590747**	HDS2	D
10.938	.750	596487	HDS1	R
9.250 SHAFT				
	.625	87784	LDSLV4	
	FOR SEAL SH SIZE 9.438			
	.875	84643	LDSLV4	
	FOR SEAL SH SIZE 9.438		(239.73MM)	
10.438	.875	595331	HDSA1	VD
10.438	.875	92591	HDSA1	RD
10.500	.625	591881	HS7	R
10.500	.625	**593366**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.500	.625	590762	HDS1	R
10.500	.625	593365	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.500	.625	**596466**	HDS2	V
10.500	.750	590763	HDS1	R
10.500	.750	**592741**	HDS2	R
10.750	.609	520868	HS9	R
10.750	.687	**HDL-3963-R**	HDL	R
10.750	.656	92534	HDS1	R
10.750	.656	92537	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.750	.688	590775	HDS1	R
10.750	.688	591973	HDS1	R
	W/4 EA .125 LUGS			
10.750	.750	590093	HDS1	R
10.750	.750	**592348**	HDS2	D
10.875	.750	592016	HDS1	R
11.000	.625	92532	HDS3	D
	W/4 EA .500 ADJ. LUGS			

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
9.250 SHAFT (Cont.)				
11.000	.750	593368	HDS3	D
	W/4 EA .500 ADJ. LUGS			
11.000	1.375	590791	HDSD1	RR
11.000	1.375	592452	HDSA1	RD
11.250	.625	593625	HS7	R
11.250	.750	**592858**	HS8	R
11.250	.750	593370	HS7	R
11.250	.625	**593467**	HDS2	R
11.250	.625	▲ **92536**	† CRWHA1	R
11.250	.625	92543	HDS1	V
11.250	.688	590701	HDS1	R
11.250	.750	590797	HDS1	R
11.250	.750	593369	HDS3	D
	W/4 EA .500 ADJ. LUGS			
11.250	.813	**92544**	HDS2	V
11.250	.875	593312	HDSA1	VD
11.250	1.000	590798	HDS1	R
11.250	1.375	590039	HDSD1	DD
11.250	1.375	593263	HDSE2	RR
11.375	.875	590472	HDS1	R
11.500	.875	592562	HDS1	R
11.500	.875	593371	HDS3	D
	W/4 EA .500 ADJ. LUGS			
12.750	.625	▲ **92570**	CRWHA1	R
12.750	1.250	**92574**	CRWHA1	R
9.260 SHAFT				
	1.102	87789	LDSLV4	
	FOR SEAL SHAFT SIZE 9.448			
9.312 SHAFT				
		93116	HDDFBV1	R
	.750	86754	LDSLV4	
	FOR SEAL SH SIZE 9.500		(241.30MM)	
	1.250	87807	LDSLV4	
	FOR SEAL SHAFT SIZE 9.500			
11.000	1.437	93115	HDDF1	R
11.625	1.754	93125	HDDF1	R
9.313 SHAFT				
		93126	HDDFBV1	R
	1.500	85377	LDSLV3	
	FOR SEAL SH SIZE 9.500		(241.30MM)	
	2.250	84843	LDSLV3	
	FOR SEAL SH SIZE 9.500			
10.000	.063	451033	BUW	#
10.000	.344	★ 710695	BV	D
10.000	.344	712552	BV	V
9.375 SHAFT				
10.625	.625	590764	HS7	R
10.625	.625	592713	HS6	R
10.625	.625	**593397**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
10.625	.625	593372	HDS3	D
	W/4 EA .500 ADJ. LUGS			
10.875	.750	590779	HS7	R
10.875	.750	591988	HDS1	R
11.000	.750	590485	HDS1	R
11.375	.812	**HDL-4610-R**	HDL	R
11.375	.875	**592651**	HS8	R
11.375	1.000	**592546**	HS8	R
11.375	.875	595130	HDS1	V

★ Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
9.375 SHAFT (Cont.)				
11.375	.750	590806	HDS1	R
11.375	.750	592462	HDS1	D
11.375	.750	593373	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.375	.875	93751	HDS1	R
11.375	1.000	592642	HDS1	R
11.500	.875	590812	HDS1	R
12.750	1.250	590688	HDSB1	RD
9.435 SHAFT				
10.500	.625	594528	HS7	R
9.438 SHAFT				
10.625	.750	592051	HDS1	R
10.635	.750	593894	HDS1	R
10.688	.625	592126	HS7	R
11.250	.625	593129	HDS1	R
11.250	.625	595529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.438	.875	590810	HDS1	R
11.500	.875	590284	HDS1	R
11.500	.875	593374	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.500	1.000	592397	HDS1	R
9.440 SHAFT				
	2.500	87280	LDSLV3	
	FOR SEAL SH SIZE 9.628		(244.51MM)	
9.448 SHAFT				
	.984	87435	LDSLV3	
	FOR SEAL SH SIZE 9.636		(244.75MM)	
9.449 SHAFT				
	1.181	87144	LDSLV4	
		FOR SEAL SH SIZE 9.637		
10.827	.630	**94485**	HMSA7	V
		W/STAINLESS STEEL SPRING		
11.803	.984	590839	HDS1	R
9.500 SHAFT				
	1.000	86633	LDSLV3	
	FOR SEAL SH SIZE 9.688		(246.08MM)	
	1.250	86564	LDSLV4	
	FOR SEAL SH SIZE 9.688		(246.08MM)	
	2.500	86562	LDSLV4	
	FOR SEAL SH SIZE 9.688		(246.08MM)	
.688	1.125	595613	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	595604	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
10.500	.500	590749	HS7	R
10.500	.500	**592607**	HS8	R
10.500	.500	**593398**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
10.500	.500	**594502**	HS8	V
10.500	.500	**95000**	HS8	D
10.500	.350	511197	HD1	D
		QUILL WIPER		
10.500	.438	▲ **95048**	† CRW1	R
		W/SS CASE & SPRING		
10.750	.625	592209	HS7	R
10.750	.625	**593376**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
10.750	.625	**595922**	HDS2	D

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
9.500 SHAFT (Cont.)				
10.750	.313	95052	HM21	R
10.750	.625	590776	HDS1	R
10.750	.625	593375	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.750	.625	**95044**	HDS2	V
10.750	.625	**95045**	HDS2	R
11.000	.625	**531331**	HS8	R
11.000	.625	592042	HS7	R
11.000	.625	**95075**	HS8	V
11.000	.750	590166	HS7	R
11.000	.625	590653	HDS1	R
11.000	.625	590792	HDS1	R
		W/4 EA .125 LUGS		
11.000	.625	**592693**	HDS2	R
11.000	.625	**593133**	HDS2	R
11.000	.625	95046	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.000	.688	95042	HDS1	V
11.000	.750	95047	HDS1	R
11.000	.625	596566	HDS7	H
11.125	.625	590070	HDS1	R
11.125	.625	95056	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.250	.750	**HDL-3981-R**	HDL	R
11.250	.750	HDLA-3981-R	HDLA	R
11.250	.625	591932	HDS1	R
11.250	.625	593378	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.500	.812	**HDL-3984-R**	HDL	R
11.500	1.000	**595431**	HS8	R
11.500	1.000	595909	HDS1	R
		W/4 EA .375 LUGS		
11.500	.625	526302	HDS1	R
11.500	.625	**593666**	HDS2	D
11.500	.625	▲ **95062**	† CRW1	R
11.500	.625	95069	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.500	.750	590813	HDS1	R
11.500	.813	590814	HDS1	R
11.500	.813	95068	HDS1	V
11.500	.875	**95071**	HDS2	R
11.500	.938	590816	HDS1	R
11.500	.938	**590817**	HDS2	R
11.500	.938	590818	HDS1	R
		W/6 EA .125 LUGS		
11.500	.938	**590819**	HDS2	R
		W/6 EA .250 LUGS		
11.500	1.000	590820	HDS1	R
11.500	1.000	**95072**	HDS2	R
11.500	1.250	531679	HDSD1	VV
11.500	1.250	590375	HDSA1	RD
11.500	1.250	591960	HDSC1	DD
11.500	1.250	593081	HDSD1	RR
11.500	1.250	593667	HDSA2	DD
12.500	.688	95081	CRSA4	R
9.563 SHAFT				
		95621	HDDFBV1	R
	1.000	85073	LDSLV4	
	FOR SEAL SH SIZE 9.750		(247.65MM)	
	2.000	85397	LDSLV4	
	FOR SEAL SH SIZE 9.750		(247.65MM)	
10.563	.500	**592623**	HS8	R
10.563	.500	**594146**	HS8	D
		W/HOOK & EYE SPRING CONNECTOR		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
9.563 SHAFT (Cont.)				
10.875	.625	590782	HDS1	R
11.859	1.949	95620	HDDF1	R
9.620 SHAFT				
10.625	.500	**591981**	HS8	R
10.625	.500	592199	HS7	R
10.875	.625	590015	HDS1	R
12.750	1.250	96290	HDSA1	RD
9.625 SHAFT				
10.625	.500	**595476**	HS8	V
		W/HOOK & EYE SPRING CONNECTOR		
10.875	.750	590783	HDS1	R
10.875	.750	**592420**	HDS2	R
10.875	.750	593380	HDS3	D
		W/4 EA .500 ADJ. LUGS		
10.875	.875	590784	HDS1	R
11.000	.750	525448	HDS1	R
11.125	.625	592520	HS7	R
11.625	.625	▲**96245**	CRWH1	R
11.625	.813	**96231**	HDS2	V
11.625	1.000	593659	HDSC1	RD
11.625	1.000	**96230**	HDS2	V
11.625	1.500	594292	HDSE1	RR
		W/8 EA LUBE HOLES		
11.625	1.500	962952	HDSE2	RR
9.688 SHAFT				
10.875	.625	595810	HDS1	D
10.875	.625	594080	HDS1	R
11.500	.625	594906	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.500	1.000	**96880**	HDS2	V
9.719 SHAFT				
11.625	.700	590665	HDS1	R
9.750 SHAFT				
	1.438	84965	LDSLV4	
	FOR SEAL SH SIZE 9.938		(252.43MM)	
	2.250	85045	LDSLV4	
	FOR SEAL SH SIZE 9.938		(252.43MM)	
	.310	402502	VR3	R
	SHAFT RANGE 9.170 - 10.240			
	.310	402506	VR3	V
	SHAFT RANGE 9.170 - 10.240			
10.750	.500	592988	HS7	R
10.750	.500	595530	HS6	R
	W/HOOK & EYE SPRING CONNECTOR			
10.750	.350	596455	HD1	D
		QUILL WIPER		
11.000	.625	590785	HS7	R
11.000	.625	**593382**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
11.000	.625	**593492**	HDS2	R
		W/4 EA .375 LUGS		
11.000	.625	**593611**	HDS2	R
11.000	.625	**593646**	HDS2	D
11.000	.625	596561	HDS7	R
11.000	.625	97526	HDS1	R
11.000	.625	97527	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.000	.625	97528	HDS1	V
11.000	.625	**97529**	HDS2	V
11.000	.750	590133	HDS1	R
9.750 SHAFT (Cont.)				
11.000	.875	593053	HDSA1	RD
11.000	1.000	593428	HDSA1	DD
11.125	.875	594974	HDSA2	D
11.125	.625	▲**97542**	CRWH1	R
11.125	.750	590795	HDS1	R
11.125	.750	**592501**	HDS2	R
11.250	.625	593385	HS7	R
11.250	.625	**593386**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.250	.687	**HDL-3985-R**	HDL	R
11.250	.750	593177	HS7	R
11.250	.875	595514	HDSA2	D
11.250	.625	590655	HDS1	R
11.250	.625	593384	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.250	.625	▲**97545**	CRWH1	R
11.250	.750	590800	HDS1	R
11.500	.750	592272	HDS1	R
11.500	.750	593387	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.750	.625	97549	HDS1	V
11.750	.625	▲**97550**	CRWH1	R
11.750	.688	591897	HDS1	R
11.750	.750	590832	HDS1	R
11.750	.750	593388	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.750	1.000	595568	HDSA1	D
11.750	1.000	97548	HDS1	R
11.750	1.000	**97551**	HDS2	V
12.000	.875	590422	HDS1	R
9.790 SHAFT				
11.125	.625	**593936**	HDS2	D
9.813 SHAFT				
	.625	85987	LDSLV4	
	FOR SEAL SH SIZE 10.000		(254.00MM)	
	1.125	86413	LDSLV4	
	FOR SEAL SH SIZE 10.000		(254.00MM)	
	2.000	84156	LDSLV3	
	FOR SEAL SH SIZE 10.000		(254.00MM)	
	2.000	87067	LDSLV4	
	FOR SEAL SH SIZE 10.000		(254.00MM)	
9.835 SHAFT				
	1.575	90773	LDSLV4	
		FOR SEAL SH SIZE 10.023		
9.840 SHAFT				
11.020	.625	**596062**	HS8	V
9.842 SHAFT				
11.016	.630	592917	HDS1	R
9.844 SHAFT				
11.409	.875	595219	HDSC2	R
11.409	.625	**98444**	HDS2	R
11.409	.625	**98445**	HDS2	R
		W/4 EA .375 LUGS		
9.875 SHAFT				
	.790	**402500**	VR1	R
	SHAFT RANGE 9.250 - 10.430			
	.790	**402504**	VR1	V
	SHAFT RANGE 9.250 - 10.430			
10.875	.500	591905	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
9.875 SHAFT (Cont.)				
11.375	.750	590363	HDS1	R
11.375	.750	**592763**	HDS2	R
11.375	.750	**594364**	HDS2	R
		W/4 EA .500 ADJ. LUGS		
11.500	.750	592727	HDS1	R
11.875	1.000	**595106**	HDS2	R
11.875	.688	590841	HDS1	R
11.875	.688	593389	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.875	.875	590842	HDS1	R
11.875	1.000	592847	HDSA2	RD
12.000	.750	1330	KIT	R
		SEE KIT SECTION		
12.000	.875	590850	HDS1	R
12.000	1.000	590851	HDS1	R
9.938 SHAFT				
11.188	.625	**594753**	HS8	R
11.438	.750	592529	HS7	R
11.438	.750	**592731**	HS8	R
11.938	.875	590444	HDS1	R
12.000	.750	592463	HDS1	D
12.000	1.000	**529752**	HDS2	R
12.000	1.000	590351	HDS1	R
12.125	1.000	592816	HDS1	R
10.000 SHAFT				
	1.000	90070	LDSLV3	
		FOR SEAL SH SIZE 10.188		
11.000	.500	1000017	HS7	R
11.000	.562	**1000018**	HS8	R
11.000	.350	511198	HD1	D
		QUILL WIPER		
11.000	.375	▲**100042**	HMS4	R
11.250	.625	1000117	HS7	R
11.250	.625	**1000118**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.250	.625	**1000128**	HS8	D
11.250	.875	1000914	HDSA2	V
11.250	.625	1000108	HDS1	R
11.250	.625	1000110	HDS1	R
11.250	.625	**1000111**	HDS2	R
11.250	.625	1000113	HDS1	R
		W/4 EA .125 LUGS		
11.250	.625	**1000114**	HDS2	V
11.250	.625	**1000115**	HDS2	R
		W/4 EA .125 LUGS		
11.250	.625	1000116	HDS1	V
		W/6 EA .125 LUGS		
11.250	.625	1000119	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.250	.625	**1000126**	HDS2	V
		W/4 EA .125 LUGS		
11.250	.625	1000129	HDS7	R
11.250	.625	1000313	HDS1	V
11.250	.750	1000130	HDS1	R
11.250	.875	1000910	HDSA1	RD
11.252	.625	▲**100044**	CRWHA1	R
11.370	.750	**1000183**	HDS2	V
11.375	.750	1000180	HDS1	R
11.500	.625	1000237	HS7	R
11.500	.625	**1000238**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.500	.687	**HDL-3992-R**	HDL	R
11.500	.750	1000257	HS7	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
10.000 SHAFT (Cont.)				
11.500	.750	**1000258**	HS8	R
11.500	1.250	1000920	HDSA1	RD
11.500	.625	1000230	HDS1	R
11.500	.625	**1000232**	HDS2	R
11.500	.625	**1000233**	HDS2	V
11.500	.625	1000239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.500	.688	1000240	HDS1	R
11.500	.688	**1000243**	HDS2	V
11.500	.750	1000250	HDS1	R
11.625	.750	1000330	HDS1	R
11.687	.750	1000335	HDS1	R
11.750	.625	1000367	HS7	R
11.750	.625	1000360	HDS1	R
11.750	.625	1000369	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.750	.750	1000380	HDS1	R
11.750	.938	1000940	HDSC1	RD
11.750	.938	1000943	HDSC2	DD
11.750	1.000	1000420	HDS1	R
11.750	1.000	1000941	HDSC1	RD
11.875	.625	1000450	HDS1	R
11.875	1.250	1000948	HDSD2	RR
12.000	.625	1000025	HS7	V
12.000	.625	1000527	HS7	R
12.000	.625	**1000528**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
12.000	.625	**594889**	HS8	V
12.000	.625	**596414**	HS8	V
		W/HOOK & EYE SPRING CONNECTOR		
12.000	.810	**1000558**	HS8	V
12.000	.812	**HDL-3997-R**	HDL	R
12.000	.875	**1000568**	HS8	D
12.000	1.000	**1000588**	HS8	R
12.000	.350	511199	HD1	D
		QUILL WIPER		
12.000	.625	▲**100051**	CRWH1	R
12.000	.625	1000520	HDS1	R
12.000	.625	1000529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
12.000	.625	**100075**	†CRWA1	R
12.000	.688	1000530	HDS1	R
12.000	.750	**1000523**	HDS2	V
12.000	.750	1000540	HDS1	R
		W/4 EA .500 ADJ. LUGS		
12.000	.750	1000541	HDS1	R
		W/3 EA .125 LUGS		
12.000	.750	**1000542**	HDS2	R
12.000	.750	1000543	HDS1	V
12.000	.813	1000550	HDS1	R
12.000	.875	1000560	HDS1	R
12.000	.875	1000950	HDSA1	RD
12.000	1.000	1000580	HDS1	R
12.000	1.000	**1000582**	HDS2	R
12.000	1.250	1000952	HDSA1	RD
12.000	1.250	1000953	HDSB1	RD
12.000	1.250	1000955	HDSE1	RR
12.000	1.500	1000954	HDSA1	RD
12.000	1.750	1000958	HDSD2	RR
12.125	.875	1000620	HDS1	R
12.250	.812	**HDL-3669-R**	HDL	R
12.250	.875	1000660	HDS1	R
12.438	.875	1000740	HDS1	R
12.500	1.000	1000971	HDSA1	RD

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
10.063 SHAFT				
	2.250	86000	LDSLV4	
	FOR SEAL SH SIZE 10.250		(260.35MM)	
11.688	.750	1006330	HDS1	R
11.688	.750	1006332	HDS1	R
		W/4 EA .125 LUGS		
10.120 SHAFT				
12.000	1.000	1012500	HDS1	R
10.125 SHAFT				
11.375	.625	1013117	HS7	R
11.625	.625	1013237	HS7	R
11.625	.687	**HDL-3999-R**	HDL	R
11.625	.750	1013257	HS7	R
11.625	.688	1013240	HDS1	R
11.625	.688	**1013242**	HDS2	R
11.625	.688	1013244	HDS1	R
		W/4 EA .125 LUGS		
11.625	.688	**1013245**	HDS2	R
		W/4 EA .125 LUGS		
11.625	.688	1013249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.625	.750	1013250	HDS1	R
11.750	.687	**HDL-5989-R**	HDL	R
11.750	.750	**1012334**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.750	.750	**1012338**	HS8	R
11.750	.688	1013320	HDS1	R
11.750	.688	1013329	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.750	.938	1013930	HDSC1	RD
12.000	.750	1013470	HDS1	R
12.000	1.000	1013490	HDS1	R
12.125	.625	**1013528**	HS8	R
12.125	.875	1013560	HDS1	R
12.250	.875	1013620	HDS1	R
12.375	.875	1013660	HDS1	R
10.160 SHAFT				
11.160	.500	**1016018**	HS8	R
10.188 SHAFT				
	1.125	84962	LDSLV4	
	FOR SEAL SH SIZE 10.375		(263.53MM)	
.688	.875	524434	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
11.188	.500	**1018019**	HS8	D
11.188	.500	1019017	HS7	R
11.188	.500	**1019018**	HS8	R
11.438	.625	1019110	HDS1	R
11.688	.625	1019230	HDS1	R
11.875	.625	1019347	HS7	R
12.000	.750	**1018452**	HDS2	V
12.188	.875	1019560	HDS1	R
12.250	1.000	1019600	HDS1	R
12.313	.875	1019620	HDS1	R
12.372	.719	1019640	HDS1	R
12.438	.875	1019660	HDS1	R
10.220 SHAFT				
11.750	.750	1022300	HDS1	R
10.236 SHAFT				
	1.968	87738	LDSLV3	
		FOR SEAL SH SIZE 10.424		
10.236 SHAFT (Cont.)				
11.236	.500	**1024018**	HS8	R
12.590	.984	1024690	HDS1	R
10.250 SHAFT				
11.250	.625	1025017	HS7	R
11.250	.625	**1025018**	HS8	V
11.250	.563	**102520**	CRWH1	R
11.438	1.000	1025104	HDS1	R
11.500	.625	1025117	HS7	R
11.500	.625	**1025118**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.500	.625	**1025112**	HDS2	D
11.500	.625	1025119	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.750	.625	1025237	HS7	R
11.750	.625	1025527	HS7	R
11.750	.687	**HDL-4004-R**	HDL	R
11.750	.750	1025257	HS7	R
11.750	.688	1025240	HDS1	R
11.750	.688	**1025244**	HDS2	V
11.750	.688	1025249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.750	.750	1025250	HDS1	R
11.750	.750	**1025252**	HDS2	R
12.000	.625	**1025368**	HS8	R
12.000	.625	102530	HDS3	D
		W/4 EA .500 ADJ. LUGS		
12.000	.750	1025380	HDS1	R
12.017	.750	**1025428**	HS8	R
12.017	.750	**1025435**	HS5	R
12.250	.625	**1025528**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
12.250	.625	▲**102540**	CRWH1	R
12.250	.625	1025520	HDS1	R
12.250	.625	1025529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
12.250	.750	1025540	HDS1	R
12.250	.750	1025543	HDS1	V
12.250	1.000	1025580	HDS1	R
12.250	1.000	**1025582**	HDS2	D
12.250	1.250	1025951	HDSC1	RD
12.375	.875	1025620	HDS1	R
12.500	.750	**1025133**	HDS2	R
12.500	.875	1025660	HDS1	R
10.313 SHAFT				
	1.500	85636	LDSLV4	
	FOR SEAL SH SIZE 10.500		(266.70MM)	
	2.000	85629	LDSLV4	
	FOR SEAL SH SIZE 10.500		(266.70MM)	
	2.250	85191	LDSLV3	
		FOR SEAL SH SIZE 10.500		
12.188	1.000	1031490	HDS1	R
10.375 SHAFT				
11.625	.625	1038117	HS7	R
11.625	.875	1037912	HDSA2	D
11.625	.875	1037143	HDS1	V
11.625	.875	1038140	HDS1	R
11.625	.875	**1038142**	HDS2	R
11.625	.875	**1038143**	HDS2	D
11.875	.750	1038257	HS7	R
11.875	.750	1038250	HDS1	R
11.875	.750	**1038252**	HDS2	D
12.197	1.000	1038440	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
10.375 SHAFT (Cont.)				
12.250	1.000	1038490	HDS1	R
12.375	.875	1038560	HDS1	R
12.375	.875	**1038563**	HDS2	D
12.500	.875	1038620	HDS1	R
12.625	.875	1038660	HDS1	R
10.415 SHAFT				
11.625	.875	**1041162**	HDS2	D
10.438 SHAFT				
1.063	1.500	596110	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
11.679	.875	1044140	HDS1	R
11.688	.875	**1043148**	HS8	R
11.938	.750	1044257	HS7	R
12.430	1.000	1044550	HDS1	R
12.438	.875	1044560	HDS1	R
12.500	1.000	1044600	HDS1	R
12.563	.875	1044620	HDS1	R
12.625	1.000	1044640	HDS1	R
12.688	.875	1044660	HDS1	R
10.441 SHAFT				
	2.165	86798	LDSLV4	
	FOR SEAL SH SIZE 10.629		(269.98MM)	
10.500 SHAFT				
	1.000	85072	LDSLV4	
	FOR SEAL SH SIZE 10.688		(271.48MM)	
	1.500	85839	LDSLV4	
	FOR SEAL SH SIZE 10.688		(271.48MM)	
	2.750	86013	LDSLV4	
		FOR SEAL SH SIZE 10.688		
11.500	.500	**1050014**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.500	.500	1050017	HS7	R
11.500	.500	**1050018**	HS8	R
11.500	.500	**594200**	HS8	V
11.500	.625	1050037	HS7	R
11.500	.625	**1050038**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.500	.350	532293	HD1	D
		QUILL WIPER		
11.750	.625	1050117	HS7	R
11.750	.625	**1050118**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
11.750	.625	▲**105010**	CRWH1	R
11.750	.625	1050110	HDS1	R
11.750	.625	**1050112**	HDS2	R
11.750	.625	1050113	HDS1	V
11.750	.625	1050119	HDS3	D
		W/4 EA .500 ADJ. LUGS		
11.750	.875	1050140	HDS1	R
12.000	.625	**1050236**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
12.000	.625	1050237	HS7	R
12.000	.625	**1050238**	HS8	R
12.000	.687	**HDL-4011-R**	HDL	R
12.000	.750	1050257	HS7	R
12.000	.750	**1050258**	HS8	R
12.000	1.250	1050912	HDSD2	RR
12.000	.688	**1050242**	HDS2	V
12.000	.688	**1050248**	HDS2	V
		W/4 EA .250 LUGS		
12.000	.625	1050230	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
10.500 SHAFT (Cont.)				
12.000	.625	1050239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
12.000	.688	1050211	HDS7	H
12.000	.688	1050240	HDS1	R
12.000	.688	**1050243**	HDS2	R
12.000	.688	**1050244**	HDS2	D
12.000	.750	1050250	HDS1	R
12.000	.750	**1050251**	HDS2	V
12.000	.750	**1050252**	HDS2	R
12.000	.750	**1050253**	HDS2	R
		W/4 EA .188 LUGS		
12.000	.750	**1050254**	HDS2	D
12.000	.750	1050543	HDS1	V
12.000	.875	1050916	HDSC1	RD
12.000	1.000	1050291	HDS1	D
12.125	.625	**1050312**	HDS2	D
12.125	.625	105080	HDS3	D
		W/4 EA .500 ADJ. LUGS		
12.125	.750	1050330	HDS1	R
12.250	.750	1050380	HDS1	R
12.344	.906	1050440	HDS1	R
12.500	.625	1050527	HS7	R
12.500	.625	**1050528**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
12.500	.812	**HDL-4017-R**	HDL	R
12.500	.916	1050577	HS7	R
12.500	.625	▲**105051**	CRWH1	R
12.500	.625	1050520	HDS1	R
12.500	.625	**1050523**	HDS2	R
12.500	.625	**1050524**	HDS2	V
12.500	.625	1050525	HDS1	R
		W/6 EA .125 LUGS		
12.500	.625	1050529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
12.500	.688	1050530	HDS1	R
12.500	.750	1050540	HDS1	R
12.500	.750	**1050542**	HDS2	R
12.500	.750	**1050544**	HDS2	V
12.500	.813	1050550	HDS1	R
12.500	.875	1050560	HDS1	R
12.500	.906	1050570	HDS1	R
12.500	1.000	1050578	HDS1	D
12.500	1.000	1050580	HDS1	R
12.500	1.000	**1050582**	HDS2	R
12.500	1.000	**1050593**	HDS2	V
12.500	1.000	1050956	HDSA1	RD
12.500	1.000	1050958	HDSB1	RD
12.500	1.250	1050957	HDSD2	RR
		W/LUBE HOLES ON O.D.		
12.625	.875	1050620	HDS1	R
12.625	1.000	1050630	HDS1	R
12.750	.875	1050660	HDS1	R
12.750	1.250	1050690	HDS1	R
13.000	.688	**1050754**	HDS2	V
10.531 SHAFT				
12.031	.625	1053237	HS7	R
10.557 SHAFT				
	2.250	85491	LDSLV4	
	FOR SEAL SH SIZE 10.745		(272.92MM)	
10.562 SHAFT				
	1.750	86468	LDSLV4	
	FOR SEAL SH SIZE 10.750		(273.05MM)	

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
10.562 SHAFT (Cont.)				
	1.813	86544	LDSLV4	
	FOR SEAL SHAFT SIZE 10.750			
10.563 SHAFT				
	1.500	87768	LDSLV4	
	FOR SEAL SH SIZE 10.563			
10.625 SHAFT				
11.375	.313	**106205**	HM14	R
11.812	.625	1063100	HDS1	R
11.875	.625	1063117	HS7	R
12.125	.750	1063257	HS7	R
12.125	.750	1063250	HDS1	R
12.250	.750	1063330	HDS1	R
12.375	.750	1063380	HDS1	R
12.500	.750	1063470	HDS1	R
12.500	.969	1062945	HDSA1	RD
12.625	.875	1063560	HDS1	R
12.750	.875	1063620	HDS1	R
12.875	.875	1063660	HDS1	R
13.000	.750	1063710	HDS1	R
13.000	.750	**1063712**	HDS2	R
13.000	1.000	1063971	HDSB1	RD
10.630 SHAFT				
12.254	.630	1063310	HDS1	R
10.688 SHAFT				
12.500	.625	**1068453**	HDS2	V
12.500	.625	1068456	HDS1	V
12.500	1.000	1068940	HDSA1	RD
12.688	.750	1069540	HDS1	R
13.000	.688	**1068693**	HDS2	V
10.709 SHAFT				
11.960	.630	1071110	HDS1	R
10.710 SHAFT				
12.511	.625	**1071448**	HS8	R
10.750 SHAFT				
	2.500	86435	LDSLV4	
	FOR SEAL SH SIZE 10.938		(277.83MM)	
	.310	402752	VR3	R
	SHAFT RANGE 10.240 - 11.220			
	.310	402756	VR3	V
	SHAFT RANGE 10.240 - 11.220			
.688	1.125	594369	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
11.750	.500	**1075018**	HS8	R
12.000	.625	1075117	HS7	R
12.000	.625	**1075118**	HS8	R
12.000	.625	**1075128**	HS8	V
12.000	.625	**1075114**	HDS2	V
12.000	1.375	1075912	HDSD2	RR
	W/LUBE HOLES ON O.D.			
12.000	.625	1075110	HDS1	R
12.000	.625	**1075112**	HDS2	R
12.000	.625	**1075115**	HDS2	R
	W/4 EA .125 LUGS			
12.000	1.375	1075918	HDSE1	RR
	W/SS SPRING & LUBE HOLES			
12.250	.625	1075237	HS7	R
12.250	.625	**1075238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
12.250	.687	**HDL-4023-R**	HDL	R
10.750 SHAFT (Cont.)				
12.250	.750	1075257	HS7	R
12.250	.625	1075230	HDS1	R
12.250	.625	**1075232**	HDS2	D
12.250	.625	1075239	HDS3	D
	W/4 EA .500 ADJ. LUGS			
12.250	.688	1075240	HDS1	R
12.250	.750	1075250	HDS1	R
12.250	.813	1075920	HDSA1	RD
12.250	.875	1075928	HDSC1	RD
12.250	1.025	1075910	HDSC1	R
12.250	1.250	1075923	HDSD2	VV
12.375	.625	1075310	HDS1	R
12.500	.875	**HDL-4033-R**	HDL	R
12.500	.625	1075360	HDS1	R
12.500	.625	**1075365**	HDS2	R
	W/4 EA .125 LUGS			
12.500	.625	**1075366**	HDS2	V
12.500	.625	1075367	HDS1	V
12.500	.625	1075369	HDS3	D
	W/4 EA .500 ADJ. LUGS			
12.500	.688	**1075375**	HDS2	R
	W/4 EA .125 LUGS			
12.500	.875	1075942	HDSA2	RD
12.625	.750	1075470	HDS1	R
12.750	.625	**HDL-3014-R**	HDL	R
12.750	.625	1075527	HS7	R
12.750	.625	**1075528**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
12.750	.625	▲ **107551**	CRWH1	R
12.750	.625	1075520	HDS1	R
12.750	.625	**1075523**	HDS2	D
12.750	.625	**1075524**	HDS2	V
12.750	.625	1075529	HDS3	D
	W/4 EA .500 ADJ. LUGS			
12.750	.750	1075540	HDS1	R
12.750	.750	527312	HDS1	V
12.750	.813	1075550	HDS1	R
12.750	.875	1075560	HDS1	R
12.750	1.000	1075580	HDS1	R
12.750	1.000	**1075582**	HDS2	R
12.750	1.000	1075583	HDS1	V
12.750	1.000	**1075584**	HDS2	V
12.875	.875	1075620	HDS1	R
12.900	1.375	1075642	HDS1	R
12.938	.719	510304	HS9	R
13.000	.875	1075660	HDS1	R
13.250	1.000	1075780	HDS1	R
13.371	1.250	107591	HDSB1	RD
10.788 SHAFT				
12.250	.688	**1078192**	HDS2	D
10.813 SHAFT				
	1.000	81389	LDSLV3	
	FOR SEAL SH SIZE 11.000		(279.40MM)	
	2.000	85033	LDSLV4	
	FOR SEAL SH SIZE 11.000		(279.40MM)	
	1.750	86469	LDSLV4	
	FOR SEAL SH SIZE 11.001		(279.43MM)	
10.827 SHAFT				
12.205	.630	1082150	HDS1	V

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
10.846 SHAFT				
	.709	86601	LDSLV4	
	FOR SEAL SH SIZE 11.034		(280.26MM)	
10.875 SHAFT				
		108711	HDDFBV1	R
	2.000	84510	LDSLV4	
	FOR SEAL SH SIZE 11.063		(281.00MM)	
12.125	.625	**1088118**	HS8	R
12.125	.625	1088110	HDS1	R
12.260	1.000	1088190	HDS1	R
12.375	.750	1088257	HS7	R
12.375	.750	1087253	HDS1	V
12.375	.750	1088250	HDS1	R
12.500	.687	**HDL-4028-R**	HDL	R
12.500	1.000	1088340	HDS1	R
12.750	.688	**1087468**	HS8	R
12.875	.578	527099	HS6	R
12.875	.875	1088560	HDS1	R
12.969	1.540	108710	HDDF1	R
13.000	.875	1088620	HDS1	R
13.125	.875	1088660	HDS1	R
10.885 SHAFT				
12.125	.625	1088068	HDS1	R
10.938 SHAFT				
12.188	.625	1094110	HDS1	R
12.688	.625	1094360	HDS1	R
12.750	.625	1093440	HDS1	R
11.000 SHAFT				
	1.000	81351	LDSLV3	
	FOR SEAL SH SIZE 11.188		(284.18MM)	
	1.375	86533	LDSLV4	
	FOR SEAL SH SIZE 11.188		(284.18MM)	
	1.500	86486	LDSLV4	
	FOR SEAL SH SIZE 11.188		(284.18MM)	
	2.125	86168	LDSLV3	
	FOR SEAL SH SIZE 11.188		(284.18MM	
	2.500	86378	LDSLV3	
	FOR SEAL SH SIZE 11.188		(284.18MM)	
	2.500	86454	LDSLV4	
	FOR SEAL SH SIZE 11.188		(284.18MM)	
	.790	**402750**	VR1	R
	SHAFT RANGE 10.430 - 11.420			
	.790	**402754**	VR1	V
	SHAFT RANGE 10.430 - 11.420			
.688	1.125	524206	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.250	524928	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
12.000	.500	★718053	BV	R
12.000	.500	721550	BV	V
12.000	.500	1100017	HS7	R
12.000	.625	1100027	HS7	R
12.181	.591	**1100048**	HS8	R
12.250	.625	1100117	HS7	R
12.250	.625	**1100118**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
12.250	.625	**1100102**	HDS2	D
	W/4 EA .125 LUGS			
12.250	.625	1100103	HDS1	V
12.250	.625	**1100104**	HDS2	V

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
11.000 SHAFT (Cont.)				
12.250	.625	1100110	HDS1	R
12.250	.625	**1100112**	HDS2	R
12.250	.625	**1100113**	HDS2	D
12.250	.625	**1100115**	HDS2	R
	W/4 EA .125 LUGS			
12.250	.625	1100119	HDS3	D
	W/4 EA .500 ADJ. LUGS			
12.250	.625	▲**110030**	CRWHA1	R
12.500	.625	1100237	HS7	R
12.500	.625	**1100238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
12.500	.687	**HDL-4611-R**	HDL	R
12.500	.750	1100152	HS6	R
	W/HOOK & EYE SPRING CONNECTOR			
12.500	.750	1100257	HS7	R
12.500	.750	**1100258**	HS8	R
12.500	.625	1100220	HDS1	R
	W/4 EA .500 ADJ. LUGS			
12.500	.625	1100230	HDS1	R
12.500	.625	1100233	HDS1	V
12.500	.625	1100239	HDS3	D
	W/4 EA .500 ADJ. LUGS			
12.500	.750	1100250	HDS1	R
12.500	.875	1100270	HDS1	R
12.500	1.250	1100912	HDSD2	RR
12.500	1.250	1100918	HDSA1	RD
12.625	.250	511460	HD1	D
	QUILL WIPER			
12.680	.750	1100330	HDS1	R
13.000	.625	**1100521**	HS8	D
	W/HOOK & EYE SPRING CONNECTOR			
13.000	.625	**1100526**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
13.000	.625	1100527	HS7	R
13.000	.625	**1100528**	HS8	R
13.000	.812	**HDL-4036-R**	HDL	R
13.000	.813	1100557	HS7	R
13.000	.813	**1100558**	HS8	V
13.000	.625	▲**110051**	CRWH1	R
13.000	.625	1100518	HDS3	D
	W/4 EA .500 ADJ LUGS & SS CASE			
13.000	.625	1100520	HDS1	R
13.000	.625	**1100523**	HDS2	V
13.000	.625	1100524	HDS1	V
13.000	.625	1100529	HDS3	D
	W/4 EA .500 ADJ. LUGS			
13.000	.688	1100530	HDS1	R
13.000	.750	1100540	HDS1	R
13.000	.812	**1100555**	HDS2	R
	W/4 EA .500 ADJ. LUGS			
13.000	.813	1100550	HDS1	R
13.000	.813	**1100553**	HDS2	R
13.000	.875	1100560	HDS1	R
13.000	.875	1100950	HDSA1	RD
13.000	1.000	1100580	HDS1	R
13.000	1.000	**1100585**	HDS2	R
13.000	1.000	1100951	HDSA1	RD
13.000	1.250	1100952	HDSA1	RD
13.000	1.250	1100953	HDSB1	RD
13.000	1.250	1100954	HDSC1	RD
13.000	1.250	1100958	HDSE1	RR
13.125	.875	1100620	HDS1	R
13.250	.875	1100660	HDS1	R
13.500	.687	**HDL-3060-R**	HDL	R
13.500	1.250	1100971	HDSA1	RD

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
11.001 SHAFT				
	1.000	90139	LDSLV4	
	FOR SEAL SH SIZE 11.189		(284.28MM)	
11.023 SHAFT				
	1.181	87142	LDSLV4	
	FOR SEAL SH SIZE 11.212		(284.80MM)	
11.024 SHAFT				
12.197	.630	**1102082**	HDS2	D
13.378	.984	1102690	HDS1	R
11.026 SHAFT				
12.256	.750	**1102042**	HDS2	R
11.031 SHAFT				
	1.260	87525	LDSLV4	
	FOR SEAL SH SIZE 11.219			
12.031	.625	1103027	HS7	R
11.054 SHAFT				
	1.750	85469	LDSLV4	
	FOR SEAL SH SIZE 11.250		(285.75MM)	
11.063 SHAFT				
12.250	.750	1105201	HDS1	R
12.500	.750	1106200	HDS1	R
12.750	.750	1106340	HDS1	R
13.000	.750	1106430	HDS1	R
13.063	.875	1106560	HDS1	R
13.188	.875	1106620	HDS1	R
13.313	.875	1106660	HDS1	R
11.125 SHAFT				
12.125	.500	**1112018**	HS8	R
12.375	.625	**1113118**	HS8	R
12.750	1.000	1113340	HDS1	R
13.000	1.000	1113490	HDS1	R
13.125	.875	1113560	HDS1	R
13.250	.875	1113620	HDS1	R
13.375	.875	1113660	HDS1	R
11.187 SHAFT				
	1.250	86269	LDSLV4	
	FOR SEAL SH SIZE 11.375		(288.93MM)	
11.188 SHAFT				
	2.250	85212	LDSLV4	
	FOR SEAL SH SIZE 11.375		(288.93MM)	
12.188	.500	1119017	HS7	R
12.500	.625	**1118122**	HDS2	R
12.500	.750	1118130	HDS1	R
13.500	1.000	1118680	HDS1	R
11.190 SHAFT				
	2.250	87566	LDSLV4	
	FOR SEAL SH SIZE 11.378			
11.250 SHAFT				
12.000	.375	711566	BV	R
12.250	.625	1125027	HS7	R
12.500	.625	1125117	HS7	R
12.500	.625	1125110	HDS1	R
12.500	.625	**1125111**	HDS2	R
12.500	.625	1125113	HDS1	V
12.750	.625	**1125235**	HS5	R
12.750	.625	1125237	HS7	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
11.250 SHAFT (Cont.)				
12.750	.625	**1125238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
12.750	.750	**1125218**	HS8	V
	W/HOOK & EYE SPRING CONNECTOR			
12.750	.750	1125257	HS7	R
12.750	.625	1125230	HDS1	R
12.750	.625	1125239	HDS3	D
	W/4 EA .500 ADJ. LUGS			
12.750	.688	1125240	HDS1	R
12.750	.750	1125250	HDS1	R
12.750	.750	**1125252**	HDS2	D
12.750	.750	1125253	HDS1	V
12.750	.875	1125270	HDS1	R
12.750	1.250	1125920	HDSE1	RR
12.750	.625	1125219	HDS7	H
13.250	.625	1125527	HS7	R
13.250	.625	**1125528**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
13.250	.813	1125557	HS7	R
13.250	.625	**1125522**	HDS2	R
13.250	.625	**1125524**	HDS2	R
	W/4 EA .375 LUGS			
13.250	.625	1125529	HDS3	D
	W/4 EA .500 ADJ. LUGS			
13.250	.813	1125550	HDS1	R
13.250	.813	**1125553**	HDS2	R
13.250	.875	1125560	HDS1	R
13.250	.938	1125570	HDS1	R
13.250	1.000	1125580	HDS1	R
13.375	.875	1125620	HDS1	R
13.500	.875	1125660	HDS1	R
13.500	.875	1125661	HDS1	R
	W/4 EA .125 LUGS			
13.500	1.000	1125680	HDS1	R
13.500	1.000	**1125792**	HDS2	R
11.313 SHAFT				
	1.500	84094	LDSLV4	
	FOR SEAL SH SIZE 11.500		(292.10MM)	
	2.000	87746	LDSLV4	
	FOR SEAL SH SIZE 11.501			
13.000	.625	1131340	HDS1	R
13.312	.875	1131560	HDS1	R
13.438	.875	1131620	HDS1	R
13.562	.875	1131660	HDS1	R
11.344 SHAFT				
12.594	.625	1134117	HS7	R
11.375 SHAFT				
	2.250	86145	LDSLV4	
	FOR SEAL SH SIZE 11.563		(293.70MM)	
12.375	.500	1138017	HS7	R
12.625	.625	1138117	HS7	R
12.875	.750	**1138256**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
12.875	.750	1138257	HS7	R
12.875	.750	**1138258**	HS8	R
12.875	.750	1138250	HDS1	R
12.875	.750	1138251	HDS1	R
	W/4 EA .125 LUGS			
12.875	.750	**1138252**	HDS2	R
12.875	.750	1138259	HDS3	D
	W/4 EA .500 ADJ. LUGS			
13.000	.625	▲**113740**	CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
11.375 SHAFT (Cont.)				
13.000	.625	1138319	HDS3	D
		W/4 EA .500 ADJ. LUGS		
13.000	.688	1138320	HDS1	R
13.000	.688	1138322	HDS1	R
		W/4 EA .125 LUGS		
13.000	.688	**1138323**	HDS2	R
13.000	.688	1138325	HDS1	R
		W/8 EA .250 LUGS		
13.000	.750	1138330	HDS1	R
13.000	.750	1138331	HDS1	R
		W/4 EA .125 LUGS		
13.000	.750	1138334	HDS1	R
		W/8 EA .250 LUGS		
13.375	.812	**HDL-4052-R**	HDL	R
13.375	1.000	**1138588**	HS8	R
13.375	.813	1138550	HDS1	R
13.375	1.000	1138580	HDS1	R
13.500	.875	1138620	HDS1	R
13.500	1.000	1138630	HDS1	R
13.625	.875	1138660	HDS1	R
11.417 SHAFT				
	1.750	86441	LDSLV4	
	FOR SEAL SH SIZE 11.605		(294.77MM)	
12.981	.625	**1141228**	HS8	R
12.984	.630	592915	HDS1	R
12.994	.875	1141937	HDSA1	V
13.000	.875	1141273	HDSA2	V
13.142	.750	**1142332**	HDS2	R
13.142	.750	**1142334**	HDS2	R
		W/4 EA .375 LUGS		
11.422 SHAFT				
12.922	.750	1142257	HS7	R
11.438 SHAFT				
13.000	.688	1144300	HDS1	R
13.000	.688	1144305	HDS1	R
		W/4 EA .500 LUGS		
13.625	.875	1144620	HDS1	R
13.688	.875	1144660	HDS1	R
11.446 SHAFT				
13.430	.875	1144560	HDS1	R
11.500 SHAFT				
	.750	86150	LDSLV4	
	FOR SEAL SH SIZE 11.688		(296.88MM)	
	.750	90761	LDSLV4	
		FOR SEAL SHAFT SIZE 11.688		
12.500	.500	**1150018**	HS8	R
12.500	.500	**1150019**	HS8	D
		W/HOOK & EYE SPRING CONNECTOR		
12.500	.500	**595181**	HS5	R
12.500	.625	1150017	HS7	R
12.500	.625	**1150028**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
12.750	.625	**1150116**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
12.750	.625	1150117	HS7	R
12.750	.625	**1150118**	HS8	R
12.750	.625	1150110	HDS1	R
12.750	.625	**1150112**	HDS2	R
12.750	.625	**1150113**	HDS2	D

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
11.500 SHAFT (Cont.)				
12.750	.625	1150119	HDS3	D
		W/4 EA .500 ADJ. LUGS		
12.750	.625	1150127	HDS1	V
12.750	.625	**594376**	HDS2	R
12.750	1.500	1150912	HDSE2	DD
12.875	.688	1150170	HDS1	R
13.000	.625	1150237	HS7	R
13.000	.625	**1150238**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
13.000	.687	**HDL-4057-R**	HDL	R
13.000	.750	1150257	HS7	R
13.000	.750	**1150258**	HS8	R
13.000	.750	**1150259**	HS8	D
		W/HOOK & EYE SPRING CONNECTOR		
13.000	.625	**1150114**	HDS2	V
13.000	.625	▲**115021**	CRWH1	R
13.000	.625	1150239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
13.000	.688	**1150212**	HDS2	R
		W/4 EA .125 LUGS		
13.000	.688	1150240	HDS1	R
13.000	.688	1150242	HDS1	R
		W/6 EA .375 LUGS		
13.000	.688	**1150243**	HDS2	R
13.000	.688	**1150244**	HDS2	R
		W/6 EA .250 LUGS		
13.000	.709	1150241	HDS1	R
13.000	.750	115025	HDSA1	RD
13.000	.750	1150250	HDS1	R
13.000	.750	**1150253**	HDS2	R
13.000	.750	1150254	HDS1	D
13.000	.750	1150283	HDS1	V
13.000	.750	1150919	HDSA1	DD
13.000	.875	1150925	HDSA1	DD
13.000	1.063	1150920	HDSA1	RD
13.000	.688	**1150210**	HDS2	V
13.125	1.000	1150340	HDS1	R
13.250	.750	**594850**	HS5	R
13.250	.750	1150380	HDS1	R
13.375	.750	1150470	HDS1	R
13.500	.625	**1150526**	HS8	D
13.500	.625	1150527	HS7	R
13.500	.625	**1150528**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
13.500	.812	**HDL-4063-R**	HDL	R
13.500	.813	1150557	HS7	R
13.500	1.000	**1150578**	HS8	R
13.500	1.000	1150587	HS7	R
13.500	1.000	511766	HS7	R
13.500	1.000	525669	HS6	R
13.500	.625	▲**115041**	CRWH1	R
13.500	.625	**1150522**	HDS2	R
13.500	.625	**1150524**	HDS2	V
13.500	.625	1150529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
13.500	.688	1150284	HDS1	V
13.500	.688	1150530	HDS1	R
13.500	.750	1150540	HDS1	R
13.500	.750	**1150546**	HDS2	R
		W/4 EA .125 LUGS		
13.500	.750	1150547	HDS1	V
13.500	.813	1150550	HDS1	R
13.500	.813	**1150552**	HDS2	V
13.500	.813	1150553	HDS1	V
13.500	.875	1150560	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
11.500 SHAFT (Cont.)				
13.500	1.000	**1150572**	HDS2	D
13.500	1.000	1150580	HDS1	R
13.500	1.000	**1150582**	HDS2	R
13.500	1.250	1150953	HDSD1	RR
13.500	1.250	1150954	HDSD2	RR
13.625	.875	1150620	HDS1	R
13.750	.875	1150660	HDS1	R
11.562 SHAFT				
	1.000	90333	LDSLV4	
	FOR SEAL SH SIZE 11.75		(298.45MM)	
11.575 SHAFT				
12.575	.500	1158017	HS7	R
11.623 SHAFT				
	1.417	87875	LDSLV3	
	FOR SEAL SH SIZE 11.811			
11.625 SHAFT				
		116501	HDDFBV1	R
12.875	.625	**1162112**	HDS2	R
13.125	.750	1162216	HS6	R
13.125	.750	1163257	HS7	R
13.125	.750	**1163259**	HS8	D
13.125	.688	**1163244**	HDS2	V
13.125	1.000	1163290	HDS1	R
13.191	.750	1163250	HDS1	R
13.250	1.290	116500	HDDF1	R
	O.D. LISTED IS SEAL I.D.			
13.625	.813	1163557	HS7	R
11.688 SHAFT				
12.938	.625	1169110	HDS1	R
13.062	.750	1169180	HDS1	R
13.188	.625	1169235	HS7	V
13.500	.866	**530513**	HS8	R
		1 PKG/2 CUTS		
11.750 SHAFT				
	2.375	87872	LDSLV3	
	FOR SEAL SH SIZE 11.938			
	.310	403002	VR3	R
	SHAFT RANGE 11.220 - 12.200			
	.310	403006	VR3	V
	SHAFT RANGE 11.220 - 12.200			
.688	1.125	593629	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
13.000	.625	**1175118**	HS8	R
13.188	.875	1175190	HDS1	R
13.250	.625	**1175236**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
13.250	.625	1175237	HS7	R
13.250	.625	**1175238**	HS8	R
13.250	.687	**HDL-4064-R**	HDL	R
13.250	.750	1175257	HS7	R
13.250	.750	**1175258**	HS8	V
	W/HOOK & EYE CONNECTOR			
13.250	.625	1175239	HDS3	D
	W/4 EA .500 ADJ. LUGS			
13.250	.688	**1175224**	HDS2	V
13.250	.688	1175240	HDS1	R
13.250	.688	1175243	HDS1	V
13.250	.750	1175250	HDS1	R
13.250	.750	**1175252**	HDS2	R
11.750 SHAFT (Cont.)				
13.250	.750	1175253	HDS1	R
	W/4 EA .125 LUGS			
13.250	.750	**1175254**	HDS2	R
	W/4 EA .125 LUGS			
13.250	.750	**1175255**	HDS2	V
13.250	.750	1175283	HDS1	V
13.250	.875	1175920	HDSC1	RD
13.250	.875	1175924	HDSA2	VD
13.250	.688	1175219	HDS7	R
13.252	.750	1175300	HDS1	R
13.500	.625	1175360	HDS1	R
13.750	.625	1175527	HS7	R
13.750	.813	1175557	HS7	R
13.750	1.000	1175587	HS7	R
13.750	.625	117570	HDS3	D
	W/4 EA .500 ADJ. LUGS			
13.750	.875	1175560	HDS1	R
13.750	.875	**1175563**	HDS2	D
13.750	.875	**1175565**	HDS2	R
	W/4 EA .125 LUGS			
13.750	.875	1175569	HDS3	D
	W/4 EA .500 ADJ. LUGS			
13.750	1.000	1175580	HDS1	R
13.750	1.000	**1175582**	HDS2	R
13.750	1.000	1175583	HDS1	V
13.750	1.250	1175952	HDSB1	RD
13.750	1.813	1175595	HDS1	R
13.875	.875	1175620	HDS1	R
14.000	.875	1175660	HDS1	R
14.000	1.000	1175680	HDS1	R
11.808 SHAFT				
13.308	.750	1180257	HS7	R
11.811 SHAFT				
	2.500	86903	LDSLV4	
	FOR SEAL SH SIZE 11.999		(284.46MM)	
12.811	.500	596055	HS6	V
	W/HOOK & EYE SPRING CONNECTOR			
13.311	.750	**1181218**	HS8	R
13.378	.709	1181300	HDS1	R
13.386	.787	**1181258**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
13.575	.984	**1181428**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
13.780	.984	1181500	HDS1	R
11.812 SHAFT				
	1.125	86643	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)	
	1.125	86687	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)	
11.813 SHAFT				
	1.500	85979	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)	
	2.000	85874	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)	
	2.250	84819	LDSLV3	
	FOR SEAL SH SIZE 12.000		(304.80MM)	
	2.250	85046	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)	
	2.750	85844	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)	
12.813	.500	1181017	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
11.813 SHAFT (Cont.)				
13.250	1.000	1181195	HDS1	R
13.313	.750	1181257	HS7	R
13.780	1.000	1181577	HS7	R
13.812	.875	1181560	HDS1	R
13.938	.875	1181620	HDS1	R
14.000	.750	**1180614**	HDS2	R
		W/4 EA .250 LUGS		
14.000	.750	1181619	HDS3	D
		W/4 EA .500 ADJ. LUGS		
14.000	.875	**1181593**	HDS2	V
14.000	.875	1181640	HDS1	R
14.000	1.000	1181641	HDS1	R
14.000	1.250	1181960	HDSE1	RR
14.063	.875	1181660	HDS1	R
11.875 SHAFT				
	.790	**403000**	VR1	R
		SHAFT RANGE 11.420 - 12.200		
	.790	**403004**	VR1	V
		SHAFT RANGE 11.420 - 12.200		
12.875	.625	**1187028**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
13.125	.625	**1188118**	HS8	R
13.375	.750	1188257	HS7	R
11.906 SHAFT				
13.156	.625	1191117	HS7	R
11.938 SHAFT				
13.938	.625	1194527	HS7	R
13.938	.625	1194520	HDS1	R
11.947 SHAFT				
13.947	1.000	**1194588**	HS8	R
11.950 SHAFT				
14.000	.688	1195530	HDS1	R
11.952 SHAFT				
13.952	1.000	**1195588**	HS8	R
11.963 SHAFT				
13.963	1.000	**1196588**	HS8	R
11.968 SHAFT				
	.709	86600	LDSLV4	
	FOR SEAL SH SIZE 12.156		(308.76MM)	
.688	.875	528036	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
11.971 SHAFT				
13.771	1.000	**1197588**	HS8	R
12.000 SHAFT				
	2.250	85577	LDSLV4	
	FOR SEAL SH SIZE 12.188		(309.58MM)	
	2.250	87406	LDSLV3	
	FOR SEAL SH SIZE 12.188		(309.58MM	
.688	.875	524380	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.250	524208	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
1.063	1.500	525582	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
13.000	.500	**1200015**	HS5	R
13.000	.500	1200017	HS7	R
12.000 SHAFT (Cont.)				
13.000	.500	**1200018**	HS8	R
13.000	.500	**1200028**	HS8	D
13.000	.625	1200037	HS7	R
13.000	.350	511200	HD1	D
		QUILL WIPER		
13.250	.625	1200117	HS7	R
13.250	.625	**1200118**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
13.250	.625	1200110	HDS1	R
13.250	.625	1200119	HDS3	D
		W/4 EA .500 ADJ. LUGS		
13.250	1.000	1200100	HDS1	V
13.250	1.000	1200150	HDS1	R
13.279	1.000	**1200103**	HDS2	V
13.500	.625	**1200236**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
13.500	.625	1200237	HS7	R
13.500	.625	**1200238**	HS8	R
13.500	.687	**HDL-4612-R**	HDL	R
13.500	.750	1200257	HS7	R
13.500	.750	**1200258**	HS8	R
13.500	.750	1200259	HS7	V
13.500	.750	593650	HS9	R
13.500	.625	1200230	HDS1	R
13.500	.625	**1200231**	HDS2	R
13.500	.625	1200233	HDS1	V
13.500	.625	**1200235**	HDS2	R
		W/ 4 EA .125" LUGS		
13.500	.625	1200239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
13.500	.625	1200280	HDS1	D
13.500	.688	1200220	HDS1	R
		W/4 EA .500 ADJ. LUGS		
13.500	.688	1200240	HDS1	R
13.500	.688	1200241	HDS1	R
		W/4 EA .063 LUGS		
13.500	.688	1200242	HDS1	R
		W/4 EA .125 LUGS		
13.500	.688	**1200243**	HDS2	R
13.500	.688	1200245	HDS1	R
		W/4 EA .375 LUGS		
13.500	.750	1200250	HDS1	R
13.500	.750	1200252	HDS1	R
		W/4 EA .188 LUGS		
13.500	.750	1200254	HDS1	R
		W/8 EA .125 LUGS		
13.500	.750	**1200255**	HDS2	R
13.500	.875	1200920	HDSA1	RD
13.500	.625	1213210	HDS7	R
13.500	.625	1213211	HDS7	R
		W/4 EA .313 LUGS		
13.625	.625	120045	HDS3	D
		W/4 EA .500 ADJ. LUGS		
13.625	.688	1200300	HDS1	D
13.625	.688	1200320	HDS1	R
13.625	.688	1200324	HDS1	R
		W/4 EA .250 LUGS		
13.625	.750	1200330	HDS1	R
13.625	.750	1200338	HDS1	D
13.688	.875	1200340	HDS1	R
13.750	.750	1200380	HDS1	R
13.938	.688	1200500	HDS7	R
13.992	1.750	1200940	HDSD1	RR
14.000	.625	**1200524**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
12.000 SHAFT (Cont.)				
14.000	.625	1200527	HS7	R
14.000	.688	**1200538**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
14.000	.750	**HDL-4071-R**	HDL	R
14.000	.812	**HDL-4072-R**	HDL	R
14.000	.813	1200557	HS7	R
14.000	.813	**1200558**	HS8	R
14.000	.813	**1200559**	HS8	D
14.000	1.000	1200587	HS7	R
14.000	.625	1200518	HDS3	D
	W/4 EA .500 ADJ LUGS & SS CASE			
14.000	.625	1200520	HDS1	R
14.000	.625	1200522	HDS1	R
	W/4 EA .125 LUGS			
14.000	.625	1200523	HDS1	V
14.000	.625	**1200526**	HDS2	R
	W/4 EA .125 LUGS			
14.000	.625	1200529	HDS3	D
	W/4 EA .500 ADJ. LUGS			
14.000	.625	▲**120060**	CRW1	R
14.000	.688	1200530	HDS1	R
14.000	.688	1200533	HDS1	V
14.000	.688	1200535	HDS1	R
	W/4 EA .500 LUGS			
14.000	.750	1200540	HDS1	R
14.000	.750	**1200541**	HDS2	R
14.000	.750	**1200545**	HDS2	R
	W/4 EA .125 LUGS			
14.000	.813	1200550	HDS1	R
14.000	.813	**1200553**	HDS2	R
14.000	.844	1200962	HDSA2	VD
	W/LIGHT SPRING			
14.000	.875	1200560	HDS1	R
14.000	1.000	1200580	HDS1	R
14.000	1.000	**1200585**	HDS2	R
14.000	1.000	1200593	HDS1	V
14.000	1.000	1200955	HDSA2	RD
14.000	1.000	1200958	†HDSB1	RD
14.000	1.250	1200952	HDSB1	RD
14.000	1.250	1200968	HDSD1	RR
14.000	.812	1200521	HDS7	R
14.188	1.000	1200640	HDS1	R
14.250	.875	1200660	HDS1	R
14.250	1.000	1200680	HDS1	R
14.250	1.188	**1200691**	HDS2	R
14.375	1.000	1200730	HDS1	R
14.500	.875	1200760	HDS1	R
14.500	1.000	1200782	HDS1	D
14.750	.875	1200820	HDS1	R
12.050 SHAFT				
13.313	.750	1205144	HDS1	R
12.063 SHAFT				
	.625	85418	LDSLV4	
	FOR SEAL SH SIZE 12.250		(311.15MM)	
	.875	87248	LDSLV4	
	FOR SEAL SH SIZE 12.250		(311.15MM	
	2.500	86404	LDSLV3	
	FOR SEAL SH SIZE 12.250		(311.15MM)	
13.125	.875	1206030	HDS1	R
13.313	.750	1206130	HDS1	R
12.100 SHAFT				
14.000	1.250	594330	HDSB1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
12.125 SHAFT				
13.125	.500	**1212018**	HS8	R
13.375	.625	**1213118**	HS8	R
13.500	.625	1213160	HDS1	R
13.875	.750	1213380	HDS1	R
13.875	.750	**1213382**	HDS2	R
14.000	.855	**1215508**	HS8	R
14.000	1.000	1213490	HDS1	R
14.250	.875	1213620	HDS1	R
12.156 SHAFT				
13.500	.625	1215110	HDS1	R
12.188 SHAFT				
13.438	.625	**1219112**	HDS2	R
13.688	.625	**1218238**	HS8	R
13.688	.625	1219237	HS7	R
13.688	.625	1219230	HDS1	R
12.238 SHAFT				
13.750	.750	**1223312**	HDS2	H
12.250 SHAFT				
13.375	.625	▲**122555**	CRWH1	R
13.500	.625	**1225118**	HS8	R
13.750	.625	1225237	HS7	R
13.750	.625	**1225238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
13.750	.687	**HDL-4613-R**	HDL	R
13.750	.750	**1225125**	HS5	R
13.750	.750	1225257	HS7	R
13.750	.875	**HDL-4614-R**	HDL	R
13.750	.625	1225230	HDS1	R
13.750	.625	**1225232**	HDS2	V
13.750	.625	1225239	HDS3	D
	W/4 EA .500 ADJ. LUGS			
13.750	.688	1225240	HDS1	R
13.750	.688	**1225245**	HDS2	R
	W/4 EA .125 LUGS			
13.750	.688	1225247	HDS1	V
13.750	.688	**1225282**	HDS2	D
13.750	.719	1225241	HDS1	R
13.750	.750	1225250	HDS1	R
13.750	.750	**1225252**	HDS2	R
13.750	.875	1225928	HDSC1	RD
13.750	1.105	1225920	HDSC1	R
13.750	.750	1225259	HDS7	D
13.813	.625	**1225283**	HDS2	V
13.813	.625	▲**122580**	CRW1	R
13.813	.719	1225300	HDS1	R
14.000	.750	1225380	HDS1	R
14.000	.875	1225410	HDS1	R
14.000	.688	1225379	HDS7	R
14.250	.500	**1225518**	HS8	R
14.250	.812	**HDL-4075-R**	HDL	R
14.250	.813	1225557	HS7	R
14.250	.625	**1225532**	HDS2	R
14.250	.640	**1225523**	HDS2	D
14.250	.640	**1225525**	HDS2	R
14.250	.640	1225529	HDS3	D
	W/4 EA .500 ADJ. LUGS			
14.250	.665	**1225495**	HDS2	R
14.250	.665	1225496	HDS1	R
14.250	.719	1225500	HDS1	R
14.250	.750	1225540	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
12.250 SHAFT (Cont.)				
14.250	.750	1225541	HDS1	R
		W/4 EA .125 LUGS		
14.250	.750	**1225542**	†HDS2	R
14.250	.750	**1225543**	HDS2	D
14.250	.750	1225544	HDS1	R
		W/4 EA .250 LUGS		
14.250	.750	**1225545**	HDS2	R
		W/4 EA .250 LUGS		
14.250	.750	**1225573**	HDS2	V
14.250	.813	1225550	HDS1	R
14.250	.813	**1225554**	HDS2	V
14.250	1.000	1225580	HDS1	R
14.250	1.000	**1225582**	HDS2	D
14.250	1.000	**1225583**	HDS2	R
14.250	1.000	▲**122590**	CRWHA1	R
14.250	1.125	1225590	HDS1	R
14.250	1.250	1225588	HDSA2	RD
14.250	1.250	1225600	HDS1	R
14.250	1.250	1225912	HDSE2	RR
		W/8 EA .125 LUBE HOLES on O.D.		
14.250	1.250	1225918	HDSE1	RR
		W/8 EA .125 LUBE HOLES ON O.D.		
14.250	1.250	1225960	HDSA1	RD
14.250	.750	1225549	HDS7	R
14.250	.812	1225370	HDS7	R
14.250	1.250	1225589	HDS7	R
14.500	.875	1225660	HDS1	R
12.283 SHAFT				
13.750	.688	**1228172**	HDS2	D
12.312 SHAFT				
	1.500	90174	LDSLV4	
		FOR SEAL SH SIZE 12.500		
12.313 SHAFT				
	.750	83760	LDSLV4	
		FOR SEAL SH SIZE 12.500	(317.50MM)	
12.373 SHAFT				
13.875	.688	**1238242**	HDS2	D
12.375 SHAFT				
13.875	.625	1238237	HS7	R
13.875	.687	**HDL-4076-R**	HDL	R
13.875	.750	1238257	HS7	R
13.875	.688	1238240	HDS1	R
13.875	.750	1238250	HDS1	R
14.000	.687	**HDL-4056-R**	HDL	R
14.000	.750	1238330	HDS1	R
14.250	.875	1238480	HDS1	R
14.375	1.000	1238580	HDS1	R
14.500	.875	1238620	HDS1	R
14.500	1.000	1238630	HDS1	R
12.400 SHAFT				
		124021	HDDFBV1	R
14.375	1.656	124020	HDDF1	R
12.469 SHAFT				
14.000	.750	1247300	HDS1	R
12.500 SHAFT				
	2.125	86169	LDSLV3	
		FOR SEAL SH SIZE 12.688	(322.28MM)	
12.500 SHAFT (Cont.)				
	2.500	86947	LDSLV4	
		FOR SEAL SH SIZE 12.688	(322.28MM)	
13.500	.500	1250017	HS7	R
13.500	.500	**1250018**	HS8	R
13.500	.500	1250027	HS7	R
13.500	.350	513034	HD1	D
		QUILL WIPER		
13.750	.625	1250117	HS7	R
13.750	.625	**1250118**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
13.750	.625	**1250128**	HS8	H
13.750	.625	1250110	HDS1	R
13.750	.625	1250113	HDS1	V
13.750	.625	**1250115**	HDS2	V
13.750	.625	1250119	HDS3	D
		W/4 EA .500 ADJ. LUGS		
13.750	.750	1250130	HDS1	R
13.750	.906	1250912	HDSA2	RD
13.922	.516	511843	HS9	R
14.000	.500	511705	HS9	R
14.000	.625	**1250238**	HS8	R
14.000	.687	**HDL-4079-R**	HDL	R
14.000	.750	1250257	HS7	R
14.000	.750	**1250258**	HS8	R
14.000	.875	1250272	HDSA2	D
14.000	.625	1250230	HDS1	R
14.000	.688	1250240	HDS1	R
14.000	.688	**1250242**	HDS2	R
14.000	.688	**1250244**	HDS2	R
		W/4 EA .125 LUGS		
14.000	.688	1250249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
14.000	.750	1250250	HDS1	R
14.000	.750	**1250252**	HDS2	R
14.000	.813	1250260	HDS1	R
14.000	.875	1250922	HDSA2	D
14.000	.906	1250924	HDSA2	V
14.000	.688	1250239	HDS7	R
14.000	.906	1250570	HDS1	R
14.250	.875	1250350	HDS1	V
14.250	.875	1250410	HDS1	R
14.500	.812	**HDL-4083-R**	HDL	R
14.500	.813	1250557	HS7	R
14.500	.813	**1250558**	HS8	R
14.500	1.000	**1250578**	HS8	R
14.500	.750	1250540	HDS1	R
14.500	.750	**1250542**	HDS2	R
14.500	.750	1250549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
14.500	.750	**593499**	HDS2	R
14.500	.813	1250550	HDS1	R
14.500	.813	**1250553**	HDS2	R
14.500	.813	**1250554**	HDS2	V
14.500	.813	**1250555**	HDS2	R
		W/4 EA .500 LUGS		
14.500	.875	1250560	HDS1	R
14.500	.875	1250561	HDS1	R
		W/4 EA .125 LUGS		
14.500	.875	**1250564**	HDS2	R
14.500	.875	1250565	HDS1	R
		W/4 EA .375 LUGS		
14.500	.875	1250566	HDS1	R
		W/4 EA .188 LUGS		
14.500	.875	**1250567**	HDS2	R
		W/4 EA .125 LUGS		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
12.500 SHAFT (Cont.)				
14.500	.906	1250574	HDS1	R
		W/4 EA .438 LUGS		
14.500	1.000	1250580	HDS1	R
14.500	1.000	**1250582**	HDS2	R
14.500	1.250	1250950	HDSA1	RD
14.500	1.250	1250952	HDSD1	RR
14.625	1.000	1250630	HDS1	R
14.750	.875	1250660	HDS1	R
14.750	1.000	1250680	HDS1	R
15.000	.813	1250750	HDS1	R
12.563 SHAFT				
14.250	.750	1256330	HDS1	R
12.565 SHAFT				
14.063	.750	1256250	HDS1	R
12.590 SHAFT				
14.125	1.000	1259300	HDS1	R
12.598 SHAFT				
	.980	87434	LDSLV3	
	FOR SEAL SH SIZE 12.786		(324.76MM)	
	.196	**403203**	VR4	R
	SHAFT RANGE 12.598-12.795			
14.492	.750	1259476	HS6	R
12.620 SHAFT				
14.250	.750	1262340	HDS1	R
12.625 SHAFT				
	.310	403252	VR3	R
	SHAFT RANGE 12.200 - 13.190			
	.310	403256	VR3	V
	SHAFT RANGE 12.200 - 13.190			
	.790	**403250**	VR1	R
	SHAFT RANGE 12.200 - 13.190			
	.790	**403254**	VR1	V
	SHAFT RANGE 12.200 - 13.190			
1.063	1.500	596098	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
13.875	.625	1263117	HS7	R
13.875	.625	**1262112**	HDS2	R
14.125	.625	**1263238**	HS8	R
14.125	.750	1263237	HS7	R
14.125	.750	1263250	HDS1	R
14.125	.750	**1263252**	HDS2	D
14.125	1.000	1263290	HDS1	R
14.250	.750	1263330	HDS1	R
14.500	.875	1263480	HDS1	R
14.500	1.000	1263490	HDS1	R
14.625	.875	1263569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
14.625	1.000	1263580	HDS1	R
14.625	1.000	**1263583**	†HDS2	D
14.750	.875	1263620	HDS1	R
15.000	.875	1263710	HDS1	R
12.688 SHAFT				
13.688	.500	**1268018**	HS8	R
14.000	.750	1268130	HDS1	R
14.250	.750	1269290	HDS1	R
14.688	.813	1269557	HS7	R
14.750	1.000	1269600	HDS1	R
15.000	.875	1269700	HDS1	R
15.250	.875	1269800	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
12.688 SHAFT (Cont.)				
16.500	.688	**1269900**	HDS2	R
12.750 SHAFT				
	.688	87513	LDSLV4	
	FOR SEAL SH SIZE 12.938			
	.875	87246	LDSLV4	
	FOR SEAL SH SIZE 12.938		(328.63MM)	
	1.125	82099	LDSLV3	
	FOR SEAL SH SIZE 12.938		(328.63MM)	
	1.500	90143	LDSLV3	
	FOR SEAL SH SIZE 12.938		(328.63MM)	
13.625	.563	**127540**	HMSA7	R
14.250	.625	**1275238**	HS8	R
14.250	.625	**594327**	HS8	V
14.250	.687	**HDL-4089-R**	HDL	R
14.250	.750	1275255	HS7	V
14.250	.750	1275257	HS7	R
14.250	.688	1275240	HDS1	R
14.250	.688	**1275242**	HDS2	R
14.250	.688	**1275243**	HDS2	V
14.250	.688	1275244	HDS1	V
14.250	.688	**1275246**	HDS2	D
		W/4 EA .500 LUGS		
14.250	.688	1275249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
14.250	.688	**1275256**	HDS2	V
		W/4 EA .500 ADJ. LUGS		
14.250	.750	1275250	HDS1	R
14.250	.750	**1275252**	HDS2	R
14.250	.625	1275219	HDS7	H
14.500	.625	**1275368**	HS8	R
14.500	.688	**1275373**	HDS2	V
14.750	.875	1275560	HDS1	R
14.750	.875	1275569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
14.750	1.000	1275580	HDS1	R
14.750	1.000	**1275582**	HDS2	R
14.750	1.250	1275590	HDS1	R
14.750	1.250	1275950	HDSB1	RD
15.000	.875	1275660	HDS1	R
15.250	.688	1275740	HDS1	R
15.250	.875	1275760	HDS1	R
15.500	.875	1275820	HDS1	R
15.750	1.000	**1275892**	HDS2	R
12.795 SHAFT				
14.370	.630	**1279282**	HDS2	D
12.812 SHAFT				
	1.750	86970	LDSLV4	
	FOR SEAL SH SIZE 13.000		(330.20MM)	
12.813 SHAFT				
	1.000	86258	LDSLV4	
	FOR SEAL SH SIZE 13.000		(330.20MM	
	1.375	84263	LDSLV4	
	FOR SEAL SH SIZE 13.000		(330.20MM)	
	1.500	86721	LDSLV4	
	FOR SEAL SH SIZE 13.000		(330.20MM)	
	2.000	84390	LDSLV3	
	FOR SEAL SH SIZE 13.000		(330.20MM)	
	2.500	86722	LDSLV4	
	FOR SEAL SH SIZE 13.000		(330.20MM)	
14.312	.750	1281250	HDS1	R
14.375	.625	1281260	HDS1	V

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
12.875 SHAFT				
14.125	.875	1287912	HDSA2	R
14.375	.625	1288237	HS7	R
14.375	.750	1288257	HS7	R
14.500	.688	**1288322**	HDS2	R
14.750	.875	1288480	HDS1	R
14.750	1.000	1288490	HDS1	R
14.875	1.000	1288580	HDS1	R
15.000	.875	1288620	HDS1	R
15.250	.875	1288710	HDS1	R
15.500	.875	1288800	HDS1	R
12.938 SHAFT				
14.250	.625	**1293098**	HS8	R
12.975 SHAFT				
14.500	.750	**1297218**	HS8	R
13.000 SHAFT				
	1.750	85535	LDSLV4	
FOR SEAL SH SIZE 13.188 (334.98MM)				
.688	1.125	524209	CT1	R
BORE DIA. IS SHOULDER WIDTH				
1.063	1.500	523587	CT1	R
BORE DIA. IS SHOULDER WIDTH				
14.000	.063	451300	BUW	#
14.000	.500	711854	BV	D
14.000	.500	**1300018**	HS8	R
14.000	.500	**1300019**	HS8	D
14.500	.625	1300237	HS7	R
14.500	.687	**HDL-4093-R**	HDL	R
14.500	.750	1300257	HS7	R
14.500	.750	**1300258**	HS8	R
14.500	.750	**1300259**	HS8	D
14.500	.688	1300240	HDS1	R
14.500	.688	1300242	HDS1	R
W/4 EA .125 LUGS				
14.500	.688	1300243	HDS1	R
W/4 EA .375 LUGS				
14.500	.688	**1300244**	HDS2	R
14.500	.688	1300249	HDS3	D
W/4 EA .500 ADJ. LUGS				
14.500	.688	1300254	HDS1	V
14.500	.688	**1300283**	HDS2	V
14.500	.750	1300250	HDS1	R
14.500	.750	1300251	HDS1	D
14.500	.750	**1300252**	HDS2	R
14.500	.750	1300253	HDS1	V
14.500	.875	1300900	HDSA1	RD
14.500	.875	1300901	HDSA2	D
14.500	1.000	1300290	HDS1	R
14.500	1.000	**1300292**	HDS2	R
14.500	1.000	1300920	HDSA1	RD
14.500	1.500	1300921	HDSD2	DD
14.500	.875	1300929	HDSB1	RD
14.606	.703	513509	HS9	R
14.625	.750	1300337	HS7	R
14.625	.750	1300330	HDS1	R
14.734	.703	514635	HS9	R
14.750	.875	1300410	HDS1	R
14.750	1.000	1300420	HDS1	R
14.812	.625	1300444	HDS1	R
14.875	.875	1300480	HDS1	R
15.000	.625	1300527	HS7	R
15.000	.750	**1300548**	HS8	R
15.000	.812	**HDL-4099-R**	HDL	R
13.000 SHAFT (Cont.)				
15.000	.813	1300557	HS7	R
15.000	.813	**1300558**	HS8	R
15.000	.813	**1300568**	HS8	D
15.000	1.000	1300587	HS7	R
15.000	1.000	1300600	HDS7	R
15.000	.750	1300540	HDS1	R
15.000	.750	**1300542**	HDS2	R
15.000	.750	1300549	HDS3	D
W/4 EA .500 ADJ. LUGS				
15.000	.813	1300550	HDS1	R
15.000	.813	**1300552**	HDS2	R
15.000	.813	1300553	HDS1	R
W/4 EA .344 LUGS				
15.000	.875	1300560	HDS1	R
15.000	.875	**1300565**	HDS2	R
W/4 EA .125 LUGS				
15.000	.938	1300570	HDS1	R
15.000	.938	1300573	HDS1	V
15.000	1.000	1300580	HDS1	R
15.000	1.000	**1300582**	HDS2	V
15.000	1.000	**1300585**	HDS2	R
15.000	1.313	1300590	HDSE1	RR
15.375	1.375	1300973	HDSE2	DD
16.000	1.000	1300990	HDSA1	RD
13.063 SHAFT				
	1.125	84963	LDSLV4	
FOR SEAL SH SIZE 13.250 (336.50MM)				
13.125 SHAFT				
.687	.875	596435	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
.688	.875	524381	CT3	R
BORE DIA. IS SHOULDER WIDTH				
14.625	.750	1313257	HS7	R
15.125	.750	**592920**	HS8	R
15.125	.813	1313557	HS7	R
15.125	.875	1313560	HDS1	R
15.250	.875	1313620	HDS1	R
15.500	.875	1313710	HDS1	R
15.750	.875	1313800	HDS1	R
13.187 SHAFT				
14.688	.688	**1318222**	HDS2	R
13.188 SHAFT				
14.188	.500	1319017	HS7	R
14.500	.750	**1318102**	HDS2	R
14.500	1.250	1318920	HDSD2	RR
13.220 SHAFT				
14.407	.625	1322100	HDS1	R
13.250 SHAFT				
14.750	.625	**1325228**	HS8	R
14.750	.625	1325237	HS7	R
14.750	.625	**1325238**	HS8	R
W/HOOK & EYE SPRING CONNECTOR				
14.750	.687	**HDL-4101-R**	HDL	R
14.750	.750	1325257	HS7	R
14.750	.625	1325230	HDS1	R
14.750	.625	**1325232**	HDS2	D
14.750	.625	1325235	HDS1	V
14.750	.625	1325239	HDS3	D
W/4 EA .500 ADJ. LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
13.250 SHAFT (Cont.)				
14.750	.688	1325240	HDS1	R
14.750	.688	**1325242**	HDS2	R
14.750	.688	**1325243**	HDS2	V
14.750	.688	**1325244**	HDS2	R
		W/4 EA .125 LUGS		
14.750	.688	**596517**	†HDS2	R
14.750	.750	1325250	HDS1	R
14.750	.750	**1325252**	HDS2	R
14.750	.906	1325922	HDSA2	D
14.750	.906	1325928	HDSA2	V
14.750	1.000	1325290	HDS1	R
14.875	.687	**HDL-7734-R**	HDL	R
14.875	.688	1325300	HDS1	R
14.875	.750	1325330	HDS1	R
14.875	.750	1325339	HDS3	D
		W/4 EA .500 ADJ. LUGS		
14.875	.938	1325340	HDS1	R
14.875	1.000	1325932	HDSA2	D
15.000	.750	1325380	HDS1	R
15.000	.750	1325389	HDS3	D
		W/4 EA .500 ADJ. LUGS		
15.000	.875	1325410	HDS1	R
15.000	1.000	1325420	HDS1	R
15.000	1.250	1325940	HDSA1	RD
15.125	.875	1325480	HDS1	R
15.250	.813	1325557	HS7	R
15.250	1.000	**1325588**	HS8	R
15.250	.750	1325540	HDS1	R
15.250	.750	1325549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
15.250	.875	1325560	HDS1	R
15.250	1.000	1325580	HDS1	R
15.250	1.000	1325950	HDSA1	RD
15.250	1.125	1325590	HDS1	R
15.250	1.250	1325600	HDS1	R
15.250	1.250	**1325605**	HDS2	R
15.250	1.250	**1325606**	HDS2	D
15.250	.750	1325569	HDS7	R
15.375	1.000	1325630	HDS1	R
15.500	.875	1325660	HDS1	R
15.500	1.000	1325680	HDS1	R
15.750	.875	1325760	HDS1	R
16.000	.875	1325820	HDS1	R
13.313 SHAFT				
	.813	86319	LDSLV4	
		FOR SEAL SH SIZE 13.500		
	.813	86688	LDSLV4	
		FOR SEAL SH SIZE 13.500 (342.90MM)		
	1.500	87463	LDSLV4	
		FOR SEAL SH SIZE 13.500		
	2.000	85852	LDSLV3	
		FOR SEAL SH SIZE 13.500 (342.90MM)		
14.875	.750	1331300	HDS1	R
15.000	1.000	**1331348**	HS8	R
15.000	.750	1331340	HDS1	R
15.250	.875	1331500	HDS1	R
15.375	.875	1331600	HDS1	R
15.438	.875	1331620	HDS1	R
15.500	.875	1331630	HDS1	R
15.500	1.000	1331640	HDS1	R
15.750	.875	1331740	HDS1	R
16.000	.875	1331800	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
13.358 SHAFT				
15.000	.750	1335340	HDS1	R
13.375 SHAFT				
14.375	.500	1338017	HS7	R
14.875	.625	**1338235**	HS5	R
14.875	.625	**1338238**	HS8	R
14.875	.625	**594057**	HS8	R
14.875	.750	1338257	HS7	R
14.875	.750	1338250	HDS1	R
15.000	.750	1338330	HDS1	R
15.250	.875	1338480	HDS1	R
15.375	.813	1338557	HS7	R
15.375	1.000	1338587	HS7	R
15.375	.875	1338560	HDS1	R
15.500	.875	1338620	HDS1	R
15.750	.875	1338710	HDS1	R
15.750	.875	**1337712**	HDS2	R
		WITH 4 EA .252 FIXED LUGS		
16.000	.875	1338800	HDS1	R
13.386 SHAFT				
15.000	.875	1338273	HDSA2	V
15.118	.787	**1338332**	HDS2	R
15.354	1.000	1338577	HS7	R
15.740	.984	1339690	HDS1	R
15.748	1.094	1339680	HDS1	R
13.469 SHAFT				
14.469	.500	1347017	HS7	R
13.500 SHAFT				
14.500	.500	**1350014**	HS8	R
14.500	.500	**1350018**	HS8	R
14.500	.500	**1350028**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
14.750	.625	**1350112**	HDS2	R
14.922	.500	**1350158**	HS8	R
15.000	.625	**1350235**	HS5	D
15.000	.625	1350237	HS7	R
15.000	.625	**1350238**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
15.000	.687	**HDL-4121-R**	HDL	R
15.000	.750	1350257	HS7	R
15.000	.750	**1350258**	HS8	R
15.000	.750	**1350259**	HS8	D
15.000	.625	1350230	HDS1	R
15.000	.625	**1350232**	HDS2	D
		W/4 EA .125 LUGS		
15.000	.625	**1350233**	HDS2	D
15.000	.625	1350239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
15.000	.688	1350240	HDS1	R
15.000	.688	1350245	HDS1	V
15.000	.750	1350250	HDS1	R
15.000	.750	1350251	HDS1	R
		W/4 EA .125 LUGS		
15.000	.750	**1350252**	HDS2	R
15.000	.750	1350253	HDS1	D
15.000	.750	**1350212**	HDS2	V
15.125	.750	1350330	HDS1	R
15.250	.750	1350387	HS7	R
15.250	.750	1350380	HDS1	R
15.250	.875	1350410	HDS1	R
15.312	.625	1350444	HDS1	R
15.375	.875	1350480	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
13.500 SHAFT (Cont.)				
15.438	.875	1350510	HDS1	R
15.500	.625	1350527	HS7	R
15.500	.812	**HDL-4128-R**	HDL	R
15.500	.812	**HDL-4128-V**	HDL	V
15.500	.813	1350557	HS7	R
15.500	.813	**594222**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
15.500	1.000	1350587	HS7	R
15.500	1.375	1350962	HDSD2	R
15.500	.750	1350540	HDS1	R
15.500	.750	**1350542**	HDS2	R
15.500	.750	1350549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
15.500	.813	1350550	HDS1	R
15.500	.813	1350551	HDS1	R
		W/4 EA .375 LUGS		
15.500	.813	**1350552**	HDS2	R
15.500	.813	1350553	HDS1	R
		W/4 EA .375 LUGS		
15.500	.813	**1350554**	HDS2	R
		W/4 EA .125 LUGS		
15.500	.813	1350555	HDS1	V
15.500	.813	**1350564**	HDS2	V
15.500	.875	1350560	HDS1	R
15.500	.875	1350954	HDSA2	RD
15.500	1.000	1350580	HDS1	R
15.500	1.000	1350583	HDS1	V
15.500	1.063	1350590	HDS1	R
		W/4 EA .438 LUGS		
15.500	1.250	1350591	HDS1	R
15.500	1.250	1350953	HDSE1	RR
15.500	1.250	1350970	HDSB1	RD
15.500	1.250	593517	HDSB1	VD
15.500	1.375	1350980	HDSD1	RR
15.500	1.500	1350592	HDS1	R
15.500	.812	1350520	HDS7	R
15.500	1.000	**1350532**	HDS2	R
		WITH SPRING KOVER		
15.750	.875	1350660	HDS1	R
15.752	1.000	1350690	HDS1	R
16.000	.875	1350760	HDS1	R
16.500	1.000	1350750	HDS1	R
17.300	1.000	1350900	HDS1	R
13.520 SHAFT				
15.500	.813	1352480	HDS1	R
13.563 SHAFT				
.688	.875	525029	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
15.063	.750	1356257	HS7	R
13.580 SHAFT				
14.580	.500	1358017	HS7	R
13.625 SHAFT				
15.125	.625	**1363238**	HS8	R
15.500	1.000	1363490	HDS1	R
15.625	.813	1363557	HS7	R
15.625	1.000	1363587	HS7	R
16.125	1.250	1363790	HDS1	R
13.688 SHAFT				
15.188	1.000	1369290	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
13.750 SHAFT				
		137571	HDDFBV1	R
	.310	403502	VR3	R
		SHAFT RANGE 13.190 - 14.370		
	.310	403506	VR3	V
		SHAFT RANGE 13.190 - 14.370		
	.790	**403500**	VR1	R
		SHAFT RANGE 13.190 - 14.370		
	.790	**403504**	VR1	V
		SHAFT RANGE 13.190 - 14.370		
14.750	.500	1375017	HS7	R
14.750	.500	**1375018**	HS8	R
15.000	.625	1375110	HDS1	R
15.000	.750	1375130	HDS1	R
15.000	.750	1375131	HDS1	D
15.000	.750	**1375133**	HDS2	R
		W/4 EA .125 LUGS		
15.250	.625	**1375236**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
15.250	.625	1375237	HS7	R
15.250	.625	**1375238**	HS8	R
15.250	.750	1375257	HS7	R
15.250	.625	1375230	HDS1	R
15.250	.625	1375239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
15.250	.688	**1375224**	HDS2	V
15.250	.688	1375240	HDS1	R
15.250	.688	**1375242**	HDS2	R
15.250	.750	1375250	HDS1	R
15.250	.625	1375719	HDS7	H
15.438	.750	1375340	HDS1	R
15.500	.750	1375380	HDS1	R
15.500	.750	**1375382**	HDS2	R
15.500	.750	1375387	HDS1	V
15.500	.750	**1375388**	HDS2	H
15.500	.875	1375418	HDSA1	VD
15.508	.750	1375430	HDS1	R
15.563	1.000	1375445	HDS1	R
15.750	.625	1375527	HS7	R
15.750	.625	**1375528**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
15.750	.812	**HDL-4129-R**	HDL	R
15.750	.813	1375557	HS7	R
15.750	1.000	**1375588**	HS8	R
15.750	.625	**1375522**	HDS2	R
15.750	.625	1375529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
15.750	.750	1375540	HDS1	R
15.750	.750	1375543	HDS1	V
15.750	.750	**1375544**	HDS2	V
15.750	.813	1375550	HDS1	R
15.750	.813	**1375553**	HDS2	V
15.750	.875	1375560	HDS1	R
15.750	1.000	**1375542**	HDS2	R
15.750	1.000	1375580	HDS1	R
15.817	1.875	137570	HDDF1	R
		O.D. LISTED IS SEAL I.D.		
16.000	.875	1375660	HDS1	R
16.000	1.000	1375680	HDS1	R
16.250	.875	1375760	HDS1	R
16.500	.875	1375820	HDS1	R
13.780 SHAFT				
15.279	.750	1378257	HS7	R
15.708	.787	**1378508**	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
13.813 SHAFT				
	1.000	85074	LDSLV4	
	FOR SEAL SH SIZE 14.000		(355.60MM)	
	1.500	81390	LDSLV3	
	FOR SEAL SH SIZE 14.000		(355.60MM)	
	2.000	85179	LDSLV4	
	FOR SEAL SH SIZE 14.000		(355.60MM)	
1.063	1.500	594110	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
16.000	1.000	1381600	HDS1	R
16.000	1.000	**1381602**	HDS2	R
13.875 SHAFT				
15.125	.875	1387912	HDSA2	RD
15.375	.625	**1387238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
15.375	.750	1388257	HS7	R
15.440	.750	1388300	HDS1	R
15.875	1.000	**1388588**	HS8	R
16.000	1.000	1387610	HDS7	R
16.000	1.000	1388630	HDS1	R
13.938 SHAFT				
15.437	.750	1394257	HS7	R
15.438	.625	1394230	HDS1	R
15.438	.688	1394240	HDS1	R
15.438	.750	1394250	HDS1	R
15.500	.750	1394260	HDS1	R
15.500	.750	**1394262**	HDS2	R
15.744	1.000	1394430	HDS1	R
15.744	1.000	**1394432**	HDS2	R
15.744	1.250	1394942	HDSA2	RD
15.750	.938	1394450	HDS1	R
16.000	.875	1394600	HDS1	R
16.250	.875	1394700	HDS1	R
16.500	.875	1394740	HDS1	R
13.980 SHAFT				
15.500	.625	**1398232**	HDS2	R
14.000 SHAFT				
	1.500	81352	LDSLV3	
	FOR SEAL SH SIZE 14.188		(360.38MM)	
	1.500	86357	LDSLV4	
	FOR SEAL SH SIZE 14.000		(355.60MM)	
	2.000	86153	LDSLV4	
	FOR SEAL SH SIZE 14.188		(360.38MM)	
	2.500	86473	LDSLV4	
	FOR SEAL SH SIZE 14.188		(360.38MM)	
.938	1.375	593037	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
1.063	1.500	530733	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
14.188	1.375	89951	LDSLV3	
	FOR SEAL SH SIZE 14.188			
15.000	.500	1400017	HS7	R
15.000	.500	**1400018**	HS8	R
15.000	.625	**594326**	HS8	V
15.000	.350	514423	HD1	D
	QUILL WIPER			
15.500	.625	1400227	HS7	D
15.500	.625	1400237	HS7	R
15.500	.625	**1400238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
15.500	.687	**HDL-4131-R**	HDL	R
15.500	.750	1400257	HS7	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
14.000 SHAFT (Cont.)				
15.500	.750	**1400258**	HS8	R
15.500	.750	**1400259**	HS8	D
15.500	.875	1400928	HDSC1	RD
15.500	.625	1400230	HDS1	R
15.500	.625	**1400232**	HDS2	R
15.500	.625	**1400233**	HDS2	D
15.500	.625	**1400234**	HDS2	V
15.500	.625	**1400235**	HDS2	R
	W/4 EA .125 LUGS			
15.500	.625	1400239	HDS3	D
	W/4 EA .500 ADJ. LUGS			
15.500	.688	1400240	HDS1	R
15.500	.750	1400250	HDS1	R
15.500	.750	1400253	HDS1	V
15.500	.750	1400254	HDS1	D
	W/4 EA .125 LUGS			
15.500	.750	1400255	HDS1	R
	W/4 EA .188 LUGS			
15.500	.985	1400910	HDSC1	R
15.500	1.000	1400925	HDSA1	RD
15.500	1.500	1400926	HDSD2	DD
15.510	.688	**1400222**	HDS2	D
15.510	.688	1400223	HDS3	D
	W/4 EA .500 ADJ. LUGS			
15.562	.750	1400300	HDS1	R
15.562	.750	**1400303**	HDS2	R
15.562	.750	1400309	HDS3	D
	W/4 EA .500 ADJ. LUGS			
15.625	.625	1400310	HDS1	R
15.625	.625	1400313	HDS1	R
	W/4 EA .125 LUGS			
15.625	.625	1400314	HDS1	V
15.734	.531	511701	HS9	R
15.750	.687	**HDL-5991-R**	HDL	R
15.750	.750	**HDL-4134-R**	HDL	R
15.750	.750	**1400388**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
15.750	.688	1400370	HDS1	R
15.750	.750	1400380	HDS1	R
15.750	.750	**1400382**	HDS2	R
15.750	.750	**1400383**	HDS2	V
15.750	.750	**1400384**	HDS2	R
	W/4 EA .125 LUGS			
15.750	.750	1400389	HDS3	D
	W/4 EA .500 ADJ. LUGS			
15.750	.813	1400390	HDS1	R
15.750	.875	1400410	HDS1	R
15.752	.813	1400430	HDS1	R
16.000	.625	**1400528**	HS8	R
16.000	.625	**1400538**	HS8	R
16.000	.625	**594196**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
16.000	.750	1400548	HS7	R
16.000	.812	**HDL-4135-R**	HDL	R
16.000	.813	1400557	HS7	R
16.000	1.000	**1400578**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
16.000	1.000	1400587	HS7	R
16.000	1.000	**1400588**	HS8	R
16.000	1.000	**1400598**	HS8	R
16.000	1.000	1400958	HDSA1	RD
16.000	.750	1400540	HDS1	R
16.000	.750	1400543	HDS1	V
16.000	.750	**1400545**	HDS2	R
	W/4 EA .125 LUGS			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
14.000 SHAFT (Cont.)				
16.000	.750	1400549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.000	.813	1400550	HDS1	R
16.000	.813	**1400553**	HDS2	R
16.000	.813	1400554	HDS1	V
16.000	.875	1400560	HDS1	R
16.000	1.000	1400580	HDS1	R
16.000	1.000	**1400582**	HDS2	D
16.000	1.000	1400583	HDS1	V
16.000	1.000	**1400585**	HDS2	R
16.000	1.375	1400950	HDSA1	RD
16.000	1.375	1400970	HDSD1	RR
16.000	1.375	1400972	HDSD2	RR
16.250	1.000	1400680	HDS1	R
16.250	1.000	1400683	HDS1	V
16.250	1.000	1400965	HDSA2	RD
16.250	1.000	528307	HDSA2	VD
16.375	1.000	1400730	HDS1	R
16.500	.813	1400750	HDS1	R
16.500	.813	1400753	HDS1	V
16.500	1.000	1400780	HDS1	R
16.625	.625	1400800	HDS1	R
16.750	.930	140080	†HMSA22	D
		P.F. WIDTH .700		
16.750	.968	1400981	†HDSB2	RD
16.875	.750	1400840	HDS1	R
18.000	.750	1400905	HDS1	R
14.013 SHAFT				
15.513	.750	1401257	HS7	R
14.016 SHAFT				
15.500	.688	**1402170**	HDS2	D
14.063 SHAFT				
16.063	.813	1406557	HS7	R
14.125 SHAFT				
15.625	.750	1413257	HS7	R
16.712	.875	**1413762**	HDS2	D
16.745	.875	**1413805**	HDS2	D
16.745	1.703	1413975	HDSD2	DD
14.173 SHAFT				
	1.000	87445	LDSLV4	
	FOR SEAL SH SIZE 14.361		(364.77MM)	
	.196	**403603**	VR4	R
	SHAFT RANGE 14.173-14.370			
15.354	.625	1417047	HS7	R
15.433	.787	**1417102**	HDS2	D
15.673	.750	1417257	HS7	R
15.673	.750	**1417258**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
16.712	.875	**1417760**	HDS2	D
16.712	1.703	1417973	HDSD2	DD
16.734	.844	1417740	HDS1	R
16.734	.844	1417743	HDS1	R
		W/6 EA .063 LUGS		
14.188 SHAFT				
15.438	.625	**1418118**	HS8	R
15.500	.688	1418120	HDS1	D
15.500	.688	1419140	HDS1	R
15.750	.750	1419300	HDS1	R
16.000	.875	1419440	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
14.188 SHAFT (Cont.)				
16.188	.813	1419557	HS7	R
16.188	.813	1419550	HDS1	R
16.250	.875	1419600	HDS1	R
16.500	.875	1419700	HDS1	R
16.742	.875	1419790	HDS1	R
16.750	.875	1419800	HDS1	R
14.250 SHAFT				
15.750	.687	**HDL-4118-R**	HDL	R
15.750	.750	1425257	HS7	R
15.750	.750	**1425258**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
15.750	.750	1425250	HDS1	R
15.750	.750	**1425252**	HDS2	R
15.750	1.000	1425920	HDSA1	RD
16.000	.875	1425410	HDS1	R
16.250	.812	**HDL-4140-R**	HDL	R
16.250	.813	1425557	HS7	R
16.250	.813	**1425558**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
16.250	1.000	1425587	HS7	R
16.250	.625	1425520	HDS1	R
16.250	.813	1425550	HDS1	R
16.250	.813	**1425552**	HDS2	R
16.250	.813	1425559	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.250	.875	1425560	HDS1	R
16.250	1.000	1425580	HDS1	R
16.250	1.000	**1425585**	HDS2	R
16.250	1.000	1425950	HDSB1	RD
16.500	.875	1425660	HDS1	R
16.750	.875	1425760	HDS1	R
17.000	.875	1425820	HDS1	R
14.312 SHAFT				
	1.000	90334	LDSLV4	
		FOR SEAL SH SIZE 14.500		
14.313 SHAFT				
	1.375	87580	LDSLV4	
		FOR SEAL SH SIZE 14.500		
	1.500	86429	LDSLV4	
	FOR SEAL SH SIZE 14.500		(368.30MM)	
	2.000	84661	LDSLV3	
	FOR SEAL SH SIZE 14.500		(368.30MM)	
14.325 SHAFT				
16.000	.688	**1432343**	HDS2	D
14.361 SHAFT				
15.748	.709	595175	HS4	R
14.370 SHAFT				
15.938	.709	1437240	HDS1	R
14.375 SHAFT				
15.875	.750	**1438215**	HS8	V
15.875	.750	**1438258**	HS8	R
15.875	.750	1438250	HDS1	R
16.000	.688	1438320	HDS1	R
16.000	.688	**1438321**	HDS2	D
16.000	.688	**1438322**	HDS2	R
16.000	.688	**1438323**	HDS2	R
		W/4 EA .125 LUGS		
16.000	.688	**1438324**	HDS2	D
		W/4 EA .125 LUGS		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
14.375 SHAFT (Cont.)				
16.000	.688	1438329	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.375	.750	1438547	HS7	R
14.400 SHAFT				
15.587	.875	1440901	HDSB1	RD
14.438 SHAFT				
	2.500	86403	LDSLV3	
	FOR SEAL SH SIZE 14.625		(371.48MM)	
15.938	.625	1444230	HDS1	R
14.500 SHAFT				
	1.000	85914	LDSLV4	
	FOR SEAL SH SIZE 14.688		(373.08MM)	
15.500	.500	**1450018**	HS8	R
15.500	.625	1450027	HS7	R
15.750	.750	1450140	†HDS1	R
15.906	.770	**593624**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
15.984	.688	**1450212**	HDS2	R
15.984	.688	**1450214**	HDS2	R
		W/4 EA .125 LUGS		
16.000	.625	**1450228**	HS8	V
		W/HOOK & EYE SPRING CONNECTOR		
16.000	.687	**HDL-4142-R**	HDL	R
16.000	.750	1450257	HS7	R
16.000	.870	1450922	HDSC2	DD
16.000	.625	1450230	HDS1	V
16.000	.688	1450240	HDS1	R
16.000	.688	1450241	HDS1	R
		W/4 EA .125 LUGS		
16.000	.688	**1450242**	HDS2	R
16.000	.688	**1450244**	HDS2	R
		W/4 EA .125 LUGS		
16.000	.688	1450249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.000	.688	1450757	HDS1	V
16.000	.750	1450250	†HDS1	R
		W/BORE-TITE		
16.000	.750	**1450252**	HDS2	R
16.000	.750	1450253	HDS1	D
16.000	1.000	1450290	HDS1	R
16.000	.688	1450220	HDS7	R
16.250	.625	1450360	HDS1	R
16.250	.750	1450380	HDS1	R
16.250	.813	1450390	HDS1	R
16.250	.875	1450410	HDS1	R
16.250	1.000	1450420	HDS1	R
16.500	.812	**HDL-4145-R**	HDL	R
16.500	.813	1450557	HS7	R
16.500	.750	1450540	HDS1	R
16.500	.750	**1450542**	HDS2	R
16.500	.750	1450549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.500	.813	1450550	HDS1	R
16.500	.813	**1450553**	HDS2	D
16.500	.938	1450570	HDS1	R
16.500	1.000	1450580	HDS1	R
16.500	1.000	1450583	HDS1	V
16.500	1.750	1450951	HDSE1	RR
16.500	.813	1450559	HDS7	R
16.750	.875	1450660	HDS1	R
17.000	.875	1450760	HDS1	R
18.250	.875	1450900	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
14.563 SHAFT				
16.000	.625	1456200	HDS1	R
14.593 SHAFT				
17.000	.875	**1459743**	HDS2	R
14.625 SHAFT				
15.625	.500	**1462018**	HS8	R
16.125	.750	1463257	HS7	R
16.125	.750	1463250	HDS1	R
16.125	.750	**1463252**	HDS2	R
16.133	.500	**1462208**	HS8	R
16.133	1.250	1462912	HDSE2	RR
		W/8 EA .125 LUBE HOLES on O.D.		
16.133	1.250	1462918	HDSE1	RR
		W/8 EA .125 LUBE HOLES ON O.D.		
16.250	.750	1462330	HDS1	V
16.250	.750	1463330	HDS1	R
16.500	.875	1463480	HDS1	R
16.625	.875	**1463565**	HDS2	R
16.742	1.000	1463600	HDS1	R
16.750	1.000	1463630	HDS1	R
17.000	.875	1463710	HDS1	R
17.250	.875	1463800	HDS1	R
14.688 SHAFT				
16.000	.688	**1468129**	HDS2	D
16.188	.750	1469257	HS7	R
16.188	.625	1469230	HDS1	R
16.688	.813	1469557	HS7	R
14.750 SHAFT				
16.108	.703	515883	HS9	R
16.250	.625	**1475228**	HS8	V
16.250	.625	1475237	HS7	R
16.250	.625	**1475238**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
16.250	.687	**HDL-4147-R**	HDL	R
16.250	.750	**1475218**	HS8	V
		W/HOOK & EYE SPRING CONNECTOR		
16.250	.750	1475257	HS7	R
16.250	.750	**1475258**	HS8	R
16.250	.625	1475230	HDS1	R
16.250	.625	1475232	HDS1	R
		W/4 EA .125 LUGS		
16.250	.625	1475239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.250	.688	1475240	HDS1	R
16.250	.688	1475242	HDS1	R
		W/4 EA .125 LUGS		
16.250	.688	**1475243**	HDS2	D
16.250	.688	**1475245**	HDS2	D
		W/4 EA .313 LUGS		
16.250	.750	1475250	HDS1	R
16.250	.750	**1475252**	HDS2	R
16.250	.750	**1475253**	HDS2	V
16.250	.688	1475244	HDS1	V
		W/4 EA .125 LUGS		
16.252	.750	**1475302**	HDS2	R
16.500	.687	**HDL-5990-R**	HDL	R
16.500	.688	1475377	HS7	R
16.500	.688	**1475378**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
16.500	.688	1475370	HDS1	R
16.500	.688	1475371	HDS1	R
		W/4 EA .375 LUGS		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
14.750 SHAFT (Cont.)				
16.500	.688	**1475372**	HDS2	R
16.500	.688	**1475374**	HDS2	R
		W/4 EA .375 LUGS		
16.500	.688	1475379	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.500	.688	**1475383**	HDS2	V
16.500	.875	1475410	HDS1	R
16.500	.875	**1475411**	HDS2	R
16.500	1.000	1475420	HDS1	R
16.500	1.250	1475942	HDSD2	RR
16.500	.688	1475430	HDS7	R
16.750	.813	1475557	HS7	R
16.750	.875	1475560	HDS1	R
16.750	.875	1475561	HDS1	R
		W/4 EA .125 LUGS		
17.000	.875	1475660	HDS1	R
17.250	.875	1475760	HDS1	R
17.500	.875	1475820	HDS1	R
14.764 SHAFT				
	.196	**403753**	VR4	R
		SHAFT RANGE 14.764-14.961		
14.813 SHAFT				
	1.500	87723	LDSLV4	
		FOR SEAL SH SIZE 15.000		
	2.125	81391	LDSLV3	
		FOR SEAL SH SIZE 15.000	(381.00MM)	
14.875 SHAFT				
	.310	403752	VR3	R
		SHAFT RANGE 14.370 - 15.150		
	.310	403756	VR3	V
		SHAFT RANGE 14.370 - 15.150		
	.790	**403750**	VR1	R
		SHAFT RANGE 14.370 - 15.350		
	.790	**403754**	VR1	V
		SHAFT RANGE 14.370 - 15.350		
16.375	.750	1488257	HS7	R
16.375	.750	**1488252**	HDS2	R
16.500	.687	**HDL-3858-R**	HDL	R
16.500	.750	1488330	HDS1	R
16.500	.750	**1488332**	HDS2	R
16.500	1.250	1488935	HDSD2	RR
16.500	.750	1487337	HDS1	V
16.750	.875	1488480	HDS1	R
16.875	.813	1488557	HS7	R
16.875	1.000	1488587	HS7	R
16.875	.875	1488560	HDS1	R
16.875	1.000	1488580	HDS1	R
17.000	.875	1488620	HDS1	R
17.250	.875	1488710	HDS1	R
17.500	.875	1488800	HDS1	R
14.906 SHAFT				
17.000	.875	1491600	HDS1	R
17.000	.875	**1491603**	HDS2	R
14.938 SHAFT				
16.438	.750	1494257	HS7	R
15.000 SHAFT				
	1.000	87247	LDSLV4	
		FOR SEAL SH SIZE 15.188	(385.78MM)	

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
15.000 SHAFT (Cont.)				
.688	1.125	594025	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
16.000	.500	1500017	HS7	R
16.000	.500	**1500018**	HS8	R
16.000	.350	511201	HD1	D
		QUILL WIPER		
16.000	.350	594740	HD1	D
		QUILL WIPER		
16.188	1.250	1500902	HDSE2	RR
16.420	.500	1500157	HS7	R
16.500	.687	**HDL-4151-R**	HDL	R
16.500	.734	511156	HS9	R
16.500	.750	**HDL-3067-R**	HDL	R
16.500	.750	1500257	HS7	R
16.500	.750	**1500258**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
16.500	.688	1500240	HDS1	R
16.500	.688	**1500243**	HDS2	V
16.500	.688	**1500244**	HDS2	D
16.500	.688	**1500245**	HDS2	R
16.500	.688	1500248	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.500	.688	1500249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.500	.688	**1500283**	HDS2	V
16.500	.750	**1500222**	HDS2	R
16.500	.750	1500250	HDS1	R
16.500	.750	1500252	HDS1	D
16.500	.750	1500253	HDS1	V
16.500	.750	**1500254**	HDS2	V
16.500	1.000	1500290	HDS1	R
16.500	1.000	**1500292**	HDS2	R
16.500	1.250	1500920	HDSD1	RR
16.500	1.250	593315	HDSD1	VV
16.750	.750	1500380	HDS1	R
16.750	.750	1500383	HDS1	V
16.750	.875	1500410	HDS1	R
16.750	1.125	**1500432**	HDS2	R
16.875	.750	1500470	HDS1	R
16.875	.875	1500480	HDS1	R
17.000	.625	**1500528**	HS8	R
17.000	.625	**594197**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
17.000	.812	**HDL-4156-R**	HDL	R
17.000	.813	1500557	HS7	R
17.000	.813	**1500558**	HS8	R
17.000	.875	**1500568**	HS8	R
17.000	.750	1500540	HDS1	R
17.000	.750	**1500542**	HDS2	D
17.000	.750	**1500543**	HDS2	R
17.000	.750	1500549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
17.000	.813	1500550	HDS1	R
17.000	.813	**1500552**	HDS2	R
17.000	.813	**1500553**	HDS2	V
17.000	.813	1500555	HDS1	R
		W/4 EA .125 LUGS		
17.000	.813	1500556	HDS1	R
		W/4 EA .063 LUGS		
17.000	.875	1500560	HDS1	R
17.000	.875	**1500563**	HDS2	R
17.000	.875	1500564	HDS1	V
17.000	.875	1500951	HDSA1	RD
17.000	.875	1500956	HDSC1	RD
		W/4 EA .125 LUGS		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
15.000 SHAFT (Cont.)				
17.000	1.000	1500580	HDS1	R
17.000	1.250	1500590	HDS1	R
17.000	1.250	1500950	HDSA1	RD
17.000	.812	1500510	HDS7	R
17.000	1.000	**1500522**	HDS2	R
		WITH SPRING KOVER		
17.250	.875	1500660	HDS1	R
17.250	1.000	1500680	HDS1	R
17.375	1.750	1500972	HDSD1	RR
17.500	.875	1500760	HDS1	R
17.500	.938	1500770	HDS1	R
17.500	.938	**1500772**	HDS2	R
17.500	.938	1500774	HDS1	R
		W/4 EA .125 LUGS		
17.500	.938	1500779	HDS3	D
		W/4 EA .500 ADJ. LUGS		
17.500	1.000	1500780	HDS1	R
17.500	1.000	1500973	HDSA1	RD
17.500	1.125	1500790	HDS1	R
17.500	1.250	1500800	HDS1	R
17.500	1.250	1500974	HDSE2	RR
17.750	.875	1500820	HDS1	R
17.750	.875	**1500822**	HDS2	R
15.062 SHAFT				
	.750	90272	LDSLV4	
		FOR SEAL SH SIZE 15.250		
15.066 SHAFT				
	1.000	87871	LDSLV3	
		FOR SEAL SH SIZE 15.254		
15.125 SHAFT				
16.375	.875	1512912	HDSA2	RD
16.750	.750	1513330	HDS1	R
15.188 SHAFT				
	2.500	87569	LDSLV4	
		FOR SEAL SH SIZE 15.375		
16.500	.625	1519110	HDS1	R
17.000	.625	**1518448**	HS8	R
15.250 SHAFT				
	.750	84964	LDSLV3	
		FOR SEAL SH SIZE 15.438 (392.13MM)		
.688	1.125	594250	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.688	1.125	594954	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
16.625	.500	**1525158**	HS8	R
16.625	.593	**1525168**	HS8	R
16.625	.625	**1525162**	HS8	R
16.750	.687	**HDL-4615-R**	HDL	R
16.750	.734	514649	HS9	R
16.750	.750	1525257	HS7	R
16.750	.875	**1525278**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
16.750	.688	1525228	HDS1	H
16.750	.688	1525240	HDS1	R
16.750	.688	1525241	HDS1	R
		W/4 EA .375 LUGS		
16.750	.688	**1525242**	HDS2	R
16.750	.688	1525249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
16.750	.750	1525250	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
15.250 SHAFT (Cont.)				
16.750	.750	**1525252**	HDS2	R
16.750	.750	**1525253**	HDS2	V
16.752	.688	**1525302**	HDS2	R
16.754	.750	1525220	HDS1	R
17.000	.750	1525380	HDS1	R
17.000	.875	1525410	HDS1	R
17.250	.812	**HDL-4476-R**	HDL	R
17.250	.813	1525557	HS7	R
17.250	.875	**HDL-3030-R**	HDL	R
17.250	.625	**1525525**	HDS2	R
		W/4 EA .500 ADJ. LUGS		
17.250	.750	1525540	HDS1	R
17.250	.750	**1525542**	HDS2	R
17.250	.750	1525549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
17.250	.813	1525550	HDS1	R
17.250	.813	**1525554**	HDS2	R
17.250	.875	1525560	HDS1	R
17.250	.875	1525562	HDS1	R
		W/4 EA .250 LUGS		
17.250	1.000	1525580	HDS1	R
17.250	1.125	1525590	HDS1	R
17.250	1.500	1525952	HDSD2	RR
17.250	.625	1525511	HDS7	R
17.500	.875	1525660	HDS1	R
17.750	.750	1525740	HDS1	R
17.750	.875	1525760	HDS1	R
18.000	.875	1525820	HDS1	R
15.312 SHAFT				
17.312	.687	**HDL-5992-R**	HDL	R
17.312	.688	**1531532**	HDS2	V
15.313 SHAFT				
.688	.875	593526	CT3	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
.688	.875	524382	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
.750	.938	524383	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
.750	.938	594653	CT3	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
16.875	.688	1531300	HDS1	R
16.875	.750	1531310	HDS1	R
17.000	.750	1531400	HDS1	R
17.250	.875	1531500	HDS1	R
17.313	.813	592865	HDSA2	RD
17.313	.688	1531530	HDS1	R
17.313	.688	1531534	HDS1	R
		W/4 EA .125 LUGS		
17.313	.688	1531537	HDS1	V
17.313	.750	1531540	HDS1	R
17.313	.750	1531541	HDS1	R
		W/4 EA .125 LUGS		
17.313	.813	1531550	HDS1	R
17.313	.875	1531950	HDSA1	RD
17.500	.875	1531640	HDS1	R
17.750	.875	1531740	HDS1	R
18.000	.875	1531800	HDS1	R
15.335 SHAFT				
18.875	.875	1534900	HDS1	R
15.344 SHAFT				
16.875	.750	**1534258**	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
15.350 SHAFT				
16.850	.750	1535257	HS7	R
15.354 SHAFT				
	.196	**403903**	VR4	R
		SHAFT RANGE 15.354-15.551		
15.359 SHAFT				
17.709	.906	1536690	HDS1	R
17.709	.906	1536691	HDS7	R
15.375 SHAFT				
16.625	.875	1537142	HDSA2	R
16.875	.750	1538257	HS7	R
17.250	.750	1538470	HDS1	R
17.375	.813	1538557	HS7	R
17.375	1.000	1538587	HS7	R
17.375	.688	1538530	HDS1	R
17.375	.750	1538540	HDS1	R
17.375	.813	1538550	HDS1	R
17.375	.813	**1538552**	HDS2	R
17.375	.813	**1538554**	HDS2	R
		W/4 EA .375 LUGS		
17.375	1.000	1538580	HDS1	R
17.375	1.000	1538581	HDS1	R
		W/4 EA .125 LUGS		
17.500	1.000	1538630	HDS1	R
17.728	.875	1538700	HDS1	R
17.750	.875	1538710	HDS1	R
15.438 SHAFT				
16.938	.750	**1544219**	HS8	D
15.472 SHAFT				
17.502	.709	1547530	HDS1	R
15.500 SHAFT				
.688	.875	594432	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
16.500	.500	**1550018**	HS8	R
16.500	.500	**1550028**	HS8	D
16.750	.750	1550137	HS7	R
16.750	.750	1550130	HDS1	R
16.875	.625	**1550458**	HS8	R
16.875	.625	1550160	HDS1	R
16.875	.625	**1550162**	HDS2	R
16.875	.625	**1550163**	HDS2	V
16.875	.625	1550169	HDS3	D
		W/4 EA .500 ADJ. LUGS		
17.000	.750	1550257	HS7	R
17.000	.750	**1550258**	HS8	R
17.000	.750	1550250	HDS1	R
17.000	.750	1550252	HDS1	R
		W/4 EA .125 LUGS		
17.000	.750	1550253	HDS1	V
		W/8 EA .375 LUGS		
17.000	.750	1550254	HDS1	V
		W/4 EA .188 LUGS		
17.000	.750	**1550255**	HDS2	R
		W/4 EA .125 LUGS		
17.000	.750	**1550283**	HDS2	V
		W/4 EA .188 LUGS		
17.000	1.000	1550290	HDS1	R
17.000	1.000	**1550292**	HDS2	R
17.000	1.375	1550920	HDSD1	RR
17.000	.750	**1550284**	HDS2	V

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
15.500 SHAFT (Cont.)				
17.375	.813	**1550488**	HS8	R
17.496	.812	**HDL-4163-R**	HDL	R
17.496	.812	**HDL-4163-V**	HDL	V
17.500	.813	1550557	HS7	R
17.500	1.000	**1550528**	HS8	R
17.500	1.000	1550587	HS7	R
17.500	.688	1550530	HDS1	R
17.500	.750	1550540	HDS1	R
17.500	.750	1550541	HDS1	R
		W/4 EA .125 LUGS		
17.500	.750	**1550542**	HDS2	R
17.500	.750	**1550543**	HDS2	V
17.500	.750	1550549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
17.500	.813	**1550544**	HDS2	V
17.500	.813	1550550	HDS1	R
17.500	.813	1550552	HDS1	R
		W/4 EA .375 LUGS		
17.500	.813	**1550553**	HDS2	R
17.500	.813	1550554	HDS1	V
17.500	.813	**1550555**	HDS2	R
		W/4 EA .125 LUGS		
17.500	.813	**1550558**	HDS2	D
17.500	.813	**1550575**	HDS2	R
		W/4 EA .375 LUGS		
17.500	.875	1550560	HDS1	R
17.500	.950	1550570	HDS1	R
17.500	1.000	1550580	HDS1	R
17.500	1.031	529858	HDSA2	VD
17.500	.813	1550551	HDS7	R
		W/4 EA .250 LUGS		
17.500	.813	1550559	HDS7	R
17.500	.813	**1550565**	HDS2	R
		W/4 EA .250 LUGS		
17.550	1.000	1550600	HDS1	R
17.750	.875	1550660	HDS1	R
17.750	1.000	1550680	HDS1	R
18.000	.875	1550760	HDS1	R
18.000	1.000	1550780	HDS1	R
18.000	1.000	**1550782**	HDS2	R
18.000	1.000	1550789	HDS3	D
		W/4 EA .500 ADJ. LUGS		
18.000	1.000	**1550792**	HDS2	D
15.515 SHAFT				
17.515	.813	**1551568**	HS8	R
15.560 SHAFT				
	.906	85582	LDSLV4	
		FOR SEAL SH SIZE 15.750	(400.00MM)	
15.563 SHAFT				
16.929	.709	1556190	HDS1	R
17.625	.875	1556560	HDS1	R
15.604 SHAFT				
16.974	.625	1560146	HDS1	R
15.625 SHAFT				
16.875	1.250	1562118	HDSD2	D
17.125	.750	1563257	HS7	R
17.125	.750	1563250	HDS1	R
17.500	.875	1563480	HDS1	R
17.625	1.000	**1563588**	HS8	R
17.625	.875	1563560	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
15.625 SHAFT (Cont.)				
17.727	.875	1563600	HDS1	R
17.750	.875	1563620	HDS1	R
18.000	.875	1563710	HDS1	R
15.740 SHAFT				
17.250	.688	1574240	HDS1	R
17.250	.688	**1574243**	HDS2	D
17.250	.688	**1574245**	HDS2	R
15.748 SHAFT				
	.196	**404003**	VR4	R
	SHAFT RANGE 15.748-15.945			
17.717	.890	1574443	HS4	R
18.110	.984	**1574722**	HDS2	R
15.750 SHAFT				
17.000	.625	1575110	HDS1	R
17.165	.687	**HDL-9986-R**	HDL	R
17.250	.685	**1575248**	HS8	R
17.250	.687	**HDL-4170-R**	HDL	R
17.250	.750	1575257	HS7	R
17.250	.688	1575240	HDS1	R
17.250	.688	1575242	HDS1	R
	W/4 EA .250 LUGS			
17.250	.688	**1575243**	HDS2	D
17.250	.688	1575244	HDS1	V
17.250	.688	**1575245**	HDS2	R
17.250	.688	**1575246**	HDS2	R
	W/4 EA .250 LUGS			
17.250	.688	1575249	HDS3	D
	W/4 EA .500 ADJ. LUGS			
17.250	.688	**1575283**	HDS2	V
17.250	.750	1575252	HDS1	R
	W/4 EA .188 LUGS			
17.250	.750	**1575253**	HDS2	R
17.250	.787	**1575254**	HDS2	R
17.250	.750	1575210	HDS7	H
17.500	.688	1575370	HDS1	R
17.500	.688	1575377	HDS1	V
17.750	.687	**HDL-6874-R**	HDL	R
17.750	1.000	1575587	HS7	R
17.750	.688	**1575532**	HDS2	R
17.750	.875	1575560	HDS1	R
17.750	1.000	1575580	HDS1	R
17.750	1.250	1575910	HDSA1	RD
17.875	.875	1575620	HDS1	R
18.000	.875	1575660	HDS1	R
18.000	1.000	1575680	HDS1	R
18.250	.875	1575760	HDS1	R
18.500	.875	1575820	HDS1	R
18.625	.875	1575843	HDS1	V
18.625	.875	1575870	HDS1	R
15.785 SHAFT				
17.785	.813	1579557	HS7	R
15.812 SHAFT				
	2.500	87634	LDSLV3	
	FOR SEAL SHAFT SIZE 16.000			
15.813 SHAFT				
	2.000	85181	LDSLV4	
	FOR SEAL SH SIZE 16.000		(406.40MM)	
	2.000	87446	LDSLV3	
	FOR SEAL SH SIZE 16.000		(406.40MM	

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
15.813 SHAFT (Cont.)				
	2.500	86407	LDSLV4	
	FOR SEAL SH SIZE 16.000			
	2.500	87813	LDSLV3	
	FOR SEAL SH SIZE 16.000			
17.312	.813	1581200	HDS1	R
15.820 SHAFT				
17.500	.688	1582800	HDS1	R
15.875 SHAFT				
17.375	.750	1588257	HS7	R
17.500	.750	1587331	HDS7	R
17.500	.750	**1588332**	HDS2	D
17.500	.750	1587330	HDS7	H
17.750	.875	1588480	HDS1	R
17.875	.813	1588550	HDS1	R
17.875	.813	**1588552**	HDS2	R
17.875	.875	1588560	HDS1	R
17.875	.875	1588563	HDS1	R
18.000	.916	**1587638**	HS8	R
18.000	.875	1588620	HDS1	R
15.938 SHAFT				
17.313	.625	1594160	HDS1	R
17.313	.625	1594161	HDS1	R
	W/4 EA .125 LUGS			
17.313	.625	1594162	HDS1	R
	W/4 EA .063 LUGS			
15.998 SHAFT				
	2.250	85908	LDSLV3	
	FOR SEAL SH SIZE 16.188		(411.18MM)	
16.000 SHAFT				
	2.000	81354	LDSLV3	
	FOR SEAL SH SIZE 16.188		(411.18MM)	
	2.000	85900	LDSLV4	
	FOR SEAL SH SIZE 16.188		(411.18MM)	
	.310	404002	VR3	R
	SHAFT RANGE 15.150 - 16.730			
	.310	404006	VR3	V
	SHAFT RANGE 15.150 - 16.930			
	.790	**404000**	VR1	R
	SHAFT RANGE 15.350 - 16.930			
	.790	**404004**	VR1	V
	SHAFT RANGE 15.350 - 16.930			
.688	.875	529760	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
17.000	.500	1600014	HS4	R
17.000	.500	1600017	HS7	R
17.000	.500	**1600018**	HS8	R
17.000	.500	**1600019**	HS8	D
17.000	.500	**595873**	HS5	D
17.000	.350	511202	HD1	D
		QUILL WIPER		
17.500	.625	**1600234**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
17.500	.625	**1600238**	HS8	R
17.500	.687	**HDL-4177-R**	HDL	R
17.500	.687	HDLA-4177-R	HDLA	R
17.500	.734	510871	HS9	R
17.500	.750	1600256	HS6	D
17.500	.750	1600257	HS7	R
17.500	.750	**1600258**	HS8	R
17.500	.750	**1600259**	HS8	D

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
16.000 SHAFT (Cont.)				
17.500	.750	**1600288**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
17.500	.688	1600240	HDS1	R
17.500	.688	1600241	HDS1	R
	W/4 EA .063 LUGS			
17.500	.688	**1600242**	HDS2	R
17.500	.688	1600243	HDS1	R
	W/4 EA .375 LUGS			
17.500	.688	**1600244**	HDS2	D
17.500	.688	**1600245**	HDS2	R
	W/4 EA .063 LUGS			
17.500	.688	1600249	HDS3	D
	W/4 EA .500 ADJ. LUGS			
17.500	.688	1600283	HDS1	V
17.500	.750	1600250	HDS1	R
17.500	.750	**1600255**	HDS2	R
17.500	.875	1600926	HDSA2	RD
	W/4 EA .063 LUGS			
17.500	1.000	1600290	HDS1	R
17.500	1.000	1600293	HDS1	V
17.500	1.250	1600924	HDSE1	RR
17.500	1.250	1600925	HDSE2	RR
17.500	.625	1600211	HDS7	H
17.625	.750	1600330	HDS1	R
17.625	1.000	1600340	HDS1	R
17.625	1.000	**1600342**	HDS2	R
17.996	.813	1600545	HDS1	R
17.996	.813	1600546	HDS1	R
	W/4 EA .125 LUGS			
18.000	.750	**1600578**	HS8	R
18.000	.812	**HDL-4180-R**	HDL	R
18.000	.813	1600557	HS7	R
18.000	.813	**1600558**	HS8	R
18.000	.813	1600577	HS7	V
18.000	.938	1600567	HS7	R
18.000	1.000	1600587	HS7	R
18.000	.750	1600544	HDS3	D
	W/4 EA .500 ADJ. LUGS			
18.000	.750	1600548	HDS1	R
18.000	.750	**1600549**	HDS2	R
18.000	.813	1600550	HDS1	R
18.000	.813	1600551	HDS1	R
	W/4 EA .125 LUGS			
18.000	.813	1600552	HDS1	R
	W/4 EA .250 LUGS			
18.000	.813	1600553	HDS1	R
	W/4 EA .500 LUGS			
18.000	.813	1600554	HDS1	R
	W/4 EA .188 LUGS			
18.000	.813	**1600555**	HDS2	R
18.000	.813	**1600556**	HDS2	R
	W/4 EA .250 LUGS			
18.000	.813	**1600559**	HDS2	D
18.000	.813	**1600574**	HDS2	V
18.000	.875	1600560	HDS1	R
18.000	.875	1600951	HDSA1	RD
18.000	.938	1600570	HDS1	R
18.000	.938	**1600572**	HDS2	R
18.000	.938	**1600575**	HDS2	R
	W/4 EA .250 LUGS			
18.000	1.000	1600580	HDS1	R
18.000	1.000	1600583	HDS1	V
18.000	1.000	**1600584**	HDS2	V
18.000	1.000	**1600585**	HDS2	R
18.000	1.000	1600955	HDSA2	RD

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
16.000 SHAFT (Cont.)				
18.000	1.125	1600940	HDSB1	RD
18.000	1.125	1600941	HDSA1	RD
18.000	1.250	1600950	HDSA1	RD
18.000	1.250	1600958	HDSE1	HH
18.000	1.750	1600954	HDSE1	RR
	W/LUBE HOLES ON O.D.			
18.000	.812	1600561	HDS7	R
	W/4 EA .125 LUGS			
18.000	.813	1600519	HDS7	H
18.000	.813	1600520	HDS7	H
	W/4 EA .250 LUGS			
18.000	1.250	1600963	HDSE1	DD
	W/LUBE HOLES ON O.D.			
18.000	.813	**1600500**	HDS4	R
	W/8 EA .500 MOLDED ADJ. LUGS			
18.000	.813	1600505	HDS6	R
	W/8 EA .500 MOLDED ADJ. LUGS			
18.125	.875	1600620	HDS1	R
18.125	.875	1600623 †	HDS1	V
18.250	.750	1600650	HDS1	R
18.250	.875	1600660	HDS1	R
18.311	1.000	1600690	HDS1	R
18.500	.812	**HDL-5995-R**	HDL	R
18.500	.813	1600750	HDS1	R
18.500	1.000	1600780	HDS1	R
18.500	1.000	1600782	HDS1	D
19.000	.750	1600860	HDS1	R
16.063 SHAFT				
	.500	87613	LDSLV4	
	FOR SEAL SH SIZE 16.250			
	1.250	86175	LDSLV4	
	FOR SEAL SH SIZE 16.250		(411.18MM)	
	1.300	86426	LDSLV4	
	FOR SEAL SH SIZE 16.250			
	2.000	86575	LDSLV4	
	FOR SEAL SH SIZE 16.250		(412.75MM)	
16.125 SHAFT				
17.375	.930	161550 †	HMSA11	D
	P.F. WIDTH .700			
18.000	.750	1612473	HDS1	V
18.125	.813	1613557	HS7	R
16.141 SHAFT				
18.141	.813	1614557	HS7	R
16.142 SHAFT				
	.196	**404103**	VR4	R
	SHAFT RANGE 16.142-16.339			
16.188 SHAFT				
18.188	.813	1619557	HS7	R
16.225 SHAFT				
17.725	.750	1623257	HS7	R
16.250 SHAFT				
.813	1.250	595322	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
3.063	3.500	592934	CT4	R
	BORE DIA. IS SHOULDER WIDTH			
17.750	.625	**1625228**	HS8	R
17.750	.625	1625237	HS7	R
17.750	.625	**1625238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
16.250 SHAFT (Cont.)				
17.750	.687	**HDL-4181-R**	HDL	R
17.750	.750	**1625258**	HS8	R
17.750	.625	1625230	HDS1	R
17.750	.625	1625239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
17.750	.688	1625210	HDS7	R
17.750	.688	1625211	HDS7	R
		W/4 EA .125 LUGS		
17.750	.688	1625240	HDS1	R
17.750	.688	1625242	HDS1	R
		W/4 EA .125 LUGS		
17.750	.688	**1625243**	HDS2	R
17.750	.688	**1625245**	HDS2	R
		W/4 EA .125 LUGS		
17.750	.750	1625250	HDS1	R
17.875	.750	1625330	HDS1	R
18.000	1.000	**HDL-3057-R**	HDL	R
18.000	.625	**1625362**	HDS2	R
18.000	.625	**1625364**	HDS2	R
		W/4 EA .063 LUGS		
18.000	.625	1625369	HDS3	D
		W/4 EA .500 ADJ. LUGS		
18.000	.750	1625380	HDS1	R
18.000	.750	1625383	HDS1	V
18.000	.813	1625390	HDS1	R
18.000	.938	1625410	HDS1	R
18.000	.938	1625412	HDS1	R
		W/4 EA .125 LUGS		
18.000	1.000	1625420	HDS1	R
18.000	1.000	**1625422**	HDS2	R
18.000	1.000	1625425	HDS1	R
		W/4 EA .500 LUGS		
18.242	1.000	1625510	HDS1	R
18.250	.813	1625557	HS7	R
18.250	1.000	1625587	HS7	R
18.250	1.000	**1625588**	HS8	R
18.250	.688	1625530	HDS1	R
18.250	.750	1625540	HDS1	R
18.250	1.000	1625580	HDS1	R
18.500	1.250	1625690	HDS1	R
16.310 SHAFT				
17.686	.688	1631190	HDS1	R
16.313 SHAFT				
	2.000	84697	LDSLV4	
	FOR SEAL SH SIZE 16.500		(419.10MM)	
.688	.875	524386	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
16.350 SHAFT				
17.350	.500	1635017	HS7	R
16.375 SHAFT				
17.562	1.000	1637901	HDSA1	RD
17.875	.687	**HDL-4179-R**	HDL	R
17.875	.750	1638257	HS7	R
17.875	.750	1638250	HDS1	R
18.375	.813	1638557	HS7	R
18.375	1.000	1638580	HDS1	R
16.400 SHAFT				
18.500	.813	**1640554**	HDS2	R
		W/4 EA .250 LUGS		
18.500	1.625	1640932	HDSD2	RR

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
16.500 SHAFT				
17.500	.500	1650017	HS7	R
17.500	.350	511203	HD1	D
		QUILL WIPER		
17.750	.750	**1650138**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
17.750	.625	1650132	HDS1	R
17.750	.750	1650130	HDS1	R
18.000	.734	513680	HS9	R
18.000	.750	1650257	HS7	R
18.000	.750	**1650258**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
18.000	.750	1650200	HDS1	D
18.000	.750	1650220	HDS1	D
18.000	.750	1650250	HDS1	R
18.000	.750	**1650252**	HDS2	R
18.000	.750	1650253	HDS1	V
18.000	.750	1650254	HDS1	R
		W/6 EA .125 LUGS		
18.000	.750	**1650255**	HDS2	R
		W/4 EA .375 LUGS		
18.000	.750	1650259	HDS3	D
		W/4 EA .500 ADJ. LUGS		
18.000	1.000	1650290	HDS1	R
18.000	.750	1650280	HDS7	R
18.250	.750	1650380	HDS1	R
18.250	.813	1650390	HDS1	R
18.500	.687	**HDL-4187-R**	HDL	R
18.500	.812	**HDL-4186-R**	HDL	R
18.500	.813	1650557	HS7	R
18.500	1.000	**1650579**	HS8	D
18.500	1.000	1650587	HS7	R
18.500	.750	1650540	HDS1	R
18.500	.750	1650549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
18.500	.813	1650550	HDS1	R
18.500	.813	**1650552**	HDS2	V
18.500	.813	**1650553**	HDS2	R
18.500	.813	**1650555**	HDS2	R
		W/4 EA .250 LUGS		
18.500	.813	1650573	HDS1	V
18.500	1.000	1650580	HDS1	R
18.500	1.000	**1650582**	HDS2	R
18.500	.813	**1650590**	HDS4	R
		W/8 EA .500 MOLDED ADJ. LUGS		
18.500	.813	1650595	HDS6	R
		W/8 EA .500 MOLDED ADJ. LUGS		
19.000	.875	1650660	HDS1	R
19.000	.875	1650769	HDS3	D
		W/4 EA .500 ADJ. LUGS		
19.000	1.000	1650780	HDS1	R
19.000	1.000	526651	HDS1	R
		W/LIGHT SPRING		
16.531 SHAFT				
18.031	.750	1653257	HS7	R
16.535 SHAFT				
18.102	.787	**1650342**	HDS2	D
18.110	.787	**1653282**	HDS2	D
16.625 SHAFT				
17.625	.500	1663017	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
16.750 SHAFT				
	1.500	87585	LDSLV4	
	FOR SEAL SH SIZE 16.938			
.813	1.250	523826	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.875	1.313	524815	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
18.000	.875	**1675148**	HS8	R
18.250	.750	1675257	HS7	R
18.250	.750	**1675258**	HS8	R
18.250	.688	1675240	HDS1	R
18.250	.688	**1675242**	HDS2	R
18.250	.750	1675250	HDS1	R
18.484	.703	518039	HS9	R
18.500	.875	1675410	HDS1	R
18.500	.875	1675413	HDS1	V
18.500	1.000	1675420	HDS1	R
18.750	.813	1675557	HS7	R
18.750	1.000	**1675588**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
18.750	.875	1675560	HDS1	R
18.750	.875	**1675510**	HDS2	R
19.000	.875	1675660	HDS1	R
19.250	1.000	1675780	HDS1	R
19.250	1.000	526650	HDS1	R
	W/LIGHT SPRING			
16.812 SHAFT				
	1.000	86737	LDSLV4	
	FOR SEAL SH SIZE 17.000		(431.80MM)	
	2.500	86738	LDSLV4	
	FOR SEAL SH SIZE 17.000		(431.80MM)	
16.813 SHAFT				
	2.250	84616	LDSLV4	
	FOR SEAL SH SIZE 17.000		(431.80MM)	
.813	1.000	594681	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
16.875 SHAFT				
18.375	.500	1688217	HS7	R
18.875	.813	1688557	HS7	R
16.929 SHAFT				
	.196	**404303**	VR4	R
	SHAFT RANGE 16.929-17.126			
18.429	.750	1693257	HS7	R
18.898	.629	1693460	HDS1	R
16.938 SHAFT				
18.311	1.250	1694193	HDS1	R
19.283	.906	1694696	HDS1	R
	W/6 EA .063 LUGS			
19.291	.906	**1694692**	HDS2	R
19.291	.906	1694697	HDS1	R
19.291	1.063	1694700	HDS1	R
19.291	.906	**1694725**	HDS2	R
	W/6 EA .063 LUGS			
17.000 SHAFT				
.813	1.000	524360	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
1.063	1.500	528535	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
18.000	.500	**1700018**	HS8	D
18.250	.625	**1700118**	HS8	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
17.000 SHAFT (Cont.)				
18.250	.625	1700110	HDS1	R
18.250	.875	1700142	HDSA2	R
18.500	.625	**1700228**	HS8	V
18.500	.625	1700237	HS7	R
18.500	.625	**1700238**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
18.500	.625	**1700249**	HS8	D
18.500	.687	**HDL-4188-R**	HDL	R
18.500	.750	1700257	HS7	R
18.500	.625	1700230	HDS1	R
18.500	.625	**1700232**	HDS2	R
18.500	.625	1700239	HDS3	D
	W/4 EA .500 ADJ. LUGS			
18.500	.625	★ 596179	HDS7	R
18.500	.688	1700240	HDS1	R
18.500	.688	1700242	HDS1	R
	W/6 EA .125 LUGS			
18.500	.688	**1700243**	HDS2	V
18.500	.688	**1700244**	HDS2	R
	W/4 EA .125 LUGS			
18.500	.688	**1700245**	HDS2	R
18.500	.688	1700283	HDS1	V
18.500	.750	**1700212**	HDS2	V
	W/4 EA .500 ADJ. LUGS			
18.500	.750	1700250	HDS1	R
18.500	.750	**1700251**	HDS2	D
18.500	.750	1700253	HDS1	V
18.500	1.375	1700920	HDSD1	RR
18.500	1.375	1700922	HDSD2	RR
18.500	.625	1700280	HDS7	R
19.000	.812	**HDL-4190-R**	HDL	R
19.000	.813	1700557	HS7	R
19.000	.813	**1700558**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
19.000	.813	**1700559**	HS8	D
	W/HOOK & EYE SPRING CONNECTOR			
19.000	.813	1700576	HS6	D
	W/HOOK & EYE SPRING CONNECTOR			
19.000	1.000	1700587	HS7	R
19.000	.625	1700523	HDS3	D
	W/4 EA .500 ADJ LUGS			
19.000	.625	**1700528**	HDS2	D
19.000	.687	**1700534**	HDS2	V
19.000	.687	1700537	HDS1	V
19.000	.688	**1700532**	HDS2	R
19.000	.750	1700540	HDS1	R
19.000	.750	**1700541**	HDS2	R
19.000	.750	1700542	HDS1	R
	W/4 EA .375 LUGS			
19.000	.750	1700549	HDS3	D
	W/4 EA .500 ADJ. LUGS			
19.000	.813	1700550	HDS1	R
19.000	.813	**1700552**	HDS2	R
19.000	.813	1700553	HDS1	V
19.000	.813	1700554	HDS1	R
	W/4 EA .188 LUGS			
19.000	.813	**1700573**	HDS2	V
19.000	.875	1700560	HDS1	R
19.000	.875	1700562	HDS1	R
	W/6 EA .063 LUGS			
19.000	.906	**1700565**	HDS2	D
	W/6 EA .063 LUGS			
19.000	.906	1700567	HDS1	R
	W/6 EA .219 LUGS			
19.000	.938	1700570	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
17.000 SHAFT (Cont.)				
19.000	1.000	1700580	HDS1	R
19.000	1.000	**1700584**	HDS2	D
19.000	1.000	1700585	HDS1	D
19.000	1.250	1700950	HDSA1	RD
19.000	1.250	1700952	HDSE2	DD
19.000	2.000	1700953	HDSE2	RR
19.000	2.000	1700958	HDSE2	RR
		W/ LUBE HOLES ON O.D.		
19.000	.813	1700579	HDS7	R
19.250	1.000	1700680	HDS1	R
19.291	.875	1700700	HDS1	R
19.500	.812	**HDL-3750-R**	HDL	R
19.500	.875	1700760	HDS1	R
17.125 SHAFT				
		171026	HDDFBV1	R
		BELLEVILLE WASHERS (2 EA/KIT)		
18.125	.500	1713017	HS7	R
18.625	.750	1713257	HS7	R
19.125	.813	1713557	HS7	R
19.240	1.531	171025	HDDF1	R
17.172 SHAFT				
19.250	.750	1717600	HDS1	R
17.188 SHAFT				
18.562	.688	1719170	HDS1	R
17.250 SHAFT				
	1.000	90779	LDSLV4	
		FOR SEAL SH SIZE 17.438		
	2.000	84576	LDSLV4	
	FOR SEAL SH SIZE 17.438		(442.93MM)	
18.750	.687	**HDL-3751-R**	HDL	R
18.750	.750	1725257	HS7	R
18.750	.750	**1725258**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
18.750	.625	1725230	†HDS1	R
18.750	.750	1725250	HDS1	R
18.750	.750	**1725255**	HDS2	R
18.750	.750	1725259	HDS3	D
		W/4 EA .500 ADJ. LUGS		
19.000	.875	1725410	HDS1	R
19.250	.813	1725557	HS7	R
19.250	1.000	1725587	HS7	R
19.250	.875	1725560	HDS1	R
19.250	.938	1725570	HDS1	R
19.250	.938	1725571	HDS1	D
19.250	1.000	1725580	HDS1	R
19.250	1.000	1725583	HDS1	V
19.500	.875	1725660	HDS1	R
17.313 SHAFT				
	1.500	86430	LDSLV4	
	FOR SEAL SH SIZE 17.500		(444.50MM)	
.688	.875	524388	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
17.332 SHAFT				
18.832	.750	1733257	HS7	R
17.375 SHAFT				
18.625	1.250	1737118	HDSH2	D
18.875	.750	1738257	HS7	R
18.875	.750	1737219	HDS7	R
19.500	1.000	1737630	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
17.438 SHAFT				
18.750	.750	**1743182**	HDS2	R
19.250	.875	1743410	HDS1	R
17.449 SHAFT				
	2.000	85762	LDSLV4	
	FOR SEAL SH SIZE 17.637		(447.98MM)	
17.500 SHAFT				
	1.250	90770	LDSLV4	
		FOR SEAL SH SIZE 17.688		
.813	1.250	522679	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.938	1.375	523547	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.938	1.375	525737	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
18.500	.500	1750017	HS7	R
18.500	.350	516226	HD1	D
		QUILL WIPER		
19.000	.687	**HDL-4194-R**	HDL	R
19.000	.750	1750257	HS7	R
19.000	.750	**1750259**	HS8	D
19.000	.625	1750230	HDS1	R
19.000	.688	1750240	HDS1	R
19.000	.688	**1750244**	HDS2	V
19.000	.688	**1750245**	HDS2	R
19.000	.688	1750249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
19.000	.750	1750250	HDS1	R
19.000	.750	1750251	HDS1	D
19.000	.750	1750253	HDS1	V
19.000	.750	**1750254**	HDS2	V
19.000	1.000	1750290	HDS1	R
19.000	1.250	1750920	HDSA1	RD
19.000	.688	1750220	HDS7	H
19.000	.688	1750221	HDS7	R
19.250	.625	**1750368**	HS8	V
19.250	.687	**HDL-5054-R**	HDL	R
19.250	1.000	**HDL-3005-R**	HDL	R
19.250	.688	1750370	HDS1	R
19.250	.688	**1750372**	HDS2	R
19.250	.688	1750379	HDS3	D
		W/4 EA .500 ADJ. LUGS		
19.250	.750	1750380	HDS1	R
19.250	.750	**1750385**	HDS2	R
19.250	.938	1750433	HDS1	D
19.250	1.000	1750420	HDS1	R
19.250	1.000	**1750425**	HDS2	R
		W/4 EA .125 LUGS		
19.250	1.000	**1750426**	HDS2	R
		W/4 EA .500 ADJ. LUGS		
19.500	.687	**HDL-4198-R**	HDL	R
19.500	.688	**1750538**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
19.500	.750	1750516	HS6	R
19.500	.813	1750557	HS7	R
19.500	1.000	1750587	HS7	R
19.500	.688	1750530	HDS1	R
19.500	.688	1750532	HDS1	R
		W/4 EA .125 LUGS		
19.500	.688	**1750533**	HDS2	D
19.500	.688	**1750534**	HDS2	R
		W/4 EA .125 LUGS		
19.500	.688	1750539	HDS3	D
		W/4 EA .500 ADJ. LUGS		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
17.500 SHAFT (Cont.)				
19.500	.750	1750540	HDS1	R
19.500	.875	1750560	HDS1	R
19.500	1.000	1750580	HDS1	R
19.500	1.000	1750585	HDS1	R
		W/4 EA .125 LUGS		
19.500	1.000	1750958	HDSA2	RD
19.500	1.250	1750952	HDSA1	RD
19.750	.750	1750659	HDS3	D
		W/4 EA .500 ADJ. LUGS		
20.000	1.000	1750780	HDS1	R
20.500	1.000	1750890	HDS1	R
20.522	1.500	1750900	HDS1	R
20.522	1.500	**1750901**	HDS2	R
17.531 SHAFT				
19.125	.719	1753230	HDS1	V
17.543 SHAFT				
	2.362	86799	LDSLV4	
	FOR SEAL SH SIZE 17.731		(450.37MM)	
17.558 SHAFT				
19.063	.750	1755250	HDS1	R
17.563 SHAFT				
19.063	.750	1756257	HS7	R
17.625 SHAFT				
19.125	.750	1763210	HDS1	D
19.125	.750	1763217	HDS1	V
19.125	.750	1763250	HDS1	R
19.250	.687	**HDL-4199-R**	HDL	R
19.250	.688	1763320	HDS1	R
19.375	.750	1763380	HDS1	R
19.375	.875	1763410	HDS1	R
19.375	.875	**1763412**	HDS2	R
19.500	.750	1763470	HDS1	R
19.625	.813	1763557	HS7	R
19.625	.688	1763530	HDS1	R
19.625	.813	1763550	HDS1	R
20.500	1.000	1763840	HDS1	R
17.688 SHAFT				
.750	.938	524389	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
.750	.938	594654	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
3.313	3.750	528070	CT4	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
17.716 SHAFT				
19.716	.813	1771557	HS7	R
17.717 SHAFT				
	1.969	**404503**	VR4	R
	SHAFT RANGE 17.717-17.913			
17.718 SHAFT				
20.079	.719	1771690	HDS1	R
17.719 SHAFT				
19.219	.750	1772257	HS7	R
17.750 SHAFT				
	1.250	90774	LDSLV4	
	FOR SEAL SHAFT SIZE 17.938			

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
17.750 SHAFT (Cont.)				
	2.500	86631	LDSLV3	
	FOR SEAL SH SIZE 17.938		(455.63MM)	
18.750	.500	1775017	HS7	R
19.250	.750	1775257	HS7	R
19.750	.813	**1775518**	HS8	R
19.750	.813	1775557	HS7	R
19.750	.750	1775540	HDS1	R
19.750	.750	1775543	HDS1	R
		W/4 EA .250 LUGS		
19.750	.813	1775550	HDS1	R
19.750	1.000	1775570	HDS1	D
19.750	1.000	1775580	HDS1	R
20.089	.875	1775690	HDS1	R
20.089	1.000	1775700	HDS1	R
20.250	.875	1775760	†HDS1	R
17.812 SHAFT				
	2.125	87271	LDSLV4	
	FOR SEAL SH SIZE 18.000		(457.20MM)	
17.813 SHAFT				
	2.500	86405	LDSLV3	
	FOR SEAL SH SIZE 18.000		(457.20MM)	
19.125	.625	**1781145**	HDS2	R
17.818 SHAFT				
19.750	.750	**1781502**	HDS2	R
19.750	.750	1783500	HDS1	R
20.500	1.000	1782790	HDS1	R
17.875 SHAFT				
19.137	.930	178750	†HMSA11	D
		P.F. WIDTH .930		
19.137	.930	1787068	HDS1	D
19.500	.688	**1788322**	HDS2	D
19.875	.812	**HDL-4204-R**	HDL	R
19.875	.813	**1788558**	HS8	R
19.875	.750	1788540	HDS1	R
19.875	.750	1788541	HDS1	R
		W/4 EA .125 LUGS		
19.875	.813	1788550	HDS1	R
19.875	.813	**1788552**	HDS2	R
20.000	.875	**1787622**	HDS2	R
		W/4 EA .250 LUGS		
20.000	.875	1787623	HDS3	D
		W/4 EA .500 ADJ. LUGS		
20.250	.875	1788710	HDS1	R
17.900 SHAFT				
19.400	.750	1790257	HS7	R
17.913 SHAFT				
	.196	**404553**	VR4	R
	SHAFT RANGE 17.913-18.110			
17.938 SHAFT				
19.750	1.000	**1793442**	HDS2	R
19.750	1.000	1793490	HDS1	R
18.000 SHAFT				
	.310	404502	VR3	R
	SHAFT RANGE 16.730 - 18.700			
	.310	404506	VR3	V
	SHAFT RANGE 16.730 - 18.700			
	.790	**404500**	VR1	R
	SHAFT RANGE 16.930 - 18.900			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
18.000 SHAFT (Cont.)				
	.790	**404504**	VR1	V
	SHAFT RANGE 16.930 - 18.900			
19.000	.500	1800017	HS7	R
19.000	.500	**1800018**	HS8	R
19.000	.625	1800027	HS7	R
19.500	.687	**HDL-4206-R**	HDL	R
19.500	.688	**1800218**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
19.500	.750	1800257	HS7	R
19.500	.687	**1800224**	HDS2	V
19.500	.688	1800240	HDS1	R
19.500	.688	**1800244**	HDS2	D
	W/4 EA .125 LUGS			
19.500	.688	**1800245**	HDS2	R
19.500	.688	**1800246**	HDS2	D
19.500	.688	1800249	HDS3	D
	W/4 EA .500 ADJ. LUGS			
19.500	.750	1800250	HDS1	R
19.500	1.000	1800290	HDS1	R
19.500	1.250	1800912	HDSE2	RR
	W/8 EA .125 LUBE HOLES ON O.D.			
19.500	1.250	1800918	HDSE1	RR
	W/8 EA .125 LUBE HOLES ON O.D.			
19.500	1.438	1800922	HDSE2	RR
19.515	.875	1800300	HDS1	R
19.750	.750	1800387	HS7	R
19.750	.750	1800380	HDS1	R
19.750	.750	**1800382**	HDS2	R
19.750	.750	1800389	HDS3	D
	W/4 EA .500 ADJ. LUGS			
19.750	.875	1800410	HDS1	R
19.750	.938	1800430	HDS1	R
19.750	1.000	1800423	HDS1	V
19.875	.750	1800470	HDS1	R
20.000	.813	1800557	HS7	R
20.000	.813	**1800558**	HS8	R
20.000	.813	**1800559**	HS8	D
20.000	.875	**HDL-4210-R**	HDL	R
20.000	1.000	1800587	HS7	R
20.000	.625	**1800520**	HDS2	R
20.000	.750	1800540	HDS1	R
20.000	.750	**1800542**	HDS2	D
20.000	.750	1800543	HDS1	R
	W/4 EA .375 LUGS			
20.000	.750	1800549	HDS3	D
	W/4 EA .500 ADJ. LUGS			
20.000	.813	1800550	HDS1	R
20.000	.875	1800560	HDS1	R
20.000	.875	**1800563**	HDS2	R
20.000	.875	1800564	HDS1	R
	W/4 EA .125 LUGS			
20.000	.875	**1800565**	HDS2	R
	W/4 EA .125 LUGS			
20.000	.875	**1800573**	HDS2	V
20.000	.875	1800583	HDS3	D
	W/4 EA .500 ADJ. LUGS			
20.000	1.000	1800580	HDS1	R
20.000	1.000	1800581	HDS1	R
	W/4 EA .375 LUGS			
20.000	1.000	**1800582**	HDS2	R
20.000	1.250	1800570	HDSD2	RR
20.000	1.250	1800591	HDS1	R
20.000	1.250	1800592	HDS1	R
	W/4 EA .125 LUGS			
20.000	1.500	1800950	HDSA1	RD
18.000 SHAFT (Cont.)				
20.000	1.500	1800956	HDSD1	RR
20.000	1.813	1800593	HDS1	R
20.000	.875	**1800510**	HDS4	R
	W/8 EA .500 MOLDED ADJ. LUGS			
20.000	.875	1800515	HDS6	R
	W/8 EA .500 MOLDED ADJ. LUGS			
20.250	1.000	1800680	HDS1	R
20.250	1.000	1800683	HDS1	V
20.250	1.000	1800965	HDSA2	RD
20.250	1.000	528308	HDSA2	VD
20.250	1.250	1800966	HDSE2	RR
20.500	1.125	1800790	HDS1	R
20.500	1.250	1800800	HDS1	R
21.000	.688	1800850	HDS1	R
21.000	1.125	**1800896**	HDS2	R
	W/4 EA .375 LUGS			
21.000	1.500	1800890	HDS1	R
18.031 SHAFT				
20.031	.813	1803557	HS7	R
18.063 SHAFT				
20.063	.813	1806557	HS7	R
18.110 SHAFT				
	1.969	**404603**	VR4	R
	SHAFT RANGE 18.110-18.307			
20.110	.813	1811557	HS7	R
20.115	.813	1811550	HDS1	R
20.276	1.102	**1811632**	HDS2	R
18.120 SHAFT				
20.500	1.000	1813720	HDS1	R
18.125 SHAFT				
20.125	.813	**1813558**	HS8	R
20.500	1.000	1813730	HDS1	R
18.163 SHAFT				
	2.000	86343	LDSLV4	
	FOR SEAL SH SIZE 18.350		(466.09MM)	
18.175 SHAFT				
19.500	.750	**1817138**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
19.750	.750	**1817258**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
18.188 SHAFT				
20.500	1.000	1819690	HDS1	R
18.250 SHAFT				
19.750	.750	1825257	HS7	R
19.750	.750	**1825258**	HS8	R
19.750	.750	**1825338**	HS8	H
19.750	.750	1825250	HDS1	R
19.750	.750	**1825252**	HDS2	R
19.750	.750	1825253	HDS1	V
19.750	.750	1825255	HDS1	R
	W/4 EA .375 LUGS			
19.781	.750	**1825268**	HS8	R
19.867	1.000	1825300	HDS1	R
19.875	.875	1825340	HDS1	R
19.875	1.000	1825350	HDS1	R
19.875	1.000	**1825352**	HDS2	R
20.000	.875	1825410	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
18.250 SHAFT (Cont.)				
20.125	.938	1825486	HDS1	R
20.250	.813	1825557	HS7	R
20.250	.750	1825540	HDS1	R
20.250	.813	1825550	HDS1	R
20.500	1.000	1825680	HDS1	R
20.500	1.188	1825674	HDS1	V
21.250	1.500	1825900	HDS1	R
18.313 SHAFT				
19.492	.750	1831070	HDS1	R
18.375 SHAFT				
19.875	.687	**HDL-4213-R**	HDL	R
19.875	.750	1838257	HS7	R
19.875	.688	1838240	HDS1	R
19.875	.688	**1838241**	HDS2	R
19.875	.688	**1838244**	HDS2	R
		W/4 EA .250 LUGS		
19.875	.688	**1838245**	HDS2	R
		W/4 EA .125 LUGS		
19.875	.688	1838249	HDS3	D
		W/4 EA .500 ADJ. LUGS		
19.938	.625	1838300	HDS1	R
19.938	.625	1838301	HDS1	R
		W/4 EA .063 LUGS		
20.000	.750	**HDL-4215-R**	HDL	R
20.000	.750	1838330	HDS1	R
20.375	.813	1838557	HS7	R
20.375	.813	**1838558**	HS8	R
20.375	.813	1837570	HDS1	R
20.375	.875	1838560	HDS1	R
20.500	.875	**1837608**	HS8	R
20.500	.875	1838620	HDS1	R
20.750	.875	1838710	HDS1	R
18.500 SHAFT				
.688	1.125	525708	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.813	1.250	526192	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
19.500	.500	1850017	HS7	R
20.000	.750	**1850248**	HS8	D
20.000	.750	1850257	HS7	R
20.000	.750	**1850212**	HDS2	V
20.000	.750	1850250	HDS1	R
20.000	1.250	1850922	HDSD2	RR
20.250	.750	1850380	HDS1	R
20.500	.812	HDLA-3068-R	HDLA	R
20.500	.813	1850557	HS7	R
20.500	.875	**HDL-4216-R**	HDL	R
20.500	1.000	1850587	HS7	R
20.500	.750	1850540	HDS1	R
20.500	.750	**1850542**	HDS2	R
20.500	.750	1850543	HDS1	R
		W/4 EA .125 LUGS		
20.500	.750	**1850545**	HDS2	R
		W/4 EA .125 LUGS		
20.500	.750	1850548	HDS3	V
		W/4 EA .500 ADJ LUGS		
20.500	.750	1850549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
20.500	.813	1850550	HDS1	R
20.500	.813	1850551	HDS1	R
		W/4 EA .188 LUGS		
20.500	.813	**1850552**	HDS2	R
18.500 SHAFT (Cont.)				
20.500	.813	**1850554**	HDS2	V
20.500	.813	1850555	HDS1	D
20.500	.875	**1850553**	HDS2	V
20.500	.875	1850560	HDS1	R
20.500	.875	**1850561**	HDS2	R
20.500	.875	1850562	HDS1	R
		W/4 EA .250 LUGS		
20.500	.875	1850563	HDS1	R
		W/4 EA .438 LUGS		
20.500	.875	1850564	HDS1	R
		W/4 EA .375 LUGS		
20.500	.875	1850565	HDS1	R
		W/4 EA .406 LUGS		
20.500	.875	**1850567**	HDS2	R
		W/4 EA .375 LUGS		
20.500	.875	**592939**	HDS2	D
20.500	.906	1850570	HDS1	R
20.500	.906	1850572	HDS1	R
		W/4 EA .250 LUGS		
20.500	.906	**1850576**	HDS2	R
		W/4 EA .250 LUGS		
20.500	.968	1850952	HDSA2	V
20.500	1.000	1850580	HDS1	R
20.500	1.000	**1850584**	HDS2	D
20.500	1.000	1850585	HDS1	D
21.248	1.000	1850790	HDS1	R
22.750	1.000	1850905	HDS1	R
18.504 SHAFT				
	.196	**404703**	VR4	R
		SHAFT RANGE 18.504-18.701		
20.079	.787	1850306	HDS3	V
		W/4 EA .500 ADJ LUGS		
18.560 SHAFT				
20.000	.750	1856193	HDS1	R
18.625 SHAFT				
20.625	.813	1863557	HS7	R
18.730 SHAFT				
20.500	.750	1873440	HDS1	R
18.750 SHAFT				
.813	1.250	595637	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
19.750	.500	1875017	HS7	R
20.250	.750	1875257	HS7	R
20.250	.750	**1875258**	HS8	R
20.250	.750	1875250	HDS1	R
20.250	.750	**1875253**	HDS2	R
20.250	.750	1875259	HDS3	D
		W/4 EA .500 ADJ. LUGS		
20.500	.750	1875380	HDS1	R
20.500	.750	1875381	HDS1	V
20.500	.875	1875410	HDS1	R
20.500	.875	**1875412**	HDS2	R
20.563	.813	**1875433**	HDS2	R
		W/4 EA .063 LUGS		
20.750	.813	1875557	HS7	R
20.750	1.000	1875580	HDS1	R
20.750	.750	1875540	HDS1	R
20.750	.813	1875513	HDS1	D
20.750	.813	1875550	HDS1	R
20.750	.813	**1875553**	HDS2	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
18.812 SHAFT				
	1.575	87924	LDSLV4	
		FOR SEAL SH SIZE 19.000		
18.813 SHAFT				
	1.500	85104	LDSLV3	
	FOR SEAL SH SIZE 19.000		(482.60MM)	
	1.750	86563	LDSLV4	
	FOR SEAL SH SIZE 19.000		(482.60MM)	
	2.250	87015	LDSLV4	
	FOR SEAL SH SIZE 19.000		(482.60MM)	
	2.500	86716	LDSLV4	
	FOR SEAL SH SIZE 19.000		(482.60MM)	
18.818 SHAFT				
20.818	.813	1882557	HS7	R
18.875 SHAFT				
.750	.938	595943	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
20.625	.875	1888391	HDS1	R
20.875	.813	1888557	HS7	R
18.898 SHAFT				
	.196	**404803**	VR4	R
		SHAFT RANGE 18.898-19.094		
20.861	.866	**1889572**	HDS2	D
18.937 SHAFT				
20.937	.813	1894557	HS7	R
19.000 SHAFT				
20.000	.500	1900017	HS7	R
20.500	.750	**HDL-4218-R**	HDL	R
20.500	.750	1900257	HS7	R
20.500	.750	**1900258**	HS8	R
20.500	.750	1901257	HS7	D
20.500	.625	**1900232**	HDS2	H
20.500	.750	1900250	HDS1	R
20.500	.750	**1900251**	HDS2	R
		W/6 EA .375 LUGS		
20.500	.750	1900252	HDS1	R
		W/4 EA .250 LUGS		
20.500	.750	1900253	HDS1	R
		W/6 EA .250 LUGS		
20.500	.750	**1900254**	HDS2	R
20.500	.750	**1900255**	HDS2	R
		W/4 EA .125 LUGS		
20.500	.750	**1900256**	HDS2	R
		W/6 EA .250 LUGS		
20.500	.750	1900259	HDS3	D
		W/4 EA .500 ADJ. LUGS		
20.500	.750	**1900265**	HDS2	V
		W/6 EA .375 LUGS		
20.500	.750	**1901254**	HDS2	D
20.500	.875	**1900274**	HDS2	D
20.500	.875	**1900275**	HDS2	D
		W/4 EA .125 LUGS		
20.500	.938	1900282	HDS1	R
		W/4 EA .125 LUGS		
20.500	.750	**1900260**	HDS2	V
20.500	.750	1900211	HDS7	R
21.000	.750	**1900548**	HS8	R
21.000	.813	1900557	HS7	R
21.000	.875	**HDL-4219-R**	HDL	R
21.000	.750	1900540	HDS1	R
19.000 SHAFT (Cont.)				
21.000	.875	1900560	HDS1	R
21.000	.875	**1900562**	HDS2	V
21.000	.875	**1900563**	HDS2	R
21.000	.875	**1900564**	HDS2	R
		W/4 EA .188 LUGS		
21.000	.875	**1900565**	HDS2	R
		W/4 EA .125 LUGS		
21.000	.875	**1900566**	HDS2	V
		W/4 EA .125 LUGS		
21.000	.875	1900569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
21.000	1.000	1900580	HDS1	R
21.000	1.250	1900950	HDSC1	RD
21.000	1.313	1900592	HDS1	R
21.000	1.000	**1900512**	HDS2	R
21.125	.813	**1900616**	HDS2	R
		W/4 EA .063 LUGS		
21.250	.875	1900660	HDS1	R
21.500	.750	1900740	HDS1	R
21.500	.750	**1900741**	HDS2	R
21.500	1.250	1900800	HDS1	R
21.750	1.000	1900830	HDS1	R
19.094 SHAFT				
	.196	**404853**	VR4	R
		SHAFT RANGE 19.094-19.291		
19.125 SHAFT				
		191021	HDDFBV1	R
20.125	.500	1913017	HS7	R
21.125	.813	1913557	HS7	R
21.250	1.750	1913960	HDSD1	RR
21.500	1.640	191022	HDDF1	R
19.188 SHAFT				
20.563	.688	1919170	HDS1	R
21.188	.813	1919557	HS7	R
19.250 SHAFT				
20.750	.750	**HDL-4617-R**	HDL	R
20.750	.625	596180	HDS7	R
20.750	.750	1925250	HDS1	R
20.750	.750	**1925252**	HDS2	R
20.750	.750	1925253	HDS1	R
		W/6 EA .125 LUGS		
20.750	.750	1925254	HDS1	D
		W/4 EA .125 LUGS		
20.750	.750	**1925255**	HDS2	R
		W/6 EA .125 LUGS		
20.750	.875	1925920	HDSA1	RD
21.000	.750	1925380	HDS1	R
21.250	.813	1925557	HS7	R
21.250	.750	1925540	HDS1	R
21.250	.938	1925570	HDS1	R
21.250	1.000	1925580	HDS1	R
21.500	.875	1925660	HDS1	R
19.291 SHAFT				
	.196	**404903**	VR4	R
		SHAFT RANGE 19.291-19.488		
19.375 SHAFT				
21.000	.813	1938340	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
19.375 SHAFT (Cont.)				
21.000	.813	**1938345**	HDS2	D
		W/4 EA .188 LUGS		
21.375	.813	1938557	HS7	R
19.496 SHAFT				
	2.360	★87632	LDSLV4	
		FOR SEAL SH SIZE 19.685		
	2.362	87631	LDSLV4	
		FOR SEAL SH SIZE 19.684		
19.497 SHAFT				
	1.575	87785	LDSLV4	
		FOR SEAL SH SIZE 19.497		
19.500 SHAFT				
	1.250	90769	LDSLV4	
		FOR SEAL SH SIZE 19.688		
.688	1.125	594181	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
20.500	.500	1950017	HS7	R
21.000	.750	1950250	HDS1	R
21.500	.813	**1950518**	HS8	R
21.500	.813	1950557	HS7	R
21.500	.875	**HDL-4221-R**	HDL	R
21.500	1.000	**1950588**	HS8	R
21.500	.750	1950540	HDS1	R
21.500	.750	**1950542**	HDS2	R
21.500	.750	**1950544**	HDS2	R
		W/4 EA .375 LUGS		
21.500	.750	1950549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
21.500	.875	1950560	HDS1	R
21.500	.875	**1950563**	HDS2	V
21.500	.938	1950570	HDS1	R
21.500	.938	1950571	HDS1	R
		W/4 EA .125 LUGS		
21.500	1.000	1950580	HDS1	R
21.500	1.000	1950583	HDS1	V
21.500	1.250	1950950	HDSA1	RD
21.500	.750	1950211	HDS7	R
21.688	.750	1950640	HDS1	R
21.750	.875	1950660	HDS1	R
22.000	.875	1950760	HDS1	R
22.125	.875	1950800	HDS1	R
22.250	.875	1950820	HDS1	R
19.563 SHAFT				
	2.750	85654	LDSLV4	
	FOR SEAL SH SIZE 19.750		(501.60MM)	
19.625 SHAFT				
21.260	.787	1963341	HDS1	R
21.260	1.563	1963340	HDS1	R
21.625	.813	1963557	HS7	R
21.625	.813	1963550	HDS1	R
21.625	.938	1963570	HDS1	R
19.685 SHAFT				
	.196	**405003**	VR4	R
		SHAFT RANGE 19.685-19.882		
22.047	.984	1968710	HDS1	R
19.688 SHAFT				
21.250	.787	1969300	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
19.750 SHAFT				
20.750	.500	**1975018**	HS8	R
20.750	.625	1975526	HS6	R
21.125	.875	1975150	HDS1	R
21.500	1.000	1975420	HDS1	R
21.750	.625	**1975528**	HS8	R
21.750	.813	1975557	HS7	R
21.750	.875	**HDL-4228-R**	HDL	R
21.750	.813	**1975553**	HDS2	V
21.750	.875	1975560	HDS1	R
21.750	.875	1975569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
21.750	1.000	1975580	HDS1	R
21.750	1.000	**1975582**	HDS2	R
21.750	1.000	**1975585**	HDS2	R
		W/4 EA. .125 LUGS		
22.000	.875	1975660	HDS1	R
22.000	1.000	1975680	HDS1	R
22.125	.875	1975710	HDS1	R
22.125	1.000	**1975732**	HDS2	R
22.125	1.000	1975972	HDSA1	RD
22.250	.875	1975760	HDS1	R
19.813 SHAFT				
	1.250	84781	LDSLV4	
	FOR SEAL SH SIZE 20.000		(508.00MM	
19.875 SHAFT				
	.310	405002	VR3	R
		SHAFT RANGE 18.900 - 20.870		
	.310	405006	VR3	V
		SHAFT RANGE 18.700 - 20.080		
	.790	**405000**	VR1	R
		SHAFT RANGE 18.900 - 20.870		
	.790	**405004**	VR1	V
		SHAFT RANGE 18.900 - 20.870		
21.750	.750	1988470	HDS1	R
21.875	.625	**1988528**	HS8	R
21.875	.813	1988557	HS7	R
22.000	.875	1988620	HDS1	R
22.000	1.000	1988630	HDS1	R
22.250	.875	1988710	HDS1	R
19.881 SHAFT				
21.881	.813	1989557	HS7	R
19.937 SHAFT				
21.687	.625	**HDL-4233-R**	HDL	R
19.938 SHAFT				
21.500	.750	1994300	HDS1	R
21.688	.625	1994360	HDS1	R
21.688	.625	1994361	HDS1	R
		W/4 EA .063 LUGS		
21.688	.625	1994363	HDS1	R
		W/4 EA .125 LUGS		
21.750	.750	1994430	HDS1	R
19.983 SHAFT				
22.000	.625	1998523	HDS3	D
		W/4 EA .500 ADJ. LUGS		
22.000	.875	1998603	HDS3	D
		W/4 EA .500 ADJ LUGS		
20.000 SHAFT				
.813	1.250	524587	CT1	R
		BORE DIA. IS SHOULDER WIDTH		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
20.000 SHAFT (Cont.)				
21.000	.500	2000017	HS7	R
21.000	.500	**2000018**	HS8	D
21.250	1.375	2000913	HDSA1	RD
21.500	.625	2000237	HS7	R
21.500	.625	**2000238**	HS8	R
21.500	.750	**HDL-4235-R**	HDL	R
21.500	.750	**2000258**	HS8	R
21.500	.625	2000230	HDS1	R
21.500	.625	2000239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
21.500	.750	2000250	HDS1	R
21.500	.750	2000253	HDS1	R
		W/8 EA .125 LUGS		
21.500	.750	2000254	HDS1	R
		W/4 EA .250 LUGS		
21.500	.750	**2000262**	HDS2	V
21.500	.750	2000283	HDS1	V
21.500	.875	2000920	HDSA1	V
21.500	.875	593789	HDSA1	VD
21.500	.750	**2000232**	HDS2	R
21.500	.750	2000240	HDS7	R
21.750	.750	**HDL-4236-R**	HDL	R
21.750	.750	**2000388**	HS8	R
21.750	.750	2000380	HDS1	R
22.000	.500	**595044**	HS5	R
22.000	.625	2000527	HS7	R
22.000	.625	**2000528**	HS8	R
22.000	.813	2000557	HS7	R
22.000	.813	**2000558**	HS8	R
22.000	.875	**HDL-4237-R**	HDL	R
22.000	.875	**2000568**	HS8	R
22.000	1.000	2000587	HS7	R
22.000	.625	2000520	HDS1	R
22.000	.625	**2000522**	HDS2	V
22.000	.625	2000529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
22.000	.750	2000543	HDS1	V
22.000	.875	2000560	HDS1	R
22.000	.875	2000561	HDS1	R
		W/4 EA .125 LUGS		
22.000	.875	2000563	HDS1	R
		W/8 EA .125 LUGS		
22.000	.875	2000564	HDS1	V
22.000	.875	**2000565**	HDS2	R
22.000	.875	**2000566**	HDS2	R
		W/4 EA .250 LUGS		
22.000	.906	2000500	HDS1	R
22.000	.906	2000570	HDS1	R
22.000	1.000	2000580	HDS1	R
22.000	1.000	2000582	HDS1	R
		W/6 EA .250 LUGS		
22.000	1.000	**2000584**	HDS2	R
		W/6 EA .250 LUGS		
22.000	1.000	**2000585**	HDS2	R
22.000	1.250	**2000592**	HDS2	R
22.000	1.812	2000590	HDS1	R
22.000	1.813	2000951	HDSE1	RR
22.125	.916	**2000638**	HS8	V
22.125	.916	**2000648**	HS8	R
22.125	.916	**2000649**	HS8	D
22.125	1.000	2000630	HDS1	R
22.250	.875	2000660	HDS1	R
22.500	.875	2000760	HDS1	R
22.500	1.250	2000795	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
20.000 SHAFT (Cont.)				
22.625	.750	**2000803**	HDS2	R
20.079 SHAFT				
	.196	**405103**	VR4	R
		SHAFT RANGE 20.079-20.276		
20.188 SHAFT				
22.500	1.000	2019690	HDS1	R
20.250 SHAFT				
21.250	.500	2025017	HS7	R
21.750	.750	**HDL-4239-R**	HDL	R
21.750	.750	**2025214**	HDS2	V
21.750	.750	2025250	HDS1	R
21.750	.750	2025251	HDS1	R
		W/4 EA .125 LUGS		
21.750	.750	**2025252**	HDS2	R
21.750	.750	**2025254**	HDS2	R
		W/4 EA .125 LUGS		
21.750	1.500	**2025284** †	HDS2	R
21.875	.875	2025340	HDS1	R
22.000	.750	2025380	HDS1	R
22.250	.625	**2025528**	HS8	R
22.250	.813	2025557	HS7	R
22.250	.750	2025543	HDS1	V
22.250	.875	2025560	HDS1	R
22.250	.875	**2025562**	HDS2	R
22.250	.875	2025564	HDS1	R
		W/4 EA .125 LUGS		
22.250	.875	2025569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
22.250	.875	2025570	HDS1	D
22.250	1.000	2025568	HDS3	D
		W/4 EA .500 ADJ. LUGS		
22.250	1.000	2025580	HDS1	R
22.375	1.000	2025630	HDS1	R
22.500	.875	2025660	HDS1	R
22.500	.875	**2025662**	HDS2	R
22.500	.875	**2025664**	HDS2	R
		W/4 EA .375 LUGS		
22.500	.875	**2025665**	HDS2	R
		W/4 EA .500 ADJ. LUGS		
24.000	1.000	2025901	HDS1	R
20.275 SHAFT				
21.535	.630	**2027118**	HS8	R
20.312 SHAFT				
	1.000	86739	LDSLV4	
		FOR SEAL SH SIZE 20.500	(520.70MM)	
20.313 SHAFT				
.750	.938	525030	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
.750	.938	595455	CT3	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
20.438 SHAFT				
22.500	.750	2044600	HDS1	R
22.500	.750	**2044602**	HDS2	R
22.500	.750	**2044603**	HDS2	R
		W/4 EA .250 LUGS		
22.500	.750	2044604	HDS1	R
		W/4 EA .250 LUGS		
22.500	1.000	2044580	HDSA1	R
23.000	.875	2044790	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
20.438 SHAFT (Cont.)				
23.000	1.250	2044793	HDS1	R
23.125	.875	2044800	HDS1	R
20.472 SHAFT				
	.196	**405203**	VR4	R
	SHAFT RANGE 20.472-20.669			
22.834	.984	2047673	HDS3	D
	W/4 EA .500 ADJ. LUGS			
20.500 SHAFT				
.813	1.000	530468	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.000	596571	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
22.000	.750	**HDL-4619-R**	HDL	R
22.000	.750	**2050258**	HS8	R
22.000	.750	**2050212**	HDS2	R
	W/4 EA .188 LUGS			
22.000	.750	2050250	HDS1	R
22.000	.750	**2050252**	HDS2	R
22.000	.750	**2050254**	HDS2	V
22.000	1.500	2050282	HDSA2	RD
22.500	.625	2050527	HS7	R
22.500	.625	**2050528**	HS8	R
22.500	.812	**2050558**	HS8	R
22.500	.813	2050557	HS7	R
22.500	.875	**HDL-4246-R**	HDL	R
22.500	.875	2050565	HDS1	R
	W/4 EA .125 LUGS			
22.500	.875	**2050568**	HS8	R
22.500	.625	2050520	HDS1	R
22.500	.625	**2050523**	HDS2	D
22.500	.625	2050529	HDS3	D
	W/4 EA .500 ADJ. LUGS			
22.500	.750	2050540	HDS1	R
22.500	.750	**2050542**	HDS2	R
22.500	.813	**2050552**	HDS2	R
22.500	.813	**2050553**	HDS2	V
22.500	.844	2050550	HDS1	R
22.500	.875	2050560	HDS1	R
22.500	.875	2050562	HDS1	R
	W/4 EA .250 LUGS			
22.500	.875	**2050563**	HDS2	R
22.500	.875	2050954	HDSA2	V
22.500	.906	2050573	HDS1	R
	W/4 EA .188 LUGS			
22.500	.906	**2050575**	HDS2	R
	W/4 EA .250 LUGS			
22.500	1.000	2050580	HDS1	R
22.500	1.000	2050586	HDS1	R
	W/4 EA .500 LUGS			
22.500	1.500	2050596	HDS1	R
22.500	1.500	2050953	HDSE2	RR
	W/LUBE HOLES ON O.D.			
22.750	.875	2050660	HDS1	R
22.999	1.125	2050740	HDS1	R
22.999	1.250	2050750	HDS1	R
23.000	.875	2050760	HDS1	R
23.000	1.250	2050791	HDS1	R
23.000	1.250	2050793	HDS1	R
	W/4 EA .250 LUGS			
20.515 SHAFT				
22.515	.813	2052557	HS7	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
20.625 SHAFT				
22.265	1.000	2063300	HDS1	R
22.625	.813	2063557	HS7	R
22.625	1.000	2063580	HDS1	R
20.700 SHAFT				
	.310	405252	VR3	R
	SHAFT RANGE 20.080 - 21.260			
20.719 SHAFT				
22.125	.875	2072200	HDS1	R
22.500	.875	2072440	HDS1	R
22.625	.875	2072500	HDS1	R
22.750	.875	2072600	HDS1	R
22.750	1.250	**2072954**	HDS2	D
20.750 SHAFT				
22.375	.875	2075340	HDS1	R
22.750	.625	**2075238**	HS8	R
22.750	.813	2075557	HS7	R
22.750	.875	**HDL-4248-R**	HDL	R
22.750	1.000	**2075588**	HS8	R
22.750	.750	2075540	HDS1	R
22.750	.750	2075543	HDS3	V
	W/4 EA .500 ADJ. LUGS			
22.750	.750	2075549	HDS3	D
	W/4 EA .500 ADJ. LUGS			
22.750	.875	2075560	HDS1	R
22.750	.875	2075561	HDS1	D
22.750	.875	**2075562**	HDS2	D
22.750	.875	**2075563**	HDS2	R
22.750	1.000	2075580	HDS1	R
22.750	1.250	2075950	HDSA1	RD
22.750	.875	2075569	HDS7	D
22.752	.875	**2075602**	HDS2	R
23.000	.875	2075660	HDS1	R
23.000	.875	2075662	HDS1	R
	W/4 EA .188 LUGS			
23.750	1.188	2075907	HDS1	R
	W/4 EA .313 LUGS			
23.750	1.500	2075908	HDS1	R
20.813 SHAFT				
	1.250	85800	LDSLV3	
	FOR SEAL SH SIZE 21.000		(533.40MM)	
	2.000	86805	LDSLV4	
	FOR SEAL SH SIZE 21.000		(533.40MM)	
	2.125	85367	LDSLV4	
	FOR SEAL SH SIZE 21.000		(533.40MM)	
	2.250	87241	LDSLV4	
	FOR SEAL SH SIZE 21.000		(533.40MM)	
	2.500	87298	LDSLV4	
	FOR SEAL SH SIZE 21.000			
20.827 SHAFT				
22.827	.813	2083557	HS7	R
20.861 SHAFT				
22.835	.860	**2086502**	HDS2	D
20.866 SHAFT				
	.196	**405303**	VR4	R
	SHAFT RANGE 20.866-21.063			
22.866	.813	2087557	HS7	R
22.866	.812	2068710	HDS1	R
22.866	.812	2086710	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
20.875 SHAFT				
.688	.875	528536	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
22.750	1.000	2087490	HDS1	R
22.875	.813	2088557	HS7	R
22.875	.750	2088540	HDS1	R
23.000	.750	**2088648**	HS8	R
23.000	.750	2088610	HDS1	R
23.228	.875	2088700	HDS1	R
23.228	.906	2088702	HDS1	R
23.500	.875	2088800	HDS1	R
20.990 SHAFT				
	2.250	84579	LDSLV3	
	FOR SEAL SH SIZE 21.178		(537.92MM)	
21.000 SHAFT				
	2.250	87090	LDSLV4	
	FOR SEAL SH SIZE 21.188		(538.18MM)	
22.000	.500	2100017	HS7	R
22.250	1.375	2100913	HDSA1	RD
22.500	.750	**HDL-5259-R**	HDL	R
22.500	.750	2100257	HS7	R
22.500	.750	**2100258**	HS8	R
22.500	.750	2100250	HDS1	R
22.580	.578	**2100228**	HS8	R
22.750	.750	**HDL-5312-R**	HDL	R
22.750	.688	2100370	HDS1	R
22.750	.750	2100380	HDS1	R
22.750	.813	2100390	HDS1	R
22.750	.813	2100391	HDS1	R
		W/4 EA .125 LUGS		
22.750	.813	2100393	HDS1	V
22.751	.813	2100430	HDS1	R
22.751	.813	2100432	HDS1	R
		W/4 EA .125 LUGS		
22.938	1.000	2100490	HDS1	R
23.000	.625	2100527	HS7	R
23.000	.625	**2100528**	HS8	R
23.000	.813	2100517	HS7	V
23.000	.813	2100557	HS7	R
23.000	.813	**2100558**	HS8	R
23.000	.813	**594201**	HS8	V
23.000	.875	**HDL-4253-R**	HDL	R
23.000	1.000	**2100588**	HS8	V
23.000	.625	**2100516**	HDS2	V
		W/4 EA .500 ADJ. LUGS		
23.000	.625	2100520	HDS1	R
23.000	.625	2100521	HDS1	R
		W/4 EA .125 LUGS		
23.000	.625	**2100522**	HDS2	R
23.000	.625	2100529	HDS3	D
		W/4 EA .500 ADJ. LUGS		
23.000	.708	**2100532**	HDS2	R
23.000	.750	2100540	HDS1	R
23.000	.750	**2100544**	HDS2	R
		W/4 EA .125 LUGS		
23.000	.750	**2100545**	HDS2	R
23.000	.813	2100550	HDS1	R
23.000	.813	**2100553**	HDS2	V
23.000	.875	2100560	HDS1	R
23.000	.875	2100561	HDS1	R
		W/4 EA .125 LUGS		
23.000	.875	**2100562**	HDS2	R
		W/6 EA .125 LUGS		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
21.000 SHAFT (Cont.)				
23.000	.875	2100563	HDS1	R
		W/4 EA .500 LUGS		
23.000	.875	**2100564**	HDS2	R
23.000	.875	**2100565**	HDS2	D
23.000	.875	**2100566**	HDS2	D
		W/4 EA .250 LUGS		
23.000	.875	2100567	HDS1	V
		W/4 EA .375 LUGS		
23.000	.875	2100568	HDS3	D
		W/4 EA. .125 LUGS		
23.000	.875	**2100575**	HDS2	R
		W/6 EA .500 ADJ. LUGS		
23.000	.875	2100951	HDSA1	RD
23.000	.875	2100952	HDSC2	RD
		W/6 EA .500 LUGS		
23.000	.875	2100955	HDSC2	RD
23.000	.875	2100957	HDSA2	V
23.000	1.000	2100580	HDS1	R
23.000	1.000	2100583	HDS1	V
23.000	1.000	**2100584**	HDS2	R
		W/4 EA .250 LUGS		
23.000	.750	2100539	HDS7	R
		W/4 EA .125 LUGS		
23.000	.750	**2100330**	HDS4	R
		W/8 EA .500 MOLDED ADJ. LUGS		
23.000	.750	2100335	HDS6	R
		W/8 EA .500 MOLDED ADJ. LUGS		
23.012	.750	2100543	HDS1	R
23.250	.875	2100660	HDS1	R
23.500	.875	2100760	HDS1	R
23.500	1.000	2100780	HDS1	R
23.500	1.125	2100790	HDS1	R
23.500	1.125	2100791	HDS1	R
		W/4 EA .125 LUGS		
23.500	1.250	2100800	HDS1	R
24.000	.875	2100870	HDS1	R
21.125 SHAFT				
23.125	1.000	2112570	HDS1	V
21.204 SHAFT				
23.204	.813	2120550	HDS1	R
21.210 SHAFT				
24.500	1.000	2121900	HDS1	R
21.250 SHAFT				
22.750	.750	2125257	HS7	R
23.000	.750	**HDL-4255-R**	HDL	R
23.000	.750	2125380	HDS1	R
23.000	.875	2125940	HDSA1	RD
23.250	.625	2125527	HS7	R
23.250	.813	2125557	HS7	R
23.250	.875	**HDL-4254-R**	HDL	R
23.250	.625	2125520	HDS1	R
23.250	.750	2125540	HDS1	R
23.250	.813	**2125555**	HDS2	D
23.250	.875	2125560	HDS1	R
23.250	.875	2125562	HDS1	R
		W/4 EA .313 LUGS		
23.250	.875	**2125563**	HDS2	R
23.250	.875	**2125564**	HDS2	V
23.500	.875	2125660	HDS1	R
24.250	1.000	2125890	HDS1	R
24.250	1.000	2125895	HDS1	D

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
21.260 SHAFT				
23.228	.984	2126510	HDS7	R
23.260	.813	2126557	HS7	R
21.313 SHAFT				
23.125	.750	2131440	HDS1	R
23.312	.875	2131560	HDS1	R
23.312	.875	2131561	HDS1	R
		W/4 EA .063 LUGS		
23.312	1.000	2131580	HDS1	R
23.500	.875	2131640	HDS1	R
21.375 SHAFT				
23.250	.875	2138480	HDS1	R
23.375	.813	2138557	HS7	R
23.375	.875	2138560	HDS1	R
23.500	.875	2138620	HDS1	R
21.438 SHAFT				
23.000	.750	2144300	HDS1	R
23.188	.625	2144360	HDS1	R
23.188	.625	2144361	HDS1	R
		W/4 EA .125 LUGS		
23.188	.625	2144362	HDS1	R
		W/4 EA .031 LUGS		
23.188	.625	2144363	HDS1	R
		W/4 EA .063 LUGS		
23.188	.750	2144380	HDS1	R
23.250	.875	2144440	HDS1	R
23.500	.875	2144600	HDS1	R
21.456 SHAFT				
23.456	.813	2146557	HS7	R
21.500 SHAFT				
.813	1.250	524599	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.813	1.000	524362	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
3.313	3.750	526741	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
22.688	.625	2150070	HDS1	R
23.000	.625	**2150238**	HS8	R
23.000	.750	2150257	HS7	R
23.000	.750	**2150258**	HS8	R
23.250	.750	2150380	HDS1	R
23.250	.750	**2150384**	HDS2	V
23.250	.750	2150387	HDS1	V
23.250	.750	2150388	HDS1	D
23.500	.625	2150527	HS7	R
23.500	.813	2150557	HS7	R
23.500	.875	**HDL-4259-R**	HDL	R
23.500	.625	2150520	HDS1	R
23.500	.750	2150540	HDS1	R
23.500	.750	**2150542**	HDS2	R
23.500	.750	2150549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
23.500	.800	**2150574**	HDS2	V
23.500	.813	2150550	HDS1	R
23.500	.813	2150554	HDS1	R
		W/6 EA .375 LUGS		
23.500	.813	**2150555**	HDS2	R
		W/6 EA .375 LUGS		
23.500	.875	2150560	HDS1	R
23.500	.875	**2150562**	HDS2	V
23.500	.875	**2150565**	HDS2	D

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
21.500 SHAFT (Cont.)				
23.500	1.000	2150580	HDS1	R
23.500	1.000	594356	HDSA1	RD
23.563	.875	2150600	HDS1	R
23.750	.875	2150660	HDS1	R
24.000	.875	2150760	HDS1	R
24.000	1.000	2150780	HDS1	R
24.000	1.250	2150800	HDS1	R
21.625 SHAFT				
23.375	.750	2163380	HDS1	R
23.625	.813	2163557	HS7	R
23.625	.875	**HDL-4263-R**	HDL	R
23.625	.875	2163560	HDS1	R
23.625	1.000	2163580	HDS1	R
23.750	.875	2163620	HDS1	R
21.653 SHAFT				
23.153	.750	2165257	HS7	R
21.654 SHAFT				
	.196	**405503**	VR4	R
		SHAFT RANGE 21.654-21.850		
21.688 SHAFT				
23.188	.750	2169257	HS7	R
21.691 SHAFT				
23.691	.813	2169557	HS7	R
21.750 SHAFT				
23.250	.625	2175237	HS7	R
23.250	.625	**2175238**	HS8	R
23.250	.625	**594360**	HS8	R
23.250	.750	**HDL-4621-R**	HDL	R
23.250	.750	2175257	HS7	R
23.250	.625	2175230	HDS1	R
23.250	.625	**2175232**	HDS2	R
23.250	.750	2175250	HDS1	R
23.250	.750	**2175252**	HDS2	R
23.250	.750	2175253	HDS1	R
		W/4 EA .125 LUGS		
23.750	.813	2175557	HS7	R
23.750	.875	**HDL-4265-R**	HDL	R
23.750	.750	2175540	HDS1	R
23.750	.750	**2175542**	HDS2	R
23.750	.750	**2175545**	HDS2	R
		W/4 EA .500 LUGS		
23.750	1.000	2175580	HDS1	R
23.750	1.000	2175581	HDS1	R
		W/4 EA .063 LUGS		
23.750	1.000	**2175585**	HDS2	R
		W/4 EA .500 LUGS		
23.750	.875	2175569	HDS7	R
24.000	.875	2175660	HDS1	R
24.000	.875	**2175664**	HDS2	R
		W/4 EA .125 LUGS		
24.000	1.000	2175680	HDS1	R
24.250	.875	2175760	HDS1	R
24.500	1.000	2175830	HDS1	R
24.750	1.000	2175899	HDS3	D
		W/4 EA .500 ADJ. LUGS		
24.750	1.500	2175895	HDS1	R
24.750	1.500	2175920	HDSD1	RR
24.750	1.500	2175992	HDSD2	VV
24.750	1.500	2175997	HDSD1	VV

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
21.750 SHAFT (Cont.)				
24.750	1.500	2175998	HDSE1	VV
21.803 SHAFT				
	2.362	87069	LDSLV4	
	FOR SEAL SH SIZE 21.991		(558.57MM)	
21.813 SHAFT				
	2.250	84590	LDSLV4	
	FOR SEAL SH SIZE 22.000		(558.80MM)	
.813	1.250	524210	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
21.875 SHAFT				
	.310	405502	VR3	R
	SHAFT RANGE 20.870 - 22.830			
	.790	**405500**	VR1	R
	SHAFT RANGE 20.870 - 22.830			
	.790	**405504**	VR1	V
	SHAFT RANGE 20.870 - 22.830			
23.875	.813	2188557	HS7	R
21.938 SHAFT				
.688	1.125	524211	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
22.000 SHAFT				
.813	1.250	524347	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.000	524363	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
23.000	.500	2200017	HS7	R
23.000	.500	2200027	HS7	V
23.000	.350	511204	G1	L
		QUILL WIPER		
23.500	.625	2200237	HS7	R
23.500	.625	**2200238**	HS8	R
23.500	.750	**HDL-4269-R**	HDL	R
23.500	.750	**2200218**	HS8	R
23.500	.750	2200257	HS7	R
23.500	.625	2200230	HDS1	R
23.500	.625	2200239	HDS3	D
		W/4 EA .500 ADJ. LUGS		
23.500	.750	**2200212**	HDS2	D
23.500	.750	**2200213**	HDS2	V
23.500	.750	2200250	HDS1	R
23.500	.750	**2200252**	HDS2	R
23.500	.750	2200253	HDS1	D
23.500	.750	**2200255**	HDS2	R
		W/4 EA .250 LUGS		
23.500	.750	2200256	HDS1	R
		W/6 EA .125 LUGS		
23.500	.875	2200920	HDSA1	RD
23.750	.813	**2200398**	HS8	D
23.750	.813	2200390	HDS1	R
23.750	.813	2200393	HDS1	D
24.000	.625	**2200529**	HS8	D
24.000	.812	**2200555**	HS8	V
24.000	.813	2200557	HS7	R
24.000	.813	**2200558**	HS8	D
24.000	.875	**HDL-4270-R**	HDL	R
24.000	1.000	2200587	HS7	R
24.000	.875	2200954	HDSA1	RL
24.000	.625	**2200522**	HDS2	D
		W/4 EA .375 LUGS		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
22.000 SHAFT (Cont.)				
24.000	.750	2200513	HDS3	V
		W/4 EA .500 ADJ. LUGS		
24.000	.750	2200540	HDS1	R
24.000	.750	**2200542**	HDS2	R
24.000	.750	2200549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
24.000	.813	2200550	HDS1	R
24.000	.875	2200140	HDS1	R
		W/4 EA .188 LUGS		
24.000	.875	2200560	HDS1	R
24.000	.875	2200561	HDS1	R
		W/4 EA .125 LUGS		
24.000	.875	2200562	HDS1	R
		W/4 EA .250 LUGS		
24.000	.875	**2200563**	HDS2	R
		W/4 EA .125 LUGS		
24.000	.875	**2200564**	HDS2	D
24.000	.875	**2200565**	HDS2	R
24.000	.875	**2200566**	HDS2	R
		W/4 EA .250 LUGS		
24.000	.875	**2200567**	HDS2	D
		W/4 EA .250 LUGS		
24.000	.875	2200955	HDSA2	RL
24.000	.875	**2201560**	HDS2	D
		W/4 EA .125 LUGS		
24.000	.875	2201564	HDS1	D
24.000	.875	2201565	HDS1	R
		W/6 EA .125 LUGS		
24.000	1.000	2200580	HDS1	R
24.000	1.000	2200585	HDS1	R
		W/4 EA .125 LUGS		
24.000	1.250	2200590	HDS1	R
24.000	1.250	**2200592**	HDS2	D
24.000	1.250	2200953	HDSD1	RR
24.000	1.250	2200958	HDSE2	DD
24.000	1.250	2200962	HDSD2	DD
24.000	1.250	526339	HDS1	D
24.000	1.250	**593880**	HDS2	D
24.000	1.281	2200591	HDS1	R
24.000	1.875	2200961	HDSE2	RR
		W/LUBE HOLES ON O.D.		
24.000	.875	**2200600**	HDS4	R
		W/8 EA .500 MOLDED ADJ. LUGS		
24.000	.875	2200605	HDS6	R
		W/8 EA .500 MOLDED ADJ. LUGS		
24.250	1.000	2200680	HDS1	R
24.500	.875	2200760	HDS1	R
24.500	.875	2200762	HDS1	R
		W/4 EA .250 LUGS		
24.500	1.000	2200780	HDS1	R
24.500	1.250	2200800	HDS1	R
24.500	1.250	2200804	HDS1	D
24.750	.875	2200820	HDS1	R
25.750	1.250	**593959**	HDS2	R
26.000	1.250	2200900	HDS1	R
26.000	1.750	**593960**	HDS2	R
22.047 SHAFT				
	.196	**405603**	VR4	R
	SHAFT RANGE 22.047-22.244			
22.063 SHAFT				
24.063	.813	2206557	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
22.125 SHAFT				
24.000	1.000	2213490	HDS1	R
24.125	.813	2213557	HS7	R
24.125	.813	2213550	HDS1	R
22.250 SHAFT				
	1.000	85691	LDSLV3	
	FOR SEAL SH SIZE 22.438		(569.93MM)	
23.750	.625	2225230	HDS1	R
24.000	.750	2225350	HDS1	V
24.000	.750	2225380	HDS1	R
24.250	.813	2225557	HS7	R
24.250	.875	**HDL-3764-R**	HDL	R
24.250	1.000	**2225588**	HS8	R
24.250	.813	2225550	HDS1	R
24.250	.813	**2225553**	HDS2	V
24.250	.875	2225560	HDS1	R
24.250	.875	2225561	HDS7	R
		W/4 EA .250 LUGS		
24.250	.875	**2225562**	HDS2	R
24.250	.875	**2225563**	HDS2	R
		W/4 EA .125 LUGS		
24.250	.875	2225564	HDS1	R
		W/4 EA .250 LUGS		
24.250	.875	**2225565**	HDS2	R
		W/4 EA .250 LUGS		
24.250	.875	2225568	HDS3	H
		W/4 EA .500 ADJ .LUGS		
24.250	.875	2225569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
24.250	1.000	2225580	HDS1	R
		W/4 EA .500 ADJ. LUGS		
24.250	.875	2225511	HDS7	H
24.500	.875	2225660	HDS1	R
24.500	1.000	2225680	HDS1	R
22.303 SHAFT				
	2.362	87070	LDSLV4	
	FOR SEAL SH SIZE 22.491		(571.27MM)	
22.313 SHAFT				
	1.250	85907	LDSLV4	
	FOR SEAL SH SIZE 22.500		(571.50MM)	
22.375 SHAFT				
24.250	.750	2238470	HDS1	R
24.368	.875	2238500	HDS1	R
24.368	.875	2238505	HDS1	R
		W/4 EA .375 LUGS		
24.368	.875	2238509	HDS3	D
		W/4 EA .500 ADJ. LUGS		
24.368	.875	**2238565**	HDS2	D
		W/4 EA .375 LUGS		
24.368	.875	**2237710**	HDS2	R
24.373	.875	2238550	HDS1	R
24.375	.750	2237515	HDS1	R
		W/4 EA .125 LUGS		
24.375	.750	2237541	HDS1	R
		W/4 EA .125 LUGS		
24.375	.750	2238540	HDS1	R
24.375	.875	2238560	HDS1	R
24.375	.875	2238563	HDS1	R
		W/4 EA .375 LUGS		
24.500	.750	2238610	HDS1	R
24.500	.875	2238620	HDS1	R
24.750	.875	2238710	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
22.437 SHAFT				
24.000	.750	**HDL-4275-R**	HDL	R
24.437	.750	**HDL-6480-R**	HDL	R
22.438 SHAFT				
24.000	.750	2243303	HDS1	V
24.000	.750	2244300	HDS1	R
24.250	.688	**2243468**	HS8	R
24.250	.750	2244440	HDS1	R
24.376	.875	2244453	HDS1	R
		W/4 EA .375 LUGS		
24.438	.750	2244540	HDS1	R
24.438	.875	2244560	HDS1	R
24.438	.906	**2244542**	HDS2	R
22.441 SHAFT				
	.196	**405703**	VR4	R
	SHAFT RANGE 22.441-22.638			
24.803	.787	**HDL-3061-R**	HDL	R
22.500 SHAFT				
.813	1.250	524212	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
23.688	.625	2250100	HDS1	R
23.688	.625	2250105	HDS1	D
24.000	.750	**HDL-4271-R**	HDL	R
24.000	.625	2250230	HDS1	R
24.250	.750	2250380	HDS1	R
24.250	.750	2250381	HDS1	R
		W/4 EA .063 LUGS		
24.250	.750	2250388	HDS3	R
		W/4 EA .375 LUGS		
24.250	.813	2250390	HDS1	R
24.250	.813	2250391	HDS1	R
		W/4 EA .063 LUGS		
24.250	.875	2250410	HDS1	R
24.260	.750	2250400	HDS1	R
24.495	.875	2250500	HDS1	R
24.495	.875	2250501	HDS1	R
		W/4 EA .125 LUGS		
24.495	.875	2250502	HDS1	R
		W/4 EA .313 LUGS		
24.500	.813	2250557	HS7	R
24.500	.875	**HDL-4279-R**	HDL	R
24.500	.625	2250520	HDS1	R
24.500	.750	2250540	HDS1	R
24.500	.750	2250545	HDS1	R
		W/4 EA .125 LUGS		
24.500	.750	2250549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
24.500	.875	**2250552**	HDS2	V
24.500	.875	2250560	HDS1	R
24.500	1.000	2250580	HDS1	R
24.750	.875	2250660	HDS1	R
22.638 SHAFT				
	.196	**405753**	VR4	R
	SHAFT RANGE 22.638-22.835			
24.638	.750	**2263548**	HS8	D
22.673 SHAFT				
24.173	.750	2267257	HS7	R
22.750 SHAFT				
.938	1.375	524657	CT1	R
	BORE DIA. IS SHOULDER WIDTH			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
22.750 SHAFT (Cont.)				
.938	1.375	596570	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
24.500	.750	2275380	HDS1	R
24.750	.813	2275557	HS7	R
24.750	.813	**2275558**	HS8	R
24.750	.875	**HDL-4281-R**	HDL	R
24.750	.875	2275560	HDS1	R
24.750	.875	**2275562**	HDS2	R
24.750	1.000	2275580	HDS1	R
25.000	.875	2275660	HDS1	R
25.500	.875	2275820	HDS1	R
22.812 SHAFT				
23.000	2.000	90163	LDSLV4	
FOR SEAL SH SIZE 23.000				
22.814 SHAFT				
24.814	.813	**2281558**	HS8	R
22.834 SHAFT				
24.834	.813	2283557	HS7	R
22.835 SHAFT				
	.196	**405803**	VR4	R
SHAFT RANGE 22.835-23.031				
22.875 SHAFT				
24.875	.813	2288557	HS7	R
23.000 SHAFT				
	2.000	90146	LDSLV4	
FOR SEAL SH SIZE 23.188				
24.000	.500	2300017	HS7	R
24.500	.750	**HDL-4283-R**	HDL	R
24.500	.750	2300257	HS7	R
24.500	.750	**2300258**	HS8	R
W/HOOK & EYE SPRING CONNECTOR				
24.500	.750	**2300214**	HDS2	V
24.500	.750	2300220	HDS1	R
W/4 EA .500 ADJ. LUGS				
24.500	.750	2300250	HDS1	R
24.500	.750	**2300252**	HDS2	R
24.500	.750	**2300254**	HDS2	R
W/4 EA .125 LUGS				
24.500	.750	2300255	HDS1	D
24.500	.750	2300259	HDS3	D
W/4 EA .500 ADJ. LUGS				
24.500	.875	2300921	HDSB1	RD
24.500	.875	593810	HDSC1	DD
24.750	.688	**2300370**	HS8	R
24.750	.750	2300380	HDS1	R
24.750	.750	2300381	HDS1	R
W/6 EA .063 LUGS				
24.750	.750	**2300382**	HDS2	R
24.750	.750	**2300383**	HDS2	D
24.750	.750	**2300384**	HDS2	V
24.750	.750	2300388	HDS1	D
24.750	.938	2300412	HDS1	R
W/8 EA .125 LUGS				
24.750	1.250	2300983	HDSE1	VV
25.000	.813	**2300551**	HS8	D
25.000	.813	2300557	HS7	R
25.000	.813	**2300558**	HS8	R
25.000	.813	**2300559**	HS8	D
25.000	.875	**HDL-4284-R**	HDL	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
23.000 SHAFT (Cont.)				
25.000	.750	2300540	HDS1	R
25.000	.875	2300560	HDS1	R
25.000	.875	**2300561**	HDS2	R
25.000	.875	2300563	HDS1	R
W/6 EA .250 LUGS				
25.000	.875	2300565	HDS1	R
W/8 EA .125 LUGS				
25.000	.875	2300569	HDS3	D
W/4 EA .500 ADJ. LUGS				
25.000	.938	2300570	HDS1	R
25.000	1.000	2300580	HDS1	R
25.000	1.000	**2300582**	HDS2	R
25.000	1.000	2300952	HDSA2	RL
25.000	1.281	2300591	HDS1	R
25.250	.875	2300660	HDS1	R
25.375	.875	2300710	HDS1	R
25.375	.875	2300717	HDS1	V
25.500	.875	**HDL-4285-R**	HDL	R
25.500	.875	2300760	HDS1	R
25.500	.875	2350567	HDS1	V
25.500	1.250	2300800	HDS1	R
25.500	1.000	2300780	HDS1	R
23.074 SHAFT				
24.954	.813	**2307558**	HS8	R
23.208 SHAFT				
25.208	.813	**2320558**	HS8	R
23.228 SHAFT				
	.196	**405903**	VR4	R
SHAFT RANGE 23.228-23.622				
23.250 SHAFT				
.813	1.250	595635	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
25.000	.750	2325380	HDS1	R
25.000	.750	2325381	HDS1	R
W/4 EA .125 LUGS				
25.000	.750	2325382	HDS1	R
W/4 EA .250 LUGS				
25.000	.750	2325383	HDS1	R
W/6 EA .250 LUGS				
25.000	.750	**2325385**	HDS2	R
25.000	.750	**2325386**	HDS2	R
W/4 EA .250 LUGS				
25.250	.813	2325557	HS7	R
25.250	.750	2325540	HDS1	R
25.250	.813	2325550	HDS1	R
25.250	.875	2325560	HDS1	R
25.250	.875	2325562	HDS1	R
W/6 EA .250 LUGS				
25.500	.875	2325660	HDS1	R
25.750	1.000	2325780	HDS1	R
23.300 SHAFT				
24.300	.500	2330017	HS7	R
23.310 SHAFT				
25.310	.875	**2331568**	HS8	R
23.313 SHAFT				
25.313	1.000	2331580	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
23.375 SHAFT				
.938	1.375	525627	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
24.875	.750	2338250	HDS1	R
25.375	.813	2338557	HS7	R
25.375	1.000	2338580	HDS1	R
23.434 SHAFT				
	.689	87861	LDSLV4	
	FOR SEAL SH SIZE 23.622			
	.984	87777	LDSLV4	
	FOR SEAL SH SIZE 23.434			
23.438 SHAFT				
.688	1.125	525031	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
23.500 SHAFT				
.938	1.375	524364	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
24.500	.500	2350017	HS7	R
24.681	.591	**HDL-3033-R**	HDL	R
25.000	.625	**2350238**	HS8	R
25.250	.750	2350380	HDS1	R
25.250	.750	**2350382**	HDS2	R
25.250	.750	**2350652**	HDS2	V
25.500	.813	2350557	HS7	R
25.500	.875	**HDL-4288-R**	HDL	R
25.500	.750	2350540	HDS1	R
25.500	.813	2350550	HDS1	R
25.500	.875	2350560	HDS1	R
25.500	.875	2350562	HDS1	R
	W/6 EA .250 LUGS			
25.500	.875	2350570	HDS1	V
25.500	1.000	2350580	HDS1	R
25.500	1.250	2350955	HDSD2	RR
25.750	.875	2350660	HDS1	R
26.375	1.000	2350840	HDS1	R
23.562 SHAFT				
25.312	.750	2356380	HDS1	R
25.312	.750	2356383	HDS3	R
	W/4 EA .375 LUGS			
25.375	.750	**HDL-4291-R**	HDL	R
23.563 SHAFT				
25.250	.750	2356340	HDS1	R
25.250	.750	**2356343**	HDS2	D
25.375	.750	2356440	HDS1	R
25.500	.750	2356500	HDS1	R
23.570 SHAFT				
25.070	.750	2357257	HS7	R
23.595 SHAFT				
25.095	.750	2360557	HS7	R
23.622 SHAFT				
	.196	**406003**	VR4	R
	SHAFT RANGE 23.622-24.016			
23.625 SHAFT				
25.375	.812	**2362418**	HDS2	D
25.625	.813	2363557	HS7	R
25.750	.875	2363620	HDS1	R
26.000	.875	**HDL-4292-R**	HDL	R
26.000	.875	2363710	HDS1	R
23.625 SHAFT (Cont.)				
26.250	.875	2363800	HDS1	R
23.687 SHAFT				
	1.950	87907	LDSLV4	
	FOR SEAL SH SIZE 23.875			
23.750 SHAFT				
	.310	406002	VR3	R
	SHAFT RANGE 22.830 - 24.800			
	.790	**406000**	VR1	R
	SHAFT RANGE 22.830 - 24.800			
	.790	**406004**	VR1	V
	SHAFT RANGE 22.830 - 24.800			
.813	1.250	524365	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.000	530589	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
.938	1.375	523184	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.938	1.375	525637	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
1.375	1.813	528267	CT4	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
1.375	1.813	528651	CT4	R
	BORE DIA. IS SHOULDER WIDTH			
25.250	1.000	**HDL-6239-R**	HDL	R
25.750	.813	2375557	HS7	R
25.750	.813	**2575558**	HS8	R
25.750	1.000	2375580	HDS1	R
26.000	.875	2375660	HDS1	R
26.242	.750	2375746	HDS1	R
26.750	1.125	2375900	HDS1	R
26.750	1.500	2375902	HDS1	R
26.750	1.500	2375903	HDS1	V
23.812 SHAFT				
	.750	87922	LDSLV4	
	FOR SEAL SH SIZE 24.000			
	2.500	87960	LDSLV4	
	FOR SEAL SHAFT SIZE 24.000			
23.875 SHAFT				
		238021	HDDFBV1	R
24.875	.500	2388017	HS7	R
25.750	.875	2388480	HDS1	R
26.000	.875	**HDL-4293-R**	HDL	R
26.000	.875	2387960	HDSA1	RL
26.000	.875	2387962	HDSA2	RL
26.000	.875	2387967	HDSA2	V
26.000	.875	2388620	HDS1	R
26.250	.875	2388710	HDS1	R
26.875	2.125	238020	HDDF1	R
23.938 SHAFT				
26.010	1.000	2394590	HDS1	R
24.000 SHAFT				
.813	1.000	594059	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
25.500	.750	**HDL-4623-R**	HDL	R
25.500	.750	2400257	HS7	R
25.500	.750	**2400258**	HS8	R
25.500	.750	**594361**	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
24.000 SHAFT (Cont.)				
25.500	.750	2400220	HDS1	D
		W/4 EA .500 ADJ. LUGS		
25.500	.750	2400250	HDS1	R
25.500	.750	2400251	HDS1	R
		W/4 EA .125 LUGS		
25.500	.750	**2400255**	HDS2	R
		W/4 EA .250 LUGS		
25.500	.750	2400259	HDS3	D
		W/4 EA .500 ADJ. LUGS		
25.580	.578	511822	HS9	R
25.875	.813	**2400488**	HS8	R
26.000	.750	**HDL-9988-R**	HDL	R
26.000	.812	**HDL-4295-R**	HDL	R
26.000	.813	**2400554**	HS8	R
		W/THREADED SPRING CONNECTOR		
26.000	.813	2400557	HS7	R
26.000	.813	**2400558**	HS8	R
26.000	.875	**HDL-4294-R**	HDL	R
26.000	1.000	2400587	HS7	R
26.000	1.000	**2400588**	HS8	R
26.000	1.000	**2400598**	HS8	D
26.000	.813	2400550	HDS1	R
26.000	.813	2400552	HDS1	R
		W/4 EA .375 LUGS		
26.000	.813	2400556	HDS3	D
		W/4 EA .500 ADJ. LUGS		
26.000	.875	**2400559**	HDS2	R
26.000	.875	2400560	HDS1	R
26.000	.875	2400561	HDS1	R
		W/4 EA .125 LUGS		
26.000	.875	2400562	HDS1	R
		W/4 EA .375 LUGS		
26.000	.875	2400563	HDS1	R
		W/4 EA .250 LUGS		
26.000	.875	2400565	HDS1	R
		W/4 EA .063 LUGS		
26.000	.875	**2400567**	HDS2	V
26.000	.875	2400568	HDS1	H
26.000	1.000	2400580	HDS1	R
26.250	.688	**2400718**	HS8	R
26.250	.870	2400962	HDSA2	RL
26.250	.875	2400660	HDS1	R
26.250	.875	2400661	HDS1	R
		W/4 EA .125 LUGS		
26.250	.875	2400663	HDS3	D
		W/4 EA .500 ADJ. LUGS		
26.250	1.000	2400680	HDS1	R
26.250	1.000	2400682	HDS1	R
		W/6 EA .250 LUGS		
26.250	1.000	2400683	HDS1	R
		W/4 EA .375 LUGS		
26.250	1.000	**2400684**	HDS2	R
		W/6 EA .250 LUGS		
26.250	1.000	**2400685**	HDS2	R
26.500	.875	2400760	HDS1	R
26.500	.875	2400761	HDS1	R
		W/4 EA .125 LUGS		
26.500	1.000	**2400784**	HDS2	R
26.500	1.125	2400790	HDS1	R
26.500	1.250	2400800	HDS1	R
26.750	.875	2400820	HDS1	R
24.016 SHAFT				
	.196	**406103**	VR4	R
		SHAFT RANGE 24.016-24.409		
24.093 SHAFT				
26.093	.813	**2409557**	HS8	R
24.250 SHAFT				
.813	1.000	526277	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
1.438	1.875	529276	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
26.000	.875	2425410	HDS1	R
26.000	1.000	2425420	HDS1	R
26.000	1.000	**2425422**	HDS2	R
26.063	.844	2425440	HDS1	R
26.250	.875	**HDL-4301-R**	HDL	R
26.250	1.000	**2425588**	HS8	R
26.250	.875	2425560	HDS1	R
26.250	.875	**2425562**	HDS2	V
26.250	1.000	2425580	HDS1	R
26.500	.875	2425660	HDS1	R
26.750	1.000	2425780	HDS1	R
24.375 SHAFT				
26.375	.750	2438540	HDS1	R
26.375	.750	**2438542**	HDS2	R
27.250	1.375	2438843	HDS1	R
24.409 SHAFT				
	.196	**406203**	VR4	R
		SHAFT RANGE 24.409-24.803		
26.929	.787	2440660	HDS1	R
24.437 SHAFT				
26.000	.750	**HDL-4302-R**	HDL	R
26.437	.750	**2443544**	HDS2	V
26.935	1.000	**HDL-9990-R**	HDL	R
24.438 SHAFT				
26.000	.750	2444300	HDS1	R
26.000	.750	2444301	HDS1	R
		W/4 EA .125 LUGS		
26.000	.750	2444302	HDS1	R
		W/4 EA .250 LUGS		
26.000	.750	**2444304**	HDS2	R
26.000	.750	2444305	HDS1	R
		W/6 EA .500 LUGS		
26.000	.750	**2444306**	HDS2	R
		W/4 EA .250 LUGS		
26.250	.750	2444430	HDS1	R
26.438	1.500	2448950	HDSD1	RR
		W/LUBE HOLES ON O.D.		
26.438	.625	2444520	HDS1	R
26.438	.625	2444521	HDS1	R
		W/4 EA .063 LUGS		
26.438	.719	**2444536**	HDS2	R
		W/4 EA .063 LUGS		
26.438	.750	2444540	HDS1	R
26.438	.750	2444541	HDS1	R
		W/4 EA .063 LUGS		
26.438	.750	**2444542**	HDS2	R
26.438	.813	2444550	HDS1	R
26.438	.875	2444560	HDS1	R
24.500 SHAFT				
25.500	.500	2450017	HS7	R
25.500	.500	**2450018**	HS8	R
25.625	.625	**2450068**	HS8	R
26.000	.750	2450257	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
24.500 SHAFT (Cont.)				
26.500	.813	2450557	HS7	R
26.500	.875	**HDL-4305-R**	HDL	R
26.500	1.000	2450587	HS7	R
26.500	.875	2450560	HDS1	R
26.500	.875	**2450563**	HDS2	R
26.500	.875	2450564	HDS1	V
26.500	.875	**2450565**	HDS2	R
		W/6 EA .250 LUGS		
26.500	.875	**2450567**	HDS2	V
26.500	.875	2450569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
26.500	1.000	2450580	HDS1	R
26.875	.875	2450710	HDS1	R
27.000	1.125	2450790	HDS1	R
27.000	1.250	2450800	HDS1	R
27.250	.875	2450820	HDS1	R
24.750 SHAFT				
.813	1.250	524213	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
26.750	.813	2475557	HS7	R
26.750	.813	**2475558**	HS8	R
26.750	1.000	2475587	HS7	R
26.750	.625	2475520	HDS1	R
26.750	.750	2475540	HDS1	R
24.803 SHAFT				
	.196	**406303**	VR4	R
		SHAFT RANGE 24.803-25.197		
26.303	.750	2480257	HS7	R
24.813 SHAFT				
26.813	.813	2481557	HS7	R
24.875 SHAFT				
26.126	.813	2487101	HDS1	R
26.875	.813	2488557	HS7	R
25.000 SHAFT				
	2.500	86567	LDSLV4	
	FOR SEAL SH SIZE 25.188		(639.78MM)	
26.000	.500	2500017	HS7	R
26.500	.750	**HDL-4308-R**	HDL	R
26.500	.750	2500247	HS7	D
26.500	.750	**2500249**	HS8	D
26.500	.750	2500257	HS7	R
26.500	.750	**2500258**	HS8	R
26.500	.750	**594375**	HS8	D
26.500	.750	2500217	HDS1	V
26.500	.750	2500250	HDS1	R
26.500	.750	2500251	HDS1	R
		W/6 EA .125 LUGS		
26.500	.750	2500252	HDS1	R
		W/6 EA .375 LUGS		
26.500	.750	**2500253**	HDS2	R
26.500	.750	**2500254**	HDS2	R
		W/6 EA .125 LUGS		
26.500	.750	2500255	HDS1	D
26.500	.750	2500256	HDS1	D
		W/6 EA .125 LUGS		
26.500	.750	2500259	HDS3	D
		W/4 EA .500 ADJ. LUGS		
26.500	1.125	2500920	HDSA1	RL
27.000	.813	2500557	HS7	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
25.000 SHAFT (Cont.)				
27.000	.813	**2500558**	HS8	D
		W/HOOK & EYE CONNECTOR		
27.000	.875	**594362**	HS8	R
27.000	.916	**2500559**	HS8	D
27.000	1.000	2500587	HS7	R
27.000	1.000	**2500588**	HS8	R
27.000	.750	2500540	HDS1	R
27.000	.750	2500544	HDS1	R
		W/4 EA .125 LUGS		
27.000	.750	2500545	HDS3	D
		W/4 EA .500 ADJ. LUGS		
27.000	.813	**2500553**	HDS2	V
27.000	.875	2500560	HDS1	R
27.000	.875	2500562	HDS1	R
		W/4 EA .125 LUGS		
27.000	.875	**2500563**	HDS2	V
27.000	.875	**2500564**	HDS2	R
		W/4 EA .125 LUGS		
27.000	.875	**2500565**	HDS2	R
27.000	.875	2500569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
27.000	.875	2500952	HDSA2	DL
		W/4 EA .500 ADJ. LUGS		
27.000	.906	2500570	HDS1	R
27.000	1.000	2500580	HDS1	R
27.000	1.000	**2500582**	HDS2	R
27.250	.875	2500660	HDS1	R
27.250	1.000	2500680	HDS1	R
27.250	1.000	2500682	HDS1	R
		W/4 EA .188 LUGS		
27.250	1.188	2500691	HDS1	R
27.250	1.188	2500692	HDS1	R
		W/4 EA .188 LUGS		
27.375	.875	2500740	HDS1	R
27.500	.875	2500760	HDS1	R
27.500	.875	**2500762**	HDS2	R
27.500	.875	**2500764**	HDS2	D
		W/4 EA .250 LUGS		
27.500	.875	2500769	HDS3	D
		W/4 EA .500 ADJ. LUGS		
27.500	1.000	**2500772**	HDS2	D
27.500	1.000	2500780	HDS1	R
27.500	1.000	**2500783**	HDS2	R
27.500	1.000	2500970	HDSA1	RL
27.500	1.000	2500971	HDSB1	RL
27.500	1.000	2500972	HDSA2	D
27.500	1.250	2500793	HDS1	R
28.375	.875	2500990	HDS1	R
25.125 SHAFT				
.938	1.375	524214	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
26.125	.500	2513017	HS7	R
26.750	.750	2513330	HDS1	R
25.187 SHAFT				
26.875	.750	**HDL-4311-R**	HDL	R
25.188 SHAFT				
26.875	.750	**2518332**	HDS2	H
26.875	.750	**2518344**	HDS2	V
26.875	.750	2518346	HDS3	V
		W/4 EA .500 ADJ. LUGS		
26.875	.750	2519340	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
25.188 SHAFT (Cont.)				
26.875	.750	**2519344**	HDS2	R
		W/4 EA .188 LUGS		
26.938	.750	2519380	HDS1	R
27.000	.875	2519440	HDS1	R
27.188	.813	2519557	HS7	R
25.197 SHAFT				
	.196	**406403**	VR4	R
		SHAFT RANGE 25.197-25.591		
25.219 SHAFT				
27.219	.813	2522557	HS7	R
25.250 SHAFT				
26.750	.750	2525250	HDS1	R
27.250	.750	**HDL-4299-R**	HDL	R
27.250	.813	2525557	HS7	R
27.250	1.000	**2525588**	HS8	R
27.250	.875	2525560	HDS1	R
27.250	.875	**2525562**	HDS2	R
27.500	.875	2525660	HDS1	R
28.000	.875	2525820	HDS1	R
28.125	1.500	2525844	HDS1	R
28.250	1.000	2525890	HDS1	R
28.250	1.000	**2525893**	HDS2	D
25.312 SHAFT				
	2.500	87802	LDSLV4	
		FOR SEAL SHAFT SIZE 25.500		
25.313 SHAFT				
	2.000	86091	LDSLV4	
	FOR SEAL SH SIZE 25.500		(647.70MM)	
25.375 SHAFT				
27.375	1.000	2537583	HDS1	V
27.391	1.000	515259	HS9	R
28.500	1.500	2537900	HDS1	R
25.500 SHAFT				
	.790	**406500**	VR1	R
		SHAFT RANGE 24.800 - 26.180		
26.750	.750	**HDL-3022-R**	HDL	R
27.000	.750	**2550258**	HS8	R
27.000	.875	**HDL-4300-R**	HDL	R
27.000	.750	2550250	HDS1	R
27.500	.813	2550557	HS7	R
27.500	.875	**HDL-4318-R**	HDL	R
27.500	1.000	2550587	HS7	R
27.500	1.000	**2550588**	HS8	V
27.500	1.000	**595687**	HS5	R
27.500	.750	2550540	HDS1	R
27.500	.750	2550549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
27.500	.875	2550560	HDS1	R
27.500	.875	2550561	HDS1	R
		W/4 EA .125 LUGS		
27.500	.875	**2550564**	HDS2	D
		W/4 EA .250 LUGS		
27.500	.875	**2550565**	HDS2	R
27.500	1.000	2550580	HDS1	R
27.500	1.000	2550584	HDS1	R
		W/4 EA .250 LUGS		
27.500	1.000	**2550585**	HDS2	R
28.000	1.250	2550792	HDS1	R
28.250	1.500	2525903	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
25.500 SHAFT (Cont.)				
28.500	1.125	2550900	HDS1	R
28.500	1.250	2550912	HDSD2	RR
25.531 SHAFT				
27.031	.750	2553257	HS7	R
25.590 SHAFT				
26.590	.500	2559017	HS7	R
27.090	.750	2559257	HS7	R
25.591 SHAFT				
	.196	**406503**	VR4	R
		SHAFT RANGE 25.591-25.984		
27.591	.875	2559567	HS7	R
25.625 SHAFT				
26.625	.500	2563017	HS7	R
27.750	1.000	2562630	HDSA1	RL
27.750	1.000	2563630	HDS1	R
27.750	1.000	594084	HDSA1	VL
28.000	1.000	2563730	HDS1	R
28.250	1.000	2563800	HDS1	R
25.750 SHAFT				
26.750	.500	2575017	HS7	R
26.875	.500	2575057	HS7	R
26.875	.500	**528623**	HS8	R
		2 PKGS REQ'D - 1 CUT EACH		
27.250	.750	**2575258**	HS8	R
27.250	.750	2575250	HDS1	R
27.250	.750	**2575252**	HDS2	R
27.750	.813	2575557	HS7	R
27.750	1.000	**2575588**	HS8	R
27.750	1.000	**2575572**	HDS2	R
28.755	1.250	2575903	HDS1	R
		W/6 EA .250 LUGS		
28.755	1.500	2575904	HDS1	R
25.813 SHAFT				
27.063	.625	**2581113**	HDS2	R
25.875 SHAFT				
26.875	.500	2588017	HS7	R
27.875	.813	2588557	HS7	R
28.000	.875	2588620	HDS1	R
28.250	.875	2588710	HDS1	R
28.500	.875	2588800	HDS1	R
25.980 SHAFT				
27.625	1.500	**592773**	HDS2	R
		W/4EA .500 LUGS		
25.988 SHAFT				
27.625	.750	2598330	HDS1	R
27.625	.750	**2598332**	HDS2	R
27.625	1.000	**2598342**	HDS2	R
26.000 SHAFT				
	2.250	86640	LDSLV3	
		FOR SEAL SHAFT SIZE 26.188		
.938	1.375	524591	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
27.000	.500	2600017	HS7	R
27.620	.750	**2600344**	HDS2	V
27.625	.750	**HDL-5921-R**	HDL	R
27.625	.750	2600330	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
26.000 SHAFT (Cont.)				
27.625	.750	**2600332**	HDS2	R
27.625	.750	**2600334**	HDS2	V
27.625	.750	2600339	HDS3	D
		W/4 EA .500 ADJ. LUGS		
27.625	1.000	2598932	HDSB1	RL
27.730	.730	2600347	HS7	R
28.000	.813	2600557	HS7	R
28.000	.875	**HDL-4325-R**	HDL	R
28.000	1.000	2600587	HS7	R
28.000	.813	2600550	HDS1	R
28.000	.875	2600560	HDS1	R
28.000	.875	2600562	HDS1	R
		W/4 EA .250 LUGS		
28.000	.875	**2600563**	HDS2	R
28.000	.875	2600564	HDS1	V
28.000	.875	2600953	HDSA3	D
		W/4 EA .500 ADJ. LUGS		
28.000	1.000	2600580	HDS1	R
28.125	.916	**2600648**	HS8	R
28.125	1.000	2600630	HDS1	R
28.250	1.000	2600680	HDS1	R
28.500	.875	2600760	HDS1	R
28.500	.875	2600761	HDS1	R
		W/4 EA .125 LUGS		
28.500	.938	2600770	HDS1	R
28.500	1.000	2600780	HDS1	R
29.000	1.500	2600903	HDS1	R
26.125 SHAFT				
27.625	.750	**HDL-4329-R**	HDL	R
27.625	.750	2613250	HDS1	R
28.000	.875	2613480	HDS1	R
28.125	.813	2613557	HS7	R
28.125	.875	**HDL-4330-R**	HDL	R
28.125	.813	2613550	HDS1	R
28.125	.813	2613551	HDS1	R
		W/6 EA .063 LUGS		
28.125	.875	2612563	HDS1	V
28.125	.875	**2612564**	HDS2	V
28.125	.875	2613560	HDS1	R
28.125	.875	**2613562**	HDS2	R
28.250	.875	2613620	HDS1	R
28.250	.875	**2613622**	HDS2	R
26.188 SHAFT				
28.188	.750	2619540	HDS1	R
26.250 SHAFT				
28.250	.813	2625557	HS7	R
28.750	1.000	2625780	HDS1	R
26.375 SHAFT				
27.627	.625	**2637118**	HS8	R
27.875	.750	2638250	HDS1	R
28.188	.750	2638350	HDS1	R
28.188	.750	2638351	HDS1	R
		W/4 EA .125 LUGS		
28.250	.875	2637942	HDSA2	RL
28.250	.875	2638480	HDS1	R
28.250	.875	**2638482**	HDS2	R
28.375	.813	2638557	HS7	R
28.375	1.000	2637510	HDS1	R
		W/4 EA .125 LUGS		
28.375	1.000	2638580	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
26.378 SHAFT				
28.378	.812	**2637558**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
26.500 SHAFT				
28.000	.750	**HDL-4533-R**	HDL	R
28.000	.750	2650257	HS7	R
28.000	.750	**2650258**	HS8	R
28.000	.750	2650240	HDS7	R
28.000	.750	2650241	HDS7	R
		W/4 EA .125 LUGS		
28.000	.750	2650250	HDS1	R
28.000	.750	**2650253**	HDS2	D
28.000	.750	2650254	HDS1	V
28.000	.750	2650259	HDS3	D
		W/4 EA .500 ADJ. LUGS		
28.000	.750	**2650283**	HDS2	V
28.000	1.000	2650290	HDS1	R
28.000	1.000	2650295	HDS1	R
		W/4 EA .250 LUGS		
28.000	1.000	2650920	HDSB1	RL
28.500	.813	2650557	HS7	R
28.500	.875	**HDL-4313-R**	HDL	R
28.500	.875	**2650512**	HDS2	R
28.500	.875	2650560	HDS1	R
28.750	.875	2650660	HDS1	R
29.500	1.125	2650900	HDS1	R
29.500	1.500	2650902	HDS1	R
26.625 SHAFT				
28.625	.813	**2662558**	HS8	R
26.688 SHAFT				
28.688	.813	2669557	HS7	R
26.750 SHAFT				
28.750	.813	2675557	HS7	R
26.771 SHAFT				
27.771	.500	2677017	HS7	R
26.772 SHAFT				
	.196	**406803**	VR4	R
		SHAFT RANGE 26.772-27.165		
26.781 SHAFT				
28.781	.813	2678557	HS7	R
26.813 SHAFT				
	1.250	85384	LDSLV4	
	FOR SEAL SH SIZE 27.000		(685.80MM)	
	2.000	86974	LDSLV4	
	FOR SEAL SH SIZE 27.000		(685.80MM)	
	2.250	85531	LDSLV4	
	FOR SEAL SH SIZE 27.000		(685.80MM)	
29.000	.750	**2681612**	HDS2	R
26.815 SHAFT				
28.815	.813	2682557	HS7	R
26.875 SHAFT				
.813	1.000	529823	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
28.875	.813	2688557	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
26.911 SHAFT				
2.438	2.875	593604	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
26.938 SHAFT				
.688	1.125	524215	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
29.000	.750	**2693612**	HDS2	R
27.000 SHAFT				
	2.000	86841	LDSLV4	
		FOR SEAL SH SIZE 27.188	(690.58MM)	
	.790	**407000**	VR1	R
		SHAFT RANGE 26.180 - 27.760		
.813	1.000	528926	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
28.500	.625	**2700218**	HS8	R
28.500	.625	2700237	HS7	R
29.000	.813	**2700555**	HS5	R
29.000	.813	2700557	HS7	R
29.000	.813	**2700558**	HS8	R
29.000	.813	**2700559**	HS8	D
29.000	.875	**HDL-4333-R**	HDL	R
29.000	.750	2700540	HDS1	R
29.000	.750	**2700542**	HDS2	R
29.000	.750	2700549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
29.000	.866	2700568	HDS1	R
		W/4 EA 9.50MM LUGS		
29.000	.875	2700560	HDS1	R
29.000	.875	**2700564**	HDS2	R
29.000	.875	**2700574**	HDS2	V
29.000	1.000	2700580	HDS1	R
29.000	1.000	2700583	HDS1	V
29.000	1.000	**2700584**	HDS2	R
		W/4 EA .250 LUGS		
29.000	1.875	2700953	HDSE2	DD
29.500	1.000	2700780	HDS1	R
29.500	1.000	2700783	HDS1	R
		W/4 EA .250 LUGS		
29.500	1.250	2700790	HDS1	R
29.500	1.250	2700792	HDS1	R
		W/4 EA .125 LUGS		
29.625	1.000	2700800	HDS1	R
29.813	1.500	2700844	HDS1	R
30.000	.875	**HDL-9984-R**	HDL	R
30.000	.875	2700870	HDS1	R
30.000	1.125	2700900	HDS1	R
30.000	1.125	2700901	HDS1	R
		W/6 EA .500 LUGS		
30.000	1.500	2700902	HDS1	R
30.000	1.500	2700903	HDS1	R
		W/6 EA .125 LUGS		
30.000	1.625	2700990	HDSB1	RL
27.063 SHAFT				
	2.250	84764	LDSLV4	
		FOR SEAL SH SIZE 27.250	(692.15MM)	
27.125 SHAFT				
29.000	.875	2713480	HDS1	R
29.250	1.000	2713630	HDS1	R
27.165 SHAFT				
	.196	**406903**	VR4	R
		SHAFT RANGE 27.165-27.559		
27.188 SHAFT				
29.250	.875	2719600	HDS1	R
29.500	.875	2719700	HDS1	R
27.250 SHAFT				
.938	1.375	524592	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
29.250	.813	2725557	HS7	R
29.250	.875	**HDL-4626-R**	HDL	R
29.250	.813	2725550	HDS1	R
29.250	.813	2725552	HDS1	R
		W/6 EA .125 LUGS		
29.250	.813	**2725553**	HDS2	R
29.250	.813	**2725554**	HDS2	R
		W/6 EA .125 LUGS		
29.250	.875	**2725563**	HDS2	R
29.250	.875	2725566	HDS1	R
		W/6 EA .625 LUGS		
27.313 SHAFT				
	2.250	85011	LDSLV4	
		FOR SEAL SH SIZE 27.500	(698.50MM)	
27.375 SHAFT				
29.375	.813	2738557	HS7	R
27.402 SHAFT				
29.500	.750	2740590	HDS1	R
27.433 SHAFT				
	1.500	85122	LDSLV4	
		FOR SEAL SH SIZE 27.625	(701.68MM)	
27.440 SHAFT				
29.815	.875	2744710	HDS1	R
27.500 SHAFT				
	2.000	84472	LDSLV3	
		FOR SEAL SH SIZE 27.688	(703.28MM)	
	2.250	84711	LDSLV4	
		FOR SEAL SH SIZE 27.688	(703.28MM)	
28.750	.625	2750117	HS7	R
29.000	.750	**HDL-4315-R**	HDL	R
29.000	.750	**2750218**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
29.000	.750	2750250	HDS1	R
29.000	.750	2750257	HDS1	V
29.500	.813	2750557	HS7	R
29.500	.875	**HDL-4339-R**	HDL	R
29.500	.875	2750560	HDS1	R
29.500	.875	2750562	HDS1	R
		W/6 EA .250 LUGS		
29.500	.875	**2750564**	HDS2	R
29.500	.875	**2750565**	HDS2	R
		W/6 EA .250 LUGS		
29.500	.875	2750569	HDS3	D
		W/4 EA .500 ADJ. LUGS		
29.500	.875	**2750574**	HDS2	V
29.500	1.000	2750580	HDS1	R
29.500	.875	**2750570**	HDS4	R
		W/8 EA .500 MOLDED ADJ. LUGS		
29.500	.875	2750575	HDS6	R
		W/8 EA .500 MOLDED ADJ. LUGS		
29.520	.984	**2755502**	HDS2	R
30.000	.875	2750760	HDS1	R
30.688	.813	2750900	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
27.559 SHAFT				
	.196	**407003**	VR4	R
	SHAFT RANGE 27.559-27.953			
29.750	1.370	2755962	HDSA2	RL
27.625 SHAFT				
29.125	.750	2763250	HDS1	R
29.500	.750	2763470	HDS1	R
29.625	.750	2763540	HDS1	R
29.625	.750	2763543	HDS1	R
		W/4 EA .250 LUGS		
30.000	1.000	2763730	HDS1	R
27.626 SHAFT				
29.500	.750	**HDL-4336-R**	HDL	R
27.688 SHAFT				
29.812	.875	**2769622**	HDS2	R
29.812	1.250	2769915	HDSE2	RR
27.750 SHAFT				
.938	1.375	524216	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
1.938	2.375	528268	CT4	R
	BORE DIA. IS SHOULDER WIDTH			
29.812	.875	**2775562**	HDS2	R
27.812 SHAFT				
	2.500	87421	LDSLV4	
	FOR SEAL SH SIZE 28.000		(711.20MM)	
29.812	.875	**2781562**	HDS2	R
27.875 SHAFT				
29.812	.875	2788500	HDS1	R
29.812	.875	**2788502**	HDS2	R
29.815	.875	2788510	HDS1	R
29.815	.875	**2788512**	HDS2	D
29.815	.875	2788600	HDS7	R
29.875	.813	2788557	HS7	R
30.000	1.000	2788630	HDS1	R
27.953 SHAFT				
29.921	.787	**596047**	HS8	D
29.953	.813	2795557	HS7	R
28.000 SHAFT				
.813	1.250	527232	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.000	524366	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
29.500	.750	**HDL-4343-R**	HDL	R
29.500	.750	2800257	HS7	R
29.500	.750	2800217	HDS1	V
29.500	.750	2800250	HDS1	R
29.500	.750	2800255	HDS1	R
		W/4 EA .250 LUGS		
29.500	.750	**592845**	HDS2	R
29.500	.875	**2800272**	HDS2	R
29.500	.875	2800920	HDSC1	RL
29.500	.750	2800240	HDS7	R
29.500	.750	2800241	HDS7	R
		W/4 EA .125 LUGS		
29.625	.750	**HDL-7828-R**	HDL	R
29.625	.750	2800330	HDS1	R
29.625	.750	**2800331**	HDS2	R
29.625	.750	2800332	HDS1	R
		W/4 EA .125 LUGS		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
28.000 SHAFT (Cont.)				
29.812	.750	2800425	HDS1	R
		W/4 EA .250 LUGS		
30.000	.813	**2800551**	HS8	D
30.000	.813	2800557	HS7	R
30.000	.813	**2800558**	HS8	R
30.000	.875	**HDL-4344-R**	HDL	R
30.000	.875	2800560	HDS1	R
30.000	.875	2800562	HDS1	R
		W/4 EA .125 LUGS		
30.000	.875	2800563	HDS1	R
		W/6 EA .125 LUGS		
30.000	.875	**2800564**	HDS2	D
		W/4 EA .125 LUGS		
30.000	.875	**2800565**	HDS2	R
30.000	.875	**2800566**	HDS2	R
		W/4 EA .125 LUGS		
30.000	.875	2800567	HDS1	V
30.000	.875	2800573	HDS1	V
30.000	.875	**2800585**	HDS2	R
		W/6 EA .250 LUGS		
30.250	1.250	2800700	HDS1	R
30.250	1.250	**2800702**	HDS2	R
30.500	.875	**HDL-3878-R**	HDL	R
30.500	.875	2800762	HDS1	R
		W/6 EA .250 LUGS		
30.500	.875	**2800764**	HDS2	R
30.500	.875	**2800766**	HDS2	R
		W/6 EA .250 LUGS		
30.500	.875	2800769	HDS3	D
		W/6 EA .500 ADJ. LUGS		
30.500	1.000	**2800752**	HDS2	D
30.500	1.000	2800780	HDS1	R
30.500	1.000	**2800782**	HDS2	R
30.500	1.000	2800972	HDSA2	D
30.500	.875	2800760	HDS1	R
30.535	.875	2800800	HDS1	R
30.535	.875	**2800802**	HDS2	R
31.000	.875	**HDL-5998-R**	HDL	R
31.000	.875	2800870	HDS1	R
31.000	.875	**2800872**	HDS2	R
31.000	1.125	2800900	HDS1	R
31.000	1.500	2800902	HDS1	R
31.000	1.250	2800998	HDSD2	DD
28.038 SHAFT				
31.038	1.000	2803998	HDSB2	VL
28.125 SHAFT				
29.250	.500	**2813058**	HS8	R
29.250	.625	2813100	HDS1	R
29.250	.625	**2813102**	HDS2	R
28.188 SHAFT				
.688	.875	531719	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
28.250 SHAFT				
30.250	.813	2825557	HS7	R
28.312 SHAFT				
	2.313	87623	LDSLV3	
	FOR SEAL SH SIZE 28.500			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
28.313 SHAFT				
	2.000	81587	LDSLV3	
	FOR SEAL SH SIZE 28.500		(723.90MM)	
28.438 SHAFT				
31.000	1.125	2844800	HDS1	R
31.000	1.188	2844801	HDS1	R
28.500 SHAFT				
	.790	**407250**	VR1	R
	SHAFT RANGE 27.760 - 29.330			
29.500	.500	2850017	HS7	R
30.218	.750	2850386	HS6	R
30.500	.625	2850527	HS7	R
30.500	.625	**2850528**	HS8	R
30.500	.813	2850557	HS7	R
30.500	.875	**HDL-4346-R**	HDL	R
30.500	.625	2850520	HDS1	R
30.500	.625	2850529	HDS3	D
	W/6 EA .500 ADJ. LUGS			
30.500	.750	2850540	HDS1	R
30.500	.750	**2850542**	HDS2	R
30.500	.750	**2850543**	HDS2	V
30.500	.875	2850560	HDS1	R
30.500	.875	2850562	HDS1	R
	W/4 EA .250 LUGS			
30.500	.875	**2850563**	HDS2	D
30.500	.875	2850564	HDS1	V
	W/6 EA .250 LUGS			
30.500	.875	**2850565**	HDS2	R
30.500	1.000	2850580	HDS1	R
30.500	.875	2850211	HDS7	H
31.000	.875	2850760	HDS1	R
31.000	.875	2850765	HDS1	R
	W/6 EA .250 LUGS			
31.000	1.000	2850780	HDS1	R
31.250	1.000	**2850832**	HDS2	R
31.500	1.500	2850903	HDS1	R
28.540 SHAFT				
	.790	**407254**	VR1	V
	SHAFT RANGE 27.760 - 29.330			
28.740 SHAFT				
	.196	**407303**	VR4	R
	SHAFT RANGE 28.740-29.134			
28.750 SHAFT				
30.750	.813	2875557	HS7	R
30.750	.875	**HDL-4628-R**	HDL	R
30.750	.875	2875560	HDS1	R
30.750	.875	2875561	HDS1	R
	W/4 EA .125 LUGS			
30.750	.875	**2875562**	HDS2	R
30.750	.875	2875563	HDS1	R
	W/8 EA .250 LUGS			
30.750	.875	2875567	HDS1	V
28.813 SHAFT				
	2.250	84641	LDSLV4	
	FOR SEAL SH SIZE 29.000		(736.60MM)	
.688	1.125	525032	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
28.875 SHAFT				
30.875	.813	2888557	HS7	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
29.000 SHAFT				
.688	.875	594856	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
1.063	1.500	524940	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
1.313	1.750	528269	CT4	R
	BORE DIA. IS SHOULDER WIDTH			
30.500	.750	**HDL-4347-R**	HDL	R
30.500	.750	**2900218**	HS8	R
30.500	.750	2900257	HS7	R
30.500	.750	2900250	HDS1	R
30.500	.875	2900270	HDSA1	RL
31.000	.813	2900557	HS7	R
31.000	.875	**HDL-4348-R**	HDL	R
31.000	.875	2900560	HDS1	R
31.000	.875	2900561	HDS1	R
	W/4 EA .125 LUGS			
31.000	.875	2900562	HDS1	R
	W/4 EA .250 LUGS			
31.000	.875	**2900563**	HDS2	R
31.000	.875	**2900564**	HDS2	R
	W/4 EA .125 LUGS			
31.000	.875	**2900565**	HDS2	R
	W/4 EA .250 LUGS			
31.000	.875	2900569	HDS3	D
	W/6 EA .500 ADJ. LUGS			
31.000	1.000	2900580	HDS1	R
31.000	1.125	2900590	HDS1	R
31.000	1.750	2900954	HDSD1	RR
31.500	.875	2900760	HDS1	R
31.500	.875	2900960	HDSA1	RL
32.000	.875	2900870	HDS1	R
32.000	.875	2900872	HDS1	R
	W/4 EA .125 LUGS			
32.000	1.500	2900903	HDS1	R
29.125 SHAFT				
31.125	.813	2913550	HDS1	R
32.000	1.500	2913844	HDS1	R
32.125	1.500	2913903	HDS1	R
32.250	1.500	2913904	HDS1	R
29.134 SHAFT				
	.196	**407403**	VR4	R
	SHAFT RANGE 29.134-29.528			
29.250 SHAFT				
30.250	.500	2925017	HS7	R
31.250	.813	2925557	HS7	R
29.375 SHAFT				
1.063	1.500	524853	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
1.125	1.563	528270	CT4	R
	BORE DIA. IS SHOULDER WIDTH			
29.500 SHAFT				
31.000	.750	**2950258**	HS8	R
31.219	.734	**2950348**	HS8	R
31.219	.734	**2950438**	HS8	D
	W/HOOK & EYE SPRING CONNECTOR			
31.500	.813	2950557	HS7	R
31.500	.875	**HDL-4352-R**	HDL	R
31.500	1.000	**HDL-3791-R**	HDL	R
31.500	.750	2950540	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
29.500 SHAFT (Cont.)				
31.500	.750	2950549	HDS3	D
		W/4 EA .500 ADJ. LUGS		
31.500	.875	**2950552**	HDS2	V
31.500	.875	2950560	HDS1	R
31.500	.875	**2950564**	HDS2	D
31.500	.875	**2950565**	HDS2	R
		W/4 EA .500 ADJ. LUGS		
31.500	.875	2950580	HDS1	R
		W/4 EA .500 ADJ. LUGS		
32.000	.875	2950760	HDS1	R
32.000	.875	2950762	HDS1	R
		W/8 EA .250 LUGS		
32.000	.875	**2950765**	HDS2	R
32.000	.875	2950769	HDS3	D
		W/4 EA .500 ADJ. LUGS		
32.000	.938	2950770	HDS1	R
32.000	.938	**2950772**	HDS2	R
32.000	1.000	2950780	HDS1	R
32.000	1.000	**2950783**	HDS2	R
32.000	1.250	2950758	HDSD7	RR
		OUTER LIP IS SPRINGLESS		
32.250	1.000	2950830	HDS1	R
32.250	1.000	**2950835**	HDS2	R
32.250	1.000	**2950836**	HDS2	D
32.250	1.250	2950850	HDS1	R
32.250	1.375	2950841	HDS1	R
32.500	.875	2950870	HDS1	R
32.500	.938	2950880	HDS1	R
32.500	.938	**2950882**	HDS2	R
32.500	1.500	2950903	HDS1	R
29.527 SHAFT				
30.527	.500	2953017	HS7	R
29.528 SHAFT				
	.196	**407503**	VR4	R
		SHAFT RANGE 29.528-29.843		
32.047	.984	2952585	HDS1	R
29.563 SHAFT				
31.563	.813	2956557	HS7	R
29.625 SHAFT				
31.125	.770	**2962258**	HS8	R
31.625	.813	2963557	HS7	R
31.625	1.000	2963580	HDS1	R
32.000	1.000	2963680	HDS1	R
32.500	1.500	2963844	HDS1	R
32.750	1.500	2963904	HDS1	R
29.688 SHAFT				
31.688	.813	2969557	HS7	R
29.750 SHAFT				
.938	1.375	524217	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	524218	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	524973	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
31.250	.770	**2975258**	HS8	R
31.750	.813	**2975558**	HS8	R
29.813 SHAFT				
	2.250	84642	LDSLV4	
	FOR SEAL SH SIZE 30.000		(762.00MM)	
29.823 SHAFT				
	.315	407502	VR3	R
		SHAFT RANGE 29.130 -30.510		
29.875 SHAFT				
31.875	.813	2988557	HS7	R
29.921 SHAFT				
	.196	**407603**	VR4	R
		SHAFT RANGE 29.843-30.157		
29.990 SHAFT				
31.613	.750	**2999332**	HDS2	R
30.000 SHAFT				
	2.500	86641	LDSLV3	
	FOR SEAL SH SIZE 30.188		(766.78MM	
31.000	.500	3000017	HS7	R
31.250	.625	**3000118**	HS8	R
31.250	.625	**3000111**	HDS2	R
31.500	.750	3000257	HS7	R
31.500	.750	3000250	HDS1	R
31.500	.750	3000251	HDS1	R
		W/6 EA .125 LUGS		
31.500	.750	3000253	HDS1	V
31.600	.775	3000300	HDS1	R
31.606	.750	3000302	HDS1	R
31.606	.750	**3000303**	HDS2	R
31.616	.750	3000280	HDS1	R
31.625	.625	**3000312**	HDS2	R
31.625	.625	**3000313**	HDS2	D
31.625	.750	3000330	HDS1	R
31.630	.750	3000340	HDS1	R
31.655	.750	3000350	HDS1	R
32.000	.813	**3000556**	HS8	R
32.000	.813	3000557	HS7	R
32.000	.813	**3000558**	HS8	D
32.000	.875	**HDL-4357-R**	HDL	R
32.000	.916	3000577	HS7	R
32.000	1.000	**3000518**	HS8	R
32.000	1.000	**3000519**	HS8	H
32.000	1.000	**3000578**	HS8	D
32.000	1.000	**3000588**	HS8	R
32.000	.813	3000550	HDS1	R
32.000	.813	3000552	HDS1	R
		W/6 EA .125 LUGS		
32.000	.813	3000553	HDS1	D
32.000	.813	**3000555**	HDS2	D
32.000	.813	3000559	HDS3	D
		W/6 EA .500 ADJ. LUGS		
32.000	.875	3000560	HDS1	R
32.000	.875	3000562	HDS1	D
32.000	1.000	3000580	HDS1	R
32.250	1.125	3000690	HDS1	R
32.250	1.156	3000700	HDS1	R
32.250	1.156	**3000702**	HDS2	R
32.500	.875	**HDL-4358-R**	HDL	R
32.500	.875	3000760	HDS1	R
32.500	.875	3000761	HDS1	V
32.500	1.000	3000780	HDS1	R
32.750	.875	3000820	HDS1	R
32.750	1.500	3000834	HDS1	R
33.000	.875	3000870	HDS1	R
33.000	1.125	3000900	HDS1	R
33.000	1.750	3000995	HDSB1	RL

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
30.063 SHAFT				
.688	1.125	525033	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
30.125 SHAFT				
	.790	**407500**	VR1	R
		SHAFT RANGE 29.330 - 30.910		
31.125	.500	3013017	HS7	R
30.250 SHAFT				
32.250	.750	3025540	HDS1	R
32.250	.875	3025561	HDS1	R
		W/4 EA .125 LUGS		
32.250	.750	**3025542**	HDS2	V
32.500	.875	3025660	HDS1	R
32.500	.875	3025661	HDS1	R
		W/4 EA .125 LUGS		
32.750	1.000	**3025782**	HDS2	V
30.309 SHAFT				
	1.375	87530	LDSLV4	
		FOR SEAL SH SIZE 30.497		
30.310 SHAFT				
32.314	1.000	3031590	HDS1	R
30.312 SHAFT				
	2.500	87842	LDSLV3	
		FOR SEAL SH SIZE 30.500		
30.313 SHAFT				
31.813	.750	3031257	HS7	R
32.375	.875	3031600	HDS1	R
32.500	.875	3031640	HDS1	R
32.500	1.000	3031650	HDS1	R
32.750	1.000	3031740	HDS1	R
33.000	1.000	3031800	HDS1	R
33.250	1.500	3031830	HDS1	R
33.260	.906	3031840	HDS1	R
33.260	.906	3031845	HDS1	R
		W/8 EA .563 LUGS		
33.277	1.500	3031846	HDS1	R
30.315 SHAFT				
	.196	**407703**	VR4	R
		SHAFT RANGE 30.157-30.472		
30.320 SHAFT				
	1.375	87605	LDSLV4	
		FOR SEAL SH SIZE 30.508		
30.375 SHAFT				
32.375	.813	3038557	HS7	R
32.375	.813	3038550	HDS1	R
30.500 SHAFT				
32.500	.813	3050557	HS7	R
32.500	.875	**HDL-4365-R**	HDL	R
32.500	.750	**3050546**	HDS2	V
		W/8 EA .250 LUGS		
32.500	.750	3050540	HDS1	R
32.500	.750	**3050542**	HDS2	R
32.500	.750	**3050544**	HDS2	V
32.500	.750	3050549	HDS3	D
		W/6 EA .500 ADJ. LUGS		
32.500	.875	3050560	HDS1	R
30.500 SHAFT (Cont.)				
32.500	.875	3050561	HDS1	R
		W/6 EA .063 LUGS		
32.500	.875	3050562	HDS1	R
		W/8 EA .125 LUGS		
32.500	.875	3050563	HDS1	R
		W/8 EA .250 LUGS		
32.500	.875	**3050565**	HDS2	R
32.500	1.000	**3050582**	HDS2	R
32.500	.875	3050511	HDS7	H
32.750	1.000	3050680	HDS1	R
33.000	.875	**HDL-8577-R**	HDL	R
33.000	.750	3050791	HDS1	R
33.000	.750	**3050793**	HDS2	R
33.000	.750	3050799	HDS3	D
		W/6 EA .500 ADJ. LUGS		
33.000	1.000	3050780	HDS1	R
33.000	1.000	**3050785**	HDS2	R
33.032	1.000	**3050790**	HDS2	R
33.492	1.000	3050840	HDS1	R
33.500	.875	3050870	HDS1	R
33.500	.875	**3050872**	HDS2	R
33.500	1.000	3050890	HDS1	R
33.500	1.000	**3050892**	HDS2	R
33.500	1.500	3050903	HDS1	R
30.563 SHAFT				
32.563	.813	3056557	HS7	R
30.615 SHAFT				
33.268	1.094	**3061715**	HDS2	R
33.268	1.094	3061721	HDS7	R
30.625 SHAFT				
32.125	.750	3063257	HS7	R
30.709 SHAFT				
	.196	**407803**	VR4	R
		SHAFT RANGE 30.472-30.827		
30.750 SHAFT				
31.750	.500	3075017	HS7	R
32.742	.875	3075510	HDS1	R
32.742	.875	3075513	HDS1	R
		W/4 EA .375 LUGS		
30.813 SHAFT				
	2.000	85039	LDSLV4	
		FOR SEAL SH SIZE 31.000	(787.40MM	
30.900 SHAFT				
31.900	.500	3090017	HS7	R
31.000 SHAFT				
.813	1.250	525212	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
32.000	.500	3100017	HS7	R
32.000	.500	**3100018**	HS8	R
		W/HOOK & EYE SPRING CONNECTOR		
32.500	.750	3100257	HS7	R
32.500	.750	3100250	HDS1	R
32.500	.750	3100255	HDS1	D
32.500	.750	522342	HDS1	D
32.500	1.000	3100290	HDS1	R
33.000	.813	3100557	HS7	R
33.000	.875	**HDL-4367-R**	HDL	R
33.000	.875	3100567	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
31.000 SHAFT (Cont.)				
33.000	.813	3100550	HDS1	R
33.000	.813	3100551	HDS1	R
		W/4 EA .063 LUGS		
33.000	.813	3100552	HDS1	R
		W/6 EA .125 LUGS		
33.000	.875	3100560	HDS1	R
33.000	.875	3100561	HDS1	R
		W/4 EA .125 LUGS		
33.000	.875	**3100562**	HDS2	D
33.000	.875	**3100563**	HDS2	R
33.000	.875	3100951	HDSA1	RL
33.000	.875	3100952	HDSA2	RL
33.188	.953	513184	HS9	R
33.500	.875	3100757	HDS1	V
33.500	.875	3100760	HDS1	R
33.500	.875	3100778	HDS1	R
		W/8 EA .125 LUGS		
34.000	.813	3100840	HDS1	R
34.000	.813	3100849	HDS3	D
		W/6 EA .500 ADJ. LUGS		
34.000	.875	3100870	HDS1	R
34.000	.875	**3100872**	HDS2	R
34.000	1.000	3100890	HDS1	R
34.000	1.000	**3100895**	HDS2	R
34.000	1.250	3100992	HDSD2	RR
31.250 SHAFT				
32.750	.750	3125250	HDS1	R
32.750	.750	**3125252**	HDS2	R
32.750	1.000	3125290	HDS1	R
33.250	.750	**HDL-5033-R**	HDL	R
33.250	.750	3125540	HDS1	R
33.250	.750	3125543	HDS1	R
		W/6 EA .125 LUGS		
33.250	.750	**3125544**	HDS2	R
		W/4 EA .250 LUGS		
33.250	.750	**3125548**	HDS2	D
31.340 SHAFT				
33.340	.813	**3134558**	HS8	R
31.491 SHAFT				
34.020	.980	**3149798**	HDS2	D
31.496 SHAFT				
	.196	**408003**	VR4	R
		SHAFT RANGE 31.181-31.535		
33.465	.984	3149470	HDS7	R
31.500 SHAFT				
.813	1.250	528210	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
32.500	.500	3150017	HS7	R
33.000	.750	3150210	HDS1	R
33.500	.813	3150557	HS7	R
34.500	.875	3150875	HDS1	R
		W/4 EA .250 LUGS		
31.625 SHAFT				
33.625	1.000	3162580	HDS1	R
31.750 SHAFT				
	.790	**408000**	VR1	R
		SHAFT RANGE 30.910 - 32.680		
.688	.875	526244	CT3	R
		BORE DIA. IS SHOULDER WIDTH		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
31.750 SHAFT (Cont.)				
.813	1.250	526715	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
33.750	.813	3175557	HS7	R
33.750	.875	3175560	HDS1	R
33.750	.875	**3175562**	HDS2	R
33.750	.875	3175565	HDS1	R
		W/4 EA .125 LUGS		
33.750	.875	3175569	HDS3	D
		W/6 EA .500 ADJ. LUGS		
35.250	.875	3175900	HDS1	R
31.900 SHAFT				
33.900	.813	**3190558**	HS8	D
32.000 SHAFT				
33.500	.750	**HDL-3023-R**	HDL	R
33.500	.750	**3200239**	HS8	D
		W/THREADED SPRING CONNECTOR		
34.000	.813	3200557	HS7	R
34.000	.875	**HDL-4632-R**	HDL	R
34.000	.875	**3200563**	HDS2	R
34.000	.750	3200540	HDS1	R
34.000	.750	3200541	HDS1	V
34.000	.813	3200550	HDS1	R
34.000	.875	3200560	HDS1	R
34.000	.875	**3200562**	HDS2	D
34.000	.875	3200564	HDS1	R
		W/8 EA .250 LUGS		
34.000	.875	3200569	HDS3	D
		W/6 EA .500 ADJ. LUGS		
34.000	.875	3200954	HDSA2	V
34.000	1.000	3200580	HDS1	R
34.250	1.000	3200680	HDS1	R
34.500	.875	3200760	HDS1	R
34.500	1.000	3200782	HDS1	R
		W/6 EA .063 LUGS		
34.500	1.250	3200790	HDS1	R
32.125 SHAFT				
33.625	.625	3213237	HS7	R
34.125	.750	**HDL-3002-R**	HDL	R
34.125	.813	3213557	HS7	R
34.125	.875	3212563	HDS1	V
34.125	.875	3213560	HDS1	R
34.125	.875	**3213562**	HDS2	D
34.125	.875	**3213564**	HDS2	R
		W/6 EA .250 LUGS		
34.125	.875	3213569	HDS3	D
		W/6 EA .500 ADJ. LUGS		
34.250	.875	3213620	HDS1	R
34.375	.875	3231600	HDS1	R
34.500	.875	3213710	HDS1	R
34.625	.750	3213740	HDS1	R
34.625	.750	3213742	HDS1	R
		W/6 EA .313 LUGS		
34.625	.875	3213760	HDS1	R
35.000	.875	3231800	HDS1	R
35.125	.875	3231840	HDS1	R
35.125	1.500	3231844	HDS1	R
32.188 SHAFT				
.813	1.250	525034	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
34.188	.813	3219557	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
32.250 SHAFT				
.813	1.250	524294	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
34.250	.813	3225557	HS7	R
34.250	1.000	**3225512**	HDS2	R
32.312 SHAFT				
34.500	.875	**HDL-4373-R**	HDL	R
32.313 SHAFT				
	2.000	86090	LDSLV4	
	FOR SEAL SH SIZE 32.500		(825.50MM)	
34.500	.906	**3231648**	HS8	R
	W/HOOK & EYE SPRING CONNECTOR			
34.500	.875	**3231622**	HDS2	H
34.500	.875	3231640	HDS1	R
34.500	.875	**3231642**	HDS2	R
32.375 SHAFT				
.813	1.250	593949	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
33.625	.625	3238117	HS7	R
34.375	1.000	**3237518**	HS8	R
34.375	1.000	**3237519**	HS8	H
34.875	1.250	3238790	HDS1	R
32.500 SHAFT				
.500	.688	594799	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
.813	1.250	524367	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
33.625	.563	3250117	HS7	R
34.250	.625	**3250365**	HDS2	R
34.250	.875	3250410	HDS1	R
34.250	1.250	3250440	HDS1	R
34.500	.813	3250557	HS7	R
34.500	.875	**HDL-4377-R**	HDL	R
34.500	.916	3250577	HS7	R
34.500	1.000	**3250588**	HS8	R
34.500	.813	3250550	HDS1	R
34.500	.875	3250560	HDS1	R
34.500	.875	3250561	HDS1	R
	W/6 EA .063 LUGS			
34.500	.875	3250562	HDS1	R
	W/4 EA .125 LUGS			
34.500	.875	**3250566**	HDS2	R
34.500	.875	**3250567**	HDS2	R
	W/4 EA .250 LUGS			
34.500	.875	3250569	HDS3	D
	W/6 EA .500 ADJ. LUGS			
34.500	.938	3250570	HDS1	R
34.500	.938	**3250574**	HDS2	R
34.750	.875	3250660	HDS1	R
32.688 SHAFT				
34.688	.813	3269557	HS7	R
32.700 SHAFT				
34.680	.750	**3270542**	HDS2	R
32.750 SHAFT				
34.250	.750	3275250	HDS1	R
34.500	.875	3275410	HDS1	R
34.500	1.000	3275420	HDS1	R
34.750	.813	3275557	HS7	R
34.750	1.000	3275580	HDS1	R
34.750	1.250	3275592	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
32.750 SHAFT (Cont.)				
35.000	1.000	3275680	HDS1	R
35.250	1.000	3275780	HDS1	R
35.375	.938	3275805	HDS1	R
	W/4 EA .063 LUGS			
35.375	1.000	3275802	HDS1	R
35.375	1.000	3275803	HDS1	R
	W/4 EA .063 LUGS			
35.375	2.000	3275806	HDS1	R
	W/4 EA .063 LUGS			
35.500	1.000	3275830	HDS1	R
35.750	1.000	3275890	HDS1	R
35.750	1.500	3275903	HDS1	R
32.812 SHAFT				
	2.220	87850	LDSLV4	
	FOR SEAL SH SIZE 33.000			
32.950 SHAFT				
34.688	.750	**3295343**	HDS2	R
32.972 SHAFT				
34.683	.750	3297300	HDS1	R
32.980 SHAFT				
34.688	.750	**3298342**	HDS2	R
32.996 SHAFT				
34.685	.787	**HDL-4380-R**	HDL	R
33.000 SHAFT				
34.000	.500	3300017	HS7	R
34.250	.625	**530414**	HS5	D
34.500	.625	3300237	HS7	R
34.500	.750	**HDL-4381-R**	HDL	R
34.500	.750	**3300212**	HDS2	H
34.500	.750	**3300222**	HDS2	D
34.500	.750	3300250	HDS1	R
34.500	1.250	3300920	HDSD1	RR
34.500	1.250	3300921	HDSE1	RR
34.502	.750	3300260	HDS1	R
34.554	.775	3300280	HDS1	R
34.609	.750	3300290	HDS1	R
34.613	.750	3300300	HDS1	R
34.625	.750	**HDL-6787-R**	HDL	R
34.625	.750	3300330	HDS1	R
34.625	.750	**3300331**	HDS2	R
34.625	.750	**3300334**	HDS2	D
34.630	.750	3300340	HDS1	R
34.630	.750	**3300342**	HDS2	R
34.630	.750	3300345	HDS1	D
34.650	.787	**HDL-4634-R**	HDL	R
34.688	.750	3300332	HDSA2	DL
34.688	.750	3300350	HDS1	R
34.688	.750	**3300351**	HDS2	R
34.688	.750	**3300353**	HDS2	D
35.000	.813	3300557	HS7	R
35.000	.813	592817	HS7	D
35.000	.875	**HDL-4382-R**	HDL	R
35.000	.750	3300540	HDS1	R
35.000	.750	3300547	HDS1	V
35.000	.750	3300549	HDS3	D
	W/6 EA .500 ADJ. LUGS			
35.000	.875	3300560	HDS1	R
35.000	.875	3300561	HDS1	R
	W/4 EA .125 LUGS			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
33.000 SHAFT (Cont.)				
35.000	.875	**3300562**	HDS2	R
		W/4 EA .125 LUGS		
35.000	.875	**3300565**	HDS2	R
35.000	.875	3300568	HDS3	H
		W/4 EA .500 ADJ. LUGS		
35.000	1.000	3300958	HDSC2	RL
35.125	.770	3300611	HDS1	R
35.250	.875	**HDL-4326-R**	HDL	R
35.250	.875	3300660	HDS1	R
35.250	.875	3300951	HDSA1	RL
35.500	.875	**HDL-4544-R**	HDL	R
35.500	.750	3300790	HDS1	R
35.500	.750	**3300792**	HDS2	R
35.500	.875	3300760	HDS1	R
35.500	.875	**3300765**	HDS2	R
35.500	.875	3300769	HDS3	D
		W/6 EA .500 ADJ. LUGS		
35.500	.938	3300770	HDS1	R
35.500	.938	**3300772**	HDS2	R
35.500	1.000	3300780	HDS1	R
35.500	1.000	**3300782**	HDS2	V
35.500	1.000	**3300785**	HDS2	R
35.625	.875	3300800	HDS1	R
35.750	.875	3300820	HDS1	R
36.000	.875	3300870	HDS1	R
36.000	1.000	**3300852**	HDS2	V
36.000	1.000	3300890	HDS1	R
36.000	1.000	3300990	HDSB2	V
		LIGHT INTERFERENCE DUST-LIP		
36.000	1.500	3300903	HDS1	R
33.063 SHAFT				
.813	1.250	526867	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
33.250 SHAFT				
.813	1.250	595636	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
35.250	1.000	**3325588**	HS8	R
33.313 SHAFT				
	2.625	84730	LDSLV4	
		FOR SEAL SH SIZE 33.500	(850.90MM)	
33.465 SHAFT				
	.196	**408503**	VR4	R
		SHAFT RANGE 33.110-33.504		
33.469 SHAFT				
35.469	.875	3347560	†HDS1	R
36.409	.906	3347850	HDS1	R
36.409	.906	3347854	HDS1	R
		W/8 EA .219 LUGS		
36.409	.906	3347855	HDS1	R
		W/8 EA .531 LUGS		
33.500 SHAFT				
	.790	**408500**	VR1	R
		SHAFT RANGE 32.680 - 34.450		
35.500	.813	3350557	HS7	R
35.500	.875	**HDL-4389-R**	HDL	R
35.500	1.000	**3350588**	HS8	R
35.500	.875	3350560	HDS1	R
35.500	.875	3350561	HDS1	R
		W/6 EA .125 LUGS		

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
33.500 SHAFT (Cont.)				
35.500	.875	3350562	HDS1	R
		W/6 EA .250 LUGS		
35.500	1.750	3350950	HDSE1	RR
35.625	.875	3350620	HDS1	R
35.625	1.000	3350630	HDS1	R
35.750	.875	3350660	HDS1	R
35.995	.938	3350740	HDS1	R
36.000	.875	**HDL-4550-R**	HDL	R
36.000	.875	3350760	HDS1	R
36.000	.875	3350762	HDS1	R
		W/6 EA .250 LUGS		
36.000	.875	**3350765**	HDS2	R
36.000	.875	3350769	HDS3	D
		W/6 EA .500 ADJ. LUGS		
36.000	.906	3350766	HDS1	R
		W/8 EA .188 LUGS		
36.000	.938	3350770	HDS1	R
36.002	.938	3350790	HDS1	R
36.002	.938	3350791	HDS1	R
		W/6 EA .125 LUGS		
36.250	.875	3350820	HDS1	R
36.250	.875	3350824	HDS1	R
		W/6 EA .063 LUGS		
36.417	.875	3350840	HDS1	R
36.417	1.500	3350844	HDS1	R
36.500	1.500	3350902	HDS1	R
33.625 SHAFT				
35.625	.875	3363560	HDS1	R
35.625	.875	3363562	HDS1	R
		W/6 EA .125 LUGS		
36.625	.875	3363870	HDS1	R
33.688 SHAFT				
.813	1.250	524219	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
33.750 SHAFT				
35.750	.813	3375557	HS7	R
35.750	1.000	**3375588**	HS8	R
35.750	1.000	3375950	HDSA1	RL
33.875 SHAFT				
35.875	.875	3388560	HDS1	R
36.000	.875	3388620	HDS1	R
36.375	1.000	3388780	HDS1	R
36.500	.875	3388800	HDS1	R
34.000 SHAFT				
35.000	.500	3400017	HS7	R
36.000	.813	3400557	HS7	R
36.000	.875	**HDL-4399-R**	HDL	R
36.000	1.000	3400587	HS7	R
36.000	.813	3400550	HDS1	R
36.000	.875	**3400534**	HDS2	R
36.000	.875	3400539	HDS3	D
		W/6 EA .500 ADJ. LUGS		
36.000	.875	3400560	HDS1	R
36.000	.875	3400561	HDS1	R
		W/4 EA .250 LUGS		
36.000	.875	**3400564**	HDS2	R
36.000	.875	**3400565**	HDS2	R
		W/4 EA .250 LUGS		
36.000	.875	**3400566**	HDS2	R
		W/4 EA .125 LUGS		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
34.000 SHAFT (Cont.)				
36.000	1.000	3400580	HDS1	R
36.250	1.125	3400690	HDS1	R
36.250	1.250	3400700	HDS1	R
36.250	1.250	**3400702**	HDS2	R
36.500	.750	**HDL-3056-R**	HDL	R
36.500	.875	3400760	HDS1	R
37.000	1.000	3400890	HDS1	R
37.000	1.500	3400903	HDS1	R
34.032 SHAFT				
36.032	.813	3403557	HS7	R
34.250 SHAFT				
36.000	.750	**HDL-3017-R**	HDL	R
36.062	.688	★3425455	HS4	R
36.250	.813	3425557	HS7	R
36.250	.875	3425560	HDS1	R
36.500	.875	3425660	HDS1	R
36.750	.875	3425760	HDS1	R
36.750	.875	3425761	HDS1	R
		W/6 EA .375 LUGS		
34.312 SHAFT				
	1.750	87529	LDSLV4	
		FOR SEAL SH SIZE 34.500		
34.375 SHAFT				
36.875	1.250	3438790	HDS1	R
34.500 SHAFT				
1.063	1.500	523063	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
36.000	.750	**3450258**	HS8	R
36.000	.750	3450250	HDS1	R
36.000	.750	3450252	HDS1	R
		W/6 EA .250 LUGS		
36.000	.750	**3450253**	HDS2	R
36.000	.750	3450255	HDS1	R
		W/6 EA .125 LUGS		
36.000	1.000	3450290	HDS1	R
36.500	.813	3450557	HS7	R
36.500	.875	**HDL-4405-R**	HDL	R
36.500	1.000	**HDL-3021-R**	HDL	R
36.500	.875	3450560	HDS1	R
36.500	.875	**3450564**	HDS2	R
		W/6 EA .156 LUGS		
36.500	.875	3450565	HDS1	R
		W/6 EA .250 LUGS		
36.500	.875	**3450566**	†HDS2	V
36.500	.875	3450569	HDS3	D
		W/6 EA .500 ADJ. LUGS		
36.500	1.000	**3450574**	HDS2	V
36.500	1.000	3450580	HDS1	R
36.500	1.000	**3450582**	HDS2	R
36.500	1.000	3450950	HDSA1	RL
36.500	.875	**3450518**	HDS2	H
36.500	.875	**3450563**	HDS2	D
36.750	.875	3450660	HDS1	R
37.000	.875	3450760	HDS1	R
37.500	.750	3450860	HDS1	R
37.500	.750	**3450862**	HDS2	R
34.750 SHAFT				
36.625	.750	**3475470**	HDS2	R
36.750	.875	3475560	HDS1	R
34.750 SHAFT (Cont.)				
36.750	.875	**3475562**	HDS2	R
36.750	.875	3475564	HDS1	R
		W/8 EA .375 LUGS		
36.750	.875	3475565	HDS1	R
		W/8 EA .250 LUGS		
37.000	.875	3475660	HDS1	R
37.375	.875	3475800	HDS1	R
37.500	.875	3475820	HDS1	R
37.750	1.500	3475903	HDS1	R
34.813 SHAFT				
	1.313	86029	LDSLV4	
		FOR SEAL SH SIZE 35.000	(899.00MM)	
35.000 SHAFT				
36.000	.500	3500017	HS7	R
36.500	.625	3500237	HS7	R
36.500	.750	3500257	HS7	R
37.000	.813	3500557	HS7	R
37.000	.875	**HDL-3835-R**	HDL	R
37.000	.875	**3500568**	HS8	R
37.000	.813	3500550	HDS1	R
37.000	.875	3500560	HDS1	R
37.000	.875	3500561	HDS1	R
		W/4 EA .063 LUGS		
37.000	.875	3500562	HDS1	R
		W/4 EA .188 LUGS		
37.000	.875	**3500563**	HDS2	R
		W/6 EA .500 LUGS		
37.000	.875	3500564	HDS3	R
		W/4 EA .500 ADJ. LUGS		
37.000	.875	**3500565**	HDS2	R
37.000	.875	**3500566**	HDS2	R
		W/6 EA .188 LUGS		
37.000	.875	3500567	HDS1	V
37.000	.875	3500569	HDS3	D
		W/6 EA .500 ADJ. LUGS		
37.000	.875	3500579	HDS3	D
		W/6 EA .500 ADJ. LUGS		
37.000	.875	3500952	HDSA2	RL
37.000	.875	3500958	HDSA2	VL
37.000	1.000	3500584	HDS1	R
		W/6 EA .125 LUGS		
37.000	1.000	3501952	HDSA2	RL
37.375	1.000	3500730	HDS1	R
37.500	.875	**HDL-3836-R**	HDL	R
37.500	.750	3500740	HDS1	R
37.500	.875	3500760	HDS1	R
37.500	.875	**3500762**	HDS2	R
37.500	.875	3500765	HDS1	R
		W/6 EA .500 LUGS		
37.500	.875	3500769	HDS3	D
		W/6 EA .500 ADJ. LUGS		
37.500	.938	3500770	HDS1	R
37.500	.938	3500772	HDS1	R
		W/6 EA .125 LUGS		
37.500	.938	3500773	HDS1	R
		W/6 EA .063 LUGS		
37.500	1.000	3500780	HDS1	R
37.750	.875	3500820	HDS1	R
38.000	.875	**HDL-3837-R**	HDL	R
38.000	1.500	3500903	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
35.039 SHAFT				
	.196	**408903**	VR4	R
	SHAFT RANGE 34.724-35.118			
35.125 SHAFT				
.688	.875	531069	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
35.250 SHAFT				
37.250	.813	**3525558**	HS8	R
37.250	.875	**HDL-4416-R**	HDL	R
37.250	.875	3525560	HDS1	R
37.250	.875	3525567	HDS1	V
37.500	.875	3525660	HDS1	R
38.250	.688	3525850	HDS1	R
38.250	.688	**3525852**	HDS2	R
38.250	.813	**3525862**	HDS2	R
38.250	1.125	3525900	HDS1	R
38.250	1.500	3525902	HDS1	R
35.313 SHAFT				
	2.500	85814	LDSLV4	
	FOR SEAL SH SIZE 35.500		(901.70MM)	
	.790	**409000**	VR1	R
	SHAFT RANGE 34.450 - 36.220			
35.375 SHAFT				
37.375	.813	3538557	HS7	R
37.375	.875	**HDL-4417-R**	HDL	R
37.375	.875	3538560	HDS1	R
37.375	1.000	3538580	HDS1	R
37.375	.875	3537587	HDS1	V
37.500	.875	3538620	HDS1	R
35.433 SHAFT				
	.196	**409003**	VR4	R
	SHAFT RANGE 35.315-36.102			
35.438 SHAFT				
.813	1.250	524221	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
36.938	.750	3543257	HS7	R
37.500	1.000	3544590	HDS1	R
38.583	.906	3548900	HDS1	R
38.583	.906	3548905	HDS1	R
	W/8 EA .563 LUGS			
35.496 SHAFT				
37.996	.984	**HDL-3001-R**	HDL	R
35.500 SHAFT				
1.063	1.500	524222	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
37.500	.813	3550557	HS7	R
37.500	.875	**HDL-4553-R**	HDL	R
37.500	.875	3550560	HDS1	R
37.500	.875	3550562	HDS1	R
	W/6 EA .125 LUGS			
37.500	.875	**3550566**	HDS2	D
	W/6 EA .125 LUGS			
37.500	.875	3550569	HDS3	D
	W/6 EA .500 ADJ. LUGS			
37.500	1.000	3550580	HDS1	R
37.750	1.000	3550680	HDS1	R
38.000	1.000	3550770	HDS1	V
38.000	1.000	3550780	HDS1	R
38.000	1.000	**3550794**	HDS2	V
35.500 SHAFT (Cont.)				
38.000	1.250	3550974	HDSE2	VV
38.250	1.000	3550830	HDS1	R
38.500	1.500	3550903	HDS1	R
35.630 SHAFT				
37.598	.866	**HDL-3065-R**	HDL	R
35.750 SHAFT				
37.750	.813	3575557	HS7	R
37.750	.813	**3575558**	HS8	R
35.812 SHAFT				
	1.500	90332	LDSLV4	
	FOR SEAL SHAFT SIZE 36.000			
	2.000	87451	LDSLV4	
	FOR SEAL SH SIZE 36.000		(914.40MM)	
35.826 SHAFT				
38.076	.703	**3583658**	HDS2	D
35.827 SHAFT				
38.076	.688	**3583659**	HS8	D
38.076	.703	**3582742**	HDS2	H
38.077	.687	**HDL-3003-R**	HDL	R
35.875 SHAFT				
37.875	.875	3588560	HDS1	R
38.000	.875	3588620	HDS1	R
36.000 SHAFT				
.688	1.125	528416	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.688	1.125	593606	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
.750	1.188	524223	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.250	530466	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
1.063	1.500	524224	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
37.500	.750	3600257	HS7	R
37.620	.750	3600300	HDS1	R
37.998	.875	3600500	HDS1	R
37.998	.875	3600501	HDS1	R
	W/4 EA .125 LUGS			
37.998	.875	3600505	HDS1	R
	W/8 EA .469 LUGS			
38.000	.813	3600557	HS7	R
38.000	.813	**3600558**	HS8	R
38.000	.875	**HDL-4421-R**	HDL	R
38.000	.875	3600560	HDS1	R
38.000	.875	**3600562**	HDS2	R
38.000	.875	**3600565**	HDS2	R
	W/6 EA .250 LUGS			
38.000	.875	3600569	HDS3	D
	W/6 EA .500 ADJ. LUGS			
38.000	.875	**3600572**	HDS2	D
38.000	1.500	3600954	HDSE2	RR
38.109	.953	512289	HS9	R
38.228	.875	**3600522**	HDS2	H
38.228	.875	3600523	HDS3	H
	W/6 EA .500 ADJ. LUGS			
38.250	1.000	3600680	HDS1	R
38.500	1.000	**HDL-9993-R**	HDL	R
38.500	.875	3600760	HDS1	R
38.500	.875	**3600762**	HDS2	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
36.000 SHAFT (Cont.)				
38.500	.875	3600769	HDS3	D
		W/6 EA .500 ADJ. LUGS		
38.500	1.000	3600780	HDS1	R
38.500	1.000	**3600783**	HDS2	R
38.750	1.000	3600830	HDS1	R
39.000	1.500	3600903	HDS1	R
39.500	1.500	3600904	HDS1	R
36.220 SHAFT				
	.196	**409203**	VR4	R
		SHAFT RANGE 35.906-36.299		
36.250 SHAFT				
38.250	1.000	**3625588**	HS8	R
38.250	1.000	3625580	†HDS1	R
38.500	1.000	3625680	HDS1	R
38.750	1.000	3625780	HDS1	R
39.000	1.000	3625830	HDS1	R
36.375 SHAFT				
	2.500	86111	LDSLV4	
	FOR SEAL SH SIZE 36.555		(928.50MM)	
36.460 SHAFT				
38.460	1.000	**3646588**	HS8	R
36.500 SHAFT				
38.000	1.000	3650297	HS7	R
38.000	.750	3650250	HDS1	R
38.000	1.000	3650290	HDS1	R
38.250	.813	**3650398**	HS8	R
38.500	.625	**3650525**	HS8	V
38.500	.813	3650557	HS7	R
38.500	.875	**HDL-4430-R**	HDL	R
38.500	1.000	**3650588**	HS8	R
38.500	.750	3650545	HDS1	R
		W/8 EA .079 LUGS		
38.500	.875	3650560	HDS1	R
38.500	.875	3650565	HDS1	R
		W/12 EA .125 LUGS		
38.750	1.000	3650680	HDS1	R
39.000	.625	3650750	HDS1	R
39.000	.625	**3650752**	HDS2	R
39.000	.625	**3650753**	HDS2	D
39.000	1.000	3650780	HDS1	R
39.000	1.000	3650781	HDS1	R
		W/6 EA .250 LUGS		
36.563 SHAFT				
.688	1.125	593285	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.815	.875	595670	CT1	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
2.523	2.960	594202	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
36.625 SHAFT				
38.625	.813	3663557	HS7	R
36.750 SHAFT				
1.063	1.500	595016	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
38.750	.813	3675557	HS7	R
38.750	.813	**3675558**	HS8	R
38.750	1.000	3675587	HS7	R
38.750	.875	3675560	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
36.750 SHAFT (Cont.)				
38.750	.875	3675564	HDS1	R
		W/6 EA .125 LUGS		
38.750	1.000	3675580	HDS1	R
39.000	.875	3675660	HDS1	R
39.250	.875	**HDL-7428-R**	HDL	R
39.250	.875	3675760	HDS1	R
39.250	.875	3675764	HDS1	R
		W/6 EA .125 LUGS		
39.250	.875	**3675765**	HDS2	R
39.250	1.000	3675780	HDS1	R
36.813 SHAFT				
	2.500	86458	LDSLV4	
	FOR SEAL SH SIZE 37.000		(939.80MM)	
36.875 SHAFT				
.938	1.375	523154	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
39.000	.875	3688960	HDSA1	RL
37.000 SHAFT				
.813	1.250	526246	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.813	1.000	526245	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	525320	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
38.000	.500	3700017	HS7	R
39.000	.813	3700557	HS7	R
39.000	.875	**HDL-4434-R**	HDL	R
39.000	1.000	3700576	HS6	R
39.000	1.000	**3700588**	HS8	R
39.000	.875	3700560	HDS1	R
39.000	.875	3700562	HDS1	R
		W/4 EA .375 LUGS		
39.000	.875	**3700563**	HDS2	R
39.000	.875	**3700564**	HDS2	R
		W/6 EA .375 LUGS		
39.000	.875	3700569	HDS3	D
		W/6 EA .500 ADJ. LUGS		
39.000	1.000	3700580	HDS1	R
39.250	.875	3700660	HDS1	R
40.000	1.500	3700895	HDS1	R
37.125 SHAFT				
	.790	**409500**	VR1	R
		SHAFT RANGE 36.220 - 37.990		
.813	1.250	524768	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
37.250 SHAFT				
.813	1.250	524368	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
39.250	.875	**HDL-4436-R**	HDL	R
39.250	1.000	**3725588**	HS8	R
39.250	.875	3725560	HDS1	R
39.250	.875	**3725563**	HDS2	R
39.250	.938	3725570	HDS1	R
39.250	1.000	3725580	HDS1	R
39.500	.875	3725660	HDS1	R
37.375 SHAFT				
38.625	.688	3738120	HDS1	R
39.375	.813	3738557	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
37.402 SHAFT				
	.196	**409503**	VR4	R
	SHAFT RANGE 37.165-37.598			
37.438 SHAFT				
39.500	.875	3744600	HDS1	R
40.000	.875	3744800	HDS1	R
40.500	1.500	3744904	HDS1	R
37.500 SHAFT				
.813	1.250	526582	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
39.000	.875	3750270	HDS1	R
39.000	.875	**3750272**	HDS2	R
39.000	.875	**3750274**	HDS2	R
	W/6 EA .125 LUGS			
39.000	.875	3750276	HDS1	R
	W/4 EA .250 LUGS			
39.500	.813	3750557	HS7	R
39.500	.875	**HDL-4438-R**	HDL	R
39.500	1.000	3750587	HS7	R
39.500	.750	3750540	HDS1	R
39.500	.750	**3750542**	HDS2	R
39.500	.875	3750560	HDS1	R
39.500	.875	3750561	HDS1	D
39.500	.875	3750562	HDS1	R
	W/6 EA .125 LUGS			
39.500	.875	**3750563**	HDS2	D
39.500	.875	**3750564**	HDS2	R
	W/6 EA .125 LUGS			
39.500	.875	**3750565**	HDS2	R
39.500	.875	**3750572**	HDS2	V
39.750	.875	3750660	HDS1	R
40.250	1.000	3750830	HDS1	R
40.250	1.250	3750980	HDSC1	RL
37.813 SHAFT				
	1.500	86973	LDSLV4	
	FOR SEAL SH SIZE 38.000		(965.20MM)	
	2.250	86545	LDSLV4	
	FOR SEAL SHAFT SIZE 38.000			
	2.500	86972	LDSLV4	
	FOR SEAL SH SIZE 38.000		(965.20MM)	
39.813	.813	3781557	HS7	R
40.000	.875	3781640	HDS1	R
40.500	1.000	3781800	HDS1	R
40.750	1.500	3781844	HDS1	R
40.945	.875	3781900	HDS1	R
40.954	1.500	3781904	HDS1	R
37.875 SHAFT				
.813	1.250	524225	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
39.875	1.000	3788580	HDS1	R
40.000	1.000	3788630	HDS1	R
40.500	1.000	3788800	HDS1	R
40.750	1.500	3788844	HDS1	R
38.000 SHAFT				
	1.500	86840	LDSLV4	
	FOR SEAL SH SIZE 38.188		(969.98MM)	
.813	1.250	524226	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
39.500	.750	**HDL-3004-R**	HDL	R
39.500	.750	**3800288**	HS8	D
	W/THREADED SPRING CONNECTOR			

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
38.000 SHAFT (Cont.)				
39.500	.750	**3800222**	HDS2	H
39.500	.750	**3800252**	HDS2	D
39.500	.750	**3800254**	HDS2	V
39.500	.750	**3800258**	HDS2	D
39.625	.750	**3800338**	HS8	R
40.000	.813	3800557	HS7	R
40.000	.875	**HDL-4448-R**	HDL	R
40.000	.875	3800560	HDS1	R
40.000	.875	3800563	HDS1	R
	W/6 EA .250 LUGS			
40.000	.875	**3800565**	HDS2	R
40.000	.875	**3800566**	HDS2	R
	W/6 EA .250 LUGS			
40.000	.875	3800569	HDS3	D
	W/6 EA .500 ADJ. LUGS			
40.000	1.312	3800950	HDSE1	RR
40.500	.875	3800760	HDS1	R
40.500	1.000	3800780	HDS1	D
40.500	1.000	**3800784**	HDS2	R
40.500	1.000	**3800785**	HDS2	R
40.750	.875	3800820	HDS1	R
41.000	.750	3800860	HDS1	R
41.000	.750	**3800862**	HDS2	R
41.000	1.125	3800900	HDS1	R
41.000	1.188	3800902	HDS1	R
	W/6 EA .313 LUGS			
41.000	1.500	3800903	HDS1	R
41.250	1.500	3800904	HDS1	R
38.125 SHAFT				
40.125	1.000	3812580	HDS1	R
38.189 SHAFT				
	.196	**409703**	VR4	R
	SHAFT RANGE 38.031-38.465			
38.250 SHAFT				
40.250	.875	**HDL-4454-R**	HDL	R
40.250	.875	3825560	HDS1	R
40.250	.875	**3825562**	HDS2	R
40.500	.875	3825660	HDS1	R
40.500	1.000	3825680	HDS1	R
40.750	.750	3825750	HDS1	R
40.750	.750	**3825752**	HDS2	R
40.750	.875	3825760	HDS1	R
40.750	.875	3825761	HDS1	R
	W/6 EA .063 LUGS			
40.750	.875	**3825765**	HDS2	R
41.000	1.500	3825844	HDS1	R
41.250	.875	3825870	HDS1	R
41.250	1.000	3825894	HDS1	R
	W/6 EA .125 LUGS			
41.250	1.500	3825903	HDS1	R
38.258 SHAFT				
40.750	.875	3825763	HDS1	R
	W/6 EA .125 LUGS			
38.500 SHAFT				
	1.250	83978	LDSLV4	
	FOR SEAL SH SIZE 38.688		(982.68MM)	
	1.500	81753	LDSLV4	
	FOR SEAL SH SIZE 38.688		(982.68MM)	
40.375	.750	3850477	HS7	R
40.500	.813	3850557	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
38.500 SHAFT (Cont.)				
40.750	.750	**3850652**	HDS2	R
41.000	1.000	3850780	HDS1	R
41.000	1.000	**3850782**	HDS2	R
41.000	1.625	3850978	HDSD2	V
41.500	1.500	3850895	HDS1	R
38.583 SHAFT				
	.196	**409808**	VR4	R
	SHAFT RANGE 38.465-38.898			
38.750 SHAFT				
40.750	.813	3875557	HS7	R
40.750	.875	3875560	HDS1	R
40.750	.875	3875562	HDS1	R
	W/6 EA .125 LUGS			
40.750	.875	**3875563**	HDS2	R
40.750	.875	**3875564**	HDS2	R
	W/6 EA .125 LUGS			
40.750	1.000	3875580	HDS1	R
40.750	1.000	**3875585**	HDS2	R
40.750	1.000	3875950	HDSA1	RL
41.000	.875	**HDL-4570-R**	HDL	R
41.000	.875	3875660	HDS1	R
41.250	.875	3875760	HDS1	R
42.000	1.500	3875904	HDS1	R
38.813 SHAFT				
	2.125	85123	LDSLV4	
	FOR SEAL SH SIZE 39.000		(990.60MM)	
38.875 SHAFT				
41.375	1.250	3888790	HDS1	R
38.938 SHAFT				
41.000	.875	3894600	HDS1	R
41.500	.875	3894800	HDS1	R
42.000	1.500	3894904	HDS1	R
39.000 SHAFT				
40.000	.500	3900017	HS7	R
40.500	.750	**3900258**	HS8	R
41.000	.813	3900557	HS7	R
41.000	.875	**HDL-4465-R**	HDL	R
41.000	.700	3900535	HDS1	R
41.000	.750	3900540	HDS1	R
41.000	.750	**3900542**	HDS2	R
41.000	.875	3900560	HDS1	R
41.000	.875	**3900561**	HDS2	R
41.000	.875	**3900562**	HDS2	R
41.000	.875	**3900563**	HDS2	D
41.000	.875	**3900564**	HDS2	R
	W/6 EA .250 LUGS			
41.000	.875	3900565	HDS1	R
	W/6 EA .250 LUGS			
41.000	.875	**3900566**	HDS2	R
	W/6 EA .375 LUGS			
41.000	.875	**3900572**	HDS2	D
41.000	.875	**3900574**	HDS2	V
41.250	.875	3900660	HDS1	R
41.500	.875	3900760	HDS1	R
42.000	1.500	3900903	HDS1	R
42.250	.875	3900905	HDS1	R
42.250	1.500	3900907	HDS1	R
39.250 SHAFT				
40.750	.750	3925257	HS7	R
39.250 SHAFT (Cont.)				
41.250	.813	3925557	HS7	R
39.370 SHAFT				
	.196	**410003**	VR4	R
	SHAFT RANGE 39.331-39.764			
39.500 SHAFT				
	.790	**410000**	VR1	R
	SHAFT RANGE 37.990 - 39.960			
.688	1.125	529452	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.250	526806	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
40.500	.500	3950017	HS7	R
41.500	.813	3950557	HS7	R
42.500	1.125	3950900	HDS1	R
42.500	1.250	3950901	HDS1	R
42.500	1.250	3950902	HDS1	R
	W/6 EA .125 LUGS			
39.750 SHAFT				
41.688	.969	3975500	HDS1	R
41.750	.813	3975557	HS7	R
42.250	.875	**HDL-7538-R**	HDL	R
42.250	.813	3975750	HDS1	R
42.250	.875	3975760	HDS1	R
42.250	.875	3975764	HDS1	R
	W/6 EA .125 LUGS			
42.250	.875	3975766	HDS1	R
	W/8 EA .063 LUGS			
39.813 SHAFT				
	2.125	81826	LDSLV4	
	FOR SEAL SH SIZE 40.000		(1016.00MM)	
39.875 SHAFT				
.938	1.375	523584	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
1.063	1.500	529379	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
39.979 SHAFT				
41.500	1.000	3997300	HDS1	R
40.000 SHAFT				
41.500	.750	4000257	HS7	R
41.500	1.000	4000290	HDS1	R
41.500	1.000	4000920	HDSB1	RL
42.000	.813	4000557	HS7	R
42.000	.813	4000550	HDS1	R
42.000	.813	4000559	HDS1	V
42.000	.875	4000560	HDS1	R
42.000	.875	4000561	HDS1	R
	W/4 EA .125 LUGS			
42.000	.875	**4000562**	HDS2	R
42.000	.875	4000563	HDS1	D
42.000	.875	**4000564**	HDS2	R
	W/6 EA .125 LUGS			
42.000	.875	**4000565**	HDS2	R
	W/6 EA .250 LUGS			
42.000	.875	4000566	HDS1	R
	W/8 EA .250 LUGS			
42.000	.875	4000569	HDS1	R
	W/6 EA .375 LUGS			
42.000	.875	**4000574**	HDS2	R
	W/6 EA .500 LUGS			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
40.000 SHAFT (Cont.)				
42.000	.875	4000576	HDS1	V
42.000	1.000	4000580	HDS1	R
42.000	1.000	**4000582**	HDS2	R
42.000	1.000	4000583	HDS1	R
		W/6 EA .125 LUGS		
42.000	1.000	**4000584**	HDS2	R
		W/6 EA .125 LUGS		
42.000	1.000	**4000585**	HDS2	R
		W/6 EA .250 LUGS		
42.000	1.000	4000586	HDS1	R
		W/6 EA .250 LUGS		
42.000	1.375	4000590	HDS1	R
42.000	1.375	**4000592**	HDS2	R
42.000	1.375	4000593	HDS1	R
		W/6 EA .250 LUGS		
42.000	1.375	**4000594**	HDS2	R
		W/6 EA .250 LUGS		
42.250	.875	4000660	HDS1	R
40.063 SHAFT				
1.718	2.156	530396	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
40.250 SHAFT				
.813	1.250	525426	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
41.750	.750	**4025258**	HS8	R
40.495 SHAFT				
43.007	1.000	4049790	HDS1	R
40.500 SHAFT				
1.063	1.500	528532	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
41.500	.500	4050017	HS7	R
41.500	.500	**4050018**	HS8	R
41.750	.750	4050061	HDS7	H
42.000	.750	4050257	HS7	R
42.500	.813	4050557	HS7	R
42.500	.875	4050560	HDS1	R
42.500	.875	4050561	HDS1	R
		W/4 EA .250 LUGS		
42.500	.875	4050562	HDS1	R
		W/4 EA .375 LUGS		
42.500	.875	**4050563**	HDS2	R
42.500	.875	4050564	HDS1	R
		W/12 EA .125 LUGS		
42.500	.875	4050565	HDS1	D
42.500	.875	**4050574**	HDS2	R
		W/6 EA .375 LUGS		
42.750	.875	4050660	HDS1	R
42.750	1.000	4050680	HDS1	R
42.750	1.000	4050683	HDS1	D
43.000	.875	**4050762**	HDS2	R
43.000	.875	4050760	HDS1	R
43.000	.875	4050765	HDS1	R
		W/12 EA .250 LUGS		
43.000	.875	**4050774**	HDS2	V
43.000	.875	**4050776**	HDS2	V
		W/6 EA .250 LUGS		
40.750 SHAFT				
42.250	.750	**4075258**	HS8	D
43.750	1.125	4075900	HDS1	R
43.750	1.438	4075902	HDS1	R
40.750 SHAFT (Cont.)				
43.750	1.500	4075905	HDS1	R
40.875 SHAFT				
1.063	1.500	525633	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
41.000 SHAFT				
	.790	**410500**	VR1	R
		SHAFT RANGE 39.960 - 41.930		
	2.000	**410503**	VR4	R
		SHAFT RANGE 40.550 - 41.350		
1.063	1.500	524227	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
42.500	.750	**4100258**	HS8	R
43.000	.813	4100557	HS7	R
43.000	.813	**4100558**	HS8	R
41.125 SHAFT				
1.063	1.500	525036	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
41.250 SHAFT				
.688	.875	594395	CT3	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
42.750	.750	**4125258**	HS8	R
43.250	.750	4125557	HS7	R
41.312 SHAFT				
	1.968	89948	LDSLV4	
		FOR SEAL SH SIZE 41.500		
41.375 SHAFT				
.875	1.313	530448	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
41.500 SHAFT				
.813	1.250	527474	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	524228	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
43.000	.750	**4150258**	HS8	R
43.500	.813	**4150558**	HS8	R
43.500	.875	**HDL-4635-R**	HDL	R
43.500	.875	4150560	HDS1	R
43.500	.875	**4150563**	HDS2	R
43.500	.875	**4150564**	HDS2	R
		W/6 EA .250 LUGS		
43.500	.875	4150566	HDS1	R
		W/8 EA .375 LUGS		
43.500	.875	**4150575**	HDS2	R
		W/8 EA .375 LUGS		
41.625 SHAFT				
43.625	.813	4163557	HS7	R
43.625	.688	4162530	HDS1	R
43.875	1.000	4162680	HDS1	R
43.875	1.000	**4162685**	HDS2	R
44.000	1.000	4162730	HDS1	R
44.500	1.500	4162842	HDS1	R
41.732 SHAFT				
	.196	**410603**	VR4	R
		SHAFT RANGE 41.142-41.929		
41.750 SHAFT				
43.250	.750	**4175258**	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
41.813 SHAFT				
44.000	1.000	4181640	HDS1	R
44.500	1.000	4181800	HDS1	R
45.000	1.000	4181900	HDS1	R
45.000	1.500	4181904	HDS1	R
41.875 SHAFT				
1.188	1.625	528272	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
43.500	1.000	4189932	HDSB2	DL
41.929 SHAFT				
43.929	.813	4193557	HS7	R
41.938 SHAFT				
43.500	.750	4194300	HDS1	R
43.500	.750	4194305	HDS1	R
		W/6 EA .375 LUGS		
43.750	.875	4194440	HDS1	R
41.969 SHAFT				
2.063	2.500	528271	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
42.000 SHAFT				
1.063	1.500	594494	CT4	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
3.313	3.750	596400	CT4	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
43.500	.750	**4200258**	HS8	R
43.912	.750	**4200478**	HS8	R
44.000	.813	4200557	HS7	R
44.188	.953	511855	HS9	R
44.250	1.000	4200680	HDS1	R
44.250	1.000	4200690	HDS1	D
44.500	1.000	4200780	HDS1	R
42.063 SHAFT				
	2.125	85038	LDSLV4	
		FOR SEAL SH SIZE 42.250	(1073.15MM)	
44.063	.813	4206557	HS7	R
42.125 SHAFT				
	2.125	87054	LDSLV4	
		FOR SEAL SH SIZE 42.313	(1074.75MM)	
42.248 SHAFT				
44.248	1.000	**HDL-4470-R**	HDL	R
42.250 SHAFT				
43.750	.750	**4225258**	HS8	R
44.250	.813	4225557	HS7	R
44.250	1.000	4225580	HDS1	R
42.312 SHAFT				
	1.250	87379	LDSLV4	
		FOR SEAL SH SIZE 42.500	(1079.50MM)	
42.500 SHAFT				
	1.250	87392	LDSLV4	
		FOR SEAL SH SIZE 42.688	(1084.28MM)	
.688	1.125	523133	CT3	R
		BORE DIA. IS SHOULDER WIDTH		
43.500	.500	4250017	HS7	R
44.000	.750	**4250258**	HS8	R
44.250	.750	**4250382**	HDS2	R
44.500	.813	4250557	HS7	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
42.500 SHAFT (Cont.)				
45.000	.875	**HDL-4473-R**	HDL	R
45.000	.875	4250760	HDS1	R
45.000	.875	**4250762**	HDS2	R
45.000	.875	4250765	HDS1	R
		W/12 EA .250 LUGS		
45.000	.875	4250766	HDS1	V
		W/6 EA .500 ADJ. LUGS		
45.250	.875	4250820	HDS1	R
45.250	1.125	4250900	HDS1	R
45.250	1.375	4250843	HDS1	R
45.500	1.500	4250905	HDS1	R
45.507	1.250	4250901	HDS1	R
42.563 SHAFT				
.813	1.000	593564	CT3	R
		BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT		
42.750 SHAFT				
43.750	.500	4275017	HS7	R
44.250	.750	**4275258**	HS8	R
42.913 SHAFT				
44.913	.813	4291557	HS7	R
43.000 SHAFT				
	.790	**411000**	VR1	R
		SHAFT RANGE 41.930 - 43.900		
45.000	.813	4300557	HS7	R
45.000	.813	**4300558**	HS8	R
45.000	.875	4300560	HDS1	R
45.000	1.000	4300580	HDS1	R
45.250	1.000	4300680	HDS1	R
45.500	1.000	**HDL-9994-R**	HDL	R
45.500	.875	4300760	HDS1	R
45.500	.875	**4300763**	HDS2	R
45.500	1.000	4300780	HDS1	R
43.125 SHAFT				
44.625	.750	4313250	HDS1	R
43.307 SHAFT				
	.790	**411004**	VR1	V
		SHAFT RANGE 41.929-43.897		
	.196	**411003**	VR4	R
		SHAFT RANGE 42.717-43.504		
43.375 SHAFT				
.813	1.250	524909	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
43.500 SHAFT				
1.063	1.500	524369	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
45.000	.875	4350270	HDS1	R
45.500	.813	**4350558**	HS8	R
45.500	.875	**HDL-4637-R**	HDL	R
45.500	.750	4350540	HDS1	R
45.500	.750	**4350542**	HDS2	R
45.500	.875	4350560	HDS1	R
45.500	.875	**4350562**	HDS2	V
45.500	.875	4350564	HDS1	R
		W/6 EA .250 LUGS		
45.500	.875	**4350565**	HDS2	R
45.500	.875	593047	HDS1	R
		W/6 EA .125 LUGS		

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
43.546 SHAFT				
45.546	.813	4354557	HS7	R
43.625 SHAFT				
45.250	1.000	4363932	HDSA1	RL
43.750 SHAFT				
45.750	.875	**HDL-4638-R**	HDL	R
45.750	.875	4375560	HDS1	R
45.750	.875	**4375569**	HDS2	D
44.000 SHAFT				
.813	1.250	524370	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
.938	1.375	528415	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	524229	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.063	1.500	593180	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
1.313	1.750	528002	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
1.313	1.750	528273	CT4	R
		BORE DIA. IS SHOULDER WIDTH		
45.500	.750	4400257	HS7	R
46.000	.813	4400557	HS7	R
46.000	.875	**4400562**	HDS2	R
46.000	.875	4400563	HDS1	R
		W/8 EA .125 LUGS		
46.000	1.000	4400580	HDS1	R
46.000	1.000	4400584	HDS1	R
		W/8 EA .125 LUGS		
46.500	.875	**HDL-4475-R**	HDL	R
46.500	1.000	**HDL-3024-R**	HDL	R
46.500	.875	4400760	HDS1	R
46.500	.875	**4400761**	HDS2	R
46.500	.875	4400763	HDS1	R
		W/6 EA .250 LUGS		
46.500	.875	**4400766**	HDS2	R
		W/6 EA .250 LUGS		
46.500	1.000	4400780	HDS1	R
46.500	1.000	4400785	HDS3	R
		W/8 EA .500 ADJ. LUGS		
46.500	1.000	**4400792**	HDS2	V
46.500	1.000	**4400793**	HDS2	V
		W/8 EA .500 ADJ. LUGS		
46.750	.875	4400820	HDS1	R
47.000	1.125	4400900	HDS1	R
47.000	1.250	4400902	HDS1	R
47.000	1.250	4400905	HDS1	R
		W/8 EA .125 LUGS		
44.094 SHAFT				
46.000	1.000	4409500	HDS1	R
44.250 SHAFT				
45.750	.750	**4425258**	HS8	R
44.500 SHAFT				
46.000	.750	**HDL-4563-R**	HDL	R
46.000	.750	**4450258**	HS8	R
46.000	.875	4450270	HDS1	R
46.000	.875	**4450272**	HDS2	R
46.500	.813	4450557	HS7	R
46.500	.813	4450550	HDS1	R
47.000	.875	4450760	HDS1	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
44.500 SHAFT (Cont.)				
47.000	.875	4450767	HDS1	V
44.750 SHAFT				
46.250	.750	**4475258**	HS8	R
44.875 SHAFT				
	.790	**411500**	VR1	R
		SHAFT RANGE 43.900 - 45.870		
1.063	1.500	522676	CT1	R
		BORE DIA. IS SHOULDER WIDTH		
45.000 SHAFT				
46.500	.750	4500257	HS7	R
46.625	1.000	**HDL-8903-R**	HDL	R
46.627	1.000	4500930	HDSB2	RL
46.750	.875	4500410	HDS1	R
47.000	.812	**4500518**	HS8	H
47.000	.813	4500557	HS7	R
47.000	.813	592879	HDS1	R
47.000	.875	4500560	HDS1	R
47.000	.875	4500567	HDS1	V
47.188	.688	**4500538**	HS8	R
45.125 SHAFT				
47.125	.813	4513557	HS7	R
45.250 SHAFT				
46.750	.750	**4525258**	HS8	R
47.000	1.000	**4525422**	HDS2	R
47.000	1.000	**4525424**	HDS2	V
45.500 SHAFT				
47.000	.750	**4550258**	HS8	R
47.000	.625	**4550235**	HDS2	R
47.000	.750	4550250	HDS1	R
45.669 SHAFT				
	.196	**411603**	VR4	R
		SHAFT RANGE 45.079-45.866		
45.750 SHAFT				
47.250	.750	**4575258**	HS8	R
47.768	.875	4575570	HDS1	R
46.000 SHAFT				
47.500	.750	**4600258**	HS8	R
47.500	.750	**4600259**	HS8	D
47.500	.750	**4600222**	HDS2	D
47.500	.750	**4600252**	HDS2	H
47.500	.750	**4600254**	HDS2	V
47.750	1.000	4600420	HDS1	R
47.750	1.000	**4600422**	HDS2	R
47.984	.950	513112	HS9	R
48.000	.813	4600557	HS7	R
48.000	.875	4600560	HDS1	R
48.000	1.000	4600580	HDS1	R
49.000	1.250	**4600842**	HDS2	D
46.004 SHAFT				
47.500	.750	**HDL-3006-R**	HDL	R
46.250 SHAFT				
47.750	.750	**4625258**	HS8	R
48.250	.813	4625557	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
46.500 SHAFT				
.813	1.250	529086	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
48.000	.750	**4650258**	HS8	R
48.500	.875	4650560	HDS1	R
48.500	.875	4650563	HDS1	V
48.750	1.125	4650690	HDS1	R
46.750 SHAFT				
48.250	.750	**4675258**	HS8	R
47.000 SHAFT				
1.063	1.500	527211	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
48.500	.750	**4700258**	HS8	R
48.500	.750	**4700259**	HS8	D
48.750	1.000	4700420	HDS1	R
48.750	1.000	**4700422**	HDS2	R
48.875	.875	4700480	HDS1	R
48.875	.875	**4700482**	HDS2	R
49.000	.813	4700557	HS7	R
49.000	.875	4700560	HDS1	R
49.000	.875	4700562	HDS1	R
	W/8 EA .125 LUGS			
49.000	.875	**4700564**	HDS2	R
	W/8 EA .125 LUGS			
49.000	.875	4700565	HDS1	R
	W/6 EA .250 LUGS			
49.000	.875	4700566	HDS1	V
	W/6 EA .250 LUGS			
49.000	.875	4700567	HDS1	V
49.000	1.000	4700583	HDS1	R
	W/6 EA .125 LUGS			
49.000	1.000	**4700584**	HDS2	R
	W/6 EA .125 LUGS			
49.000	.875	4700510	HDS7	H
	W/6 EA .375 LUGS			
49.000	.875	4700511	HDS7	H
49.000	.875	**4700574**	HDS2	V
49.000	.875	**4700576**	HDS2	V
	W/8 EA .250 LUGS			
49.500	.875	4700760	HDS1	R
47.244 SHAFT				
	.787	**412000**	VR1	R
	SHAFT RANGE 45.870 - 47.840			
	.196	**412003**	VR4	R
	SHAFT RANGE 46.654-47.441			
47.250 SHAFT				
49.250	.625	**4725528**	HS8	R
47.375 SHAFT				
48.875	.750	592796	HS7	R
48.875	.750	4738250	HDS1	R
47.500 SHAFT				
.750	1.188	530606	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
.813	1.250	525091	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.938	1.375	526021	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
1.063	1.500	524230	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
49.000	.770	**4750258**	HS8	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
47.500 SHAFT (Cont.)				
49.500	.875	4750560	HDS1	R
49.500	.875	**4750562**	HDS2	R
49.500	.875	4750565	HDS1	R
	W/8 EA .250 LUGS			
49.500	1.500	4750590	HDS1	R
47.625 SHAFT				
1.063	1.500	522677	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
49.125	.770	**4762258**	HS8	R
47.750 SHAFT				
50.500	1.125	4775840	HDS1	R
50.500	1.250	4775850	HDS1	R
47.875 SHAFT				
49.875	.813	4788557	HS7	R
48.000 SHAFT				
.812	1.000	596327	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
.813	1.000	530441	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
49.500	.750	4800257	HS7	R
49.500	.750	**4800252**	HDS2	D
49.500	.750	**4800254**	HDS2	V
49.750	1.000	4800420	HDS1	R
50.000	.813	4800557	HS7	R
50.000	1.000	4800580	HDS1	R
50.000	1.000	**4800582**	HDS2	R
48.125 SHAFT				
50.000	.813	4812487	HS7	R
50.000	.813	4813440	HDS1	R
48.250 SHAFT				
1.063	1.500	524231	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
50.250	.875	**HDL-4639-R**	HDL	R
50.250	.875	4825527	HDS1	V
50.250	.875	4825550	HDS1	R
	W/8 EA .250 LUGS			
50.250	.875	4825560	HDS1	R
50.250	.875	4825561	HDS1	R
	W/8 EA .500 LUGS			
50.250	.875	**4825562**	HDS2	R
	W/ 6 EA .375 LUGS			
50.250	.875	**4825563**	HDS2	R
50.250	.875	4825565	HDS1	R
	W/8 EA .125 LUGS			
50.250	.875	4825566	HDS1	R
	W/8 EA .500 LUGS			
50.250	.875	4825570	HDS1	D
50.250	.875	4825571	HDS1	D
	W/8 EA .500 ADJ. LUGS			
50.252	.875	**4825564**	HDS2	D
	W/8 EA .500 LUGS			
48.375 SHAFT				
50.375	.812	**4837558**	HS8	R
48.865 SHAFT				
1.063	1.500	524371	CT1	R
	BORE DIA. IS SHOULDER WIDTH			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
49.000 SHAFT				
	.790	**412500**	VR1	R
	SHAFT RANGE 47.840 - 50.000			
	2.000	**412503**	VR4	R
	SHAFT RANGE 48.520 - 49.320			
.813	1.250	522828	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
50.625	.813	4900340	HDS1	R
50.750	1.000	4900420	HDS1	R
50.750	1.000	**4900422**	HDS2	R
50.750	1.000	4900425	HDS1	R
	W/8 EA .125 LUGS			
51.000	1.000	4900580	HDS1	R
49.250 SHAFT				
51.125	.813	526618	HS7	R
49.500 SHAFT				
52.240	1.000	**4950803**	HDS2	R
52.240	1.000	**4950805**	HDS2	D
52.250	1.000	4950830	HDS1	R
52.250	1.000	**4950833**	HDS2	R
52.250	1.000	**4950835**	HDS2	D
49.750 SHAFT				
52.500	1.000	4975830	HDS1	R
52.500	1.000	**4975833**	HDS2	R
52.500	1.000	**4975834**	HDS2	V
52.500	1.000	**4975835**	HDS2	D
50.000 SHAFT				
51.750	1.000	5000420	HDS1	R
52.000	.813	**5000558**	HS8	R
52.000	.875	5000560	HDS1	R
52.000	.875	**5000562**	HDS2	R
52.000	.875	**5000564**	HDS2	R
	W/6 EA .250 LUGS			
50.125 SHAFT				
52.125	.845	**5012578**	HS8	R
50.625 SHAFT				
.813	1.250	525953	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
51.000 SHAFT				
	.790	**413000**	VR1	R
	SHAFT RANGE 50.000 - 51.970			
53.000	.812	**5100558**	HS8	R
53.000	.813	592880	HDS1	R
51.181 SHAFT				
	.196	**413003**	VR4	R
	SHAFT RANGE 50.984-51.772			
51.248 SHAFT				
53.289	.875	**HDL-6747-R**	HDL	R
51.250 SHAFT				
.938	1.375	529130	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
53.250	.875	**5125562**	HDS2	V
51.500 SHAFT				
.813	1.250	524372	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
51.500 SHAFT (Cont.)				
.938	1.375	530661	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
1.063	1.500	524232	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
53.500	1.250	5150570	HDS1	R
53.500	1.500	5150590	HDS1	R
52.000 SHAFT				
1.063	1.500	528927	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
53.000	.500	5200017	HS7	R
54.000	.813	**5200558**	HS8	R
52.500 SHAFT				
55.000	.875	5250760	HDS1	R
55.000	.875	5250777	HDS1	V
53.000 SHAFT				
	.790	**413500**	VR1	R
	SHAFT RANGE 51.970 - 53.940			
.813	1.250	528526	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
.813	1.000	594396	CT3	R
	BORE DIA. IS SHOULDER WIDTH			
54.875	.813	5300486	HS6	R
54.875	.813	**5300488**	HS8	R
54.875	.813	595881	HS4	R
54.875	.813	5300440	HDS1	R
54.875	.813	5300441	HDS1	R
	W/6 EA .063 LUGS			
53.150 SHAFT				
	.196	**413503**	VR4	R
	SHAFT RANGE 52.756-53.740			
53.250 SHAFT				
54.250	.500	5325017	HS7	R
53.625 SHAFT				
54.625	.500	5363017	HS7	R
54.000 SHAFT				
56.000	.813	5400557	HS7	R
56.000	1.000	**5400582**	HDS2	R
54.250 SHAFT				
56.250	1.000	5425580	HDS1	R
56.250	1.000	**5425583**	HDS2	R
54.750 SHAFT				
56.375	.875	5475340	HDS1	R
56.375	.875	**5475345**	HDS2	D
	W/6 EA .125 LUGS			
55.000 SHAFT				
	.790	**414000**	VR1	R
	SHAFT RANGE 53.940 - 55.910			
.813	1.250	526807	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
56.000	.500	5500017	HS7	R
55.118 SHAFT				
	.196	**414003**	VR4	R
	SHAFT RANGE 54.724-55.709			

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
55.150 SHAFT				
56.250	.500	**5515028**	HS8	R
55.500 SHAFT				
57.500	.750	5550540	HDS1	R
57.500	.750	**5550542**	HDS2	R
56.000 SHAFT				
58.000	.813	5600550	HDS1	R
56.875 SHAFT				
	.790	**414500**	VR1	R
	SHAFT RANGE 55.910 - 57.870			
57.000 SHAFT				
.813	1.250	528525	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
57.087 SHAFT				
	.196	**414503**	VR4	R
	SHAFT RANGE 56.693-57.677			
57.375 SHAFT				
60.375	1.500	5738900	HDS1	R
57.500 SHAFT				
59.500	.813	**5750558**	HS8	R
57.515 SHAFT				
59.515	.813	**5751558**	HS8	R
57.875 SHAFT				
	.790	**415000**	VR1	R
	SHAFT RANGE 57.870 - 59.840			
58.875	.500	5788017	HS7	R
60.000	.938	5788620	HDS1	R
58.000 SHAFT				
60.000	.813	**5800558**	HS8	R
58.500 SHAFT				
60.500	.813	**5850518**	HS8	R
59.000 SHAFT				
1.188	1.625	594163	CT4	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
60.500	.875	5900270	HDS1	R
60.875	.813	5900474	HDS1	R
60.875	.813	5900475	HDS1	R
	W/6 EA .125 LUGS			
61.000	.875	**HDL-5482-R**	HDL	R
61.000	.875	5900560	HDS1	R
59.055 SHAFT				
	.196	**415003**	VR4	R
	SHAFT RANGE 58.661-59.646			
59.750 SHAFT				
60.750	.500	5975017	HS7	R
60.000 SHAFT				
63.000	1.000	6000890	HDS1	R
60.250 SHAFT				
62.313	.750	**531572**	HS8	R
62.500	.715	**6025658**	HS8	R
60.875 SHAFT				
	.790	**415500**	VR1	R
	SHAFT RANGE 59.840 - 61.810			
61.000 SHAFT				
63.000	1.000	6100580	HDS1	R
64.000	1.500	6100992	HDSE2	RL
61.024 SHAFT				
	.196	**415503**	VR4	R
	SHAFT RANGE 60.630-61.811			
61.250 SHAFT				
62.250	.500	6125017	HS7	R
63.250	1.000	6125582	HDS1	R
63.438	.953	527120	HS9	R
62.500 SHAFT				
64.000	.719	6250271	HS7	R
64.000	.720	**6250752**	HDS2	R
64.000	.875	6250270	HDS1	R
64.000	.875	6250281	HDS1	V
64.000	.625	**6250222**	HDS2	R
64.500	.875	6250560	HDS1	R
62.598 SHAFT				
64.598	.813	6259557	HS7	R
62.750 SHAFT				
	.790	**416000**	VR1	R
	SHAFT RANGE 61.810 - 63.780			
62.992 SHAFT				
	.196	**416003**	VR4	R
	SHAFT RANGE 62.992-64.567			
63.000 SHAFT				
65.000	.813	**6300558**	HS8	R
63.250 SHAFT				
65.434	.953	527121	HS9	R
63.327 SHAFT				
65.748	.787	**HDL-8557-R**	HDL	R
63.375 SHAFT				
65.375	.813	**6337558**	HS8	R
63.500 SHAFT				
.813	1.250	526808	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
64.000 SHAFT				
66.000	.813	**6400558**	HS8	R
64.750 SHAFT				
	.790	**416500**	VR1	R
	SHAFT RANGE 63.780 - 65.750			
64.961 SHAFT				
	.196	**416503**	VR4	R
	SHAFT RANGE 64.567-66.142			
65.605 SHAFT				
67.605	.813	6560557	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
66.750 SHAFT				
	.790	**417000**	VR1	R
	SHAFT RANGE 65.750 - 67.720			
66.929 SHAFT				
	.196	**417003**	VR4	R
	SHAFT RANGE 66.142-67.717			
67.000 SHAFT				
69.000	.813	**6700557**	HS8	R
67.750 SHAFT				
.813	1.250	528975	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
68.000 SHAFT				
70.000	.812	6800557	HS7	R
68.750 SHAFT				
	.790	**417500**	VR1	R
	SHAFT RANGE 67.720 - 69.690			
68.898 SHAFT				
	.196	**417503**	VR4	R
	SHAFT RANGE 67.717-69.488			
69.000 SHAFT				
71.000	.813	**6900558**	HS8	R
70.000 SHAFT				
.813	1.250	526809	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
72.000	.813	**7000558**	HS8	R
70.625 SHAFT				
	.790	**418000**	VR1	R
	SHAFT RANGE 69.690 - 71.650			
70.866 SHAFT				
	.196	**418003**	VR4	R
	SHAFT RANGE 69.488-71.260			
71.000 SHAFT				
.813	1.250	524373	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
72.500 SHAFT				
74.500	.813	**7250558**	HS8	R
72.625 SHAFT				
	.790	**418500**	VR1	R
	SHAFT RANGE 71.650 - 73.620			
72.750 SHAFT				
74.000	.719	**7275135**	HS5	R
72.835 SHAFT				
	.196	**418503**	VR4	R
	SHAFT RANGE 71.260-73.031			
73.000 SHAFT				
1.063	1.500	531456	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
74.625 SHAFT				
	.790	**419000**	VR1	R
	SHAFT RANGE 73.620 - 75.590			
74.803 SHAFT				
	.196	**419003**	VR4	R
	SHAFT RANGE 73.031-75.000			
75.750 SHAFT				
.813	1.250	525092	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
76.000 SHAFT				
78.000	.813	**594316**	HS8	R
76.500 SHAFT				
	.790	**419500**	VR1	R
	SHAFT RANGE 75.590 - 77.560			
78.688	.953	511856	HS9	R
76.772 SHAFT				
	.196	**419503**	VR4	R
	SHAFT RANGE 75.000-76.969			
77.500 SHAFT				
.813	1.250	529517	CT1	R
	BORE DIA. IS SHOULDER WIDTH			
2.938	3.375	596405	CT4	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
78.500 SHAFT				
	.790	**419990**	VR1	R
	SHAFT RANGE 77.560 - 79.530			
78.740 SHAFT				
	.196	**419993**	VR4	R
	SHAFT RANGE 76.969-79.134			
80.000 SHAFT				
82.000	.813	**8000558**	HS8	R
80.500 SHAFT				
82.500	.813	**8050558**	HS8	R
80.709 SHAFT				
	.196	**420503**	VR4	R
	SHAFT RANGE 79.134-81.496			
81.000 SHAFT				
83.000	.813	**8100558**	HS8	R
87.750 SHAFT				
89.750	.813	**8775558**	HS8	R
94.750 SHAFT				
97.000	.688	**9475658**	HS8	R
97.000 SHAFT				
99.000	.813	**9700558**	HS8	R
98.625 SHAFT				
100.625	.813	**9862568**	HS8	R
103.000 SHAFT				
.813	1.250	594083	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
106.000 SHAFT				
107.000	.500	**594926**	HS8	R
125.000 SHAFT				
126.250	.625	**595208**	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Complete size listing — Inches

Bore dia.	Width of seal	Stock no.	Type and style	Lip code
163.078 SHAFT				
.813	1.250	594082	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
171.900 SHAFT				
173.876	.812	**595214**	HS8	R

Bore dia.	Width of seal	Stock no.	Type and style	Lip code

★Contact manufacturer for availability
Bold numbers are preferred designs

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

NOTES

Metric seals

We've made metric seals easy to find.

The worldwide *language of metrics* now used in SKF price sheets and catalogs has been slightly modified for easier use.

We've made metric seals easy to order.

With the *language of metrics* in the SKF mainframe, you may now order metric seals by the metric designation, for example **"7X20X7"** or by the traditional stock number, for example **2770**.

If you want double lip, just tell us by adding "DL" to the number like this, **"7X20X7DL"**, and you get **2772**.

It couldn't be easier.

We've made metric seals easy to get.

Hundreds of new sizes have been added to the SKF catalog and to our finished goods warehouse for off-the-shelf availability.

Complete size listings

Metric Section

See next page

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
3 x x 2.5	VR1	R	**400030**
SHAFT RANGE 2.70MM - 3.50MM			
3 x x 2.5	VR1	V	**400034**
SHAFT RANGE 2.70MM - 3.50MM			
4 x x 3	VR1	R	**400040**
SHAFT RANGE 3.50MM - 4.50MM			
4 x x 3	VR1	V	**400044**
SHAFT RANGE 3.50MM - 4.50MM			
4 x 12 x 6	HMS46	R	1574
5 x x 3	VR1	R	**400050**
SHAFT RANGE 4.50MM - 5.50MM			
5 x x 3	VR1	V	**400054**
SHAFT RANGE 4.50MM - 5.50MM			
5 x x 4.5	VR2	R	400051
SHAFT RANGE 4.50MM - 5.50MM			
5 x x 4.5	VR2	V	400055
SHAFT RANGE 4.50MM - 5.50MM			
5 x 15 x 6	HMS47	R	1972
5 x 16 x 6	HMS4	R	▲ **1960**
5 x 19 x 5	HMS46	R	1975
5 x 22 x 8	HMS46	R	1976
6 x x 3	VR1	R	**400060**
SHAFT RANGE 5.50MM - 6.50MM			
6 x x 3	VR1	V	**400064**
SHAFT RANGE 5.50MM - 6.50MM			
6 x x 4.5	VR2	R	400061
SHAFT RANGE 5.50MM - 6.50MM			
6 x x 4.5	VR2	V	400065
SHAFT RANGE 5.50MM - 6.50MM			
6 x 12 x 2	HM3	R	2340
6 x 16 x 7	HMS4	R	**2360**
6 x 16 x 6	HMS43	V	2362
6 x 16 x 5	HMS4	R	▲ **2355**
6 x 16 x 7	HMS4	V	**2357**
6 x 16 x 7	HMSA7	V	**2359**
W/STAINLESS STEEL SPRING			
6 x 19 x 6	HMS47	R	2365
6 x 22 x 7	HMS4	R	**2380**
7 x x 3	VR1	R	**400070**
SHAFT RANGE 6.50MM - 8.00MM			
7 x x 3	VR1	V	**400074**
SHAFT RANGE 6.50MM - 8.00MM			
7 x x 4.5	VR2	R	400071
SHAFT RANGE 6.50MM - 8.00MM			
7 x x 4.5	VR2	V	400075
SHAFT RANGE 6.50MM - 8.00MM			
7 x 16 x 7	HMS4	R	▲ **2760**
7 x 16 x 7	HMSA7	R	**2759**
7 x 16 x 7	HMSA7	V	**2765**
W/STAINLESS STEEL SPRING			
7 x 20 x 7	HMS4	R	▲ **2770**
7 x 20 x 7	HMSA7	R	**2772**
7 x 22 x 7	HMS4	R	**2780**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
8 x x 3	VR1	R	**400080**
SHAFT RANGE 8.00MM - 9.50MM			
8 x x 3	VR1	V	**400084**
SHAFT RANGE 8.00MM - 9.50MM			
8 x x 4.5	VR2	R	400081
SHAFT RANGE 8.00MM - 9.50MM			
8 x x 4.5	VR2	V	400085
SHAFT RANGE 8.00MM - 9.50MM			
8 x 12 x 3	HM4	R	3030
8 x 14 x 4	HMS1	R	3036
8 x 16 x 7	HMS4	R	▲ **3145**
8 x 18 x 5	HMS4	R	**3078**
8 x 18 x 7	HMSA7	R	**3177**
8 x 18 x 5	HMSA7	R	▲ **3077**
8 x 20 x 8	HMS46	R	3158
8 x 22 x 7	HMSA7	R	**3149**
8 x 22 x 7	HMS4	R	▲ **3150**
8 x 22 x 8	HMS45	R	3161
8 x 22 x 7	HMS4	V	**3088**
8 x 22 x 7	HMSA7	V	**3092**
W/STAINLESS STEEL SPRING			
8 x 24 x 7	HMS4	R	**3155**
9 x 13 x 3	HM4	R	3526
9 x 17 x 4.5	CRS11	R	3541
9 x 18 x 7	HMSA7	R	**3543**
9 x 19 x 5	CRS13	R	3544
9 x 22 x 7	HMS4	R	▲ **3540**
9 x 22 x 7	HMS4	V	**3542**
9 x 22 x 7	HMSA7	V	**3545**
W/STAINLESS STEEL SPRING			
9 x 24 x 7	HMS4	R	**3550**
9 x 26 x 7	HMS4	R	**3560**
10 x x 4.5	VR1	R	**400100**
SHAFT RANGE 9.50MM - 11.50MM			
10 x x 4.5	VR1	V	**400104**
SHAFT RANGE 9.50MM - 11.50MM			
10 x x 6.7	VR2	R	400101
SHAFT RANGE 9.50MM - 11.50MM			
10 x x 6.7	VR2	V	400105
SHAFT RANGE 9.50MM - 11.50MM			
10 x 14 x 3	HM4	R	3930
10 x 16 x 4	HM102	R	3941
10 x 18 x 6	HMS4	R	**3970**
10 x 19 x 7	HMSA7	R	**3938**
10 x 19 x 7	HMS4	R	▲ **3940**
10 x 20 x 6	HMSA7	R	**3936**
10 x 20 x 6	HMS4	R	**3937**
10 x 20 x 7	HMS4	R	**3983**
10 x 20 x 7	HMSA7	R	**3939**
10 x 22 x 7	HMS4	R	▲ **3945**
10 x 22 x 7	HMSA7	R	**3953**
10 x 22 x 7	HMS4	V	**3942**
10 x 22 x 7	HMSA7	V	**3947**
10 x 24	MVR1	R	MVR1-10
10 x 24 x 7	HMS4	R	▲ **3950**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
10 x 25 x 7	HMSA7	R	**3952**
10 x 26 x 7	HMSA7	R	**3976**
10 x 26 x 7	HMS4	R	▲ **3960**
10 x 28 x 7	HMS47	R	3967
10 x 28 x 8	HMS4	R	**3973**
10 x 30 x 10	HMS4	R	**3972**
10 x 30 x 7	HMS4	R	**3975**
10 x 40 x 7	HMS4	R	**3986**
10 x 40 x 7	HMSA7	R	**3992**
11 x 17 x 4	HMS4	R	**4327**
11 x 22 x 7	HMS4	R	**4335**
11 x 22 x 6	HMSA7	V	**4338**
11 x 26 x 7	HMS4	R	**4345**
11 x 30 x 7	HMS4	R	▲ **4348**
12 x x 4.5	VR1	R	**400120**
SHAFT RANGE 11.50MM - 12.50MM			
12 x x 4.5	VR1	V	**400124**
SHAFT RANGE 11.50MM - 12.50MM			
12 x x 6.7	VR2	R	400121
SHAFT RANGE 11.50MM - 13.50MM			
12 x x 6.7	VR2	V	400125
SHAFT RANGE 11.50MM - 13.50MM			
12 x x 6	SSLEEVE		**99049**
SHAFT RANGE 11.91MM - 12.07MM			
12 x 16 x 3	HM4	R	4695
12 x 18 x 3	HM4	R	4688
12 x 18 x 3	HMS4	R	**4692**
12 x 18 x 3	HMSA7	R	**4694**
12 x 18 x 4.5	CRSA11	R	4723
12 x 19 x 3	HM4	R	4690
12 x 19 x 5	HMS4	R	▲ **4702**
12 x 20 x 5	CRSA1	R	4725
12 x 20 x 5	HMS4	R	▲ **4701**
12 x 22 x 7	† CRW1	V	**4709**
12 x 22 x 7	† CRW1	R	**4710**
12 x 22 x 8	CRSH11	R	4731
12 x 22 x 6	HMSA7P2	R	4729
12 x 22 x 7	HMSA7	R	**4707**
12 x 22 x 7	HMS4	R	▲ **4711**
12 x 22 x 7	HMSA7	V	**4717**
12 x 22 x 4	HM4	R	4719
12 x 24 x 7	HMSA7	R	**4773**
12 x 24 x 7	HMS4	R	▲ **4715**
12 x 24 x 6	HMSA7P2	R	4738
12 x 25 x 7	† CRW1	R	**4720**
12 x 25 x 5	HMSA7	R	**4777**
12 x 25 x 8	HMS45	R	4741
12 x 25 x 4.5	HMS4	R	▲ **4718**
12 x 25 x 7	HMS4	R	**4721**
12 x 26	MVR1	R	MVR1-12
12 x 26 x 7	† CRW1	R	▲ **4730**
12 x 26 x 8	HMS4	R	**4743**
12 x 28 x 7	HMSA7	R	**4776**
12 x 28 x 7	† CRW1	R	**4750**
12 x 28 x 7	† CRW1	P	**4751**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
12 x 28 x 7	HMS4	R	▲ **4752**
12 x 28 x 7	HMS4	V	**4755**
12 x 28 x 7	HMSA7	V	**4757**
W/STAINLESS STEEL SPRING			
12 x 30 x 10	HMS46	R	4759
12 x 30 x 7	HMS4	R	**4763**
12 x 30 x 7	HMS4	V	**4765**
12 x 30 x 7	HMSA7	V	**4767**
W/STAINLESS STEEL SPRING			
12 x 30 x 7	HMSA7	R	**4768**
12 x 32 x 7	HMSA7	R	**4754**
12 x 32 x 5	CRS11	R	4753
12 x 32 x 7	† CRW1	R	**4770**
12 x 32 x 7	† CRW1	V	**4771**
12 x 32 x 7	HMS4	R	▲ **4772**
12 x 32 x 10	HMS46	R	4756
12 x 35 x 7	† CRW1	R	**4790**
12 x 35 x 10	HMS47	R	4761
12.7 x 19.05	KIT	R	480050
SPEEDI-SLEEVE & SEAL KIT			
13 x x 4.5	VR1	R	**400130**
SHAFT RANGE 12.50MM - 13.50MM			
13 x x 4.5	VR1	V	**400134**
SHAFT RANGE 12.50MM - 13.50MM			
13 x 20 x 4	CRS11	R	5120
13 x 22 x 5	CRS11	R	5119
13 x 25 x 5	HMS46	R	5123
13 x 26 x 7	HMS4	R	▲ **5221**
13 x 28 x 7	CRS1	R	5250
13 x 28 x 7	HMS4	R	▲ **5254**
13 x 30 x 7	HMSA7	R	**5285**
13 x 30 x 8	HMS4	R	**5142**
14 x x 4.5	VR1	R	**400140**
SHAFT RANGE 13.50MM - 15.50MM			
14 x x 4.5	VR1	V	**400144**
SHAFT RANGE 13.50MM - 15.50MM			
14 x x 6.7	VR2	R	400141
SHAFT RANGE 13.50MM - 15.50MM			
14 x x 6.7	VR2	V	400145
SHAFT RANGE 13.50MM - 15.50MM			
14 x x 6.35	SSLEEVE		**99055**
SHAFT RANGE 13.89MM - 14.00MM			
14 x 20 x 3	HM4	R	5402
14 x 22 x 3	HM4	R	5405
14 x 22 x 4	HMSA7	R	**5538**
14 x 22 x 4	HMS4	R	**5535**
14 x 24 x 7	HMSA7	R	**5421**
14 x 24 x 6	HMSA7	R	**5410**
14 x 24 x 7	HMS4	R	▲ **5412**
14 x 25 x 5	HMS4	R	▲ **5414**
14 x 25 x 7	HMSA7	P	**5413**
14 x 26 x 7	† CRW1	V	**5398**
14 x 26 x 7	HMS46	R	5521
14 x 27 x 7.1	SC	R	527345
14 x 28 x 7	† CRW1	R	**5440**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
14 x 28 x 7	HMS4	R	▲ **5441**
14 x 28 x 6	HMS4	R	**5439**
14 x 30 x 7	HMSA7	R	**5449**
14 x 30 x 10	CRSH13	R	5529
14 x 30 x 10	HMS45	R	5528
14 x 30 x 7	HMS4	R	▲ **5452**
14 x 30 x 7	HMS4	V	**5454**
14 x 30 x 7	HMSA7	V	**5456**
W/STAINLESS STEEL SPRING			
14 x 32 x 10	HMS46	R	5532
14 x 35 x 7	† CRW1	R	**5480**
14 x 35 x 7	HMS4	R	▲ **5481**
14 x 35 x 10	HMS46	R	5533
15 x x 5.004	SSLEEVE		**99059**
SHAFT RANGE 14.96MM - 15.06MM			
15 x 21 x 3	HM4	R	5782
15 x 23 x 3	HM4	R	5786
15 x 24 x 5	HMSA7	R	**5791**
15 x 24 x 7	HMS4	R	**5912**
15 x 24 x 5	HMS4	R	▲ **5790**
15 x 24 x 7	HMSA7	R	**5802**
15 x 25 x 5	HMSA7	R	**5809**
15 x 25 x 5	HMS4	V	**5801**
15 x 25 x 7	† CRW1	P	**5803**
15 x 25 x 5	HMS4	R	▲ **5808**
15 x 25 x 5	HMA10	R	5804
15 x 26 x 6	HMSA7	R	**5817**
15 x 26 x 6	HMS4	R	**5816**
15 x 26 x 7	HMS4	R	▲ **5806**
15 x 26 x 7	HMSA7	R	**5807**
15 x 26 x 4.5	HM102	R	5919
15 x 28 x 7	HMS4	R	**5922**
15 x 28 x 7	† CRW1	R	▲ **5810**
15 x 28 x 7	HMS4	R	**5890**
15 x 30	MVR1	R	MVR1-15
15 x 30 x 7	HMSA7	R	**5940**
15 x 30 x 10	HMSA7	R	**5902**
15 x 30 x 7	HMS4	R	▲ **5821**
15 x 30 x 10	HMS4	R	**5923**
15 x 30 x 4.5	HMS47	R	5924
15 x 32	MVR2	R	MVR2-15
15 x 32 x 7	† CRW1	R	**5830**
15 x 32 x 7	HMS4	R	▲ **5831**
15 x 32 x 7	† CRW1	V	**5832**
15 x 32 x 8	HMSA7	R	**5836**
15 x 32 x 7	HMS4	V	**5835**
15 x 32 x 7	HMSA7	R	**5837**
15 x 32 x 7	HMSA7	V	**5839**
W/STAINLESS STEEL SPRING			
15 x 32 x 10	HMS47	R	5942
15 x 32 x 9	HMS4	R	**5969**
15 x 35 x 7	† CRW1	R	**5840**
15 x 35 x 7	† CRW1	P	**5841**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
15 x 35 x 7	HMS4	R	▲ **5842**
15 x 35 x 7	HMSA7	R	**5845**
15 x 35 x 10	HMS4	R	**5951**
15 x 35 x 7	HMSA7	V	**5847**
15 x 35 x 7	HMS4	V	**5848**
W/STAINLESS STEEL SPRING			
15 x 40 x 10	HMS4	R	▲ **5883**
15 x 42 x 10	HMS47	R	5964
16 x x 4.5	VR1	R	**400160**
SHAFT RANGE 15.50MM - 17.00MM			
16 x x 4.5	VR1	V	**400164**
SHAFT RANGE 15.50MM - 17.00MM			
16 x x 6.7	VR2	R	400161
SHAFT RANGE 15.50MM - 17.50MM			
16 x x 6.7	VR2	V	400165
SHAFT RANGE 15.50MM - 17.50MM			
16 x x 7.95	SSLEEVE		**99058**
SHAFT RANGE 15.89MM - 16.00MM			
16 x 22 x 3	HM4	R	6398
16 x 22 x 4	HM4	R	6400
16 x 24 x 4	HM102	R	6302
16 x 24 x 5	HMS4	R	▲ **6403**
16 x 24 x 7	HMS4	R	**6405**
16 x 24 x 5	HMSA7	R	**6287**
16 x 26 x 7	HMS1	R	▲ 6408
16 x 27 x 6	HMS4	P	**6404**
16 x 28 x 7	† CRW1	R	**6410**
16 x 28 x 7	HMS4	R	▲ **6411**
16 x 28 x 7	HMSA7	R	**6412**
16 x 28 x 6	HMS4	R	**6406**
16 x 28 x 7	HMSA7	V	**6407**
W/STAINLESS STEEL SPRING			
16 x 28 x 7	HMS4	V	**6409**
16 x 30 x 7	HMSA7	R	**6428**
16 x 30 x 7	† CRW1	R	**6420**
16 x 30 x 7	HMS4	V	**6425**
16 x 30 x 10	HMS47	R	6345
16 x 30 x 7	HMS4	R	▲ **6426**
16 x 32	MVR1	R	MVR1-16
16 x 32 x 7	† CRW1	R	**6430**
16 x 32 x 7	HMS4	R	**6435**
16 x 32 x 7	HMSA7	R	**6437**
16 x 35 x 7	HMSA7	R	**6444**
16 x 35 x 7	† CRW1	R	**6440**
16 x 35 x 7	HMS4	R	▲ **6442**
16 x 35 x 10	HMS46	R	6340
16 x 38 x 7	HMSA7	R	**6473**
16 x 40 x 7	† CRW1	R	▲ **6480**
16 x 40 x 7	† CRWA1	R	**6481**
16 x 40 x 10	HMS47	R	6342
17 x x 7.95	SSLEEVE		**99068**
SHAFT RANGE 16.94MM - 17.04MM			
17 x 23 x 3	HM4	R	6603

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
17 x 25 x 4	HMS4	R	**6592**
17 x 25 x 4	HMSA7	R	**6594**
17 x 26 x 6	HMS46	R	6690
17 x 27 x 7	HMSA7	R	**6608**
17 x 27.03 x 6.35	† CRW1	R	**6609**
17 x 28 x 7	HMSA7	R	**6695**
17 x 28 x 7	† CRW1	R	**6610**
W/STAINLESS STEEL SPRING			
17 x 28 x 7	† CRW1	V	**6611**
17 x 28 x 7	HMS4	R	▲ **6614**
17 x 28 x 7	HMS4	V	**6612**
17 x 28 x 6	HMSA7	R	**6689**
17 x 29 x 5	HMS4	R	**6615**
17 x 30 x 7	† CRW1	R	**6620**
17 x 30 x 7	HMS4	R	▲ **6624**
17 x 30 x 7	HMSA7	R	**6622**
17 x 30 x 7	HMSA7	V	**6625**
W/STAINLESS STEEL SPRING			
17 x 30 x 7	HMS4	V	**6626**
17 x 30 x 6	HMS4	R	**6627**
17 x 30 x 8	HMS4	R	**6629**
17 x 32 x 7	HMSA7	R	**6634**
17 x 32 x 7	† CRW1	R	**6630**
17 x 32 x 7	HMS4	R	▲ **6633**
17 x 32 x 10	HMS46	R	6699
17 x 32 x 8	HMSA7	R	**6686**
17 x 34	MVR2	R	MVR2-17
17 x 34 x 4	CRS11	R	6706
17 x 35 x 7	† CRW1	R	**6640**
17 x 35 x 7	† CRW1	V	**6642**
17 x 35 x 7	HMS4	R	▲ **6644**
17 x 35 x 7	HMS4	V	**6646**
17 x 35 x 10	HMS46	R	6714
17 x 35 x 7	HMSA7	R	**6647**
17 x 35 x 8	HMS4	R	**6643**
17 x 37 x 7	HMSA7	R	▲ **6653**
17 x 40 x 7	HMSA7	R	**6663**
17 x 40 x 7	† CRW1	R	**6660**
17 x 40 x 7	HMS4	R	▲ **6661**
17 x 40 x 10	HMS4	R	**6662**
17 x 40 x 8	HMS4	R	**6659**
17 x 47 x 7	† CRW1	R	▲ **6680**
17 x 47 x 8	HMSA7	R	**6685**
17 x 47 x 10	HMS4	R	**6681**
18 x x 4.5	VR1	R	**400180**
SHAFT RANGE 17.50MM - 19.00MM			
18 x x 4.5	VR1	V	**400184**
SHAFT RANGE 17.50MM - 19.00MM			
18 x x 6.7	VR2	R	400181
SHAFT RANGE 19.50MM - 19.00MM			
18 x x 6.7	VR2	V	400185
SHAFT RANGE 19.50MM - 19.00MM			
18 x x 8.001	SSLEEVE		**99082**
SHAFT RANGE 17.87MM - 18.00MM			
18 x 24 x 3	HM4	R	6995
18 x 26 x 4	HMA1	R	7003
18 x 28 x 8	HMS4	R	**7002**
18 x 28 x 6	HMS4	R	**7013**
18 x 28 x 7	HMS4	R	▲ **7018**
18 x 28 x 7	HMS4	V	**7020**
18 x 28 x 7	HMSA7	R	**7019**
18 x 30 x 7	† CRW1	R	**7000**
18 x 30 x 7	† CRW1	V	**7001**
18 x 30 x 7	HMS4	R	▲ **7004**
18 x 30 x 6	HMSA7P2	R	7091
18 x 30 x 7	HMSA7	R	**7012**
18 x 32 x 7	† CRW1	R	**7005**
18 x 32 x 7	† CRW1	V	**7006**
18 x 32 x 7	HMS4	R	▲ **7009**
18 x 32 x 7	HMSA7	R	**7007**
18 x 32 x 8	HMS4	R	**7023**
18 x 35 x 7	† CRW1	R	**7015**
18 x 35 x 7	HMS4	R	▲ **7016**
18 x 35 x 7	HMS4	V	**7028**
18 x 35 x 6	HMSA7P2	R	7100
18 x 35 x 10	HMS45	R	7109
18 x 35 x 7	HMSA7	R	**7024**
18 x 35 x 8	HMSA7	R	**7032**
18 x 37 x 8	HMSA7	R	**7061**
18 x 38 x 7	HMSA7	R	**7071**
18 x 40 x 7	† CRW1	R	**7080**
18 x 40 x 7	HMS4	V	**7081**
18 x 40 x 7	HMS4	R	▲ **7082**
18 x 40 x 10	HMS46	R	7114
19 x x 7.95	SSLEEVE		**99076**
SHAFT RANGE 19.00MM - 19.10MM			
19 x x 7.95	GSLEEVE		99811
SHAFT RANGE 18.99MM - 19.10MM			
19 x 27 x 4	HM4	R	7200
19 x 27 x 6	HMS4	R	▲ **7202**
19 x 30 x 7	HMS4	R	**7239**
19 x 30 x 8	HMS4	R	**7205**
19 x 32 x 6.35	† CRW1	R	**7210**
19 x 32 x 7	HMS4	R	▲ **7800**
19 x 32 x 8	HMSA7	R	**7803**
19 x 35 x 7	† CRW1	R	**7220**
19 x 35 x 9	HMSA75	R	7492
19 x 35 x 10	HMS4	R	▲ **7223**
19 x 35 x 10	HMSA7	R	**7225**
19 x 35 x 8	HMS4	R	**7222**
19 x 40 x 10	HMS4	R	**7495**
19 x 40 x 10	HMS46	R	7497
19.05 x 25.37	KIT	R	480074
SPEEDI-SLEEVE & SEAL KIT			
20 x x 6	VR1	R	**400200**
SHAFT RANGE 19.00MM - 21.00MM			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
20 x x 6	VR1	V	**400204**
SHAFT RANGE 19.00MM - 21.00MM			
20 x x 9	VR2	R	400201
SHAFT RANGE 19.00MM - 21.00MM			
20 x x 9	VR2	V	400205
SHAFT RANGE 19.00MM - 21.00MM			
20 x x 8	SSLEEVE		**99078**
SHAFT RANGE 19.94MM - 20.04MM			
20 x 26 x 4	HMS4	R	**7810**
20 x 26 x 4	HMSA7	R	**7813**
20 x 26 x 4	HM4	R	7854
20 x 28 x 4	HM4	R	7855
20 x 28 x 6	HMS4	R	▲ **7902**
20 x 30 x 5	HMSA7	R	**7867**
20 x 30 x 5	HMS4	R	▲ **7900**
20 x 30 x 5	CRS1	R	7906
20 x 30 x 7	† CRW1	R	**7905**
20 x 30 x 7	CRS1	V	7909
W/STAINLESS STEEL SPRING			
20 x 30 x 7	HMSA7	R	**7912**
20 x 30 x 7	HMS4	R	**7914**
20 x 30 x 5	HMS4	V	**7904**
20 x 31 x 7	† CRW1	R	**7907**
20 x 32 x 7	HMSA7	R	**7892**
20 x 32 x 7	† CRW1	R	**7910**
20 x 32 x 7	CRS1	V	7911
20 x 32 x 7	HMS4	V	**7913**
20 x 32 x 7	HMS4	R	▲ **7918**
20 x 32 x 6	HMS4	R	**7869**
20 x 32 x 8	HMS4	R	**7868**
20 x 33 x 10	HMS47	R	7896
20 x 34 x 7	HMSA7	P	**7745**
20 x 35	MVR1	R	MVR1-20
20 x 35 x 10	HMSA7	R	**7936**
20 x 35 x 7	† CRW1	R	**7915**
20 x 35 x 7	† CRW1	V	**7916**
20 x 35 x 7	HMSA7	R	**7923**
20 x 35 x 10	HMS4	R	**7927**
20 x 35 x 6	HMS4	R	**7917**
20 x 35 x 7	HMS4	R	▲ **7922**
20 x 35 x 7	HMS4	V	**7929**
20 x 35 x 8	HMSA7	R	**7926**
20 x 36 x 7	† CRW1	R	▲ **7920**
20 x 36 x 7	† CRW1	V	**7921**
20 x 36 x 7	HMS4	R	**7919**
20 x 36 x 7	HMSA7	R	**7924**
20 x 37	MVR2	R	MVR2-20
20 x 37 x 7	† CRW1	R	▲ **7925**
20 x 37 x 10	HMS47	R	7947
20 x 38 x 7	† CRW1	R	**7930**
20 x 38 x 7	HMS4	R	▲ **7933**
20 x 38 x 8	HMS4	R	**8000**
20 x 40 x 10	HMSA7	R	**7951**
20 x 40 x 7	† CRW1	R	**7940**
20 x 40 x 7	† CRW1	V	**7941**
20 x 40 x 7	HMS4	V	**7944**
20 x 40 x 7	HMSA7	V	**7945**
W/STAINLESS STEEL SPRING			
20 x 40 x 7	HMSA7	R	**7956**
20 x 40 x 7	HMS4	R	▲ **7942**
20 x 40 x 10	HMS4	R	**7943**
20 x 40 x 8	HMSA7	R	**8003**
20 x 42 x 10	HMS4	R	**8006**
20 x 42 x 7	† CRW1	R	**7950**
20 x 42 x 7	CRS1	V	7953
20 x 42 x 10	HMSA7	R	**7986**
20 x 42 x 7	HMS4	R	▲ **7952**
20 x 42 x 7	HMSA7	R	**7954**
20 x 42 x 8	HMSA7	R	**8005**
20 x 45 x 12	HMS4	R	**8011**
20 x 47 x 8	HMSA7	R	**8031**
20 x 47 x 7	† CRW1	R	**7965**
20 x 47 x 7	HMS4	R	▲ **7966**
20 x 47 x 7	HMS4	V	**7967**
20 x 47 x 7	HMSA7	V	**7968**
W/STAINLESS STEEL SPRING			
20 x 47 x 10	HMS4	R	**7993**
20 x 47 x 7	HMSA7	R	**7987**
20 x 52 x 7	HMSA7	R	**8032**
20 x 52 x 10	HMSA7	R	**8037**
20 x 52 x 7	† CRW1	R	**7980**
20 x 52 x 7	† CRW1	P	**7981**
20 x 52 x 7	HMS4	R	▲ **7983**
20 x 52 x 10	HMS4	R	**7982**
20 x 52 x 8	HMSA7	R	**8028**
21 x 30 x 6.5	CRS11	R	8271
21 x 32 x 7	HMS47	R	8273
21 x 35 x 7	† CRW1	R	▲ **8305**
21 x 35 x 7	† CRW1	V	**8306**
21 x 35 x 8	HMS46	R	8274
21 x 40 x 8	† CRW1	R	**8380**
21 x 40 x 10	HMS47	R	8276
21 x 40 x 7	HMSA7	R	**8378**
21.82 x 36.53 x 6.35	KIT	R	901
SPEEDI-SLEEVE & SEAL KIT			
22 x x 6	VR1	R	**400220**
SHAFT RANGE 21.00MM - 24.00MM			
22 x x 6	VR1	V	**400224**
SHAFT RANGE 21.00MM - 24.00MM			
22 x x 9	VR2	R	400221
SHAFT RANGE 21.00MM - 24.00MM			
22 x x 9	VR2	V	400225
SHAFT RANGE 21.00MM - 24.00MM			
22 x x 8.001	SSLEEVE		**99085**
SHAFT RANGE 21.87MM - 22.00MM			
22 x x 6.579	SSLEEVE		**99084**
SHAFT RANGE 21.87MM - 22.00MM			
22 x 28 x 5	HM3	R	8500
22 x 28 x 4	HM1	R	8499

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
22 x 28 x 4	HMA10	R	8501
22 x 30 x 4	HM4	R	8503
22 x 31 x 7	† CRW1	P	▲ **8505**
22 x 32 x 7	CRS1	V	8508
22 x 32 x 7	† CRW1	R	**8510**
22 x 32 x 7	HMS4	R	▲ **8519**
22 x 32 x 7	HMSA7	R	**8512**
22 x 33 x 7	HMS4	R	**8781**
22 x 35 x 7	† CRW1	R	**8515**
22 x 35 x 7	† CRW1	V	**8516**
22 x 35 x 7	HMSA7	R	**8522**
22 x 35 x 6	HMS4	R	**8513**
22 x 35 x 7	HMS4	R	▲ **8517**
22 x 35 x 10	HMS4	R	**8518**
22 x 35 x 5	HM14	R	**8514**
22 x 35 x 8	HMSA7	R	**8525**
22 x 36 x 7	HMSA7	R	**8511**
22 x 37 x 7	HMS46	R	8739
22 x 38 x 7	† CRW1	R	▲ **8540**
22 x 38 x 7	† CRW1	V	**8541**
22 x 38 x 8	HMSA7	R	**8545**
22 x 38 x 7	HMS4	R	**8743**
22 x 40 x 7	HMSA7	R	**8526**
22 x 40 x 6.35	† CRW1	R	**8550**
22 x 40 x 6.35	† CRW1	V	**8552**
22 x 40 x 7	HMSA7	V	**8558**
22 x 40 x 7	HMS4	R	▲ **8551**
22 x 40 x 7	HMS4	V	**8557**
	W/STAINLESS STEEL SPRING		
22 x 40 x 10	HMS4	R	**8553**
22 x 40 x 12	HMSA7	R	**550284**
22 x 42 x 7	† CRW1	R	**8555**
22 x 42 x 10	HMSA7	R	**8556**
22 x 42 x 10	HMS4	R	▲ **8562**
22 x 42 x 11	HMS4	R	**8564**
22 x 45 x 7	HMS4	R	▲ **8563**
22 x 47 x 8	† CRW1	R	**8570**
22 x 47 x 10	HMS47	R	8776
22 x 47 x 7	HMS4	R	▲ **8568**
22 x 47 x 7	HMSA7	R	**8573**
22 x 50 x 8	† CRW1	R	▲ **8580**
23 x 32 x 5.5	HM1	R	9005
23 x 35 x 6	HMA10	R	9009
23 x 40 x 10	HMS4	R	**9060**
23 x 40 x 8	HMS4	R	**9055**
23 x 40 x 10	HMSA7	R	**9058**
23 x 42 x 11	HMS4	R	**9015**
24 x x 7.95	SSLEEVE		**99092**
	SHAFT RANGE 23.87MM - 24.00MM		
24 x 32 x 4	HM4	R	9445
24 x 32 x 7	CRSA11	R	9451
24 x 35 x 7	HMS4	R	▲ **9500**
24 x 35 x 7	HMSA7	R	**9503**
24 x 35 x 8	HMSA7	R	**9449**
24 x 36 x 7	† CRW1	V	**9502**
24 x 36 x 6	CRS11	R	9458
24 x 36 x 7	HMSA75	R	9456
24 x 36 x 9	HMS47	R	9455
24 x 37 x 7	HMSA7	R	**9511**
24 x 37 x 7	HMS4	R	**9504**
24 x 38 x 7	† CRW1	V	**9506**
24 x 38 x 10	CRS1	R	9505
24 x 38 x 8	HMS4	R	**9508**
24 x 40 x 7	HMSA7	R	**9516**
24 x 40 x 7	HMS4	R	▲ **9514**
24 x 40 x 7	HMS4	V	**9517**
24 x 40 x 7	HMSA7	V	**9521**
24 x 40 x 10	HMS47	R	9466
24 x 42 x 8	HMS4	R	▲ **9533**
24 x 42 x 10	HMS4	R	**9479**
24 x 47 x 8	† CRW1	R	**9560**
24 x 47 x 10	HMS47	R	9471
24 x 47 x 7	HMS4	R	▲ **9558**
24 x 50 x 10	HMS47	R	9476
24 x 52 x 7	HMSA7	R	**9480**
25 x x 6	VR1	R	**400250**
	SHAFT RANGE 24.00MM - 27.00MM		
25 x x 6	VR1	V	**400254**
	SHAFT RANGE 24.00MM - 27.00MM		
25 x x 9	VR2	R	400251
	SHAFT RANGE 24.00MM - 27.00MM		
25 x x 9	VR2	V	400255
	SHAFT RANGE 24.00MM - 27.00MM		
25 x x 7.95	SSLEEVE		**99098**
	SHAFT RANGE 24.94MM - 25.04MM		
25 x x 7.95	GSLEEVE		99813
	SHAFT RANGE 24.94MM - 25.04MM		
25 x 32 x 4	HMS4	R	**10012**
25 x 32 x 4	HMSA7	R	**10015**
25 x 32 x 4	HM4	R	9691
25 x 32 x 7	CRSA1	R	9696
25 x 33 x 4	HM4	R	9693
25 x 33 x 6	HMS4	R	**9875**
25 x 35 x 4	HM4	R	9694
25 x 35 x 7	† CRW1	R	**9705**
25 x 35 x 7	† CRW1	V	**9706**
25 x 35 x 7	HMS4	R	▲ **9708**
25 x 35 x 7	HMSA7	R	**9709**
25 x 35 x 7	HMS4	V	**9711**
	W/STAINLESS STEEL SPRING		
25 x 35 x 7	HMSA7	V	**9717**
	W/STAINLESS STEEL SPRING		
25 x 35 x 6	HMSA7	R	**9695**
25 x 36 x 7	† CRW1	R	▲ **9710**
25 x 36 x 8	HMSA7	R	**9768**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
25 x 37 x 7	HMSA7	R	**9677**
25 x 37 x 7	† CRW1	R	**9715**
25 x 37 x 7	† CRW1	V	**9716**
25 x 37 x 7	HMS4	R	▲ **9718**
25 x 37 x 5	HMS46	R	9915
25 x 37 x 6	HMSA7	R	**9714**
25 x 37 x 8.5	HMS4	R	**9652**
25 x 37 x 8.5	HMSA7	R	**9655**
25 x 38 x 7	HMS4	R	▲ **9723**
25 x 38 x 7	† CRW1	R	**9720**
25 x 38 x 7	† CRW1	V	**9721**
25 x 38 x 8	HMSA7	R	**9722**
25 x 38 x 7	HMSA7	R	**9668**
25 x 40	MVR1	R	MVR1-25
25 x 40 x 7	HMSA7	R	**9776**
25 x 40 x 8	HMS4	R	**9777**
25 x 40 x 10	HMSA7	R	**9778**
25 x 40 x 7	† CRW1	R	**9725**
25 x 40 x 7	CRW1	R	**9726**
W/SS CASE & SPRING			
25 x 40 x 7	† CRW1	V	**9727**
25 x 40 x 8	HMSA7	R	**9733**
25 x 40 x 7	HMS4	V	**9703**
25 x 40 x 7	HMS4	R	▲ **9732**
25 x 40 x 10	HMS4	R	**9737**
25 x 40 x 5	HMS4	R	**9699**
25 x 42	MVR2	R	MVR2-25
25 x 42 x 8	† CRW1	V	**9729**
25 x 42 x 8	† CRW1	R	**9730**
25 x 42 x 7	HMS4	V	**9992**
25 x 42 x 7	HMSA7	R	**9784**
25 x 42 x 6	HMS4	R	**9738**
25 x 42 x 7	HMS4	R	▲ **9728**
25 x 42 x 8.5	HMS4	R	**9742**
25 x 42 x 10	HMSA7	V	**9702**
W/STAINLESS STEEL SPRING			
25 x 42 x 10	HMS4	V	**9704**
25 x 42 x 10	HMSA7	R	**9712**
25 x 42 x 10	HMS4	R	**9736**
25 x 43 x 10	HMS45	R	10009
25 x 45 x 7	HMS4	R	**10091**
25 x 45 x 7	† CRW1	R	**9731**
25 x 45 x 7	HMSA7	R	**9734**
25 x 45 x 8	HMS4	R	**9739**
25 x 45 x 10	HMSA7	V	**9741**
25 x 45 x 10	HMS4	R	▲ **9743**
25 x 45 x 10	HMSA7	R	**10094**
25 x 45 x 8	HMSA7	R	**9767**
25 x 45 x 11	HMSA7	R	**9769**
25 x 46 x 7	HMS4	R	**10028**
25 x 47 x 6.35	† CRW1	R	**9745**
25 x 47 x 10	CRSA1	V	9753
W/STAINLESS STEEL SPRING			

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
25 x 47 x 8	HMS45	R	10039
25 x 47 x 6	HMSA7P2	R	10032
25 x 47 x 7	HMSA7	R	**9747**
25 x 47 x 7	HMS4	R	▲ **9748**
25 x 47 x 10	HMS4	R	**9749**
25 x 47 x 10	HMSA7	R	**9757**
25 x 48 x 8	† CRW1	R	**9750**
25 x 48 x 8	† CRW1	V	**9751**
25 x 50 x 8	† CRW1	R	**9755**
25 x 50 x 10	HMS4	V	**9754**
25 x 50 x 10	HMS4	R	▲ **9756**
25 x 50 x 10	HMSA7	V	**9759**
W/STAINLESS STEEL SPRING			
25 x 50 x 10	HMSA7	R	**9766**
25 x 50 x 12	HMS4	R	**9771**
25 x 52 x 8	HMSA7	R	**10098**
25 x 52 x 10	HMSA7	R	**9796**
25 x 52 x 8	† CRW1	R	**9760**
25 x 52 x 8	† CRW1	V	**9761**
25 x 52 x 12	CRSA13	R	10085
25 x 52 x 7	HMS4	R	▲ **9758**
25 x 52 x 7	HMSA7	R	**9763**
25 x 52 x 8	HMS4	R	**9764**
25 x 52 x 10	HMS4	R	**9762**
25 x 62 x 7	HMS4	R	**9799**
25 x 62 x 10	HMSA7	R	**9798**
25 x 62 x 7	† CRW1	R	**9790**
25 x 62 x 7	† CRW1	V	**9791**
25 x 62 x 10	HMS4	R	▲ **9795**
25 x 62 x 8	HMS4	R	**9792**
25 x 62 x 7	HMSA7	R	**9787**
25.4 x 31.75 x 7.95	KIT	R	480097
SPEEDI-SLEEVE & SEAL KIT			
25.4 x 38.07 x 7.95	KIT	R	480098
SPEEDI-SLEEVE & SEAL KIT			
25.4 x 38.07 x 7.95	KIT	R	480099
SPEEDI-SLEEVE & SEAL KIT			
26 x x 8.001	SSLEEVE		**99103**
SHAFT RANGE 25.88MM - 26.01MM			
26 x 34 x 4	HM4	R	10166
26 x 35 x 7	CRS1	R	10242
26 x 36 x 7	HMS47	R	10243
26 x 37 x 7	HMS4	R	▲ **10177**
26 x 38 x 7	HMS1	R	10173
26 x 38 x 5	HMSA7	R	**10170**
26 x 38 x 7	HMSA7	R	**10179**
26 x 38 x 7	HMS4	R	**10182**
26 x 38 x 8	HMS4	R	**10168**
26 x 40 x 8	HMS4	R	**10278**
26 x 40 x 8	HMS1	R	▲ 10181
26 x 40 x 7	HMSA7	R	**10183**
26 x 40 x 8	HMSA7	R	**10281**
26 x 42 x 8	CRS1	R	10191
26 x 42 x 7	HMS4	R	▲ **10188**
26 x 42 x 10	HMSA7	R	**10193**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
26 x 45 x 10	CRS12	R	10268
26 x 47 x 7	HMS4	R	▲ **10218**
26 x 52 x 8	HMS4	R	▲ **10253**
27 x x 7.95	SSLEEVE		**99106**
SHAFT RANGE 26.90MM - 27.02MM			
27 x x 7.95	GSLEEVE		99815
SHAFT RANGE 26.92MM - 27.02MM			
27 x 37 x 7	HMS4	R	▲ **10579**
27 x 41 x 10	CRSH1	R	10628
27 x 42 x 7	† CRW1	R	▲ **10625**
27 x 42 x 7	† CRW1	V	**10627**
27 x 42 x 10	HMS4	V	**10629**
27 x 42 x 10	HMS4	R	**10630**
27 x 43 x 8	† CRW1	V	▲ **10640**
27 x 45 x 8	HMS4	R	**10663**
27 x 45 x 8	† CRW1	V	**10666**
27 x 47 x 11	† HMS1	R	10685
27 x 47 x 7	HMS4	R	**10644**
27 x 47 x 8	HMS4	R	**10683**
27 x 47 x 10	HMSA7	R	**10633**
27 x 47 x 10	HMS4	R	▲ **10689**
27 x 52 x 8	† CRW1	R	**10758**
27 x 52 x 8	HMS46	R	10648
27 x 52 x 10	HMS46	R	10649
28 x x 6	VR1	R	**400280**
SHAFT RANGE 27.00MM - 29.00MM			
28 x x 6	VR1	V	**400284**
SHAFT RANGE 27.00MM - 29.00MM			
28 x x 9	VR2	R	400281
SHAFT RANGE 27.00MM - 29.00MM			
28 x x 9	VR2	V	400285
SHAFT RANGE 27.00MM - 29.00MM			
28 x x 9.525	SSLEEVE		**99111**
SHAFT RANGE 27.94MM - 28.04MM			
28 x x 9.525	GSLEEVE		99866
SHAFT RANGE 27.94 MM- 28.04 MM			
28 x 35 x 4	HM4	R	10915
28 x 35 x 6	HM102	R	11020
28 x 37 x 4	HM4	R	10918
28 x 38 x 7	HMSA7	R	**10920**
28 x 38 x 8	HMS4	R	**10984**
28 x 38 x 8	HMSA7	R	**10988**
28 x 38 x 7	HMS4	R	▲ **10924**
28 x 40 x 7	HMSA7	R	**10948**
28 x 40 x 8	HMS4	R	**10951**
28 x 40 x 10	CRS13	R	11026
28 x 40 x 7	† CRW1	R	**10930**
28 x 40 x 7	† CRW1	V	**10932**
28 x 40 x 7	HMS4	R	▲ **10939**
28 x 40 x 7	HMSA7	V	**10923**
28 x 40 x 7	HMS4	V	**10929**
28 x 40 x 8	HMSA7	R	**10947**
28 x 42 x 7	† CRW1	R	**10931**
28 x 42 x 7	† CRW1	V	**10934**
28 x 42 x 10	HMS4	R	▲ **10942**
28 x 42 x 10	HMSA7	R	**10952**
28 x 42 x 7	HMSA7	R	**10916**
28 x 42 x 7	HMS4	R	**10917**
28 x 42 x 8	HMS4	R	**10921**
28 x 42 x 8	HMSA7	R	**10922**
28 x 42.5 x 8	HMS4	R	**10936**
28 x 43 x 10	HMS4	R	**11031**
28 x 44 x 6	HMSA7	P	**10937**
28 x 45 x 7	† CRW1	V	**10946**
28 x 45 x 8	HMS4	R	▲ **10943**
28 x 47 x 7	† CRW1	V	**10957**
28 x 47 x 7	HMS4	R	▲ **10959**
28 x 47 x 8	† CRW1	R	**10958**
28 x 47 x 10	CRSA11	R	11036
28 x 47 x 10	HMS4	R	**10969**
28 x 47 x 5	HMS46	R	11041
28 x 47 x 7	HMSA7	R	**10961**
28 x 48 x 8	HMSA7	R	**10964**
28 x 48 x 11	HMS4	R	**10967**
28 x 50 x 10	HMS47	R	11043
28 x 52 x 10	HMSA7	R	**10976**
28 x 52 x 8	† CRW1	R	**10975**
28 x 52 x 7	HMS4	R	▲ **10973**
28 x 52 x 7	HMS4	V	**10974**
28 x 52 x 7	HMSA7	V	**10977**
28 x 52 x 10	HMS4	R	**10979**
28 x 62 x 12	CRSH1	R	11054
29 x 37.44 x 5	HMS4	R	**11407**
29 x 43 x 7	HMS47	R	11420
29 x 47 x 10	CRSH11	R	11421
29 x 50 x 10	CRSH11	R	11423
29 x 52 x 10	CRSH11	R	11424
30 x x 6	VR1	R	**400300**
SHAFT RANGE 29.00MM - 31.00MM			
30 x x 6	VR1	V	**400304**
SHAFT RANGE 29.00MM - 31.00MM			
30 x x 9	VR2	R	400301
SHAFT RANGE 29.00MM - 31.00MM			
30 x x 9	VR2	V	400305
SHAFT RANGE 29.00MM - 31.00MM			
30 x x 8.001	SSLEEVE		**99114**
SHAFT RANGE 29.95MM - 30.08MM			
30 x 37 x 4	HMS4	R	**11595**
30 x 37 x 4	HM4	R	11594
30 x 37 x 4	HMSA7	R	**11596**
30 x 40 x 4	HMS4	R	**11507**
30 x 40 x 4	HMSA7	R	**11510**
30 x 40 x 4	HM4	R	11597
30 x 40 x 7	† CRW1	R	**11605**
30 x 40 x 7	† CRW1	V	**11606**
30 x 40 x 7	HMS4	R	▲ **11600**
30 x 40 x 7	HMS4	V	**11601**
W/STAINLESS STEEL SPRING			
30 x 40 x 7	HMSA7	R	**11602**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
30 x 40 x 7	HMSA7	V	**11603**
30 x 40 x 10	HMS4	R	**11607**
30 x 42 x 7.1	SC	R	525327
30 x 42 x 7	HMS4	V	**11669**
30 x 42 x 7	HMS4	R	▲ **11608**
30 x 42 x 7	† CRW1	R	▲ **11610**
30 x 42 x 7	† CRW1	V	**11611**
30 x 42 x 6	HMSA7P2	R	11817
30 x 42 x 7	HMSA7	R	**11599**
30 x 42 x 8	HMSA7	R	**11823**
30 x 44 x 7	HMSA7	R	**11586**
30 x 44 x 7	HMSA1	R	▲ 11614
30 x 44 x 10	HMS4	R	**11616**
30 x 45 x 8	HMSA7	R	**11592**
30 x 45 x 10	HMS4	R	**11692**
30 x 45 x 8	CRS1	V	11609
30 x 45 x 8	† CRW1	R	**11615**
30 x 45 x 8	† CRW1	P	**11617**
30 x 45 x 8	HMS4	R	▲ **11622**
30 x 45 x 5	HMSA7	R	**11591**
30 x 45 x 10	HMSA7	R	**11695**
30 x 46 x 7	HMSA7	R	▲ **11671**
W/CW HELIX FROM AIR SIDE			
30 x 47	MVR1	R	MVR1-30
30 x 47 x 10	HMSA7	R	**11807**
30 x 47 x 7	† CRW1	R	**11625**
30 x 47 x 8	† CRW1	V	**11626**
30 x 47 x 8	HMS4	R	**11682**
30 x 47 x 6	HMS4	R	**11659**
30 x 47 x 7	HMS4	R	▲ **11623**
30 x 47 x 7	HMSA7	R	**11624**
30 x 47 x 7	HMS4	V	**11627**
30 x 47 x 7	HMSA7	V	**11629**
W/STAINLESS STEEL SPRING			
30 x 47 x 8	HMSA7	R	**11632**
30 x 47 x 10	HMS4	R	**11628**
30 x 48	MVR2	R	MVR2-30
30 x 48 x 8	† CRW1	R	**11630**
30 x 48 x 10	HMS46	R	11677
30 x 48 x 8	HMS4	R	**11633**
30 x 48 x 8	HMSA7	R	**11688**
30 x 50 x 8	HMSA7	R	**11891**
30 x 50 x 8	† CRW1	R	**11635**
30 x 50 x 8	† CRW1	V	**11636**
30 x 50 x 7	HMS4	R	▲ **11631**
30 x 50 x 8	HMS4	R	**11634**
30 x 50 x 10	HMS4	R	**11637**
30 x 50 x 7	HMSA7	R	**11892**
30 x 50 x 10	HMSA7	R	**11662**
30 x 50 x 11	HMSA7	R	**11663**
30 x 52 x 8	HMS4	R	**11842**
30 x 52 x 9	CRSH1	R	11851
30 x 52 x 8	† CRW1	R	**11640**
30 x 52 x 12	CRS12	R	11849
30 x 52 x 7	HMSA7	R	**11678**
30 x 52 x 10	HMSA7	R	**11694**
30 x 52 x 7	HMS4	R	▲ **11638**
30 x 52 x 8	HMSA7	R	**11639**
30 x 52 x 10	HMS4	V	**11641**
30 x 52 x 10	HMS4	R	**11643**
30 x 52 x 10	HMSA7	V	**11644**
W/STAINLESS STEEL SPRING			
30 x 52 x 12	HMS4	R	**11889**
30 x 55 x 7	† CRW1	R	**11652**
30 x 55 x 7	HMS4	R	▲ **11656**
30 x 55 x 10	HMS4	R	**11658**
30 x 55 x 7	HMSA7	R	**11697**
30 x 55 x 10	HMSA7	R	**11646**
30 x 55 x 10	HMSA7	V	**11647**
W/STAINLESS STEEL SPRING			
30 x 55 x 12	HMS4	R	**11893**
30 x 56 x 8	† CRW1	R	▲ **11654**
30 x 56 x 10	HMS47	R	11867
30 x 58 x 8	† CRWA1	R	**11655**
30 x 60 x 10	HMS4	R	**11868**
30 x 60 x 8	† CRW1	R	▲ **11660**
30 x 60 x 10	HMSA7	R	**11902**
30 x 62 x 10	HMSA7	R	**11701**
30 x 62 x 7	† CRW1	R	**11665**
30 x 62 x 7	† CRW1	V	**11666**
30 x 62 x 7	HMS4	R	▲ **11664**
30 x 62 x 7	HMSA7	R	**11668**
30 x 62 x 10	HMS4	R	**11667**
30 x 62 x 8	HMS4	R	**11704**
30 x 62 x 8	HMSA7	R	**11676**
30 x 72 x 10	HMSA7	R	**11689**
30 x 72 x 12	† CRWA1	V	**11684**
30 x 72 x 8	† CRW1	R	▲ **11685**
30 x 72 x 10	HMS4	R	**11686**
31 x x 7.95	SSLEEVE		**99123**
SHAFT RANGE 30.88MM - 31.04MM			
31 x 42 x 8	HMS4	V	**12250**
31 x 44 x 6.5	HMS4	R	**12208**
31 x 44 x 6.5	HMS42	R	12011
31 x 47 x 7	HMS44	R	12201
31.5 x x 8.001	SSLEEVE		**99141**
SHAFT RANGE 31.42MM - 31.58MM			
31.75 x 50.8 x 7.95	KIT	R	480125
SPEEDI-SLEEVE & SEAL KIT			
32 x x 6	VR1	R	**400320**
SHAFT RANGE 31.00MM - 33.00MM			
32 x x 6	VR1	V	**400324**
SHAFT RANGE 31.00MM - 33.00MM			
32 x x 9	VR2	R	400321
SHAFT RANGE 31.00MM - 33.00MM			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
32 x x 9	VR2	V	400325
SHAFT RANGE 31.00MM - 33.00MM			
32 x x 8.001	SSLEEVE		**99128**
SHAFT RANGE 31.92MM - 32.08MM			
32 x 40 x 7	HMS4	R	**12672**
32 x 42 x 4	HM4	R	12691
32 x 42 x 7	† CRW1	R	▲ **12700**
32 x 42 x 7	† CRW1	V	**12701**
32 x 42 x 7	HMS4	R	**12602**
32 x 42 x 8	HMSA7	R	**12671**
32 x 42 x 7	HMSA7	R	**12697**
32 x 43 x 7	HMSA7	R	**12695**
32 x 44 x 9	HMS4	R	**12705**
W/STAINLESS STEEL SPRING			
32 x 45 x 8	† CRW1	R	**12710**
32 x 45 x 7	HMS4	R	▲ **12709**
32 x 45 x 7	HMSA7	R	**12711**
32 x 46 x 8	CRS1	R	12719
32 x 47 x 10	HMS4	R	**12598**
32 x 47 x 8	† CRW1	R	**12730**
32 x 47 x 8	† CRW1	V	**12731**
32 x 47 x 7	HMS4	R	▲ **12733**
32 x 47 x 7	HMSA7	R	**12729**
32 x 48 x 8	† CRW1	R	**12735**
32 x 48 x 8	† CRW1	V	**12736**
32 x 48 x 8	HMS4	R	**12749**
32 x 48 x 8	HMSA7	R	▲ **12734**
32 x 48 x 5	HMS4	R	**12723**
32 x 48 x 5	HMSA7	R	**12726**
32 x 48 x 7	HMS4	R	**12713**
32 x 50 x 8	† CRW1	R	**12740**
32 x 50 x 8	† CRW1	V	**12741**
32 x 50 x 8	HMS4	R	▲ **12752**
32 x 50 x 10	HMS4	R	**12738**
32 x 50 x 10	HMSA7	V	**12739**
W/STAINLESS STEEL SPRING			
32 x 50 x 8	HMSA7	R	**12715**
32 x 50 x 7	HMS43	V	12639
32 x 52 x 8	HMSA7	R	**12675**
32 x 52 x 10	HMSA7	R	**12560**
32 x 52 x 8	† CRW1	R	**12745**
32 x 52 x 8	† CRW1	V	**12746**
32 x 52 x 9	CRSH12	R	12649
32 x 52 x 8	HMSA7	S	**12601**
W/CW HELIX FROM AIR SIDE			
32 x 52 x 5	HMS46	R	12648
32 x 52 x 10	HMS46	R	12643
32 x 52 x 7	HMSA7	R	**12742**
32 x 52 x 7	HMS4	R	▲ **12744**
32 x 52 x 10	HMS4	V	**12743**
32 x 52 x 11	HMSA7	R	**12748**
32 x 52 x 8	HMS4	R	**12674**
32 x 54 x 10	HMSA7	R	**12753**
32 x 55 x 10	HMS4	R	**12757**
32 x 56 x 12	CRSH11	R	12662
32 x 56 x 8	† CRW1	R	**12760**
32 x 56 x 10	HMS4	R	▲ **12763**
32 x 56 x 10	HMSA7	R	**12764**
32 x 58 x 8	HMS4	R	**12759**
32 x 58 x 8	HMSA7	R	**12766**
32 x 60 x 8	† HMSA27	R	12770
32 x 60 x 8	HMSA7	R	**12773**
32 x 62 x 6.35	† CRW1	R	**12780**
32 x 62 x 10	HMS4	R	▲ **12782**
32 x 62 x 8	HMSA7	R	**12777**
32 x 62 x 7	HMS46	R	12665
32 x 65 x 12	HMSA1	P	12785
32 x 72 x 12	CRSH11	R	12667
32 x 72 x 9.53	HMSA7	R	**12790**
33 x x 15.011	SSLEEVE		**99121**
SHAFT RANGE 32.94MM - 33.05MM			
33 x 44 x 8	HMSA1	R	12810
33 x 45 x 7	HMSA7	R	**12989**
33 x 45 x 7	HMS4	R	**12995**
33 x 50 x 10	HMS4	R	▲ **12901**
33 x 50 x 8	HMS46	R	12992
33 x 50 x 6	HMSA7	R	**12883**
33 x 52 x 6	HMS47	R	12998
33 x 52 x 10	HMS46	R	12996
34 x x 12.7	SSLEEVE		**99134**
SHAFT RANGE 33.86MM - 34.01MM			
34 x 44 x 8	HMSA7	R	**13423**
34 x 45 x 7	CRS15	R	13390
34 x 45 x 8	HMSA7	R	**13386**
34 x 46 x 8	HMSA7	R	**13388**
34 x 47 x 9	CRS11	R	13392
34 x 48 x 8	† CRW1	R	**13425**
34 x 48 x 8	† CRW1	V	**13426**
34 x 50 x 10	HMS46	R	13396
34 x 50 x 7	HMS4	R	**13424**
34 x 52 x 10	CRS1	R	13398
34 x 52 x 8	HMS4	R	**13433**
34 x 52 x 8	HMSA7	R	**13431**
34 x 54 x 11	CRS1	R	13438
34 x 54 x 9	HMSA7	R	**13440**
34 x 55 x 8	† CRW1	R	▲ **13445**
34 x 55 x 9	HMSA7	R	**13447**
34 x 56 x 8	† CRW1	R	**13450**
34 x 56 x 8	† CRW1	V	**13452**
34 x 58 x 13	CRSH11	R	13403
34 x 62 x 8	† CRW1	R	**13475**
34 x 62 x 10	HMS4	R	**13483**
34 x 72 x 12	CRSH11	R	13405
35 x x 6	VR1	R	**400350**
SHAFT RANGE 33.00MM - 36.00MM			
35 x x 6	VR1	V	**400354**
SHAFT RANGE 33.00MM - 36.00MM			
35 x x 9	VR2	R	400351
SHAFT RANGE 33.00MM - 36.00MM			
35 x x 9	VR2	V	400355
SHAFT RANGE 33.00MM - 36.00MM			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
35 x x 13.005	SSLEEVE		**99139**
SHAFT RANGE 34.92MM - 35.08MM			
35 x x 13.005	GSLEEVE		99820
SHAFT RANGE 34.92MM - 35.07MM			
35 x 42 x 4	HM4	R	13776
35 x 45 x 4	HM4	R	13779
35 x 45 x 7	HMS4	R	▲ **13927**
35 x 45 x 7	HMSA7	R	**14118**
35 x 46 x 8	HMSA7	R	**13908**
35 x 47 x 7	† CRW1	R	**13938**
35 x 47 x 7	† CRW1	V	**13939**
W/STAINLESS STEEL SPRING			
35 x 47 x 10	CRS13	R	13805
35 x 47 x 5	HMS4	R	**13715**
35 x 47 x 5	HMSA7	R	**13718**
35 x 47 x 6	HMS4	R	**13723**
35 x 47 x 6	HMSA7	R	**13724**
35 x 47 x 7	HMS4	R	▲ **13932**
35 x 47 x 7	HMSA7	R	**13945**
35 x 47 x 7	HMS4	V	**14003**
35 x 47 x 5	HM4	R	13762
35 x 48 x 8	† CRW1	R	▲ **13941**
35 x 48 x 8	† CRW1	V	**13942**
35 x 48 x 9	HMS4	R	**13909**
35 x 48 x 8	HMSA7	R	**13884**
35 x 50 x 8	† CRW1	R	**13944**
35 x 50 x 8	† CRW1	V	**13946**
35 x 50 x 7	HMSA7	R	**13907**
35 x 50 x 8	HMS4	R	**13887**
35 x 50 x 10	HMS4	R	**13987**
35 x 50 x 7	HMS4	R	▲ **13933**
35 x 50 x 8	HMSA7	R	**13885**
35 x 50 x 10	HMSA7	R	**13860**
35 x 52	MVR1	R	MVR1-35
35 x 52 x 8	HMSA7	R	**14108**
35 x 52 x 8	† CRWA1	P	**13947**
35 x 52 x 8	† CRW1	R	**13949**
35 x 52 x 8	† CRWA1	R	**13951**
35 x 52 x 9	CRSHA13	R	13854
35 x 52 x 10	HMSA7	R	**13903**
35 x 52 x 6	HMSA7P2	R	13829
35 x 52 x 7	HMSA7	R	**13930**
35 x 52 x 7	HMS4	R	▲ **13948**
35 x 52 x 8	HMS4	R	**13888**
35 x 52 x 10	HMS4	R	**13989**
35 x 52 x 9	HMS4	R	**14047**
35 x 52 x 12	HMS4	R	**14105**
35 x 53	MVR2	R	MVR2-35
35 x 54 x 7	† CRW1	R	**13952**
35 x 54 x 8	† CRW1	V	**13957**
35 x 55 x 8	† CRW1	R	**13954**
35 x 55 x 8	CRW1	V	**13963**
35 x 55 x 11	HMSA7	R	**550231**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
35 x 55 x 7	HMSA73	V	14034
35 x 55 x 8	HMS4	R	▲ **13993**
35 x 55 x 10	HMS4	V	**13890**
35 x 55 x 10	HMSA7	V	**13891**
W/STAINLESS STEEL SPRING			
35 x 55 x 10	HMSA7	R	**13893**
35 x 55 x 10	HMS4	R	**13960**
35 x 55 x 11	HMS4	R	**13940**
35 x 55 x 8	HMSA7	R	**13861**
35 x 55 x 12	HMSA7	R	**14111**
35 x 56 x 8	† CRW1	R	▲ **13961**
35 x 56 x 8	† CRW1	V	**13962**
35 x 56 x 10	HMS4	R	**13994**
35 x 56 x 12	HMS46	R	14048
35 x 58 x 10	HMSA7	R	**14121**
35 x 58 x 10	HMS4	R	▲ **13894**
35 x 60 x 10	HMS4	R	▲ **13967**
35 x 60 x 14	HMSA7	R	**14001**
35 x 60 x 10	HMSA7	R	**14114**
35 x 62 x 8	† CRW1	V	**13969**
35 x 62 x 8	† CRW1	R	**13970**
35 x 62 x 7	HMSA7	R	**14113**
35 x 62 x 7	HMS4	R	▲ **13966**
35 x 62 x 8	HMSA7	R	**13997**
35 x 62 x 10	HMS4	R	**13996**
35 x 62 x 10	HMSA7	R	**13998**
35 x 62 x 12	HMSA77	R	14077
35 x 64 x 8	† CRW1	R	▲ **13972**
35 x 65 x 8	† CRW1	R	▲ **13973**
35 x 65 x 10	HMS4	R	**13868**
35 x 65 x 12	CRSA1	R	13895
35 x 68 x 10	HMS4	R	**13928**
35 x 68 x 8	† CRW1	R	▲ **13974**
35 x 68 x 8	† CRW1	V	**13976**
35 x 69 x 8	† CRW1	R	**13975**
35 x 70 x 12	CRSH13	R	14093
35 x 72 x 8	† CRW1	V	**13923**
35 x 72 x 10	HMS4	R	▲ **13999**
35 x 72 x 12	HMS4	R	**14000**
35 x 72 x 8	† CRW1	R	**13979**
35 x 72 x 8	† CRWA1	R	**13980**
35 x 72 x 7	HMS48	R	14096
35 x 72 x 10	HMSA7	R	**13896**
35 x 72 x 12	HMSA7	R	**14123**
35 x 78 x 8	† CRW1	R	**13984**
35 x 80 x 8	† CRW1	R	▲ **13986**
35 x 80 x 12	HMSA7	R	**13863**
35 x 80 x 10	HMS4	R	**14133**
35 x 80 x 10	HMSA7	R	**14135**
36 x x 13.005	SSLEEVE		**99146**
SHAFT RANGE 35.85MM - 36.00MM			
36 x 46 x 9	CRS1	R	14004

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
36 x 47 x 7	HMS4	R	▲ **14005**
36 x 47 x 7	HMSA7	R	**14157**
36 x 50 x 7	† CRW1	R	**14009**
36 x 50 x 7	HMS4	R	▲ **14011**
36 x 50 x 7	HMSHA1	R	14115
36 x 50 x 7	HMSA7	R	**14166**
36 x 50 x 8	† CRW1	R	**14010**
36 x 50 x 10	HMS46	R	14173
36 x 52 x 8	† CRW1	R	**14016**
36 x 52 x 8	† CRW1	V	**14017**
36 x 52 x 9	CRSH11	R	14176
36 x 52 x 9.5	HMA10	R	550227
36 x 52 x 7	HMS4	V	**14012**
36 x 52 x 7	HMS4	R	▲ **14013**
36 x 52 x 7	HMSA7	R	**14163**
36 x 54 x 8	† CRW1	R	**14024**
36 x 54 x 8	† CRW1	V	**14027**
36 x 54 x 8	HMS4	R	▲ **14068**
36 x 54 x 7	HMS47	R	14177
36 x 54 x 7.5	HMS4	R	**14023**
36 x 55 x 8	† HMSA27	R	14030
36 x 56 x 10	HMS4	R	**14037**
36 x 58 x 8	† CRW1	R	**14040**
36 x 58 x 10	HMSA7	R	**14039**
36 x 58 x 10	HMS4	R	▲ **14043**
36 x 58 x 12	HMS4	R	**14044**
36 x 60 x 8	† CRW1	R	**14045**
36 x 60 x 8	† CRW1	V	**14046**
36 x 62 x 10	CRSH11	R	14183
36 x 62 x 8	† CRW1	R	**14050**
36 x 62 x 7	HMS4	R	▲ **14052**
36 x 65 x 8	† CRW1	R	**14055**
36 x 68 x 8	† CRW1	R	**14065**
36 x 68 x 10	HMS4	R	**14107**
36 x 72 x 12	CRSH11	R	14184
37 x 47 x 4	HMS4	R	**14469**
37 x 47 x 4	HMSA7	R	**14471**
37 x 47 x 4	HM4	R	14476
37 x 50 x 6	HMSA7	P	**14671**
CW HELIX FROM AIR SIDE			
37 x 52 x 10	CRSH13	R	14571
37 x 52 x 8	HMS4	R	**14489**
37 x 55 x 10	CRSH1	R	14494
37 x 58 x 13	CRSH11	R	14572
37 x 62 x 9	CRSH13	R	14573
37 x 62 x 12	CRSH11	R	14575
37 x 62 x 10	HMS46	R	14574
38 x x 6	VR1	R	**400380**
SHAFT RANGE 36.00MM - 38.00MM			
38 x x 6	VR1	V	**400384**
SHAFT RANGE 36.00MM - 38.00MM			
38 x x 9	VR2	R	400381
SHAFT RANGE 36.00MM - 38.00MM			
38 x x 9	VR2	V	400385
SHAFT RANGE 36.00MM - 38.00MM			

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
38 x x 13.005	SSLEEVE		**99147**
SHAFT RANGE 37.85MM - 38.00MM			
38 x 47 x 7	HMSA1	R	14695
38 x 48 x 4	HM4	R	14697
38 x 50 x 8	HMSA7	R	**14714**
38 x 50 x 7	† CRW1	R	**14701**
38 x 50 x 7	† CRW1	V	**14703**
38 x 50 x 7	HMS4	R	▲ **14707**
38 x 50 x 10	CRS11	R	14984
38 x 50 x 7	HMSA7	R	**14716**
38 x 51 x 7.5	HMSA1	R	14702
38 x 52 x 8	HMS4	R	**14711**
38 x 52 x 8	† CRW1	R	**14704**
38 x 52 x 8	† CRWA1	R	**14705**
38 x 52 x 8	† CRW1	V	**14706**
38 x 52 x 7	HMSA7	R	**14717**
38 x 52 x 7	HMS4	R	▲ **14709**
38 x 53 x 8	† CRW1	R	▲ **14708**
38 x 54 x 7	CRW1	P	▲ **14710**
38 x 54 x 8	HMSA92	R	14691
38 x 54 x 6.5	HMS46	R	15053
38 x 54 x 10	HMS4	R	**14712**
38 x 55 x 7	HMSA7	R	**14718**
38 x 55 x 8	† CRW1	R	**14720**
38 x 55 x 8	† CRW1	V	**14721**
38 x 55 x 8.5	HMSA1	R	14772
38 x 55 x 10	HMS47	R	15063
38 x 55 x 7	HMS4	R	▲ **14719**
38 x 56 x 12	CRS11	R	15067
38 x 56 x 8	† CRW1	V	**14724**
38 x 56 x 8	† CRW1	R	**14725**
38 x 56 x 10	HMS4	R	**14727**
38 x 58 x 11	HMSA3	R	14753
38 x 58 x 8	† CRW1	R	▲ **14730**
38 x 58 x 8	† CRW1	V	**14732**
38 x 58 x 8	HMSA3	R	14763
38 x 58 x 10	HMS46	R	15068
38 x 60 x 8	† CRW1	R	▲ **14740**
38 x 60 x 8	† CRW1	V	**14741**
38 x 60 x 7	HMS43	V	15071
38 x 60 x 10	HMSA7	R	**14778**
38 x 60 x 10	HMS4	R	**14746**
38 x 62 x 7	HMSA7	R	**14771**
38 x 62 x 10	HMSA7	R	**14737**
38 x 62 x 8	† CRW1	R	**14742**
38 x 62 x 8	† CRWA1	R	**14743**
38 x 62 x 8	† CRW1	V	**14744**
38 x 62 x 7	HMS4	R	▲ **14733**
38 x 62 x 10	HMS4	R	**14726**
38 x 62 x 10	HMS4	V	**14751**
38 x 62 x 10	HMSA7	V	**14752**
W/STAINLESS STEEL SPRING			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
38 x 65 x 8	† CRW1	R	▲ **14750**
38 x 65 x 12	HMSA35	P	14748
38 x 65 x 10	HMS4	R	**15121**
38 x 68 x 8	† CRW1	R	▲ **14755**
38 x 70 x 8	† CRW1	R	**14760**
38 x 70 x 10	HMS4	R	**14776**
38 x 72 x 8	† CRW1	R	**14764**
38 x 72 x 12	HMS47	R	15112
38 x 72 x 10	HMS4	R	▲ **14761**
38 x 73 x 8	† CRW1	R	**14765**
38 x 74 x 11	† CRWA1	R	▲ **14767**
38 x 74 x 11	† CRW1	V	**14768**
38 x 74 x 10	HMSA77	R	15114
38 x 80 x 8	† CRW1	R	**14774**
38 x 80 x 12	HMS46	R	15115
38 x 90 x 8	† CRWA1	R	▲ **14785**
38.1 x 57.25 x 14.3	† KIT	R	480149
SPEEDI-SLEEVE & SEAL KIT			
38.1 x 60.25 x 14.3	† KIT	R	480148
SPEEDI-SLEEVE & SEAL KIT			
38.1 x 60.3 x 14.3	KIT	R	480152
SPEEDI-SLEEVE & SEAL KIT			
38.1 x 60.38 x 14.3	KIT	R	480150
SPEEDI-SLEEVE & SEAL KIT			
38.1 x 63.55 x 14.3	KIT	R	480151
SPEEDI-SLEEVE & SEAL KIT			
38.5 x 58 x 11	HMSA7	R	**15292**
39 x 62 x 12	CRSH11	R	15352
39 x 65 x 9	HMS-SPL	P	15354
W/CCW HELIX FROM AIR SIDE			
39 x 68 x 9	HMS-SPL	P	15356
W/CW HELIX FROM AIR SIDE			
40 x x 7	VR1	R	**400400**
SHAFT RANGE 38.00MM - 43.00MM			
40 x x 7	VR1	V	**400404**
SHAFT RANGE 38.00MM - 43.00MM			
40 x x 11	VR2	R	400401
SHAFT RANGE 38.00MM - 43.00MM			
40 x x 11	VR2	V	400405
SHAFT RANGE 38.00MM - 43.00MM			
40 x x 9.906	SSLEEVE		**99153**
SHAFT RANGE 39.84MM - 40.00M			
40 x x 13.005	SSLEEVE		**99157**
SHAFT RANGE 39.93MM - 40.09MM			
40 x x 13.005	GSLEEVE		99825
SHAFT RANGE 39.929 - 40.081MM			
40 x 46 x 8	HMSA7	R	**15715**
40 x 46 x 8	HMS4	R	**15713**
40 x 47 x 4	HM4	R	15738
40 x 50 x 8	HMS4	R	**15747**
40 x 50 x 4	HM4	R	15740
40 x 50 x 7	HMSA7	R	**15732**
40 x 52 x 7.1	SC	R	523171
40 x 52 x 7	† CRW1	V	**15803**
W/STAINLESS STEEL SPRING			
40 x 52 x 7	† CRW1	R	**15805**
40 x 52 x 5	HM4	R	15743
40 x 52 x 7	HMSA7	R	**15801**
40 x 52 x 7	HMS4	R	▲ **15804**
40 x 52 x 8	HMSA7	R	**15808**
40 x 52 x 6	HMSA7	R	**15745**
40 x 54 x 5.5	HMSA1	R	▲ 15807
40 x 54 x 7	† CRW1	R	▲ **15810**
40 x 55 x 10	HMS4	R	**15672**
40 x 55 x 10	CRS1	R	15937
40 x 55 x 8	† CRW1	R	**15820**
40 x 55 x 8	† CRW1	V	**15821**
40 x 55 x 10	HMSA7	R	**15675**
40 x 55 x 12	HMS46	R	15798
40 x 55 x 7	HMS4	R	▲ **15815**
40 x 55 x 7	HMSA7	R	**15819**
40 x 55 x 8	HMSA7	R	**15822**
40 x 55 x 8	HMS4	R	**15823**
40 x 56 x 7	† CRW1	V	**15826**
40 x 56 x 8	† CRW1	R	**15825**
40 x 56 x 8	HMS4	R	▲ **15828**
40 x 56 x 8	HMSA7	R	**15829**
40 x 57	MVR1	R	MVR1-40
40 x 57 x 8	† CRW1	R	**15830**
40 x 58	MVR2	R	MVR2-40
40 x 58 x 8	HMS4	R	**15998**
40 x 58 x 8	† CRW1	R	**15835**
40 x 58 x 8	† CRW1	V	**15836**
40 x 58 x 9	CRSA13	R	15879
40 x 58 x 9	HMSA7	R	▲ **15838**
40 x 58 x 10	HMS4	R	**15876**
40 x 60 x 6	HMS4	V	**15712**
40 x 60 x 10	CRSA1	R	15893
40 x 60 x 8	† CRW1	R	**15840**
40 x 60 x 8	† CRW1	V	**15841**
40 x 60 x 10	HMS4	R	▲ **15839**
40 x 60 x 10	HMSA7	R	**15844**
40 x 60 x 12	HMS4	R	**15869**
40 x 62 x 8	HMSA7	R	**15961**
40 x 62 x 10	HMSA7	R	**15914**
40 x 62 x 10	HMS4	V	**15907**
40 x 62 x 8	† CRW1	R	**15845**
40 x 62 x 8	† CRW1	V	**15846**
40 x 62 x 10	HMS4	R	**15848**
40 x 62 x 10	HMA10	R	▲ 550230
40 x 62 x 7	HMS4	R	▲ **15847**
40 x 62 x 7	HMSA7	R	**15851**
40 x 62 x 7	HMSA92	P	15989
W/CW HELIX			
40 x 62 x 10	HMSA7	V	**15856**
W/STAINLESS STEEL SPRING			
40 x 62 x 11.5	HMS4	R	**550199**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
40 x 62 x 6	HMSA7P2	R	15898
40 x 62 x 12	HMS4	R	**16006**
40 x 62 x 12	HMSA7	R	**16009**
40 x 62 x 8	HMS4	R	**15958**
40 x 65 x 10	HMSA7	R	**15963**
40 x 65 x 12	CRS13	R	15919
40 x 65 x 8	† CRW1	R	**15850**
40 x 65 x 10	HMS4	R	▲ **15852**
40 x 65 x 14	HMSA7	R	**15874**
40 x 65 x 12	HMS4	R	**15950**
40 x 68 x 10	HMSA7	R	**15964**
40 x 68 x 7	CRS13	R	15922
40 x 68 x 8	† CRW1	R	**15854**
40 x 68 x 8	HMS4	R	**16024**
40 x 68 x 8	HMSA7	R	▲ **15858**
40 x 68 x 10	HMS4	R	**15853**
40 x 68 x 12	HMS4	R	**15878**
40 x 70 x 8	† CRW1	R	**15855**
40 x 70 x 12	CRSH11	R	15930
40 x 72 x 7	HMSA7	V	**15934**
40 x 72 x 8	† CRW1	R	**15860**
40 x 72 x 7	HMS4	R	▲ **15857**
40 x 72 x 7	HMS4	V	**15861**
W/STAINLESS STEEL SPRING			
40 x 72 x 10	HMS4	R	**15859**
40 x 72 x 10	HMSA7	R	**15868**
40 x 72 x 7	HMSA7	R	**15985**
40 x 74 x 8	† CRW1	R	▲ **15863**
40 x 75 x 8	† CRW1	V	**15862**
40 x 78 x 10	HMSA7	R	**15948**
40 x 80 x 8	† CRW1	R	**15870**
40 x 80 x 10	HMS4	R	▲ **15872**
40 x 80 x 10	HMSA7	R	**15939**
40 x 80 x 10	HMS4	V	**15871**
40 x 80 x 10	HMSA7	V	**15873**
40 x 80 x 12	HMSA7	R	**15877**
40 x 90 x 8	† CRW1	R	▲ **15890**
40 x 90 x 10	HMS48	R	15944
40 x 90 x 12	HMSA79	R	15945
41 x x 12.7	SSLEEVE		**99163**
SHAFT RANGE 40.84MM - 41.00MM			
41 x 53 x 7	† CRW1	R	▲ **16032**
41 x 55 x 8	† CRW1	R	▲ **16034**
41 x 56 x 7	HMS4	R	▲ **550232**
41 x 62 x 12	D8	P	16043
41 x 62 x 8	† CRW1	R	**16041**
42 x x 11.303	SSLEEVE		**99166**
SHAFT RANGE 41.84MM - 42.00MM			
42 x x 14.3	SSLEEVE		**99169**
SHAFT RANGE 41.84MM - 42.00MM			
42 x 50 x 4	HMSA7	R	**16480**
42 x 52 x 4	HM4	R	16483
42 x 55 x 7	HMSA3	R	550237
42 x 55 x 6	HM1	R	16502
42 x 55 x 8	† CRW1	R	▲ **16503**
42 x 55 x 8	† CRW1	V	**16507**
42 x 55 x 8	HMS4	R	**16512**
42 x 55 x 7	HMSA7	R	**16495**
42 x 55 x 7	HMS4	R	▲ **16513**
42 x 55 x 9	HMSA7	R	**16531**
42 x 56 x 7	CRSA1	R	16466
42 x 56 x 7	† CRW1	V	**16504**
42 x 56 x 8	† CRW1	R	▲ **16505**
42 x 56 x 7	HMS4	R	▲ **16492**
42 x 56 x 7	HMS4	V	**16493**
42 x 56 x 7	HMSA7	R	**16494**
42 x 56 x 7	HMSA7	V	**16496**
W/STAINLESS STEEL SPRING			
42 x 58 x 7	HMS4	R	**16642**
42 x 58 x 8	† CRW1	R	**16509**
42 x 58 x 8	† CRW1	V	**16511**
42 x 58 x 7	HMA1	R	▲ 16548
42 x 58 x 10	HMS4	R	**16498**
42 x 60 x 10	HMS4	R	**16579**
42 x 60 x 8	† CRW1	R	**16515**
42 x 60 x 8	† CRW1	V	**16517**
42 x 60 x 7	HMS4	R	**16543**
42 x 60 x 7	HMSA7	R	▲ **16514**
42 x 60 x 9	HMSA7	R	**16451**
42 x 62 x 10	CRS1	R	16581
42 x 62 x 8	† CRW1	R	**16519**
42 x 62 x 8	† CRW1	V	**16523**
42 x 62 x 8	HMSA7	R	**16518**
42 x 62 x 8	HMS4	R	▲ **16521**
42 x 62 x 10	HMS4	R	**16529**
42 x 62 x 7	HMSA7	R	**16616**
42 x 62 x 7	HMS4	R	**16628**
42 x 64 x 6	HMA1	R	16522
42 x 65 x 8	† CRW1	R	**16525**
42 x 65 x 8	† CRW1	V	**16527**
42 x 65 x 10	HMS4	R	▲ **16537**
42 x 65 x 12	HMSA7	R	**16534**
42 x 66 x 10	HMSA7	P	**16528**
42 x 67 x 10	HMSA7	P	**16565**
W/ENCAPSULATED SPRING			
42 x 68 x 10	HMS4	R	**16552**
42 x 70 x 12	CRSH11	R	16605
42 x 70 x 10	HMSA7	R	**16615**
42 x 72 x 8	† CRW1	V	**16554**
42 x 72 x 8	† CRW1	R	**16555**
42 x 72 x 8	HMS4	R	▲ **16558**
42 x 72 x 12	CRS12	R	16609
42 x 72 x 8	HMSA7	R	**16553**
42 x 72 x 10	HMS4	R	**16561**
42 x 72 x 10	HMSA7	R	**16647**
42 x 80 x 10	HMS4	R	**16617**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
42.88 x 63.55 x 21.209	† KIT	R	480168
SPEEDI-SLEEVE & SEAL KIT			
43 x x 12.7	SSLEEVE		**99182**
SHAFT RANGE 42.84MM - 43.00MM			
43 x 54 x 7.5	CRSA1	R	▲16892
43 x 55 x 8	HMA3	R	▲550228
43 x 57 x 8	† CRW1	R	**16895**
43 x 60 x 8	† CRW1	R	**16897**
43 x 60 x 10	HMS4	R	**16937**
43 x 60 x 10	HMSA7	R	**16942**
43 x 60 x 9	HMSA7	R	**16984**
W/CW HELIX FROM AIR SIDE			
43 x 62 x 8	HMSA7	P	**16898**
43 x 62 x 10	CRSH1	R	16939
43 x 65 x 12	† HMSA2	R	▲550244
43 x 69 x 8	† CRW1	R	**16905**
43 x 72 x 10	CRSH11	R	16936
43 x 73 x 8	† CRW1	R	**16914**
44 x 60 x 8	† CRW1	R	▲**17139**
44 x 60 x 8	CRW1	V	**17142**
44 x 60 x 10	HMS4	R	**17148**
44 x 60 x 9	HMSA7	R	**17143**
44 x 62 x 10	HMS4	R	**17335**
44 x 62 x 8	† CRW1	R	▲**17149**
44 x 62 x 10	HMSA7	R	**17324**
44 x 65 x 8	† CRW1	R	**17160**
44 x 65 x 10	HMS4	R	**17168**
44 x 68 x 8	† CRW1	V	**17166**
44 x 70 x 8	† CRW1	R	**17179**
44 x 72 x 8	† CRW1	R	**17184**
44 x 72 x 12	CRSH11	R	17347
44 x 72 x 10	HMS4	R	**17186**
44.45 x 60.3 x 14.3	† KIT	R	480173
SPEEDI-SLEEVE & SEAL KIT			
44.45 x 69.04 x 14.3	KIT	R	480176
SPEEDI-SLEEVE & SEAL KIT			
44.86 x 61.26 x 14.3	† KIT	R	480177
SPEEDI-SLEEVE & SEAL KIT			
45 x x 7	VR1	R	**400450**
SHAFT RANGE 43.00MM - 48.00MM			
45 x x 7	VR1	V	**400454**
SHAFT RANGE 43.00MM - 48.00MM			
45 x x 11	VR2	R	400451
SHAFT RANGE 43.00MM - 48.00MM			
45 x x 11	VR2	V	400455
SHAFT RANGE 43.00MM - 48.00MM			
45 x x 13.995	SSLEEVE		**99177**
SHAFT RANGE 44.93MM - 45.09MM			
45 x x 16.866	GSLEEVE		99830
SHAFT RANGE 44.933 - 45.085MM			
45 x 52 x 4	HM4	R	17692
45 x 55 x 4	HM4	R	17904
45 x 55 x 4	HMS4	R	**17945**
45 x 55 x 4	HMSA7	R	**17948**
45 x 55 x 7	HMS47	R	17809
45 x 55 x 7	HMS4	R	**17937**
45 x 55 x 7	HMSA7	R	**17939**
45 x 58 x 9	CRSA1	R	17784
45 x 58 x 7	HMS46	R	17812
45 x 58 x 7	HMS4	R	▲**17728**
45 x 58 x 7	HMSA7	R	**17908**
45 x 60 x 10	HMSA7	R	**17688**
45 x 60 x 8	† CRW1	R	**17750**
45 x 60 x 8	† CRW1	V	**17752**
45 x 60 x 7	HMSA7	R	**17729**
45 x 60 x 7	HMS4	R	▲**17741**
45 x 60 x 8	HMSA7	R	**17730**
45 x 60 x 8	HMS4	R	▲**17740**
45 x 60 x 10	HMS4	R	**17732**
45 x 60 x 9	HMSA7	R	**17690**
45 x 62	MVR1	R	MVR1-45
45 x 62 x 7	HMSA7	R	**17911**
45 x 62 x 10	HMSA7	R	**17912**
45 x 62 x 7	HMS4	R	**17742**
45 x 62 x 8	HMSA7	R	**17738**
45 x 62 x 8	† CRWA1	V	**17753**
45 x 62 x 8	† CRW1	R	**17754**
45 x 62 x 10	HMS4	R	**17736**
45 x 62 x 8	HMS4	R	▲**17790**
45 x 62 x 9	HMS4	R	**17749**
45 x 62 x 12	HMS45	R	17845
45 x 63	MVR2	R	MVR2-45
45 x 63 x 7.7	HMS4	S	**17679**
45 x 65 x 10	HMSA7	R	**17868**
45 x 65 x 5	HM1	R	▲17757
45 x 65 x 8	HMS4	R	▲**17734**
45 x 65 x 8	† CRW1	R	**17759**
45 x 65 x 8	† CRW1	V	**17762**
45 x 65 x 7	HMSA7P2	R	17873
45 x 65 x 8	HMSA7	R	**17717**
45 x 65 x 10	HMS4	R	**17764**
45 x 66 x 6	HMS46	R	17874
45 x 68 x 7	HMSA7	R	**17694**
45 x 68 x 8	† CRW1	R	▲**17766**
45 x 68 x 8	† CRW1	V	**17767**
45 x 68 x 8	† CRWA1	R	**550294**
45 x 68 x 12	† HMSA1	R	17255
45 x 68 x 10	HMS4	R	**17769**
45 x 68 x 12	HMS4	R	**17952**
45 x 68 x 12	HMSA7	R	**17954**
45 x 68 x 9	HMSA7	R	**17758**
45 x 68 x 10	HMSA7	R	**17925**
45 x 70 x 10	HMSA7	R	**16619**
45 x 70 x 12	HMSA7	R	**17785**
45 x 72 x 8	HMSA7	R	**17927**
45 x 72 x 8	HMA22	R	17818
45 x 72 x 8	† CRW1	V	**17773**
45 x 72 x 8	HMS4	R	▲**17774**
45 x 72 x 8	† CRW1	R	**17778**
45 x 72 x 10	HMS4	R	**17776**
45 x 72 x 7	HMS4	R	**17703**
45 x 72 x 10	HMSA7	R	**17795**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
45 x 72 x 12	HMSA7	R	**17744**
45 x 75 x 10	HMSA7	R	**17933**
45 x 75 x 8	† CRW1	R	▲ **17782**
45 x 75 x 8	† CRW1	V	**17783**
45 x 75 x 7	HMSA7	R	**17906**
45 x 75 x 8	HMSA7	R	**17929**
45 x 75 x 10	HMS4	R	**17713**
45 x 75 x 8	HMS4	R	**17928**
45 x 78 x 10	HMS4	R	**17786**
45 x 80 x 8	† CRW1	R	**17791**
45 x 80 x 10	HMS4	R	▲ **17794**
45 x 80 x 13	HMS46	R	17898
45 x 80 x 10	HMSA7	R	**17798**
45 x 85 x 10	HMSA7	R	**17935**
45 x 85 x 13	CRSH11	R	17900
45 x 85 x 8	† CRW1	R	**17796**
45 x 85 x 10	HMS4	R	▲ **17797**
45 x 100 x 10	HMS46	R	17901
45 x 100 x 10	HMSA7	R	**17941**
46 x 59 x 12	HMA10	R	▲ 17909
46 x 60 x 8	† CRW1	R	**17910**
46 x 65 x 8	† CRW1	R	**17930**
46 x 65 x 10	HMS47	R	18113
46 x 68 x 8	† CRW1	R	**17950**
46 x 72 x 8	† CRW1	R	**17975**
46 x 73 x 8	† CRW1	R	**17980**
46 x 80 x 10	CRSH11	R	18118
47 x 60 x 7	† CRW1	R	**18447**
47 x 62 x 8	† CRW1	R	**18450**
47 x 65 x 12	CRSH13	R	18500
47 x 65 x 10	HMS4	R	▲ **18467**
47 x 70 x 12	CRSH11	R	18501
47 x 70 x 10	HMSA7	R	**18480**
47 x 72 x 6	HMA85	R	18727
47 x 72 x 8	† CRW1	R	▲ **18485**
47 x 72 x 10	CRSH11	R	18502
47.45 x 63.96 x 22.581	† KIT	P	480184
SPEEDI-SLEEVE & SEAL KIT			
47.63 x 65.05 x 14.3	† KIT	P	480185
SPEEDI-SLEEVE & SEAL KIT			
47.63 x 65.05 x 14.3	KIT	P	480186
SPEEDI-SLEEVE & SEAL KIT			
47.63 x 70.1 x 14.3	† KIT	S	480187
SPEEDI-SLEEVE & SEAL KIT			
47.904 x 72 x 11.43	HMSA21	V	18868
W/CCW HELIX AND 270 DEG SPRING			
48 x x 14	SSLEEVE		**99189**
SHAFT RANGE 47.93MM - 48.09MM			
48 x 58 x 4	HM4	R	18997
48 x 62 x 8	HMS4	R	▲ **18958**
48 x 62 x 8	† CRW1	R	**18962**
48 x 62 x 8	† CRW1	P	**18963**
48 x 62 x 8	HMSA7	R	**18955**
48 x 62 x 8	HMSA7	V	**18956**
48 x 62 x 8	HMS4	V	**18957**
48 x 63 x 11	HMSA7	R	**550280**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
48 x 65 x 8	† CRW1	R	**18965**
48 x 65 x 8	† CRW1	V	**18966**
48 x 65 x 7	HMA2	R	550225
48 x 65 x 10	HMSA7	R	**18951**
48 x 65 x 10	HMS4	R	▲ **18967**
48 x 68 x 8	† CRW1	R	**18968**
48 x 68 x 10	HMS4	R	▲ **18952**
48 x 68 x 10	HMSA7	R	**18953**
48 x 70 x 9	CRSA1	R	18921
48 x 70 x 8	† CRW1	R	▲ **18970**
48 x 70 x 8	† CRW1	V	**18971**
48 x 70 x 10	HMS47	R	18919
48 x 72 x 10	HMSA7	R	**19007**
48 x 72 x 8	† CRW1	R	**18972**
48 x 72 x 8	† CRW1	V	**18973**
48 x 72 x 7	HMS4	R	**19028**
48 x 72 x 8	HMSA7	R	**19021**
48 x 72 x 12	HMS46	R	18935
48 x 72 x 8	HMS4	R	▲ **18976**
48 x 72 x 10	HMS4	R	**18977**
48 x 72 x 7	HMSA7	R	**19002**
48 x 74 x 10	HMSA7	R	**18974**
48 x 80 x 10	HMS48	R	18989
48 x 80 x 8	† CRW1	R	▲ **18981**
48 x 80 x 13	CRSH11	R	18940
48 x 90 x 10	HMS4	R	**19003**
49 x 65 x 10	HMS46	R	19290
49 x 68 x 10	CRSH13	R	19292
49 x 68 x 7	HMSA7	V	**19092**
50 x x 7	VR1	R	**400500**
SHAFT RANGE 48.00MM - 53.00MM			
50 x x 7	VR1	V	**400504**
SHAFT RANGE 48.00MM - 53.00MM			
50 x x 11	VR2	R	400501
SHAFT RANGE 48.00MM - 53.00MM			
50 x x 11	VR2	V	400505
SHAFT RANGE 48.00MM - 53.00MM			
50 x x 14	SSLEEVE		**99196**
SHAFT RANGE 49.91MM - 50.07MM			
50 x 58 x 4	HM4	R	19590
50 x 60 x 7	HMSA7	R	**19584**
50 x 60 x 7	HMS4	R	**19581**
50 x 62 x 5	HMS4	R	**19589**
50 x 62 x 5	HM4	R	19595
50 x 62 x 5	HMSA7	R	**19597**
50 x 62 x 10	HMS4	R	**19587**
50 x 62 x 10	HMSA7	R	**19592**
50 x 62 x 7	CRS1	R	19602
50 x 62 x 10	CRS1	R	19629
50 x 62 x 7	HMSA7	R	**19603**
50 x 62 x 7	HMS4	R	▲ **19622**
50 x 64 x 6.5	HMSA7	R	▲ **19604**
50 x 64 x 10	HMSA7	R	**19688**
50 x 65 x 7.1	SC	R	522374
50 x 65 x 10	HMS4	R	**19714**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
50 x 65 x 10	HMSA7	R	**19637**
50 x 65 x 8	HMS4	R	▲ **19600**
50 x 65 x 8	HMSA7	R	**19601**
50 x 65 x 8	† CRW1	R	**19605**
50 x 65 x 8	† CRW1	V	**19606**
50 x 65 x 9	HMSA7	R	**19681**
50 x 68 x 8	† CRW1	R	**19608**
50 x 68 x 8	† CRW1	V	**19611**
50 x 68 x 10	HMS4	R	**19618**
50 x 68 x 10	HMSA7	R	**19619**
50 x 68 x 7	HMSA7P2	R	19710
50 x 68 x 6.5	HMSA7	R	**19621**
50 x 68 x 8	HMSA7	R	**19564**
50 x 68 x 8	HMS4	V	**19614**
50 x 68 x 8	HMS4	R	▲ **19616**
50 x 68 x 9	HMS4	R	**19598**
50 x 70	MVR1	R	MVR1-50
50 x 70 x 8	† CRW1	R	▲ **19630**
50 x 70 x 8	† CRW1	V	**19631**
50 x 70 x 10	HMSA7	R	**19723**
50 x 70 x 10	HMS4	R	▲ **19632**
50 x 70 x 10	HMSA7	V	**19634**
W/STAINLESS STEEL SPRING			
50 x 72	MVR2	R	MVR2-50
50 x 72 x 8	† CRW1	R	**19640**
50 x 72 x 8	† CRW1	V	**19641**
50 x 72 x 7	HMSA7P2	R	19728
50 x 72 x 8	HMS4	V	**19636**
W/STAINLESS STEEL SPRING			
50 x 72 x 8	HMS4	R	▲ **19638**
50 x 72 x 10	HMS4	R	**19645**
50 x 72 x 8	HMSA7	R	**19646**
50 x 72 x 10	HMSA7	R	**19649**
50 x 72 x 12	HMSA7	R	**19652**
50 x 72 x 12	HMS4	R	**19715**
50 x 72 x 9	HMS4	R	**19648**
50 x 75 x 8	† CRWA1	R	**19654**
50 x 75 x 9	CRS11	R	19741
50 x 75 x 10	HMS4	R	▲ **19655**
50 x 75 x 10	HMSA7	R	**19657**
50 x 75 x 12	HMSA7	R	**19683**
50 x 78 x 13	CRSH13	R	19791
50 x 78 x 10	HMS47	R	19903
50 x 80 x 10	HMSA7	R	**19925**
50 x 80 x 8	HMSA7	R	**19662**
50 x 80 x 8	† CRW1	R	**19664**
50 x 80 x 8	† CRW1	V	**19666**
50 x 80 x 8	HMS4	R	▲ **19665**
50 x 80 x 10	HMS4	R	**19663**
50 x 80 x 10	HMS4	V	**19669**
W/STAINLESS STEEL SPRING			
50 x 80 x 13	HMS4	R	**19667**
50 x 82 x 8	† CRWA1	R	**19668**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
50 x 85 x 8	† CRW1	R	**19674**
50 x 85 x 13	CRSH1	R	19878
50 x 85 x 10	HMS4	R	**19675**
50 x 87 x 11	HMSA92	P	19650
50 x 90 x 13	CRSH13	R	19894
50 x 90 x 10	HMSA7	R	**19927**
50 x 90 x 8	† CRW1	R	▲ **19684**
50 x 90 x 8	† CRW1	V	**19686**
50 x 90 x 10	HMS4	R	**19687**
50.29 x 85.62 x 14.3	† KIT	V	20146
SEE KIT SECTION			
50.8 x 69.72 x 14.3	KIT	S	480198
SPEEDI-SLEEVE & SEAL KIT			
51 x 63 x 6	HMA2	R	▲ 20205
51 x 65 x 7	† CRWA1	R	▲ **20210**
51 x 73 x 8	† CRWA1	R	**20255**
51 x 80 x 9.53	† CRW1	R	**20275**
51 x 81 x 9.53	† CRWH1	R	**20280**
51 x 81 x 9.53	† CRWHA1	R	**20281**
51 x 92 x 11.13	† CRWH1	R	**20292**
52 x x 12.7	SSLEEVE		**99204**
SHAFT RANGE 51.81MM - 52.00MM			
52 x 62 x 7	HMSA7	R	**20400**
52 x 63 x 8	HMSA7	P	**20405**
52 x 65 x 9	HMSA7	R	**20408**
52 x 66 x 9	HMS4	R	**20434**
52 x 68 x 10	HMSA7	R	**20478**
52 x 68 x 8	† CRW1	R	**20421**
52 x 68 x 8	† CRW1	V	**20424**
52 x 68 x 8	HMS4	R	▲ **20426**
52 x 68 x 8	HMSA7	R	**20466**
52 x 69 x 10	HMS4	R	**20415**
52 x 70 x 8	† CRW1	R	▲ **20430**
52 x 72 x 10	HMSA7	R	**20507**
52 x 72 x 8	† CRWA1	V	**20435**
52 x 72 x 8	† CRW1	R	**20440**
52 x 72 x 8	† CRW1	V	**20441**
52 x 72 x 12	CRSA13	R	20479
52 x 72 x 8	HMSA7	R	**20437**
52 x 72 x 12	HMS45	R	20481
52 x 72 x 8	HMS4	R	▲ **20444**
52 x 72 x 10	HMS4	R	**20442**
52 x 72 x 10	HMSA7	V	**20443**
W/STAINLESS STEEL SPRING			
52 x 75 x 10	HMS46	R	20488
52 x 75 x 12	HMS4	R	**20453**
52 x 80 x 13	CRS15	R	20491
52 x 80 x 10	HMS4	R	**20473**
52 x 85 x 8	† CRW1	R	**20490**
52 x 85 x 10	HMS4	R	▲ **20495**
53 x 68 x 8	CRW1	V	**20904**
53 x 68 x 10	HMS4	R	**20905**
53 x 72 x 12	CRSH11	R	20872
53 x 80 x 13	CRSH13	R	20873

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
53.086 x 71.298 x 8.915	HMS4	P	**20902**
54 x x 19.837	GSLEEVE		99836
SHAFT RANGE 53.95MM -54.10MM			
54 x x 12.7	SSLEEVE		**99210**
SHAFT RANGE 53.92MM - 54.06MM			
54 x x 19.84	SSLEEVE		**99212**
SHAFT RANGE 53.95MM - 54.11MM			
54 x 65 x 8	† CRW1	R	▲ **21040**
54 x 65 x 8	† CRW1	V	**21041**
54 x 70 x 8	HMSA7	P	**21290**
54 x 70 x 10	CRS13	R	21261
54 x 70 x 12	CRSH13	R	21262
54 x 72 x 10	HMSA7	R	**21318**
54 x 73 x 11	† CRW1	R	▲ **21320**
54 x 73 x 11.13	† CRWA1	R	**21324**
54 x 80 x 13	CRSH13	R	21273
54 x 80 x 10	CRSH1	R	21283
54 x 81 x 9.53	† CRWA1	R	▲ **21345**
54 x 85 x 10	HMS4	R	**21361**
55 x x 7	VR1	R	**400550**
SHAFT RANGE 53.00MM - 58.00MM			
55 x x 7	VR1	V	**400554**
SHAFT RANGE 53.00MM - 58.00MM			
55 x x 11	VR2	R	400551
SHAFT RANGE 53.00MM - 58.00MM			
55 x x 11	VR2	V	400555
SHAFT RANGE 53.00MM - 58.00MM			
55 x x 19.99	SSLEEVE		**99215**
SHAFT RANGE 54.91MM - 55.07MM			
55 x 68 x 8	HMS4	R	▲ **21603**
55 x 68 x 8	HMSA7	R	**21648**
55 x 70 x 10	HMS4	R	**21646**
55 x 70 x 10	HMSA7	R	**21643**
55 x 70 x 8	† CRW1	R	**21610**
55 x 70 x 8	† CRW1	V	**21611**
55 x 70 x 8	HMS4	R	▲ **21612**
55 x 70 x 8	HMSA7	R	**21656**
55 x 70 x 8	HMSA7	V	**21613**
W/STAINLESS STEEL SPRING			
55 x 70 x 9	HMSA7	R	**21615**
55 x 72 x 8	HMSA7	R	**21723**
55 x 72 x 10	HMSA7	R	**21727**
55 x 72 x 8	HMSA7	V	**21667**
55 x 72 x 8	† CRW1	R	**21620**
55 x 72 x 8	† CRW1	V	**21621**
55 x 72 x 8	HMS4	R	▲ **21623**
55 x 72 x 10	HMS4	R	**21624**
55 x 72 x 7	HMSA7P2	R	21664
55 x 72 x 8	HMS4	V	**21619**
W/STAINLESS STEEL SPRING			
55 x 72 x 9	HMSA7	R	**21629**
55 x 73 x 8	† CRW1	V	**21622**
55 x 75	MVR1	R	MVR1-55
55 x 75 x 12	HMS4	R	**21682**
55 x 75 x 8	† CRW1	R	**21625**
55 x 75 x 8	† CRW1	V	**21626**
55 x 75 x 10	HMS4	R	▲ **21627**
55 x 75 x 10	HMSA7	R	**21634**
55 x 77	MVR2	R	MVR2-55
55 x 78 x 9	HMS1	R	21630
55 x 78 x 13	CRSH11	R	21717
55 x 78 x 8	HMSA7	R	**21747**
55 x 78 x 10	HMS4	R	**21631**
55 x 78 x 8	HMS4	R	**21744**
55 x 78 x 12	HMSA7	R	**21632**
55 x 80 x 10	HMSA7	R	**21699**
55 x 80 x 8	HMS4	R	▲ **21637**
55 x 80 x 8	HMSA7	R	**21638**
55 x 80 x 8	† CRW1	R	**21640**
55 x 80 x 8	† CRW1	V	**21641**
55 x 80 x 10	HMS4	R	**21642**
55 x 80 x 13	HMS4	R	**21645**
55 x 80 x 12	HMS4	R	**21644**
55 x 82 x 10	† HM3	R	550241
55 x 82 x 12	HMS4	R	**21651**
55 x 85 x 10	HMSA7	R	**21732**
55 x 85 x 8	† CRW1	R	**21660**
55 x 85 x 13	HMS47	R	21709
55 x 85 x 8	HMS4	R	▲ **21661**
55 x 85 x 10	HMS4	R	**21668**
55 x 85 x 14	HMS4	R	**21633**
55 x 90 x 8	† CRW1	R	▲ **21670**
55 x 90 x 10	HMSA7	R	**21711**
55 x 90 x 10	HMS4	R	▲ **21671**
55 x 90 x 13	HMS4	R	**21673**
55 x 100 x 13	CRSH13	R	21716
55 x 100 x 8	† CRW1	R	▲ **21685**
55 x 100 x 12	HMS4	R	**21693**
55.58 x 80.98 x 19.837	KIT	R	480219
SPEEDI-SLEEVE & SEAL KIT			
56 x x 12.7	SSLEEVE		**99220**
SHAFT RANGE 55.81MM - 56.00MM			
56 x 69 x 7.1	SC	R	527664
56 x 70 x 8	HMS4	R	▲ **22015**
56 x 70 x 8	CRS11	R	22051
56 x 72 x 9	† HMS1	R	22020
56 x 72 x 10	CRSH11	R	22059
56 x 72 x 8	HMS4	R	▲ **22018**
56 x 72 x 8	HMSA7	R	**22038**
56 x 75 x 8	† CRW1	R	▲ **22030**
56 x 78 x 10	HMS1	R	22040
56 x 80 x 13	CRSH11	R	22067
56 x 80 x 8	HMS4	R	▲ **22053**
56 x 82 x 8	† HMSA27	R	22060
56 x 82 x 8	HMSA7	R	**22074**
56 x 85 x 8	HMS4	R	▲ **22071**
57 x x 11.91	VR1	R	**400578**
SHAFT RANGE 53.00MM - 58.00MM			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
57 x 72 x 10	CRSH1	R	22453
57 x 80 x 12	CRSH11	R	22457
57 x 81 x 11	† CRW1	R	**22240**
57 x 81 x 11	† CRWA1	P	**22245**
57 x 85 x 10	CRSH11	R	22458
57 x 85 x 13	HMSA7	R	**22469**
57 x 90 x 13	CRS13	R	22463
57 x 90 x 13	CRSH11	R	22467
57 x 92 x 11	† CRWH1	R	**22260**
57 x 92 x 11	† CRWHA1	R	**22262**
57.15 x 82.58 x 12.7	† KIT	V	22562
SEE KIT SECTION			
58 x x 19.837	SSLEEVE		**99219**
SHAFT RANGE 57.91MM - 58.06MM			
58 x 72 x 8	HMSA7	R	**22804**
58 x 72 x 8	† CRW1	R	**22815**
58 x 72 x 8	† CRW1	S	**22818**
58 x 72 x 8	HMS4	V	**22813**
58 x 72 x 8	HMS4	R	▲ **22816**
58 x 75 x 8	† CRW1	R	▲ **22822**
58 x 75 x 11	HMS4	R	**22824**
58 x 75 x 9	HMSA7	R	**22823**
58 x 78 x 8	HMSHA1	R	22811
58 x 80 x 8	† CRW1	R	**22832**
58 x 80 x 8	† CRW1	V	**22833**
58 x 80 x 10	HMS4	R	**22831**
58 x 80 x 8	HMS4	R	▲ **22827**
58 x 80 x 10	HMSA7	R	**22834**
58 x 80 x 12	HMSA7	R	**22828**
58 x 85 x 8	† CRW1	R	**22849**
58 x 85 x 13	CRSH1	R	22866
58 x 85 x 10	HMS4	R	▲ **22851**
58 x 90 x 13	CRSH13	R	22862
58 x 90 x 8	† CRW1	R	**22869**
58 x 90 x 10	HMSA7	R	**22875**
59 x 75 x 9.11	HMSA29	R	▲ 23278
59.13 x 76.2 x 19.05	KIT	P	480233
SPEEDI-SLEEVE & SEAL KIT			
60 x x 7	VR1	R	**400600**
SHAFT RANGE 58.00MM - 63.00MM			
60 x x 7	VR1	V	**400604**
SHAFT RANGE 58.00MM - 63.00MM			
60 x x 11	VR2	R	400601
SHAFT RANGE 58.00MM - 63.00MM			
60 x x 11	VR2	V	400605
SHAFT RANGE 58.00MM - 63.00MM			
60 x x 9.4	SSLEEVE		**99241**
SHAFT RANGE 59.92MM - 60.08MM			
60 x x 20	SSLEEVE		**99235**
SHAFT RANGE 59.91MM - 60.07MM			
60 x 70 x 7	CRS1	R	23618
60 x 72 x 8	HMS4	R	**23425**
60 x 75 x 7.1	SC	R	522281
OD IS 75MM / BORE IS 74.88MM			
60 x 75 x 8	HMS4	R	▲ **23426**
60 x 75 x 8	HMSA7	R	**23427**
60 x 75 x 8	† CRW1	R	**23429**
60 x 75 x 8	† CRW1	V	**23430**
60 x 75 x 8	HMSA7	V	**23428**
W/STAINLESS STEEL SPRING			
60 x 75 x 9	HMS4	R	**23433**
60 x 75 x 10	HMSA7	R	**23431**
60 x 78 x 9	† CRS1	R	23435
60 x 78 x 9	HMSA7	R	**23436**
60 x 80	MVR1	R	MVR1-60
60 x 80 x 8	HMSA7	R	**23697**
60 x 80 x 8	HMS4	V	**23715**
60 x 80 x 10	CRSHA1	R	23639
60 x 80 x 8	† CRW1	R	**23440**
60 x 80 x 8	† CRW1	V	**23441**
60 x 80 x 7	HMSA71	R	23636
60 x 80 x 8	HMS4	R	▲ **23439**
60 x 80 x 8	HMSA7	V	**23444**
W/STAINLESS STEEL SPRING			
60 x 80 x 10	HMSA7	R	**23438**
60 x 80 x 10	HMS4	R	**23442**
60 x 80 x 13	HMS4	R	**23443**
60 x 80 x 12	HMS4	R	**23414**
60 x 80 x 12	HMSA7	R	**23619**
60 x 82	MVR2	R	MVR2-60
60 x 82 x 8	† CRWA1	R	▲ **23445**
60 x 82 x 12	HMSA7	R	**23456**
60 x 82 x 9	HMSA7	R	**24627**
60 x 85 x 10	HMSA7	R	**23462**
60 x 85 x 8	† CRW1	V	**23447**
60 x 85 x 8	† CRW1	R	**23449**
60 x 85 x 8	HMSA7	R	**23452**
60 x 85 x 10	HMS4	R	**23453**
60 x 85 x 13	HMS46	R	23818
60 x 85 x 8	HMS4	R	▲ **23451**
60 x 85 x 12	HMS4	R	**23454**
60 x 90 x 10	HMSA7	R	**23475**
60 x 90 x 8	HMSA7	R	**23747**
60 x 90 x 10	CRSH1	R	23789
60 x 90 x 8	† CRW1	R	**23465**
60 x 90 x 8	HMS4	R	▲ **23467**
60 x 90 x 13	HMS48	R	23787
60 x 90 x 10	HMS4	R	**23466**
60 x 90 x 14	HMS4	R	**23471**
60 x 95 x 13	CRSH13	R	23822
60 x 95 x 8	HMSA7	R	**23476**
60 x 95 x 10	HMSA7	R	▲ **23468**
60 x 100 x 10	HMS4	R	**23799**
60 x 105 x 8	† CRW1	R	**23486**
60 x 110 x 13	HMS46	R	23804
60 x 110 x 8	† CRW1	R	▲ **23488**
62 x x 12.7	SSLEEVE		**99242**
SHAFT RANGE 61.85MM - 62.01MM			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
62 x x 12.7	SSLEEVE		**99244**
SHAFT RANGE 61.81MM - 62.00MM			
62 x 75 x 10	CRS1	R	24600
62 x 80 x 8	† CRW1	R	▲ **24620**
62 x 80 x 10	HMS4	R	**24626**
62 x 85 x 8	† CRW1	R	▲ **24635**
62 x 85 x 10	HMSA7	R	**24639**
62 x 85 x 10	HMS4	R	▲ **24638**
62 x 85 x 10	HMSA7	R	**24640**
62 x 85 x 12	HMS4	R	**24645**
62 x 90 x 13	CRS13	R	24432
62 x 90 x 8	† CRW1	R	**24659**
62 x 90 x 11.13	† CRWH1	R	**24661**
62 x 90 x 10	HMS4	R	▲ **24662**
62 x 90 x 10	HMSA7	V	**24665**
W/STAINLESS STEEL SPRING			
62 x 95 x 13	CRS13	R	24433
62 x 100 x 12	HMS4	R	▲ **24678**
63 x 78 x 8	† CRW1	R	**24710**
63 x 80 x 8	† CRW1	R	**24725**
63 x 80 x 9	HMSA7	R	**24729**
63 x 85 x 8	† CRW1	R	▲ **24755**
63 x 85 x 10	HMS4	R	**24758**
63 x 88 x 8	† CRW1	R	**24770**
63 x 90 x 12	CRSH11	R	24808
63 x 90 x 10	HMS4	R	**24788**
63.5 x 82.58 x 19.837	KIT	R	480250
SPEEDI-SLEEVE & SEAL KIT			
63.5 x 88.9 x 19.837	KIT	R	480249
SPEEDI-SLEEVE & SEAL KIT			
64 x 80 x 13	CRSH11	R	25203
64 x 80 x 8	HMS4	R	▲ **25185**
64 x 85 x 10	CRSH13	R	25204
64 x 85 x 13	CRSH13	R	25205
64 x 90 x 10	HMS46	R	25207
65 x x 7	VR1	R	**400650**
SHAFT RANGE 63.00MM - 68.00MM			
65 x x 7	VR1	V	**400654**
SHAFT RANGE 63.00MM - 68.00MM			
65 x x 10.414	VR1-SPL	R	400659
SHAFT RANGE 63.00MM - 68.00MM			
65 x x 11	VR2	R	400651
SHAFT RANGE 63.00MM - 68.00MM			
65 x x 11	VR2	V	400655
SHAFT RANGE 63.00MM - 68.00MM			
65 x x 19.99	SSLEEVE		**99254**
SHAFT RANGE 64.92MM - 65.08MM			
65 x x 20	GSLEEVE		99841
SHAFT RANGE 64.922 - 65.075 MM			
65 x 75 x 8	HM102	R	25590
65 x 80 x 8	HMSA7	R	**25409**
65 x 80 x 8	† CRW1	R	**25410**
65 x 80 x 8	† CRW1	V	**25514**
65 x 80 x 8	HMS4	R	▲ **25416**
65 x 82 x 10	HMS4	R	**25417**
65 x 85	MVR1	R	MVR1-65
65 x 85 x 10	CRSH12	R	25596
65 x 85 x 8	† CRW1	R	▲ **25420**
65 x 85 x 8	† CRW1	V	**25421**
W/STAINLESS STEEL SPRING			
65 x 85 x 8	HMS4	R	**25396**
65 x 85 x 8	HMSA7	R	**25398**
65 x 85 x 12	HMS4	R	**25400**
65 x 85 x 13	HMSA7	R	**25581**
65 x 85 x 10	HMS4	R	▲ **25422**
65 x 85 x 10	HMSA7	R	**25424**
65 x 85 x 12	HMSA7	R	**25588**
65 x 87	MVR2	R	MVR2-65
65 x 88 x 8	† CRW1	R	▲ **25425**
65 x 88 x 10	HMSA7	R	**25438**
65 x 88 x 12	HMSA7	R	**25433**
65 x 90 x 13	CRSA13	R	25605
65 x 90 x 12	HMS4	R	**25586**
65 x 90 x 8	† CRW1	R	▲ **25430**
65 x 90 x 8	† CRW1	V	**25431**
65 x 90 x 13	HMSA7	R	**25573**
65 x 90 x 10	HMSA7	V	**25426**
W/STAINLESS STEEL SPRING			
65 x 90 x 10	HMS4	V	**25427**
65 x 90 x 10	HMS4	R	▲ **25428**
65 x 90 x 10	HMSA7	R	**25429**
65 x 90 x 13	HMS4	R	**25434**
65 x 92 x 11.13	† CRWH1	R	**25432**
65 x 95 x 10	HMS4	R	▲ **25436**
65 x 95 x 14	HMSA7	R	**25437**
65 x 100 x 13	CRSA12	R	25633
65 x 100 x 8	† CRW1	R	▲ **25440**
65 x 100 x 8	† CRW1	V	**25441**
65 x 100 x 10	HMS4	R	▲ **25442**
65 x 100 x 10	HMSA7	R	**25443**
65 x 100 x 10	HMS4	V	**25446**
W/STAINLESS STEEL SPRING			
65 x 110 x 10	† CRW1	R	**25455**
65 x 120 x 8	† CRW1	R	**25465**
66 x x 19.84	SSLEEVE		**99259**
SHAFT RANGE 65.91MM - 66.07MM			
66 x 80 x 8.9	CRSHA1	R	25965
66 x 85 x 10	CRSHA1	R	▲ 25968
66 x 90 x 13	CRSH1	R	25979
66.68 x 92.02 x 19.837	† KIT	P	480260
SPEEDI-SLEEVE & SEAL KIT			
66.68 x 112.73 x 19.837	KIT	R	480261
SPEEDI-SLEEVE & SEAL KIT			
66.68 x 115.9 x 19.837	KIT	P	480262
SPEEDI-SLEEVE & SEAL KIT			
67 x 85 x 10	CRSH12	R	26381
67 x 88 x 8	HMS4	P	**26379**
67 x 90 x 13	CRSH11	R	26383

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
68 x x 19.05	SSLEEVE		**99266**
SHAFT RANGE 67.81MM - 68.00MM			
68 x 85 x 8	† CRW1	R	▲ **26630**
68 x 85 x 10	CRS1	R	26635
68 x 85 x 8	HMS4	V	**26632**
W/STAINLESS STEEL SPRING			
68 x 88 x 8	† CRW1	R	**26640**
68 x 90 x 10	HMSA7	R	**26649**
68 x 90 x 8	† CRW1	R	▲ **26650**
68 x 90 x 8	† CRW1	V	**26652**
68 x 90 x 10	HMS4	R	▲ **26648**
68 x 90 x 10	HMS4	V	**26653**
68 x 90 x 10	HMSA7	V	**26657**
68 x 90 x 12	HMS4	R	**26651**
68 x 95 x 10	† CRW1	R	▲ **26660**
68 x 95 x 10	† CRW1	V	**26661**
68 x 95 x 13	HMS4	R	**26665**
68 x 100 x 10	† CRW1	R	**26670**
68 x 100 x 10	HMS4	R	▲ **26673**
68 x 100 x 13	HMSA7	R	**26683**
69 x 90 x 10	HMS47	R	27170
69.85 x 89.99 x 19.837	KIT	P	480273
SPEEDI-SLEEVE & SEAL KIT			
69.85 x 95.28 x 19.837	† KIT	P	480274
SPEEDI-SLEEVE & SEAL KIT			
69.85 x 98.45 x 19.837	KIT	P	480275
SPEEDI-SLEEVE & SEAL KIT			
69.85 x 107.92 x 19.837	KIT	P	480278
SPEEDI-SLEEVE & SEAL KIT			
70 x x 9	VR1	R	**400700**
SHAFT RANGE 68.00MM - 73.00MM			
70 x x 9	VR1	V	**400704**
SHAFT RANGE 68.00MM - 73.00MM			
70 x x 13.5	VR2	R	400701
SHAFT RANGE 68.00MM - 73.00MM			
70 x x 13.5	VR2	V	400705
SHAFT RANGE 68.00MM - 73.00MM			
70 x x 19.837	GSLEEVE		99844
SHAFT RANGE 69.85MM - 70.00MM			
70 x x 10.31	SSLEEVE		**99272**
SHAFT RANGE 69.85MM - 70.01MM			
70 x x 19.84	SSLEEVE		**99275**
SHAFT RANGE 69.85MM - 70.01MM			
70 x x 19.99	SSLEEVE		**99276**
SHAFT RANGE 69.92MM - 70.08MM			
70 x x 28.58	SSLEEVE		**99269**
SHAFT RANGE 69.85MM - 70.01MM			
70 x 85 x 8	† CRW1	R	**27710**
70 x 85 x 8	HMS4	R	▲ **27714**
70 x 85 x 7	HMSA7	R	**27719**
70 x 85 x 8	HMSA7	R	**27715**
70 x 85 x 7	HMS4	R	**27721**
70 x 88 x 8	† CRW1	R	▲ **27725**
70 x 88 x 8	† CRW1	V	**27726**
70 x 88 x 12	HMS4	R	**27727**
70 x 90	MVR1	R	MVR1-70
70 x 90 x 13	HMSA7	R	**27640**
70 x 90 x 12	HMS4	R	**27637**
70 x 90 x 13	HMS4	R	**27587**
70 x 90 x 8	† CRW1	R	▲ **27740**
70 x 90 x 10	† CRW1	V	**27743**
70 x 90 x 10	† CRWHA1	P	**27746**
70 x 90 x 7	HMSA7P2	R	27571
70 x 90 x 10	HMS4	R	▲ **27739**
70 x 90 x 10	HMSA7	R	**27741**
70 x 90 x 12	HMSA7	R	**27636**
70 x 92	MVR2	R	MVR2-70
70 x 92 x 11	† CRWH1	R	▲ **27748**
70 x 92 x 11	† CRWH1	V	**27749**
70 x 92 x 12	HMSA7	R	**27750**
70 x 95 x 10	HMSA7	V	**27598**
70 x 95 x 10	† CRW1	R	**27755**
70 x 95 x 10	HMS47	R	27596
70 x 95 x 10	HMS4	V	**27757**
W/STAINLESS STEEL SPRING			
70 x 95 x 13	HMS4	R	▲ **27759**
70 x 95 x 13	HMSA7	R	**27760**
70 x 100 x 10	HMSA7	R	**27607**
70 x 100 x 12	HMS4	R	**27608**
70 x 100 x 10	HMS4	R	▲ **27768**
70 x 100 x 10	† CRW1	R	**27770**
70 x 100 x 6	HMS46	R	27606
70 x 100 x 10	HMS4	V	**27773**
70 x 100 x 13	HMS4	R	**27775**
70 x 105 x 10	† CRW1	R	**27785**
70 x 105 x 13	HMS4	R	▲ **27783**
70 x 110 x 10	HMS4	R	**27788**
70 x 110 x 10	HMSA7	R	**27789**
70 x 110 x 13	HMS4	R	**27619**
70 x 110 x 10	† CRW1	R	▲ **27790**
70 x 110 x 12.7	CRWHA1	R	**27791**
70 x 110 x 12	HMS4	R	**27792**
70 x 110 x 8	HMS47	R	27620
72 x x 19.05	SSLEEVE		**99284**
SHAFT RANGE 71.81MM - 72.00MM			
72 x 86 x 7.5	HMSA7	R	**28307**
72 x 88 x 8	† CRW1	R	**28310**
72 x 90 x 10	HMSA7	R	**28331**
72 x 90 x 10	HMS4	R	▲ **28330**
72 x 95 x 13	CRS13	R	28362
72 x 95 x 10	HMS4	R	▲ **28341**
72 x 100 x 10	HMS4	R	▲ **28354**
72 x 100 x 12	HMS4	R	**28358**
72 x 105 x 13	CRSA13	R	28375
73 x x 19.84	SSLEEVE		**99287**
SHAFT RANGE 72.97MM - 73.13MM			
73 x x 19.837	GSLEEVE		99846
SHAFT RANGE 72.97MM - 73.12MM			
73 x 90 x 8	HMSA27	R	28325

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
73 x 92 x 11.13	† CRWH1	R	**28612**
73 x 95 x 10	CRSH13	R	28740
73 x 100 x 13	CRSH11	R	28744
73 x 110 x 11.13	† CRWA1	P	**28622**
74 x 90 x 10	HMS46	R	29132
74 x 95 x 10	CRSH13	R	29133
74 x 95 x 10	HMS48	R	29134
74 x 100 x 13	CRSH1	R	29129
74.63 x 100.03 x 19.837	KIT	P	480293
SPEEDI-SLEEVE & SEAL KIT			
74.63 x 101.68 x 19.837	KIT	P	480294
SPEEDI-SLEEVE & SEAL KIT			
75 x x 9	VR1	R	**400750**
SHAFT RANGE 73.00MM - 78.00MM			
75 x x 9	VR1	V	**400754**
SHAFT RANGE 73.00MM - 78.00MM			
75 x x 13.5	VR2	R	400751
SHAFT RANGE 73.00MM - 78.00MM			
75 x x 13.5	VR2	V	400755
SHAFT RANGE 73.00MM - 78.00MM			
75 x x 15.09	SSLEEVE		**99289**
SHAFT RANGE 74.93MM - 75.09MM			
75 x x 22	SSLEEVE		**99294**
SHAFT RANGE 74.93MM - 75.09MM			
75 x 90 x 8	HMS4	R	**29529**
75 x 90 x 8	† CRW1	R	▲ **29510**
75 x 90 x 10	HMSA7	R	**29512**
75 x 90 x 10	HMS4	R	**29513**
75 x 95	MVR1	R	MVR1-75
75 x 95 x 10	HMSA7	R	**29521**
75 x 95 x 12	HMSA7	R	**29551**
75 x 95 x 8	HMSA7	R	**29536**
75 x 95 x 10	HMS4	R	▲ **29524**
75 x 95 x 10	† CRW1	R	**29525**
75 x 95 x 10	† CRW1	V	**29526**
75 x 95 x 12	HMS4	R	**29537**
75 x 95 x 10	HMSA7	V	**29527**
W/STAINLESS STEEL SPRING			
75 x 95 x 12	HMS4	V	**29530**
75 x 97	MVR2	R	MVR2-75
75 x 100 x 13	HMS4	R	**29495**
75 x 100 x 10	† CRW1	R	**29540**
75 x 100 x 10	† CRW1	V	**29542**
75 x 100 x 13	HMSA7	R	**29580**
75 x 100 x 10	HMS4	R	▲ **29543**
75 x 100 x 10	HMS4	V	**29544**
75 x 100 x 10	HMSA7	V	**29545**
W/STAINLESS STEEL SPRING			
75 x 100 x 12	HMS4	R	**29563**
75 x 100 x 10	HMSA7	R	**29554**
75 x 105 x 10	† CRW1	R	**29555**
75 x 105 x 13	HMS4	R	▲ **29567**
75 x 110 x 13	HMSA7	R	**29581**
75 x 110 x 13	CRSH13	R	29569
75 x 110 x 10	† CRW1	R	**29570**
75 x 110 x 13	CRS13	R	29568
75 x 110 x 12	HMS4	R	▲ **29575**
75 x 115 x 12	† CRW1	R	▲ **29585**
75 x 115 x 13	CRSH1	R	29582
75 x 120 x 12	HMS4	R	▲ **29587**
76 x x 20.65	SSLEEVE		**99299**
SHAFT RANGE 75.94MM - 76.10MM			
76 x x 14.3	SSLEEVE		**99298**
SHAFT RANGE 75.94MM - 76.10MM			
76 x 95 x 10	CRS11	R	29931
76 x 100 x 10	HMS47	R	29936
76.02 x x 12.29	SSLEEVE		**99291**
SHAFT RANGE 75.94MM - 76.10MM			
76.2 x 95.28 x 20.65	KIT	R	480299
SPEEDI-SLEEVE & SEAL KIT			
76.2 x 101.68 x 20.65	KIT	P	480300
SPEEDI-SLEEVE & SEAL KIT			
76.2 x 107.92 x 20.65	KIT	P	480303
SPEEDI-SLEEVE & SEAL KIT			
77 x 95 x 10	CRSH13	R	30310
77 x 100 x 10	CRSH13	R	30311
78 x x 19.05	SSLEEVE		**99306**
SHAFT RANGE 77.81MM - 78.00MM			
78 x 100 x 10	HMSA7	R	**30726**
78 x 100 x 10	HMS4	R	▲ **30725**
78 x 105 x 13	CRSH11	R	30716
78 x 110 x 13	CRSH11	R	30717
80 x x 9	VR1	R	**400800**
SHAFT RANGE 78.00MM - 83.00MM			
80 x x 9	VR1	V	**400804**
SHAFT RANGE 78.00MM - 83.00MM			
80 x x 13.5	VR2	R	400801
SHAFT RANGE 78.00MM - 83.00MM			
80 x x 13.5	VR2	V	400805
SHAFT RANGE 78.00MM - 83.00MM			
80 x x 19.05	SSLEEVE		**99313**
SHAFT RANGE 79.81MM - 80.01MM			
80 x x 11	SSLEEVE		**99317**
SHAFT RANGE 79.90MM - 80.08MM			
80 x x 21.01	SSLEEVE		**99315**
SHAFT RANGE 79.90MM - 80.08MM			
80 x 95 x 10	CRSH13	R	31501
80 x 100	MVR1	R	MVR1-80
80 x 100 x 13	CRSA1	R	31503
80 x 100 x 10	† CRW1	R	**31510**
80 x 100 x 10	HMS4	R	▲ **31512**
80 x 100 x 10	HMSA7	R	**31513**
80 x 100 x 10	† CRW1	V	**31524**
80 x 100 x 7	HMSA7P2	R	31533
80 x 100 x 13	HMS47	R	31539
80 x 100 x 10	HMSA7	V	**31509**
W/STAINLESS STEEL SPRING			
80 x 100 x 10	HMS4	V	**31516**
80 x 100 x 12	HMSA7	R	**31499**
80 x 100 x 13	HMS4	R	**31588**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
80 x 100 x 13	HMSA7	R	**31590**
80 x 102	MVR2	R	MVR2-80
80 x 105 x 13	HMS4	R	**31547**
80 x 105 x 10	† CRW1	V	**31517**
80 x 105 x 10	† CRW1	R	▲ **31515**
80 x 105 x 13	HMSA7	R	**31521**
80 x 110 x 10	HMSA7	R	**31560**
80 x 110 x 12	HMSA7	R	**31580**
80 x 110 x 13	HMS4	R	**31573**
80 x 110 x 10	† CRW1	R	**31520**
80 x 110 x 12	HMS4	R	**31530**
80 x 110 x 10	HMS4	R	▲ **31525**
80 x 110 x 12	HMS4	V	**31526**
80 x 110 x 12	HMSA7	V	**31531**
W/STAINLESS STEEL SPRING			
80 x 115 x 13	CRS13	R	31563
80 x 115 x 10	HMS46	R	31562
80 x 120 x 13	HMS4	R	**31546**
80 x 125 x 10	† CRW1	R	▲ **31551**
80 x 125 x 10	† CRW1	V	**31552**
80 x 125 x 13	CRSH1	R	31576
80 x 125 x 13	HMS43	R	31568
80 x 130 x 12	† CRWA1	R	**31565**
80 x 140 x 12	† CRW1	R	**31585**
81 x 100 x 10	CRSH11	R	31891
82 x x 16.76	SSLEEVE		**99328**
SHAFT RANGE 81.91MM - 82.07MM			
82 x 105 x 13	CRSH13	R	32285
82 x 105 x 12	HMS4	R	**32302**
82 x 110 x 12	HMS4	R	**32286**
82 x 110 x 12	HMSA7	R	**32275**
82.55 x 107.92 x 20.65	† KIT	P	480325
SPEEDI-SLEEVE & SEAL KIT			
82.55 x 110.85	KIT	P	1725
SEE KIT SECTION			
84 x x 20.65	SSLEEVE		**99331**
SHAFAT RANGE 83.99MM - 84.15MM			
84 x 100 x 10	HMSA1	R	33070
84 x 110 x 12	CRSH11	R	33072
84 x 127 x 11	† CRWH1	R	**33115**
85 x x 9	VR1	R	**400850**
SHAFT RANGE 83.00MM - 88.00MM			
85 x x 9	VR1	V	**400854**
SHAFT RANGE 83.00MM - 88.00MM			
85 x x 13.5	VR2	R	400851
SHAFT RANGE 83.00MM - 88.00MM			
85 x x 13.5	VR2	V	400855
SHAFT RANGE 83.00MM - 88.00MM			
85 x x 10.13	SSLEEVE		**99334**
SHAFT RANGE 84.78MM - 85.00MM			
85 x x 16.99	SSLEEVE		**99332**
SHAFT RANGE 84.76MM - 85.02MM			
85 x x 21.01	SSLEEVE		**99333**
SHAFT RANGE 84.76MM - 85.02MM			
85 x 100 x 12	CRSA12	R	33463
85 x 100 x 13	CRSH13	R	33464
85 x 100 x 9	HMS4	R	**33456**
85 x 100 x 9	HMSA7	R	**33458**
85 x 100 x 9	CRS1	R	33459
85 x 105	MVR1	R	MVR1-85
85 x 105 x 13	HMSA7	R	**33416**
85 x 105 x 10	† CRW1	R	▲ **33410**
85 x 105 x 10	† CRW1	V	**33412**
85 x 105 x 12	HMSA7	R	**33413**
W/CCW HELIX FROM AIR SIDE			
85 x 105 x 13	HMS4	R	**33415**
85 x 107	MVR2	R	MVR2-85
85 x 110 x 10	† CRW1	R	▲ **33425**
85 x 110 x 10	† CRWA1	V	**33426**
85 x 110 x 12	HMS4	R	**33427**
85 x 110 x 12	HMS4	V	**33428**
W/STAINLESS STEEL SPRING			
85 x 110 x 12	HMSA7	R	**33429**
85 x 110 x 13	HMSA7	R	**33431**
85 x 115 x 13	CRSH13	R	33488
85 x 115 x 13	HMS4	R	▲ **33443**
85 x 120 x 12	HMSA7	R	**33564**
85 x 120 x 12	† CRW1	R	**33555**
85 x 120 x 12	HMS4	R	▲ **33563**
85 x 130 x 12	HMS4	R	**33586**
85 x 130 x 12	HMSA7	R	**33587**
85 x 130 x 12	† CRW1	R	**33585**
85 x 130 x 14	HMSA7	R	**33593**
86 x 105 x 13	HMS46	R	33862
86 x 110 x 13	CRSH11	R	33863
87 x 110 x 13	CRSH13	R	34251
88 x 110 x 12	HMS4	R	▲ **34623**
88 x 110 x 13	CRSH1	R	34655
88 x 120 x 13	CRSH13	R	34653
88.9 x 114.33 x 20.65	KIT	P	480350
SPEEDI-SLEEVE & SEAL KIT			
89 x x 7.95	SSLEEVE		**99347**
SHAFT RANGE 88.90MM - 89.06MM			
89 x x 20.65	GSLEEVE		99852
SHAFT RANGE 88.90MM - 89.05MM			
89 x x 15.88	SSLEEVE		**99349**
SHAFT RANGE 88.92MM - 89.08MM			
89 x x 20.65	SSLEEVE		**99350**
SHAFT RANGE 88.90MM - 89.06MM			
89 x 127 x 11.13	† CRWH1	R	**35125**
89 x 127 x 11.13	† CRWHA1	P	**35127**
90 x x 9	VR1	R	**400900**
SHAFT RANGE 88.00MM - 93.00MM			
90 x x 9	VR1	V	**400904**
SHAFT RANGE 88.00MM - 93.00MM			
90 x x 13.5	VR2	R	400901
SHAFT RANGE 88.00MM - 93.00MM			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
90 x x 13.5	VR2	V	400905
SHAFT RANGE 88.00MM - 93.00MM			
90 x x 11.13	SSLEEVE		**99352**
SHAFT RANGE 89.91MM - 90.07MM			
90 x x 13.36	SSLEEVE		**99353**
SHAFT RANGE 89.91MM - 90.07MM			
90 x x 18.03	SSLEEVE		**99351**
SHAFT RANGE 89.91MM - 90.07MM			
90 x x 23.01	SSLEEVE		**99354**
SHAFT RANGE 89.91MM - 90.07MM			
90 x 110	MVR1	R	MVR1-90
90 x 110 x 8.3	SC	R	522353
90 x 110 x 12	† CRW1	R	**35410**
90 x 110 x 12	† CRW1	V	**35412**
90 x 110 x 12	HMSA7	R	**35414**
90 x 110 x 5.5	HMS4	R	**35501**
90 x 110 x 12	HMS4	R	▲ **35411**
90 x 110 x 5.5	HMSA7	R	**35504**
90 x 110 x 7.5	HMSA7P2	R	35439
90 x 110 x 8	HMSA7	R	**35425**
90 x 110 x 8	HMS4	R	**35428**
90 x 110 x 13	HMSA7	R	**35449**
90 x 110 x 13	HMS4	R	**35498**
90 x 112	MVR2	R	MVR2-90
90 x 115 x 9	CRSH11	R	35453
90 x 115 x 13	HMS4	R	**35483**
90 x 115 x 12	† CRWA1	R	▲ **35420**
90 x 115 x 13	HMSA7	R	**35421**
90 x 120 x 12	HMS4	V	**35461**
90 x 120 x 12	† CRW1	R	**35430**
90 x 120 x 12	† CRW1	V	**35431**
90 x 120 x 13	HMS4	R	**35459**
90 x 120 x 13	HMSA7	R	**35468**
90 x 120 x 12	HMS4	R	▲ **35432**
90 x 120 x 12	HMSA7	V	**35435**
W/STAINLESS STEEL SPRING			
90 x 120 x 12	HMSA7	R	**35484**
90 x 125 x 13	HMS4	R	**35508**
90 x 125 x 13	HMSA7	R	**35511**
90 x 125 x 12	† CRW1	R	▲ **35440**
90 x 125 x 12	† CRW1	V	**35441**
90 x 125 x 13	CRSH1	R	35477
90 x 130 x 12	† CRW1	R	**35450**
90 x 130 x 13	HMS46	R	35472
90 x 140 x 12	† CRWA1	R	**35481**
90 x 140 x 13	HMS4	R	**35482**
92 x x 20.65	SSLEEVE		**99360**
SHAFT RANGE 91.89MM - 92.05MM			
92 x 120 x 12	HMS46	R	36222
92 x 120 x 13	HMS4	R	**36013**
92 x 120 x 14	HMS4	R	**36015**
92 x 127 x 11	† CRWHA1	R	**36027**
92 x 127 x 11.13	† CRWH1	R	**36025**
95 x x 9	VR1	R	**400950**
SHAFT RANGE 93.00MM - 98.00MM			
95 x x 9	VR1	V	**400954**
SHAFT RANGE 93.00MM - 98.00MM			
95 x x 13.5	VR2	R	400951
SHAFT RANGE 93.00MM - 98.00MM			
95 x x 13.5	VR2	V	400955
SHAFT RANGE 93.00MM - 98.00MM			
95 x x 21.01	SSLEEVE		**99369**
SHAFT RANGE 94.92MM - 95.08MM			
95 x x 8.74	SSLEEVE		**99374**
SHAFT RANGE 94.99MM - 95.15MM			
95 x x 11.91	SSLEEVE		**99364**
SHAFT RANGE 94.99MM - 95.15MM			
95 x 110 x 12	HMS4	R	**37440**
95 x 110 x 10	† CRW1	R	▲ **37015**
95 x 110 x 9	CRS1	R	37001
95 x 110 x 9	HMS4	R	**37005**
95 x 110 x 9	HMSA7	R	**37008**
95 x 115	MVR1	R	MVR1-95
95 x 115 x 12	† CRW1	R	**37025**
95 x 115 x 12	† CRW1	V	**37026**
95 x 115 x 12	HMS4	R	▲ **37020**
95 x 115 x 12	CRSA1	R	37027
95 x 117	MVR2	R	MVR2-95
95 x 120 x 12	HMSA7	R	**37043**
95 x 120 x 12	† CRW1	R	▲ **37040**
95 x 120 x 12	† CRW1	V	**37041**
95 x 120 x 12	† CRWA1	V	**37042**
95 x 120 x 12	HMS4	R	**37039**
95 x 120 x 13	HMSA7	R	**37439**
95 x 125 x 12	HMSA7	R	**37424**
95 x 125 x 12	† CRW1	R	**37050**
95 x 125 x 12	HMS4	R	▲ **37047**
95 x 130 x 12	† CRW1	R	**37075**
95 x 130 x 12	HMS4	R	▲ **37081**
95 x 130 x 15	HMSA7	R	**35455**
95.25 x 114.3 x 17.475	† KIT	P	900
SPEEDI-SLEEVE & SEAL KIT			
97 x 120 x 13	CRSH11	R	38191
98 x 120 x 12	† CRW1	V	**38520**
98 x 120 x 13	HMS4	R	▲ **38523**
98 x 125 x 12	HMS45	R	38581
98 x 130 x 13	CRSH11	R	38583
99 x 124 x 9.53	† CRW1	R	**38890**
100 x x 9	VR1	R	**401000**
SHAFT RANGE 98.00MM - 105.00MM			
100 x x 9	VR1	V	**401004**
SHAFT RANGE 98.00MM - 105.00MM			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
100 x x 13.5	VR2	R	401001
SHAFT RANGE 98.00MM - 105.00MM			
100 x x 13.5	VR2	V	401005
SHAFT RANGE 98.00MM - 105.00MM			
100 x x 20.65	SSLEEVE		**99393**
SHAFT RANGE 99.95MM - 100.11MM			
100 x x 20.65	GSLEEVE		99854
SHAFT RANGE 99.94MM - 100.10MM			
100 x 115 x 9	HMS4	R	**39100**
100 x 120	MVR1	R	MVR1-100
100 x 120 x 8	CRS13	R	39384
100 x 120 x 10	HMSA7	R	**39114**
100 x 120 x 13	CRSH1	R	39387
100 x 120 x 12	† CRW1	R	▲ **39120**
100 x 120 x 12	† CRW1	V	**39125**
100 x 120 x 12	HMSA7	R	**39129**
100 x 120 x 10	HMS4	R	▲ **39118**
100 x 120 x 12	HMS4	R	**39122**
100 x 120 x 13	HMSA7	R	**39416**
100 x 122	MVR2	R	MVR2-100
100 x 125 x 13	HMS4	R	**39142**
100 x 125 x 12	† CRW1	R	▲ **39135**
100 x 125 x 12	† CRW1	V	**39136**
100 x 125 x 12	HMS4	R	▲ **39139**
100 x 125 x 12	HMSA7	R	**39140**
100 x 125 x 13	HMSA7	R	**39392**
100 x 127 x 11.13	† CRWH1	R	**39145**
100 x 130 x 12	HMS4	V	**39403**
100 x 130 x 12	† CRW1	R	**39155**
100 x 130 x 12	HMS4	R	▲ **39156**
100 x 130 x 12	HMSA7	R	**39158**
100 x 130 x 12	HMSA7	V	**39159**
W/STAINLESS STEEL SPRING			
100 x 130 x 10	HMS46	R	39399
100 x 130 x 13	HMSA7	R	**39415**
100 x 135 x 13	HMS47	R	39406
100 x 135 x 12	† CRWA1	R	**39170**
100 x 140 x 12	† CRWA1	R	**39180**
100 x 140 x 13	HMS4	R	**39183**
100 x 140 x 13	HMSA7	R	**39184**
100 x 150 x 12	HMS4	R	**39421**
101 x 114 x 10	HMSA1	R	39760
102 x 116 x 14	HMSA1	R	40151
102 x 130 x 13	HMS4	R	**40248**
104 x x 19.99	SSLEEVE		**99409**
SHAFT RANGE 103.89MM-104.09MM			
104 x 125 x 10	HMS4	R	**40939**
105 x x 19.99	SSLEEVE		**99413**
SHAFT RANGE 104.90MM-105.10MM			
105 x 120 x 8	CRSA13	R	41340
105 x 125	MVR1	R	MVR1-105
105 x 125 x 12	CRS1	R	41411
105 x 125 x 13	HMSA7	R	**41370**
105 x 125 x 12	HMSA27	R	41410
105 x 125 x 13	HMS4	R	**41367**
105 x 127 x 11.13	† CRWH1	R	**41415**
105 x 130 x 12	† CRW1	R	**41425**
105 x 130 x 12	† CRW1	V	**41426**
105 x 130 x 12	HMS4	R	▲ **41430**
105 x 130 x 12	HMSA7	R	**41433**
105 x 135 x 13	CRSH11	R	41352
105 x 135 x 12	† CRWA1	R	**41440**
105 x 135 x 14	HMSA7	R	**41443**
105 x 140 x 12	HMSA7	R	**41460**
105 x 140 x 12	† CRWA1	R	**41455**
105 x 140 x 12	HMS4	R	▲ **41456**
105 x 140 x 15	HMS4	R	**41457**
105 x 145 x 15	CRS11	R	41358
105 x 150 x 15	CRSH11	R	41360
105 x 160 x 12	† CRW1	R	**41475**
107 x 123 x 11	CRSA1	R	42120
107 x 130 x 13	CRSH11	R	42130
108 x x 20.65	SSLEEVE		**99424**
SHAFT RANGE 107.90MM - 108.10MM			
108 x 130 x 13	CRSH1	R	42520
110 x x 10.5	VR1	R	**401100**
SHAFT RANGE 105.00MM - 115.00MM			
110 x x 10.5	VR1	V	**401104**
SHAFT RANGE 105.00MM - 115.00MM			
110 x x 15.5	VR2	R	401101
SHAFT RANGE 105.00MM - 115.00MM			
110 x x 15.5	VR2	V	401105
SHAFT RANGE 105.00MM - 115.00MM			
110 x x 11.38	SSLEEVE		**99434**
SHAFT RANGE 109.78MM-110.00MM			
110 x x 12.93	SSLEEVE		**99435**
SHAFT RANGE 109.91MM-110.11MM			
110 x 128 x 9	CRSA13	R	43313
110 x 130 x 12	HMS4	R	▲ **43303**
110 x 130 x 12	† CRW1	R	**43310**
110 x 130 x 12	† CRW1	V	**43311**
110 x 130 x 12	HMS4	V	**43300**
110 x 130 x 12	HMSA7	V	**43301**
W/STAINLESS STEEL SPRING			
110 x 130 x 13	HMS4	R	**43359**
110 x 130 x 13	HMSA7	R	**43363**
110 x 130 x 12	HMSA7	R	**43304**
110 x 135 x 12	† CRW1	V	**43326**
110 x 135 x 12	HMS4	R	▲ **43327**
110 x 140 x 12	† CRW1	V	**43338**
110 x 140 x 12	† CRW1	R	**43340**
110 x 140 x 12	HMS4	R	▲ **43341**
110 x 140 x 13	HMS4	R	**43342**
110 x 140 x 12	HMSA7	R	**43324**
110 x 140 x 14	HMSA7	R	**43343**
110 x 140 x 13	HMSA7	R	**43361**
110 x 145 x 12	† CRW1	R	▲ **43355**
110 x 145 x 15	HMSA7	R	**43357**
110 x 150 x 13	HMS4	R	**43334**
110 x 160 x 12	† CRWH1	R	**43390**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
111.1 x x 20.65	SSLEEVE		**99437**
SHAFT RANGE 111.00MM - 111.20MM			
112 x x 19.05	SSLEEVE		**99438**
SHAFT RANGE 111.78MM-112.00MM			
112 x 140 x 13	CRSA11	R	44092
112 x 140 x 13	HMS47	R	44094
112 x 150 x 15	CRSH11	R	44095
113 x 140 x 13	CRSH1	R	44493
114 x 140 x 13	HMSA7	R	**44880**
114.3 x 139.73 x 20.65	KIT	R	480450
SPEEDI-SLEEVE & SEAL KIT			
115 x x 20.65	SSLEEVE		**99452**
SHAFT RANGE 114.89MM-115.09MM			
115 x 135 x 12	† CRW1	R	**45210**
115 x 140 x 12	HMSA7	R	**45224**
115 x 140 x 12	† CRW1	R	▲ **45220**
115 x 140 x 12	† CRW1	R	**45221**
W/SS CASE & SPRING			
115 x 140 x 12	† CRW1	V	**45222**
115 x 140 x 12	HMS4	R	▲ **45223**
115 x 140 x 13	HMS4	R	**45225**
115 x 145 x 12	† CRW1	R	▲ **45230**
115 x 145 x 14	HMSA7	R	**45233**
115 x 150 x 12	† CRW1	R	**45250**
115 x 150 x 12	HMS4	R	▲ **45252**
115 x 160 x 12	† CRW1	R	**45290**
115 x 160 x 15	CRSH1	R	45299
118 x 140 x 13	CRSH11	R	46460
119 x x 20.65	SSLEEVE		**99468**
SHAFT RANGE 119.00MM - 119.20MM			
120 x x 6.5	VR1-SPL	#	401208
SHAFT RANGE 115.00MM - 125.00MM			
120 x x 10.5	VR1	R	**401200**
SHAFT RANGE 115.00MM - 125.00MM			
120 x x 10.5	VR1	V	**401204**
SHAFT RANGE 115.00MM - 125.00MM			
120 x x 15.5	VR2	R	401201
SHAFT RANGE 115.00MM - 125.00MM			
120 x x 15.5	VR2	V	401205
SHAFT RANGE 115.00MM - 125.00MM			
120 x x 8	SSLEEVE		**99471**
SHAFT RANGE 119.89MM-120.09MM			
120 x x 19.99	SSLEEVE		**99473**
SHAFT RANGE 119.89MM-120.09MM			
120 x 140 x 12	† CRWA1	R	**47210**
120 x 140 x 13	HMS4	R	▲ **47212**
120 x 140 x 13	HMSA7	R	**47214**
120 x 145 x 12	† CRW1	R	▲ **47230**
120 x 145 x 12	HMS4	R	**47225**
120 x 150 x 15	CRSH1	R	47264
120 x 150 x 12	† CRW1	R	▲ **47250**
120 x 150 x 13	HMS4	R	**47240**
120 x 150 x 12	HMS4	R	▲ **47252**
120 x 150 x 12	HMS4	V	**47253**
W/STAINLESS STEEL SPRING			
120 x 150 x 12	HMSA7	V	**47254**
W/STAINLESS STEEL SPRING			
120 x 150 x 14	HMSA7	R	**47260**
120 x 150 x 12	HMSA7	R	**47276**
120 x 155 x 16	HMSA7	R	**47273**
120 x 160 x 12	† CRWH1	R	▲ **47291**
120 x 160 x 15	CRSH11	R	47272
120 x 160 x 12	HMS4	R	**47287**
120 x 160 x 12	HMS4	V	**47289**
W/STAINLESS STEEL SPRING			
122 x x 19.99	SSLEEVE		**99472**
SHAFT RANGE 121.90MM-122.10MM			
122 x 150 x 13	CRSH13	R	48030
122 x 150 x 15	HMSA75	R	48031
123 x x 19.99	SSLEEVE		**99484**
SHAFT RANGE 122.91MM-123.11MM			
125 x x 10	SSLEEVE		**99490**
SHAFT RANGE 124.90MM-125.10MM			
125 x x 26.01	SSLEEVE		**99492**
SHAFT RANGE 124.89MM-125.09MM			
125 x 146 x 14	CRSA1	P	49208
125 x 150 x 13	HMS4	R	**49264**
125 x 150 x 13	HMSA7	R	**49267**
125 x 150 x 12	† CRW1	R	**49210**
125 x 150 x 12	† CRW1	V	**49211**
125 x 150 x 12	HMS4	R	▲ **49215**
125 x 150 x 12	HMSA7	R	**49213**
125 x 150 x 12	HMSA7	V	**49214**
W/STAINLESS STEEL SPRING			
125 x 150 x 15	HMS43	V	49221
125 x 155 x 14	HMS1	R	▲ 49240
125 x 155 x 14	HMSA7	R	**49243**
125 x 160 x 12	† CRW1	R	**49270**
125 x 160 x 12	HMS4	R	▲ **49268**
125 x 170 x 15	HMSA7	R	**49235**
126 x 147 x 11	CRSA1	R	49600
127 x x 20.65	SSLEEVE		**99499**
SHAFT RANGE 126.95MM - 127.15MM			
127 x x 13.72	SSLEEVE		**99501**
SHAFT RANGE 126.95MM - 127.15MM			
127 x x 17.475	GSLEEVE		99857
SHAFT RANGE 126.94MM - 127.15MM			
127 x x 17.48	SSLEEVE		**99498**
SHAFT RANGE 126.95MM - 127.15MM			
127 x x 20.65	GSLEEVE		99858
SHAFT RANGE 126.94MM - 127.15MM			
127 x 155.6 x 20.65	† KIT	V	218
SEE KIT SECTION			
128 x 146 x 13.5	CRSH12	R	50390
128 x 150 x 13	HMS47	R	50391
128 x 150 x 15	HMS4	R	**50600**
128 x 160 x 15	CRSH13	R	50394

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
129 x 160 x 15	CRSH11	R	50790
130 x x 10.5	VR1	R	**401300**
SHAFT RANGE 125.00MM - 135.00MM			
130 x x 10.5	VR1	V	**401304**
SHAFT RANGE 125.00MM - 135.00MM			
130 x x 15.5	VR2	R	401301
SHAFT RANGE 125.00MM - 135.00MM			
130 x x 15.5	VR2	V	401305
SHAFT RANGE 125.00MM - 135.00MM			
130 x x 19.05	SSLEEVE		**99494**
SHAFT RANGE 129.80MM-130.00MM			
130 x x 22	SSLEEVE		**99491**
SHAFT RANGE 129.97MM - 130.17MM			
130 x 150 x 10	CRSA1	R	51182
130 x 150 x 14	CRSA1	R	51181
130 x 155 x 10	CRSH1	R	51179
130 x 160 x 13	CRS1	R	51189
130 x 160 x 13	CRSA1	R	51190
130 x 160 x 12	† CRW1	R	**51125**
130 x 160 x 12	† CRW1	V	**51126**
130 x 160 x 15	HMSA7	R	**51193**
130 x 160 x 12	HMS4	R	▲ **51130**
130 x 160 x 12	HMSA7	R	**51131**
130 x 160 x 13	HMS4	R	**51123**
130 x 160 x 13	HMSA7	R	**51128**
130 x 160 x 15	HMSA7	R	**51117**
130 x 160 x 15	HMS4	R	**51120**
130 x 160 x 14	HMSA7	R	**51135**
130 x 165 x 13	CRSH1	R	51151
130 x 170 x 12	HMS4	R	▲ **51140**
130 x 170 x 12	† CRW1	R	**51180**
130 x 170 x 12	HMS4	V	**51185**
130 x 170 x 15	HMS4	R	**51143**
130 x 180 x 15	CRSH13	R	51203
135 x x 20.5	SSLEEVE		**99533**
SHAFT RANGE 134.80MM - 135.00MM			
135 x 160 x 13	CRSH12	R	53154
135 x 160 x 13	CRSH1	R	53152
135 x 160 x 12	HMS4	R	▲ **53135**
135 x 160 x 13	HMSA7	R	**53142**
135 x 160 x 13	HMS4	R	**53143**
135 x 160 x 15	HMS4	R	**53140**
135 x 165 x 13	CRSH13	R	53156
135 x 165 x 14	HMSA7	R	**53145**
135 x 170 x 12	HMSA7	R	**53149**
135 x 170 x 12	HMS4	R	**53155**
135 x 170 x 15	CRSH1	R	53162
135 x 180 x 15	CRSH13	R	53165
138 x 152 x 12	CRSA1	R	54330
139 x x 14.3	SSLEEVE		**99547**
SHAFT RANGE 138.99MM - 139.19MM			
140 x x 8	VR3	R	401402
SHAFT RANGE 135.00MM - 145.00MM			
140 x x 8	VR3	V	401406
SHAFT RANGE 135.00MM - 145.00MM			
140 x x 10.5	VR1	R	**401400**
SHAFT RANGE 135.00MM - 145.00MM			
140 x x 10.5	VR1	V	**401404**
SHAFT RANGE 135.00MM - 145.00MM			
140 x x 15.5	VR2	R	401401
SHAFT RANGE 135.00MM - 145.00MM			
140 x x 15.5	VR2	V	401405
SHAFT RANGE 135.00MM - 145.00MM			
140 x x 20.5	SSLEEVE		**99552**
SHAFT RANGE 139.90MM-140.11MM			
140 x 160 x 12	† CRW1	R	▲ **55115**
140 x 160 x 13	HMS4	R	▲ **55116**
140 x 165 x 12	HMS45	R	55134
140 x 170 x 12	† CRW1	R	▲ **55118**
140 x 170 x 12	CRW1	V	**55125**
140 x 170 x 13	HMS4	R	▲ **55119**
140 x 170 x 15	HMS4	R	**55120**
140 x 170 x 15	HMSA7	R	**55121**
140 x 170 x 12	HMSA7	R	**55113**
140 x 180 x 15	CRSA13	R	55160
140 x 180 x 12	HMS4	R	▲ **55127**
143 x 181 x 12.7	† CRWHA1	R	**56315**
144 x 160 x 12	HMSA7	R	**56340**
145 x x 19.05	SSLEEVE		**99571**
SHAFT RANGE 144.75MM-145.00MM			
145 x 164 x 14	CRSA1	R	57080
145 x 165 x 13	CRSH12	R	57089
145 x 170 x 13	CRSA11	R	57094
145 x 170 x 15	HMS4	R	▲ **57110**
145 x 170 x 12	HMSA7	R	**57088**
145 x 175 x 14	CRS1	R	57120
145 x 175 x 14	HMSA7	R	**57123**
145 x 175 x 15	HMS4	R	▲ **57118**
145 x 180 x 12	HMS4	R	▲ **57125**
145 x 190 x 16	HMSA7	R	**57533**
148 x 170 x 15	HMS4	R	**57599**
150 x x 8	VR3	R	401502
SHAFT RANGE 145.00MM - 155.00MM			
150 x x 8	VR3	V	401506
SHAFT RANGE 145.00MM - 155.00MM			
150 x x 10.5	VR1	R	**401500**
SHAFT RANGE 145.00MM - 155.00MM			
150 x x 10.5	VR1	V	**401504**
SHAFT RANGE 145.00MM - 155.00MM			
150 x x 15.5	VR2	R	401501
SHAFT RANGE 145.00MM - 155.00MM			
150 x x 15.5	VR2	V	401505
SHAFT RANGE 145.00MM - 155.00MM			
150 x x 26.01	SSLEEVE		**99595**
SHAFT RANGE 149.75MM-150.00MM			
150 x 170 x 15	CRSH1	R	59062
150 x 180 x 15.88	HS8	R	**596132**
150 x 180 x 12	HMS4	R	▲ **59005**
150 x 180 x 15	HMS4	R	**59010**
150 x 180 x 15	HMS4	V	**59061**
150 x 180 x 13	HMSA7	R	**59057**
150 x 180 x 14	HMSA7	R	**59053**
150 x 180 x 14	HMS4	R	**59059**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
150 x 180 x 15	HMSA7	R	**59076**
150 x 180 x 13	HMS4	R	**59063**
150 x 180 x 13	CRSH1	R	59065
150 x 190 x 15	CRSH13	R	59071
150 x 200 x 15	CRSH1	R	59077
152.4 x 171.45 x 12.7	KIT	V	210
SEE KIT SECTION			
154 x x 26.01	SSLEEVE		**99605**
SHAFT RANGE 153.87MM-154.13MM			
154 x 175 x 13	CRSA1	R	▲ 60622
155 x x 26.01	SSLEEVE		**99606**
SHAFT RANGE 154.75MM-155.00MM			
155 x 180 x 15	HMSA7	R	**61031**
155 x 190 x 15	HMS4	R	**60920**
155 x 200 x 15	CRSH11	R	61024
158 x 180 x 15	CRSH13	R	62200
160 x x 7	VR1-SPL	#	401608
SHAFT RANGE 155.00MM - 165.00MM			
160 x x 8	VR3	R	401602
SHAFT RANGE 155.00MM - 165.00MM			
160 x x 8	VR3	V	401606
SHAFT RANGE 155.00MM - 165.00MM			
160 x x 12	VR1	R	**401600**
SHAFT RANGE 155.00MM - 165.00MM			
160 x x 12	VR1	V	**401604**
SHAFT RANGE 155.00MM - 165.00MM			
160 x x 18	VR2	R	401601
SHAFT RANGE 155.00MM - 165.00MM			
160 x x 18	VR2	V	401605
SHAFT RANGE 155.00MM - 165.00MM			
160 x x 25.4	SSLEEVE		**99630**
SHAFT RANGE 159.74MM - 160.00MM			
160 x 180 x 15	CRSH13	R	62989
160 x 185 x 13	CRSA1	V	62935
W/STAINLESS STEEL SPRING			
160 x 185 x 14	HMS47	R	62995
160 x 185 x 10	HMS4	R	▲ **62930**
160 x 190 x 13	CRS11	R	62998
160 x 190 x 15	HMS4	R	▲ **62940**
160 x 190 x 15	† CRW1	V	**62941**
160 x 190 x 15	HMSA7	V	**62945**
160 x 190 x 15	HMSA7	R	**62939**
160 x 200 x 15.88	HS8	D	**595294**
W/ LT. SPRING			
160 x 200 x 15	HMSA7	R	**63005**
162 x 190 x 12	HMS46	R	63781
162 x 200 x 14.3	† CRWHA1	R	**63829**
162 x 200 x 15.88	† CRWH1	R	**63825**
165 x 190 x 13	CRS13	R	64960
165 x 190 x 13	HMS4	R	▲ **64500**
165 x 200 x 15	CRSH11	R	64964
168 x 200 x 15	CRSH1	R	66145
170 x x 8	VR3	R	401702
SHAFT RANGE 165.00MM - 175.00MM			

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
170 x x 8	VR3	V	401706
SHAFT RANGE 165.00MM - 175.00MM			
170 x x 12	VR1	R	**401700**
SHAFT RANGE 165.00MM - 175.00MM			
170 x x 12	VR1	V	**401704**
SHAFT RANGE 165.00MM - 175.00MM			
170 x x 18	VR2	R	401701
SHAFT RANGE 165.00MM - 175.00MM			
170 x x 18	VR2	V	401705
SHAFT RANGE 165.00MM - 175.00MM			
170 x x 31.75	SSLEEVE		**99640**
SHAFT RANGE 169.75MM - 170.01MM			
170 x 190 x 15	CRSH1	R	66927
170 x 200 x 16	HS8	V	**595073**
170 x 200 x 15	HDS2	R	**596450**
170 x 200 x 12	HMS4	R	▲ **66925**
170 x 200 x 15	HMS4	R	**66930**
170 x 200 x 15	HMSA7	R	**66922**
170 x 200 x 16	HMS4	R	**66918**
170 x 200 x 16	HMSA7	R	**66920**
170 x 210 x 15	HMSA7	R	**66947**
170 x 210 x 16	HDS1	R	595932
175 x x 27.99	SSLEEVE		**99687**
SHAFT RANGE 174.75MM - 175.01MM			
175 x 200 x 15	HMS4	R	▲ **68800**
175 x 200 x 15	HMSA7	R	**68803**
175 x 205 x 15	HMS4	R	**68905**
178 x 215 x 16	CRSH11	R	70082
180 x x 8	VR3	R	401802
SHAFT RANGE 175.00MM - 185.00MM			
180 x x 8	VR3	V	401806
SHAFT RANGE 175.00MM - 185.00MM			
180 x x 12	VR1	R	**401800**
SHAFT RANGE 175.00MM - 185.00MM			
180 x x 12	VR1	V	**401804**
SHAFT RANGE 175.00MM - 185.00MM			
180 x x 18	VR2	R	401801
SHAFT RANGE 175.00MM - 185.00MM			
180 x x 18	VR2	V	401805
SHAFT RANGE 175.00MM - 185.00MM			
180 x x 32.99	SSLEEVE		**99721**
SHAFT RANGE 179.75MM - 180.01MM			
180 x 200 x 12	CRS1	R	70801
180 x 200 x 15	HMS4	R	**70813**
180 x 210 x 15	HMSA7	R	**70809**
180 x 210 x 15	HMS4	R	▲ **70805**
180 x 210 x 15	HMS1	V	70803
W/STAINLESS STEEL SPRING			
180 x 215 x 15	CRSHA13	R	70876
180 x 215 x 15	HMSA7	R	**70879**
180 x 215 x 16	CRS1	R	70869
184 x x 31.75	SSLEEVE		**99725**
SHAFT RANGE 183.99MM - 184.25MM			
185 x x 32	SSLEEVE		**99726**
SHAFT RANGE 184.75MM-185.00MM			
185 x 24.99 x 30	CT1	R	593637
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
185 x 210 x 13	HMS4	R	**72813**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
185 x 215 x 16	CRSHA11	R	72832
185 x 220 x 12.7	HS8	R	**594916**
186 x 226 x 16	HS8	R	**595185**
188 x 215 x 16	† CRWH1	R	**74800**
190 x x 8	VR3	R	401902
SHAFT RANGE 185.00MM - 195.00MM			
190 x x 8	VR3	V	401906
SHAFT RANGE 185.00MM - 195.00MM			
190 x x 12	VR1	R	**401900**
SHAFT RANGE 185.00MM - 195.00MM			
190 x x 12	VR1	V	**401904**
SHAFT RANGE 185.00MM - 195.00MM			
190 x x 18	VR2	R	401901
SHAFT RANGE 185.00MM - 195.00MM			
190 x x 18	VR2	V	401905
SHAFT RANGE 185.00MM - 195.00MM			
190 x 215 x 15	CRS13	R	74801
190 x 215 x 16	CRSH1	R	74815
190 x 220 x 12	HMSA7	R	**74803**
190 x 220 x 15	HMSA7	R	**74813**
190 x 220 x 15	HMS4	R	▲ **74805**
190 x 220 x 15	HMS4	V	**74807**
190 x 220 x 15	HMSA7	V	**74808**
W/STAINLESS STEEL SPRING			
190 x 225 x 16	HMS47	R	74812
190 x 225 x 16	HMS4	R	**74820**
190 x 225 x 16	HMSA7	R	**74824**
190 x 230 x 16	HS8	R	**594857**
195 x 220 x 16	CRSH13	R	76770
195 x 230 x 15	CRSH1	R	76790
199 x x 12	VR1	R	**401990**
SHAFT RANGE 190.00MM - 210.00MM			
199 x x 12	VR1	V	**401994**
SHAFT RANGE 190.00MM - 210.00MM			
199 x x 18	VR2	R	401991
SHAFT RANGE 190.00MM - 210.00MM			
199 x x 18	VR2	V	401995
SHAFT RANGE 190.00MM - 210.00MM			
200 x x 8	VR3	R	402002
SHAFT RANGE 190.00MM - 210.00MM			
200 x x 8	VR3	V	402006
SHAFT RANGE 190.00MM - 210.00MM			
200 x x 20	VR1	R	**402000**
SHAFT RANGE 190.00MM - 210.00MM			
200 x x 20	VR1	V	**402004**
SHAFT RANGE 190.00MM - 210.00MM			
200 x x 34.52	SSLEEVE		**99787**
SHAFT RANGE 199.87MM - 200.13MM			
200 x 230 x 15	HMS4	R	▲ **78705**
200 x 230 x 16	CRS13	R	78745
200 x 230 x 15.87	HDS1	R	595139
200 x 230 x 15	HMSA7	R	**78706**
200 x 230 x 15	HMSA7	V	**78703**
W/STAINLESS STEEL SPRING			
200 x 230 x 13	HMSA7P2	R	78742
200 x 238 x 19	HS6	R	595693
200 x 238 x 19	HDS1	V	78708
200 x 238.1 x 19.1	HS8	R	**595101**
200 x 240 x 20	HDL	R	**HDL-3013-R**
200 x 240 x 16	HDS1	H	596296
200 x 240 x 20	HDS2	R	**595408**
200 x 250 x 15	CRSH1	R	78751
200 x 255 x 22	HDS2	R	**595409**
203 x 254 x 15.88	† CRWH1	R	**79825**
203 x 254 x 15.88	CRWHA1	R	**79826**
205 x 230 x 15	CRS11	R	78757
210 x 240 x 20	HDS1	V	596185
210 x 240 x 15	HMS4	R	▲ **82610**
210 x 240 x 20	HDS2	V	**596468**
210 x 245 x 16	HDS1	R	593438
210 x 245 x 16	HDS1	V	595880
210 x 250 x 15	HMS4	R	**82607**
210 x 250 x 20	HDS1	V	82615
210 x 265 x 23	HDS2	R	**595410**
215 x x 25.4	LDSLV3		90179
FOR SEAL SH SIZE 220.00MM			
215 x 240 x 12	HMS47	R	84650
215 x 248 x 15	HDS1	R	596518
215 x 250 x 16	HMS47	R	84651
215 x 270 x 23	HDS2	R	**595196**
215.2 x x 35	LDSLV3		87831
FOR SEAL SH SIZE 220.00MM			
216 x 254 x 15.88	† CRWH1	R	**85115**
219.989 x x 19.99	VR1	R	**402200**
SHAFT RANGE 210.00MM - 235.00MM			
220 x x 8	VR3	R	402202
SHAFT RANGE 210.00MM - 233.00MM			
220 x x 8	VR3	V	402206
SHAFT RANGE 210.00MM - 233.00MM			
220 x x 20	VR1	V	**402204**
SHAFT RANGE 210.00MM - 233.00MM			
220 x x 40	LDSLV3		87914
FOR SEAL SH SIZE 225.00MM			
220 x 225 x 50.8	LDSLV3		87915
FOR SEAL SH SIZE 225.00MM			
220 x 250 x 15	HDL	R	**HDL-3069-R**
220 x 250 x 15	HS8	R	**595075**
220 x 250 x 16	HS8	D	**596225**
220 x 250 x 18	HDL	R	**HDL-3039-R**
220 x 250 x 16	CRWH1	R	**86617**
220 x 250 x 15	HMSA7	R	**86616**
220 x 250 x 16	HMS4	R	**86603**
220 x 250 x 16	HMSA7	R	**86606**
220 x 250 x 15	HMS43	V	86611
220 x 250 x 15	HMS4	V	**86614**
220 x 250 x 15	HMS4	R	▲ **86615**
220 x 255 x 16	HDS1	R	595999
W/4 EA 12.70MM ADJ. LUGS			
220 x 255 x 18	HDS2	R	**597284**
220 x 260 x 14.27	HS8	R	**594917**
220 x 260 x 15	HS8	R	**596048**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
220 x 260 x 16	HS8	R	**596324**
220 x 260 x 22	HDS2	V	**595851**
220 x 260 x 16	HDS1	R	592515
220 x 260 x 20	HDS1	R	594271
220 x 260 x 22	HDS2	D	**595319**
224 x 260 x 16	HDS1	R	593489
224 x 260 x 16	HDS2	R	**595651**
224 x 274 x 20	HDS2	R	**595411**
225 x 257 x 16	HDS1	R	595249
229.01 x 18.11 x 29.21	CT1	R	528631
BORE DIA. IS SHOULDER WIDTH			
230 x 260 x 15	HS8	R	**90057**
230 x 260 x 15	HDS7	R	597293
230 x 260 x 15	HMSA7	R	**90554**
230 x 260 x 15	HMS4	R	▲ **90555**
230 x 260 x 15.88	HDS1	V	596462
230 x 260 x 16	HDS1	R	596335
230 x 265 x 16	HDS1	R	595998
W/4 EA 12.70MM ADJ. LUGS			
230 x 269 x 22	HS5	R	**595195**
230 x 270 x 15	CRSH11	R	90559
230 x 270 x 16	HDS1	R	596016
230 x 270 x 16	HDS2	V	**596548**
230 x 280 x 16	HDS2	R	**590632**
W/4 EA 3.20MM LUGS			
230 x 285 x 23	HDS1	R	593546
230 x 285 x 23	HDS2	R	**595412**
235 x 270 x 16	HDS2	R	**595058**
235 x 270 x 15	HDS7	H	596345
235 x 270 x 16	HDS7	H	596344
235.229 x x 18	LDSLV4		90952
FOR SEAL SH SIZE 240.00MM			
238 x 290 x 25.4	HDS2	R	**595413**
W/6 EA 12.70MM ADJ. LUGS			
240 x x 17.5	LDSLV3		90156
FOR SEAL SHAFT SIZE 250.00MM			
240 x 23.8 x 28.57	CT3	R	594780
BORE DIA. IS SHOULDER WIDTH			
240 x 23.825 x 29	CT3	R	595464
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
240 x 270 x 15	HS8	R	**595165**
240 x 270 x 16	HDS1	R	590767
240 x 270 x 16	HDS2	R	**594397**
W/6 EA 3.20MM LUGS			
240 x 270 x 16	HDS2	D	**595577**
240 x 270 x 16	HDS2	V	**595298**
W/4 EA 3.20MM LUGS			
240 x 270 x 15	HMS4	R	▲ **94495**
240 x 275 x 18	HDS2	R	**597287**
240 x 275 x 16	HDS2	D	**595930**
240 x 275 x 16	HDS1	R	596014
W/4 EA 12.70MM ADJ. LUGS			
240 x 275 x 16	HMS4	R	**94480**
240 x 275 x 16	HMSA7	R	**94484**
240 x 279 x 22	HS5	R	**595190**
240 x 280 x 20	HDL	R	**HDL-3015-R**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
240 x 280 x 20	HS7	R	595668
240 x 280 x 16	HDS2	D	**594897**
240 x 280 x 16	HDS2	R	**94498**
240 x 280 x 23	HDSA1	R	595573
240 x 290 x 20	HDS1	R	595315
240 x 300 x 25	HDS1	R	592964
240.208 x x 44	LDSLV4		87911
FOR SEAL SH SIZE 245.00MM			
245 x 290 x 15	HS4	V	596309
245 x 305 x 28	HDS2	R	**595414**
245.2 x x 63.5	LDSLV3		90766
FOR SEAL SH SIZE 250.00MM			
250 x x 8	VR3	R	402502
SHAFT RANGE 233.00MM - 260.00MM			
250 x x 8	VR3	V	402506
SHAFT RANGE 233.00MM - 260.00MM			
250 x x 20	VR1	R	**402500**
SHAFT RANGE 233.00MM - 260.00MM			
250 x x 20	VR1	V	**402504**
SHAFT RANGE 233.00MM - 260.00MM			
250 x 280 x 16	HDS1	D	591941
250 x 280 x 15	HS8	R	**594732**
250 x 280 x 16	HDS2	D	**595371**
250 x 280 x 16	HDS2	R	**595763**
250 x 280 x 16	HDS1	V	595831
250 x 280 x 15	HMS4	R	▲ **98435**
250 x 285 x 16	HDS2	R	**595415**
250 x 285 x 16	HDS2	D	**595122**
250 x 290 x 15.88	HS8	R	**596239**
250 x 290 x 16	HDS1	R	595792
250 x 290 x 16.5	HDS3	D	595847
W/6 EA 12.70MM ADJ. LUGS			
250 x 310 x 25	HDS1	R	595203
254 x 17.48 x 28.57	CT1	R	524205
BORE DIA. IS SHOULDER WIDTH			
254 x 17.48 x 28.57	CT1	R	527806
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
254 x 20.62 x 25.4	CT3	R	528780
BORE DIA. IS SHOULDER WIDTH			
260 x 280 x 16	HMS1	V	102360
W/STAINLESS STEEL SPRING			
260 x 285.4 x 12.7	HS5	R	**1023015**
260 x 290 x 16	HS8	R	**1024068**
260 x 290 x 16	HDS2	R	**1023452**
260 x 290 x 16	HDS2	V	**1023453**
260 x 290 x 16	HDS2	D	**1024081**
260 x 300 x 20	CRS1	R	102365
260 x 300 x 20	HDS2	D	**1024218**
260 x 300 x 16	HDS2	R	**1023282**
W/ 4 EA 6.35MM LUGS			
260 x 300 x 16	HDS2	R	**1024232**
260 x 300 x 20	HDS1	V	1023287
260 x 300 x 20	HDS1	R	1024280
260 x 304 x 20	HS8	R	**1023398**
260 x 315 x 24	HDS2	R	**1024632**
260 x 320 x 25	HDS1	V	1023670
260 x 320 x 25	HDS2	R	**1023972**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
265 x 290 x 16	CRSH13	R	104300
265 x 305 x 18	HDS1	R	1043240
265 x 310 x 22	HS7	R	1043427
265 x 310 x 16	HDS1	R	1043360
266 x 310 x 20	HS8	R	**1047388**
270 x 310 x 16	HDS1	V	1063253
270 x 310 x 20	HDLA	R	HDLA-3035-R
270 x 310 x 20	HS8	R	**1063258**
270 x 310 x 20	HS8	R	**1063268**
W/HOOK & EYE SPRING CONNECTOR			
270 x 310 x 16	HDS2	V	**1063284**
270 x 310 x 16	HDS3	V	1063318
W/6 EA 12.70MM ADJ. LUGS			
270 x 310 x 20	HDS2	V	**1063248**
W/SPRING KOVER			
270 x 310 x 20	HDS2	R	**1063252**
270 x 310 x 16	HDS2	R	**1063242**
270 x 310 x 20.5	HDS3	D	1063303
W/6 EA 12.70MM ADJ. LUGS			
270 x 310 x 16	HDS1	R	1063240
270 x 314 x 20	HDS1	R	1063780
270 x 330 x 25	HDS2	V	**1063744**
270 x 330 x 25.4	HDSA1	R	1063960
270 x 335 x 18	HDS1	R	1063790
275 x x 8	VR3	R	402752
SHAFT RANGE 260.00MM - 285.00MM			
275 x x 8	VR3	V	402756
SHAFT RANGE 260.00MM - 285.00MM			
275 x x 20	VR1	R	**402750**
SHAFT RANGE 260.00MM - 285.00MM			
275 x x 20	VR1	V	**402754**
SHAFT RANGE 260.00MM - 285.00MM			
275 x x 22	LDSLV4		90546
FOR SEAL SH SIZE 280.00MM			
275 x 310 x 16	HDS1	R	1082160
280 x 310 x 15	HS8	R	**1102078**
280 x 310 x 16	HS8	R	**1102108**
280 x 310 x 16	HDS2	R	**1102012**
280 x 310 x 16	HDS2	D	**1102118**
280 x 310 x 16	HDS1	V	1102060
280 x 310 x 16	HDS1	R	1102080
280 x 310 x 16	HMS4	R	**110222**
280 x 320 x 19.05	HS8	R	**1102258**
280 x 320 x 20	† CRWA1	R	▲ **110245**
280 x 320 x 20	† CRWA1	V	**110246**
280 x 320 x 20	HDS2	R	**1102252**
280 x 320 x 16	HDS1	R	1102220
280 x 320 x 18	HDS2	D	**1102218**
280 x 320 x 18	HDS1	R	1103258
W/4 EA 12.70MM ADJ. LUGS			
280 x 320 x 18	HDS1	R	1102260
280 x 320 x 20	HDS1	R	1102250
280 x 324 x 20	HS8	R	**1102378**
280 x 325 x 24	HS5	R	**595193**
280 x 330 x 24	HDS1	R	594272

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
280 x 340 x 20.62	HDL	R	**HDL-4039-R**
280 x 340 x 25	HDS1	R	1102720
280.01 x x 45.009	LDSLV4		90437
FOR SEAL SH SIZE 285.00MM			
285 x 320 x 16	HDS2	R	**1122162**
285 x 320 x 16	HDS2	R	**1122165**
W/6 EA 12.70MM ADJ. LUGS			
285 x 325 x 16	HDS1	R	1122230
285.217 x x 63.5	LDSLV4		90238
FOR SEAL SH SIZE 290.00MM			
290 x 330 x 16	CRSA13	R	1141288
290 x 330 x 20	HS8	R	**1141258**
290 x 330 x 18	HDS2	R	**1142242**
290 x 330 x 18	HDS2	D	**1141282**
W/6 EA 9.00MM LUGS			
290 x 335 x 24	HS7	R	1142427
290 x 350 x 25	HDS7	R	596382
290 x 350 x 25	HDS2	V	**1141744**
290 x 350 x 25	HDS2	R	**1142732**
295 x 330 x 17.48	HDS1	V	1161170
295 x 330 x 17.48	HDS2	V	**1161174**
295 x 335 x 18	HDS1	R	1161300
295.199 x x 32	LDSLV3		90114
FOR SEAL SHAFT SIZE 300.00MM			
300 x x 8	VR3	R	403002
SHAFT RANGE 285.00MM - 310.00MM			
300 x x 8	VR3	V	403006
SHAFT RANGE 185.00MM - 310.00MM			
300 x x 20	VR1	R	**403000**
SHAFT RANGE 290.00MM - 310.00MM			
300 x x 20	VR1	V	**403004**
SHAFT RANGE 290.00MM - 310.00MM			
300 x 19.23 x 24	CT3	R	594734
BORE DIA. IS SHOULDER WIDTH			
300 x 19.23 x 24	CT3	R	594814
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
300 x 332 x 16	HDS2	R	**1181052**
300 x 335 x 18	CRSH11	R	118101
300 x 335 x 18	HDS2	R	**1181182**
300 x 338.094 x 19.05	HDS2	R	**1181252**
300 x 340 x 16.5	HDS3	D	1181303
W/6 EA 12.70MM ADJ. LUGS			
300 x 340 x 20	HS8	R	**1181268**
300 x 340 x 16	HDS1	R	1181310
300 x 340 x 22.225	† HDSA2	R	1181921
W/ BORE-TITE ON OD			
300 x 340 x 18	HDS1	D	1181220
300 x 340 x 18	HDS7	R	1181231
300 x 340 x 18	HDS2	V	**1181262**
300 x 340 x 18	HDS1	V	1181307
300 x 340 x 20	HDS2	V	**1181234**
300 x 340 x 18	HDS2	R	**1181232**
300 x 340 x 18	HMS4	R	**118100**
300 x 340 x 16	HMS46	R	118102
300 x 340 x 16	HMS4	R	**118103**
300 x 340 x 16	HMSA7	R	**118106**
300 x 344 x 20	HDS2	V	**1181372**
300 x 345 x 22	HS7	R	1181587

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
300 x 345 x 22	HDS1	R	1181410
300 x 350 x 25	HDS1	R	1181420
300 x 360 x 25	HDS2	R	**1181712**
300 x 360 x 25	HDS2	V	**1181704**
304.8 x x 34.925	LDSLV4		90150
FOR SEAL SHAFT SIZE 310.00MM			
310 x 340 x 15	HS8	V	**1220055**
310 x 340 x 15	HS8	R	**1220058**
310 x 350 x 18	HS8	R	**1220254**
W/HOOK & EYE SPRING CONNECTOR			
310 x 350 x 20	HS8	D	**1220289**
310 x 350 x 20	HDS3	D	1220283
W/6 EA 12.70MM ADJ. LUGS			
310 x 350 x 18	HDS2	V	**1220224**
310 x 350 x 20	HDS2	D	**1220228**
310 x 350 x 18	HDS3	D	596490
W/4 EA 12.70MM ADJ. LUGS			
310 x 354 x 20	HS5	R	**595681**
310 x 354 x 20.5	HDS3	D	1220343
W/6 EA 12.70MM ADJ. LUGS			
310 x 370 x 25	HDS1	R	1220720
310 x 370 x 25	HDS2	D	**1220722**
310 x 370 x 25	HDS2	R	**1220972**
310 x 370 x 25	HDS1	R	1221728
W/4 EA 4.77MM LUGS			
310 x 370 x 25.4	HDSA1	R	1220960
315 x 355 x 16	HS4	V	1240234
315 x 355 x 18	HDS1	V	1240240
315 x 355 x 20	HDS1	V	1240230
315 x 355 x 18	HDS1	R	1240250
315 x 365 x 20	HDS1	R	1240470
315.189 x x 63.5	LDSLV4		90155
FOR SEAL SH SIZE 320.00MM			
317 x 352 x 23	HDSA1	RD	1248920
318 x 360 x 20	HDS2	R	**1252340**
320 x x 50	VR4	R	**403203**
SHAFT RANGE 320.00MM - 325.00MM			
320 x x 63.5	LDSLV4		90198
FOR SEAL SH SIZE 325.00MM			
320 x 350 x 16	HDS1	R	1259100
320 x 350 x 18	HDS1	R	592869
320 x 355 x 16	HDS1	R	1259160
320 x 358 x 19	HDS1	R	1259240
320 x 360 x 20	HS8	R	**1259288**
W/THREADED SPRING CONNECTOR			
320 x 360 x 16	HDS1	R	1259220
W/6 EA 12.70MM ADJ. LUGS			
320 x 360 x 22.23	HDSC1	VD	1259937
320 x 360 x 25	HDSB2	RD	1259928
320 x 360 x 20	HDS1	V	1259280
320 x 360 x 18	HDS2	V	**1259247**
320 x 360 x 18	HDS1	R	1259370
320 x 360 x 20	HDS1	R	1259380
320 x 364 x 20	HDS2	D	**1259343**
320 x 380 x 25	HDS1	R	1260690
320 x 380 x 30	HDS1	R	1260720

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
320 x 380 x 25	HDS1	R	1259670
320 x 380 x 28	HDS7	R	1259720
320 x 380 x 28	HDSA2	RD	1259962
320 x 380 x 25	HDS2	R	**1260732**
325 x x 8	VR3	R	403252
SHAFT RANGE 310.00MM - 335.00MM			
325 x x 8	VR3	V	403256
SHAFT RANGE 310.00MM - 335.00MM			
325 x x 20	VR1	R	**403250**
SHAFT RANGE 310.00MM - 335.00MM			
325 x x 20	VR1	V	**403254**
SHAFT RANGE 310.00MM - 335.00MM			
325 x 368 x 20	HS5	R	**595680**
325.222 x x 63.5	LDSLV4		90239
FOR SEAL SH SIZE 330.00MM			
330 x 370 x 18	HDL	R	**HDL-3007-R**
330 x 370 x 18	HDS2	V	**1299242**
330 x 370 x 20	HDS1	R	1299280
330 x 370 x 16	HDS2	R	**1299312**
330 x 370 x 20	HDS2	R	**1299212**
W/4 EA 4.77MM LUGS			
330 x 370 x 25	HDS2	R	**1299272**
330 x 370 x 18	HDS2	R	**1299252**
330 x 370 x 18	HDS1	R	1299300
330 x 370 x 18	HDS2	D	**1299302**
330 x 370 x 20	HDS1	R	1299303
330 x 370 x 20	HDS2	R	**1299262**
330 x 374 x 18	HDS1	R	1299340
W/4 EA 12.70MM ADJ. LUGS			
330 x 374 x 20	HDS2	R	**1299382**
330 x 390 x 25	HDS1	R	1299700
330 x 390 x 28	HDS2	D	**1299732**
335 x 375 x 18	HDS1	R	592787
335 x 375 x 18	HDS3	D	1318303
W/6 EA 12.70MM ADJ. LUGS			
335 x 380 x 20	HDS1	R	1319430
335.2 x x 39	LDSLV4		90777
FOR SEAL SH SIZE 340.00MM			
335.229 x x 18	LDSLV4		87901
FOR SEAL SH SIZE 340.00MM			
340 x x 50	LDSLV3		90113
FOR SEAL SH SIZE 345.00MM			
340 x 372 x 18	HS8	R	**1339128**
340 x 372 x 16	HDS2	V	**1339114**
340 x 372 x 16	HDS1	R	1339110
340 x 380 x 18	HDLA	R	HDLA-3036-R
340 x 380 x 20	HS8	R	**1338288**
340 x 380 x 20	HDS2	V	**1338304**
340 x 380 x 20	HDS3	D	1338233
W/4 EACH 12.70MM ADJ.LUGS			
340 x 380 x 20	HDS1	R	1339300
340 x 380 x 18	HDS1	V	1339211
340 x 380 x 18	HDS2	V	**1339214**
340 x 380 x 18	HDS1	R	1339301
340 x 380 x 18	HDS2	R	**1339302**
340 x 380 x 20	HDS2	H	**1339251**
340 x 380 x 20	HDS2	R	**1339252**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
340 x 384 x 20	HDS1	R	1338340
340 x 390 x 25.4	HDS1	R	1339490
345 x 390 x 25	HS8	R	**1358418**
350 x x 8	VR3	R	403502
SHAFT RANGE 335.00MM - 365.00MM			
350 x x 8	VR3	V	403506
SHAFT RANGE 335.00MM - 365.00MM			
350 x x 20	VR1	R	**403500**
SHAFT RANGE 335.00MM - 365.00MM			
350 x x 20	VR1	V	**403504**
SHAFT RANGE 335.00MM - 365.00MM			
350 x 380 x 16	HDS2	V	**1377040**
350 x 380 x 16	HDS2	R	**1377050**
350 x 380 x 16	HDS1	R	1377100
350 x 380 x 20.5	HDS2	H	**1378372**
350 x 390 x 18	HS8	R	**1378268**
350 x 390 x 18	HDS2	V	**1378212**
350 x 390 x 18	HDS2	D	**1377242**
350 x 390 x 18	HDS1	D	1377280
350 x 390 x 18	HDS1	V	1377287
350 x 400 x 25.4	HS5	R	**595191**
350 x 400 x 17	HDS1	R	1378540
355.2 x x 25.4	LDSLV4		90778
FOR SEAL SH SIZE 360.00MM			
355.6 x 406.4 x 20.62	HDLA	R	HDLA-4135-R
360 x x 50	VR4	R	**403603**
SHAFT RANGE 360.00MM - 365.00MM			
360 x x 44	LDSLV4		87500
FOR SEAL SH SIZE 364.78MM			
360 x 390 x 18	HS5	H	**1417075**
360 x 390 x 15.88	HDS2	R	**1417442**
360 x 392 x 15.88	HDS1	R	1417060
360 x 392 x 20	HDS1	R	1417130
360 x 398 x 20	HDS2	R	**1417222**
360 x 400 x 18	HS8	R	**1417268**
360 x 400 x 20	HS7	R	1417287
360 x 400 x 20	HDS1	R	1417310
360 x 400 x 17	HDS2	R	**1417245**
W/4 EA 4.77MM LUGS			
360 x 400 x 20	HDS2	R	**1417253**
360 x 400 x 25	HDS2	R	**1417275**
360 x 400 x 17	HDS2	R	**1417252**
W/6 EA 12.70MM ADJ. LUGS			
360 x 400 x 18	HDS1	R	1417250
360 x 400 x 18	HDS1	V	1417337
360 x 400 x 20	HDS1	V	1417251
360 x 404 x 17.45	HDL	R	**HDL-9996-R**
360 x 404 x 16	HDS1	R	1417220
W/6 EA 12.70MM ADJ. LUGS			
360 x 404 x 20	HDS2	R	**1417342**
360 x 404 x 20	HDS7	R	1417351
360 x 410 x 17	HDS1	R	1457230
360 x 410.8 x 22.26	HS8	R	**1417588**
360 x 420 x 25	HDS1	R	1417720
364 x 406 x 17	HDS7	D	596393
364 x 420 x 25	HDSA2	RD	1433962
364 x 420 x 25	HDSC7	RD	1433970
365 x 400 x 17	HDS1	R	1436170
365 x 405 x 18	HDS2	R	**1437242**
365 x 405 x 18	HDS2	V	**1437254**
365 x 405 x 18	HDS3	R	1437283
W/6 EA 12.70MM ADJ. LUGS			
365.2 x x 20	LDSLV4		87531
FOR SEAL SH SIZE 370.00MM			
370 x 410 x 16	HDS2	R	**1456232**
370 x 410 x 18	HDS1	R	1456240
370 x 420 x 25	HDS1	R	1456490
370 x 420 x 25	HDS1	R	1456491
W/4 EA 4.77MM LUGS			
375 x x 8	VR3	R	403752
SHAFT RANGE 365.00MM - 385.00MM			
375 x x 8	VR3	V	403756
SHAFT RANGE 365.00MM - 385.00MM			
375 x x 20	VR1	R	**403750**
SHAFT RANGE 365.00MM - 390.00MM			
375 x x 20	VR1	V	**403754**
SHAFT RANGE 365.00MM - 390.00MM			
375 x x 50	VR4	R	**403753**
SHAFT RANGE 375.00MM - 380.00MM			
375 x 420 x 18	HDS1	R	1476380
375 x 420 x 18	HDS2	R	**1476432**
380 x 27 x 38.1	CT1	R	593171
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
380 x 418 x 19	HS7	R	1496257
380 x 418 x 19	HS8	R	**1496258**
380 x 420 x 19.05	HS8	V	**1496268**
380 x 420 x 20	HS8	D	**1496238**
380 x 420 x 20	HS7	R	1496247
380 x 420 x 20	HS8	H	**1496248**
380 x 420 x 20	HS8	D	**1496289**
380 x 420 x 20	HS8	R	**1496308**
380 x 420 x 16	HDS3	R	1496223
W/4 EA 12.70MM ADJ. LUGS			
380 x 420 x 16	HDS3	D	1496283
W/6 EA 12.70MM ADJ. LUGS			
380 x 420 x 20	HDS2	V	**1496256**
380 x 420 x 20	HDS2	D	**1496259**
380 x 420 x 20	HDS3	D	1496263
W/4 EACH 12.70MM ADJ LUGS			
380 x 420 x 20	HDS1	R	1496250
380 x 420 x 20	HDS2	R	**1496252**
380 x 420 x 20	HDS2	R	**1496254**
W/4 EA 9.50MM LUGS			
380 x 420 x 22.2	HDSA2	VD	1496944
380 x 424 x 20	HS8	R	**1496384**
W/HOOK & EYE SPRING CONNECTOR			
380 x 425 x 20	HDS2	R	**1378392**
380 x 430 x 20	HS8	R	**1496508**
380 x 430 x 19	HDS2	R	**1496470**

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
380 x 440 x 25	HDS1	R	1496671
380 x 440 x 25	HDS2	R	**1496672**
380 x 440 x 28	HDSA2	RD	1496972
381 x 17.48 x 28.57	CT1	R	594025
BORE DIA. IS SHOULDER WIDTH			
389.99 x 20.62 x 25.4	CT3	R	594190
BORE DIA. IS SHOULDER WIDTH			
390 x x 50	VR4	R	**403903**
SHAFT RANGE 390.00MM - 395.00MM			
390 x 430 x 16	HDL	R	**HDL-4616-R**
390 x 430 x 16	HDS1	R	1535300
390 x 430 x 16	HDS2	R	**1535304**
390 x 430 x 18	HDS2	R	**1535242**
390 x 430 x 20	HDS2	D	**1535248**
390 x 430 x 20	HDS2	V	**1535284**
390 x 434 x 20	HS5	R	**1535345**
390 x 434 x 18	HDS1	R	1535340
W/6 EA 12.70MM ADJ. LUGS			
390 x 434 x 20	HDS2	R	**1535382**
390 x 434 x 22	HDSA2	V	1535934
390 x 450 x 25	HDS1	R	1535710
394 x 420 x 16	HMS46	R	1551038
395 x 430 x 18	HDS2	R	**1555185**
W/6 EA 12.70MM ADJ. LUGS			
395 x 430 x 18	HDS1	V	1555193
395.22 x x 63.5	LDSLV4		87461
FOR SEAL SHAFT SIZE 400.00MM			
400 x x 8	VR3	R	404002
SHAFT RANGE 385.00MM - 410.00MM			
400 x x 8	VR3	V	404006
SHAFT RANGE 385.00MM - 410.00MM			
400 x x 20	VR1	R	**404000**
SHAFT RANGE 390.00MM - 430.00MM			
400 x x 20	VR1	V	**404004**
SHAFT RANGE 390.00MM - 430.00MM			
400 x x 50	VR4	R	**404003**
SHAFT RANGE 400.00MM - 405.00MM			
400 x 440 x 20	HDL	R	**HDL-3038-R**
400 x 440 x 20	HS7	R	1574267
400 x 440 x 18	HDS1	R	1574220
W/6 EA 12.70MM ADJ. LUGS			
400 x 440 x 20	HDS2	R	**1575212**
400 x 440 x 20	HDS1	V	1575337
400 x 440 x 20	HDS2	V	**1574264**
400 x 440 x 20	HDS1	R	1575280
400 x 444 x 13.5	HS8	R	**1574368**
400 x 444 x 20	HS5	R	**595291**
400 x 444 x 20	HDS7	R	1574250
400 x 444 x 20	HDS1	R	1574350
400 x 444 x 22	HDS1	R	1574340
400 x 444 x 20	HDS2	R	**1575382**
400 x 447 x 20	HS5	R	**1574445**

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
400 x 450 x 25	HS8	R	**1574488**
400 x 450 x 25	HS5	R	**595194**
400 x 450 x 20	HDS3	D	1574573
W/4 EA 12.70MM ADJ. LUGS			
400 x 450 x 17.5	HDS2	R	**1574504**
W/4 EA 3.20MM LUGS			
400 x 450 x 20	HDS1	R	1574500
400 x 450 x 20	HDS2	R	**1574503**
400 x 450 x 20	HDS1	V	1574520
400 x 451 x 22.225	HS8	R	**1574558**
400 x 460 x 25	HDS1	R	1575720
400 x 460 x 28	HDSA2	RD	1574972
405.232 x x 50	LDSLV4		90042
FOR SEAL SH SIZE 410.00MM			
410 x x 50	VR4	R	**404103**
SHAFT RANGE 410.00MM - 415.00MM			
410 x 12.5 x 23.83	CT1	R	595110
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
410 x 450 x 17.5	HDS1	V	1614237
410 x 450 x 20	HDS2	R	**1614242**
410 x 454 x 19	HS8	R	**1614388**
410 x 454 x 20	HS5	R	**594849**
410 x 460 x 22	HDS2	R	**1614572**
410 x 470 x 25	HDS1	R	1614720
W/4 EA 6.30MM LUGS			
410 x 470 x 25	HDS1	R	1614721
419.989 x x 63.5	LDSLV3		97064
FOR SEAL SH SIZE 425.00MM			
420 x 460 x 20	HDL	R	**HDL-3010-R**
420 x 460 x 20	HS7	R	1653267
420 x 460 x 20	HDS1	V	596044
420 x 460 x 22.23	HDSC1	VD	1653927
420 x 460 x 20	HDS2	R	**1653262**
420 x 460 x 20	HDS1	R	1653300
420 x 464 x 20	HDS2	R	**1653342**
420 x 470 x 22	HDS1	R	1653570
W/6 EA 12.70MM ADJ. LUGS			
420 x 470 x 20	HDS3	D	1653502
W/6 EA 12.70MM ADJ. LUGS			
420 x 470 x 20	HDS3	H	1653742
W/6 EA 12.70MM ADJ. LUGS			
420 x 480 x 28	HDS1	R	1654740
420 x 480 x 25	HDS1	R	1654730
430 x x 50	VR4	R	**404303**
SHAFT RANGE 430.00MM - 435.00MM			
430 x 480 x 22	HDS1	V	1692567
430 x 480 x 16	HDS2	R	**1693506**
430 x 480 x 25	HDS2	R	**1693502**
430 x 480 x 18	HDS2	R	**1692502**
W/4 EA 3.18MM LUGS			
430 x 480 x 22	HDS2	R	**1693562**
430 x 490 x 25	HDS1	R	1693780

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
435 x 475 x 20	HDS1	R	1712240
435 x 485 x 18	HDS2	R	**1712472**
W/6 EA 9.50MM ADJ. LUGS			
435 x 485 x 18	HDS2	R	**1712522**
435 x 485 x 18	HDS2	R	**1712562**
W/6 EA 12.70MM ADJ. LUGS			
435.204 x x 63.5	LDSLV4		87916
FOR SEAL SH SIZE 440.00MM			
440 x 470 x 20	HDS1	R	1732130
440 x 472 x 16	HS8	R	**1732118**
W/HOOK & EYE SPRING CONNECTOR			
440 x 480 x 20	HDL	R	**HDL-4192-R**
440 x 480 x 20	HS8	R	**1732288**
440 x 480 x 21	HS8	H	**1732308**
440 x 480 x 20	HDS1	R	1732250
440 x 480 x 20	HDS1	V	1732253
440 x 480 x 20	HDS7	R	1732259
440 x 480 x 22.23	HDSA2	V	1732934
440 x 480 x 20	HDS1	R	1732258
W/4 EA 9.52MM LUGS			
440 x 490 x 20	HDS1	R	1732490
445 x 485 x 20	HDS1	R	1752270
446 x 496 x 22	HDS1	R	1755500
448 x 480 x 16	HDS2	R	**1763110**
450 x x 8	VR3	R	404502
SHAFT RANGE 440.00MM - 475.00MM			
450 x x 8	VR3	V	404506
SHAFT RANGE 440.00MM - 475.00MM			
450 x x 20	VR1	R	**404500**
SHAFT RANGE 430.00MM - 480.00MM			
450 x x 20	VR1	V	**404504**
SHAFT RANGE 430.00MM - 480.00MM			
450 x x 50	VR4	R	**404503**
SHAFT RANGE 450.00MM - 455.00MM			
450 x 490 x 20	HDS1	R	1771250
450 x 500 x 25	HS8	R	**1771508**
450 x 500 x 20	HDS1	R	1771470
454.03 x 504.83 x 19.05	HDS1	R	592944
W/SS CASE			
455 x x 50	VR4	R	**404553**
SHAFT RANGE 455.00MM - 460.00MM			
455 x x 30	LDSLV4		90347
FOR SEAL SH SIZE 460.00MM			
455 x 459.77 x 30	LDSLV4		90765
FOR SEAL SH SIZE 460.00MM			
455.2 x x 50	LDSLV4		87504
FOR SEAL SH SIZE 460.00MM			
458 x 505 x 20.62	HDS2	R	**1803452**
460 x x 50	VR4	R	**404603**
SHAFT RANGE 460.00MM - 465.00MM			
460 x 500 x 20	HDS1	V	1811287
460 x 500 x 23	HDS1	V	1811300
460 x 500 x 20	HDS1	R	1811280
460 x 504 x 20	HDS1	R	1811340
460 x 510 x 22	HDS2	V	**1811564**
460 x 510 x 20.62	HDS2	R	**1811452**
460 x 520 x 25	HDS2	R	**1811722**
461 x 495 x 20	HDS7	H	1815180
463 x 528 x 20	HDS1	R	1850660
467 x 510 x 20	HDS2	V	**1838342**
470 x x 50	VR4	R	**404703**
SHAFT RANGE 470.00MM - 475.00MM			
470 x 510 x 20	HDS2	V	**1850253**
470 x 510 x 20	HDS1	R	1850280
470 x 510 x 20	HDS2	R	**1850302**
470 x 520 x 20.7	HS4	R	1850503
470 x 520 x 22	HDL	R	**HDL-3029-R**
470 x 520 x 20	HDS1	R	1850590
W/4 EA 12.70MM ADJ. LUGS			
470 x 520 x 20	HDS1	V	1850510
470 x 530 x 20	HDL	R	**HDL-3062-R**
470 x 530 x 25	HDS1	D	1850720
470 x 530 x 25	HDS1	R	1850728
W/4 EA 9.50MM LUGS			
470 x 530 x 25	HDS2	R	**1850722**
470 x 530 x 26	HDS2	R	**1850702**
470 x 530 x 28	HDS7	R	1850710
475 x 525 x 25	HS4	R	1870504
475.183 x x 20	LDSLV4		87921
FOR SEAL SHAFT SIZE 480.00MM			
480 x x 50	VR4	R	**404803**
SHAFT RANGE 480.00MM - 485.00MM			
480 x 520 x 20	HDS2	V	**1889284**
480 x 520 x 20	HDS1	D	1889260
480 x 520 x 20	HDS1	R	1890260
480 x 530 x 20	HS8	R	**1890548**
480 x 530 x 25	HS5	R	**595199**
480 x 530 x 20	HDS3	D	1889502
W/4 EA 12.70MM ADJ. LUGS			
480 x 530 x 20	HDS3	H	1889742
W/4 EA 12.70MM ADJ. LUGS			
480 x 530 x 18	HDS1	R	1889570
W/6 EA 12.70MM ADJ. LUGS			
485 x x 50	VR4	R	**404853**
SHAFT RANGE 484.88MM - 489.96MM			
485 x 535 x 19	HDL	R	**HDL-4220-R**
485 x 535 x 22	HDS1	R	1909500
485 x 535 x 20	HDS3	D	1909503
W/4 EA 12.70MM ADJ. LUGS			
490 x x 50	VR4	R	**404903**
SHAFT RANGE 490.00MM - 495.00MM			
490 x 530 x 20	HS8	R	**1929228**
490 x 530 x 20.5	HS5	D	**595169**
490 x 530 x 20	HDS1	R	1929218
W/4 EA 4.80MM ADJ. LUGS			
490 x 530 x 20	HDS1	R	1929250
490 x 540 x 25	HS8	R	**1929578**
490 x 540 x 25	HDS1	R	1929570

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
490 x 541 x 20.7	HS6	R	1929576
494.436 x x 111.252	LDSLV4		90259
FOR SEAL SH SIZE 500.00MM			
495.2 x x 30	LDSLV4		87503
FOR SEAL SH SIZE 500.00MM			
500 x x 8	VR3	R	405002
SHAFT RANGE 475.00MM - 510.00MM			
500 x x 8	VR3	V	405006
SHAFT RANGE 474.98MM - 620.03MM			
500 x x 20	VR1	R	**405000**
SHAFT RANGE 480.00MM - 530.00MM			
500 x x 20	VR1	V	**405004**
SHAFT RANGE 480.00MM - 530.00MM			
500 x x 50	VR4	R	**405003**
SHAFT RANGE 500.00MM - 505.00MM			
500 x 540 x 20	HDS1	R	1968280
W4/ EA 10.00MM LUGS			
500 x 540 x 20	HDS3	D	1968223
W/6 EA 12.70MM ADJ. LUGS			
500 x 540 x 20	HDS1	R	1968190
500 x 540 x 20	HDS1	V	1968257
500 x 550 x 19	HDL	R	**HDL-4232-R**
500 x 550 x 25	HS8	R	**1968388**
500 x 550 x 18	HDS1	R	1968570
W/6 EA 12.70MM ADJ. LUGS			
500 x 550 x 18	HDS2	R	**1968500**
500 x 550 x 18	HDS2	D	**1968462**
500 x 550 x 20	HDS7	D	1985539
W/6 EA 12.70MM ADJ. LUGS			
500 x 550 x 18	HDS1	D	1968458
500 x 560 x 18	HDS1	V	596045
W/6 EA 12.70MM ADJ. LUGS			
503.25 x x 24.003	LDSLV4		90149
FOR SEAL SH SIZE 508.00MM			
505 x 555 x 20.62	HDS2	R	**1988462**
510 x x 50	VR4	R	**405103**
SHAFT RANGE 510.00MM - 515.00MM			
510 x 550 x 20	HDS1	D	2007260
510 x 554 x 20	HDS1	D	2007340
510 x 560 x 25	HDS2	D	**2007502**
510 x 560 x 25	HDS1	D	2008570
513 x 543 x 16	HDL	R	**HDL-9997-R**
515 x 555 x 20	HS5	R	**2027295**
W/SPRING KOVER			
515 x 555 x 20	HS8	R	**2028258**
515 x 555 x 20	HDS7	R	2027280
515 x 555 x 20	HDS2	R	**2027282**
519 x 560 x 25	HS8	D	**2043308**
519 x 560 x 25	HS5	D	**596075**
520 x x 50	VR4	R	**405203**
SHAFT RANGE 520.00MM - 525.00MM			
520 x 560 x 18	HDL	R	**HDL-3025-R**
520 x 560 x 20	HDS1	R	2047258
W/4 EA 9.50MM LUGS			
520 x 560 x 20	HDS1	R	2047220
520 x 560 x 20	HDS1	V	2047283
520 x 570 x 22	HDL	R	**HDL-3027-R**
520 x 570 x 24	HS5	R	**595192**
520 x 570 x 18	HDS1	R	2047500
W/6 EA 12.70MM ADJ. LUGS			
520 x 580 x 20	HDS1	R	2047700
520 x 580 x 20	HDS2	R	**2047702**
520 x 580 x 25	HDS2	R	**2047692**
520 x 580 x 25	HDS2	R	**2047705**
W/6 EA 12.70MM ADJ. LUGS			
525 x x 8	VR3	R	405252
SHAFT RANGE 510.00MM - 540.00MM			
525 x 575 x 20.7	HS4	R	2066503
525 x 575 x 20	HDS3	D	2066573
W/4 EA 12.70MM ADJ. LUGS			
525 x 575 x 22	HDS1	R	2066500
530 x x 50	VR4	R	**405303**
SHAFT RANGE 530.00MM - 535.00MM			
530 x x 20	LDSLV4		87783
FOR SEAL SH SIZE 535.00MM			
530 x 575 x 20	HS5	R	**594770**
530 x 576 x 21	HS8	R	**2086448**
530 x 580 x 20	HS8	R	**2086508**
530 x 580 x 20.62	HDL	R	**HDL-4244-R**
530 x 580 x 22	HDS1	R	2086541
W/6 EA 6.40MM LUGS			
530 x 580 x 22	HS8	R	**2087568**
530 x 580 x 22	HDS3	D	2086573
W/6 EA 12.70MM ADJ. LUGS			
530 x 580 x 20	HDS1	V	2087547
530 x 580 x 20	HDS1	R	2086510
530 x 580 x 22	HDS1	R	2086540
530 x 580 x 20	HDS7	D	2086539
W/6 EA 12.70MM ADJ. LUGS			
530 x 580 x 22	HDS7	R	2086500
533 x 20.65 x 31.75	CT1	R	594241
BORE DIA. IS SHOULDER WIDTH			
535 x 580 x 20	HDS3	D	2105443
W/6 EA 12.70MM ADJ. LUGS			
540 x 580 x 20	HDS1	R	2126280
540 x 584 x 20	HS4	R	2126344
540 x 590 x 24.98	HDL	R	**HDL-7393-R**
540 x 590 x 20	HDS2	D	**2126502**
540 x 590 x 20	HDS2	V	**2126504**
540 x 590 x 20	HDS1	R	2126540
542 x 578 x 16	HDS7	D	2133181
W/4 EACH 12.70MM ADJ LUGS			
545 x 595 x 22	HDS1	R	2145500
550 x x 8	VR3	R	405502
SHAFT RANGE 540.00MM - 575.00MM			
550 x x 20	VR1	R	**405500**
SHAFT RANGE 530.00MM - 580.00MM			
550 x x 20	VR1	V	**405504**
SHAFT RANGE 530.00MM - 580.00MM			
550 x x 50	VR4	R	**405503**
SHAFT RANGE 550.00MM - 555.00MM			
550 x 590 x 20	HS8	R	**2165288**
550 x 590 x 20	HDS1	R	2165258
W/4 EA 9.50MM LUGS			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
550 x 590 x 20	HDS1	R	2165250
550 x 590 x 20	HDS1	R	2165255
W/4 EA 4.80MM LUGS			
550 x 600 x 20	HDS1	R	2165500
550 x 600 x 25	HDS2	R	**2165492**
550 x 610 x 25	HDS2	R	**2163672**
550 x 610 x 25	HDS1	R	2165720
550 x 620 x 25	HDS1	V	2165840
555.2 x x 63.5	LDSLV4		90075
FOR SEAL SH SIZE 560.00MM			
556 x 610 x 25.4	HS7	R	2189637
560 x x 50	VR4	R	**405603**
SHAFT RANGE 560.00MM - 564.89MM			
560 x 600 x 18	HDS2	R	**2204242**
560 x 604 x 16	HDS2	R	**2204332**
W/4 EA 3.20MM LUGS			
560 x 604 x 20	HDS2	R	**2205382**
560 x 604 x 20	HDS1	R	2204340
560 x 604 x 20	HDS7	R	2204380
560 x 610 x 22	HDS7	R	2204510
560 x 610 x 20	HDS1	V	2204473
560 x 610 x 20	HDS1	R	2204500
W/4 EA 12.70MM ADJ. LUGS			
560 x 610 x 20	HMS46	R	2204508
560 x 620 x 30	HDSA2	RD	2204962
560 x 620 x 29.34	HDS7	R	2204720
565 x 601 x 20	HDL	R	**HDL-9995-R**
570 x x 50	VR4	R	**405703**
SHAFT RANGE 570.00MM - 575.00MM			
570 x 610 x 20	HDS1	R	2244260
570 x 620 x 22	HDS2	R	**2244552**
W/6 EA 12.70MM ADJ. LUGS			
573 x 18.999 x 31.979	CT1	R	594874
BORE DIA. IS SHOULDER WIDTH			
575 x x 50	VR4	R	**405753**
SHAFT RANGE 575.00MM - 580.00MM			
575.234 x x 63.5	LDSLV4		90951
FOR SEAL SH SIZE 580.00MM			
578 x 640 x 30	HDS1	R	2276740
580 x x 50	VR4	R	**405803**
SHAFT RANGE 580.00MM - 585.00MM			
580 x 620 x 20	HDS2	D	**2283282**
580 x 620 x 20	HDS3	D	2283228
W/6 EA 12.70MM ADJ. LUGS			
580 x 630 x 18	HDS1	R	2283500
W/6 EA 12.70MM ADJ. LUGS			
580 x 630 x 25	HDS1	R	2284578
W/4 EA 4.77MM ADJ.LUGS			
580 x 640 x 25	HDS1	R	2283700
580 x 640 x 25	HDS2	R	**2284732**
580 x 640 x 30	HDSA2	RD	2283972
585 x 620 x 20	HDS2	R	**2303192**
585.216 x x 54.991	LDSLV4		90292
FOR SEAL SH SIZE 590.00MM			
586 x 650 x 25	HDS1	R	2307740
590 x x 50	VR4	R	**405903**
SHAFT RANGE 590.00MM - 600.00MM			
590 x 630 x 20	HDS3	D	2323253
W/6 EA 12.70MM ADJ. LUGS			
590 x 630 x 20	HDS1	R	2322218
W/4 EA 4.80MM ADJ. LUGS			
590 x 630 x 20	HDS1	R	2322250
590 x 630 x 20	HDS7	D	2322221
W/6 EA 12.70MM ADJ. LUGS			
590 x 640 x 25	HS8	R	**2322498**
590 x 640 x 22	HDS2	R	**2323562**
595.2 x x 58.17	LDSLV3		90120
FOR SEAL SH SIZE 600.00MM			
595.2 x x 63.5	LDSLV4		89997
FOR SEAL SH SIZE 600.00MM			
595.224 x x 50.013	LDSLV3		90241
FOR SEAL SH SIZE 600.00MM			
600 x x 8	VR3	R	406002
SHAFT RANGE 575.00MM - 625.00MM			
600 x x 20	VR1	R	**406000**
SHAFT RANGE 580.00MM - 630.00MM			
600 x x 20	VR1	V	**406004**
SHAFT RANGE 580.00MM - 630.00MM			
600 x x 50	VR4	R	**406003**
SHAFT RANGE 600.00MM - 610.00MM			
600 x 18.9 x 30	CT1	R	594431
BORE DIA. IS SHOULDER WIDTH			
600 x 640 x 20	HDL	R	**HDL-8624-R**
600 x 640 x 20	HDS1	R	2362250
600 x 640 x 20	HDS1	V	2362253
600 x 650 x 25	HDS1	R	2362500
600 x 650 x 18	HDS1	R	2362580
W/4 EA 12.70MM ADJ. LUGS			
600 x 660 x 18	HDS1	V	596046
W/6 EA 12.70MM ADJ. LUGS			
604 x 640 x 22	HDS1	R	2378190
610 x x 50	VR4	R	**406103**
SHAFT RANGE 610.00MM - 620.00MM			
610 x 660 x 20	HDS2	R	**2407542**
615 x 665 x 24	HS8	R	**2410488**
620 x x 50	VR4	R	**406203**
SHAFT RANGE 620.00MM - 630.00MM			
620 x 670 x 22	HS8	D	**2440509**
620 x 670 x 20	HDS1	R	2441540
620 x 670 x 20	HDS1	R	2441548
W/4 EA 3.18MM LUGS			
620 x 680 x 20	HDS1	R	2440670
W/4 EA 12.70MM ADJ. LUGS			
625 x 665 x 25	HDS1	R	2460220
625 x 676 x 19	HS8	D	**2460548**
630 x x 50	VR4	R	**406303**
SHAFT RANGE 630.00MM - 640.00MM			
630 x 670 x 20	HDL	R	**HDL-3020-R**
630 x 670 x 20	HDS3	R	2480255
W/6 EA 12.70MM ADJ. LUGS			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
630 x 670 x 20	HS8	R	**2480258**
W/HOOK & EYE SPRING CONNECTOR			
630 x 670 x 20	HDS1	R	2480250
630 x 670 x 20	HDS1	V	2480253
630 x 670 x 20	HDS3	D	2480283
W/4 EA 12.70MM ADJ. LUGS			
630 x 670 x 20	HDS1	R	2480300
W/ 6 EA. 12.70 MM LUGS			
630 x 670 x 20	HDS2	R	**2480242**
W/6 EA 12.70MM ADJ. LUGS			
630 x 674 x 20	† HDS1	R	2480380
630 x 690 x 20	HDL	R	**HDL-3059-R**
640 x x 50	VR4	R	**406403**
SHAFT RANGE 640.00MM - 650.00MM			
640 x 680 x 20	HDL	R	**HDL-3019-R**
640 x 680 x 20	HDS1	V	2519300
640 x 690 x 25	HDS1	R	2519490
640 x 690 x 25	HDS7	R	2519511
645.2 x x 64	LDSLV4		90004
FOR SEAL SH SIZE 650.00MM			
645.236 x x 63.5	LDSLV3		87817
FOR SEAL SH SIZE 650.00MM			
647 x 700 x 25	HDS7	H	2547541
650 x x 20	VR1	R	**406500**
SHAFT RANGE 630.00MM - 665.00MM			
650 x x 50	VR4	R	**406503**
SHAFT RANGE 650.00MM - 660.00MM			
650 x 700 x 20	HS8	R	**2559488**
650 x 700 x 22	HDS2	V	**2559504**
650 x 700 x 22	HDS2	D	**2559502**
650 x 710 x 25	HDS2	R	**2559702**
650 x 714 x 25	HDL	R	**HDL-3016-R**
655 x 28.91 x 40	CT4	R	594784
BORE DIA. IS SHOULDER WIDTH			
660 x 700 x 18	HDS1	R	2598240
660 x 724 x 25	HDS1	R	2598670
668 x 706 x 25.4	HDL	R	**HDL-9992-R**
670 x 710 x 20	HDS1	R	2637218
W/4 EA 4.77MM LUGS			
670 x 710 x 20	† HDS1	R	2637250
670 x 714 x 20	HDS3	D	2637413
W/6 EA 12.70MM ADJ. LUGS			
670 x 734 x 22	HDS1	R	2637740
W/6 EA 12.70MM ADJ. LUGS			
676 x 740 x 22	HDS1	R	2661790
W/6 EA 12.70MM ADJ. LUGS			
680 x x 50	VR4	R	**406803**
SHAFT RANGE 679.95MM - 690.11MM			
680 x 730 x 25	HDS1	V	2677570
680 x 730 x 25	HDS2	V	**2677572**
W/6 EA 12.70MM ADJ. LUGS			
680 x 730 x 20	HDS2	R	**2677542**
680 x 730 x 20	HDS1	V	2677577
680 x 740 x 30	HDS2	R	**2677702**
685 x 720 x 20	HDS2	R	**2696192**
685.216 x x 63.5	LDSLV4		90953
FOR SEAL SH SIZE 960.00MM			

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
690 x x 50	VR4	R	**406903**
SHAFT RANGE 690.00MM - 700.00MM			
690 x 730 x 20	HS8	R	**2716288**
690 x 730 x 20	HDS1	R	2716210
695 x 770 x 30	HDS1	R	2736840
700 x x 20	VR1	R	**407000**
SHAFT RANGE 665.00MM - 705.00MM			
700 x x 50	VR4	R	**407003**
SHAFT RANGE 700.00MM - 710.00MM			
700 x 740 x 20	HS5	D	**2755285**
700 x 740 x 20	HDS1	R	2755250
700 x 750 x 20	HS8	R	**2755508**
700 x 750 x 20	HDS1	R	2755490
700 x 750 x 20	HDS1	R	2755491
W/4 EA 4.77MM LUGS			
700 x 760 x 25	HDS1	R	2755700
710 x 760 x 20	HDS1	V	2795507
710 x 760 x 20	HDS2	V	**2795544**
710 x 760 x 25	HDS2	D	**2795502**
710 x 760 x 20	HDS2	R	**2795542**
710 x 760 x 22.2	† HDS2	D	**2795482**
W/4 EA 3.20MM ADJ. LUGS			
710 x 760 x 25	HDS2	D	**2795512**
W/4 EA 4.80MM LUGS			
710 x 770 x 25	HDS1	R	2793700
W/6 EA 12.70MM ADJ. LUGS			
712 x 757 x 20.5	HS5	D	**595168**
714.807 x x 50	LDSLV4		87820
FOR SEAL SHAFT SIZE 720.00MM			
720 x 770 x 25	HDS2	R	**2834500**
720 x 771.1 x 21	HS8	D	**2834578**
725 x x 20	VR1	R	**407250**
SHAFT RANGE 705.00MM - 745.00MM			
725 x x 20	VR1	V	**407254**
SHAFT RANGE 705.00MM - 745.00MM			
730 x x 50	VR4	R	**407303**
SHAFT RANGE 730.00MM - 740.00MM			
735.228 x x 63	LDSLV4		89949
FOR SEAL SH SIZE 740.00MM			
737 x 790 x 15.88	HS6	R	2901636
740 x x 50	VR4	R	**407403**
SHAFT RANGE 740.00MM - 750.00MM			
740 x 780 x 16.5	HDS1	R	2913220
740 x 780 x 16.5	HDS1	R	2913225
W/6 EA 3.20MM LUGS			
740 x 780 x 16.5	HDS1	V	2913240
740 x 780 x 16.5	HDS1	V	2913276
W/6 EA 3.20MM LUGS			
740 x 790 x 15.88	HS8	R	**2913488**
740 x 790 x 25	HS8	R	**2913508**
740 x 790 x 25	HDS2	R	**2913505**
W/4 EA .125 LUGS			
750 x x 20	VR1	R	**407500**
SHAFT RANGE 745.00MM - 785.00MM			
750 x x 50	VR4	R	**407503**
SHAFT RANGE 750.00MM - 758.00MM			
750 x 780 x 18	HDS1	R	2953100
750 x 790 x 23	HDS1	V	2952287

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
750 x 800 x 25	HDS2	R	**2952502**
750 x 810 x 25	HDS1	R	2952700
750 x 814 x 25	HDL	R	**HDL-4629-R**
750 x 814 x 25	HDS1	R	2953740
W/6 EA 12.70MM ADJ. LUGS			
755.193 x x 63.5	LDSLV3		87981
FOR SEAL SHAFT SIZE 760.00MM			
757.5 x x 8	VR3	R	407502
SHAFT RANGE 740.00MM - 775.00MM			
760 x x 50	VR4	R	**407603**
SHAFT RANGE 758.00MM- 766.00MM			
760 x 800 x 20.6	HS8	R	**2992268**
760 x 800 x 20	HDS3	V	2992286
W/6 EA 12.70MM ADJ. LUGS			
760 x 800 x 20	HDS1	V	2992283
760 x 810 x 20.6	HS8	R	**2992498**
760 x 810 x 25	HDS1	R	2992500
760 x 810 x 25	HDS1	R	2992570
W/6 EA 4.77MM LUGS			
760 x 810 x 25	HDS7	R	2992510
760 x 820 x 17.5	HS8	R	**2992698**
760 x 820 x 25	HDS1	R	2992700
W/6 EA 12.70MM ADJ. LUGS			
760 x 824 x 22	HDS1	R	2992770
W/6 EA 12.70MM ADJ. LUGS			
770 x x 50	VR4	R	**407703**
SHAFT RANGE 766.00MM - 774.00MM			
770 x 810 x 20	HDS1	V	3031280
770 x 834 x 25	HDS2	R	**3031762**
770 x 845 x 27.79	HDS1	R	3032840
778 x 818 x 20.5	HS5	D	**595167**
780 x x 50	VR4	R	**407803**
SHAFT RANGE 774.00MM - 783.00MM			
780 x 820 x 18	HS8	R	**3070248**
780 x 820 x 19.05	HDS2	R	**3070252**
780 x 820 x 19.05	HDS1	V	3070247
780 x 830 x 22	HS5	R	**3070565**
780 x 844 x 25	HDL	R	**HDL-3032-R**
790 x 834 x 25	HDS1	R	3110340
790 x 850 x 25	HDS2	V	**3110784**
790 x 850 x 25	HDS2	V	**3110786**
W/6 EA 12.70MM ADJ. LUGS			
790 x 850 x 25	HDS1	V	3110780
790 x 850 x 25	HDSA1	RL	3110978
790 x 854 x 25	HDL	R	**HDL-6666-R**
800 x x 20	VR1	R	**408000**
SHAFT RANGE 785.00MM - 830.00MM			
800 x x 50	VR4	R	**408003**
SHAFT RANGE 792.00MM - 801.00MM			
800 x 850 x 25.4	HS8	R	**3150578**
800 x 850 x 20	HDS1	R	3149465
W/6 EACH 1.57MM LUGS			
800 x 860 x 25	HDS1	R	3149500
W/6 EA 12.70MM ADJ. LUGS			
810 x 850 x 20	HDS1	V	3189280
810 x 860 x 20.65	HS7	R	3189557
810 x 860 x 25	HDS2	R	**3189502**
825 x 17.48 x 28.57	CT1	R	594785
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
825 x 860 x 20	HDS2	R	**3248192**
837 x 889 x 22.22	HDL	R	**HDL-3009-R**
840 x 892 x 18	HS6	R	3307546
840 x 904 x 25	HDL	R	**HDL-3034-R**
850 x x 20	VR1	R	**408500**
SHAFT RANGE 830.00MM - 875.00MM			
850 x x 50	VR4	R	**408503**
SHAFT RANGE 841.00MM - 851.00MM			
850 x 910 x 50	HDSE1	RR	3346961
850 x 910 x 25	HDS1	R	3346700
W/6 EA 12.70MM ADJ. LUGS			
850 x 925 x 27	HDS1	R	3346840
853 x 917 x 20	HDS3	D	3358743
W/6 EA 12.70MM ADJ. LUGS			
853 x 917 x 22.1	HDS3	D	3357743
W/6 EA 12.70MM ADJ. LUGS			
853 x 917 x 25	HDS3	D	3358803
W/6 EA 12.70MM ADJ. LUGS			
860 x 920 x 25	HDS1	R	3385700
865 x 911 x 18	HS8	R	**3405438**
865.226 x x 63.5	LDSLV4		90221
FOR SEAL SH SIZE 870.00MM			
867 x 920 x 15.88	HS6	R	3413566
870 x 920 x 15.88	HS8	R	**3425478**
875.182 x x 63.5	LDSLV4		90103
FOR SEAL SH SIZE 880.00MM			
880 x 940 x 25	HDS2	R	**3464702**
880 x 940 x 25	HDS3	R	3464705
W/6 EA 12.70MM ADJ. LUGS			
880 x 944 x 25	HDS3	D	3464783
W/6 EA 12.70MM ADJ. LUGS			
880 x 944 x 22	HDS1	R	3464770
W/6 EA 12.70MM ADJ. LUGS			
880 x 944 x 25	HDS1	V	3464787
880.01 x 944 x 25	HDS2	R	**3464782**
889 x 20.65 x 31.75	CT1	R	524220
BORE DIA. IS SHOULDER WIDTH			
890 x x 50	VR4	R	**408903**
SHAFT RANGE 882.00MM - 892.00MM			
893 x 925 x 20	HDS2	H	**3515138**
900 x x 20	VR1	R	**409000**
SHAFT RANGE 875.00MM - 920.00MM			
900 x x 50	VR4	R	**409003**
SHAFT RANGE 892.00MM - 912.00MM			
900 x 960 x 25	HDS1	R	3543710
W/6 EA 12.70MM ADJ. LUGS			
900 x 960 x 30	HDS1	R	3543700
910 x 966 x 17.86	HS6	R	3582646
910 x 966 x 17.86	HS5	R	**3582648**
910 x 974 x 22	HDS1	R	3582770
W/6 EA 12.70MM ADJ. LUGS			
920 x x 50	VR4	R	**409203**
SHAFT RANGE 912.00MM - 922.00MM			
920 x 980 x 30	HDS1	R	3622690
920 x 984 x 25	HDS1	V	3622747

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
920 x 984 x 25	HDS2	V	**3622784**
925 x 975 x 22	HS8	D	**3641509**
927 x 978 x 22	HDS2	D	**3649572**
930 x 980 x 22.22	HDL	R	**HDL-3026-R**
930 x 982 x 22.23	HS6	R	3661546
939 x 971 x 15.87	HDS3	H	3716478
W/6 EA 12.70MM ADJ. LUGS			
939 x 971 x 22.23	HDS2	H	**3716488**
940 x 1000 x 25	HDS1	D	3937670
940 x 1000 x 25	HDS1	D	3701728
W/6 EA 9.50MM ADJ. LUGS			
940 x 1000 x 25	HDS1	R	3700728
W/4 EA 12.70MM ADJ. LUGS			
940 x 1000 x 25	HDS3	D	3700703
W/6 EA 12.70MM ADJ. LUGS			
950 x x 20	VR1	R	**409500**
SHAFT RANGE 920.00MM - 965.00MM			
950 x x 50	VR4	R	**409503**
SHAFT RANGE 944.00MM - 955.00MM			
950 x 980 x 18	HDS1	R	3740100
950 x 1000 x 25	HDS1	R	3740560
950 x 1006 x 20	HDS2	R	**3740652**
950 x 1010 x 25	HDS1	R	3740700
W/6 EA 12.70MM ADJ. LUGS			
960 x 1000 x 25	HDS1	D	3779670
960 x 1020 x 25	HDS3	D	3779788
W/6 EA 12.70MM ADJ LUGS			
960 x 1020 x 25	HDS2	D	**3779692**
W/8 EA 10.00MM LUGS			
960 x 1020 x 25	HDS1	D	3780728
W/4 EA 4.77MM LUGS			
960 x 1020 x 25	HDS2	H	**3780729**
960 x 1020 x 25	HDS1	D	3779680
960 x 1020 x 25	HDS2	V	**3779706**
W/4 EA 4.77MM LUGS			
960 x 1024 x 25	HDS2	V	**3779784**
960 x 1040 x 23	HDS2	R	**3780901**
960 x 1040 x 23	HDS1	R	3780902
W/6 EA 12.70MM LUGS			
960 x 1040 x 23	HDS1	R	3780904
960 x 1040 x 23	HDS2	R	**3780905**
W/8 EA 5.60MM LUGS			
960 x 1040 x 23	HDS2	V	**3780908**
970 x x 50	VR4	R	**409703**
SHAFT RANGE 965.98MM - 977.01MM			
978 x 1018 x 18	HS5	R	**595118**
980 x x 50	VR4	R	**409808**
SHAFT RANGE 977.00MM - 988.00MM			
990 x 1040 x 25	HDL	R	**HDL-9998-R**
990 x 1045 x 25	HDS1	R	3898631
990 x 1045 x 25	HDS3	D	3897543
W/6 EACH 12.70MM ADJ.LUGS			
1000 x x 20	VR1	R	**410000**
SHAFT RANGE 965.00MM -1015.00MM			
1000 x x 50	VR4	R	**410003**
SHAFT RANGE 999.00MM -1010.00MM			
1000 x 1035 x 20	HDS2	R	**3937172**
1000 x 1050 x 23	HDS2	R	**3937565**
W/6 EA 3.97MM LUGS			
1000 x 1050 x 20	HDS1	R	4133510
1000 x 1050 x 23	HDS2	R	**3937582**
1000 x 1050 x 23	HDS2	R	**3937595**
W/6 EA 12.70MM ADJ. LUGS			
1000 x 1060 x 25	HDS2	R	**3937702**
1000 x 1060 x 25	HDS3	R	3937705
W/6 EA 12.70MM ADJ. LUGS			
1016 x 25.4 x 36.53	CT1	R	525035
BORE DIA. IS SHOULDER WIDTH			
1016 x 27 x 38.1	CT1	R	527903
BORE DIA. IS SHOULDER WIDTH			
1020 x 1084 x 25	HDS1	R	4016790
1020 x 1084 x 25	HDS1	R	4016792
W/6 EA 1.60MM LUGS			
1030 x 1070 x 25	HDL	R	**HDL-3070-R**
1049.325 x x 59.995	LDSLV4		89947
FOR SEAL SH SIZE 1054.00MM			
1050 x x 20	VR1	R	**410500**
SHAFT RANGE 1015.00MM -1065.00MM			
1050 x x 50	VR4	R	**410503**
SHAFT RANGE 1035.00MM -1055.00MM			
1055 x 1100 x 25	HDL	R	**HDL-3012-R**
1055 x 1100 x 25	HS5	R	**4153425**
1055 x 1100 x 25	HS8	D	**4153448**
1055 x 1100 x 25	HS5	D	**595215**
1055 x 1100 x 25	HDS2	D	**4154428**
1060 x x 50	VR4	R	**410603**
SHAFT RANGE 1045.00MM -1065.00MM			
1070 x 1120 x 20	HS6	R	4212496
1100 x x 20	VR1	R	**411000**
SHAFT RANGE 1065.00MM -1115.00MM			
1100 x x 20	VR1	V	**411004**
SHAFT RANGE 1065.00MM - 1115.00MM			
1100 x x 50	VR4	R	**411003**
SHAFT RANGE 1085.00MM -1105.00MM			
1100.226 x x 63	LDSLV4		89946
FOR SEAL SH SIZE 1105.00MM			
1105 x 1151 x 17.5	HS8	R	**4350508**
1105 x 1160 x 22	HDL	R	**HDL-4640-R**
1105 x 1160 x 25	HDS1	R	4350700
1120 x 1184 x 25	HDS2	R	**4409592**
W/6 EA 12.70MM ADJ. LUGS			
1140 x 1180 x 20	HDS1	V	4488287
1150 x x 20	VR1	R	**411500**
SHAFT RANGE 1115.00MM -1165.00MM			
1160 x x 50	VR4	R	**411603**
SHAFT RANGE 1145.00MM - 1165.00MM			
1180 x 1230 x 20	HS6	R	4645556
1200 x x 20	VR1	R	**412000**
SHAFT RANGE 1165.00MM -1215.00MM			
1200 x x 50	VR4	R	**412003**
SHAFT RANGE 1185.00MM -1205.00MM			
1200 x 1264 x 22.2	† HDS2	D	**4724762**
W/4 EA 3.20MM LUGS			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

Complete size listing — Metric

Metric size shaft x bore x width	Type and style	Lip code	Stock no.
1220 x 1255 x 20	HDS2	R	**4803182**
1248 x 1298 x 20.7	HS8	R	**4913508**
1250 x x 20	VR1	R	**412500**
SHAFT RANGE 1215.00MM -1270.00MM			
1250 x x 50	VR4	R	**412503**
SHAFT RANGE 1235.00MM -1255.00MM			
1250 x 1314 x 21.54	HDS7	R	4921790
W/12 EA 6.35MM LUGS			
1250 x 1314 x 25	HDS2	R	**4921793**
1260 x 1300 x 18	HDS1	R	593764
1270 x 20.62 x 25.4	CT3	R	593525
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
1270 x 23.83 x 34.92	CT1	R	529129
BORE DIA. IS SHOULDER WIDTH			
1300 x x 20	VR1	R	**413000**
SHAFT RANGE 1270.00MM -1320.00MM			
1300 x x 50	VR4	R	**413003**
SHAFT RANGE 1295.00MM -1315.00MM			
1350 x x 20	VR1	R	**413500**
SHAFT RANGE 1320.00MM -1370.00MM			
1350 x x 50	VR4	R	**413503**
SHAFT RANGE 1340.00MM -1365.00MM			
1350 x 1415 x 25	HDL	R	**HDL-3028-R**
1370 x 1420 x 19.83	HS8	H	**5393458**
1370 x 1420 x 20	HDS1	R	5393510
1370 x 1420 x 19.05	HDS2	H	**5393512**
1380 x 1420 x 18	HS8	R	**5433258**
1380 x 1440 x 25	HDL	R	**HDL-8594-R**
1400 x x 20	VR1	R	**414000**
SHAFT RANGE 1370.00MM -1420.00MM			
1400 x x 50	VR4	R	**414003**
SHAFT RANGE 1390.00MM -1415.00MM			
1450 x x 20	VR1	R	**414500**
SHAFT RANGE 1420.00MM -1470.00MM			
1450 x x 50	VR4	R	**414503**
SHAFT RANGE 1440.00MM -1465.00MM			
1500 x x 20	VR1	R	**415000**
SHAFT RANGE 1470.00MM -1520.00MM			
1500 x x 50	VR4	R	**415003**
SHAFT RANGE 1490.00MM -1515.00MM			
1530 x 1580 x 20	HDS1	R	6023510
1550 x x 20	VR1	R	**415500**
SHAFT RANGE 1520.00MM -1570.00MM			
1550 x x 50	VR4	R	**415503**
SHAFT RANGE 1540.00MM -1570.00MM			
1550 x 1610 x 25	HDL	R	**HDL-8622-R**
1550 x 1610 x 25	HDS2	V	**6102702**
1600 x x 20	VR1	R	**416000**
SHAFT RANGE 1570.00MM -1620.00MM			
1600 x x 50	VR4	R	**416003**
SHAFT RANGE 1600.00MM -1640.00MM			
1612 x 20.65 x 25.4	CT3	R	595373
BORE DIA. IS SHOULDER WIDTH			
1636 x 1700 x 22	HDL	R	**HDL-4979-R**
1650 x x 20	VR1	R	**416500**
SHAFT RANGE 1620.00MM -1670.00MM			
1650 x x 50	VR4	R	**416503**
SHAFT RANGE 1640.00MM -1680.00MM			
1675 x 1725 x 20	HS8	R	**6594478**
1675 x 1725 x 20.62	HS8	D	**6594558**
1700 x x 20	VR1	R	**417000**
SHAFT RANGE 1670.00MM -1720.00MM			
1700 x x 50	VR4	R	**417003**
SHAFT RANGE 1680.00MM -1720.00MM			
1750 x x 20	VR1	R	**417500**
SHAFT RANGE 1720.00MM -1770.00MM			
1750 x x 50	VR4	R	**417503**
SHAFT RANGE 1720.00MM -1765.00MM			
1800 x x 20	VR1	R	**418000**
SHAFT RANGE 1770.00MM -1820.00MM			
1800 x x 50	VR4	R	**418003**
SHAFT RANGE 1765.00MM -1810.00MM			
1810 x 1860 x 20	HS8	R	**7125478**
1810 x 1860 x 20.62	HS8	D	**7153558**
1850 x x 20	VR1	R	**418500**
SHAFT RANGE 1820.00MM -1870.00MM			
1850 x x 50	VR4	R	**418503**
SHAFT RANGE 1810.00MM -1855.00MM			
1900 x x 20	VR1	R	**419000**
SHAFT RANGE 1870.00MM -1920.00MM			
1900 x x 50	VR4	R	**419003**
SHAFT RANGE 1855.00MM -1905.00MM			
1950 x x 20	VR1	R	**419500**
SHAFT RANGE 1920.00MM -1970.00MM			
1950 x x 50	VR4	R	**419503**
SHAFT RANGE 1905.00MM -1955.00MM			
2000 x x 20	VR1	R	**419990**
SHAFT RANGE 1970.00MM -2020.00MM			
2000 x x 50	VR4	R	**419993**
SHAFT RANGE 1955.00MM -2010.00MM			
2050 x x 50	VR4	R	**420503**
SHAFT RANGE 2010.00MM -2070.00MM			
2500 x 20.73 x 25.5	CT3	R	596289
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
2540 x 27 x 38.1	CT1	R	522856
BORE DIA. IS SHOULDER WIDTH			
2850 x 2900 x 20.625	HS8	D	**595210**
2900 x 2959 x 17.33	HS6	R	597336
3000 x 3050 x 20.625	HS8	D	**595211**
3810 x 20.65 x 31.75	CT3	R	596050
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			
3980 x 20.73 x 25.5	CT3	R	596290
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT			

Bold numbers are preferred designs
▲ WasteWatcher numbers

† Includes Bore-Tite on O.D.

LDS section – HDL inch size listing

Stock no.	Shaft	Inch bore	Width	Type and style	Lip	Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-1299-R	6.125	7.625	0.687	HDL	R	**HDL-7718-R ***	8.625	10.750	0.812	HDL	R
HDL-1299-H	6.125	7.625	0.687	HDL	H	**HDL-7718-H ***	8.625	10.750	0.812	HDL	H
HDL-1299-V	6.125	7.625	0.687	HDL	V	**HDL-7718-V ***	8.625	10.750	0.812	HDL	V
HDL-3011-R	7.125	8.250	0.750	HDL	R	**HDL-3946-R**	8.750	10.250	0.687	HDL	R
HDL-3011-H	7.125	8.250	0.750	HDL	H	**HDL-3946-H**	8.750	10.250	0.687	HDL	H
HDL-3011-V	7.125	8.250	0.750	HDL	V	**HDL-3946-V**	8.750	10.250	0.687	HDL	V
HDL-9176-R	7.875	9.375	0.687	HDL	R	**HDL-9911-R ***	8.750	10.500	0.687	HDL	R
HDL-9176-H	7.875	9.375	0.687	HDL	H	**HDL-9911-H ***	8.750	10.500	0.687	HDL	H
HDL-9176-V	7.875	9.375	0.687	HDL	V	**HDL-9911-V ***	8.750	10.500	0.687	HDL	V
HDL-3921-R	8.000	9.500	0.687	HDL	R	**HDL-3952-R ***	8.750	10.750	0.812	HDL	R
HDL-3921-H	8.000	9.500	0.687	HDL	H	**HDL-3952-H ***	8.750	10.750	0.812	HDL	H
HDL-3921-V	8.000	9.500	0.687	HDL	V	**HDL-3952-V ***	8.750	10.750	0.812	HDL	V
HDL-9712-R *	8.125	10.125	0.687	HDL	R	**HDL-3953-R ***	8.875	10.875	0.812	HDL	R
HDL-9712-H *	8.125	10.125	0.687	HDL	H	**HDL-3953-H ***	8.875	10.875	0.812	HDL	H
HDL-9712-V *	8.125	10.125	0.687	HDL	V	**HDL-3953-V ***	8.875	10.875	0.812	HDL	V
HDL-4499-R	8.250	10.250	0.812	HDL	R	**HDLA-3031-R**	9.000	10.000	0.750	HDLA	R
HDL-4499-H	8.250	10.250	0.812	HDL	H	**HDLA-3031-R**	9.000	10.000	0.750	HDLA	R
HDL-4499-V	8.250	10.250	0.812	HDL	V	**HDLA-3031-V**	9.000	10.000	0.750	HDLA	V
HDL-3933-R	8.375	9.875	0.687	HDL	R	**HDL-3954-R**	9.000	10.500	0.687	HDL	R
HDL-3933-H	8.375	9.875	0.687	HDL	H	**HDL-3954-H**	9.000	10.500	0.687	HDL	H
HDL-3933-V	8.375	9.875	0.687	HDL	V	**HDL-3954-V**	9.000	10.500	0.687	HDL	V
HDL-4500-R *	8.375	10.375	0.812	HDL	R	**HDL-3955-R ***	9.000	11.000	0.812	HDL	R
HDL-4500-H *	8.375	10.375	0.812	HDL	H	**HDL-3955-H ***	9.000	11.000	0.812	HDL	H
HDL-4500-V *	8.375	10.375	0.812	HDL	V	**HDL-3955-V ***	9.000	11.000	0.812	HDL	V
HDL-1705-R	8.500	9.750	0.562	HDL	R	**HDL-3957-R**	9.125	10.625	0.687	HDL	R
HDL-1705-H	8.500	9.750	0.562	HDL	H	**HDL-3957-H**	9.125	10.625	0.687	HDL	H
HDL-1705-V *	8.500	9.750	0.562	HDL	V	**HDL-3957-V**	9.125	10.625	0.687	HDL	V
HDL-6384-R	8.500	9.750	0.652	HDL	R	**HDL-3962-R ***	9.125	11.125	0.812	HDL	R
HDL-6384-H	8.500	9.750	0.652	HDL	H	**HDL-3962-H ***	9.125	11.125	0.812	HDL	H
HDL-6384-V	8.500	9.750	0.652	HDL	V	**HDL-3962-V ***	9.125	11.125	0.812	HDL	V
HDLA3066-R	8.500	9.750	0.750	HDLA	R	**HDL-8765-R ***	9.134	10.625	0.687	HDL	R
HDLA3066-H	8.500	9.750	0.750	HDLA	H	**HDL-8765-H ***	9.134	10.625	0.687	HDL	H
HDLA3066-V	8.500	9.750	0.750	HDLA	V	**HDL-8765-V ***	9.134	10.625	0.687	HDL	V
HDL-8453-R	8.500	10.000	0.687	HDL	R	**HDL-3963-R**	9.250	10.750	0.687	HDL	R
HDL-8453-H	8.500	10.000	0.687	HDL	H	**HDL-3963-H**	9.250	10.750	0.687	HDL	H
HDL-8453-V	8.500	10.000	0.687	HDL	V	**HDL-3963-V**	9.250	10.750	0.687	HDL	V
HDL-3938-R *	8.500	10.500	0.812	HDL	R	**HDL-9706-R ***	9.250	11.250	0.687	HDL	R
HDL-3938-H *	8.500	10.500	0.812	HDL	H	**HDL-9706-H ***	9.250	11.250	0.687	HDL	H
HDL-3938-V *	8.500	10.500	0.812	HDL	V	**HDL-9706-V ***	9.250	11.250	0.687	HDL	V
HDL-3939-R	8.625	10.125	0.687	HDL	R	**HDL-4610-R**	9.375	11.375	0.812	HDL	R
HDL-3939-H	8.625	10.125	0.687	HDL	H	**HDL-4610-H**	9.375	11.375	0.812	HDL	H
HDL-3939-V	8.625	10.125	0.687	HDL	V	**HDL-4610-V**	9.375	11.375	0.812	HDL	V
HDL-2736-R *	8.625	10.260	0.687	HDL	R	**HDL-3145-R ***	9.500	10.750	0.562	HDL	R
HDL-2736-H *	8.625	10.260	0.687	HDL	H	**HDL-3145-H ***	9.500	10.750	0.562	HDL	H
HDL-2736-V *	8.625	10.260	0.687	HDL	V	**HDL-3145-V ***	9.500	10.750	0.562	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-3981-R	9.500	11.250	0.750	HDL	R
HDL-3981-H	9.500	11.250	0.750	HDL	H
HDL-3981-V	9.500	11.250	0.750	HDL	V
HDLA-3981-R	9.500	11.250	0.750	HDLA	R
HDLA-3981-H	9.500	11.250	0.750	HDLA	H
HDLA-3981-V	9.500	11.250	0.750	HDLA	V
HDL-3984-R	9.500	11.500	0.812	HDL	R
HDL-3984-H	9.500	11.500	0.812	HDL	H
HDL-3984-V	9.500	11.500	0.812	HDL	V
HDL-1692-R *	9.750	11.125	0.562	HDL	R
HDL-1692-H *	9.750	11.125	0.562	HDL	H
HDL-1692-V *	9.750	11.125	0.562	HDL	V
HDL-3985-R	9.750	11.250	0.687	HDL	R
HDL-3985-H	9.750	11.250	0.687	HDL	H
HDL-3985-V	9.750	11.250	0.687	HDL	V
HDL-9425-R *	9.750	11.750	0.687	HDL	R
HDL-9425-H *	9.750	11.750	0.687	HDL	H
HDL-9425-V *	9.750	11.750	0.687	HDL	V
HDL-3051-R	10.000	11.500	0.625	HDL	R
HDL-3051-H	10.000	11.500	0.625	HDL	H
HDL-3051-V	10.000	11.500	0.625	HDL	V
HDL-3992-R	10.000	11.500	0.687	HDL	R
HDL-3992-H	10.000	11.500	0.687	HDL	H
HDL-3992-V	10.000	11.500	0.687	HDL	V
HDL-3994-R *	10.000	11.750	0.750	HDL	R
HDL-3994-H *	10.000	11.750	0.750	HDL	H
HDL-3994-V *	10.000	11.750	0.750	HDL	V
HDL-3997-R	10.000	12.000	0.812	HDL	R
HDL-3997-H	10.000	12.000	0.812	HDL	H
HDL-3997-V	10.000	12.000	0.812	HDL	V
HDL-3998-R *	10.000	12.000	0.875	HDL	R
HDL-3998-H *	10.000	12.000	0.875	HDL	H
HDL-3998-V *	10.000	12.000	0.875	HDL	V
HDL-3669-R	10.000	12.250	0.812	HDL	R
HDL-3669-H	10.000	12.250	0.812	HDL	H
HDL-3669-V	10.000	12.250	0.812	HDL	V
HDL-3999-R	10.125	11.625	0.687	HDL	R
HDL-3999-H	10.125	11.625	0.687	HDL	H
HDL-3999-V	10.125	11.625	0.687	HDL	V
HDL-5989-R	10.125	11.750	0.687	HDL	R
HDL-5989-H	10.125	11.750	0.687	HDL	H
HDL-5989-V	10.125	11.750	0.687	HDL	V
HDL-4004-R	10.250	11.750	0.687	HDL	R
HDL-4004-H	10.250	11.750	0.687	HDL	H
HDL-4004-V	10.250	11.750	0.687	HDL	V
HDL-4009-R	10.250	12.250	0.812	HDL	R
HDL-4009-H	10.250	12.250	0.812	HDL	H
HDL-4009-V	10.250	12.250	0.812	HDL	V
HDL-4015-R *	10.250	12.500	0.812	HDL	R
HDL-4015-H *	10.250	12.500	0.812	HDL	H
HDL-4015-V *	10.250	12.500	0.812	HDL	V
HDL-4011-R	10.500	12.000	0.687	HDL	R
HDL-4011-H	10.500	12.000	0.687	HDL	H
HDL-4011-V	10.500	12.000	0.687	HDL	V
HDL-3041-R	10.500	12.500	0.750	HDL	R
HDL-3041-H	10.500	12.500	0.750	HDL	H
HDL-3041-V	10.500	12.500	0.750	HDL	V
HDL-4017-R	10.500	12.500	0.812	HDL	R
HDL-4017-H	10.500	12.500	0.812	HDL	H
HDL-4017-V	10.500	12.500	0.812	HDL	V
HDL-4023-R	10.750	12.250	0.687	HDL	R
HDL-4023-H	10.750	12.250	0.687	HDL	H
HDL-4023-V	10.750	12.250	0.687	HDL	V
HDL-4033-R	10.750	12.500	0.875	HDL	R
HDL-4033-H	10.750	12.500	0.875	HDL	H
HDL-4033-V	10.750	12.500	0.875	HDL	V
HDL-3014-R	10.750	12.750	0.625	HDL	R
HDL-3014-H	10.750	12.750	0.625	HDL	H
HDL-3014-V	10.750	12.750	0.625	HDL	V
HDL-4031-R *	10.750	12.750	0.812	HDL	R
HDL-4031-H *	10.750	12.750	0.812	HDL	H
HDL-4031-V *	10.750	12.750	0.812	HDL	V
HDL-4022-R *	10.750	13.000	0.812	HDL	R
HDL-4022-H *	10.750	13.000	0.812	HDL	H
HDL-4022-V *	10.750	13.000	0.812	HDL	V
HDL-4026-R *	10.750	13.250	0.812	HDL	R
HDL-4026-H *	10.750	13.250	0.812	HDL	H
HDL-4026-V *	10.750	13.250	0.812	HDL	V
HDL-4027-R *	10.875	12.375	0.687	HDL	R
HDL-4027-H *	10.875	12.375	0.687	HDL	H
HDL-4027-V *	10.875	12.375	0.687	HDL	V
HDL-4028-R	10.875	12.500	0.687	HDL	R
HDL-4028-H	10.875	12.500	0.687	HDL	H
HDL-4028-V	10.875	12.500	0.687	HDL	V
HDL-3135-R *	11.000	12.250	0.562	HDL	R
HDL-3135-H *	11.000	12.250	0.562	HDL	H
HDL-3135-V *	11.000	12.250	0.562	HDL	V
HDL-4611-R	11.000	12.500	0.687	HDL	R
HDL-4611-H	11.000	12.500	0.687	HDL	H
HDL-4611-V	11.000	12.500	0.687	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-6034-R *	11.000	13.000	0.687	HDL	R
HDL-6034-H *	11.000	13.000	0.687	HDL	H
HDL-6034-V *	11.000	13.000	0.687	HDL	V
HDL-4036-R	11.000	13.000	0.812	HDL	R
HDL-4036-H	11.000	13.000	0.812	HDL	H
HDL-4036-V	11.000	13.000	0.812	HDL	V
HDL-3060-R	11.000	13.500	0.687	HDL	R
HDL-3060-H	11.000	13.500	0.687	HDL	H
HDL-3060-V	11.000	13.500	0.687	HDL	V
HDL-3699-R *	11.125	13.000	0.687	HDL	R
HDL-3699-H *	11.125	13.000	0.687	HDL	H
HDL-3699-V *	11.125	13.000	0.687	HDL	V
HDL-3700-R *	11.125	13.250	0.812	HDL	R
HDL-3700-H *	11.125	13.250	0.812	HDL	H
HDL-3700-V *	11.125	13.250	0.812	HDL	V
HDL-4527-R	11.250	12.750	0.687	HDL	R
HDL-4527-H	11.250	12.750	0.687	HDL	H
HDL-4527-V	11.250	12.750	0.687	HDL	V
HDL-8778-R *	11.250	13.250	0.687	HDL	R
HDL-8778-H *	11.250	13.250	0.687	HDL	H
HDL-8778-V *	11.250	13.250	0.687	HDL	V
HDL-4047-R *	11.250	13.250	0.812	HDL	R
HDL-4047-H *	11.250	13.250	0.812	HDL	H
HDL-4047-V *	11.250	13.250	0.812	HDL	V
HDL-4052-R	11.375	13.375	0.812	HDL	R
HDL-4052-H	11.375	13.375	0.812	HDL	H
HDL-4052-V	11.375	13.375	0.812	HDL	V
HDL-4057-R	11.500	13.000	0.687	HDL	R
HDL-4057-H	11.500	13.000	0.687	HDL	H
HDL-4057-V	11.500	13.000	0.687	HDL	V
HDL-4063-R	11.500	13.500	0.812	HDL	R
HDL-4063-H	11.500	13.500	0.812	HDL	H
HDL-4063-V	11.500	13.500	0.812	HDL	V
HDL-4064-R	11.750	13.250	0.687	HDL	R
HDL-4064-H	11.750	13.250	0.687	HDL	H
HDL-4064-V	11.750	13.250	0.687	HDL	V
HDL-4612-R	12.000	13.500	0.687	HDL	R
HDL-4612-H	12.000	13.500	0.687	HDL	H
HDL-4612-V	12.000	13.500	0.687	HDL	V
HDL-8523-R *	12.000	13.625	0.687	HDL	R
HDL-8523-H *	12.000	13.625	0.687	HDL	H
HDL-8523-V *	12.000	13.625	0.687	HDL	V
HDL-3701-R *	12.000	13.750	0.687	HDL	R
HDL-3701-H *	12.000	13.750	0.687	HDL	H
HDL-3701-V *	12.000	13.750	0.687	HDL	V
HDL-5838-R *	12.000	14.000	0.687	HDL	R
HDL-5838-H *	12.000	14.000	0.687	HDL	H
HDL-5838-V *	12.000	14.000	0.687	HDL	V
HDL-4071-R	12.000	14.000	0.750	HDL	R
HDL-4071-H	12.000	14.000	0.750	HDL	H
HDL-4071-V	12.000	14.000	0.750	HDL	V
HDL-4072-R	12.000	14.000	0.812	HDL	R
HDL-4072-H	12.000	14.000	0.812	HDL	H
HDL-4072-V	12.000	14.000	0.812	HDL	V
HDL-3702-R *	12.000	14.750	0.812	HDL	R
HDL-3702-H *	12.000	14.750	0.812	HDL	H
HDL-3702-V *	12.000	14.750	0.812	HDL	V
HDL-4053-R *	12.125	13.875	0.687	HDL	R
HDL-4053-H *	12.125	13.875	0.687	HDL	H
HDL-4053-V *	12.125	13.875	0.687	HDL	V
HDL-4613-R	12.250	13.750	0.687	HDL	R
HDL-4613-H	12.250	13.750	0.687	HDL	H
HDL-4613-V	12.250	13.750	0.687	HDL	V
HDL-4614-R	12.250	13.750	0.875	HDL	R
HDL-4614-H	12.250	13.750	0.875	HDL	H
HDL-4614-V	12.250	13.750	0.875	HDL	V
HDL-4055-R *	12.250	14.000	0.687	HDL	R
HDL-4055-H *	12.250	14.000	0.687	HDL	H
HDL-4055-V *	12.250	14.000	0.687	HDL	V
HDL-4075-R	12.250	14.250	0.812	HDL	R
HDL-4075-H	12.250	14.250	0.812	HDL	H
HDL-4075-V	12.250	14.250	0.812	HDL	V
HDL-4076-R	12.375	13.875	0.687	HDL	R
HDL-4076-H	12.375	13.875	0.687	HDL	H
HDL-4076-V	12.375	13.875	0.687	HDL	V
HDL-4056-R	12.375	14.000	0.687	HDL	R
HDL-4056-H	12.375	14.000	0.687	HDL	H
HDL-4056-V	12.375	14.000	0.687	HDL	V
HDL-4097-R *	12.375	14.375	0.687	HDL	R
HDL-4097-H *	12.375	14.375	0.687	HDL	H
HDL-4097-V *	12.375	14.375	0.687	HDL	V
HDL-4106-R *	12.375	14.500	0.812	HDL	R
HDL-4106-H *	12.375	14.500	0.812	HDL	H
HDL-4106-V *	12.375	14.500	0.812	HDL	V
HDL-4079-R	12.500	14.000	0.687	HDL	R
HDL-4079-H	12.500	14.000	0.687	HDL	H
HDL-4079-V	12.500	14.000	0.687	HDL	V
HDL-4082-R *	12.500	14.500	0.750	HDL	R
HDL-4082-H *	12.500	14.500	0.750	HDL	H
HDL-4082-V *	12.500	14.500	0.750	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4083-R	12.500	14.500	0.812	HDL	R
HDL-4083-H	12.500	14.500	0.812	HDL	H
HDL-4083-V	12.500	14.500	0.812	HDL	V
HDL-4084-R *	12.500	15.000	0.812	HDL	R
HDL-4084-H *	12.500	15.000	0.812	HDL	H
HDL-4084-V *	12.500	15.000	0.812	HDL	V
HDL-4081-R *	12.625	14.125	0.687	HDL	R
HDL-4081-H *	12.625	14.125	0.687	HDL	H
HDL-4081-V *	12.625	14.125	0.687	HDL	V
HDL-3716-R *	12.625	14.500	0.687	HDL	R
HDL-3716-H *	12.625	14.500	0.687	HDL	H
HDL-3716-V *	12.625	14.500	0.687	HDL	V
HDL-9766-R *	12.687	14.750	0.812	HDL	R
HDL-9766-H *	12.687	14.750	0.812	HDL	H
HDL-9766-V *	12.687	14.750	0.812	HDL	V
HDL-4089-R	12.750	14.250	0.687	HDL	R
HDL-4089-H	12.750	14.250	0.687	HDL	H
HDL-4089-V	12.750	14.250	0.687	HDL	V
HDL-7652-R *	12.750	14.750	0.687	HDL	R
HDL-7652-H *	12.750	14.750	0.687	HDL	H
HDL-7652-V *	12.750	14.750	0.687	HDL	V
HDL-4092-R *	12.750	15.000	0.812	HDL	R
HDL-4092-H *	12.750	15.000	0.812	HDL	H
HDL-4092-V *	12.750	15.000	0.812	HDL	V
HDL-5404-R *	12.875	15.000	0.812	HDL	R
HDL-5404-H *	12.875	15.000	0.812	HDL	H
HDL-5404-V *	12.875	15.000	0.812	HDL	V
HDL-4093-R	13.000	14.500	0.687	HDL	R
HDL-4093-H	13.000	14.500	0.687	HDL	H
HDL-4093-V	13.000	14.500	0.687	HDL	V
HDL-4096-R *	13.000	14.875	0.687	HDL	R
HDL-4096-H *	13.000	14.875	0.687	HDL	H
HDL-4096-V *	13.000	14.875	0.687	HDL	V
HDL-4099-R	13.000	15.000	0.812	HDL	R
HDL-4099-H	13.000	15.000	0.812	HDL	H
HDL-4099-V	13.000	15.000	0.812	HDL	V
HDL-4101-R	13.250	14.750	0.687	HDL	R
HDL-4101-H	13.250	14.750	0.687	HDL	H
HDL-4101-V	13.250	14.750	0.687	HDL	V
HDL-7734-R	13.250	14.875	0.687	HDL	R
HDL-7734-H	13.250	14.875	0.687	HDL	H
HDL-7734-V	13.250	14.875	0.687	HDL	V
HDL-7169-R *	13.250	15.000	0.687	HDL	R
HDL-7169-H *	13.250	15.000	0.687	HDL	H
HDL-7169-V *	13.250	15.000	0.687	HDL	V
HDL-4105-R *	13.250	15.125	0.687	HDL	R
HDL-4105-H *	13.250	15.125	0.687	HDL	H
HDL-4105-V *	13.250	15.125	0.687	HDL	V
HDL-6294-R *	13.250	15.250	0.687	HDL	R
HDL-6294-H *	13.250	15.250	0.687	HDL	H
HDL-6294-V *	13.250	15.250	0.687	HDL	V
HDL-4779-R *	13.250	15.250	0.812	HDL	R
HDL-4779-H *	13.250	15.250	0.812	HDL	H
HDL-4779-V *	13.250	15.250	0.812	HDL	V
HDL-4121-R	13.500	15.000	0.687	HDL	R
HDL-4121-H	13.500	15.000	0.687	HDL	H
HDL-4121-V	13.500	15.000	0.687	HDL	V
HDL-3052-R	13.500	15.250	0.750	HDL	R
HDL-3052-H	13.500	15.250	0.750	HDL	H
HDL-3052-V	13.500	15.250	0.750	HDL	V
HDL-4128-R	13.500	15.500	0.812	HDL	R
HDL-4128-H	13.500	15.500	0.812	HDL	H
HDL-4128-V	13.500	15.500	0.812	HDL	V
HDL-4123-R *	13.500	15.750	0.812	HDL	R
HDL-4123-H *	13.500	15.750	0.812	HDL	H
HDL-4123-V *	13.500	15.750	0.812	HDL	V
HDL-4120-R *	13.625	15.500	0.687	HDL	R
HDL-4120-H *	13.625	15.500	0.687	HDL	H
HDL-4120-V *	13.625	15.500	0.687	HDL	V
HDL-4529-R *	13.750	15.250	0.687	HDL	R
HDL-4529-H *	13.750	15.250	0.687	HDL	H
HDL-4529-V *	13.750	15.250	0.687	HDL	V
HDL-4531-R *	13.750	15.500	0.750	HDL	R
HDL-4531-H *	13.750	15.500	0.750	HDL	H
HDL-4531-V *	13.750	15.500	0.750	HDL	V
HDL-4129-R	13.750	15.750	0.812	HDL	R
HDL-4129-H	13.750	15.750	0.812	HDL	H
HDL-4129-V	13.750	15.750	0.812	HDL	V
HDL-4119-R *	13.750	16.000	0.812	HDL	R
HDL-4119-H *	13.750	16.000	0.812	HDL	H
HDL-4119-V *	13.750	16.000	0.812	HDL	V
HDL-4108-R *	13.813	16.000	0.812	HDL	R
HDL-4108-H *	13.813	16.000	0.812	HDL	H
HDL-4108-V *	13.813	16.000	0.812	HDL	V
HDL-4110-R *	13.875	16.000	0.812	HDL	R
HDL-4110-H *	13.875	16.000	0.812	HDL	H
HDL-4110-V *	13.875	16.000	0.812	HDL	V
HDL-4130-R *	13.937	15.437	0.687	HDL	R
HDL-4130-H *	13.937	15.437	0.687	HDL	H
HDL-4130-V *	13.937	15.437	0.687	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4111-R *	13.938	15.500	0.687	HDL	R
HDL-4111-H *	13.938	15.500	0.687	HDL	H
HDL-4111-V *	13.938	15.500	0.687	HDL	V
HDL-4112-R *	13.938	16.000	0.687	HDL	R
HDL-4112-H *	13.938	16.000	0.687	HDL	H
HDL-4112-V *	13.938	16.000	0.687	HDL	V
HDL-4131-R	14.000	15.500	0.687	HDL	R
HDL-4131-H	14.000	15.500	0.687	HDL	H
HDL-4131-V	14.000	15.500	0.687	HDL	V
HDL-5991-R	14.000	15.750	0.687	HDL	R
HDL-5991-H	14.000	15.750	0.687	HDL	H
HDL-5991-V	14.000	15.750	0.687	HDL	V
HDL-4134-R	14.000	15.750	0.750	HDL	R
HDL-4134-H	14.000	15.750	0.750	HDL	H
HDL-4134-V	14.000	15.750	0.750	HDL	V
HDL-4135-R	14.000	16.000	0.812	HDL	R
HDL-4135-H	14.000	16.000	0.812	HDL	H
HDL-4135-V	14.000	16.000	0.812	HDL	V
HDLA-4135-R	14.000	16.000	0.812	HDLA	R
HDLA-4135-H	14.000	16.000	0.812	HDLA	H
HDLA-4135-V	14.000	16.000	0.812	HDLA	V
HDL-5382-R *	14.000	16.250	0.812	HDL	R
HDL-5382-H *	14.000	16.250	0.812	HDL	H
HDL-5382-V *	14.000	16.250	0.812	HDL	V
HDL-7535-R *	14.000	16.500	0.812	HDL	R
HDL-7535-H *	14.000	16.500	0.812	HDL	H
HDL-7535-V *	14.000	16.500	0.812	HDL	V
HDL-9280-R *	14.187	16.732	0.812	HDL	R
HDL-9280-H *	14.187	16.732	0.812	HDL	H
HDL-9280-V *	14.187	16.732	0.812	HDL	V
HDL-4118-R	14.250	15.750	0.687	HDL	R
HDL-4118-H	14.250	15.750	0.687	HDL	H
HDL-4118-V	14.250	15.750	0.687	HDL	V
HDL-4139-R *	14.250	16.000	0.687	HDL	R
HDL-4139-H *	14.250	16.000	0.687	HDL	H
HDL-4139-V *	14.250	16.000	0.687	HDL	V
HDL-4140-R	14.250	16.250	0.812	HDL	R
HDL-4140-H	14.250	16.250	0.812	HDL	H
HDL-4140-V	14.250	16.250	0.812	HDL	V
HDL-3855-R *	14.250	16.500	0.812	HDL	3
HDL-3855-H *	14.250	16.500	0.812	HDL	H
HDL-3855-V *	14.250	16.500	0.812	HDL	V
HDL-5481-R *	14.375	16.000	0.687	HDL	R
HDL-5481-H *	14.375	16.000	0.687	HDL	H
HDL-5481-V *	14.375	16.000	0.687	HDL	V
HDL-4142-V	14.500	16.000	0.687	HDL	V
HDL-4142-R	14.500	16.000	0.687	HDL	R
HDL-4142-H	14.500	16.000	0.687	HDL	H
HDL-4145-V	14.500	16.500	0.812	HDL	V
HDL-4145-R	14.500	16.500	0.812	HDL	R
HDL-4145-H	14.500	16.500	0.812	HDL	H
HDL-3856-R	14.625	16.250	0.687	HDL	R
HDL-3856-H	14.625	16.250	0.687	HDL	H
HDL-3856-V	14.625	16.250	0.687	HDL	V
HDL-3857-R *	14.625	16.750	0.812	HDL	R
HDL-3857-H *	14.625	16.750	0.812	HDL	H
HDL-3857-V *	14.625	16.750	0.812	HDL	V
HDL-4147-R	14.750	16.250	0.687	HDL	R
HDL-4147-H	14.750	16.250	0.687	HDL	H
HDL-4147-V	14.750	16.250	0.687	HDL	V
HDL-5990-R	14.750	16.500	0.687	HDL	R
HDL-5990-H	14.750	16.500	0.687	HDL	H
HDL-5990-V	14.750	16.500	0.687	HDL	V
HDL-3858-R	14.875	16.500	0.687	HDL	R
HDL-3858-H	14.875	16.500	0.687	HDL	H
HDL-3858-V	14.875	16.500	0.687	HDL	V
HDL-3859-R *	14.875	16.750	0.687	HDL	R
HDL-3859-H *	14.875	16.750	0.687	HDL	H
HDL-3859-V *	14.875	16.750	0.687	HDL	V
HDL-2622-R *	14.875	16.875	0.937	HDL	R
HDL-2622-H *	14.875	16.875	0.937	HDL	H
HDL-2622-V *	14.875	16.875	0.937	HDL	V
HDL-4150-R *	14.875	16.875	1.000	HDL	R
HDL-4150-H *	14.875	16.875	1.000	HDL	H
HDL-4150-V *	14.875	16.875	1.000	HDL	V
HDL-3860-R *	14.875	17.000	0.812	HDL	R
HDL-3860-H *	14.875	17.000	0.812	HDL	H
HDL-3860-V *	14.875	17.000	0.812	HDL	V
HDL-3861-R *	14.906	17.000	0.812	HDL	R
HDL-3861-H *	14.906	17.000	0.812	HDL	H
HDL-3861-V *	14.906	17.000	0.812	HDL	V
HDL-4151-R	15.000	16.500	0.687	HDL	R
HDL-4151-H	15.000	16.500	0.687	HDL	H
HDL-4151-V	15.000	16.500	0.687	HDL	V
HDL-3067-R	15.000	16.500	0.750	HDL	R
HDL-3067-H	15.000	16.500	0.750	HDL	H
HDL-3067-V	15.000	16.500	0.750	HDL	V
HDL-4156-R	15.000	17.000	0.812	HDL	R
HDL-4156-H	15.000	17.000	0.812	HDL	H
HDL-4156-V	15.000	17.000	0.812	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-3862-V *	15.000	17.250	0.812	HDL	V
HDL-8508-H *	15.000	17.250	0.812	HDL	H
HDL-8508-V *	15.000	17.250	0.812	HDL	V
HDL-3862-R *	15.000	17.250	0.812	HDL	R
HDL-3862-H *	15.000	17.250	0.812	HDL	H
HDL-8508-R *	15.000	17.250	0.812	HDL	R
HDL-9637-R *	15.000	17.500	0.812	HDL	R
HDL-9637-H *	15.000	17.500	0.812	HDL	H
HDL-9637-V *	15.000	17.500	0.812	HDL	V
HDL-3862-R *	15.000	17.750	0.812	HDL	R
HDL-3862-H *	15.000	17.750	0.812	HDL	H
HDL-3862-V *	15.000	17.750	0.812	HDL	V
HDL-4165-R *	15.125	16.750	0.687	HDL	R
HDL-4165-H *	15.125	16.750	0.687	HDL	H
HDL-4165-V *	15.125	16.750	0.687	HDL	V
HDL-4615-R	15.250	16.750	0.687	HDL	R
HDL-4615-H	15.250	16.750	0.687	HDL	H
HDL-4615-V	15.250	16.750	0.687	HDL	V
HDL-4476-R	15.250	17.250	0.812	HDL	R
HDL-4476-H	15.250	17.250	0.812	HDL	H
HDL-4476-V	15.250	17.250	0.812	HDL	V
HDL-3030-R	15.250	17.250	0.875	HDL	R
HDL-3030-H	15.250	17.250	0.875	HDL	H
HDL-3030-V	15.250	17.250	0.875	HDL	V
HDL-4158-R *	15.312	16.875	0.687	HDL	R
HDL-4158-H *	15.312	16.875	0.687	HDL	H
HDL-4158-V *	15.312	16.875	0.687	HDL	V
HDL-5992-R	15.312	17.312	0.687	HDL	R
HDL-5992-H	15.312	17.312	0.687	HDL	H
HDL-5992-V	15.312	17.312	0.687	HDL	V
HDL-4166-R *	15.359	17.717	0.687	HDL	R
HDL-4166-H *	15.359	17.717	0.687	HDL	H
HDL-4166-V *	15.359	17.717	0.687	HDL	V
HDL-4167-R *	15.375	17.250	0.687	HDL	R
HDL-4167-H *	15.375	17.250	0.687	HDL	H
HDL-4167-V *	15.375	17.250	0.687	HDL	V
HDL-4159-R *	15.375	17.375	0.812	HDL	R
HDL-4159-H *	15.375	17.375	0.812	HDL	H
HDL-4159-V *	15.375	17.375	0.812	HDL	V
HDL-4163-R	15.500	17.496	0.812	HDL	R
HDL-4163-H	15.500	17.496	0.812	HDL	H
HDL-4163-V	15.500	17.496	0.812	HDL	V
HDL-6771-R *	15.500	17.750	0.812	HDL	R
HDL-6771-H *	15.500	17.750	0.812	HDL	H
HDL-6771-V *	15.500	17.750	0.812	HDL	V
HDL-4168-R *	15.500	18.000	0.812	HDL	R
HDL-4168-H *	15.500	18.000	0.812	HDL	H
HDL-4168-V *	15.500	18.000	0.812	HDL	V
HDL-9986-R	15.750	17.165	0.687	HDL	R
HDL-9986-H	15.750	17.165	0.687	HDL	H
HDL-9986-V	15.750	17.165	0.687	HDL	V
HDL-4170-R	15.750	17.250	0.687	HDL	R
HDL-4170-H	15.750	17.250	0.687	HDL	H
HDL-4170-V	15.750	17.250	0.687	HDL	V
HDL-9271-R *	15.750	17.312	0.687	HDL	R
HDL-9271-H *	15.750	17.312	0.687	HDL	H
HDL-9271-V *	15.750	17.312	0.687	HDL	V
HDL-4171-R *	15.750	17.500	0.687	HDL	R
HDL-4171-H *	15.750	17.500	0.687	HDL	H
HDL-4171-V *	15.750	17.500	0.687	HDL	V
HDL-6874-R	15.750	17.750	0.687	HDL	R
HDL-6874-H	15.750	17.750	0.687	HDL	H
HDL-6874-V	15.750	17.750	0.687	HDL	V
HDL-4172-R *	15.750	18.000	0.812	HDL	R
HDL-4172-H *	15.750	18.000	0.812	HDL	H
HDL-4172-V *	15.750	18.000	0.812	HDL	V
HDL-4175-R *	15.750	18.500	1.000	HDL	R
HDL-4175-H *	15.750	18.500	1.000	HDL	H
HDL-4175-V *	15.750	18.500	1.000	HDL	V
HDL-4176-R *	15.875	17.875	0.812	HDL	R
HDL-4176-H *	15.875	17.875	0.812	HDL	H
HDL-4176-V *	15.875	17.875	0.812	HDL	V
HDL-4177-R	16.000	17.500	0.687	HDL	R
HDL-4177-H	16.000	17.500	0.687	HDL	H
HDL-4177-V	16.000	17.500	0.687	HDL	V
HDLA-4177-R	16.000	17.500	0.687	HDLA	R
HDLA-4177-H	16.000	17.500	0.687	HDLA	H
HDLA-4177-V	16.000	17.500	0.687	HDLA	V
HDL-4173-R *	16.000	17.625	0.687	HDL	R
HDL-4173-H *	16.000	17.625	0.687	HDL	H
HDL-4173-V *	16.000	17.625	0.687	HDL	V
HDL-4180-R	16.000	18.000	0.812	HDL	R
HDL-4180-H	16.000	18.000	0.812	HDL	H
HDL-4180-V	16.000	18.000	0.812	HDL	V
HDL-5077-R	16.000	18.000	0.875	HDL	R
HDL-5077-H	16.000	18.000	0.875	HDL	H
HDL-5077-V	16.000	18.000	0.875	HDL	V
HDL-5995-R	16.000	18.500	0.812	HDL	R
HDL-5995-H	16.000	18.500	0.812	HDL	H
HDL-5995-V	16.000	18.500	0.812	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4181-R	16.250	17.750	0.687	HDL	R
HDL-4181-H	16.250	17.750	0.687	HDL	H
HDL-4181-V	16.250	17.750	0.687	HDL	V
HDL-8217-R *	16.250	18.000	0.687	HDL	R
HDL-8217-H *	16.250	18.000	0.687	HDL	H
HDL-8217-V *	16.250	18.000	0.687	HDL	V
HDL-4184-R *	16.250	18.000	0.750	HDL	R
HDL-4184-H *	16.250	18.000	0.750	HDL	H
HDL-4184-V *	16.250	18.000	0.750	HDL	V
HDL-3057-R	16.250	18.000	1.000	HDL	R
HDL-3057-H	16.250	18.000	1.000	HDL	H
HDL-3057-V	16.250	18.000	1.000	HDL	V
HDL-9892-R *	16.250	18.250	0.687	HDL	R
HDL-9892-H *	16.250	18.250	0.687	HDL	H
HDL-9892-V *	16.250	18.250	0.687	HDL	V
HDL-4174-R *	16.250	18.500	0.812	HDL	R
HDL-4174-H *	16.250	18.500	0.812	HDL	H
HDL-4174-V *	16.250	18.500	0.812	HDL	V
HDL-4179-R	16.375	17.875	0.687	HDL	R
HDL-4179-H	16.375	17.875	0.687	HDL	H
HDL-4179-V	16.375	17.875	0.687	HDL	V
HDL-9863-R *	16.500	18.000	0.687	HDL	R
HDL-9863-H *	16.500	18.000	0.687	HDL	H
HDL-9863-V *	16.500	18.000	0.687	HDL	V
HDL-4187-R	16.500	18.500	0.687	HDL	R
HDL-4187-H	16.500	18.500	0.687	HDL	H
HDL-4187-V	16.500	18.500	0.687	HDL	V
HDL-4186-R	16.500	18.500	0.812	HDL	R
HDL-4186-H	16.500	18.500	0.812	HDL	H
HDL-4186-V	16.500	18.500	0.812	HDL	V
HDL-4183-R *	16.500	19.000	0.812	HDL	R
HDL-4183-H *	16.500	19.000	0.812	HDL	H
HDL-4183-V *	16.500	19.000	0.812	HDL	V
HDL-1929-R *	16.535	18.504	0.875	HDL	R
HDL-1929-H *	16.535	18.504	0.875	HDL	H
HDL-1929-V *	16.535	18.504	0.875	HDL	V
HDL-3744-R *	16.750	18.250	0.687	HDL	R
HDL-3744-H *	16.750	18.250	0.687	HDL	H
HDL-3744-V *	16.750	18.250	0.687	HDL	V
HDL-8862-R *	16.750	18.500	0.687	HDL	R
HDL-8862-H *	16.750	18.500	0.687	HDL	H
HDL-8862-V *	16.750	18.500	0.687	HDL	V
HDL-3748-R *	16.750	19.000	0.812	HDL	R
HDL-3748-H *	16.750	19.000	0.812	HDL	H
HDL-3748-V *	16.750	19.000	0.812	HDL	V
HDL-9695-R *	16.937	19.291	0.812	HDL	R
HDL-9695-H *	16.937	19.291	0.812	HDL	H
HDL-9695-V *	16.937	19.291	0.812	HDL	V
HDL-4188-R	17.000	18.500	0.687	HDL	R
HDL-4188-H	17.000	18.500	0.687	HDL	H
HDL-4188-V	17.000	18.500	0.687	HDL	V
HDL-4190-R	17.000	19.000	0.812	HDL	R
HDL-4190-H	17.000	19.000	0.812	HDL	H
HDL-4190-V	17.000	19.000	0.812	HDL	V
HDL-4191-R *	17.000	19.250	0.812	HDL	R
HDL-4191-H *	17.000	19.250	0.812	HDL	H
HDL-4191-V *	17.000	19.250	0.812	HDL	V
HDL-3750-R	17.000	19.500	0.812	HDL	R
HDL-3750-H	17.000	19.500	0.812	HDL	H
HDL-3750-V	17.000	19.500	0.812	HDL	V
HDL-3751-R	17.250	18.750	0.687	HDL	R
HDL-3751-H	17.250	18.750	0.687	HDL	H
HDL-3751-V	17.250	18.750	0.687	HDL	V
HDL-6967-R *	17.250	18.750	0.750	HDL	R
HDL-6967-H *	17.250	18.750	0.750	HDL	H
HDL-6967-V *	17.250	18.750	0.750	HDL	V
HDL-4194-R	17.500	19.000	0.687	HDL	R
HDL-4194-H	17.500	19.000	0.687	HDL	H
HDL-4194-V	17.500	19.000	0.687	HDL	V
HDL-5054-R	17.500	19.250	0.687	HDL	R
HDL-5054-H	17.500	19.250	0.687	HDL	H
HDL-5054-V	17.500	19.250	0.687	HDL	V
HDL-3005-R	17.500	19.250	1.000	HDL	R
HDL-3005-H	17.500	19.250	1.000	HDL	H
HDL-3005-V	17.500	19.250	1.000	HDL	V
HDL-4198-R	17.500	19.500	0.687	HDL	R
HDL-4198-H	17.500	19.500	0.687	HDL	H
HDL-4198-V	17.500	19.500	0.687	HDL	V
HDL-4197-R *	17.500	19.750	0.812	HDL	R
HDL-4197-H *	17.500	19.750	0.812	HDL	H
HDL-4197-V *	17.500	19.750	0.812	HDL	V
HDL-4199-R	17.625	19.250	0.687	HDL	R
HDL-4199-H	17.625	19.250	0.687	HDL	H
HDL-4199-V	17.625	19.250	0.687	HDL	V
HDL-6850-R *	17.625	19.625	0.687	HDL	R
HDL-6850-H *	17.625	19.625	0.687	HDL	H
HDL-6850-V *	17.625	19.625	0.687	HDL	V
HDL-4200-R *	17.750	19.750	0.812	HDL	R
HDL-4200-H *	17.750	19.750	0.812	HDL	H
HDL-4200-V *	17.750	19.750	0.812	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-9084-R *	17.750	20.078	0.875	HDL	R
HDL-9084-H *	17.750	20.078	0.875	HDL	H
HDL-9084-V *	17.750	20.078	0.875	HDL	V
HDL-4204-R	17.875	19.875	0.812	HDL	R
HDL-4204-H	17.875	19.875	0.812	HDL	H
HDL-4204-V	17.875	19.875	0.812	HDL	V
HDL-4206-R	18.000	19.500	0.687	HDL	R
HDL-4206-H	18.000	19.500	0.687	HDL	H
HDL-4206-V	18.000	19.500	0.687	HDL	V
HDL-5728-R *	18.000	19.750	0.687	HDL	R
HDL-5728-H *	18.000	19.750	0.687	HDL	H
HDL-5728-V *	18.000	19.750	0.687	HDL	V
HDL-4203-R *	18.000	19.875	0.687	HDL	R
HDL-4203-H *	18.000	19.875	0.687	HDL	H
HDL-4203-V *	18.000	19.875	0.687	HDL	V
HDL-4209-R *	18.000	20.000	0.750	HDL	R
HDL-4209-H *	18.000	20.000	0.750	HDL	H
HDL-4209-V *	18.000	20.000	0.750	HDL	V
HDL-4210-R	18.000	20.000	0.875	HDL	R
HDL-4210-H	18.000	20.000	0.875	HDL	H
HDL-4210-V	18.000	20.000	0.875	HDL	V
HDL-3752-R *	18.000	20.500	0.875	HDL	R
HDL-3752-H *	18.000	20.500	0.875	HDL	H
HDL-3752-V *	18.000	20.500	0.875	HDL	V
HDL-3753-R *	18.000	21.000	0.875	HDL	R
HDL-3753-H *	18.000	21.000	0.875	HDL	H
HDL-3753-V *	18.000	21.000	0.875	HDL	V
HDL-3754-R *	18.120	20.500	0.875	HDL	R
HDL-3754-H *	18.120	20.500	0.875	HDL	H
HDL-3754-V *	18.120	20.500	0.875	HDL	V
HDL-3756-R *	18.125	20.500	0.875	HDL	R
HDL-3756-H *	18.125	20.500	0.875	HDL	H
HDL-3756-V *	18.125	20.500	0.875	HDL	V
HDL-3757-R *	18.250	19.750	0.687	HDL	R
HDL-3757-H *	18.250	19.750	0.687	HDL	H
HDL-3757-V *	18.250	19.750	0.687	HDL	V
HDL-3765-R *	18.250	19.875	0.687	HDL	R
HDL-3765-H *	18.250	19.875	0.687	HDL	H
HDL-3765-V *	18.250	19.875	0.687	HDL	V
HDL-4213-R	18.375	19.875	0.687	HDL	R
HDL-4213-H	18.375	19.875	0.687	HDL	H
HDL-4213-V	18.375	19.875	0.687	HDL	V
HDL-7103-R *	18.375	19.937	0.687	HDL	R
HDL-7103-H *	18.375	19.937	0.687	HDL	H
HDL-7103-V *	18.375	19.937	0.687	HDL	V
HDL-4215-R	18.375	20.000	0.750	HDL	R
HDL-4215-H	18.375	20.000	0.750	HDL	H
HDL-4215-V	18.375	20.000	0.750	HDL	V
HDL-6740-R *	18.375	20.375	0.812	HDL	R
HDL-6740-H *	18.375	20.375	0.812	HDL	H
HDL-6740-V *	18.375	20.375	0.812	HDL	V
HDL-3767-R *	18.375	20.500	0.750	HDL	R
HDL-3767-H *	18.375	20.500	0.750	HDL	H
HDL-3767-V *	18.375	20.500	0.750	HDL	V
HDL-3768-R *	18.500	20.000	0.687	HDL	R
HDL-3768-H *	18.500	20.000	0.687	HDL	H
HDL-3768-V *	18.500	20.000	0.687	HDL	V
HDL-3772-R *	18.500	20.250	0.687	HDL	R
HDL-3772-H *	18.500	20.250	0.687	HDL	H
HDL-3772-V *	18.500	20.250	0.687	HDL	V
HDLA-3068-R	18.500	20.500	0.812	HDLA	R
HDLA-3068-H	18.500	20.500	0.812	HDLA	H
HDLA-3068-V	18.500	20.500	0.812	HDLA	V
HDL-4216-R	18.500	20.500	0.875	HDL	R
HDL-4216-H	18.500	20.500	0.875	HDL	H
HDL-4216-V	18.500	20.500	0.875	HDL	V
HDL-4218-R	19.000	20.500	0.750	HDL	R
HDL-4218-H	19.000	20.500	0.750	HDL	H
HDL-4218-V	19.000	20.500	0.750	HDL	V
HDL-4219-R	19.000	21.000	0.875	HDL	R
HDL-4219-H	19.000	21.000	0.875	HDL	H
HDL-4219-V	19.000	21.000	0.875	HDL	V
HDL-3773-R *	19.000	21.500	0.875	HDL	R
HDL-3773-H *	19.000	21.500	0.875	HDL	H
HDL-3773-V *	19.000	21.500	0.875	HDL	V
HDL-4617-R	19.250	20.750	0.750	HDL	R
HDL-4617-H	19.250	20.750	0.750	HDL	H
HDL-4617-V	19.250	20.750	0.750	HDL	V
HDL-3777-R *	19.250	21.000	0.750	HDL	R
HDL-3777-H *	19.250	21.000	0.750	HDL	H
HDL-3777-V *	19.250	21.000	0.750	HDL	V
HDL-5485-R *	19.250	21.250	0.750	HDL	R
HDL-5485-H *	19.250	21.250	0.750	HDL	H
HDL-5485-V *	19.250	21.250	0.750	HDL	V
HDL-3778-R *	19.375	21.000	0.750	HDL	R
HDL-3778-H *	19.375	21.000	0.750	HDL	H
HDL-3778-V *	19.375	21.000	0.750	HDL	V
HDL-3779-R *	19.500	21.000	0.750	HDL	R
HDL-3779-H *	19.500	21.000	0.750	HDL	H
HDL-3779-V *	19.500	21.000	0.750	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4221-R	19.500	21.500	0.875	HDL	R
HDL-4221-H	19.500	21.500	0.875	HDL	H
HDL-4221-V	19.500	21.500	0.875	HDL	V
HDL-3783-R *	19.500	21.688	0.875	HDL	R
HDL-3783-H *	19.500	21.688	0.875	HDL	H
HDL-3783-V *	19.500	21.688	0.875	HDL	V
HDL-4228-R	19.750	21.750	0.875	HDL	R
HDL-4228-H	19.750	21.750	0.875	HDL	H
HDL-4228-V	19.750	21.750	0.875	HDL	V
HDL-7400-R *	19.750	22.125	0.875	HDL	R
HDL-7400-H *	19.750	22.125	0.875	HDL	H
HDL-7400-V *	19.750	22.125	0.875	HDL	V
HDL-3785-R *	19.750	22.250	0.875	HDL	R
HDL-3785-H *	19.750	22.250	0.875	HDL	H
HDL-3785-V *	19.750	22.250	0.875	HDL	V
HDL-3788-R *	19.875	22.000	0.875	HDL	R
HDL-3788-H *	19.875	22.000	0.875	HDL	H
HDL-3788-V *	19.875	22.000	0.875	HDL	V
HDL-4233-R	19.937	21.687	0.625	HDL	R
HDL-4233-H	19.937	21.687	0.625	HDL	H
HDL-4233-V	19.937	21.687	0.625	HDL	V
HDL-3789-R *	19.938	21.500	0.750	HDL	R
HDL-3789-H *	19.938	21.500	0.750	HDL	H
HDL-3789-V *	19.938	21.500	0.750	HDL	V
HDL-4235-R	20.000	21.500	0.750	HDL	R
HDL-4235-H	20.000	21.500	0.750	HDL	H
HDL-4235-V	20.000	21.500	0.750	HDL	V
HDL-4236-R	20.000	21.750	0.750	HDL	R
HDL-4236-H	20.000	21.750	0.750	HDL	H
HDL-4236-V	20.000	21.750	0.750	HDL	V
HDL-4237-R	20.000	22.000	0.875	HDL	R
HDL-4237-H	20.000	22.000	0.875	HDL	H
HDL-4237-V	20.000	22.000	0.875	HDL	V
HDL-3790-R *	20.000	22.500	0.875	HDL	R
HDL-3790-H *	20.000	22.500	0.875	HDL	H
HDL-3790-V *	20.000	22.500	0.875	HDL	V
HDL-3792-R *	20.143	22.250	0.875	HDL	R
HDL-3792-H *	20.143	22.250	0.875	HDL	H
HDL-3792-V *	20.143	22.250	0.875	HDL	V
HDL-4239-R	20.250	21.750	0.750	HDL	R
HDL-4239-H	20.250	21.750	0.750	HDL	H
HDL-4239-V	20.250	21.750	0.750	HDL	V
HDL-8231-R *	20.250	22.245	0.875	HDL	R
HDL-8231-H *	20.250	22.245	0.875	HDL	H
HDL-8231-V *	20.250	22.245	0.875	HDL	V
HDL-4240-R *	20.250	22.250	0.875	HDL	R
HDL-4240-H *	20.250	22.250	0.875	HDL	H
HDL-4240-V *	20.250	22.250	0.875	HDL	V
HDL-4241-R *	20.250	22.375	0.750	HDL	R
HDL-4241-H *	20.250	22.375	0.750	HDL	H
HDL-4241-V *	20.250	22.375	0.750	HDL	V
HDL-8770-R *	20.250	22.500	0.875	HDL	R
HDL-8770-H *	20.250	22.500	0.875	HDL	H
HDL-8770-V *	20.250	22.500	0.875	HDL	V
HDL-4242-R *	20.438	22.500	0.812	HDL	R
HDL-4242-H *	20.438	22.500	0.812	HDL	H
HDL-4242-V *	20.438	22.500	0.812	HDL	V
HDL-4619-R	20.500	22.000	0.750	HDL	R
HDL-4619-H	20.500	22.000	0.750	HDL	H
HDL-4619-V	20.500	22.000	0.750	HDL	V
HDL-4245-R *	20.500	22.250	0.812	HDL	R
HDL-4245-H *	20.500	22.250	0.812	HDL	H
HDL-4245-V *	20.500	22.250	0.812	HDL	V
HDL-4246-R	20.500	22.500	0.875	HDL	R
HDL-4246-H	20.500	22.500	0.875	HDL	H
HDL-4246-V	20.500	22.500	0.875	HDL	V
HDL-6287-R *	20.500	22.750	0.875	HDL	R
HDL-6287-H *	20.500	22.750	0.875	HDL	H
HDL-6287-V *	20.500	22.750	0.875	HDL	V
HDL-9893-R *	20.625	22.625	0.812	HDL	R
HDL-9893-H *	20.625	22.625	0.812	HDL	H
HDL-9893-V *	20.625	22.625	0.812	HDL	V
HDL-4248-R	20.750	22.750	0.875	HDL	R
HDL-4248-H	20.750	22.750	0.875	HDL	H
HDL-4248-V	20.750	22.750	0.875	HDL	V
HDL-4243-R *	20.750	23.000	0.812	HDL	R
HDL-4243-H *	20.750	23.000	0.812	HDL	H
HDL-4243-V *	20.750	23.000	0.812	HDL	V
HDL-4250-R *	20.875	22.875	0.875	HDL	R
HDL-4250-H *	20.875	22.875	0.875	HDL	H
HDL-4250-V *	20.875	22.875	0.875	HDL	V
HDL-6417-R *	20.875	23.228	0.875	HDL	R
HDL-6417-H *	20.875	23.228	0.875	HDL	H
HDL-6417-V *	20.875	23.228	0.875	HDL	V
HDL-5259-R	21.000	22.500	0.750	HDL	R
HDL-5259-H	21.000	22.500	0.750	HDL	H
HDL-5259-V	21.000	22.500	0.750	HDL	V
HDL-5312-R	21.000	22.750	0.750	HDL	R
HDL-5312-H	21.000	22.750	0.750	HDL	H
HDL-5312-V	21.000	22.750	0.750	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-6535-R *	21.000	23.000	0.812	HDL	R
HDL-6535-H *	21.000	23.000	0.812	HDL	H
HDL-6535-V *	21.000	23.000	0.812	HDL	V
HDL-4253-R	21.000	23.000	0.875	HDL	R
HDL-4253-H	21.000	23.000	0.875	HDL	H
HDL-4253-V	21.000	23.000	0.875	HDL	V
HDL-4251-R *	21.000	23.250	0.812	HDL	R
HDL-4251-H *	21.000	23.250	0.812	HDL	H
HDL-4251-V *	21.000	23.250	0.812	HDL	V
HDL-9772-R *	21.000	23.500	0.875	HDL	R
HDL-9772-H *	21.000	23.500	0.875	HDL	H
HDL-9772-V *	21.000	23.500	0.875	HDL	V
HDL-4255-R	21.250	23.000	0.750	HDL	R
HDL-4255-H	21.250	23.000	0.750	HDL	H
HDL-4255-V	21.250	23.000	0.750	HDL	V
HDL-4254-R	21.250	23.250	0.875	HDL	R
HDL-4254-H	21.250	23.250	0.875	HDL	H
HDL-4254-V	21.250	23.250	0.875	HDL	V
HDL-4256-R *	21.437	23.187	0.750	HDL	R
HDL-4256-H *	21.437	23.187	0.750	HDL	H
HDL-4256-V *	21.437	23.187	0.750	HDL	V
HDL-4257-R *	21.500	23.250	0.750	HDL	R
HDL-4257-H *	21.500	23.250	0.750	HDL	H
HDL-4257-V *	21.500	23.250	0.750	HDL	V
HDL-7407-R *	21.500	23.500	0.812	HDL	R
HDL-7407-H *	21.500	23.500	0.812	HDL	H
HDL-7407-V *	21.500	23.500	0.812	HDL	V
HDL-4259-R	21.500	23.500	0.875	HDL	R
HDL-4259-H	21.500	23.500	0.875	HDL	H
HDL-4259-V	21.500	23.500	0.875	HDL	V
HDL-6493-R *	21.500	23.625	0.875	HDL	R
HDL-6493-H *	21.500	23.625	0.875	HDL	H
HDL-6493-V *	21.500	23.625	0.875	HDL	V
HDL-6779-R *	21.500	24.000	0.875	HDL	R
HDL-6779-H *	21.500	24.000	0.875	HDL	H
HDL-6779-V *	21.500	24.000	0.875	HDL	V
HDL-4261-R *	21.625	23.375	0.750	HDL	R
HDL-4261-H *	21.625	23.375	0.750	HDL	H
HDL-4261-V *	21.625	23.375	0.750	HDL	V
HDL-4263-R	21.625	23.625	0.875	HDL	R
HDL-4263-H	21.625	23.625	0.875	HDL	H
HDL-4263-V	21.625	23.625	0.875	HDL	V
HDL-4621-R	21.750	23.250	0.750	HDL	R
HDL-4621-H	21.750	23.250	0.750	HDL	H
HDL-4621-V	21.750	23.250	0.750	HDL	V
HDL-4265-R	21.750	23.750	0.875	HDL	R
HDL-4265-H	21.750	23.750	0.875	HDL	H
HDL-4265-V	21.750	23.750	0.875	HDL	V
HDL-5276-R *	21.750	24.000	0.875	HDL	R
HDL-5276-H *	21.750	24.000	0.875	HDL	H
HDL-5276-V *	21.750	24.000	0.875	HDL	V
HDL-8675-R *	21.750	24.250	0.875	HDL	R
HDL-8675-H *	21.750	24.250	0.875	HDL	H
HDL-8675-V *	21.750	24.250	0.875	HDL	V
HDL-4260-R *	21.750	24.500	0.875	HDL	R
HDL-4260-H *	21.750	24.500	0.875	HDL	H
HDL-4260-V *	21.750	24.500	0.875	HDL	V
HDL-4262-R *	21.750	24.750	0.875	HDL	R
HDL-4262-H *	21.750	24.750	0.875	HDL	H
HDL-4262-V *	21.750	24.750	0.875	HDL	V
HDL-4269-R	22.000	23.500	0.750	HDL	R
HDL-4269-H	22.000	23.500	0.750	HDL	H
HDL-4269-V	22.000	23.500	0.750	HDL	V
HDL-4270-R	22.000	24.000	0.875	HDL	R
HDL-4270-H	22.000	24.000	0.875	HDL	H
HDL-4270-V	22.000	24.000	0.875	HDL	V
HDL-9082-R *	22.000	24.250	0.812	HDL	R
HDL-9082-H *	22.000	24.250	0.812	HDL	H
HDL-9082-V *	22.000	24.250	0.812	HDL	V
HDL-3763-R *	22.000	24.250	0.875	HDL	R
HDL-3763-H *	22.000	24.250	0.875	HDL	H
HDL-3763-V *	22.000	24.250	0.875	HDL	V
HDL-6295-R *	22.000	24.500	0.875	HDL	R
HDL-6295-H *	22.000	24.500	0.875	HDL	H
HDL-6295-V *	22.000	24.500	0.875	HDL	V
HDL-3764-R	22.250	24.250	0.875	HDL	R
HDL-3764-H	22.250	24.250	0.875	HDL	H
HDL-3764-V	22.250	24.250	0.875	HDL	V
HDL-4268-R *	22.375	24.250	0.750	HDL	R
HDL-4268-H *	22.375	24.250	0.750	HDL	H
HDL-4268-V *	22.375	24.250	0.750	HDL	V
HDL-6999-R *	22.375	24.375	0.750	HDL	R
HDL-6999-H *	22.375	24.375	0.750	HDL	H
HDL-6999-V *	22.375	24.375	0.750	HDL	V
HDL-2576-R *	22.375	24.375	0.875	HDL	R
HDL-2576-H *	22.375	24.375	0.875	HDL	H
HDL-2576-V *	22.375	24.375	0.875	HDL	V
HDL-4275-R	22.437	24.000	0.750	HDL	R
HDL-4275-H	22.437	24.000	0.750	HDL	H
HDL-4275-V	22.437	24.000	0.750	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4276-R *	22.437	24.250	0.750	HDL	R
HDL-4276-H *	22.437	24.250	0.750	HDL	H
HDL-4276-V *	22.437	24.250	0.750	HDL	V
HDL-6480-R	22.437	24.437	0.750	HDL	R
HDL-6480-H	22.437	24.437	0.750	HDL	H
HDL-6480-V	22.437	24.437	0.750	HDL	V
HDL-1915-R *	22.437	24.437	0.875	HDL	R
HDL-1915-H *	22.437	24.437	0.875	HDL	H
HDL-1915-V *	22.437	24.437	0.875	HDL	V
HDL-9840-R *	22.437	24.500	0.750	HDL	R
HDL-9840-H *	22.437	24.500	0.750	HDL	H
HDL-9840-V *	22.437	24.500	0.750	HDL	V
HDL-4271-R	22.500	24.000	0.750	HDL	R
HDL-4271-H	22.500	24.000	0.750	HDL	H
HDL-4271-V	22.500	24.000	0.750	HDL	V
HDL-4272-R *	22.500	24.250	0.750	HDL	R
HDL-4272-H *	22.500	24.250	0.750	HDL	H
HDL-4272-V *	22.500	24.250	0.750	HDL	V
HDL-4279-R	22.500	24.500	0.875	HDL	R
HDL-4279-H	22.500	24.500	0.875	HDL	H
HDL-4279-V	22.500	24.500	0.875	HDL	V
HDL-4273-R *	22.500	24.750	0.875	HDL	R
HDL-4273-H *	22.500	24.750	0.875	HDL	H
HDL-4273-V *	22.500	24.750	0.875	HDL	V
HDL-4274-R *	22.500	25.000	0.875	HDL	R
HDL-4274-H *	22.500	25.000	0.875	HDL	H
HDL-4274-V *	22.500	25.000	0.875	HDL	V
HDL-4281-R	22.750	24.750	0.875	HDL	R
HDL-4281-H	22.750	24.750	0.875	HDL	H
HDL-4281-V	22.750	24.750	0.875	HDL	V
HDL-6843-R *	22.750	25.000	0.875	HDL	R
HDL-6843-H *	22.750	25.000	0.875	HDL	H
HDL-6843-V *	22.750	25.000	0.875	HDL	V
HDL-4283-R	23.000	24.500	0.750	HDL	R
HDL-4283-H	23.000	24.500	0.750	HDL	H
HDL-4283-V	23.000	24.500	0.750	HDL	V
HDL-5421-R *	23.000	24.750	0.750	HDL	R
HDL-5421-H *	23.000	24.750	0.750	HDL	H
HDL-5421-V *	23.000	24.750	0.750	HDL	V
HDL-4284-R	23.000	25.000	0.875	HDL	R
HDL-4284-H	23.000	25.000	0.875	HDL	H
HDL-4284-V	23.000	25.000	0.875	HDL	V
HDL-4277-R *	23.000	25.375	0.875	HDL	R
HDL-4277-H *	23.000	25.375	0.875	HDL	H
HDL-4277-V *	23.000	25.375	0.875	HDL	V
HDL-4285-R	23.000	25.500	0.875	HDL	R
HDL-4285-H	23.000	25.500	0.875	HDL	H
HDL-4285-V	23.000	25.500	0.875	HDL	V
HDL-4286-R *	23.250	25.000	0.750	HDL	R
HDL-4286-H *	23.250	25.000	0.750	HDL	H
HDL-4286-V *	23.250	25.000	0.750	HDL	V
HDL-9371-R *	23.250	25.250	0.750	HDL	R
HDL-9371-H *	23.250	25.250	0.750	HDL	H
HDL-9371-V *	23.250	25.250	0.750	HDL	V
HDL-6910-R *	23.250	25.250	0.812	HDL	R
HDL-6910-H *	23.250	25.250	0.812	HDL	H
HDL-6910-V *	23.250	25.250	0.812	HDL	V
HDL-4287-R *	23.375	25.375	0.875	HDL	R
HDL-4287-H *	23.375	25.375	0.875	HDL	H
HDL-4287-V *	23.375	25.375	0.875	HDL	V
HDL-3033-R	23.500	24.681	0.591	HDL	R
HDL-3033-H	23.500	24.681	0.591	HDL	H
HDL-3033-V	23.500	24.681	0.591	HDL	V
HDL-5547-R *	23.500	25.250	0.750	HDL	R
HDL-5547-H *	23.500	25.250	0.750	HDL	H
HDL-5547-V *	23.500	25.250	0.750	HDL	V
HDL-4288-R	23.500	25.500	0.875	HDL	R
HDL-4288-H	23.500	25.500	0.875	HDL	H
HDL-4288-V	23.500	25.500	0.875	HDL	V
HDL-4290-R *	23.562	25.250	0.750	HDL	R
HDL-4290-H *	23.562	25.250	0.750	HDL	H
HDL-4290-V *	23.562	25.250	0.750	HDL	V
HDL-4291-R	23.562	25.375	0.750	HDL	R
HDL-4291-H	23.562	25.375	0.750	HDL	H
HDL-4291-V	23.562	25.375	0.750	HDL	V
HDL-4292-R	23.625	26.000	0.875	HDL	R
HDL-4292-H	23.625	26.000	0.875	HDL	H
HDL-4292-V	23.625	26.000	0.875	HDL	V
HDL-6239-R	23.750	25.250	1.000	HDL	R
HDL-6239-H	23.750	25.250	1.000	HDL	H
HDL-6239-V	23.750	25.250	1.000	HDL	V
HDL-4293-R	23.875	26.000	0.875	HDL	R
HDL-4293-H	23.875	26.000	0.875	HDL	H
HDL-4293-V	23.875	26.000	0.875	HDL	V
HDL-4623-R	24.000	25.500	0.750	HDL	R
HDL-4623-H	24.000	25.500	0.750	HDL	H
HDL-4623-V	24.000	25.500	0.750	HDL	V
HDL-9988-R	24.000	26.000	0.750	HDL	R
HDL-9988-H	24.000	26.000	0.750	HDL	H
HDL-9988-V	24.000	26.000	0.750	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4295-R	24.000	26.000	0.812	HDL	R
HDL-4295-H	24.000	26.000	0.812	HDL	H
HDL-4295-V	24.000	26.000	0.812	HDL	V
HDL-4294-R	24.000	26.000	0.875	HDL	R
HDL-4294-H	24.000	26.000	0.875	HDL	H
HDL-4294-V	24.000	26.000	0.875	HDL	V
HDL-6293-R *	24.000	26.250	0.875	HDL	R
HDL-6293-H *	24.000	26.250	0.875	HDL	H
HDL-6293-V *	24.000	26.250	0.875	HDL	V
HDL-4297-R *	24.000	26.500	0.875	HDL	R
HDL-4297-H *	24.000	26.500	0.875	HDL	H
HDL-4297-V *	24.000	26.500	0.875	HDL	V
HDL-5644-R *	24.000	27.000	0.875	HDL	R
HDL-5644-H *	24.000	27.000	0.875	HDL	H
HDL-5644-V *	24.000	27.000	0.875	HDL	V
HDL-4301-R	24.250	26.250	0.875	HDL	R
HDL-4301-H	24.250	26.250	0.875	HDL	H
HDL-4301-V	24.250	26.250	0.875	HDL	V
HDL-3770-R *	24.250	26.250	1.000	HDL	R
HDL-3770-H *	24.250	26.250	1.000	HDL	H
HDL-3770-V *	24.250	26.250	1.000	HDL	V
HDL-4302-R	24.437	26.000	0.750	HDL	R
HDL-4302-H	24.437	26.000	0.750	HDL	H
HDL-4302-V	24.437	26.000	0.750	HDL	V
HDL-4304-R *	24.437	26.437	0.750	HDL	R
HDL-4304-H *	24.437	26.437	0.750	HDL	H
HDL-4304-V *	24.437	26.437	0.750	HDL	V
HDL-9990-R	24.437	26.935	1.000	HDL	R
HDL-9990-H	24.437	26.935	1.000	HDL	H
HDL-9990-V	24.437	26.935	1.000	HDL	V
HDL-4305-R	24.500	26.500	0.875	HDL	R
HDL-4305-H	24.500	26.500	0.875	HDL	H
HDL-4305-V	24.500	26.500	0.875	HDL	V
HDL-4308-R	25.000	26.500	0.750	HDL	R
HDL-4308-H	25.000	26.500	0.750	HDL	H
HDL-4308-V	25.000	26.500	0.750	HDL	V
HDL-3774-R *	25.000	27.000	0.875	HDL	R
HDL-3774-H *	25.000	27.000	0.875	HDL	H
HDL-3774-V *	25.000	27.000	0.875	HDL	V
HDL-4309-R *	25.000	27.000	1.000	HDL	R
HDL-4309-H *	25.000	27.000	1.000	HDL	H
HDL-4309-V *	25.000	27.000	1.000	HDL	V
HDL-6421-R *	25.000	27.250	0.875	HDL	R
HDL-6421-H *	25.000	27.250	0.875	HDL	H
HDL-6421-V *	25.000	27.250	0.875	HDL	V
HDL-5997-R *	25.000	27.482	0.875	HDL	R
HDL-5997-H *	25.000	27.482	0.875	HDL	H
HDL-5997-V *	25.000	27.482	0.875	HDL	V
HDL-3047-R	25.125	26.750	0.875	HDL	R
HDL-3047-H	25.125	26.750	0.875	HDL	H
HDL-3047-V	25.125	26.750	0.875	HDL	V
HDL-4311-R	25.187	26.875	0.750	HDL	R
HDL-4311-H	25.187	26.875	0.750	HDL	H
HDL-4311-V	25.187	26.875	0.750	HDL	V
HDL-5994-R *	25.187	26.937	0.750	HDL	R
HDL-5994-H *	25.187	26.937	0.750	HDL	H
HDL-5994-V *	25.187	26.937	0.750	HDL	V
HDL-4299-R	25.250	27.250	0.750	HDL	R
HDL-4299-H	25.250	27.250	0.750	HDL	H
HDL-4299-V	25.250	27.250	0.750	HDL	V
HDL-3022-R	25.500	26.750	0.750	HDL	R
HDL-3022-H	25.500	26.750	0.750	HDL	H
HDL-3022-V	25.500	26.750	0.750	HDL	V
HDL-4300-R	25.500	27.000	0.875	HDL	R
HDL-4300-H	25.500	27.000	0.875	HDL	H
HDL-4300-V	25.500	27.000	0.875	HDL	V
HDL-4318-R	25.500	27.500	0.875	HDL	R
HDL-4318-H	25.500	27.500	0.875	HDL	H
HDL-4318-V	25.500	27.500	0.875	HDL	V
HDL-6998-R *	25.750	27.500	0.750	HDL	R
HDL-6998-H *	25.750	27.500	0.750	HDL	H
HDL-6998-V *	25.750	27.500	0.750	HDL	V
HDL-4303-R *	25.875	28.000	0.875	HDL	R
HDL-4303-H *	25.875	28.000	0.875	HDL	H
HDL-4303-V *	25.875	28.000	0.875	HDL	V
HDL-4306-R *	25.988	27.625	0.750	HDL	R
HDL-4306-H *	25.988	27.625	0.750	HDL	H
HDL-4306-V *	25.988	27.625	0.750	HDL	V
HDL-5921-R	26.000	27.625	0.750	HDL	R
HDL-5921-H	26.000	27.625	0.750	HDL	H
HDL-5921-V	26.000	27.625	0.750	HDL	V
HDL-4325-R	26.000	28.000	0.875	HDL	R
HDL-4325-H	26.000	28.000	0.875	HDL	H
HDL-4325-V	26.000	28.000	0.875	HDL	V
HDL-9402-R *	26.000	28.125	0.875	HDL	R
HDL-9402-H *	26.000	28.125	0.875	HDL	H
HDL-9402-V *	26.000	28.125	0.875	HDL	V
HDL-4794-R *	26.000	28.500	0.875	HDL	R
HDL-4794-H *	26.000	28.500	0.875	HDL	H
HDL-4794-V *	26.000	28.500	0.875	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4329-R	26.125	27.625	0.750	HDL	R
HDL-4329-H	26.125	27.625	0.750	HDL	H
HDL-4329-V	26.125	27.625	0.750	HDL	V
HDL-4330-R	26.125	28.125	0.875	HDL	R
HDL-4330-H	26.125	28.125	0.875	HDL	H
HDL-4330-V	26.125	28.125	0.875	HDL	V
HDL-4307-R *	26.375	28.188	0.875	HDL	R
HDL-4307-H *	26.375	28.188	0.875	HDL	H
HDL-4307-V *	26.375	28.188	0.875	HDL	V
HDL-4312-R *	26.375	28.250	0.875	HDL	R
HDL-4312-H *	26.375	28.250	0.875	HDL	H
HDL-4312-V *	26.375	28.250	0.875	HDL	V
HDL-4533-R	26.500	28.000	0.750	HDL	R
HDL-4533-H	26.500	28.000	0.750	HDL	H
HDL-4533-V	26.500	28.000	0.750	HDL	V
HDL-4313-R	26.500	28.500	0.875	HDL	R
HDL-4313-H	26.500	28.500	0.875	HDL	H
HDL-4313-V	26.500	28.500	0.875	HDL	V
HDL-4333-R	27.000	29.000	0.875	HDL	R
HDL-4333-H	27.000	29.000	0.875	HDL	H
HDL-4333-V	27.000	29.000	0.875	HDL	V
HDL-8031-R *	27.000	29.500	0.875	HDL	R
HDL-8031-H *	27.000	29.500	0.875	HDL	H
HDL-8031-V *	27.000	29.500	0.875	HDL	V
HDL-9984-R	27.000	30.000	0.875	HDL	R
HDL-9984-H	27.000	30.000	0.875	HDL	H
HDL-9984-V	27.000	30.000	0.875	HDL	V
HDL-4626-R	27.250	29.250	0.875	HDL	R
HDL-4626-H	27.250	29.250	0.875	HDL	H
HDL-4626-V	27.250	29.250	0.875	HDL	V
HDL-4315-R	27.500	29.000	0.750	HDL	R
HDL-4315-H	27.500	29.000	0.750	HDL	H
HDL-4315-V	27.500	29.000	0.750	HDL	V
HDL-4339-R	27.500	29.500	0.875	HDL	R
HDL-4339-H	27.500	29.500	0.875	HDL	H
HDL-4339-V	27.500	29.500	0.875	HDL	V
HDL-3046-R	27.500	30.063	0.750	HDL	R
HDL-3046-H	27.500	30.063	0.750	HDL	H
HDL-3046-V	27.500	30.063	0.750	HDL	V
HDL-5001-R *	27.625	29.625	0.750	HDL	R
HDL-5001-H *	27.625	29.625	0.750	HDL	H
HDL-5001-V *	27.625	29.625	0.750	HDL	V
HDL-4336-R	27.626	29.500	0.750	HDL	R
HDL-4336-H	27.626	29.500	0.750	HDL	H
HDL-4336-V	27.626	29.500	0.750	HDL	V
HDL-4341-R *	27.875	29.812	0.875	HDL	R
HDL-4341-H *	27.875	29.812	0.875	HDL	H
HDL-4341-V *	27.875	29.812	0.875	HDL	V
HDL-4343-R	28.000	29.500	0.750	HDL	R
HDL-4343-H	28.000	29.500	0.750	HDL	H
HDL-4343-V	28.000	29.500	0.750	HDL	V
HDL-7828-R	28.000	29.625	0.750	HDL	R
HDL-7828-H	28.000	29.625	0.750	HDL	H
HDL-7828-V	28.000	29.625	0.750	HDL	V
HDL-4316-R *	28.000	29.813	0.750	HDL	R
HDL-4316-H *	28.000	29.813	0.750	HDL	H
HDL-4316-V *	28.000	29.813	0.750	HDL	V
HDL-4344-R	28.000	30.000	0.875	HDL	R
HDL-4344-H	28.000	30.000	0.875	HDL	H
HDL-4344-V	28.000	30.000	0.875	HDL	V
HDL-4320-R *	28.000	30.250	0.812	HDL	R
HDL-4320-H *	28.000	30.250	0.812	HDL	H
HDL-4320-V *	28.000	30.250	0.812	HDL	V
HDL-3878-R	28.000	30.500	0.875	HDL	R
HDL-3878-H	28.000	30.500	0.875	HDL	H
HDL-3878-V	28.000	30.500	0.875	HDL	V
HDL-5998-R	28.000	31.000	0.875	HDL	R
HDL-5998-H	28.000	31.000	0.875	HDL	H
HDL-5998-V	28.000	31.000	0.875	HDL	V
HDL-4321-R *	28.438	31.000	0.875	HDL	R
HDL-4321-H *	28.438	31.000	0.875	HDL	H
HDL-4321-V *	28.438	31.000	0.875	HDL	V
HDL-4346-R	28.500	30.500	0.875	HDL	R
HDL-4346-H	28.500	30.500	0.875	HDL	H
HDL-4346-V	28.500	30.500	0.875	HDL	V
HDL-4534-R *	28.500	31.000	0.875	HDL	R
HDL-4534-H *	28.500	31.000	0.875	HDL	H
HDL-4534-V *	28.500	31.000	0.875	HDL	V
HDL-4628-R	28.750	30.750	0.875	HDL	R
HDL-4628-H	28.750	30.750	0.875	HDL	H
HDL-4628-V	28.750	30.750	0.875	HDL	V
HDL-4347-R	29.000	30.500	0.750	HDL	R
HDL-4347-H	29.000	30.500	0.750	HDL	H
HDL-4347-V	29.000	30.500	0.750	HDL	V
HDL-4348-R	29.000	31.000	0.875	HDL	R
HDL-4348-H	29.000	31.000	0.875	HDL	H
HDL-4348-V	29.000	31.000	0.875	HDL	V
HDL-8793-R *	29.000	31.500	1.000	HDL	R
HDL-8793-H *	29.000	31.500	1.000	HDL	H
HDL-8793-V *	29.000	31.500	1.000	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4537-R *	29.000	32.000	0.875	HDL	R
HDL-4537-H *	29.000	32.000	0.875	HDL	H
HDL-4537-V *	29.000	32.000	0.875	HDL	V
HDL-4352-R	29.500	31.500	0.875	HDL	R
HDL-4352-H	29.500	31.500	0.875	HDL	H
HDL-4352-V	29.500	31.500	0.875	HDL	V
HDL-3791-R	29.500	31.500	1.000	HDL	R
HDL-3791-H	29.500	31.500	1.000	HDL	H
HDL-3791-V	29.500	31.500	1.000	HDL	V
HDL-4538-R *	29.500	32.000	0.875	HDL	R
HDL-4538-H *	29.500	32.000	0.875	HDL	H
HDL-4538-V *	29.500	32.000	0.875	HDL	V
HDL-4322-R *	29.500	32.250	0.875	HDL	R
HDL-4322-H *	29.500	32.250	0.875	HDL	H
HDL-4322-V *	29.500	32.250	0.875	HDL	V
HDL-4539-R *	29.500	32.500	0.875	HDL	R
HDL-4539-H *	29.500	32.500	0.875	HDL	H
HDL-4539-V *	29.500	32.500	0.875	HDL	V
HDL-3048-R	30.000	31.496	0.591	HDL	R
HDL-3048-H	30.000	31.496	0.591	HDL	H
HDL-3048-V	30.000	31.496	0.591	HDL	V
HDL-4356-R *	30.000	31.500	0.750	HDL	R
HDL-4356-H *	30.000	31.500	0.750	HDL	H
HDL-4356-V *	30.000	31.500	0.750	HDL	V
HDL-5000-R *	30.000	31.616	0.750	HDL	R
HDL-5000-H *	30.000	31.616	0.750	HDL	H
HDL-5000-V *	30.000	31.616	0.750	HDL	V
HDL-7870-R *	30.000	31.625	0.750	HDL	R
HDL-7870-H *	30.000	31.625	0.750	HDL	H
HDL-7870-V *	30.000	31.625	0.750	HDL	V
HDL-4357-R	30.000	32.000	0.875	HDL	R
HDL-4357-H	30.000	32.000	0.875	HDL	H
HDL-4357-V	30.000	32.000	0.875	HDL	V
HDL-4323-R *	30.000	32.250	0.875	HDL	R
HDL-4323-H *	30.000	32.250	0.875	HDL	H
HDL-4323-V *	30.000	32.250	0.875	HDL	V
HDL-4358-R	30.000	32.500	0.875	HDL	R
HDL-4358-H *	30.000	32.500	0.875	HDL	H
HDL-4358-V *	30.000	32.500	0.875	HDL	V
HDL-3797-R *	30.000	32.500	1.000	HDL	R
HDL-3797-H *	30.000	32.500	1.000	HDL	H
HDL-3797-V *	30.000	32.500	1.000	HDL	V
HDL-4359-R *	30.000	32.750	0.875	HDL	R
HDL-4359-H *	30.000	32.750	0.875	HDL	H
HDL-4359-V *	30.000	32.750	0.875	HDL	V
HDL-4360-R *	30.000	33.000	0.875	HDL	R
HDL-4360-H *	30.000	33.000	0.875	HDL	H
HDL-4360-V *	30.000	33.000	0.875	HDL	V
HDL-4906-R *	30.250	32.500	0.875	HDL	R
HDL-4906-H *	30.250	32.500	0.875	HDL	H
HDL-4906-V *	30.250	32.500	0.875	HDL	V
HDL-4361-R *	30.312	32.375	0.875	HDL	R
HDL-4361-H *	30.312	32.375	0.875	HDL	H
HDL-4361-V *	30.312	32.375	0.875	HDL	V
HDL-4365-R	30.500	32.500	0.875	HDL	R
HDL-4365-H	30.500	32.500	0.875	HDL	H
HDL-4365-V	30.500	32.500	0.875	HDL	V
HDL-8577-R	30.500	33.000	0.875	HDL	R
HDL-8577-H	30.500	33.000	0.875	HDL	H
HDL-8577-V	30.500	33.000	0.875	HDL	V
HDL-8230-R *	30.500	33.500	0.875	HDL	R
HDL-8230-H *	30.500	33.500	0.875	HDL	H
HDL-8230-V *	30.500	33.500	0.875	HDL	V
HDL-5739-R *	31.000	32.500	0.750	HDL	R
HDL-5739-H *	31.000	32.500	0.750	HDL	H
HDL-5739-V *	31.000	32.500	0.750	HDL	V
HDL-4367-R	31.000	33.000	0.875	HDL	R
HDL-4367-H	31.000	33.000	0.875	HDL	H
HDL-4367-V	31.000	33.000	0.875	HDL	V
HDL-4540-R *	31.000	33.500	0.875	HDL	R
HDL-4540-H *	31.000	33.500	0.875	HDL	H
HDL-4540-V *	31.000	33.500	0.875	HDL	V
HDL-4541-R *	31.000	34.000	0.875	HDL	R
HDL-4541-H *	31.000	34.000	0.875	HDL	H
HDL-4541-V *	31.000	34.000	0.875	HDL	V
HDL-4631-R *	31.250	32.750	0.750	HDL	R
HDL-4631-H *	31.250	32.750	0.750	HDL	H
HDL-4631-V *	31.250	32.750	0.750	HDL	V
HDL-5033-R	31.250	33.250	0.750	HDL	R
HDL-5033-H	31.250	33.250	0.750	HDL	H
HDL-5033-V	31.250	33.250	0.750	HDL	V
HDL-5016-R *	31.750	33.750	0.875	HDL	R
HDL-5016-H *	31.750	33.750	0.875	HDL	H
HDL-5016-V *	31.750	33.750	0.875	HDL	V
HDL-3023-R	32.000	33.500	0.750	HDL	R
HDL-3023-H	32.000	33.500	0.750	HDL	H
HDL-3023-V	32.000	33.500	0.750	HDL	V
HDL-4632-R	32.000	34.000	0.875	HDL	R
HDL-4632-H	32.000	34.000	0.875	HDL	H
HDL-4632-V	32.000	34.000	0.875	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-8407-R *	32.000	34.500	0.875	HDL	R
HDL-8407-H *	32.000	34.500	0.875	HDL	H
HDL-8407-V *	32.000	34.500	0.875	HDL	V
HDL-3002-R	32.125	34.125	0.750	HDL	R
HDL-3002-H	32.125	34.125	0.750	HDL	H
HDL-3002-V	32.125	34.125	0.750	HDL	V
HDL-4371-R	32.125	34.125	0.875	HDL	R
HDL-4371-H	32.125	34.125	0.875	HDL	H
HDL-4371-V	32.125	34.125	0.875	HDL	V
HDL-7537-R *	32.125	34.625	0.875	HDL	R
HDL-7537-H *	32.125	34.625	0.875	HDL	H
HDL-7537-V *	32.125	34.625	0.875	HDL	V
HDL-4373-R	32.312	34.500	0.875	HDL	R
HDL-4373-H	32.312	34.500	0.875	HDL	H
HDL-4373-V	32.312	34.500	0.875	HDL	V
HDL-4377-R	32.500	34.500	0.875	HDL	R
HDL-4377-H	32.500	34.500	0.875	HDL	H
HDL-4377-V	32.500	34.500	0.875	HDL	V
HDL-4542-R *	32.750	34.250	0.750	HDL	R
HDL-4542-H *	32.750	34.250	0.750	HDL	H
HDL-4542-V *	32.750	34.250	0.750	HDL	V
HDL-8289-R *	32.750	35.000	0.875	HDL	R
HDL-8289-H *	32.750	35.000	0.875	HDL	H
HDL-8289-V *	32.750	35.000	0.875	HDL	V
HDL-4380-R	32.996	34.685	0.787	HDL	R
HDL-4380-H	32.996	34.685	0.787	HDL	H
HDL-4380-V	32.996	34.685	0.787	HDL	V
HDL-4381-R	33.000	34.500	0.750	HDL	R
HDL-4381-H	33.000	34.500	0.750	HDL	H
HDL-4381-V	33.000	34.500	0.750	HDL	V
HDL-6787-R	33.000	34.625	0.750	HDL	R
HDL-6787-H	33.000	34.625	0.750	HDL	H
HDL-6787-V	33.000	34.625	0.750	HDL	V
HDL-4634-R	33.000	34.650	0.787	HDL	R
HDL-4634-H	33.000	34.650	0.787	HDL	H
HDL-4634-V	33.000	34.650	0.787	HDL	V
HDL-6152-R *	33.000	34.687	0.750	HDL	R
HDL-6152-H *	33.000	34.687	0.750	HDL	H
HDL-6152-V *	33.000	34.687	0.750	HDL	V
HDL-4382-R	33.000	35.000	0.875	HDL	R
HDL-4382-H	33.000	35.000	0.875	HDL	H
HDL-4382-V	33.000	35.000	0.875	HDL	V
HDL-4326-R	33.000	35.250	0.875	HDL	R
HDL-4326-H	33.000	35.250	0.875	HDL	H
HDL-4326-V	33.000	35.250	0.875	HDL	V
HDL-4544-R	33.000	35.500	0.875	HDL	R
HDL-4544-H	33.000	35.500	0.875	HDL	H
HDL-4544-V	33.000	35.500	0.875	HDL	V
HDL-9504-R *	33.500	35.000	0.875	HDL	R
HDL-9504-H *	33.500	35.000	0.875	HDL	H
HDL-9504-V *	33.500	35.000	0.875	HDL	V
HDL-4389-R	33.500	35.500	0.875	HDL	R
HDL-4389-H	33.500	35.500	0.875	HDL	H
HDL-4389-V	33.500	35.500	0.875	HDL	V
HDL-4327-H *	33.500	35.625	0.875	HDL	H
HDL-4327-V *	33.500	35.625	0.875	HDL	V
HDL-4548-H *	33.500	35.625	0.875	HDL	H
HDL-4548-V *	33.500	35.625	0.875	HDL	V
HDL-4327-R *	33.500	35.625	0.875	HDL	R
HDL-4548-R *	33.500	35.625	0.875	HDL	R
HDL-4549-R *	33.500	35.750	0.875	HDL	R
HDL-4549-H *	33.500	35.750	0.875	HDL	H
HDL-4549-V *	33.500	35.750	0.875	HDL	V
HDL-4550-R	33.500	36.000	0.875	HDL	R
HDL-4550-H	33.500	36.000	0.875	HDL	H
HDL-4550-V	33.500	36.000	0.875	HDL	V
HDL-4552-R *	33.500	36.417	0.875	HDL	R
HDL-4552-H *	33.500	36.417	0.875	HDL	H
HDL-4552-V *	33.500	36.417	0.875	HDL	V
HDL-4328-R *	33.625	35.625	0.875	HDL	R
HDL-4328-H *	33.625	35.625	0.875	HDL	H
HDL-4328-V *	33.625	35.625	0.875	HDL	V
HDL-4331-R *	34.000	35.625	0.875	HDL	R
HDL-4331-H *	34.000	35.625	0.875	HDL	H
HDL-4331-V *	34.000	35.625	0.875	HDL	V
HDL-4399-R	34.000	36.000	0.875	HDL	R
HDL-4399-H	34.000	36.000	0.875	HDL	H
HDL-4399-V	34.000	36.000	0.875	HDL	V
HDL-3056-R	34.000	36.500	0.750	HDL	R
HDL-3056-H	34.000	36.500	0.750	HDL	H
HDL-3056-V	34.000	36.500	0.750	HDL	V
HDL-4400-R	34.000	36.500	0.875	HDL	R
HDL-4400-H	34.000	36.500	0.875	HDL	H
HDL-4400-V	34.000	36.500	0.875	HDL	V
HDL-4332-R *	34.000	37.000	0.875	HDL	R
HDL-4332-H *	34.000	37.000	0.875	HDL	H
HDL-4332-V *	34.000	37.000	0.875	HDL	V
HDL-3017-R	34.250	36.000	0.750	HDL	R
HDL-3017-H	34.250	36.000	0.750	HDL	H
HDL-3017-V	34.250	36.000	0.750	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4401-R *	34.250	36.250	0.875	HDL	R
HDL-4401-H *	34.250	36.250	0.875	HDL	H
HDL-4401-V *	34.250	36.250	0.875	HDL	V
HDL-4335-R *	34.250	36.750	0.875	HDL	R
HDL-4335-H *	34.250	36.750	0.875	HDL	H
HDL-4335-V *	34.250	36.750	0.875	HDL	V
HDL-4338-R *	34.250	37.500	0.875	HDL	R
HDL-4338-H *	34.250	37.500	0.875	HDL	H
HDL-4338-V *	34.250	37.500	0.875	HDL	V
HDL-6908-R *	34.500	36.000	0.750	HDL	R
HDL-6908-H *	34.500	36.000	0.750	HDL	H
HDL-6908-V *	34.500	36.000	0.750	HDL	V
HDL-4405-R	34.500	36.500	0.875	HDL	R
HDL-4405-H	34.500	36.500	0.875	HDL	H
HDL-4405-V	34.500	36.500	0.875	HDL	V
HDL-3021-R	34.500	36.500	1.000	HDL	R
HDL-3021-H	34.500	36.500	1.000	HDL	H
HDL-3021-V	34.500	36.500	1.000	HDL	V
HDL-4338-R *	34.500	37.500	0.875	HDL	R
HDL-4338-H *	34.500	37.500	0.875	HDL	H
HDL-4338-V *	34.500	37.500	0.875	HDL	V
HDL-3831-R *	34.750	36.750	0.875	HDL	R
HDL-3831-H *	34.750	36.750	0.875	HDL	H
HDL-3831-V *	34.750	36.750	0.875	HDL	V
HDL-3835-R	35.000	37.000	0.875	HDL	R
HDL-3835-H	35.000	37.000	0.875	HDL	H
HDL-3835-V	35.000	37.000	0.875	HDL	V
HDL-3836-R	35.000	37.500	0.875	HDL	R
HDL-3836-H	35.000	37.500	0.875	HDL	H
HDL-3836-V	35.000	37.500	0.875	HDL	V
HDL-3837-R	35.000	38.000	0.875	HDL	R
HDL-3837-H	35.000	38.000	0.875	HDL	H
HDL-3837-V	35.000	38.000	0.875	HDL	V
HDL-4416-R	35.250	37.250	0.875	HDL	R
HDL-4416-H	35.250	37.250	0.875	HDL	H
HDL-4416-V	35.250	37.250	0.875	HDL	V
HDL-4647-R *	35.250	38.250	0.812	HDL	R
HDL-4647-H *	35.250	38.250	0.812	HDL	H
HDL-4647-V *	35.250	38.250	0.812	HDL	V
HDL-4417-R	35.375	37.375	0.875	HDL	R
HDL-4417-H	35.375	37.375	0.875	HDL	H
HDL-4417-V	35.375	37.375	0.875	HDL	V
HDL-9079-R *	35.437	38.583	0.875	HDL	R
HDL-9079-H *	35.437	38.583	0.875	HDL	H
HDL-9079-V *	35.437	38.583	0.875	HDL	V
HDL-3001-R	35.496	37.996	0.984	HDL	R
HDL-3001-H	35.496	37.996	0.984	HDL	H
HDL-3001-V	35.496	37.996	0.984	HDL	V
HDL-4553-R	35.500	37.500	0.875	HDL	R
HDL-4553-H	35.500	37.500	0.875	HDL	H
HDL-4553-V	35.500	37.500	0.875	HDL	V
HDL-3003-R	35.827	38.077	0.687	HDL	R
HDL-3003-H	35.827	38.077	0.687	HDL	H
HDL-3003-V	35.827	38.077	0.687	HDL	V
HDL-4421-R	36.000	38.000	0.875	HDL	R
HDL-4421-H	36.000	38.000	0.875	HDL	H
HDL-4421-V	36.000	38.000	0.875	HDL	V
HDL-9993-R	36.000	38.500	1.000	HDL	R
HDL-9993-H	36.000	38.500	1.000	HDL	H
HDL-9993-V	36.000	38.500	1.000	HDL	V
HDL-7770-R *	36.220	37.717	0.750	HDL	R
HDL-7770-H *	36.220	37.717	0.750	HDL	H
HDL-7770-V *	36.220	37.717	0.750	HDL	V
HDL-4429-R *	36.500	38.000	0.750	HDL	R
HDL-4429-H *	36.500	38.000	0.750	HDL	H
HDL-4429-V *	36.500	38.000	0.750	HDL	V
HDL-4430-R	36.500	38.500	0.875	HDL	R
HDL-4430-H	36.500	38.500	0.875	HDL	H
HDL-4430-V	36.500	38.500	0.875	HDL	V
HDL-4432-R *	36.750	38.750	0.875	HDL	R
HDL-4432-H *	36.750	38.750	0.875	HDL	H
HDL-4432-V *	36.750	38.750	0.875	HDL	V
HDL-7428-R	36.750	39.250	0.875	HDL	R
HDL-7428-H	36.750	39.250	0.875	HDL	H
HDL-7428-V	36.750	39.250	0.875	HDL	V
HDL-4434-R	37.000	39.000	0.875	HDL	R
HDL-4434-H	37.000	39.000	0.875	HDL	H
HDL-4434-V	37.000	39.000	0.875	HDL	V
HDL-4436-R	37.250	39.250	0.875	HDL	R
HDL-4436-H	37.250	39.250	0.875	HDL	H
HDL-4436-V	37.250	39.250	0.875	HDL	V
HDL-4425-R *	37.374	39.500	0.875	HDL	R
HDL-4425-H *	37.374	39.500	0.875	HDL	H
HDL-4425-V *	37.374	39.500	0.875	HDL	V
HDL-3847-R *	37.437	39.500	0.875	HDL	R
HDL-3847-H *	37.437	39.500	0.875	HDL	H
HDL-3847-V *	37.437	39.500	0.875	HDL	V
HDL-9411-R *	37.500	39.000	0.750	HDL	R
HDL-9411-H *	37.500	39.000	0.750	HDL	H
HDL-9411-V *	37.500	39.000	0.750	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4438-R	37.500	39.500	0.875	HDL	R
HDL-4438-H	37.500	39.500	0.875	HDL	H
HDL-4438-V	37.500	39.500	0.875	HDL	V
HDL-3004-R	38.000	39.500	0.750	HDL	R
HDL-3004-H	38.000	39.500	0.750	HDL	H
HDL-3004-V	38.000	39.500	0.750	HDL	V
HDL-4448-R	38.000	40.000	0.875	HDL	R
HDL-4448-H	38.000	40.000	0.875	HDL	H
HDL-4448-V	38.000	40.000	0.875	HDL	V
HDL-4340-R *	38.000	41.000	0.875	HDL	R
HDL-4340-H *	38.000	41.000	0.875	HDL	H
HDL-4340-V *	38.000	41.000	0.875	HDL	V
HDL-4454-R	38.250	40.250	0.875	HDL	R
HDL-4454-H	38.250	40.250	0.875	HDL	H
HDL-4454-V	38.250	40.250	0.875	HDL	V
HDL-4567-R *	38.250	40.750	0.875	HDL	R
HDL-4567-H *	38.250	40.750	0.875	HDL	H
HDL-4567-V *	38.250	40.750	0.875	HDL	V
HDL-4569-R *	38.250	41.250	0.875	HDL	R
HDL-4569-H *	38.250	41.250	0.875	HDL	H
HDL-4569-V *	38.250	41.250	0.875	HDL	V
HDL-4342-R *	38.258	40.750	0.875	HDL	R
HDL-4342-H *	38.258	40.750	0.875	HDL	H
HDL-4342-V *	38.258	40.750	0.875	HDL	V
HDL-4349-R *	38.500	41.000	0.875	HDL	R
HDL-4349-H *	38.500	41.000	0.875	HDL	H
HDL-4349-V *	38.500	41.000	0.875	HDL	V
HDL-4456-R *	38.750	40.750	0.875	HDL	R
HDL-4456-H *	38.750	40.750	0.875	HDL	H
HDL-4456-V *	38.750	40.750	0.875	HDL	V
HDL-4570-R	38.750	41.000	0.875	HDL	R
HDL-4570-H	38.750	41.000	0.875	HDL	H
HDL-4570-V	38.750	41.000	0.875	HDL	V
HDL-4462-R *	38.937	41.000	0.875	HDL	R
HDL-4462-H *	38.937	41.000	0.875	HDL	H
HDL-4462-V *	38.937	41.000	0.875	HDL	V
HDL-4465-R	39.000	41.000	0.875	HDL	R
HDL-4465-H	39.000	41.000	0.875	HDL	H
HDL-4465-V	39.000	41.000	0.875	HDL	V
HDL-4350-R *	39.000	41.500	0.875	HDL	R
HDL-4350-H *	39.000	41.500	0.875	HDL	H
HDL-4350-V *	39.000	41.500	0.875	HDL	V
HDL-4577-R *	39.000	42.250	0.875	HDL	R
HDL-4577-H *	39.000	42.250	0.875	HDL	H
HDL-4577-V *	39.000	42.250	0.875	HDL	V
HDL-7538-R	39.750	42.250	0.875	HDL	R
HDL-7538-H	39.750	42.250	0.875	HDL	H
HDL-7538-V	39.750	42.250	0.875	HDL	V
HDL-4467-R	40.000	42.000	0.875	HDL	R
HDL-4467-H	40.000	42.000	0.875	HDL	H
HDL-4467-V	40.000	42.000	0.875	HDL	V
HDL-8791-R *	40.000	42.500	0.875	HDL	R
HDL-8791-H *	40.000	42.500	0.875	HDL	H
HDL-8791-V *	40.000	42.500	0.875	HDL	V
HDL-8599-R *	40.000	42.500	1.000	HDL	R
HDL-8599-H *	40.000	42.500	1.000	HDL	H
HDL-8599-V *	40.000	42.500	1.000	HDL	V
HDL-4468-R *	40.500	42.500	0.875	HDL	R
HDL-4468-H *	40.500	42.500	0.875	HDL	H
HDL-4468-V *	40.500	42.500	0.875	HDL	V
HDL-7300-R *	40.500	43.000	0.875	HDL	R
HDL-7300-H *	40.500	43.000	0.875	HDL	H
HDL-7300-V *	40.500	43.000	0.875	HDL	V
HDL-1964-R *	40.500	43.020	0.875	HDL	R
HDL-1964-H *	40.500	43.020	0.875	HDL	H
HDL-1964-V *	40.500	43.020	0.875	HDL	V
HDL-4635-R	41.500	43.500	0.875	HDL	R
HDL-4635-H	41.500	43.500	0.875	HDL	H
HDL-4635-V	41.500	43.500	0.875	HDL	V
HDL-8628-R	41.875	43.500	1.000	HDL	R
HDL-8628-H	41.875	43.500	1.000	HDL	H
HDL-8628-V	41.875	43.500	1.000	HDL	V
HDL-4470-R	42.248	44.248	1.000	HDL	R
HDL-4470-H	42.248	44.248	1.000	HDL	H
HDL-4470-V	42.248	44.248	1.000	HDL	V
HDL-5555-R *	42.500	44.250	0.875	HDL	R
HDL-5555-H *	42.500	44.250	0.875	HDL	H
HDL-5555-V *	42.500	44.250	0.875	HDL	V
HDL-4473-R	42.500	45.000	0.875	HDL	R
HDL-4473-H	42.500	45.000	0.875	HDL	H
HDL-4473-V	42.500	45.000	0.875	HDL	V
HDL-6269-R *	42.500	45.500	0.875	HDL	R
HDL-6269-H *	42.500	45.500	0.875	HDL	H
HDL-6269-V *	42.500	45.500	0.875	HDL	V
HDL-7189-R *	43.000	45.500	0.875	HDL	R
HDL-7189-H *	43.000	45.500	0.875	HDL	H
HDL-7189-V *	43.000	45.500	0.875	HDL	V
HDL-9994-R	43.000	45.500	1.000	HDL	R
HDL-9994-H	43.000	45.500	1.000	HDL	H
HDL-9994-V	43.000	45.500	1.000	HDL	V

* Contact SKF for availability

LDS section – HDL inch size listing – (cont.)

Stock no.	Shaft	Inch bore	Width	Type and style	Lip
HDL-4637-R	43.500	45.500	0.875	HDL	R
HDL-4637-H	43.500	45.500	0.875	HDL	H
HDL-4637-V	43.500	45.500	0.875	HDL	V
HDL-4638-R	43.750	45.750	0.875	HDL	R
HDL-4638-H	43.750	45.750	0.875	HDL	H
HDL-4638-V	43.750	45.750	0.875	HDL	V
HDL-7087-R *	44.000	46.000	0.875	HDL	R
HDL-7087-H *	44.000	46.000	0.875	HDL	H
HDL-7087-V *	44.000	46.000	0.875	HDL	V
HDL-4475-R	44.000	46.500	0.875	HDL	R
HDL-4475-H	44.000	46.500	0.875	HDL	H
HDL-4475-V	44.000	46.500	0.875	HDL	V
HDL-3024-R	44.000	46.500	1.000	HDL	R
HDL-3024-H	44.000	46.500	1.000	HDL	H
HDL-3024-V	44.000	46.500	1.000	HDL	V
HDL-4563-R	44.500	46.000	0.750	HDL	R
HDL-4563-H	44.500	46.000	0.750	HDL	H
HDL-4563-V	44.500	46.000	0.750	HDL	V
HDL-8903-R	45.000	46.625	1.000	HDL	R
HDL-8903-H	45.000	46.625	1.000	HDL	H
HDL-8903-V	45.000	46.625	1.000	HDL	V
HDL-3006-R	46.004	47.500	0.750	HDL	R
HDL-3006-H	46.004	47.500	0.750	HDL	H
HDL-3006-V	46.004	47.500	0.750	HDL	V
HDL-4578-R *	46.500	48.500	0.875	HDL	R
HDL-4578-H *	46.500	48.500	0.875	HDL	H
HDL-4578-V *	46.500	48.500	0.875	HDL	V
HDL-8317-R	46.850	48.819	0.875	HDL	R
HDL-8317-H	46.850	48.819	0.875	HDL	H
HDL-8317-V	46.850	48.819	0.875	HDL	V
HDL-8579-R *	48.000	50.000	0.875	HDL	R
HDL-8579-H *	48.000	50.000	0.875	HDL	H
HDL-8579-V *	48.000	50.000	0.875	HDL	V
HDL-4639-R	48.250	50.250	0.875	HDL	R
HDL-4639-H	48.250	50.250	0.875	HDL	H
HDL-4639-V	48.250	50.250	0.875	HDL	V
HDL-6747-R	51.248	53.289	0.875	HDL	R
HDL-6747-H	51.248	53.289	0.875	HDL	H
HDL-6747-V	51.248	53.289	0.875	HDL	V
HDL-1914-R *	51.250	53.300	0.875	HDL	R
HDL-1914-H *	51.250	53.300	0.875	HDL	H
HDL-1914-V *	51.250	53.300	0.875	HDL	V
HDL-5482-R	59.000	61.000	0.875	HDL	R
HDL-5482-H	59.000	61.000	0.875	HDL	H
HDL-5482-V	59.000	61.000	0.875	HDL	V
HDL-8557-R	63.327	65.748	0.787	HDL	R
HDL-8557-H	63.327	65.748	0.787	HDL	H
HDL-8557-V	63.327	65.748	0.787	HDL	V

* Contact SKF for availability

LDS section - HDL metric size listing

Stock no.	Shaft	Metric bore	Width	Type and style	Lip
HDL-3013-R	200.00	240.00	20.00	HDL	R
HDL-3013-H	200.00	240.00	20.00	HDL	H
HDL-3013-V	200.00	240.00	20.00	HDL	V
HDL-3069-R	220.00	250.00	15.00	HDL	R
HDL-3069-H	220.00	250.00	15.00	HDL	H
HDL-3069-V	220.00	250.00	15.00	HDL	V
HDL-3039-V	220.00	250.00	18.00	HDL	R
HDL-3039-H	220.00	250.00	18.00	HDL	H
HDL-3039-V	220.00	250.00	18.00	HDL	V
HDL-3040-R	240.00	270.00	15.00	HDL	R
HDL-3040-H	240.00	270.00	15.00	HDL	H
HDL-3040-V	240.00	270.00	15.00	HDL	V
HDL-3015-R	240.00	280.00	20.00	HDL	R
HDL-3015-H	240.00	280.00	20.00	HDL	H
HDL-3015-V	240.00	280.00	20.00	HDL	V
HDL-7769-R *	270.00	308.00	17.45	HDL	R
HDL-7769-H *	270.00	308.00	17.45	HDL	H
HDL-7769-V *	270.00	308.00	17.45	HDL	V
HDLA-3035-R	270.00	310.00	20.00	HDLA	R
HDLA-3035-H	270.00	310.00	20.00	HDLA	H
HDLA-3035-V	270.00	310.00	20.00	HDLA	V
HDL-7391-R *	280.00	320.00	19.98	HDL	R
HDL-7391-H *	280.00	320.00	19.98	HDL	H
HDL-7391-V *	280.00	320.00	19.98	HDL	V
HDL-4039-R	280.00	340.00	20.62	HDL	R
HDL-4039-H	280.00	340.00	20.62	HDL	H
HDL-4039-V	280.00	340.00	20.62	HDL	V
HDL-3007-R	330.00	370.00	18.00	HDL	R
HDL-3007-H	330.00	370.00	18.00	HDL	H
HDL-3007-V	330.00	370.00	18.00	HDL	V
HDLA-3036-R	340.00	380.00	18.00	HDLA	R
HDLA-3036-H	340.00	380.00	18.00	HDLA	H
HDLA-3036-V	340.00	380.00	18.00	HDLA	V
HDL-9996-R	360.00	404.00	17.45	HDL	R
HDL-9996-H	360.00	404.00	17.45	HDL	H
HDL-9996-V	360.00	404.00	17.45	HDL	V
HDL-4616-R	390.00	430.00	16.00	HDL	R
HDL-4616-H	390.00	430.00	16.00	HDL	H
HDL-4616-V	390.00	430.00	16.00	HDL	V
HDL-3038-R	400.00	440.00	20.00	HDL	R
HDL-3038-H	400.00	440.00	20.00	HDL	H
HDL-3038-V	400.00	440.00	20.00	HDL	V
HDL-4169-R *	400.00	450.00	17.45	HDL	R
HDL-4169-H *	400.00	450.00	17.45	HDL	H
HDL-4169-V *	400.00	450.00	17.45	HDL	V
HDL-8504-R *	420.00	460.00	17.45	HDL	R
HDL-8504-H *	420.00	460.00	17.45	HDL	H
HDL-8504-V *	420.00	460.00	17.45	HDL	V
HDL-3010-R	420.00	460.00	20.00	HDL	R
HDL-3010-H	420.00	460.00	20.00	HDL	H
HDL-3010-V	420.00	460.00	20.00	HDL	V
HDL-8792-R *	420.00	470.00	17.45	HDL	R
HDL-8792-H *	420.00	470.00	17.45	HDL	H
HDL-8792-V *	420.00	470.00	17.45	HDL	V
HDL-4192-R	440.00	480.00	20.00	HDL	R
HDL-4192-H	440.00	480.00	20.00	HDL	H
HDL-4192-V	440.00	480.00	20.00	HDL	V
HDL-3029-R	470.00	520.00	22.00	HDL	R
HDL-3029-H	470.00	520.00	22.00	HDL	H
HDL-3029-V	470.00	520.00	22.00	HDL	V
HDL-3062-R	470.00	530.00	20.00	HDL	R
HDL-3062-H	470.00	530.00	20.00	HDL	H
HDL-3062-V	470.00	530.00	20.00	HDL	V
HDL-7281-R *	480.00	520.00	20.00	HDL	R
HDL-7281-H *	480.00	520.00	20.00	HDL	H
HDL-7281-V *	480.00	520.00	20.00	HDL	V
HDL-4220-R	485.00	535.00	19.00	HDL	R
HDL-4220-H	485.00	535.00	19.00	HDL	H
HDL-4220-V	485.00	535.00	19.00	HDL	V
HDL-4232-R	500.00	550.00	19.00	HDL	R
HDL-4232-H	500.00	550.00	19.00	HDL	H
HDL-4232-V	500.00	550.00	19.00	HDL	V
HDL-4238-R *	508.00	560.00	25.00	HDL	R
HDL-4238-H *	508.00	560.00	25.00	HDL	H
HDL-4238-V *	508.00	560.00	25.00	HDL	V
HDL-9997-R	513.00	543.00	16.00	HDL	R
HDL-9997-H	513.00	543.00	16.00	HDL	H
HDL-9997-V	513.00	543.00	16.00	HDL	V
HDL-3025-R	520.00	560.00	18.00	HDL	R
HDL-3025-H	520.00	560.00	18.00	HDL	H
HDL-3025-V	520.00	560.00	18.00	HDL	V
HDL-3027-R	520.00	570.00	22.00	HDL	R
HDL-3027-H	520.00	570.00	22.00	HDL	H
HDL-3027-V	520.00	570.00	22.00	HDL	V
HDL-4244-R	530.00	580.00	20.62	HDL	R
HDL-4244-H	530.00	580.00	20.62	HDL	H
HDL-4244-V	530.00	580.00	20.62	HDL	V
HDL-3044-R	540.00	578.00	15.00	HDL	R
HDL-3044-H	540.00	578.00	15.00	HDL	H
HDL-3044-V	540.00	578.00	15.00	HDL	V

* Contact SKF for availability

LDS section - HDL metric size listing - (cont.)

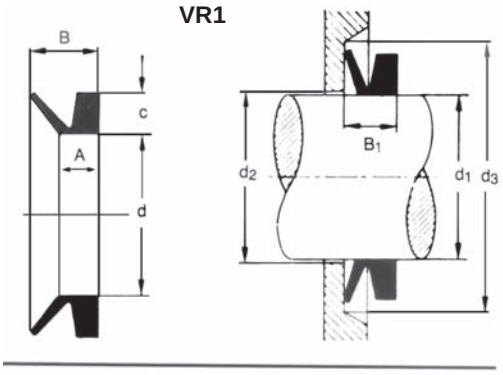
Stock no.	Shaft	Metric bore	Width	Type and style	Lip
HDL-7393-R	540.00	590.00	24.98	HDL	R
HDL-7393-H	540.00	590.00	24.98	HDL	H
HDL-7393-V	540.00	590.00	24.98	HDL	V
HDL-7266-R *	560.00	610.00	20.00	HDL	R
HDL-7266-H *	560.00	610.00	20.00	HDL	H
HDL-7266-V *	560.00	610.00	20.00	HDL	V
HDL-9995-R	565.00	601.00	20.00	HDL	R
HDL-9995-H	565.00	601.00	20.00	HDL	H
HDL-9995-V	565.00	601.00	20.00	HDL	V
HDL-3061-R	570.00	630.00	20.00	HDL	R
HDL-3061-H	570.00	630.00	20.00	HDL	H
HDL-3061-V	570.00	630.00	20.00	HDL	V
HDL-3053-R	580.00	620.00	20.00	HDL	R
HDL-3053-H	580.00	620.00	20.00	HDL	H
HDL-3053-V	580.00	620.00	20.00	HDL	V
HDL-8624-R	600.00	640.00	20.00	HDL	R
HDL-8624-H	600.00	640.00	20.00	HDL	H
HDL-8624-V	600.00	640.00	20.00	HDL	V
HDL-3020-R	630.00	670.00	20.00	HDL	R
HDL-3020-V	630.00	670.00	20.00	HDL	V
HDL-3020-H	630.00	670.00	20.00	HDL	H
HDL-3059-R	630.00	690.00	20.00	HDL	R
HDL-3059-H	630.00	690.00	20.00	HDL	H
HDL-3059-V	630.00	690.00	20.00	HDL	V
HDL-3019-R	640.00	680.00	20.00	HDL	R
HDL-3019-H	640.00	680.00	20.00	HDL	H
HDL-3019-V	640.00	680.00	20.00	HDL	V
HDL-3016-R	650.00	714.00	25.00	HDL	R
HDL-3016-H	650.00	714.00	25.00	HDL	H
HDL-3016-V	650.00	714.00	25.00	HDL	V
HDL-9992-R	668.00	706.00	25.40	HDL	R
HDL-9992-H	668.00	706.00	25.40	HDL	H
HDL-9992-V	668.00	706.00	25.40	HDL	V
HDL-3054-R	690.00	730.00	20.00	HDL	R
HDL-3054-H	690.00	730.00	20.00	HDL	H
HDL-3054-V	690.00	730.00	20.00	HDL	V
HDL-4629-R	750.00	814.00	25.00	HDL	R
HDL-4629-H	750.00	814.00	25.00	HDL	H
HDL-4629-V	750.00	814.00	25.00	HDL	V
HDL-3037-R	760.00	804.00	18.00	HDL	R
HDL-3037-H	760.00	804.00	18.00	HDL	H
HDL-3037-V	760.00	804.00	18.00	HDL	V
HDL-3048-V	762.00	800.00	15.00	HDL	R
HDL-3048-H	762.00	800.00	15.00	HDL	H
HDL-3048-H	762.00	800.00	15.00	HDL	H

Stock no.	Shaft	Metric bore	Width	Type and style	Lip
HDL-3032-R	780.00	844.00	25.00	HDL	R
HDL-3032-H	780.00	844.00	25.00	HDL	H
HDL-3032-V	780.00	844.00	25.00	HDL	V
HDL-6666-R	790.00	854.00	25.00	HDL	R
HDL-6666-H	790.00	854.00	25.00	HDL	H
HDL-6666-V	790.00	854.00	25.00	HDL	V
HDL-3009-R	837.00	889.00	22.22	HDL	R
HDL-3009-H	837.00	889.00	22.22	HDL	H
HDL-3009-V	837.00	889.00	22.22	HDL	V
HDL-3034-R	840.00	904.00	25.00	HDL	R
HDL-3034-H	840.00	904.00	25.00	HDL	H
HDL-3034-V	840.00	904.00	25.00	HDL	V
HDL-3065-V	905.00	955.00	22.00	HDL	R
HDL-3065-H	905.00	955.00	22.00	HDL	H
HDL-3065-V	905.00	955.00	22.00	HDL	V
HDL-3026-R	930.00	980.00	22.22	HDL	R
HDL-3026-H	930.00	980.00	22.22	HDL	H
HDL-3026-V	930.00	980.00	22.22	HDL	V
HDL-9998-R	990.00	1040.00	25.00	HDL	R
HDL-9998-H	990.00	1040.00	25.00	HDL	H
HDL-9998-V	990.00	1040.00	25.00	HDL	V
HDL-1073-R *	1000.00	1050.00	22.22	HDL	R
HDL-1073-H *	1000.00	1050.00	22.22	HDL	H
HDL-1073-V *	1000.00	1050.00	22.22	HDL	V
HDL-3012-R	1055.00	1100.00	25.00	HDL	R
HDL-3012-H	1055.00	1100.00	25.00	HDL	H
HDL-3012-V	1055.00	1100.00	25.00	HDL	V
HDL-4640-R	1105.00	1160.00	22.00	HDL	R
HDL-4640-H	1105.00	1160.00	22.00	HDL	H
HDL-4640-V	1105.00	1160.00	22.00	HDL	V
HDL-7065-R *	1350.00	1414.00	22.00	HDL	R
HDL-7065-H *	1350.00	1414.00	22.00	HDL	H
HDL-7065-V *	1350.00	1414.00	22.00	HDL	V
HDL-3028-R	1350.00	1415.00	25.00	HDL	R
HDL-3028-H	1350.00	1415.00	25.00	HDL	H
HDL-3028-V	1350.00	1415.00	25.00	HDL	V
HDL-8594-R	1380.00	1440.00	25.00	HDL	R
HDL-8594-H	1380.00	1440.00	25.00	HDL	H
HDL-8594-V	1380.00	1440.00	25.00	HDL	V
HDL-9010-R	1890.00	1954.00	25.00	HDL	R
HDL-9010-H	1890.00	1954.00	25.00	HDL	H
HDL-9010-V	1890.00	1954.00	25.00	HDL	V

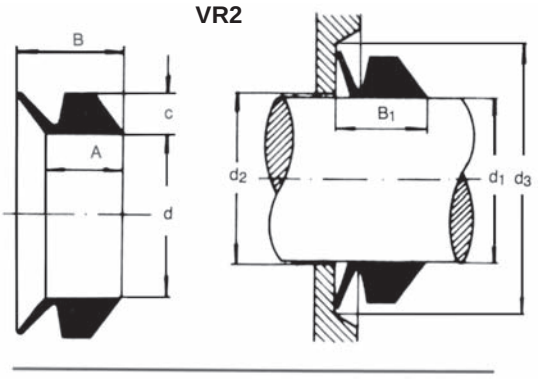
* Contact SKF for availability

V-Ring size listing

VR1

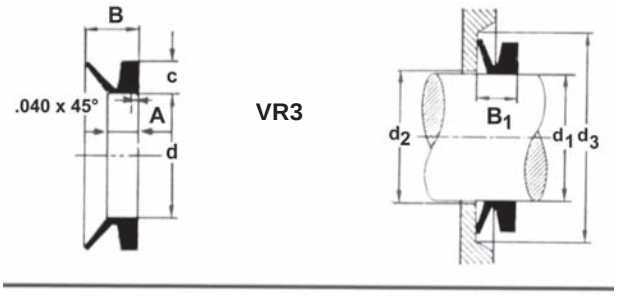


VR2



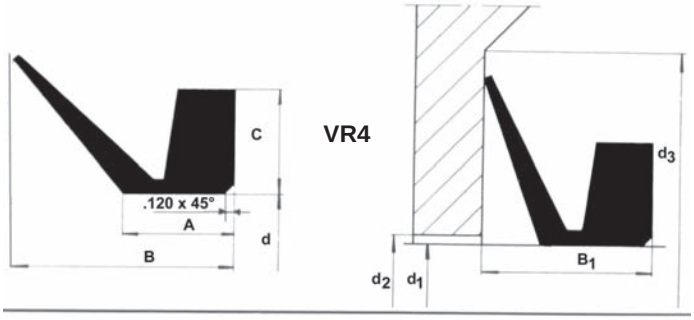
Profile dimensions Assembly dimensions

VR3



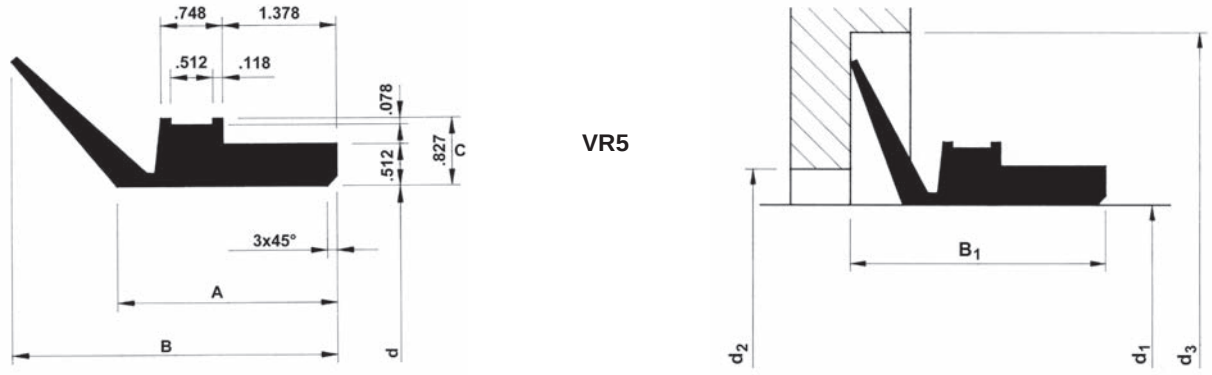
Profile dimensions Assembly dimensions

VR4



Profile dimensions Assembly dimensions

VR5



Profile dimensions Assembly dimensions

VR6

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
400030	0.110-0.140	.100	.060	.080	.120	.040	.160	.100±.012	VR1	R	3mm
400034	0.110-0.140	.100	.060	.080	.120	.040	.160	.100±.012	VR1	V	3mm
400040	0.140-0.180	.130	.080	.090	.150	.040	.240	.120±.016	VR1	R	4mm
400044	0.140-0.180	.130	.080	.090	.150	.040	.240	.120±.016	VR1	V	4mm
400050	0.180-0.210	.160	.080	.090	.150	.040	.240	.120±.016	VR1	R	5mm
400054	0.180-0.210	.160	.080	.090	.150	.040	.240	.120±.016	VR1	V	5mm
400051	0.180-0.210	.160	.080	.150	.200	.040	.240	.180±.016	VR2	R	5mm
400055	0.180-0.210	.160	.080	.150	.200	.040	.240	.180±.016	VR2	V	5mm
400060	0.210-0.260	.200	.080	.090	.150	.040	.240	.120±.016	VR1	R	6mm
400064	0.210-0.260	.200	.080	.090	.150	.040	.240	.120±.016	VR1	V	6mm
400061	0.210-0.260	.200	.080	.150	.200	.040	.240	.180±.016	VR2	R	6mm
400065	0.210-0.260	.200	.080	.150	.200	.040	.240	.180±.016	VR2	V	6mm
400070	0.260-0.315	.240	.080	.090	.150	.040	.240	.120±.016	VR1	R	7mm
400074	0.260-0.315	.240	.080	.090	.150	.040	.240	.120±.016	VR1	V	7mm
400071	0.260-0.315	.240	.080	.150	.200	.040	.240	.180±.016	VR2	R	7mm
400075	0.260-0.315	.240	.080	.150	.200	.040	.240	.180±.016	VR2	V	7mm
400080	0.315-0.370	.280	.080	.090	.150	.040	.240	.120±.016	VR1	R	8mm
400084	0.315-0.370	.280	.080	.090	.150	.040	.240	.120±.016	VR1	V	8mm
400081	0.315-0.370	.280	.080	.150	.200	.040	.240	.180±.016	VR2	R	8mm
400085	0.315-0.370	.280	.080	.150	.200	.040	.240	.180±.016	VR2	V	8mm
400100	0.370-0.450	.350	.120	.130	.220	.080	.350	.180±.020	VR1	R	10mm
400104	0.370-0.450	.350	.120	.130	.220	.080	.350	.180±.020	VR1	V	10mm
400101	0.370-0.450	.350	.120	.220	.300	.080	.350	.260±.020	VR2	R	10mm
400105	0.370-0.450	.350	.120	.220	.300	.080	.350	.260±.020	VR2	V	10mm
400120	0.450-0.530	.410	.120	.130	.220	.080	.350	.180±.020	VR1	R	12mm
400124	0.450-0.530	.410	.120	.130	.220	.080	.350	.180±.020	VR1	V	12mm
400121	0.450-0.530	.410	.120	.220	.300	.080	.350	.260±.020	VR2	R	12mm
400125	0.450-0.530	.410	.120	.220	.300	.080	.350	.260±.020	VR2	V	12mm
400130	0.490-0.570	.450	.120	.130	.220	.080	.350	.180±.020	VR1	R	13mm
400134	0.490-0.570	.450	.120	.130	.220	.080	.350	.180±.020	VR1	V	13mm
400140	0.530-0.413	.490	.120	.130	.220	.080	.350	.180±.020	VR1	R	14mm
400144	0.530-0.413	.490	.120	.130	.220	.080	.350	.180±.020	VR1	V	14mm
400141	0.530-0.413	.490	.120	.220	.300	.080	.350	.260±.020	VR2	R	14mm
400145	0.530-0.413	.490	.120	.220	.300	.080	.350	.260±.020	VR2	V	14mm
400160	0.413-0.690	.550	.120	.130	.220	.080	.350	.180±.020	VR1	R	16mm
400164	0.413-0.690	.550	.120	.130	.220	.080	.350	.180±.020	VR1	V	16mm
400161	0.413-0.690	.550	.120	.220	.300	.080	.350	.260±.020	VR2	R	16mm
400165	0.413-0.690	.550	.120	.220	.300	.080	.350	.260±.020	VR2	V	16mm
400180	0.690-0.748	.630	.120	.130	.220	.080	.350	.180±.020	VR1	R	18mm
400184	0.690-0.748	.630	.120	.130	.220	.080	.350	.180±.020	VR1	V	18mm
400181	0.690-0.770	.630	.120	.220	.300	.080	.350	.260±.020	VR2	R	18mm
400185	0.690-0.770	.630	.120	.220	.300	.080	.350	.260±.020	VR2	V	18mm
400200	0.748-0.827	.710	.160	.190	.300	.080	.470	.240±.030	VR1	R	20mm
400204	0.748-0.827	.710	.160	.190	.300	.080	.470	.240±.030	VR1	V	20mm
400201	0.770-0.827	.710	.160	.310	.410	.080	.470	.354±.030	VR2	R	20mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
400205	0.770-0.827	.710	.160	.310	.410	.080	.470	.354±.030	VR2	V	20mm
400220	0.827-0.950	.790	.160	.190	.300	.080	.470	.240±.030	VR1	R	22mm
400224	0.827-0.950	.790	.160	.190	.300	.080	.470	.240±.030	VR1	V	22mm
400221	0.827-0.950	.790	.160	.310	.410	.080	.470	.354±.030	VR2	R	22mm
400225	0.827-0.950	.790	.160	.310	.410	.080	.470	.354±.030	VR2	V	22mm
400250	0.950-1.070	.788	.160	.190	.300	.080	.470	.240±.030	VR1	R	25mm
400254	0.950-1.070	.788	.160	.190	.300	.080	.470	.240±.030	VR1	V	25mm
400251	0.950-1.070	.788	.160	.310	.410	.080	.470	.354±.030	VR2	R	25mm
400255	0.950-1.070	.788	.160	.310	.410	.080	.470	.354±.030	VR2	V	25mm
400280	1.070-1.140	.980	.160	.190	.300	.120	.470	.240±.030	VR1	R	28mm
400284	1.070-1.140	.980	.160	.190	.300	.120	.470	.240±.030	VR1	V	28mm
400281	1.070-1.140	.980	.160	.310	.410	.120	.470	.354±.030	VR2	R	28mm
400285	1.070-1.140	.980	.160	.310	.410	.120	.470	.354±.030	VR2	V	28mm
400300	1.140-1.220	1.060	.160	.190	.300	.120	.470	.240±.030	VR1	R	30mm
400304	1.140-1.220	1.060	.160	.190	.300	.120	.470	.240±.030	VR1	V	30mm
400301	1.140-1.220	1.060	.160	.310	.410	.120	.470	.354±.030	VR2	R	30mm
400305	1.140-1.220	1.060	.160	.310	.410	.120	.470	.354±.030	VR2	V	30mm
400320	1.220-1.300	1.140	.160	.190	.300	.120	.470	.240±.030	VR1	R	32mm
400324	1.220-1.300	1.140	.160	.190	.300	.120	.470	.240±.030	VR1	V	32mm
400321	1.220-1.300	1.140	.160	.310	.410	.120	.470	.354±.030	VR2	R	32mm
400325	1.220-1.300	1.140	.160	.310	.410	.120	.470	.354±.030	VR2	V	32mm
400350	1.300-1.420	1.220	.160	.190	.300	.120	.470	.240±.030	VR1	R	35mm
400354	1.300-1.420	1.220	.160	.190	.300	.120	.470	.240±.030	VR1	V	35mm
400351	1.300-1.420	1.220	.160	.310	.410	.120	.470	.354±.030	VR2	R	35mm
400355	1.300-1.420	1.220	.160	.310	.410	.120	.470	.354±.030	VR2	V	35mm
400380	1.420-1.500	1.340	.160	.190	.300	.120	.470	.240±.030	VR1	R	38mm
400384	1.420-1.500	1.340	.160	.190	.300	.120	.470	.240±.030	VR1	V	38mm
400381	1.420-1.500	1.340	.160	.310	.410	.120	.470	.354±.030	VR2	R	38mm
400385	1.420-1.500	1.340	.160	.310	.410	.120	.470	.354±.030	VR2	V	38mm
400400	1.500-1.700	1.420	.200	.220	.350	.120	.590	.280±.039	VR1	R	40mm
400404	1.500-1.700	1.420	.200	.220	.350	.120	.590	.280±.039	VR1	V	40mm
400401	1.500-1.700	1.420	.200	.370	.510	.120	.590	.433±.039	VR2	R	40mm
400405	1.500-1.700	1.420	.200	.370	.510	.120	.590	.433±.039	VR2	V	40mm
400450	1.700-1.889	1.570	.200	.220	.350	.120	.590	.280±.039	VR1	R	45mm
400454	1.700-1.889	1.570	.200	.220	.350	.120	.590	.280±.039	VR1	V	45mm
400451	1.700-1.889	1.570	.200	.370	.510	.120	.590	.433±.039	VR2	R	45mm
400455	1.700-1.889	1.570	.200	.370	.510	.120	.590	.433±.039	VR2	V	45mm
400500	1.889-2.090	1.772	.200	.220	.350	.120	.590	.280±.039	VR1	R	50mm
400504	1.889-2.090	1.772	.200	.220	.350	.120	.590	.280±.039	VR1	V	50mm
400501	1.889-2.090	1.772	.200	.370	.510	.120	.590	.433±.039	VR2	R	50mm
400505	1.889-2.090	1.772	.200	.370	.510	.120	.590	.433±.039	VR2	V	50mm
400550	2.090-2.290	1.930	.200	.220	.350	.120	.590	.280±.039	VR1	R	55mm
400554	2.090-2.290	1.930	.200	.220	.350	.120	.590	.280±.039	VR1	V	55mm
400551	2.090-2.290	1.930	.200	.370	.510	.120	.590	.433±.039	VR2	R	55mm
400555	2.090-2.290	1.930	.200	.370	.510	.120	.590	.433±.039	VR2	V	55mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
400600	2.290-2.480	2.130	.200	.220	.350	.120	.590	.280±.039	VR1	R	60mm
400604	2.290-2.480	2.130	.200	.220	.350	.120	.590	.280±.039	VR1	V	60mm
400601	2.290-2.480	2.130	.200	.370	.510	.120	.590	.433±.039	VR2	R	60mm
400605	2.290-2.480	2.130	.200	.370	.510	.120	.590	.433±.039	VR2	V	60mm
400650	2.480-2.680	2.280	.200	.220	.350	.120	.590	.280±.039	VR1	R	65mm
400654	2.480-2.680	2.280	.200	.220	.350	.120	.590	.280±.039	VR1	V	65mm
400659	2.480-2.680	2.280	.200	.220	.350	.120	.590	.280±.039	VR1-SPL	R	65mm
400651	2.480-2.680	2.280	.200	.370	.510	.120	.590	.433±.039	VR2	R	65mm
400655	2.480-2.680	2.280	.200	.370	.510	.120	.590	.433±.039	VR2	V	65mm
400700	2.680-2.874	2.480	.240	.270	.430	.160	.710	.354±.047	VR1	R	70mm
400704	2.680-2.874	2.480	.240	.270	.430	.160	.710	.354±.047	VR1	V	70mm
400701	2.680-2.874	2.480	.240	.440	.610	.160	.710	.530±.047	VR2	R	70mm
400705	2.680-2.874	2.480	.240	.440	.610	.160	.710	.530±.047	VR2	V	70mm
400750	2.874-3.070	2.640	.240	.270	.430	.160	.710	.354±.047	VR1	R	75mm
400754	2.874-3.070	2.640	.240	.270	.430	.160	.710	.354±.047	VR1	V	75mm
400751	2.874-3.070	2.640	.240	.440	.610	.160	.710	.530±.047	VR2	R	75mm
400755	2.874-3.070	2.640	.240	.440	.610	.160	.710	.530±.047	VR2	V	75mm
400800	3.070-3.270	2.787	.240	.270	.430	.160	.710	.354±.047	VR1	R	80mm
400804	3.070-3.270	2.787	.240	.270	.430	.160	.710	.354±.047	VR1	V	80mm
400801	3.070-3.270	2.787	.240	.440	.610	.160	.710	.530±.047	VR2	R	80mm
400805	3.070-3.270	2.787	.240	.440	.610	.160	.710	.530±.047	VR2	V	80mm
400851	3.270-3.472	2.940	.240	.440	.610	.160	.710	.530±.047	VR2	R	85mm
400855	3.270-3.472	2.940	.240	.440	.610	.160	.710	.530±.047	VR2	V	85mm
400850	3.270-3.472	2.990	.240	.270	.430	.160	.710	.354±.047	VR1	R	85mm
400854	3.270-3.472	2.990	.240	.270	.430	.160	.710	.354±.047	VR1	V	85mm
400900	3.472-3.660	3.190	.240	.270	.430	.160	.710	.354±.047	VR1	R	90mm
400904	3.472-3.660	3.190	.240	.270	.430	.160	.710	.354±.047	VR1	V	90mm
400901	3.472-3.660	3.190	.240	.440	.610	.160	.710	.530±.047	VR2	R	90mm
400905	3.472-3.660	3.190	.240	.440	.610	.160	.710	.530±.047	VR2	V	90mm
400950	3.660-3.787	3.350	.240	.270	.430	.160	.710	.354±.047	VR1	R	95mm
400954	3.660-3.787	3.350	.240	.270	.430	.160	.710	.354±.047	VR1	V	95mm
400951	3.660-3.787	3.350	.240	.440	.610	.160	.710	.530±.047	VR2	R	95mm
400955	3.660-3.787	3.350	.240	.440	.610	.160	.710	.530±.047	VR2	V	95mm
401000	3.787-4.140	3.540	.240	.270	.430	.160	.710	.354±.047	VR1	R	100mm
401004	3.787-4.140	3.540	.240	.270	.430	.160	.710	.354±.047	VR1	V	100mm
401001	3.787-4.140	3.540	.240	.440	.610	.160	.710	.530±.047	VR2	R	100mm
401005	3.787-4.140	3.540	.240	.440	.610	.160	.710	.530±.047	VR2	V	100mm
401100	4.140-4.528	3.900	.280	.310	.500	.160	.787	.413±.059	VR1	R	110mm
401104	4.140-4.528	3.900	.280	.310	.500	.160	.787	.413±.059	VR1	V	110mm
401101	4.140-4.528	3.900	.280	.520	.710	.160	.787	.610±.059	VR2	R	110mm
401105	4.140-4.528	3.900	.280	.520	.710	.160	.787	.610±.059	VR2	V	110mm
401200	4.528-4.920	4.250	.280	.310	.500	.160	.787	.413±.059	VR1	R	120mm
401204	4.528-4.920	4.250	.280	.310	.500	.160	.787	.413±.059	VR1	V	120mm
401208	4.528-4.917	4.250	.280	.310	.500	.160	.787	.413±.059	VR1-SPL	#	120mm
401201	4.528-4.920	4.250	.280	.520	.710	.160	.787	.610±.059	VR2	R	120mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1 (Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
401205	4.528-4.920	4.250	.280	.520	.710	.160	.787	.610±.059	VR2	V	120mm
401202*	4.528-4.920	4.250	.260	.240	.410	.200	.787	.315±.059	VR3	R	120mm
401206*	4.528-4.920	4.250	.260	.240	.410	.200	.787	.315±.059	VR3	V	120mm
401300	4.920-5.320	4.610	.280	.310	.500	.160	.787	.413±.059	VR1	R	130mm
401304	4.920-5.320	4.610	.280	.310	.500	.160	.787	.413±.059	VR1	V	130mm
401301	4.920-5.320	4.610	.280	.520	.710	.160	.787	.610±.059	VR2	R	130mm
401305	4.920-5.320	4.610	.280	.520	.710	.160	.787	.610±.059	VR2	V	130mm
401400	5.320-5.709	4.960	.280	.310	.500	.160	.787	.413±.059	VR1	R	140mm
401404	5.320-5.709	4.960	.280	.310	.500	.160	.787	.413±.059	VR1	V	140mm
401401	5.320-5.709	4.960	.280	.520	.710	.160	.787	.610±.059	VR2	R	140mm
401405	5.320-5.709	4.960	.280	.520	.710	.160	.787	.610±.059	VR2	V	140mm
401402	5.320-5.709	4.960	.260	.240	.410	.197	.787	.315±.059	VR3	R	140mm
401406	5.320-5.709	4.960	.260	.240	.410	.197	.787	.315±.059	VR3	V	140mm
401500	5.709-6.102	5.310	.280	.310	.500	.160	.787	.413±.059	VR1	R	150mm
401504	5.709-6.102	5.310	.280	.310	.500	.160	.787	.413±.059	VR1	V	150mm
401501	5.709-6.102	5.310	.280	.520	.710	.160	.787	.610±.059	VR2	R	150mm
401505	5.709-6.102	5.310	.280	.520	.710	.160	.787	.610±.059	VR2	V	150mm
401502	5.709-6.102	5.310	.260	.240	.410	.197	.787	.315±.059	VR3	R	150mm
401506	5.709-6.102	5.310	.260	.240	.410	.197	.787	.315±.059	VR3	V	150mm
401600	6.102-6.496	5.670	.310	.350	.570	.157	.940	.472±.070	VR1	R	160mm
401604	6.102-6.496	5.670	.310	.350	.570	.157	.940	.472±.070	VR1	V	160mm
401608	6.102-6.496	5.670	.310	.350	.570	.157	.940	.472±.070	VR1-SPL	#	160mm
401601	6.102-6.496	5.670	.310	.590	.787	.157	.940	.709±.070	VR2	R	160mm
401605	6.102-6.496	5.670	.310	.590	.787	.157	.940	.709±.070	VR2	V	160mm
401602	6.102-6.496	5.670	.260	.240	.410	.197	.787	.315±.059	VR3	R	160mm
401606	6.102-6.496	5.670	.260	.240	.410	.197	.787	.315±.059	VR3	V	160mm
401700	6.496-6.890	6.020	.310	.350	.570	.157	.940	.472±.070	VR1	R	170mm
401704	6.496-6.890	6.020	.310	.350	.570	.157	.940	.472±.070	VR1	V	170mm
401701	6.496-6.890	6.020	.310	.590	.787	.157	.940	.709±.070	VR2	R	170mm
401705	6.496-6.890	6.020	.310	.590	.787	.157	.940	.709±.070	VR2	V	170mm
401702	6.496-6.890	6.020	.260	.240	.410	.197	.787	.315±.059	VR3	R	170mm
401706	6.496-6.890	6.020	.260	.240	.410	.197	.787	.315±.059	VR3	V	170mm
401800	6.890-7.283	6.380	.310	.350	.570	.157	.940	.472±.070	VR1	R	180mm
401804	6.890-7.283	6.380	.310	.350	.570	.157	.940	.472±.070	VR1	V	180mm
401801	6.890-7.283	6.380	.310	.590	.787	.157	.940	.709±.070	VR2	R	180mm
401805	6.890-7.283	6.380	.310	.590	.787	.157	.940	.709±.070	VR2	V	180mm
401802	6.890-7.283	6.380	.260	.240	.410	.197	.787	.315±.059	VR3	R	180mm
401806	6.890-7.283	6.380	.260	.240	.410	.197	.787	.315±.059	VR3	V	180mm
401900	7.283-7.680	6.730	.310	.350	.570	.157	.940	.472±.070	VR1	R	190mm
401904	7.283-7.680	6.730	.310	.350	.570	.157	.940	.472±.070	VR1	V	190mm
401901	7.283-7.680	6.730	.310	.590	.787	.157	.940	.709±.070	VR2	R	190mm
401905	7.283-7.680	6.730	.310	.590	.787	.157	.940	.709±.070	VR2	V	190mm
401902	7.283-7.680	6.730	.260	.240	.410	.197	.787	.315±.059	VR3	R	190mm
401906	7.283-7.680	6.730	.260	.240	.410	.197	.787	.315±.059	VR3	V	190mm
401990	7.680-8.270	7.090	.310	.350	.570	.157	.940	.472±.070	VR1	R	199mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
401994	7.680-8.270	7.090	.310	.350	.570	.157	.940	.472±.070	VR1	V	199mm
402000	7.480-8.270	7.090	.590	.560	.980	.394	1.772	.787±.157	VR1	R	200mm
402004	7.480-8.270	7.090	.590	.560	.980	.394	1.772	.787±.157	VR1	V	200mm
401991	7.680-8.270	7.090	.310	.590	.787	.157	.940	.709±.070	VR2	R	199mm
401995	7.680-8.270	7.090	.310	.590	.787	.157	.940	.709±.070	VR2	V	199mm
402002	7.680-8.270	7.170	.260	.240	.410	.197	.787	.315±.059	VR3	R	200mm
402006	7.680-8.270	7.170	.260	.240	.410	.197	.787	.315±.059	VR3	V	200mm
402200	8.270-9.250	7.787	.590	.560	.980	.394	1.772	.787±.157	VR1	R	220mm
402204	8.270-9.250	7.787	.590	.560	.980	.394	1.772	.787±.157	VR1	V	220mm
402202	8.270-9.170	7.787	.260	.240	.410	.197	.787	.315±.059	VR3	R	220mm
402206	8.270-9.170	7.787	.260	.240	.410	.197	.787	.315±.059	VR3	V	220mm
402500	9.250-10.433	8.788	.590	.560	.980	.394	1.772	.787±.157	VR1	R	250mm
402504	9.250-10.433	8.788	.590	.560	.980	.394	1.772	.787±.157	VR1	V	250mm
402502	9.170-10.240	8.788	.260	.240	.410	.197	.787	.315±.606	VR3	R	250mm
402506	9.170-10.240	8.788	.260	.240	.410	.197	.787	.315±.059	VR3	V	250mm
402750	10.433-11.420	9.720	.590	.560	.980	.394	1.772	.787±.157	VR1	R	275mm
402754	10.433-11.420	9.720	.590	.560	.980	.394	1.772	.787±.157	VR1	V	275mm
402752	10.240-11.220	9.720	.260	.240	.410	.197	.787	.315±.059	VR3	R	275mm
402756	10.240-11.220	9.720	.260	.240	.410	.197	.787	.315±.059	VR3	V	275mm
403000	11.420-12.200	10.630	.590	.560	.980	.394	1.772	.787±.157	VR1	R	300mm
403004	11.420-12.200	10.630	.590	.560	.980	.394	1.772	.787±.157	VR1	V	300mm
403002	11.220-12.200	10.630	.260	.240	.410	.197	.787	.315±.059	VR3	R	300mm
403006	11.220-12.200	10.630	.260	.240	.410	.197	.787	.315±.059	VR3	V	300mm
403250	12.200-13.189	11.500	.590	.560	.980	.394	1.772	.787±.157	VR1	R	325mm
403254	12.200-13.189	11.500	.590	.560	.980	.394	1.772	.787±.157	VR1	V	325mm
403252	12.200-13.189	11.500	.260	.240	.410	.197	.787	.315±.059	VR3	R	325mm
403256	12.200-13.189	11.500	.260	.240	.410	.197	.787	.315±.059	VR3	V	325mm
403003	11.811-12.008	11.575	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	300mm
470300*	11.811-12.000	11.580	.787	2.660	3.930	.940	4.528	3.346±.472	VR5	R	300mm
403053	12.008-12.205	11.772	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	305mm
403103	12.205-12.402	11.969	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	310mm
403153	12.402-12.598	12.165	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	315mm
403203	12.598-12.795	12.362	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	320mm
403500	13.189-14.370	12.400	.590	.560	.980	.394	1.772	.787±.157	VR1	R	350mm
403504	13.189-14.370	12.400	.590	.560	.980	.394	1.772	.787±.157	VR1	V	350mm
403502	13.189-14.370	12.400	.260	.240	.410	.197	.787	.315±.059	VR3	R	350mm
403506	13.189-14.370	12.400	.260	.240	.410	.197	.787	.315±.059	VR3	V	350mm
403253	12.795-12.992	12.559	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	325mm
403303	12.992-13.189	12.717	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	330mm
403353	13.189-13.386	12.913	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	335mm
403403	13.386-13.583	13.110	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	340mm
403750	14.370-15.354	13.270	.590	.560	.980	.394	1.772	.787±.157	VR1	R	375mm
403754	14.370-15.354	13.270	.590	.560	.980	.394	1.772	.787±.157	VR1	V	375mm
403752	14.370-15.150	13.270	.260	.240	.410	.197	.787	.315±.059	VR3	R	375mm
403756	14.370-15.150	13.270	.260	.240	.410	.197	.787	.315±.059	VR3	V	375mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
403453	13.583-13.780	13.307	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	345mm
403503	13.780-13.976	13.504	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	350mm
403553	13.976-14.173	13.661	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	355mm
403603	14.173-14.370	13.788	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	360mm
403653	14.370-14.567	14.055	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	365mm
404000	15.354-16.930	14.170	.590	.560	.980	.394	1.772	.787±.157	VR1	R	400mm
404004	15.354-16.930	14.170	.590	.560	.980	.394	1.772	.787±.157	VR1	V	400mm
404002	15.150-16.730	14.170	.260	.240	.410	.197	.787	.315±.059	VR3	R	400mm
404006	15.150-16.930	14.170	.260	.240	.410	.197	.787	.315±.059	VR3	V	400mm
403703	14.567-14.764	14.252	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	370mm
403753	14.764-14.961	14.449	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	375mm
403803	14.961-15.157	14.606	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	380mm
470380*	14.961-15.157	14.610	.787	2.660	3.940	.940	4.528	3.346±.472	VR5	R	380mm
470385*	15.354-19.685	14.787	.787	2.660	3.940	.940	4.528	3.346±.472	VR5	R	385mm
403853	15.157-15.354	14.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	385mm
403903	15.354-15.551	15.000	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	390mm
404252*	16.142-17.322	15.040	.260	.240	.410	.200	.787	.315±.059	VR3	R	425mm
403953	15.551-15.748	15.197	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	395mm
404003	15.748-15.945	15.394	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	400mm
404053	15.945-16.142	15.591	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	405mm
404103	16.142-16.339	15.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	410mm
404500	16.930-18.898	15.940	.590	.560	.980	.394	1.772	.787±.157	VR1	R	450mm
404504	16.930-18.898	15.940	.590	.560	.980	.394	1.772	.787±.157	VR1	V	450mm
404502	16.730-18.700	15.940	.260	.240	.410	.197	.787	.315±.059	VR3	R	450mm
404506	16.730-18.700	15.940	.260	.240	.410	.197	.787	.315±.059	VR3	V	450mm
404153	16.339-16.535	15.945	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	415mm
404203	16.535-16.732	16.142	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	420mm
404253	16.732-16.929	16.339	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	425mm
404303	16.929-17.126	16.535	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	430mm
404353	17.126-17.323	16.732	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	435mm
404403	17.323-17.520	16.788	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	440mm
404453*	17.520-17.717	17.087	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	445mm
404503	17.717-17.913	17.283	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	450mm
404553	17.913-18.110	17.480	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	455mm
404603	18.110-18.307	17.638	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	460mm
405000	18.898-20.866	17.720	.590	.560	.980	.394	1.772	.787±.157	VR1	R	500mm
405004	18.898-20.866	17.720	.590	.560	.980	.394	1.772	.787±.157	VR1	V	500mm
405002	18.898-20.866	17.720	.260	.240	.410	.197	.787	.315±.059	VR3	R	500mm
405006	18.700-20.080	17.720	.260	.240	.410	.197	.790	.315±.059	VR3	R	500mm
404653	18.307-18.504	17.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	465mm
404703	18.504-18.701	18.031	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	470mm
404753*	18.701-18.898	18.228	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	475mm
404757*	18.701-18.898	18.228	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	475mm
404803	18.898-19.094	18.425	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	480mm
404807*	18.898-19.094	18.425	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	480mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
405252	20.080-21.260	18.580	.260	.240	.410	.197	.787	.315±.059	VR3	R	525mm
404853	19.094-19.291	18.622	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	485mm
404857*	19.094-19.291	18.622	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	485mm
404903	19.291-19.488	18.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	490mm
404953	19.488-19.685	19.016	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	495mm
405003	19.685-19.881	19.213	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	500mm
405007*	19.881-20.079	19.409	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	505mm
405053	19.881-20.079	19.409	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	505mm
405500	20.866-22.835	19.490	.590	.560	.980	.394	1.772	.787±.157	VR1	R	550mm
405504	20.866-22.835	19.490	.590	.560	.980	.394	1.772	.787±.157	VR1	V	550mm
405502	20-870-22.835	19.490	.260	.240	.410	.197	.787	.315±.059	VR3	R	550mm
405506*	21.560-22.638	19.490	.260	.240	.410	.197	.787	.315±.059	VR3	V	550mm
405103	20.079-20.276	19.567	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	510mm
405153	20.276-20.472	19.764	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	515mm
405203	20.472-20.669	19.961	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	520mm
405253	20.669-20.866	20.157	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	525mm
405303	20.866-21.063	20.354	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	530mm
405353	21.063-21.260	20.512	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	535mm
405403	21.260-21.457	20.709	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	540mm
405453	21.457-21.654	20.906	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	545mm
405503	21.654-21.850	21.102	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	550mm
406000	22.835-24.803	21.260	.590	.560	.980	.394	1.772	.787±.157	VR1	R	600mm
406004	22.835-24.803	21.260	.590	.560	.980	.394	1.772	.787±.157	VR1	V	600mm
406002	22.835-24.803	21.260	.260	.240	.410	.197	.787	.315±.059	VR3	R	600mm
406006*	22.638-24.606	21.260	.260	.240	.410	.197	.787	.315±.059	VR3	V	600mm
405553	21.850-22.047	21.299	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	555mm
405603	22.047-22.244	21.496	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	560mm
405607*	22.047-22.244	21.496	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	560mm
405653	22.244-22.441	21.654	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	565mm
405703	22.441-22.638	21.850	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	570mm
405753	22.638-22.835	22.047	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	575mm
405757*	22.638-22.835	22.047	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	575mm
405803	22.835-23.031	22.244	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	580mm
405853	23.031-23.228	22.441	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	585mm
405903	23.228-23.622	22.638	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	590mm
406003	23.622-24.016	22.913	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	600mm
406103	24.016-24.409	23.307	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	610mm
406500	24.803-26.180	23.620	.590	.560	.980	.394	1.772	.787±.157	VR1	R	650mm
406504*	24.787-26.187	23.620	.590	.560	.980	.394	1.772	.787±.157	VR1	V	650mm
406203	24.409-24.803	23.701	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	620mm
406303	24.803-25.197	24.094	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	630mm
406403	25.197-25.591	24.449	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	640mm
407000	26.180-27.760	24.787	.590	.560	.980	.394	1.772	.787±.157	VR1	R	700mm
407004*	26.180-27.760	24.787	.590	.560	.980	.394	1.772	.787±.157	VR1	V	700mm
406503	25.591-25.984	24.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	650mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
406507*	25.591-25.984	24.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	650mm
406603*	25.984-26.378	25.197	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	660mm
406703*	26.378-26.772	25.591	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	670mm
406803*	26.772-27.165	25.984	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	680mm
406903	27.165-27.559	26.378	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	690mm
406907*	27.165-27.559	26.378	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	690mm
407250	27.760-29.330	26.380	.590	.560	.980	.394	1.772	.787±.157	VR1	R	725mm
407003	27.559-27.953	26.772	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	700mm
407103*	27.953-28.346	27.126	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	710mm
407203*	28.346-28.740	27.520	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	720mm
407500	29.330-30.910	27.760	.590	.560	.980	.394	1.772	.787±.157	VR1	R	750mm
407504*	29.330-30.900	27.760	.590	.560	.980	.394	1.772	.787±.157	VR1	V	750mm
407303	28.740-29.134	27.913	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	730mm
407307*	28.740-29.134	27.913	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	730mm
407403	29.134-29.528	28.268	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	740mm
407503	29.528-29.843	28.661	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	750mm
407603	29.843-30.157	28.937	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	760mm
407703	30.157-30.472	29.252	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	770mm
408000	30.910-32.680	29.330	.590	.560	.980	.394	1.772	.787±.157	VR1	R	800mm
408004*	30.900-32.680	29.330	.590	.560	.980	.394	1.772	.787±.157	VR1	V	800mm
407502*	29.134-30.512	29.530	.260	.240	.410	.197	.787	.315±.059	VR3	R	750mm
407803	30.472-30.827	29.567	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	780mm
407903	30.827-31.181	29.788	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	790mm
408003	31.181-31.535	30.236	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	800mm
408103	31.535-31.889	30.591	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	810mm
408500	32.680-34.450	30.910	.590	.560	.980	.400	1.772	.787±.157	VR1	R	850mm
408203	31.889-32.323	30.945	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	820mm
408303	32.323-32.717	31.339	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	830mm
408403	32.717-33.110	31.693	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	840mm
408503	33.110-33.504	32.047	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	850mm
408603	33.504-33.898	32.441	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	860mm
409000	34.450-36.220	32.480	.590	.560	.980	.394	1.772	.787±.157	VR1	R	900mm
409004*	34.450-36.220	32.480	.590	.560	.980	.394	1.772	.787±.157	VR1	V	900mm
409002*	34.449-36.417	32.480	.260	.240	.410	.197	.787	.315±.059	VR3	R	900mm
408703*	33.898-34.291	32.795	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	870mm
408803	34.291-34.724	33.189	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	880mm
408807*	34.291-34.724	33.189	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	880mm
408903	34.724-35.118	33.583	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	890mm
408907*	34.724-35.118	33.583	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	V	890mm
409500	36.220-37.990	34.060	.590	.560	.980	.394	1.772	.787±.157	VR1	R	950mm
409504*	36.220-37.992	34.060	.590	.560	.980	.394	1.772	.787±.157	VR1	V	950mm
470900*	35.118-35.905	34.290	.787	2.660	3.940	.940	4.528	3.346±.472	VR5	R	900mm
409003	35.315-36.102	34.291	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	900mm
409203	35.906-36.299	34.646	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	920mm
409303	36.299-36.732	35.039	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	930mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
470940*	36.730-31.170	35.430	.787	2.660	3.940	.940	4.528	3.346±.472	VR5	R	940mm
409403	36.732-37.165	35.433	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	940mm
410000	37.990-39.960	35.787	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1000mm
410004*	37.990-39.960	35.787	.590	.560	.980	.394	1.772	.787±.157	VR1	V	1000mm
409503	37.165-37.598	35.788	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	950mm
409603	37.598-38.031	36.260	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	960mm
409703	38.031-38.465	36.693	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	970mm
409808	38.465-38.898	37.087	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	980mm
409903	38.898-39.331	37.520	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	990mm
410500	39.960-41.930	37.600	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1050mm
410003	39.331-39.764	37.913	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1000mm
410203	39.764-40.354	38.307	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1020mm
410403	40.354-41.142	38.976	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1040mm
410503	40.748-41.535	39.340	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1050mm
411000	41.930-43.898	39.370	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1100mm
410603	41.142-41.929	40.433	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1060mm
411500	43.898-45.866	41.140	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1150mm
411502*	44.290-46.260	41.140	.260	.240	.410	.200	.787	.315±.059	VR3	R	1150mm
410803*	41.929-42.717	41.142	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1080mm
411003	42.717-43.504	41.929	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1100mm
411203*	43.504-44.291	41.929	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1120mm
411403	44.291-45.079	42.677	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1140mm
471140*	44.291-45.079	42.680	.787	2.660	3.940	.940	4.528	3.346±.472	VR5	R	1140mm
412000	45.866-47.835	42.910	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1200mm
412004*	45.866-47.835	42.910	.590	.560	.980	.394	1.772	.787±.157	VR1	V	1200mm
412002*	46.259-48.238	42.910	.260	.240	.410	.197	.787	.315±.059	VR3	R	1200mm
411503	44.685-45.472	43.060	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1150mm
411603	45.079-45.866	43.425	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1160mm
411803	45.866-46.654	44.134	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1180mm
412500	47.835-50.000	44.690	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1250mm
412504*	47.835-50.000	44.690	.590	.560	.980	.394	1.772	.787±.157	VR1	V	1250mm
412003	46.654-47.441	44.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1200mm
412203	47.441-48.228	45.551	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1220mm
412403*	48.228-49.016	46.299	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1240mm
413000	50.000-51.970	46.460	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1300mm
412503	48.622-49.409	46.680	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1250mm
412603	49.016-50.000	47.047	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1260mm
412803*	50.000-50.984	47.953	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1280mm
413500	51.970-53.940	48.230	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1350mm
413502*	52.165-54.134	48.230	.260	.240	.410	.197	.787	.315±.059	VR3	R	1350mm
413003	50.984-51.772	48.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1300mm
413253*	51.772-52.756	49.567	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1325mm
414000	53.940-55.910	50.000	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1400mm
414006*	54.130-56.102	50.000	.260	.240	.410	.197	.787	.315±.059	VR3	V	1400mm
413503	52.756-53.740	50.433	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1350mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

V-Ring size listing - (cont.)

SKF stock no.	Shaft diameter d_1(Range)	Inside diameter d	Height c	Dimension A	Free width B	Maximum d_2 =(d_1+)	Minimum d_3 =(d_1+)	Fitted width B_1	Construction	Lip code	Reference metric shaft size
413753	53.740-54.724	51.378	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1375mm
414500	55.910-57.874	51.772	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1450mm
414504*	55.190-57.874	51.772	.590	.560	.980	.394	1.772	.787±.157	VR1	V	1450mm
414003	54.724-55.709	52.283	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1400mm
414253	55.709-56.693	53.150	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1425mm
415000	57.874-59.843	53.540	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1500mm
414503	56.693-57.677	54.094	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1450mm
414753	57.677-58.661	55.000	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1475mm
415500	59.843-61.811	55.320	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1550mm
415003	58.661-59.646	55.788	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1500mm
415253	59.646-60.630	56.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1525mm
416000	61.811-63.780	57.090	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1600mm
415503	60.630-61.811	57.756	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1550mm
415753	61.811-62.992	58.788	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1575mm
416500	63.780-65.748	58.788	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1650mm
416003	62.992-64.567	60.000	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1600mm
417000	65.748-67.720	60.630	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1700mm
416503	64.567-66.142	61.378	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1650mm
417500	67.720-69.690	62.400	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1750mm
417003	66.142-67.717	62.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1700mm
418000	69.690-71.560	64.170	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1800mm
418006*	69.882-71.850	64.170	.260	.240	.410	.197	.787	.315±.059	VR3	V	1800mm
417503	67.717-69.488	64.252	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1750mm
418003	69.488-71.260	65.787	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1800mm
418500	71.650-73.620	65.950	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1850mm
418503	71.260-73.031	67.480	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1850mm
419000	73.620-75.590	67.720	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1900mm
419003	73.031-75.000	69.016	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1900mm
419500	75.590-77.560	69.490	.590	.560	.980	.394	1.772	.787±.157	VR1	R	1950mm
419503	75.000-76.969	70.630	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	1950mm
419990	77.560-79.530	71.260	.590	.560	.980	.394	1.772	.787±.157	VR1	R	2000mm
421000*	79.530-83.460	72.240	.590	.560	.980	.395	1.772	.787±.157	VR1	R	2100mm
419993	76.969-79.134	72.598	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	2000mm
420503	79.134-81.496	74.567	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	2050mm
421503*	83.646-86.417	78.661	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	2150mm
472201*	86.417-89.209	80.910	.787	2.660	3.940	.940	4.528	3.346±.472	VR5	R	2200mm
425000*	97.358-99.543	86.020	.590	.560	.980	.400	1.772	.787±.157	VR1	R	2500mm
425003*	96.063-100.000	89.567	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	2500mm
432503*	126.260-129.670	113.740	1.180	1.280	2.560	.940	4.528	1.969±.472	VR4	R	3250mm
433003*	127.953-131.889	115.394	1.181	1.280	2.559	.945	4.528	1.969±.472	VR4	R	3300mm

Select the larger V-Ring when the dimension d_1 is on the boundary between two sizes of V-Ring.
Purple dot on V-Ring indicates LongLife material.
Sizes under .787 (20mm) shaft are brown with no dot.
* Check for availability & pricing
# Indicates non-standard compounds for specific applications

Pressure seals size listing

Bore dia.	Seal O.D.	Width of seal	Stock no.	Type and style	Lip code
.313 SHAFT					
.686	.690	.313	▲**3094**	CRWA5	R
.749	.753	.250	▲**3101**	CRWA5	R
.749	.753	.250	**3103**	CRWA5	V
.999	1.003	.313	▲**3171**	CRWA5	R
.375 SHAFT					
.749	.753	.250	**3689**	CRW5	R
W/SS CASE & SPRING					
1.124	1.128	.375	**3807**	† CRW5	V
.500 SHAFT					
		.250	**99050**	SSLEEVE	
.500	.875	.313	**4941**	† CRWA5	V
.875	.879	.313	**4940**	† CRWA5	R
.999	1.003	.250	**4991**	† CRWA5	V
W/STAINLESS STEEL SPRING					
.999	1.003	.313	**4996**	† CRWA5	R
1.124	1.128	.250	**5069**	† CRWA5	R
1.124	1.128	.250	**5072**	† CRWA5	V
.625 SHAFT					
		.313	**99062**	SSLEEVE	
.999	1.003	.250	**6151**	† CRWA5	R
1.124	1.128	.250	**6191**	† CRW5	R
1.124	1.128	.374	**6231**	† CRWA5	V
1.124	1.128	.375	**6184**	† CRWHA5	R
W/SS CASE & SPRING					
1.124	1.128	.375	▲**6229**	† CRWA5	R
1.126	1.130	.250	▲**6232**	† CRW5	R
W/SS CASE & SPRING					
1.250	1.254	.313	▲**6280**	CRWA5	R
W/SS CASE & SPRING					
1.250	1.254	.313	**6285**	CRWA5	V
W/SS CASE & SPRING					
1.375	1.379	.250	**6371**	† CRW5	P
1.375	1.379	.375	**6388**	† CRWA5	R
W/SS CASE & SPRING					
1.500	1.504	.313	**6393**	† CRW5	V
W/STAINLESS STEEL SPRING					
.750 SHAFT					
		.313	**99076**	SSLEEVE	
1.250	1.254	.250	**7434**	† CRWA5	R
1.250	1.254	.375	▲**7449**	† CRWA5	R
1.375	1.379	.250	**7509**	† CRWA5	V
.875 SHAFT					
		.313	**99087**	SSLEEVE	
1.250	1.254	.250	**8634**	† CRWA5	V
1.375	1.379	.250	▲**8660**	† CRWA5	R
1.375	1.379	.250	**8665**	† CRWA5	V

Bore dia.	Seal O.D.	Width of seal	Stock no.	Type and style	Lip code
.875 SHAFT (Cont.)					
1.497	1.501	.313	▲**8694**	† CRWA5	V
W/STAINLESS STEEL SPRING					
.984 SHAFT					
1.596	1.600	.250	▲**9700**	† CRWA5	R
1.752	1.756	.313	▲**9805**	† CRWA5	V
W/SS CASE & SPRING					
1.000 SHAFT					
		.313	**99100**	SSLEEVE	
1.375	1.379	.250	▲**9814**	† CRWA5	R
1.499	1.503	.250	▲**9843**	† CRWA5	R
1.499	1.503	.250	**9855**	CRW5	R
W/SS CASE & SPRING					
1.499	1.503	.250	**9858**	† CRWA5	V
1.500	1.505	.250	**9863**	† CRWA5	R
1.752	1.756	.313	**9967**	† CRWA5	R
2.000	2.004	.313	**10131**	† CRWA5	R
1.125 SHAFT					
		.313	**99112**	SSLEEVE	
		.375	**99116**	SSLEEVE	
1.626	1.630	.250	**11139**	† CRWA5	V
1.250 SHAFT					
		.313	**99125**	SSLEEVE	
1.687	1.691	.313	**12333**	† CRWA5	R
1.750	1.754	.250	**12339**	† CRWA5	V
1.750	1.754	.250	▲**12360**	† CRWA5	R
1.997	2.003	.438	▲**12438**	† CRWA5	V
W/STAINLESS STEEL SPRING					
2.328	2.332	.500	**12609**	† CRWA5	R
W/STAINLESS STEEL SPRING					
2.502	2.506	.500	**12640**	† CRWA5	R
W/STAINLESS STEEL SPRING					
1.438 SHAFT					
		.563	**99143**	SSLEEVE	
		.375	**99144**	SSLEEVE	
1.875	1.881	.250	▲**14208**	† CRWAR5	V
W/STAINLESS STEEL SPRING					
2.003	2.007	.313	▲**14211**	CRWAR5	V
W/STAINLESS STEEL SPRING					
2.003	2.007	.313	**14384**	CRWAR5	R
1.500 SHAFT					
		.563	**99149**	SSLEEVE	
		.375	**99150**	SSLEEVE	
1.997	2.003	.250	▲**14844**	† CRWA5	V
W/STAINLESS STEEL SPRING					
2.064	2.068	.375	**14868**	CRWA5	V
W/STAINLESS STEEL SPRING					

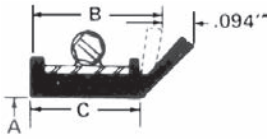
★ Contact manufacturer for availability
Bold numbers are preferred designs
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Pressure seals size listing - (cont.)

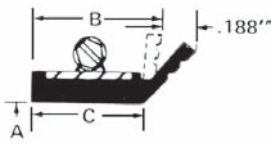
Bore dia.	Seal O.D.	Width of seal	Stock no.		Type and style	Lip code
1.500 SHAFT (Cont.)						
2.311	2.315	.500	**14979**		CRWA5	V
W/STAINLESS STEEL SPRING						
2.328	2.332	.500	**14977**	†	CRWA5	R
W/STAINLESS STEEL SPRING						
1.625 SHAFT						
		.313	**99161**		SSLEEVE	
		.563	**99162**		SSLEEVE	
2.125	2.131	.250	**16045**	†	CRWAR5	V
W/STAINLESS STEEL SPRING						
1.750 SHAFT						
		.375	**99172**		SSLEEVE	
		.563	**99174**		SSLEEVE	
		.750	**99175**		SSLEEVE	
		.531	**99180**		SSLEEVE	
2.502	2.506	.500	**17374**	†	CRWA5	R
W/STAINLESS STEEL SPRING						
1.938 SHAFT						
		.563	**99193**		SSLEEVE	
2.675	2.679	.250	**19213**	†	CRWA5	R
2.835	2.839	.250	**19278**	†	CRWA5	R
2.500 SHAFT						
		.500	**99248**		SSLEEVE	
		.781	**99250**		SSLEEVE	
		.555	**99253**		SSLEEVE	
3.251	3.256	.350	**24892**	†	CRWA5	R
W/SS CASE & SPRING W/GROUND O.D.						

★ Contact manufacturer for availability
Bold numbers are preferred designs
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

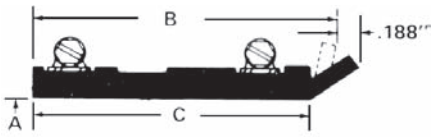
Axial clamp size listing



Style 1



Style 3



Style 4

Shoulder dia. A	Oper. WD. B	Shoulder width C	Style no.	Part no.	Shoulder dia. A	Oper. WD. B	Shoulder width C	Style no.	Part no.
6.000	0.875	0.687	*3	**596161**	14.000	1.375	0.938	*1	**593037**
6.250	1.437	1.000	1	**595079**	14.000	1.500	1.063	*1	**530733**
6.625	1.125	0.688	*1	**529489**	14.961	1.500	1.063	*1	**593171**
6.625	1.125	0.688	1	**594334**	15.000	1.125	0.688	1	**594025**
7.000	1.500	1.063	*1	**594648**	15.250	1.125	0.688	*1	**594954**
7.000	1.500	1.063	1	**523586**	15.250	1.125	0.688	1	**594250**
7.086	0.876	0.688	*3	**595109**	15.313	0.875	0.688	*3	**593526**
7.283	1.181	0.984	*1	**593637**	15.313	0.938	0.750	*3	**594653**
8.000	0.875	0.688	*3	**528035**	15.313	0.938	0.750	3	**524383**
8.000	0.875	0.688	3	**528745**	15.313	0.875	0.688	3	**524382**
8.250	1.125	0.688	*1	**527820**	15.354	1.000	0.813	3	**594190**
8.500	1.000	0.813	*3	**594343**	15.500	0.875	0.688	3	**594432**
8.625	1.125	0.688	*1	**529490**	16.000	0.875	0.688	*3	**529760**
8.875	0.875	0.688	*3	**530096**	16.142	0.938	0.500	*1	**595110**
8.875	0.875	0.688	3	**524375**	16.250	1.250	0.813	1	**595322**
8.938	1.125	0.688	1	**531635**	16.250	3.500	3.063	4	**592934**
9.000	1.125	0.688	*1	**527819**	16.313	0.875	0.688	3	**524386**
9.000	1.125	0.688	1	**524204**	16.750	1.313	0.875	1	**524815**
9.016	1.150	0.713	1	**528631**	16.750	1.250	0.813	1	**523826**
9.449	1.125	0.938	*3	**595464**	16.813	1.000	0.813	*3	**594681**
9.449	1.125	0.938	3	**594780**	17.000	1.500	1.063	1	**528535**
9.500	1.500	1.063	*1	**595604**	17.000	1.000	0.813	3	**524360**
9.500	1.125	0.688	1	**595613**	17.313	0.875	0.688	3	**524388**
10.000	1.125	0.688	*1	**527806**	17.500	1.375	0.938	*1	**525737**
10.000	1.125	0.688	1	**524205**	17.500	1.375	0.938	1	**523547**
10.000	1.000	0.813	3	**528780**	17.500	1.250	0.813	1	**522679**
10.188	0.875	0.688	3	**524434**	17.688	0.938	0.750	*3	**594654**
10.438	1.500	1.063	1	**596110**	17.688	3.750	3.313	*4	**528070**
10.750	1.125	0.688	*1	**594369**	17.688	0.938	0.750	3	**524389**
11.000	1.250	0.813	1	**524928**	18.500	1.250	0.813	1	**526192**
11.000	1.125	0.688	1	**524206**	18.500	1.125	0.688	1	**525708**
11.750	1.125	0.688	*1	**593629**	18.750	1.250	0.813	*1	**595637**
11.811	0.945	0.757	*3	**594814**	18.875	0.938	0.750	*3	**595943**
11.811	0.945	0.757	3	**594734**	19.500	1.125	0.688	1	**594181**
11.968	0.875	0.688	*3	**528036**	20.000	1.250	0.813	1	**524587**
12.000	0.875	0.688	3	**524380**	20.313	0.938	0.750	*3	**595455**
12.000	1.500	1.063	1	**525582**	20.313	0.938	0.750	3	**525030**
12.000	1.250	0.813	1	**524208**	20.500	1.000	0.813	*3	**596571**
12.625	1.500	1.063	*1	**596098**	20.500	1.000	0.813	3	**530468**
13.000	1.125	0.688	1	**524209**	20.875	0.875	0.688	3	**528536**
13.000	1.500	1.063	1	**523587**	20.984	1.250	0.813	1	**594241**
13.125	0.875	0.687	*3	**596435**	21.500	1.250	0.813	1	**524599**
13.125	0.875	0.688	3	**524381**	21.500	1.000	0.813	3	**524362**
13.563	0.875	0.688	3	**525029**	21.500	3.750	3.313	4	**526741**
13.813	1.500	1.063	*1	**594110**	21.813	1.250	0.813	1	**524210**

* w/Butt Joint

Axial clamp size listing - (cont.)

Shoulder dia. A	Oper. WD. B	Shoulder width C	Style no.	Part no.	Shoulder dia. A	Oper. WD. B	Shoulder width C	Style no.	Part no.
21.938	1.125	0.688	1	**524211**	33.063	1.250	0.813	1	**526867**
22.000	1.000	0.813	3	**524363**	33.250	1.250	0.813	*1	**595636**
22.000	1.250	0.813	1	**524347**	33.688	1.250	0.813	1	**524219**
22.500	1.250	0.813	1	**524212**	34.500	1.500	1.063	1	**523063**
22.559	1.259	0.748	1	**594874**	35.000	1.250	0.813	1	**524220**
22.750	1.375	0.938	*1	**596570**	35.125	0.875	0.688	3	**531069**
22.750	1.375	0.938	1	**524657**	35.438	1.250	0.813	1	**524221**
23.250	1.250	0.813	*1	**595635**	35.500	1.500	1.063	1	**524222**
23.375	1.375	0.938	1	**525627**	36.000	1.250	0.813	*1	**530466**
23.438	1.125	0.688	1	**525031**	36.000	1.125	0.688	*1	**593606**
23.500	1.375	0.938	1	**524364**	36.000	1.188	0.750	1	**524223**
23.622	1.181	0.744	1	**594431**	36.000	1.125	0.688	1	**528416**
23.750	1.375	0.938	*1	**525637**	36.000	1.500	1.063	1	**524224**
23.750	1.813	1.375	*4	**528267**	36.563	0.875	0.815	*1	**595670**
23.750	1.000	0.813	3	**530589**	36.563	2.960	2.523	4	**594202**
23.750	1.250	0.813	1	**524365**	36.563	1.125	0.688	1	**593285**
23.750	1.813	1.375	4	**528651**	36.750	1.500	1.063	1	**595016**
23.750	1.375	0.938	1	**523184**	36.875	1.375	0.938	1	**523154**
24.000	1.000	0.813	*3	**594059**	37.000	1.000	0.813	3	**526245**
24.250	1.000	0.813	3	**526277**	37.000	1.500	1.063	1	**525320**
24.250	1.875	1.438	4	**529276**	37.000	1.250	0.813	1	**526246**
24.750	1.250	0.813	1	**524213**	37.125	1.250	0.813	1	**524768**
25.125	1.375	0.938	1	**524214**	37.250	1.250	0.813	1	**524368**
25.787	1.575	1.138	4	**594784**	37.500	1.250	0.813	1	**526582**
26.000	1.375	0.938	1	**524591**	37.875	1.250	0.813	1	**524225**
26.875	1.000	0.813	3	**529823**	38.000	1.250	0.813	1	**524226**
26.911	2.875	2.438	4	**593604**	39.500	1.250	0.813	1	**526806**
26.938	1.125	0.688	1	**524215**	39.500	1.125	0.688	1	**529452**
27.000	1.000	0.813	3	**528926**	39.875	1.500	1.063	1	**529379**
27.250	1.375	0.938	1	**524592**	39.875	1.375	0.938	1	**523584**
27.750	2.375	1.938	4	**528268**	40.000	1.438	1.000	1	**525035**
27.750	1.375	0.938	1	**524216**	40.000	1.500	1.063	1	**527903**
28.000	1.250	0.813	1	**527232**	40.063	2.156	1.718	4	**530396**
28.000	1.000	0.813	3	**524366**	40.250	1.250	0.813	1	**525426**
28.188	0.875	0.688	3	**531719**	40.500	1.500	1.063	1	**528532**
28.813	1.125	0.688	*1	**525032**	40.875	1.500	1.063	1	**525633**
29.000	1.750	1.313	4	**528269**	41.000	1.500	1.063	1	**524227**
29.000	1.500	1.063	1	**524940**	41.125	1.500	1.063	1	**525036**
29.000	0.875	0.688	3	**594856**	41.250	0.875	0.688	*3	**594395**
29.375	1.500	1.063	1	**524853**	41.375	1.313	0.875	1	**530448**
29.375	1.563	1.125	4	**528270**	41.500	1.250	0.813	1	**527474**
29.750	1.500	1.063	1	**524973**	41.500	1.500	1.063	1	**524228**
29.750	1.500	1.063	1	**524218**	41.875	1.625	1.188	4	**528272**
29.750	1.375	0.938	1	**524217**	41.969	2.500	2.063	4	**528271**
30.063	1.125	0.688	1	**525033**	42.000	1.500	1.063	*4	**594494**
31.000	1.250	0.813	1	**525212**	42.000	3.750	3.313	*4	**596400**
31.500	1.250	0.813	1	**528210**	42.500	1.125	0.688	1	**523133**
31.750	0.875	0.688	3	**526244**	42.563	1.000	0.813	*3	**593564**
31.750	1.250	0.813	1	**526715**	43.375	1.250	0.813	1	**524909**
32.188	1.250	0.813	1	**525034**	43.500	1.500	1.063	1	**524369**
32.250	1.250	0.813	1	**524294**	44.000	1.375	0.938	1	**528415**
32.375	1.250	0.813	*1	**593949**	44.000	1.750	1.313	4	**528273**
32.480	1.125	0.688	*1	**594785**	44.000	1.750	1.313	4	**528002**
32.500	0.688	0.500	*3	**594799**	44.000	1.500	1.063	1	**524229**
32.500	1.250	0.813	1	**524367**	44.000	1.250	0.813	1	**524370**

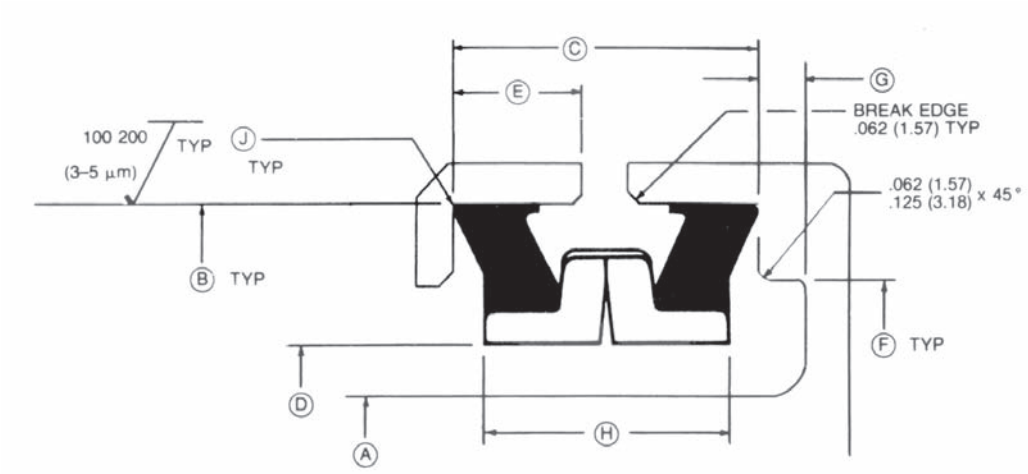
* w/Butt Joint

Axial clamp size listing – (cont.)

Shoulder dia. A	Oper. WD. B	Shoulder width C	Style no.	Part no.
44.000	1.500	1.063	1	**593180**
44.875	1.500	1.063	1	**522676**
46.500	1.250	0.813	1	**529086**
47.000	1.500	1.063	*1	**527211**
47.500	1.188	0.750	*1	**530606**
47.500	1.500	1.063	1	**524230**
47.500	1.250	0.813	1	**525091**
47.500	1.375	0.938	1	**526021**
47.625	1.500	1.063	1	**522677**
48.000	1.000	0.812	*3	**596327**
48.000	1.000	0.813	3	**530441**
48.250	1.500	1.063	1	**524231**
48.865	1.500	1.063	1	**524371**
49.000	1.250	0.813	1	**522828**
50.000	1.000	0.813	*3	**593525**
50.000	1.375	0.938	1	**529129**
50.625	1.250	0.813	*1	**525953**
51.250	1.375	0.938	1	**529130**
51.500	1.375	0.938	1	**530661**
51.500	1.500	1.063	1	**524232**
51.500	1.250	0.813	1	**524372**
52.000	1.500	1.063	1	**528927**
53.000	1.000	0.813	3	**594396**
53.000	1.250	0.813	1	**528526**
55.000	1.250	0.813	1	**526807**
57.000	1.250	0.813	1	**528525**
59.000	1.625	1.188	*4	**594163**
63.465	1.000	0.813	3	**595373**
63.500	1.250	0.813	1	**526808**
67.750	1.250	0.813	1	**528975**
70.000	1.250	0.813	1	**526809**
71.000	1.250	0.813	1	**524373**
73.000	1.500	1.063	1	**531456**
75.750	1.250	0.813	1	**525092**
77.500	3.375	2.938	*4	**596405**
77.500	1.250	0.813	1	**529517**
98.425	1.004	0.816	*3	**596289**
100.000	1.500	1.063	1	**522856**
103.000	1.250	0.813	*1	**594083**
150.000	1.250	0.813	*3	**596050**
156.690	1.004	0.816	*3	**596290**
163.078	1.250	0.813	*1	**594082**

* w/Butt Joint

Heavy Duty (HDDF) size listing



I	II		A	B	C	D	E	F		G	H	J
Service kit no.	Field repair kit. no.	Lip	Shaft (Max.)	Bore	Operating range	Seal I.D. (Min.)	Bore depth (Ref.)	Recommended shoulder dia. (Max.)	(Min.)	Undercut (Min.)	Length (Max.)	Radius (Max.)
									Only w/ undercut			
16904	16906	R	1.688 (42.88)	2.760 .003 (70.09 0.06)	.974 .038 (24.74 0.97)	1.760 (44.70)	.453 (11.51)	2.282 (57.96)			.846 (21.49)	.037 (0.94)
18259	18257	R	1.813 (46.05)	3.003 .003 (76.26 0.06)	.892 .031 (22.66 0.79)	1.910 (48.51)	.416 (10.57)	2.475 (62.86)			.790 (20.07)	.042 (1.07)
21306	21307	R	2.125 (53.98)	3.250 .003 (82.55 0.06)	.900 .033 (22.86 0.84)	2.215 (56.26)	.418 (10.62)	2.759 (70.08)			.812 (20.62)	.045 (1.14)
25096	25097	R	2.500 (63.50)	3.761 .003 (95.54 0.06)	.907 .033 (23.04 0.84)	2.580 (65.53)	.422 (10.72)	3.188 (80.98)			.840 (21.34)	.042 (1.07)
27536	27535	R	2.750 (69.85)	4.030 .003 (102.35 0.06)	.918 .035 (23.32 0.89)	2.830 (71.88)	.426 (10.82)	3.480 (88.39)			.810 (20.57)	.042 (1.07)
30651	30654	R	3.063 (77.80)	4.500 .003 (114.30 0.06)	1.016 .035 (25.81 0.89)	3.170 (80.52)	.475 (12.06)	3.833 (97.36)			.912 (23.16)	.042 (1.07)
35076	35079	R	3.500 (88.90)	4.953 .003 (125.81 0.06)	1.096 .043 (27.84 1.09)	3.620 (91.95)	.511 (12.98)	4.296 (109.12)			.962 (24.43)	.035 (0.89)
38740	38741	R	3.875 (98.43)	5.312 .003 (135.00 0.08)	1.102 .024 (28.00 0.61)	4.040 (102.62)	.524 (13.30)	4.750 (120.65)			1.002 (25.45)	.042 (1.07)
38751	38752	R	3.875 (98.43)	5.562 .003 (141.27 0.08)	1.267 .050 (32.18 1.27)	4.040 (102.62)	.594 (15.09)	4.791 (121.69)			1.110 (28.19)	.051 (1.30)
43135	43136	R	4.312 (109.52)	5.823 .003 148.00 0.08)	1.102 .024 (28.00 0.61)	4.420 (112.27)	.524 (13.30)	5.125 (130.18)			1.002 (25.45)	.042 (1.07)
43150	43149	R	4.312 (109.52)	6.000 .003 (152.40 0.08)	1.320 .040 (33.53 1.02)	4.420 (112.27)	.625 (15.88)	5.173 (131.39)			1.090 (27.69)	.051 (1.30)
46975	46976	R	4.688 (119.08)	6.400 .003 (162.56 0.08)	1.525 .050 (38.74 1.27)	4.795 (121.79)	.722 (18.34)	5.583 (141.81)			1.254 (31.85)	.047 (1.19)
50655	50656	R	5.062 (128.57)	6.750 .003 (171.45 0.08)	1.280 .040 (32.51 1.02)	5.170 (131.32)	.605 (15.37)	5.975 (151.76)			1.150 (29.21)	.057 (1.45)
54000	54001	R	5.400 (137.16)	6.990 .003 (177.55 0.08)	1.310 .030 (33.27 0.76)	5.625 (142.88)	.625 (15.88)	6.625 (168.28)			1.182 (30.02)	.057 (1.45)
56170	56171	R	5.625 (142.88)	7.250 .003 (184.15 0.08)	1.366 .031 (34.70 0.79)	5.825 (147.96)	.650 (16.51)	6.486 (164.74)	6.174 (156.82)	.032 (0.81)	1.300 (33.02)	.057 (1.45)
805544	925544	R	5.625 (142.88)	7.438 .005 (188.93 0.13)	1.406 .031 (35.71 0.79)	5.865 (148.97)	.672 (17.07)					.062 (1.58)
58775	58776	R	5.875 (149.23)	7.641 .003 (194.08 0.08)	1.510 .031 (38.35 0.79)	6.000 (152.40)	.724 (18.39)	6.868 (174.45)	6.548 (166.32)	.056 (1.42)	1.490 (37.85)	.073 (1.85)

Dimensions in parentheses are in millimeters. For sizes not listed, contact SKF.

See page 42A for additional information.

Heavy Duty (HDDF) size listing - (cont.)

I	II		A	B	C	D	E	F		G	H	J
Service kit no.	Field repair kit. no.	Lip	Shaft (Max.)	Bore	Operating range	Seal I.D. (Min.)	Bore depth (Ref.)	Recommended Shoulder Dia. (Max.)	(Min.) Only w/ undercut	Undercut (Min.)	Length (Max.)	Radius (Max.)
63796	63797	R	6.375 (161.93)	8.120 .003 (206.25 0.08)	1.265 .040 (32.13 1.02)	6.570 (166.88)	.598 (15.19)	7.555 (191.90)	7.505 (190.63)	.125 (3.18)	1.350 (34.29)	.042 (1.07)
67560	67561	R	6.750 (171.45)	8.620 .004 (218.95 0.10)	1.375 .030 (34.92 0.76)	6.920 (175.77)	.656 (16.66)	7.750 (196.85)			1.260 (32.00)	.042 (1.07)
74310	74311	R	7.438 (188.93)	9.400 .004 (238.76 0.10)	1.656 .040 (42.06 1.02)	7.540 (191.52)	.793 (20.14)	8.431 (214.15)			1.344 (34.14)	.073 (1.85)
78020	78021	R	7.800 (198.12)	10.000 .004 (254.00 0.10)	1.750 .050 (44.45 1.27)	7.940 (201.68)	.835 (21.21)	8.910 (226.31)			1.500 (38.10)	.058 (1.47)
82540	82541	R	8.250 (209.55)	10.062 .004 (255.57 0.10)	1.560 .040 (39.62 1.02)	8.358 (212.29)	.745 (18.92)	9.280 (235.71)	9.220 (234.19)	.071 (1.80)	1.562 (39.67)	.058 (1.47)
86850	86851	R	8.688 (220.68)	10.911 .005 (277.14 0.13)	1.924 .030 (48.87 0.76)	8.790 (223.27)	.932 (23.67)	9.754 (247.75)			1.642 (41.71)	.058 (1.47)
93115	93116	R	9.312 (236.52)	11.000 .005 (279.40 0.13)	1.437 0.32 (36.50 0.81)	9.410 (239.01)	.687 (17.45)	10.360 (263.14)	10.260 (260.60)	.090 (2.29)	1.510 (38.35)	.050 (1.27)
93125	93126	R	9.312 (236.52)	11.625 .005 (295.28 0.13)	1.754 .050 (44.55 1.27)	9.410 (239.01)	.837 (21.26)	10.750 (273.05)			1.510 (38.35)	.089 (2.26)
95620	95621	R	9.562 (242.87)	11.859 .005 (301.22 0.13)	1.949 .069 (49.50 1.75)	9.660 (245.36)	.925 (23.50)	10.703 (271.86)			1.700 (43.18)	.074 (1.88)
108710	108711	R	10.875 (276.23)	12.969 .005 (329.41 0.13)	1.540 .050 (39.12 1.27)	11.060 (280.92)	.730 (18.54)	12.100 (307.34)	12.000 (304.80)	.143 (3.63)	1.670 (42.42)	.043 (1.09)
116500	116501	R	11.625 (295.28)	13.250 .005 (336.55 0.13)	1.290 .030 (32.77 0.76)	11.780 (299.21)	.615 (15.62)	12.780 (324.61)			1.210 (30.73)	.045 (1.14)
124020	124021	R	12.400 (314.96)	14.375 .005 (365.12 0.13)	1.656 .050 42.06 1.27)	12.500 (317.50)	.788 (20.02)	13.530 (343.66)	13.470 (342.14)	.060 (1.52)	1.610 (40.89)	.057 (1.45)
137570	137571	R	13.750 (349.25)	15.817 .005 (401.75 0.13)	1.875 .032 (47.62 0.81)	13.910 (353.31)	.906 (23.01)	14.985 (380.62)			1.670 (42.42)	.089 (2.26)
806715		R	14.750 (374.65)	16.695 .005 (424.05 0.13)	1.875 .032 (47.62 0.81)	14.950 379.73	.906 (23.01)	15.863 402.92			1.670 (42.42)	.062 (1.58)
807115		V	14.750 (374.65)	16.695 .005 (424.05 0.13)	1.875 .032 (47.62 0.81)	14.950 379.73	.906 (23.01)	15.863 402.92			1.670 (42.42)	.062 (1.58)
171025	171026	R	17.125 (434.98)	19.240 .006 (488.70 0.15)	1.531 .053 (38.89 1.35)	17.280 (438.91)	.724 (18.39)	18.400 (467.36)	18.300 (464.82)	.140 (3.56)	1.659 (42.14)	.043 (1.09)
191022	191021	R	19.125 (485.78)	21.500 .006 (546.10 0.15)	1.640 .042 (41.66 1.07)	19.250 (488.95)	.784 (19.91)	20.950 (532.13)	20.850 (529.59)	.175 (4.44)	1.832 (46.53)	.057 (1.45)
238020	238021	R	23.875 (606.43)	26.875 .006 (682.62 0.15)	2.125 .059 (53.98 1.50)	24.280 (616.71)	1.018 (25.86)	25.550 (648.97)			1.851 (47.02)	.089 (2.26)

Dimensions in parentheses are in millimeters. For sizes not listed, contact SKF.

Service kit/Field repair kit

I. Service kit contents:

1 - Seal assembly
(Includes Belleville washers)
2 - Lint-free wipers
1 - Instruction sheet

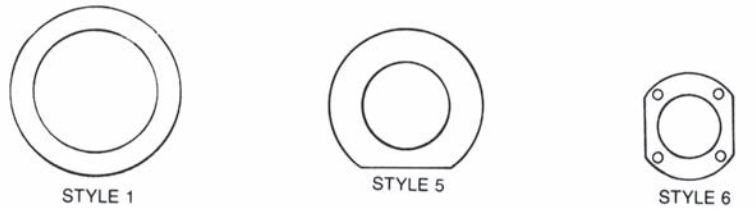
II. Field repair kit contents:

2 - Belleville washers only
2 - Lint-free Wipers
1 - Instruction sheet

Metal sealing rings can be reused even if the rubber Belleville washers are damaged. Simply purchase a field repair kit (listed next to the service kit number) and fit the new washers to the sealing rings, using the instructions provided.

See page 42A for additional information.

Axle flange gaskets size listing



No. bolt holes	Hole dia.	Bolt circle	Gasket O.D.	Gasket I.D.	Stock no. *	Used in kit	Style no.
—	—	—	3.188	2.781	450163	21814	1
—	—	—	3.188	2.781	450163	21820	1
4	.328	3.000	3.688	2.250	450166	15243	6
6	.469	4.000	4.688	3.188	450194	20766	1
6	.469	5.250	6.200	3.875	450189	27630	1
6	.406	4.000	4.563	2.688	450176	20168	1
7	.718	6.875	8.125	5.781	450154	31369	1
8	.531	5.047	5.750	4.313	450431	31361	1
8	.516	5.125	5.938	4.406	450024	23870	1
8	.531	5.313	6.203	4.484	450023	25160	1
8	.688	7.000	8.188	6.000	450447	1240	1
8	.688	7.000	8.188	6.000	450447	31378	1
8	.688	7.000	8.188	6.000	450447	31393	1
8	.688	7.000	8.250	6.031	450155	31385	1
8	.688	7.000	8.250	6.031	450155	32630	1
8	.688	7.000	8.250	6.031	450155	32640	1
10	.656	7.250	8.250	5.813	450158	31390	1
12	.563	6.500	7.500	5.719	450153	31364	1
12	.625	10.250	11.250	8.750	450173	75090	1

* Check SKF for availability

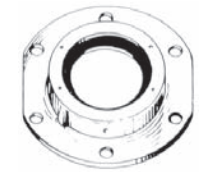
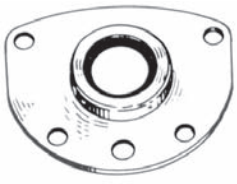
Felt washers — Size listing

Inside diameter	Outside diameter	Width	Type	SKF no.
In sequence by size				
.938	1.500	.375	F†	671
1.938	3.000	.375	F	573
2.000	3.125	.500	F	596
2.188	3.063	.250	F†	515
2.188	3.500	.250	F	668
2.281	3.500	.313	F	645
2.563	3.531	.344	F	528
2.563	3.625	.313	F	654
2.688	3.500	.219	F†	662
2.906	3.813	.313	F†	663
4.125	5.750	.438	F	633
4.688	6.000	.375	F	653

Inside diameter	Outside diameter	Width	Type	SKF no.
In sequence by SKF number				
2.188	3.063	.250	F†	515
2.563	3.531	.344	F	528
1.938	3.000	.375	F	573
2.000	3.125	.500	F	596
4.125	5.750	.438	F	633
2.281	3.500	.313	F	645
4.688	6.000	.375	F	653
2.563	3.625	.313	F	654
2.688	3.500	.219	F†	662
2.906	3.813	.313	F†	663
2.188	3.500	.250	F	668
.938	1.500	.375	F†	671

† Laminated Sirvene and Felt

Type-J seal size listing

Illustration	Flange dia.	Largest step dia.	Overall width	No. of holes	Hole dia.	Circle dia.	Type	Lip style	Stock no.	Lip code
J1	**1.181 SHAFT**									
	3.543	2.452	.433	4	.256	2.913	J2	HMSA	11703	#
	1.250 SHAFT									
	4.310	1.953	.484	4	.484	*	J6	HMA	12685	R
						*2.866 between bottom bolt hole centers				
	4.560	1.953	.474	4	.406	*	J6	HMA	12688	R
						*3.332 between bottom bolt hole centers				
	1.372 SHAFT									
	4.560	2.328	.547	4	.375	*	J8	HMSA	13508	R
				1	.500	*3.328 between top bolt hole centers				
	1.375 SHAFT							**Special**		
	4.582	2.000	.259	4	.401	4.000	J5	HMS	13955	R
				1	.438	4.000				
				2*	.187	*Locating holes on 4.000 B.C.				
J2	4.582	2.000	.259	6	.401	4.000	J5	Special	13956	R
				1*	.438	*1.875 from center of shaft				
				2*	.187	*Locating holes on 4.000 B.C.				
	1.500 SHAFT									
	3.625	2.063	.563	4	.328	3.000	J6	CRW	15243 ■	R
	1.772 SHAFT									
	3.661	2.841	.307	4	.256	3.189	J6	HMA	17792	R
	1.875 SHAFT									
	4.812	3.375	.313	12	.469	4.000	J2	HMS	18961	R
J5	**2.000 SHAFT**									
	4.563	2.656	.563	6	.406	4.000	J2	HM	20168 ■	R
				1	.438	3.750				
	2.063 SHAFT									
	4.688	3.125	.348	6	.469	4.000	J2	CRWH	20766 ■	R
	2.375 SHAFT									
	5.875	3.563	.275	8	.500	5.125	J1	CRW	23870 ■	R
	2.500 SHAFT									
	6.125	4.500	.438	8	.563	5.312	J1	CRW	25160 ■	R
	2.750 SHAFT									
	6.200	3.859	.500	6	.469	5.250	J2	CRWHA	27630 ■	R
 J6	**3.109 SHAFT**									
	5.750	4.060	.325	8	.500	5.047	J2	CRW	31361 ■	R
	7.500	5.500	.328	12	.563	6.500	J1	CRW	31364 ■	R
	8.125	5.781	.500	7	.688	6.875	J1	CRW	31369 ■	R
	8.250	5.500	.953	8	.688	7.000	J1	CRW	1240 ■	R
	8.250	5.781	.500	5	.781	7.063	J1	CRW	31374 ■	R
	8.250	5.500	1.016	8	.688	7.000	J1	CRW	31378 ■	P
	8.250	5.781	.500	8	.688	7.000	J1	CRW	31385 ■	R
	8.250	5.781	.500	10	.625	7.250	J1	CRW	31390 ■	R
 J8	**3.125 SHAFT**									
	8.250	5.500	1.003	8	.688	7.000	J2	CRSH	31372	R
	3.234 SHAFT									
	8.250	5.906	.500	8	.688	7.000	J1	CRW	32640 ■	R
	5.938 SHAFT									
	9.032	6.806	1.125	12	.563	8.250	J2	HMSA	59380	R
	7.500 SHAFT									
	11.260	8.431	1.918	12	.625	10.250	J1	CRW	75090 ■	P

■ Also see kit section

Kits - miscellaneous

Kit no.	Contents		
	Qty.	Part no.	Description
101	2	187933	Half Seal
103	2	187520	Half Seal
104	2	453635	Half Seal
107	2	450146	Rope Seal
138	2	450433	Rope Seal
	2	450001	Wedge
140	2	187944	Half Seal
144	1	450791	Half Seal
155	2	450433	Rope Seal
	2	450026	Wedge
162	1	36314	Seal
	1	879991	O Ring
185	2	450277	Rope Seal
187	2	181614	Half Seal
191	2	450275	Wedge
	2	450276	Rope Seal
192	2	538305	Half Seal
194	1	505863	Half Seal
	1	505864	Half Seal
196	2	450433	Rope
197	2	450006	Rope Seal
	2	450275	Wedge
198	2	181613	Half Seal
199	2	528000	Half Seal
200	1	181387	Half Seal
	1	181388	Half Seal
201	2	181386	Half Seal
204	2	181391	Half Seal
205	2	181392	Half Seal
206	2	181393	Half Seal
	2	450001	Wedge
207	2	181394	Half Seal
	2	450026	Wedge
208	1	181395	Half Seal
	1	181396	Half Seal
209	1	181397	Half Seal
	1	181398	Half Seal
210	1	60000	Seal
	1	99599	Sleeve
211	2	181729	Half Seal
212	1	187942	Half Seal
	1	187943	Half Seal
214	2	181783	Half Seal
216	2	182673	Half Seal
217	16	717134	Valve Seal
218	1	49960	Seal
	1	99499	Sleeve
220	2	188144	Half Seal
229	2	501582	Seal
285	2	501473	Seal
287	2	501446	Seal
900	1	37330	Seal
	1	99372	Sleeve
901	1	8691	Seal
	1	99086	Sleeve
1200	1	48065	Seal
	1	80184	Sleeve
1201	1	48075	Seal
	1	80184	Sleeve
1202	1	13021	Seal
	1	450010	Sleeve
1206	1	40036	Seal
	1	450014	Sleeve
1211	1	54629	Seal
	1	68016	Sleeve
1212	1	54940	Seal
	1	68016	Sleeve
1213	1	55170	Seal
	1	68016	Sleeve
1214	1	40360	Seal
	1	450018	Sleeve
1215	1	50640	Seal
	1	450022	Sleeve
1219	1	40360	Seal
	1	450013	Sleeve
1240	1	502081	Seal
	1	502234	Sleeve
	1	450447	Gasket
1243	1	29867	Seal
	1	81474	Sleeve
1244	1	24949	Seal
	1	81473	Sleeve
1245	1	25146	Seal
	1	81471	Sleeve
1303	1	524564	Seal
	1	71895	Sleeve
1306	1	32710	Seal
	1	77811	Sleeve
1307	1	35810	Seal
	1	77810	Sleeve
1308	1	40210	Seal
	1	77801	Sleeve
1321	1	40582	Seal
	1	86207	Sleeve
1322	1	39436	Seal
	1	86206	Sleeve
1330	1	100075	Seal
	1	76360	Sleeve
1725	1	522928	Seal
	1	84239	Sleeve
7566	1	8702	Seal
		89495	Sleeve
10781	1	11908	Seal
	1	89483	Sleeve
11377	1	12551	Seal
	1	89519	Sleeve
11904	1	11905	Seal
	1	86190	Sleeve
12392	1	12355	Seal
	1	12371	Seal
	2	450692	Steel Washer
	1	450693	Retainer
12578	1	13676	Seal
	1	86191	Sleeve
14731	2	14730	Seal
	1	508	Felt Washer
15243	1	531585	Seal
	1	450166	Gasket
15696	1	16814	Seal
	1	89496	Sleeve
17459	1	17458	Seal
		87614	Retainer
18550	1	18549	Seal
	1	879996	O Ring
18551	1	18552	Seal
	1	879996	O Ring
19011	1	19010	Seal
	1	450002	Retainer
	1	879997	O Ring
19012	1	19010	Seal
	1	450002	Retainer
	1	879982	O Ring
19286	1	19300	Seal
	1	19306	Seal
19305	1	19298	Seal
	1	86187	Sleeve
20108	1	537826	Seal
	1	89510	Sleeve
20146	1	20127	Seal
	1	99198	Sleeve
20168	1	530086	Seal
	1	450176	Gasket
20446	1	20431	Seal
	1	22037	Seal
	1	87443	Dust Cover

Kits - miscellaneous - (cont.)

Kit no.	Contents		
	Qty.	Part no.	Description
20501	1	20421	Seal
	1	22030	Seal
	1	27705	Seal
20526	1	20525	Seal
	1	879999	O Ring
20766	1	542144	Seal
	1	450194	Gasket
21070	1	21069	Seal
	1	879998	O Ring
21294	1	400558	V-Ring
	1	87532	Dust Shield
21814	1	541934	Seal
	1	450163	Gasket
21820	1	541746	Seal
	1	450163	Gasket
21962	1	21952	Seal
	1	84476	Sleeve
22075	1	20431	Seal
	1	22037	Seal
	1	87443	Dust Cover
22562	1	22449	Seal
	1	99229	Sleeve
22587	1	22586	Seal
	1	86178	Sleeve
23279	1	533853	Seal
	1	89504	Sleeve
23483	1	26500	Seal
	1	86208	Sleeve
23870	1	500625	Seal
	2	450024	Gasket
	1	503513	Sleeve
24466	1	25714	Seal
	1	86184	Sleeve
25160	1	530459	Seal
	2	450023	Gasket
	1	500488	Sleeve
26196	1	27269	Seal
	1	87030	Sleeve
27630	1	503699	Seal
	1	450189	Gasket
31361	1	500959	Seal
	2	450431	Gasket
31364	1	502185	Seal
	2	450153	Gasket
	1	502198	Sleeve
31369	1	502253	Seal
	2	450154	Gasket
	1	502198	Sleeve
31374	1	502075	Seal
	2	450152	Gasket
	1	502198	Sleeve
31378	1	502081	Seal
	2	450447	Gasket
	1	502198	Sleeve
31385	1	502256	Seal
	2	450155	Gasket
	1	502198	Sleeve
31390	1	502073	Seal
	2	450158	Gasket
	1	502198	Sleeve
32630	1	502255	Seal
	2	450155	Gasket
	1	502199	Sleeve
32640	1	502252	Seal
	2	450155	Gasket
	1	502199	Sleeve
33251	1	34408	Seal
	1	89507	Sleeve
33659	1	33660	Seal
	1	86193	Sleeve
36381	1	36384	Seal
	1	86189	Sleeve
36944	1	36943	Seal
	1	86179	Sleeve
41152	1	41153	Seal
	1	86185	Sleeve
45001	1	46125	Seal
	1	86542	Sleeve
47385	1	47379	Seal
	1	84041	Sleeve
47587	1	48768	Seal
	1	88883	Sleeve
48697	1	48698	Seal
	1	86074	Sleeve
49921	1	49920	Seal
	1	77500	Sleeve
51242	1	51243	Seal
	1	86383	Sleeve
54930	1	54929	Seal
	1	70171	Sleeve
54935	1	54940	Seal
	1	70171	Sleeve
55165	1	55170	Seal
	1	70171	Sleeve
56103	1	56104	Seal
	1	86151	Sleeve
59997	1	59998	Seal
	1	453677	Inst. Sleeve
70037	1	70038	Seal
	1	86188	Sleeve
75090	1	540693	Seal
	1	450173	Gasket

S-series sleeves numerical listing

SKF no.	Outside diam. B	Diam. C	Diam. A (shaft)	Width D	Width E	Type style	Component of kit number(s)	Illustration
68016	5.500	4.766	4.766	0.688	0.875	S3	1211, 1212, 1213	
70171	5.500	4.832	4.824	0.688	0.875	S2	54930, 54935, 55165	
71895	2.420	2.156	2.342		0.625	S7	1303	
76360	10.000		9.875		0.750	S1	1330	
77500	5.000		4.841		0.750	S1	49921	
77801	4.012	4.314	3.875	0.893	0.968	S6	1308	
77810	3.566	3.874	3.438	0.675	0.750	S6	1307	
77811	3.254	3.562	3.125	0.675	0.750	S6	1306	
80184	4.806		4.688		1.240	S1	1200, 1201	
81473	2.506		2.375		1.000	S1	1244, 1245	
81474	2.995		2.875		0.625	S1	1243	
81774	4.894	5.203	4.766	0.938	1.012	S6		
84041	4.750		4.644		0.625	S1	47385, 47388	
86074	4.875		4.750		0.750	S1	48697	
86151	5.603	5.812	5.500	0.801	0.875	S6	56103	
86178	2.230	2.437	2.125	0.695	0.750	S6	22587	
86179	3.666	3.825	3.562	0.644	0.718	S6	36944	
86183	3.229	3.437	3.125	0.820	0.875	S6	32548	
86184	2.562	2.750	2.437	0.690	0.750	S6	24466	
86185	4.110	4.312	4.000	0.663	0.718	S6	41152	
86188	7.000	7.187	6.875	0.926	1.000	S6	70037	
86189	3.625	3.937	3.500	0.644	0.718	S6	36381	
86190	1.174	1.437	1.062	0.570	0.625	S6	11904	
86191	1.362	1.562	1.250	0.676	0.750	S6	12578	
86193	3.354	3.625	3.250	0.695	0.750	S6	33659	
86206	4.000	4.182	3.937		0.750	S6	1322	
86207	4.066		3.938		0.875	S6	1321	
86383	5.125		5.000		0.750	S1	51242	
88883	4.852	5.500	4.750		0.812	S6	47587	
99086	0.877	1.093	0.859	0.363	0.375	S6	901	
99372	3.770	4.031	3.753	0.863	0.875	S6	900	
99599	6.015	6.375	5.999	1.234	1.250	S6	210	
450010	1.307		1.175		0.422	S1	1202	
450013	4.042	4.375	3.930	0.781	0.844	S6	1219	
450014	3.980	4.312	3.868	0.813	0.844	S6	1206	
450018	4.042	4.500	3.868	0.813	0.906	S6	1214	
450022	5.062		4.766		0.922	S1	1215	
500488	2.505	2.062	2.415	0.313	0.453	S4	25160	
500625	See Type J Section						23870	
500959	See Type J Section						31361	
502073	See Type J Section						31390	
502075	See Type J Section						31374	
502081	See Type J Section						31378	
502185	See Type J Section						31364	
502198	3.110	2.688	3.010	0.313	0.453	S4	31364, 31369, 31374	

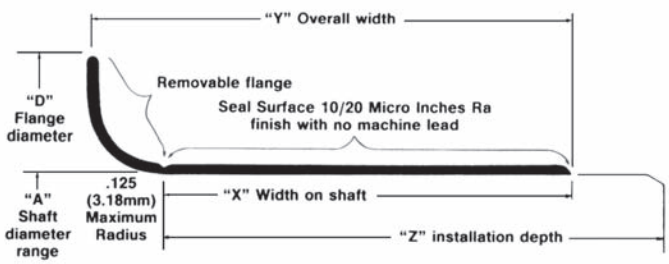
S-series sleeves numerical listing - (cont.)

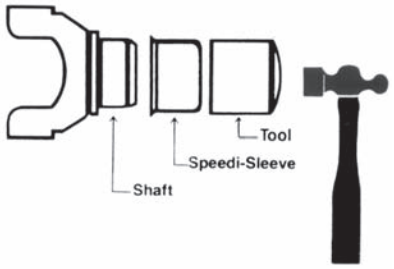
SKF no.	Outside diam. B	Diam. C	Diam. A (shaft)	Width D	Width E	Type style	Component of kit number(s)	Illustration
502199	3.235	2.688	3.129	0.313	0.453	S4	32630, 32640	
502234	3.110	2.578	3.010	0.331	0.625	S5	1240	
502252	See Type J Section						32640	
502253	See Type J Section						31369	
502256	See Type J Section						31385	
530086	See Type J Section						20168	
503513	2.375	2.000	2.289	0.328	0.524	S4	23870	
530459	See Type J Section						25160	
531585	See Type J Section						15243	
540693	See Type J Section						75090	
542144	See Type J Section						20766	

Speedi-Sleeve grease seal kit size listing

SKF Kit no.	Kit dimensions			Kit components	
	Shaft	Bore	Width	Speedi-Sleeve no.	Seal no.
480050	.500	.750	.250	99050	4912
480074	.750	.999	.313	99076	7410
901	.859	1.437	.250	99086	8691
480097	1.000	1.250	.313	99100	9815
480098	1.000	1.499	.313	99100	9876
480099	1.000	1.499	.313	99100	9878
480125	1.250	2.000	.313	99125	12456
480148	1.500	2.372	.563	99149	14978
480149	1.500	2.254	.563	99149	14966
480150	1.500	2.377	.563	99149	15041
480151	1.500	2.502	.563	99149	15141
480152	1.500	2.374	.563	99149	15005
480168	1.688	2.502	.835	99168	16725
480173	1.750	2.374	.563	99174	17271
480176	1.750	2.718	.563	99174	17617
480177	1.766	2.412	.563	99176	17286
480184	1.868	2.518	.889	99186	18492
480185	1.875	2.561	.563	99187	18548
480186	1.875	2.561	.563	99187	18546
480187	1.875	2.760	.563	99187	18692
480198	2.000	2.745	.563	99199	19807
20146	1.980	3.371	.563	99198	20127
480219	2.188	3.188	.781	99218	21938
22562	2.250	3.251	.500	99229	22449
480233	2.328	3.000	.750	99233	23300
480249	2.500	3.500	.781	99250	24988
480250	2.500	3.251	.781	99250	24910
480260	2.625	3.623	.781	99262	26220
480261	2.625	4.438	.781	99262	26368
480262	2.625	4.563	.781	99262	26373
480273	2.750	3.543	.781	99274	27295
480274	2.750	3.751	.781	99274	27377
480275	2.750	3.876	.781	99274	27452
480278	2.750	4.249	.781	99274	27601
480293	2.938	3.938	.781	99293	29275
480294	2.938	4.003	.781	99293	29322
480299	3.000	3.751	.813	99300	29872
480300	3.000	4.003	.813	99300	29925
480303	3.000	4.249	.813	99300	30055
480325	3.250	4.249	.813	99325	32385
480350	3.500	4.501	.813	99350	34891
900	3.750	4.501	.688	99372	37330
480450	4.500	5.501	.813	99450	44967
218	5.000	6.126	.813	99499	49960
210	6.000	6.750	1.000	99599	60000

Speedi-Sleeve size listing - Inches





Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches .031)	"Y" Overall width (Inches .031)	"D" Flange diameter (Inches .063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
0.472	0.469	0.475	**99049**	0.236	0.331	0.610	1.875
0.500	0.498	0.502	**99050**	0.250	0.344	0.610	2.000
0.551	0.547	0.551	**99055**	0.250	0.391	0.750	1.831
0.563	0.560	0.566	**99056**	0.250	0.391	0.750	1.831
0.591	0.589	0.593	**99059**	0.197	0.354	0.750	1.862
0.625	0.623	0.627	**99810** *	0.313	0.406	0.750	2.000
0.625	0.623	0.627	**99062**	0.313	0.406	0.750	2.000
0.630	0.626	0.630	**99058**	0.313	0.438	0.718	2.000
0.669	0.667	0.671	**99068**	0.315	0.433	0.875	2.000
0.684	0.682	0.686	**99060**	0.313	0.438	0.900	2.000
0.709	0.704	0.709	**99082**	0.315	0.433	0.962	1.811
0.750	0.748	0.752	**99811** *	0.313	0.438	0.945	2.000
0.750	0.748	0.752	**99076**	0.313	0.438	0.945	2.000
0.760	0.759	0.761	**99081**	0.313	0.438	0.938	2.000
0.781	0.780	0.784	**99080**	0.313	0.438	0.935	2.000
0.787	0.785	0.789	**99078**	0.315	0.433	0.930	2.000
0.813	0.812	0.815	**99083**	0.375	0.563	0.000	3.000
0.859	0.857	0.861	**99086**	0.250	0.375	1.155	2.000
0.866	0.861	0.866	**99084**	0.259	0.359	1.188	1.856
0.866	0.861	0.866	**99085**	0.315	0.472	1.188	1.812
0.875	0.873	0.877	**99812** *	0.313	0.438	1.094	2.000
0.875	0.873	0.877	**99087**	0.313	0.438	1.094	2.000
0.910	0.908	0.912	**99860** *	0.313	0.438	1.218	1.847
0.910	0.908	0.912	**99091**	0.313	0.438	1.218	1.847
0.945	0.940	0.945	**99092**	0.313	0.438	1.130	2.000
0.969	0.966	0.970	**99094**	0.313	0.438	1.130	2.000
0.969	0.966	0.970	**99096**	0.625	0.719	1.130	2.000
0.984	0.982	0.986	**99813** *	0.313	0.433	1.300	2.000
0.984	0.982	0.986	**99098**	0.313	0.433	1.300	2.000
1.000	0.998	1.002	**99814** *	0.313	0.438	1.219	2.000
1.000	0.998	1.002	**99100**	0.313	0.438	1.219	2.000
1.024	1.019	1.024	**99103**	0.315	0.472	1.313	1.813
1.063	1.060	1.064	**99815** *	0.313	0.438	1.320	1.843
1.063	1.060	1.064	**99106**	0.313	0.438	1.320	1.843
1.089	1.087	1.091	**99108**	0.313	0.438	1.406	0.625
1.102	1.100	1.104	**99866** *	0.375	0.500	1.375	1.843
1.102	1.100	1.104	**99111**	0.375	0.500	1.375	1.843
1.125	1.123	1.127	**99816** *	0.313	0.438	1.500	0.688
1.125	1.123	1.127	**99112**	0.313	0.438	1.500	0.688
1.125	1.123	1.127	**99116**	0.375	0.500	1.500	0.688
1.156	1.154	1.158	**99865** *	0.375	0.500	1.350	0.688
1.156	1.154	1.158	**99120**	0.375	0.500	1.350	0.688
1.175	1.173	1.178	**99122**	0.313	0.438	1.400	0.688
1.181	1.179	1.184	**99114**	0.315	0.433	1.400	0.688
1.188	1.185	1.190	**99118**	0.313	0.438	1.400	0.688
1.219	1.216	1.222	**99123**	0.313	0.433	1.563	0.625
1.240	1.237	1.243	**99141**	0.315	0.438	1.540	0.688
1.250	1.247	1.253	**99817** *	0.313	0.438	1.500	0.688

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches .031)	"Y" Overall width (Inches .031)	"D" Flange diameter (Inches .063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
1.250	1.247	1.253	**99871** *	0.625	0.750	1.500	2.000
1.250	1.247	1.253	**99125**	0.313	0.438	1.500	0.688
1.260	1.257	1.263	**99128**	0.315	0.438	1.500	0.688
1.299	1.297	1.301	**99121**	0.591	0.709	1.594	1.000
1.313	1.310	1.316	**99818** *	0.500	0.625	1.594	0.813
1.313	1.308	1.314	**99129**	0.250	0.375	1.600	0.813
1.313	1.310	1.316	**99131**	0.500	0.625	1.594	0.813
1.339	1.333	1.339	**99134**	0.500	0.625	1.625	0.813
1.375	1.371	1.377	**99819** *	0.500	0.625	1.638	0.813
1.375	1.375	1.381	**99820** *	0.512	0.630	1.638	0.813
1.375	1.371	1.377	**99133**	0.313	0.438	1.638	0.813
1.375	1.371	1.377	**99138**	0.500	0.625	1.638	0.813
1.375	1.375	1.381	**99139**	0.512	0.630	1.638	0.813
1.417	1.411	1.417	**99146**	0.512	0.669	1.781	0.984
1.438	1.432	1.438	**99821** *	0.563	0.688	1.781	1.016
1.438	1.432	1.438	**99143**	0.563	0.688	1.781	1.016
1.438	1.435	1.441	**99144**	0.375	0.500	1.781	1.016
1.496	1.490	1.496	**99147**	0.512	0.669	1.781	0.984
1.500	1.497	1.503	**99822** *	0.563	0.688	1.781	1.016
1.500	1.497	1.503	**99823** *	0.375	0.500	1.781	1.016
1.500	1.497	1.503	**99149**	0.563	0.688	1.781	1.016
1.500	1.497	1.503	**99150**	0.375	0.500	1.781	1.016
1.523	1.520	1.526	**99152**	0.438	0.563	1.859	1.016
1.552	1.549	1.555	**99155**	0.438	0.563	1.859	1.016
1.563	1.559	1.565	**99824** *	0.563	0.688	1.859	1.016
1.563	1.559	1.565	**99156**	0.563	0.688	1.859	1.016
1.569	1.566	1.572	**99159**	0.625	0.750	1.859	1.016
1.575	1.569	1.575	**99153**	0.390	0.509	1.850	1.000
1.578	1.572	1.578	**99825** *	0.512	0.630	1.850	1.023
1.578	1.572	1.578	**99157**	0.512	0.630	1.850	1.023
1.605	1.602	1.608	**99160**	0.500	0.641	1.938	1.000
1.614	1.608	1.614	**99163**	0.500	0.625	1.938	1.016
1.625	1.622	1.628	**99826** *	0.563	0.688	1.875	0.813
1.625	1.622	1.628	**99161**	0.313	0.438	1.875	1.016
1.625	1.622	1.628	**99162**	0.563	0.688	1.875	0.813
1.650	1.647	1.654	**99166**	0.445	0.571	2.087	0.846
1.650	1.647	1.654	**99169**	0.563	0.689	2.087	0.827
1.654	1.647	1.654	**99873** *	0.563	0.689	2.087	0.827
1.656	1.653	1.659	**99165**	0.550	0.689	2.087	0.827
1.688	1.685	1.691	**99167**	0.313	0.438	1.906	0.875
1.688	1.684	1.690	**99168**	0.563	0.688	1.906	0.875
1.693	1.687	1.693	**99182**	0.500	0.625	1.906	0.844
1.719	1.715	1.721	**99171**	0.563	0.688	2.031	0.813
1.739	1.736	1.742	**99170**	0.375	0.500	2.063	0.813
1.750	1.747	1.753	**99827** *	0.563	0.688	2.063	0.813
1.750	1.747	1.753	**99828** *	0.750	0.875	2.063	0.813
1.750	1.747	1.753	**99172**	0.375	0.500	2.055	0.813
1.750	1.747	1.753	**99174**	0.563	0.688	2.063	0.813
1.750	1.747	1.753	**99175**	0.750	0.875	2.063	0.813
1.750	1.747	1.753	**99180**	0.531	0.625	2.063	0.878
1.766	1.761	1.767	**99829** *	0.563	0.688	2.063	0.813
1.766	1.761	1.767	**99176**	0.563	0.688	2.063	0.813
1.772	1.769	1.775	**99830** *	0.551	0.669	2.087	0.812
1.772	1.769	1.775	**99177**	0.551	0.669	2.087	0.812
1.781	1.778	1.784	**99179**	0.667	0.800	2.125	1.062
1.813	1.809	1.815	**99831** *	0.563	0.688	2.090	1.000
1.813	1.809	1.815	**99181**	0.563	0.688	2.090	1.000
1.859	1.857	1.863	**99185**	0.563	0.688	2.156	1.000
1.868	1.866	1.872	**99186**	0.889	1.025	2.188	1.000
1.875	1.872	1.878	**99832** *	0.563	0.688	2.203	1.000

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches .031)	"Y" Overall width (Inches .031)	"D" Flange diameter (Inches .063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
1.875	1.872	1.878	**99184**	0.375	0.516	2.203	1.050
1.875	1.872	1.878	**99187**	0.563	0.688	2.203	1.000
1.875	1.872	1.878	**99188**	0.295	0.415	2.203	0.744
1.875	1.872	1.878	**99190**	0.175	0.295	2.203	0.744
1.891	1.887	1.893	**99189**	0.551	0.668	2.205	0.984
1.912	1.909	1.915	**99192**	0.375	0.500	2.219	1.000
1.938	1.934	1.940	**99833** *	0.563	0.688	2.219	1.000
1.938	1.934	1.940	**99193**	0.563	0.688	2.219	1.000
1.969	1.965	1.971	**99196**	0.551	0.668	2.244	0.984
1.980	1.977	1.983	**99198**	0.563	0.704	2.313	1.050
2.000	1.997	2.003	**99834** *	0.563	0.688	2.406	1.006
2.000	1.997	2.003	**99835** *	0.875	1.000	2.406	1.000
2.000	1.997	2.003	**99199**	0.563	0.688	2.406	1.000
2.000	1.997	2.003	**99200**	0.875	1.000	2.406	1.000
2.047	2.040	2.047	**99204**	0.500	0.625	2.469	1.359
2.063	2.057	2.063	**99205**	0.781	0.938	2.469	1.375
2.125	2.124	2.130	**99836** *	0.781	0.938	2.422	1.375
2.125	2.123	2.128	**99210**	0.500	0.750	2.422	1.281
2.125	2.124	2.130	**99212**	0.781	0.938	2.422	1.375
2.165	2.162	2.169	**99863** *	0.787	0.905	2.441	1.250
2.165	2.162	2.168	**99215**	0.787	0.905	2.441	1.250
2.188	2.186	2.192	**99218**	0.781	0.938	2.500	1.313
2.205	2.198	2.205	**99220**	0.500	0.625	2.531	1.313
2.230	2.227	2.233	**99861** *	0.500	0.625	2.531	1.313
2.230	2.227	2.233	**99229**	0.500	0.625	2.531	1.313
2.230	2.227	2.233	**99230**	0.781	0.906	2.531	1.250
2.240	2.237	2.243	**99226**	0.764	0.900	2.563	1.250
2.250	2.249	2.255	**99837** *	0.781	0.938	2.531	1.313
2.250	2.249	2.255	**99838** *	0.313	0.438	2.531	1.313
2.250	2.249	2.255	**99225**	0.781	0.938	2.531	1.313
2.250	2.249	2.255	**99227**	0.313	0.438	2.531	1.313
2.283	2.280	2.286	**99219**	0.787	0.938	2.598	1.375
2.313	2.309	2.315	**99231**	0.781	0.938	2.688	1.375
2.328	2.327	2.333	**99233**	0.750	0.875	2.750	1.500
2.362	2.359	2.365	**99869** *	0.787	0.905	2.785	1.375
2.362	2.359	2.365	**99235**	0.787	0.905	2.785	1.375
2.362	2.359	2.365	**99241**	0.370	0.450	2.785	1.471
2.375	2.374	2.380	**99839** *	0.781	0.938	2.750	1.375
2.375	2.374	2.380	**99237**	0.781	0.938	2.750	1.375
2.375	2.372	2.378	**99238**	0.594	0.750	2.750	1.375
2.375	2.374	2.380	**99240**	0.526	0.683	2.750	1.375
2.438	2.435	2.441	**99242**	0.500	0.625	2.828	1.425
2.438	2.434	2.440	**99243**	0.781	0.938	2.828	1.393
2.441	2.434	2.441	**99244**	0.500	0.625	2.828	1.425
2.492	2.489	2.495	**99249**	0.781	0.938	2.875	1.393
2.500	2.500	2.506	**99840** *	0.781	0.938	2.820	1.375
2.500	2.500	2.506	**99248**	0.500	0.656	2.828	1.393
2.500	2.500	2.506	**99250**	0.781	0.938	2.820	1.375
2.500	2.497	2.503	**99253**	0.555	0.650	2.820	0.890
2.516	2.510	2.516	**99251**	0.781	0.906	2.828	1.438
2.559	2.556	2.562	**99841** *	0.787	0.905	2.850	1.375
2.559	2.556	2.562	**99254**	0.787	0.905	2.850	1.375
2.563	2.560	2.566	**99256**	0.781	0.938	2.891	1.375
2.598	2.595	2.601	**99259**	0.781	0.938	2.990	1.250
2.621	2.618	2.624	**99261**	0.781	0.938	3.047	1.375
2.625	2.625	2.631	**99842** *	0.781	0.938	3.047	1.375
2.625	2.622	2.628	**99260**	0.500	0.625	3.047	1.375
2.625	2.625	2.631	**99262**	0.781	0.938	3.047	1.375
2.625	2.621	2.627	**99264**	0.781	0.906	3.047	1.375
2.677	2.670	2.677	**99266**	0.750	0.875	3.125	1.688

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches .031)	"Y" Overall width (Inches .031)	"D" Flange diameter (Inches .063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
2.730	2.727	2.733	**99268**	0.781	0.906	3.125	1.313
2.743	2.740	2.746	**99273**	0.781	0.938	3.065	1.250
2.750	2.745	2.751	**99843** *	0.781	0.938	3.125	1.250
2.750	2.750	2.756	**99844** *	0.781	0.938	3.125	1.250
2.750	2.747	2.753	**99267**	1.438	1.625	3.075	1.625
2.750	2.750	2.756	**99269**	1.125	1.250	3.125	1.312
2.750	2.750	2.756	**99272**	0.406	0.563	3.125	1.250
2.750	2.745	2.751	**99274**	0.781	0.938	3.125	1.250
2.750	2.750	2.756	**99275**	0.781	0.938	3.125	1.250
2.756	2.753	2.759	**99276**	0.787	0.945	3.125	1.250
2.813	2.809	2.815	**99281**	0.594	0.688	3.188	1.250
2.835	2.827	2.835	**99870** *	0.750	0.875	3.225	1.343
2.835	2.828	2.835	**99284**	0.750	0.875	3.225	1.343
2.838	2.838	2.844	**99845** *	0.500	0.656	3.225	1.250
2.838	2.838	2.844	**99282**	0.500	0.656	3.225	1.250
2.869	2.866	2.872	**99286**	0.781	0.938	3.188	1.250
2.875	2.873	2.879	**99846** *	0.781	0.938	3.219	1.250
2.875	2.873	2.879	**99287**	0.781	0.938	3.219	1.250
2.938	2.937	2.943	**99847** *	0.781	0.938	3.344	1.313
2.938	2.937	2.943	**99290**	0.500	0.641	3.344	1.331
2.940	2.937	2.943	**99293**	0.781	0.938	3.344	1.313
2.953	2.950	2.956	**99875** *	0.866	1.024	3.305	1.313
2.953	2.950	2.956	**99289**	0.594	0.690	3.273	1.083
2.953	2.950	2.956	**99294**	0.866	1.024	3.305	1.313
2.974	2.972	2.976	**99292**	0.813	1.000	3.235	1.250
2.993	2.990	2.996	**99291**	0.484	0.625	3.359	1.331
2.993	2.990	2.996	**99298**	0.563	0.688	3.359	1.375
2.993	2.990	2.996	**99299**	0.813	1.000	3.350	1.281
3.000	3.000	3.006	**99848** *	0.813	1.000	3.235	1.281
3.000	2.997	3.003	**99296**	0.813	0.938	3.240	1.375
3.000	3.000	3.006	**99300**	0.813	1.000	3.235	1.281
3.000	3.000	3.006	**99303**	0.625	0.813	3.345	1.280
3.011	3.008	3.014	**99301**	0.500	0.625	3.355	2.000
3.071	3.064	3.071	**99306**	0.750	0.875	3.468	2.056
3.125	3.120	3.126	**99849** *	0.813	1.000	3.531	2.000
3.125	3.124	3.132	**99307**	0.551	0.709	3.525	2.031
3.125	3.120	3.126	**99311**	0.688	0.813	3.531	2.000
3.125	3.120	3.126	**99312**	0.813	1.000	3.531	2.000
3.150	3.142	3.150	**99313**	0.750	0.886	3.540	1.375
3.150	3.146	3.153	**99315**	0.827	0.945	3.543	1.375
3.150	3.146	3.153	**99317**	0.433	0.591	3.543	1.375
3.228	3.225	3.231	**99328**	0.660	0.848	3.585	1.750
3.250	3.250	3.256	**99850** *	0.595	0.719	3.575	1.375
3.250	3.250	3.256	**99851** *	0.813	1.000	3.585	1.375
3.250	3.247	3.253	**99322**	0.813	1.000	3.594	1.375
3.250	3.250	3.256	**99324**	0.595	0.719	3.575	1.375
3.250	3.250	3.256	**99325**	0.813	1.000	3.585	1.375
3.250	3.250	3.256	**99326**	0.688	0.875	3.585	1.250
3.310	3.307	3.313	**99331**	0.813	1.000	3.688	1.375
3.342	3.337	3.347	**99332**	0.669	0.827	3.700	1.378
3.342	3.337	3.347	**99333**	0.827	0.984	3.700	1.378
3.346	1.247	1.253	**99872** *	0.827	0.984	3.700	1.378
3.346	3.338	3.346	**99334**	0.399	0.499	3.580	1.431
3.375	3.373	3.379	**99337**	0.813	1.000	3.695	1.375
3.375	3.373	3.379	**99338**	0.375	0.500	3.688	1.410
3.438	3.435	3.441	**99339**	0.781	0.906	3.844	1.406
3.480	3.477	3.483	**99340**	0.781	0.906	3.835	1.406
3.500	3.500	3.506	**99852** *	0.813	1.000	3.844	1.347
3.500	3.497	3.503	**99346**	0.625	0.813	3.844	1.347
3.500	3.500	3.506	**99347**	0.313	0.500	3.825	1.347

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches .031)	"Y" Overall width (Inches .031)	"D" Flange diameter (Inches .063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
3.500	3.500	3.506	**99350**	0.813	1.000	3.844	1.347
3.504	3.501	3.507	**99349**	0.625	0.813	3.844	1.348
3.543	3.540	3.546	**99351**	0.710	0.906	4.000	1.813
3.543	3.540	3.546	**99352**	0.438	0.538	4.000	1.813
3.543	3.540	3.546	**99353**	0.526	0.667	4.000	1.750
3.543	3.540	3.546	**99354**	0.906	1.102	4.000	1.750
3.563	3.560	3.566	**99356**	0.813	1.000	3.900	1.750
3.621	3.618	3.624	**99360**	0.813	1.000	4.031	1.750
3.625	3.623	3.629	**99362**	0.813	1.000	4.031	1.750
3.625	3.623	3.629	**99363**	0.500	0.625	4.025	1.750
3.688	3.685	3.691	**99365**	0.813	0.938	4.025	1.800
3.688	3.684	3.690	**99368**	0.313	0.438	4.031	0.875
3.730	3.727	3.733	**99359**	0.469	0.594	4.016	1.800
3.730	3.727	3.733	**99366**	0.781	0.906	4.025	1.800
3.740	3.737	3.743	**99369**	0.827	0.945	4.025	1.800
3.743	3.740	3.746	**99364**	0.469	0.594	4.035	1.800
3.743	3.740	3.746	**99374**	0.344	0.500	4.031	1.800
3.749	3.746	3.752	**99376**	0.563	0.688	4.025	1.800
3.750	3.750	3.756	**99853** ★	0.688	0.875	4.020	1.800
3.753	3.750	3.756	**99367**	0.344	0.500	4.025	1.800
3.753	3.750	3.756	**99372**	0.688	0.875	4.020	1.800
3.871	3.868	3.874	**99386**	0.813	1.000	4.185	1.875
3.875	3.873	3.879	**99387**	0.813	1.000	4.219	1.875
3.938	3.935	3.941	**99854** ★	0.813	1.000	4.313	2.050
3.938	3.935	3.941	**99393**	0.813	1.000	4.313	2.050
4.000	3.998	4.006	**99855** ★	0.813	1.000	4.375	2.050
4.000	3.998	4.006	**99395**	0.600	0.725	4.375	2.050
4.000	3.998	4.006	**99399**	0.813	1.000	4.375	2.050
4.000	3.998	4.006	**99400**	0.650	0.775	4.375	1.375
4.000	3.998	4.006	**99401**	0.500	0.625	4.375	2.066
4.094	4.090	4.098	**99409**	0.787	0.945	4.438	1.417
4.125	4.122	4.130	**99412**	0.813	1.000	4.470	1.375
4.134	4.130	4.138	**99413**	0.787	0.913	4.470	1.378
4.188	4.183	4.191	**99418**	0.813	1.000	4.500	1.375
4.234	4.226	4.234	**99423**	0.781	0.906	4.610	1.438
4.250	4.248	4.256	**99424**	0.813	1.000	4.610	1.438
4.328	4.327	4.335	**99435**	0.509	0.650	4.921	1.250
4.331	4.322	4.331	**99434**	0.448	0.589	4.921	1.297
4.375	4.370	4.378	**99437**	0.813	1.000	4.750	1.650
4.409	4.401	4.409	**99438**	0.750	0.886	4.750	1.300
4.438	4.434	4.442	**99439**	1.000	1.142	4.813	1.313
4.500	4.496	4.504	**99856** ★	0.813	1.000	4.900	1.250
4.500	4.496	4.504	**99450**	0.813	1.000	4.850	1.250
4.528	4.523	4.531	**99452**	0.813	0.938	5.000	1.250
4.625	4.621	4.629	**99463**	1.000	1.250	5.063	1.375
4.625	4.621	4.629	**99465**	0.438	0.625	5.000	1.375
4.688	4.685	4.693	**99468**	0.813	1.000	5.063	1.375
4.724	4.720	4.728	**99471**	0.315	0.433	5.110	1.323
4.724	4.720	4.728	**99473**	0.787	0.984	5.110	1.260
4.750	4.746	4.754	**99475**	0.500	0.750	5.000	1.500
4.803	4.799	4.807	**99472**	0.787	0.945	5.177	1.260
4.843	4.839	4.847	**99484**	0.787	0.984	5.229	1.244
4.875	4.871	4.879	**99487**	0.625	0.750	5.250	1.438
4.921	4.917	4.925	**99490**	0.394	0.551	5.400	1.438
4.921	4.917	4.925	**99492**	1.024	1.260	5.400	1.438
5.000	4.998	5.006	**99857** ★	0.688	0.875	5.400	1.438
5.000	4.998	5.006	**99858** ★	0.813	1.000	5.390	1.438
5.000	4.998	5.006	**99498**	0.688	0.875	5.400	1.438
5.000	4.998	5.006	**99499**	0.813	1.000	5.390	1.438
5.000	4.998	5.006	**99501**	0.540	0.681	5.400	1.438

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches .031)	"Y" Overall width (Inches .031)	"D" Flange diameter (Inches .063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
5.114	5.110	5.118	**99494**	0.750	0.938	5.493	1.181
5.118	5.117	5.125	**99874** *	0.866	0.996	5.493	1.280
5.125	5.117	5.125	**99491**	0.866	0.996	5.493	1.280
5.125	5.120	5.128	**99513**	0.813	1.000	5.500	1.250
5.250	5.246	5.254	**99525**	0.813	1.000	5.560	1.250
5.311	5.307	5.315	**99533**	0.807	1.000	5.735	1.250
5.375	5.371	5.379	**99537**	0.813	1.000	5.875	1.250
5.438	5.434	5.442	**99548**	1.500	1.688	5.750	1.875
5.476	5.472	5.480	**99547**	0.563	0.750	5.900	1.234
5.500	5.498	5.506	**99859** *	0.813	1.000	5.938	1.250
5.500	5.498	5.506	**99549**	0.813	1.000	5.938	1.250
5.500	5.498	5.506	**99550**	0.518	0.705	5.938	1.250
5.512	5.508	5.516	**99552**	0.807	1.000	5.945	1.250
5.625	5.621	5.629	**99560**	0.875	1.000	6.188	1.812
5.709	5.699	5.709	**99571**	0.750	0.875	6.100	1.812
5.734	5.726	5.734	**99562**	0.563	0.750	6.100	1.938
5.750	5.746	5.754	**99575**	0.813	1.000	6.180	1.750
5.875	5.871	5.879	**99862** *	1.000	1.250	6.188	1.313
5.875	5.871	5.879	**99587**	1.000	1.250	6.188	1.313
5.905	5.896	5.906	**99595**	1.024	1.181	6.260	1.280
5.938	5.934	5.942	**99596**	1.000	1.125	6.375	1.875
6.000	5.995	6.003	**99599**	1.000	1.250	6.375	1.750
6.000	5.995	6.003	**99601**	0.500	0.750	6.360	1.750
6.063	6.058	6.068	**99605**	1.024	1.181	6.375	1.299
6.097	6.092	6.102	**99606**	1.024	1.181	6.575	1.299
6.203	6.198	6.208	**99620**	0.813	1.063	6.625	1.750
6.250	6.245	6.255	**99625**	1.031	1.250	6.625	1.750
6.299	6.289	6.299	**99630**	1.000	1.250	6.750	1.375
6.500	6.495	6.505	**99650**	1.000	1.250	7.000	1.375
6.688	6.683	6.693	**99640**	1.250	1.496	7.188	1.750
6.750	6.745	6.755	**99675**	0.813	1.063	7.125	1.750
6.890	6.880	6.890	**99687**	1.102	1.260	7.362	1.378
7.000	6.995	7.005	**99864** *	1.000	1.250	7.475	1.688
7.000	6.995	7.005	**99700**	1.000	1.250	7.475	1.688
7.087	7.077	7.087	**99721**	1.299	1.496	7.500	1.752
7.250	7.244	7.254	**99725**	1.250	1.500	7.760	2.175
7.278	7.273	7.283	**99726**	1.260	1.496	7.760	2.165
7.453	7.444	7.454	**99745**	0.813	1.000	7.860	1.250
7.500	7.495	7.505	**99750**	0.813	1.000	7.875	1.250
7.750	7.745	7.755	**99775**	1.000	1.313	8.270	1.875
7.875	7.869	7.879	**99787**	1.359	1.500	8.375	1.750
7.938	7.933	7.943	**99799**	1.000	1.250	8.375	1.750
8.000	7.995	8.005	**99800**	1.000	1.250	8.375	1.750

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Metric

Shaft diameter	"A" Shaft diameter range Minimum MM	Maximum MM	Stock number	"X" Width on shaft 0.8 MM	"Y" Overall width 0.8 MM	"D" Flange diameter 1.6 MM	"Z" Installation depth MM
12.00	11.91	12.07	**99049**	6.00	8.40	15.50	47.60
12.70	12.65	12.75	**99050**	6.35	9.93	19.05	46.51
14.00	13.89	14.00	**99055**	6.35	9.93	19.05	46.51
14.30	14.22	14.38	**99056**	6.35	9.93	19.05	46.51
15.00	14.96	15.06	**99059**	5.00	8.99	19.05	47.29
15.88	15.82	15.93	**99810 ***	7.95	10.31	19.05	50.80
15.88	15.83	15.93	**99062**	7.95	10.31	19.05	50.80
16.00	15.89	16.00	**99058**	7.95	11.10	18.24	50.80
17.00	16.94	17.04	**99068**	7.95	11.00	22.23	50.80
17.37	17.32	17.42	**99060**	7.95	11.13	22.86	50.80
18.00	17.87	18.00	**99082**	8.00	11.00	24.43	46.00
19.00	19.00	19.10	**99811 ***	7.95	11.13	24.00	50.80
19.00	19.00	19.10	**99076**	7.95	11.13	24.00	50.80
19.30	19.27	19.33	**99081**	7.95	11.13	23.83	50.80
19.86	19.81	19.91	**99080**	7.95	11.13	23.75	50.80
20.00	19.94	20.04	**99078**	8.00	11.00	23.62	50.80
20.65	20.62	20.70	**99083**	9.52	14.30	0.00	76.20
21.82	21.77	21.87	**99086**	6.35	9.52	29.34	50.80
22.00	21.87	22.00	**99084**	6.58	9.09	30.20	47.09
22.00	21.87	22.00	**99085**	8.00	11.99	30.17	46.05
22.23	22.17	22.28	**99812 ***	7.95	11.13	27.79	50.80
22.23	22.18	22.28	**99087**	7.95	11.13	27.79	50.80
23.11	23.06	23.16	**99091**	7.95	11.13	30.94	46.91
23.11	23.06	23.17	**99860 ***	7.95	11.13	30.94	46.91
24.00	23.87	24.00	**99092**	7.95	11.10	28.70	50.80
24.59	24.54	24.64	**99094**	7.95	11.13	28.70	50.80
24.59	24.54	24.64	**99096**	15.88	18.26	28.70	50.80
25.00	24.94	25.04	**99813 ***	7.95	11.00	33.02	50.80
25.00	24.94	25.04	**99098**	7.95	11.00	33.02	50.80
25.40	25.35	25.45	**99814 ***	7.95	11.13	30.96	50.80
25.40	25.35	25.45	**99100**	7.95	11.13	30.96	50.80
26.00	25.88	26.01	**99103**	8.00	11.99	33.35	46.05
27.00	26.92	27.03	**99815 ***	7.95	11.13	33.53	46.81
27.00	26.92	27.02	**99106**	7.95	11.13	33.53	46.81
27.66	27.61	27.71	**99108**	7.95	11.13	35.71	15.88
28.00	27.94	28.04	**99866 ***	9.52	12.70	34.92	46.81
28.00	27.94	28.04	**99111**	9.52	12.70	34.92	46.81
28.58	28.52	28.63	**99816 ***	7.95	11.13	38.10	17.48
28.58	28.53	28.63	**99112**	7.95	11.13	38.10	17.48
28.58	28.53	28.63	**99116**	9.52	12.70	38.10	17.48
29.36	29.31	29.41	**99120**	9.52	12.70	34.29	17.48
29.36	29.31	29.41	**99865 ***	9.52	12.70	34.29	17.48
29.85	29.80	29.93	**99122**	7.95	11.13	35.56	17.48
30.00	29.95	30.08	**99114**	8.00	11.00	35.56	17.48
30.15	30.10	30.23	**99118**	7.95	11.13	35.56	17.48
31.00	30.88	31.04	**99123**	7.95	11.00	39.70	15.88
31.50	31.42	31.58	**99141**	8.00	11.10	39.12	17.48
31.75	31.67	31.83	**99817 ***	7.95	11.13	38.10	17.48
31.75	31.67	31.83	**99871 ***	15.88	19.05	38.10	50.80
31.75	31.67	31.83	**99125**	7.95	11.13	38.10	17.48
32.00	31.92	32.08	**99128**	8.00	11.13	38.10	17.48
33.00	32.94	33.04	**99121**	15.01	18.00	40.49	20.65
33.30	33.22	33.38	**99129**	6.35	9.50	40.64	20.65
33.35	33.27	33.43	**99818 ***	12.70	15.90	40.49	20.65
33.35	33.27	33.43	**99131**	12.70	15.88	40.49	20.65
34.00	33.86	34.01	**99134**	12.70	15.90	41.28	20.70
34.90	34.82	34.98	**99133**	7.95	11.13	41.60	20.65
34.90	34.82	34.98	**99138**	12.70	15.88	41.60	20.65
34.92	34.82	34.98	**99819 ***	12.70	15.88	41.60	20.65
35.00	34.92	35.08	**99820 ***	13.01	16.00	41.60	20.65

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Metric (Cont.)

Shaft diameter	"A" Shaft diameter range Minimum MM	Maximum MM	Stock number	"X" Width on shaft 0.8 MM	"Y" Overall width 0.8 MM	"D" Flange diameter 1.6 MM	"Z" Installation depth MM
35.00	34.92	35.08	**99139**	13.01	16.00	41.60	20.65
36.00	35.85	36.00	**99146**	13.01	16.99	45.24	24.99
36.45	36.37	36.53	**99143**	14.30	17.48	45.24	25.81
36.53	36.37	36.53	**99821 ***	14.30	17.48	45.24	25.81
36.53	36.45	36.61	**99144**	9.52	12.70	45.24	25.81
38.00	37.85	38.00	**99147**	13.01	16.99	45.24	24.99
38.10	38.02	38.18	**99822 ***	14.30	17.48	45.24	25.81
38.10	38.02	38.18	**99823 ***	9.52	12.70	45.24	25.81
38.10	38.02	38.18	**99149**	14.30	17.48	45.24	25.81
38.10	38.02	38.18	**99150**	9.52	12.70	45.24	25.81
38.68	38.60	38.76	**99152**	11.13	14.30	47.22	25.81
39.42	39.34	39.50	**99155**	11.13	14.30	47.22	25.81
39.67	39.59	39.75	**99156**	14.30	17.48	47.22	25.81
39.70	39.60	39.75	**99824 ***	14.30	17.48	47.22	25.81
39.85	39.77	39.93	**99159**	15.88	19.05	47.22	25.81
40.00	39.93	40.08	**99825 ***	13.01	16.00	46.99	25.98
40.00	39.84	40.00	**99153**	9.91	12.93	46.99	25.40
40.00	39.93	40.09	**99157**	13.01	16.00	46.99	25.98
40.77	40.69	40.85	**99160**	12.70	16.28	49.22	25.40
41.00	40.84	41.00	**99163**	12.70	15.88	49.20	25.81
41.28	41.20	41.35	**99826 ***	14.30	17.48	47.63	20.65
41.28	41.20	41.36	**99161**	7.95	11.13	47.63	25.81
41.28	41.20	41.36	**99162**	14.30	17.48	47.63	20.65
42.00	41.84	42.00	**99873 ***	14.00	18.00	53.01	21.01
42.00	41.84	42.00	**99166**	11.30	14.50	53.01	21.49
42.00	41.84	42.00	**99169**	14.30	17.50	53.01	21.01
42.06	41.98	42.14	**99165**	13.97	17.50	53.01	21.01
42.85	42.78	42.93	**99168**	14.30	17.48	48.41	22.23
42.88	42.80	42.96	**99167**	7.95	11.13	48.41	22.23
43.00	42.84	43.00	**99182**	12.70	15.88	48.41	21.41
43.64	43.56	43.72	**99171**	14.30	17.48	51.59	20.65
44.17	44.09	44.25	**99170**	9.52	12.70	52.40	20.65
44.45	44.37	44.53	**99827 ***	14.30	17.48	52.40	20.65
44.45	44.37	44.53	**99828 ***	19.05	22.23	52.40	20.65
44.45	44.37	44.53	**99172**	9.52	12.70	52.20	20.65
44.45	44.37	44.53	**99174**	14.30	17.48	52.40	20.65
44.45	44.37	44.53	**99175**	19.05	22.23	52.40	20.65
44.45	44.37	44.53	**99180**	13.49	15.88	52.40	22.23
44.81	44.73	44.89	**99176**	13.99	16.99	53.01	20.65
44.86	44.73	44.88	**99829 ***	14.30	17.48	52.40	20.65
45.00	44.93	45.08	**99830 ***	16.87	20.32	53.97	26.98
45.00	44.93	45.09	**99177**	13.99	16.99	53.01	20.63
45.24	45.16	45.32	**99179**	14.30	17.48	53.09	25.40
46.05	45.95	46.10	**99831 ***	14.30	17.48	54.76	25.40
46.05	45.94	46.10	**99181**	14.30	17.48	53.09	25.40
47.24	47.16	47.32	**99185**	22.58	17.48	55.58	25.40
47.45	47.39	47.55	**99186**	22.58	26.03	55.95	25.40
47.63	47.55	47.70	**99832 ***	14.30	17.48	55.96	25.40
47.63	47.55	47.71	**99184**	9.53	13.11	55.96	26.67
47.63	47.55	47.71	**99187**	14.30	17.48	55.96	25.40
47.63	47.55	47.71	**99188**	7.49	10.54	55.96	18.90
47.63	47.55	47.71	**99190**	4.45	7.49	55.96	18.90
48.00	47.93	48.09	**99189**	14.00	16.97	56.01	24.99
48.56	48.48	48.64	**99192**	9.53	12.70	56.36	25.40
49.20	49.12	49.28	**99193**	14.30	17.48	56.36	25.40
49.22	49.12	49.28	**99833 ***	14.30	17.48	56.36	25.40
50.00	49.91	50.07	**99196**	14.00	17.00	57.00	24.99
50.30	50.21	50.37	**99198**	14.30	17.88	58.75	26.67
50.80	50.72	50.88	**99834 ***	14.30	17.48	61.11	25.40
50.80	50.72	50.88	**99835 ***	22.23	25.40	61.11	25.40

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Metric (Cont.)

Shaft diameter	"A" Shaft diameter range Minimum MM	"A" Shaft diameter range Maximum MM	Stock number	"X" Width on shaft 0.8 MM	"Y" Overall width 0.8 MM	"D" Flange diameter 1.6 MM	"Z" Installation depth MM
50.80	50.72	50.88	**99199**	14.30	17.48	61.11	25.40
50.80	50.72	50.88	**99200**	22.23	25.40	61.11	25.40
52.00	51.81	52.00	**99204**	12.70	15.88	62.71	34.52
52.32	52.24	52.40	**99205**	19.84	23.83	62.71	34.93
54.00	53.95	54.10	**99836 ***	19.84	23.83	61.52	34.92
54.00	53.92	54.06	**99210**	12.70	19.05	61.52	32.54
54.00	53.95	54.11	**99212**	19.84	23.83	61.52	34.93
54.99	54.92	55.09	**99863 ***	19.99	22.99	62.00	31.75
55.00	54.91	55.07	**99215**	19.99	22.99	62.00	31.75
55.60	55.52	55.68	**99218**	19.84	23.83	63.50	33.35
56.00	55.81	56.00	**99220**	12.70	15.88	64.29	33.35
56.64	56.56	56.72	**99229**	12.70	15.88	64.29	33.35
56.64	56.56	56.72	**99230**	19.84	23.01	64.29	31.75
56.64	56.57	56.72	**99861 ***	12.70	15.88	64.29	33.35
56.90	56.82	56.98	**99226**	19.41	22.86	65.10	31.75
57.15	57.13	57.28	**99837 ***	19.84	23.83	64.29	33.35
57.15	57.13	57.28	**99838 ***	7.95	11.13	64.29	33.35
57.20	57.12	57.28	**99225**	19.84	23.83	64.29	33.35
57.20	57.12	57.28	**99227**	7.95	11.13	64.29	33.35
58.00	57.91	58.06	**99219**	19.84	23.83	65.99	34.92
58.72	58.64	58.80	**99231**	19.84	23.83	68.28	34.93
59.18	59.10	59.26	**99233**	19.05	22.23	69.85	38.10
60.00	59.91	60.07	**99869 ***	20.00	23.00	70.74	34.93
60.00	59.91	60.07	**99235**	20.00	23.00	70.74	34.93
60.00	59.92	60.08	**99241**	9.40	11.43	70.74	37.36
60.33	60.30	60.45	**99839 ***	19.84	23.83	69.85	34.92
60.33	60.25	60.41	**99238**	15.09	19.05	69.85	34.93
60.38	60.30	60.46	**99237**	19.84	23.83	69.85	34.93
60.38	60.30	60.46	**99240**	13.36	17.35	69.85	34.93
61.90	61.82	61.98	**99243**	19.84	23.83	71.83	35.38
62.00	61.85	62.01	**99242**	12.70	15.88	71.83	36.20
62.00	61.81	62.00	**99244**	12.70	15.88	71.83	36.20
63.30	63.22	63.38	**99249**	19.84	23.83	73.03	35.38
63.50	63.50	63.65	**99840 ***	19.84	23.83	71.63	34.92
63.50	63.50	63.66	**99248**	12.70	16.66	71.83	35.38
63.50	63.50	63.66	**99250**	19.84	23.83	71.63	34.93
63.50	63.42	63.58	**99253**	14.10	16.51	71.63	22.61
63.83	63.75	63.91	**99251**	19.84	23.01	71.83	36.53
65.00	64.92	65.07	**99841 ***	20.00	23.00	72.39	34.92
65.00	64.92	65.08	**99254**	19.99	22.99	72.39	34.93
65.10	65.02	65.18	**99256**	19.84	23.83	73.43	34.93
66.00	65.91	66.07	**99259**	19.84	23.83	75.95	31.75
66.57	66.49	66.65	**99261**	19.84	23.83	77.39	34.93
66.65	66.57	66.73	**99264**	19.84	23.01	77.39	34.93
66.68	66.68	66.83	**99842 ***	19.84	23.83	77.39	34.92
66.68	66.60	66.76	**99260**	12.70	15.88	77.39	34.93
66.75	66.67	66.83	**99262**	19.84	23.83	77.39	34.93
68.00	67.81	68.00	**99266**	19.05	22.23	79.38	42.88
69.34	69.26	69.42	**99268**	19.84	23.01	79.38	33.35
69.67	69.59	69.75	**99273**	19.84	23.83	77.85	31.75
69.80	69.72	69.88	**99274**	19.84	23.83	79.38	31.75
69.85	69.72	69.88	**99843 ***	19.84	23.83	79.38	31.75
69.85	69.77	69.93	**99267**	36.53	41.28	78.11	41.28
70.00	69.85	70.00	**99844 ***	19.84	23.83	79.38	31.75
70.00	69.85	70.01	**99269**	28.58	31.75	79.38	33.32
70.00	69.85	70.01	**99272**	10.31	14.30	79.38	31.75
70.00	69.85	70.01	**99275**	19.84	23.83	79.38	31.75
70.00	69.92	70.08	**99276**	19.99	24.00	79.38	31.75
71.42	71.34	71.50	**99281**	15.09	17.48	80.98	31.75
72.00	71.81	72.01	**99870 ***	19.05	22.23	81.92	34.11

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Metric (Cont.)

Shaft diameter	"A" Shaft diameter range Minimum MM	Maximum MM	Stock number	"X" Width on shaft 0.8 MM	"Y" Overall width 0.8 MM	"D" Flange diameter 1.6 MM	"Z" Installation depth MM
72.00	71.81	72.00	**99284**	19.05	22.23	81.92	34.11
72.08	72.08	72.24	**99845 ***	12.70	16.66	81.92	31.75
72.16	72.08	72.24	**99282**	12.70	16.66	81.92	31.75
72.87	72.79	72.95	**99286**	19.84	23.83	80.98	31.75
73.00	72.97	73.13	**99846 ***	19.84	23.83	81.76	31.75
73.00	72.97	73.13	**99287**	19.84	23.83	81.76	31.75
74.63	74.60	74.75	**99847 ***	19.84	23.83	84.94	33.35
74.68	74.60	74.76	**99290**	12.70	16.28	84.94	33.81
74.68	74.60	74.75	**99293**	19.84	23.83	84.94	33.35
75.00	74.93	75.09	**99875 ***	22.00	26.01	83.95	33.35
75.00	74.93	75.09	**99289**	15.09	17.53	83.13	27.51
75.00	74.93	75.09	**99294**	22.00	26.01	83.95	33.35
75.54	75.49	75.59	**99292**	20.62	25.40	82.17	31.75
76.00	75.94	76.10	**99298**	14.30	17.48	85.32	34.93
76.00	75.94	76.10	**99299**	20.65	25.40	85.09	32.54
76.02	75.94	76.10	**99291**	12.29	15.88	85.32	33.81
76.20	76.20	76.35	**99848 ***	20.65	25.40	82.17	32.54
76.20	76.12	76.28	**99296**	20.65	23.83	82.30	34.93
76.28	76.20	76.36	**99300**	20.65	25.40	82.17	32.54
76.28	76.20	76.36	**99303**	15.88	20.65	84.96	32.51
76.48	76.40	76.56	**99301**	12.70	15.88	85.22	50.80
78.00	77.81	78.00	**99306**	19.05	22.23	88.04	52.22
79.32	79.24	79.40	**99311**	17.48	20.65	89.69	50.80
79.38	79.25	79.40	**99849 ***	20.65	25.40	89.69	50.80
79.38	79.24	79.40	**99312**	20.65	25.40	89.69	50.80
79.38	79.35	79.55	**99307**	14.00	18.01	89.54	51.59
80.00	79.81	80.01	**99313**	19.05	22.50	89.92	34.93
80.00	79.91	80.08	**99315**	21.01	24.00	89.99	34.93
80.00	79.90	80.08	**99317**	11.00	15.01	89.99	34.93
82.00	81.91	82.07	**99328**	16.76	21.54	91.06	44.45
82.50	82.50	82.70	**99850 ***	15.11	18.26	90.81	34.92
82.55	82.55	82.70	**99851 ***	20.65	25.40	91.06	34.92
82.55	82.47	82.63	**99322**	20.65	25.40	91.29	34.93
82.63	82.55	82.71	**99324**	15.11	18.26	90.81	34.93
82.63	82.55	82.71	**99325**	20.65	25.40	91.06	34.93
82.63	82.55	82.71	**99326**	17.48	22.23	91.06	31.75
84.00	84.00	84.15	**99331**	20.65	25.40	93.68	34.93
85.00	31.67	31.83	**99872 ***	21.00	25.00	93.98	35.00
85.00	84.76	85.02	**99332**	16.99	21.00	93.98	35.00
85.00	84.76	85.02	**99333**	21.01	24.99	93.98	35.00
85.00	84.78	85.00	**99334**	10.13	12.67	90.93	36.35
85.75	85.67	85.83	**99337**	20.65	25.40	93.85	34.93
85.75	85.67	85.83	**99338**	9.53	12.70	93.67	35.81
87.33	87.25	87.41	**99339**	19.84	23.01	97.64	35.71
88.39	88.31	88.47	**99340**	19.84	23.01	97.41	35.71
88.98	88.82	88.98	**99346**	15.88	20.65	97.64	34.21
89.00	88.90	89.05	**99852 ***	20.65	25.40	97.64	34.21
89.00	88.90	89.06	**99347**	7.95	12.70	97.16	34.21
89.00	88.92	89.08	**99349**	15.88	20.65	97.64	34.24
89.00	88.90	89.06	**99350**	20.65	25.40	97.64	34.21
90.00	89.91	90.07	**99351**	18.03	23.01	101.60	46.05
90.00	89.91	90.07	**99352**	11.13	13.67	101.60	46.05
90.00	89.91	90.07	**99353**	13.36	16.94	101.60	44.45
90.00	89.91	90.07	**99354**	23.01	27.99	101.60	44.45
90.50	90.42	90.58	**99356**	20.65	25.40	99.06	44.45
92.00	91.89	92.05	**99360**	20.65	25.40	102.39	44.45
92.10	92.02	92.18	**99362**	20.65	25.40	102.39	44.45
92.10	92.02	92.18	**99363**	12.70	15.87	102.24	44.45
93.65	93.57	93.73	**99368**	7.95	11.13	102.39	22.23
93.68	93.60	93.76	**99365**	20.65	23.83	102.24	45.72

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Metric (Cont.)

Shaft diameter	"A" Shaft diameter range Minimum MM	"A" Shaft diameter range Maximum MM	Stock number	"X" Width on shaft 0.8 MM	"Y" Overall width 0.8 MM	"D" Flange diameter 1.6 MM	"Z" Installation depth MM
94.74	94.66	94.82	**99359**	11.91	15.09	102.01	45.72
94.74	94.66	94.82	**99366**	19.84	23.01	102.24	45.72
95.00	94.99	95.15	**99364**	11.91	15.09	102.49	45.72
95.00	94.92	95.08	**99369**	21.01	24.00	102.24	45.72
95.00	94.99	95.15	**99374**	8.74	12.70	102.39	45.72
95.22	95.14	95.30	**99376**	14.30	17.48	102.24	45.72
95.25	95.25	95.40	**99853 ***	17.48	22.23	102.11	45.72
95.33	95.25	95.41	**99367**	8.74	12.70	102.24	45.72
95.33	95.25	95.41	**99372**	17.48	22.23	102.11	45.72
98.32	98.24	98.40	**99386**	20.65	25.40	106.30	47.63
98.45	98.37	98.53	**99387**	20.65	25.40	107.16	47.63
100.00	99.95	100.10	**99854 ***	20.65	25.40	109.55	52.07
100.00	99.95	100.11	**99393**	20.65	25.40	109.55	52.07
101.60	101.55	101.75	**99855 ***	20.65	25.40	111.13	52.07
101.65	101.55	101.75	**99395**	15.24	18.42	111.13	52.07
101.65	101.55	101.75	**99399**	20.65	25.40	111.13	52.07
101.65	101.55	101.75	**99400**	16.51	19.69	111.13	34.93
101.65	101.55	101.75	**99401**	12.70	15.88	111.13	52.48
104.00	103.89	104.09	**99409**	19.99	24.00	112.72	35.99
104.80	104.70	104.90	**99412**	20.65	25.40	113.54	34.93
105.00	104.90	105.10	**99413**	19.99	23.19	113.54	35.00
106.35	106.25	106.45	**99418**	20.65	25.40	114.30	34.93
107.44	107.34	107.54	**99423**	19.84	23.01	117.09	36.53
108.00	107.90	108.10	**99424**	20.65	25.40	117.09	36.53
110.00	109.78	110.00	**99434**	11.38	14.96	124.99	32.94
110.00	109.91	110.11	**99435**	12.93	16.51	124.99	31.75
111.10	111.00	111.20	**99437**	20.65	25.40	120.65	41.91
112.00	111.78	112.00	**99438**	19.05	22.50	120.70	33.02
112.72	112.63	112.83	**99439**	25.40	29.01	122.25	33.35
114.30	114.20	114.40	**99856 ***	20.65	25.40	124.46	31.75
114.30	114.20	114.40	**99450**	20.65	25.40	123.19	31.75
115.00	114.89	115.09	**99452**	20.65	23.83	127.00	31.75
117.48	117.38	117.58	**99463**	25.40	31.75	128.60	34.93
117.48	117.38	117.58	**99465**	11.13	15.88	127.00	34.93
119.00	119.00	119.20	**99468**	20.65	25.40	128.60	34.93
120.00	119.89	120.09	**99471**	8.00	11.00	129.79	33.60
120.00	119.89	120.09	**99473**	19.99	24.99	129.79	32.00
120.65	120.55	120.75	**99475**	12.70	19.05	127.00	38.10
122.00	121.90	122.10	**99472**	19.99	24.00	131.49	32.00
123.00	122.91	123.11	**99484**	19.99	24.99	132.82	31.60
123.83	123.73	123.93	**99487**	15.88	19.05	133.35	36.53
125.00	124.90	125.10	**99490**	10.00	14.00	137.16	36.53
125.00	124.89	125.09	**99492**	26.01	32.00	137.16	36.53
127.00	126.95	127.15	**99857 ***	17.48	22.23	137.16	36.53
127.00	126.95	127.15	**99858 ***	20.65	25.40	139.91	36.53
127.00	126.95	127.15	**99498**	17.48	22.23	137.16	36.50
127.00	126.95	127.15	**99499**	20.65	25.40	136.91	36.53
127.00	126.95	127.15	**99501**	13.72	17.30	137.16	36.53
130.00	129.97	130.17	**99874 ***	22.00	25.30	139.52	32.51
130.00	129.97	130.17	**99491**	22.00	25.30	139.52	32.51
130.00	129.80	130.00	**99494**	19.05	23.83	139.52	30.00
130.15	130.05	130.25	**99513**	20.65	25.40	139.70	31.75
133.35	133.25	133.45	**99525**	20.65	25.40	141.22	31.75
135.00	134.80	135.00	**99533**	20.50	25.40	145.67	31.75
136.53	136.43	136.63	**99537**	20.65	25.40	149.23	31.75
138.13	138.03	138.23	**99548**	38.10	42.88	146.05	47.63
139.00	138.99	139.19	**99547**	14.30	19.05	149.86	31.34
139.70	139.65	139.85	**99859 ***	20.65	25.40	150.82	31.75
139.75	139.65	139.85	**99549**	20.65	25.40	150.83	31.75
139.75	139.65	139.85	**99550**	13.16	17.91	150.83	31.75

★ Indicates Speedi-Sleeve Gold product

Speedi-Sleeve size listing - Metric (Cont.)

Shaft diameter	"A" Shaft diameter range Minimum MM	"A" Shaft diameter range Maximum MM	Stock number	"X" Width on shaft 0.8 MM	"Y" Overall width 0.8 MM	"D" Flange diameter 1.6 MM	"Z" Installation depth MM
140.00	139.90	140.11	**99552**	20.50	25.40	151.00	31.75
142.88	142.77	142.98	**99560**	22.23	25.40	157.18	46.02
145.00	144.75	145.00	**99571**	19.05	22.23	154.94	46.02
145.54	145.44	145.64	**99562**	14.30	19.05	154.94	49.23
146.05	145.95	146.15	**99575**	20.65	25.40	156.97	44.45
149.23	149.12	149.33	**99862 ***	25.40	31.75	157.18	33.35
149.23	149.13	149.33	**99587**	25.40	31.75	157.18	33.35
150.00	149.75	150.00	**99595**	26.01	30.00	159.00	32.51
150.83	150.73	150.93	**99596**	25.40	28.58	161.93	47.63
152.37	152.27	152.47	**99599**	25.40	31.75	161.93	44.45
152.37	152.27	152.47	**99601**	12.70	19.05	161.54	44.45
154.00	153.87	154.13	**99605**	26.01	30.00	161.93	32.99
155.00	154.75	155.00	**99606**	26.01	30.00	167.01	32.99
157.56	157.43	157.69	**99620**	20.65	27.00	168.28	44.45
158.75	158.62	158.88	**99625**	26.19	31.75	168.28	44.45
160.00	159.74	160.00	**99630**	25.40	31.75	171.45	34.93
165.10	164.97	165.23	**99650**	25.40	31.75	177.80	34.93
170.00	169.75	170.01	**99640**	31.75	38.00	182.57	44.45
171.45	171.32	171.58	**99675**	20.65	27.00	180.98	44.45
175.00	174.75	175.01	**99687**	27.99	32.00	187.00	35.00
177.80	177.67	177.93	**99864 ***	25.40	31.75	189.87	42.88
177.80	177.67	177.93	**99700**	25.40	31.75	189.87	42.88
180.00	179.75	180.01	**99721**	32.99	38.00	190.50	44.50
184.00	183.99	184.25	**99725**	31.75	38.10	197.10	55.25
185.00	184.75	185.00	**99726**	32.00	38.00	197.10	54.99
189.20	189.07	189.33	**99745**	20.65	25.40	199.64	31.75
190.50	190.37	190.63	**99750**	20.65	25.40	200.03	31.75
196.85	196.72	196.98	**99775**	25.40	33.35	210.06	47.63
200.00	199.87	200.13	**99787**	34.52	38.10	212.73	44.45
201.63	201.50	201.76	**99799**	25.40	31.75	212.73	44.45
203.20	203.07	203.33	**99800**	25.40	31.75	212.73	44.45

★ Indicates Speedi-Sleeve Gold product

Hydraulic/Pneumatic size listing

Rod	Bore	Width	Block Vees R	Block Vees D	Block Vees V	Back-up-Washers Vellumoid	Double lip rod wipers R	Double lip rod wipers V	Wiper-Scrapers R	Type HM shaft seals R
.125	.313	.063 .094	711800	721578	721523	451486				
.188	.375	.063 .094	711801		721519					
	.438	.063 .125	711802							
	.500	.125								1850
.196	.354	.109	700005*							
.250	.500	.063 .125	711803	721579*	721526					
		.188								2450
.258	.449	.109	700036							
.278	.437	.125	700042*							
.313	.500	.094	700054							
	.563	.063 .125	711804		721512					
	.626	.156								3060
	.749	.250								3140
.375	.625	.063 .125	711805	721521	721502	451056				
.438	.688	.063 .125	700101	721510	721527					
	.836	.188								4231
	.999	.250								4340
.500	.750	.063 .125	711806	721518	721513	451225				4912
	.781	.125	710932*							
	.802	.203					709001			
	.843	.250								4923
	.875	.250								4938
	.999	.250 .281							504260	4990
	1.124	.250								5085
.563	.813	.063 .125	710696	721557	721569					
	.875	.188								5522
	.999	.219								6130
.625	.875	.063 .125	710212	721520	721503 712130	451081				
	.927	.203					709002	712120		
	.933	.188								6125
	.937	.188								6130
	1.000	.125								6152
	1.124	.250 .281							504261	6225
	1.250	.250								6323
	1.375	.250								6370
.650	.925	.115	710889*							

* Made-to-order. Contact SKF for availability.

See pages 51A- 56A for additional information.

Hydraulic/Pneumatic size listing - (cont.)

Rod	Bore	Width	Block Vees R	Block Vees D	Block Vees V	Back-up-Washers Vellumoid	Double lip rod wipers R	Double lip rod wipers V	Wiper-Scrapers R	Type HM shaft seals R
.688	.938	.063 .125	711807		721570	451284				
	.990	.203					709003			
	.999	.188								6720
	1.124	.250								6759
	1.375	.250								6920
.750	1.000	.063 .125	711825	721516		451245				7410
	1.052	.203					709004			
	1.124	.156								7415
	1.250	.250 .281							504262	7464
	1.375	.250								7536
.813	1.063	.063 .125	711809	721506	721507	451246				
	1.250	.375								8019
.875	1.125	.063 .125	711810	721524	721514	451242				8620
	1.240	.219					709005			
	1.251	.188								8627
	1.255	.188								8632
	1.308	.250								8637
	1.312	.250								8645
	1.375	.188 .281							504263	8677
.938	1.188	.063 .125	711811			451032				
	1.250	.063 .156	711812*		721528	451285*				
	1.375	.250								9243
	1.499	.250								9298
1.000	1.250	.125	711080		721558					9815
	1.313	.063 .125 .156		701084	721529	451047				9818
	1.365	.219					709006	712121		
	1.375	.188								9820
	1.500	.188 .250 .281	712589						504264	9859
	1.516	.250								9900
	1.625	.250								9932
	1.781	.469								10034
	1.938	.250								10112
	2.000	.250								10153
1.063	1.375	.063 .156	711814							

* Made-to-order. Contact SKF for availability.

See pages 51A- 56A for additional information.

Hydraulic/Pneumatic size listing - (cont.)

Rod	Bore	Width	Block Vees R	Block Vees D	Block Vees V	Back-up-Washers Vellumoid	Double lip rod wipers R	Double lip rod wipers V	Wiper-Scrapers R	Type HM shaft seals R
1.125	1.375	.125								11050
	1.438	.063 .156 .203	711816	721508	721530	451286				11055
	1.490	.219					709007			
	1.499	.188								11060
	1.624	.250 .281							504265	11130
	1.781	.250								11161
1.188	1.500	.063 .156		711817	721531	451063				
	2.000	.250								11836
1.250	1.500	.125								12330
	1.563	.063 .156	710989		721532	451080				
	1.615	.219					709008			
	1.686	.188								12334
	1.752	.250 .281							504266	12369
	1.979	.250								12407
	1.938	.250								12437
	2.000	.250								12481
	2.125	.250								12565
1.313	1.625	.063								
		.156	711818		721559*					
	2.281	.350								13165
1.375	1.688	.063 .156		711826	721533	451094				
	1.740	.219					709009	712122		
	1.750	.197								13529
	1.874	.250 .281							504267	13548
	2.000	.250								13573
	2.437	.250								13796
1.438	1.750	.063 .156	711820		721571	451079				
	2.437	.250								14359
1.500	1.813	.156	711878							
	1.865	.219					709010			
	1.875	.063 .188 .250	711822		721556	451487				14810
	1.983	.188								14840
	2.000	.250 .281							504268	14857
	2.062	.210								14863
	2.250	.250								14960
	2.623	.250								15190

* Made-to-order. Contact SKF for availability.

See pages 51A- 56A for additional information.

Hydraulic/Pneumatic size listing - (cont.)

Rod	Bore	Width	Block Vees R	Block Vees D	Block Vees V	Back-up-Washers Vellumoid	Double lip rod wipers R	Double lip rod wipers V	Wiper-Scrapers R	Type HM shaft seals R
1.625	1.990	.219					709011			
	2.000	.063 .188		711823	721515	451046				
	2.125	.281							504269	
	2.375	.250								16092
	2.502	.250								16270
	2.562	.250								16284
	2.623	.250								16322
	2.750	.250								16362
1.688	2.183	.313							509543	
1.750	2.115	.219					709012	712123		
	2.125	.063 .188		702011	721552	451264				
	2.250	.188 .281							504270	17240
	2.375	.250								17277
	2.437	.250								17310
	2.502	.250								17392
	2.561	.250								17415
	2.623	.250								17461
	3.000	.250								17702
1.875	2.250	.063				451249				
		.188	711824	721509	721560					
	2.375	.281							504271	
	2.502	.250								18558
	2.750	.250								18659
	2.965	.234								18772
	2.997	.250								18808
	3.000	.250								18823
2.000	2.365	.219					709014	712124		
	2.375	.063 .188		702028	721534	451037				
	2.502	.250 .281							504272	19754
	2.562	.227								19753
	2.623	.250 .281							504273	19763
	2.875	.250								19880
	2.997	.250								19965
	3.061	.250								20044
	3.623	.250								20148
2.125	2.490	.219					709015			
	2.500	.063 .188		710087	721535	451069				
	2.750	.250								21059
	2.875	.250								21101
	3.000	.250								21159
	3.189	.250								21265

* Made-to-order. Contact SKF for availability.

See pages 51A- 56A for additional information.

Hydraulic/Pneumatic size listing - (cont.)

Rod	Bore	Width	Block Vees R	Block Vees D	Block Vees V	Back-up-Washers Vellumoid	Double lip rod wipers R	Double lip rod wipers V	Wiper-Scrapers R	Type HM shaft seals R
2.250	2.625	.063 .188	711856		721536	451078				22306
	2.745	.281					709016			
	2.750	.281							504275	
	2.875	.250								22325
	2.997	.250								
	3.000	.250								22368
2.375	2.750	.063 .188	711828		721572					
	2.875	.281								
	2.997	.250								23630
	3.000	.250								23640
	3.350	.250								23725
2.500	2.875	.063 .188	711829	750551	721566	451253				
	2.938	.063 .219				451248				
	2.995	.281					709018	712125		
	3.000	.250 .281							504277	24863
	3.125	.250 .281							505774	24875
	3.250	.250								24904
	3.500	.250								25007
	3.505	.250								25028
2.563	3.000	.063 .219		711831	721517	451268				
2.688	3.125	.063 .219	711833		721573	451488				
2.750	3.188	.063 .219	711832		721537	451290				
	3.245	.281					709019			
	3.250	.281 .313							504279	27225
	3.500	.250								27271
	3.750	.250								27394
2.813	3.250	.063 .219		711834	721538	451100				
2.938	3.375	.063 .219	711835			451489				
3.000	3.438	.063 .219		703023	721539	451265				
	3.495	.281					709020	712126		
	3.500	.281 .313							504281	29840
	3.623	.250								29850
	3.750	.250								29863
	4.003	.250								29968
3.063	3.500	.063 .219	711836			451291				

* Made-to-order. Contact SKF for availability.

See pages 51A- 56A for additional information.

Hydraulic/Pneumatic size listing - (cont.)

Rod	Bore	Width	Block Vees R	Block Vees D	Block Vees V	Back-up-Washers Vellumoid	Double lip rod wipers R	Double lip rod wipers V	Wiper-Scrapers R	Type HM shaft seals R
3.250	3.625	.063 .188	711838		721540	451275				
	3.745	.281					709021			
	3.875	.328							504283	
	4.249	.250								32412
	4.501	.250								32510
3.313	3.750	.063 .219	711840			451490				
3.375	3.875	.063 .250	711839		721575	451273				
3.500	3.995	.281					709022	712542		
	4.000	.063 .250 .300		711841	721541	451065				34835
	4.125	.250 .328							504285	34848
	4.500	.250								34967
	4.750	.250								35042
3.750	4.245	.281					709023			
	4.250	.063 .250	711844*		721563*	451068				
	4.375	.250 .328							504287	37320
4.000	4.495	.281					709024	714884		
	4.500	.063 .250	704009		721542	451266				
	4.625	.328							504289	
	4.876	.250								39860
	4.999	.250								39961
4.250	4.745	.281					709025			
	4.750	.063 .250	711845		721564	451276				
	4.875	.328							504291	
	5.250	.250								42470
4.438	5.000	.281			712548					
4.500	4.995	.281					709026	712127		
	5.000	.063 .250		711857	721543	451352				
	5.125	.328							504293	
4.688	5.250	.063 .281	711846			451491				
4.938	5.500	.063 .281	711848							
5.000	5.495	.281					709029	712128		
	5.563	.063 .281		711849*						
	6.250	.250							50070	
5.125	5.750	.063 .313				451293				
5.250	5.745 6.250	.281 .250					709030		52475	

* Made-to-order. Contact SKF for availability.

See pages 51A- 56A for additional information.

Hydraulic/Pneumatic size listing - (cont.)

Rod	Bore	Width	Block Vees R	Block Vees D	Block Vees V	Back-up-Washers Vellumoid	Double lip rod wipers R	Double lip rod wipers V	Wiper-Scrapers R	Type HM shaft seals R
5.375	6.000	.063 .313		711850	721545					
5.500	5.995	.281					709031	712129		
	6.125	.063 .313		711851*		451495				
	6.127	.359							504297	
6.000	6.495	.281					709034			
	7.000	.359								
	7.500	.250								60075
6.375	7.000	.063 .313		711852	721547	451066				
7.375	8.000	.063 .313		711853	721548	451096				
9.313	1.000	.063 .344			712552	451033				
11.000	12.000	.500			721547*					
11.250	12.000	.063 .375	711566*							
13.000	14.000	.063 .500		711854		451300				
19.062	2.000	.469	714222*							

Metric wiper scrapers

Rod	Bore	Width	Wiper-Scrapers
17	27	7.14	527345
30	42	7.14	525327
40	52	7.14	523171
50	65	7.14	522374
56	69	7.14	527664
60	75	7.14	522281
90	110	8.33	522353

* Made-to-order. Contact SKF for availability.

See pages 51A- 56A for additional information.

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
101	2.900		.450	KIT	P
	HALF SEAL				
103	3.060		.213	KIT	R
	HALF SEAL, CCW HELIX				
★140	2.875		.205	KIT	R
	HALF SEAL, CCW HELIX				
144	1.937	2.650	.360	KIT	#
	HALF SEAL				
162	3.625	4.876	.438	KIT	#
187	2.450		.375	KIT	S
	HALF SEAL				
★192	2.645		.386	KIT	V
	HALF SEAL, CCW HELIX				
194	2.470		.217	KIT	P
	HALF SEAL				
198	3.500		.206	KIT	R
	HALF SEAL				
199	2.430		.375	KIT	S
	W/CCW HELIX FROM AIR SIDE				
★200	2.450		.223	KIT	R
	HALF SEAL				
201	3.175		.215	KIT	R
	HALF SEAL				
204	3.375		.213	KIT	R
205	3.675		.216	KIT	R
	SEE KIT SECTION				
★206	2.650		.213	KIT	R
	HALF SEAL				
★207	2.900		.216	KIT	R
	SEE KIT SECTION				
208	2.630		.215	KIT	R
	HALF SEAL				
★209	2.875		.218	KIT	R
	HALF SEAL				
210	6.000	6.750	.500	KIT	V
	SEE KIT SECTION				
211	3.785		.217	KIT	R
	HALF SEAL				
212	2.700		.313	KIT	R
	HALF SEAL,HELIX-CCW				
★213	2.900		.315	KIT	R
	SEE KIT SECTION HELIX-CCW				
214	2.975		.314	KIT	R
	HALF SEAL				
216	2.690		.380	KIT	S
	HALF SEAL				
218	5.000	6.126	.813	†KIT	V
	SEE KIT SECTION				
★229	2.750		.310	KIT	R
	HALF SEAL				
285	3.000	3.600	.322	KIT	V
	HALF SEAL				
287	2.761		.227	KIT	V
	HALF SEAL				
295	2.625			KIT	V
	W/CCW HELIX FROM AIR SIDE				
515	2.188	3.063	.250	FELT	F
528	2.563	3.531	.344	FELT	F
573	1.938	3.000	.375	FELT	F
★584	2.000	3.125	.375	FELT	F
596	2.000	3.125	.500	FELT	F
633	4.125	5.750	.438	FELT	F
★645	2.281	3.500	.313	FELT	F
653	4.688	6.000	.375	FELT	F
654	2.563	3.625	.313	FELT	F
662	2.688	3.500	.219	FELT	F
663	2.906	3.813	.313	FELT	F
★668	2.188	3.500	.250	FELT	F
671	.938	1.500	.375	FELT	F
682	3.000		.500	SPLIT	F
★692	2.625		.185	SPLIT	F
900	3.750	4.500	.688	†KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
901	.859	1.438	.250	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
1200	4.688	5.751	.625	KIT	S
	SEE KIT SECTION				
1201	4.688	5.755	.750	KIT	PP
	SEE KIT SECTION				
★1202	1.175	1.828	.375	†KIT	P
	SEE KIT SECTION				
★1206	3.868	5.376	.844	KIT	R
	SEE KIT SECTION				
1211	4.766	6.310	1.188	KIT	R
	SEE KIT SECTION				
1212	4.766	6.500	1.063	KIT	R
	SEE KIT SECTION				
1213	4.766	6.998	1.188	KIT	R
	SEE KIT SECTION				
1214	3.875	5.501	.550	KIT	R
	SEE KIT SECTION				
1215	4.766	6.310	1.359	KIT	R
	SEE KIT SECTION				
★1219	3.938	5.501	.550	KIT	R
	SEE KIT SECTION				
1240	3.010		.953	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
1243	2.875	3.751	.625	KIT	P
	SEE KIT SECTION				
1244	2.375	3.428	1.000	KIT	P
	SEE KIT SECTION				
1245	2.375	4.938	1.000	KIT	P
	SEE KIT SECTION				
★1303	2.343	3.350	.625	KIT	V
	SEE KIT SECTION				
1306	3.125	4.626	.750	KIT	R
	SEE KIT SECTION				
1307	3.438	4.758	.750	KIT	R
	SEE KIT SECTION				
1308	3.875	5.693	.968	KIT	R
	SEE KIT SECTION				
1321	3.938	5.373	.500	†KIT	R
	SEE KIT SECTION				
1322	4.000	5.505	.750	†KIT	R
	SEE KIT SECTION				
1330	9.875	12.000	.750	KIT	R
	SEE KIT SECTION				
□1574	4.00	12.00	6.00	HMS46	R
1725	3.250	4.364		KIT	P
	SEE KIT SECTION				
▲1850	.188	.500	.125	HM1	R
▲□1960	5.00	16.00	6.00	HMS4	R
□1972	5.00	15.00	6.00	HMS47	R
□1975	5.00	19.00	5.00	HMS46	R
□1976	5.00	22.00	8.00	HMS46	R
□2340	6.00	12.00	2.00	HM3	R
▲□2355	6.00	16.00	5.00	HMS4	R
□**2357**	6.00	16.00	7.00	HMS4	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**2359**	6.00	16.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**2360**	6.00	16.00	7.00	HMS4	R
□2362	6.00	16.00	6.00	HMS43	V
□2365	6.00	19.00	6.00	HMS47	R
□**2380**	6.00	22.00	7.00	HMS4	R
▲**2450**	.250	.499	.188	HM14	R
2452	.250	.499	.188	HMA14	V
▲**2470**	.250	.562	.188	†HM14	R
▲**2490**	.250	.626	.250	HM14	R
2513	.250	.749	.250	CRW1	V
	W/SS CASE & SPRING				
2514	.250	.749	.250	†CRW1	R
	W/SS CASE & SPRING				
▲**2560**	.250	.749	.188	HM14	R
□**2759**	7.00	16.00	7.00	HMSA7	R
▲□2760	7.00	16.00	7.00	HMS4	R
□**2765**	7.00	16.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□2770	7.00	20.00	7.00	HMS4	R
□**2772**	7.00	20.00	7.00	HMSA7	R
□**2780**	7.00	22.00	7.00	HMS4	R
□3030	8.00	12.00	3.00	HM4	R
□3036	8.00	14.00	4.00	HMS1	R
3044	.313	.500	.125	HM4	R
3050	.313	.626	.203	†HM1	R
▲**3060**	.313	.626	.156	†HM14	R
3061	.313	.626	.156	HM14	V
▲□3077	8.00	18.00	5.00	HMSA7	R
□**3078**	8.00	18.00	5.00	HMS4	R
3080	.313	.633	.141	HM14	R
3086	.313	.862	.250	HM14	R
□**3088**	8.00	22.00	7.00	HMS4	V
□**3092**	8.00	22.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲**3094**	.313	.686	.313	CRWA5	R
▲**3101**	.313	.749	.250	CRWA5	R
3103	.313	.749	.250	CRWA5	V
▲**3140**	.313	.749	.250	HM14	R
3141	.313	.750	.250	HM3	R
▲□3145	8.00	16.00	7.00	HMS4	R
□**3149**	8.00	22.00	7.00	HMSA7	R
▲□3150	8.00	22.00	7.00	HMS4	R
□**3155**	8.00	24.00	7.00	HMS4	R
□3158	8.00	20.00	8.00	HMS46	R
□3161	8.00	22.00	8.00	HMS45	R
▲**3171**	.313	.999	.313	CRWA5	R
□**3177**	8.00	18.00	7.00	HMSA7	R
3230	.313	1.250	.375	P1	L
□3526	9.00	13.00	3.00	HM4	R
▲□3540	9.00	22.00	7.00	HMS4	R
□3541	9.00	17.00	4.50	CRS11	R
□**3542**	9.00	22.00	7.00	HMS4	V
□**3543**	9.00	18.00	7.00	HMSA7	R
□3544	9.00	19.00	5.00	CRS13	R
□**3545**	9.00	22.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**3550**	9.00	24.00	7.00	HMS4	R
□**3560**	9.00	26.00	7.00	HMS4	R
▲3621	.375	.563	.094	HM3	R
3626	.370	.606	.310	HMSA76	R
3632	.375	.628	.197	HMA10	P
▲**3645**	.375	.687	.156	†HM14	R
3680	.375	.750	.250	†CRWA1	R
▲**3683**	.375	.749	.250	HM14	R
▲**3687**	.375	.749	.250	CRW1	R
3688	.375	.749	.250	†CRW1	V
3689	.375	.749	.250	CRW5	R
	W/SS CASE & SPRING				
▲**3719**	.375	.836	.188	†CRW1	P
▲**3725**	.375	.875	.250	†CRW1	R
▲**3727**	.375	.875	.250	HM14	R
▲**3751**	.375	.999	.250	CRW1	R
3752	.375	.999	.250	†CRW1	V
▲**3806**	.375	1.124	.250	CRW1	R
3807	.375	1.124	.375	†CRW5	V
□3930	10.00	14.00	3.00	HM4	R
□**3936**	10.00	20.00	6.00	HMSA7	R
□**3937**	10.00	20.00	6.00	HMS4	R
□**3938**	10.00	19.00	7.00	HMSA7	R
□**3939**	10.00	20.00	7.00	HMSA7	R
▲□3940	10.00	19.00	7.00	HMS4	R
□3941	10.00	16.00	4.00	HM102	R
□**3942**	10.00	22.00	7.00	HMS4	V
▲□3945	10.00	22.00	7.00	HMS4	R
□**3947**	10.00	22.00	7.00	HMSA7	V
▲□3950	10.00	24.00	7.00	HMS4	R
□**3952**	10.00	25.00	7.00	HMSA7	R
□**3953**	10.00	22.00	7.00	HMSA7	R
▲□3960	10.00	26.00	7.00	HMS4	R
□3967	10.00	28.00	7.00	HMS47	R
□**3970**	10.00	18.00	6.00	HMS4	R
□**3972**	10.00	30.00	10.00	HMS4	R
□**3973**	10.00	28.00	8.00	HMS4	R
□**3975**	10.00	30.00	7.00	HMS4	R
□**3976**	10.00	26.00	7.00	HMSA7	R
□**3983**	10.00	20.00	7.00	HMS4	R
□**3986**	10.00	40.00	7.00	HMS4	R
□**3992**	10.00	40.00	7.00	HMSA7	R
▲**4010**	.404	.620	.188	HM14	R
4012	.404	.862	.250	HM14	R
4100	.425	.875	.313	CRWH3	R
▲**4231**	.438	.836	.188	HM14	R
4247	.438	.875	.313	†HMS1	D
	W/SS CASE & SPRING				
4249	.438	.875	.250	†CRW1	P
▲**4251**	.438	.875	.250	CRW1	R
4256	.438	.879	.180	HM8	R
4260	.438	.875	.250	CRWA6	R
4261	.438	.875	.375	CRWA1	R
4262	.438	.875	.375	†CRWA1	V
□**4327**	11.00	17.00	4.00	HMS4	R
□**4335**	11.00	22.00	7.00	HMS4	R
□**4338**	11.00	22.00	6.00	HMSA7	V
▲**4340**	.438	.999	.250	HM14	R
□**4345**	11.00	26.00	7.00	HMS4	R
▲□4348	11.00	30.00	7.00	HMS4	R
▲**4355**	.438	.999	.375	†CRW1	R
4356	.438	.999	.250	†CRW1	V
▲**4390**	.438	1.124	.250	†CRW1	R
4623	.469	.836	.188	HM14	P
▲**4628**	.469	.875	.219	HM14	R
▲4641	.469	.999	.313	†P2	R
□4688	12.00	18.00	3.00	HM4	R
□4690	12.00	19.00	3.00	HM4	R
□**4692**	12.00	18.00	3.00	HMS4	R
□**4694**	12.00	18.00	3.00	HMSA7	R
□4695	12.00	16.00	3.00	HM4	R
▲□4701	12.00	20.00	5.00	HMS4	R
▲□4702	12.00	19.00	5.00	HMS4	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**4707**	12.00	22.00	7.00	HMSA7	R
□**4709**	12.00	22.00	7.00	†CRW1	V
□**4710**	12.00	22.00	7.00	†CRW1	R
▲□4711	12.00	22.00	7.00	HMS4	R
▲□4715	12.00	24.00	7.00	HMS4	R
□**4717**	12.00	22.00	7.00	HMSA7	V
▲□4718	12.00	25.00	4.50	HMS4	R
□4719	12.00	22.00	4.00	HM4	R
□**4720**	12.00	25.00	7.00	†CRW1	R
□**4721**	12.00	25.00	7.00	HMS4	R
□4723	12.00	18.00	4.50	CRSA11	R
□4725	12.00	20.00	5.00	CRSA1	R
□4729	12.00	22.00	6.00	HMSA7P2	R
▲□4730	12.00	26.00	7.00	†CRW1	R
□4731	12.00	22.00	8.00	CRSH11	R
□4738	12.00	24.00	6.00	HMSA7P2	R
□4741	12.00	25.00	8.00	HMS45	R
□**4743**	12.00	26.00	8.00	HMS4	R
□**4750**	12.00	28.00	7.00	†CRW1	R
□**4751**	12.00	28.00	7.00	†CRW1	P
▲□4752	12.00	28.00	7.00	HMS4	R
□4753	12.00	32.00	5.00	CRS11	R
□**4754**	12.00	32.00	7.00	HMSA7	R
□**4755**	12.00	28.00	7.00	HMS4	V
□4756	12.00	32.00	10.00	HMS46	R
□**4757**	12.00	28.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□4759	12.00	30.00	10.00	HMS46	R
□4761	12.00	35.00	10.00	HMS47	R
□**4763**	12.00	30.00	7.00	HMS4	R
□**4765**	12.00	30.00	7.00	HMS4	V
□**4767**	12.00	30.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**4768**	12.00	30.00	7.00	HMSA7	R
□**4770**	12.00	32.00	7.00	†CRW1	R
□**4771**	12.00	32.00	7.00	†CRW1	V
▲□4772	12.00	32.00	7.00	HMS4	R
□**4773**	12.00	24.00	7.00	HMSA7	R
□**4776**	12.00	28.00	7.00	HMSA7	R
□**4777**	12.00	25.00	5.00	HMSA7	R
□**4790**	12.00	35.00	7.00	†CRW1	R
4909	.500	.688	.170	HMS1	R
	P.F. WIDTH .100				
▲4911	.500	.688	.094	HM3	R
▲**4912**	.500	.750	.125	†HM14	R
▲4913	.500	.749	.125	HMS1	R
	O.A. WIDTH .156				
▲**4914**	.500	.820	.156	†HM14	R
▲**4923**	.500	.843	.250	†HM14	R
4925	.500	.875	.125	HM14	R
▲**4931**	.500	.875	.250	†CRW1	R
4932	.500	.875	.250	†CRW1	V
4933	.500	.875	.250	†CRWA1	V
4935	.500	.875	.250	†CRWA1	V
	W/SS CASE & SPRING				
4936	.500	.875	.250	†CRW1	D
▲**4938**	.500	.875	.250	HM14	R
4939	.500	.875	.313	†CRWA1	R
4940	.500	.875	.313	†CRWA5	R
4941	.500	.875	.313	†CRWA5	V
▲**4943**	.500	.987	.250	†CRW1	R
4944	.500	.987	.250	HMS1	R
	W/STAINLESS STEEL SPRING				
▲**4950**	.500	.999	.188	†HM14	R
4980	.500	.999	.250	†CRW1	V
	W/STAINLESS STEEL SPRING				
4982	.500	.999	.250	†CRWA1	P
▲**4984**	.500	.999	.250	†CRW1	R
4985	.500	.999	.250	†CRWA1	R
4990	.500	.999	.250	†HM14	R
4991	.500	.999	.250	†CRWA5	V
	W/STAINLESS STEEL SPRING				
4996	.500	.999	.313	†CRWA5	R
5008	.500	1.010	.204	HMSA7	V
5045	.500	1.124	.250	†CRW1	P
5046	.500	1.124	.313	†CRW1	P
5062	.500	1.124	.250	†CRWA1	R
5066	.500	1.124	.250	†CRW1	V
5067	.500	1.124	.250	†CRWA1	V
▲**5068**	.500	1.124	.250	†CRW1	R
5069	.500	1.124	.250	†CRWA5	R
5072	.500	1.124	.250	†CRWA5	V
▲**5085**	.500	1.124	.250	†HM14	R
□5119	13.00	22.00	5.00	CRS11	R
□5120	13.00	20.00	4.00	CRS11	R
□5123	13.00	25.00	5.00	HMS46	R
5131	.500	1.249	.188	CRWH3	R
	W/SS CASE & SPRING				
▲**5133**	.500	1.250	.250	†CRW1	R
□**5142**	13.00	30.00	8.00	HMS4	R
▲**5150**	.500	1.375	.250	†CRW1	R
5151	.500	1.375	.250	†CRW1	V
▲□5221	13.00	26.00	7.00	HMS4	R
□5250	13.00	28.00	7.00	CRS1	R
▲□5254	13.00	28.00	7.00	HMS4	R
□**5285**	13.00	30.00	7.00	HMSA7	R
5321	.531	.999	.250	†CRWA1	S
5334	.531	1.124	.313	CRSA1	R
5385	.546	.875	.250	CRW1	P
□**5398**	14.00	26.00	7.00	†CRW1	V
▲5399	.551	1.124	.203	†HM21	R
□5402	14.00	20.00	3.00	HM4	R
□5405	14.00	22.00	3.00	HM4	R
□**5410**	14.00	24.00	6.00	HMSA7	R
▲□5412	14.00	24.00	7.00	HMS4	R
□**5413**	14.00	25.00	7.00	HMSA7	P
▲□5414	14.00	25.00	5.00	HMS4	R
□**5421**	14.00	24.00	7.00	HMSA7	R
5425	.561	1.000	.254	HMSA7	P
□**5439**	14.00	28.00	6.00	HMS4	R
□★5440	14.00	28.00	7.00	†CRW1	R
▲□5441	14.00	28.00	7.00	HMS4	R
□**5449**	14.00	30.00	7.00	HMSA7	R
▲□5452	14.00	30.00	7.00	HMS4	R
□**5454**	14.00	30.00	7.00	HMS4	V
□**5456**	14.00	30.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**5480**	14.00	35.00	7.00	†CRW1	R
▲□5481	14.00	35.00	7.00	HMS4	R
5500	.563	.750	.094	HM3	R
5507	.551	1.024	.787	HMSASPL	P
▲5510	.563	.813	.126	HMS1	R
□5521	14.00	26.00	7.00	HMS46	R
▲**5522**	.563	.875	.188	†HM14	R
5523	.563	.875	.188	†CRW1	D
□5528	14.00	30.00	10.00	HMS45	R
□5529	14.00	30.00	10.00	CRSH13	R
□5532	14.00	32.00	10.00	HMS46	R
□5533	14.00	35.00	10.00	HMS46	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**5535**	14.00	22.00	4.00	HMS4	R
□**5538**	14.00	22.00	4.00	HMSA7	R
▲**5541**	.563	.999	.256	†CRW1	R
5542	.563	.999	.250	†CRW1	V
5543	.563	.999	.250	†CRW1	R
	W/SS CASE & SPRING				
5553	.551	.945	.394	D8-SPL	P
▲**5569**	.563	.999	.219	†HM14	R
5605	.554	.999	.250	†CRW1	R
	W/SS CASE & SPRING				
5606	.563	.999	.250	†CRWA1	R
5650	.563	1.124	.250	†CRW1	V
▲**5652**	.563	1.124	.250	†CRW1	R
5662	.563	1.124	.250	†CRWA1	R
▲**5685**	.563	1.124	.250	HM14	R
▲**5707**	.563	1.250	.250	†CRW1	R
▲**5756**	.563	1.375	.250	†CRW1	R
□5782	15.00	21.00	3.00	HM4	R
□5786	15.00	23.00	3.00	HM4	R
▲□5790	15.00	24.00	5.00	HMS4	R
□**5791**	15.00	24.00	5.00	HMSA7	R
□**5801**	15.00	25.00	5.00	HMS4	V
□**5802**	15.00	24.00	7.00	HMSA7	R
□**5803**	15.00	25.00	7.00	†CRW1	P
□5804	15.00	25.00	5.00	HMA10	R
▲□5806	15.00	26.00	7.00	HMS4	R
□**5807**	15.00	26.00	7.00	HMSA7	R
▲□5808	15.00	25.00	5.00	HMS4	R
□**5809**	15.00	25.00	5.00	HMSA7	R
▲□5810	15.00	28.00	7.00	†CRW1	R
□**5816**	15.00	26.00	6.00	HMS4	R
□**5817**	15.00	26.00	6.00	HMSA7	R
▲□5821	15.00	30.00	7.00	HMS4	R
□**5830**	15.00	32.00	7.00	†CRW1	R
▲□5831	15.00	32.00	7.00	HMS4	R
□**5832**	15.00	32.00	7.00	†CRW1	V
□**5835**	15.00	32.00	7.00	HMS4	V
□**5836**	15.00	32.00	8.00	HMSA7	R
□**5837**	15.00	32.00	7.00	HMSA7	R
□**5839**	15.00	32.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**5840**	15.00	35.00	7.00	†CRW1	R
□**5841**	15.00	35.00	7.00	†CRW1	P
▲□5842	15.00	35.00	7.00	HMS4	R
□**5845**	15.00	35.00	7.00	HMSA7	R
□**5847**	15.00	35.00	7.00	HMSA7	V
□**5848**	15.00	35.00	7.00	HMS4	V
	W/STAINLESS STEEL SPRING				
▲□5883	15.00	40.00	10.00	HMS4	R
□**5890**	15.00	28.00	7.00	HMS4	R
□**5902**	15.00	30.00	10.00	HMSA7	R
5904	.591	.827	.197	HMAS7	P
□**5912**	15.00	24.00	7.00	HMS4	R
□5919	15.00	26.00	4.50	HM102	R
□★5922	15.00	28.00	7.00	HMS4	R
□**5923**	15.00	30.00	10.00	HMS4	R
□5924	15.00	30.00	4.50	HMS47	R
▲**5926**	.594	1.124	.313	†CRW1	R
□**5940**	15.00	30.00	7.00	HMSA7	R
□5942	15.00	32.00	10.00	HMS47	R
▲**5946**	.594	1.124	.250	†HM14	R
5950	.594	1.250	.313	CRSA1	R
□**5951**	15.00	35.00	10.00	HMS4	R
□5964	15.00	42.00	10.00	HMS47	R
▲5966	.594	1.375	.313	†CRSA1	R
□**5969**	15.00	32.00	9.00	HMS4	R
6103	.591	1.102	.591	HMS15	V
	P.F. WIDTH .236 (6MM)				
▲6105	.625	.812	.094	HM3	R
6106	.625	.813	.094	HM3	V
6113	.630	.827	.157	HMA1	R
6119	.625	.875	.188	HMSA1	R
	P.F. WIDTH .125				
▲6120	.625	.875	.188	HMS1	R
	P.F. WIDTH .125				
▲**6125**	.625	.933	.188	†HM14	R
6126	.625	.933	.188	†HM14	V
▲**6130**	.625	.937	.188	†HM14	R
6134	.625	.987	.250	†CRW1	R
	W/STAINLESS STEEL SPRING				
6139	.625	.999	.250	†CRWA1	V
	W/STAINLESS STEEL SPRING				
6141	.625	.999	.250	†CRWA1	R
▲**6143**	.625	.999	.250	†CRW1	R
▲6147	.625	.999	.250	HMSA11	R
	W/SS CASE & SPRING				
6151	.625	.999	.250	†CRWA5	R
▲**6152**	.625	1.000	.125	†HM14	P
6157	.625	1.063	.250	†CRW1	R
▲**6158**	.625	1.063	.250	†HM14	R
6184	.625	1.124	.375	†CRWHA5	R
	W/SS CASE & SPRING				
6191	.625	1.124	.250	†CRW5	R
▲**6203**	.625	1.124	.250	†CRW1	R
6204	.625	1.124	.250	†CRWA1	R
6213	.625	1.124	.250	†CRW1	V
6215	.625	1.124	.250	†CRWA1	V
▲**6225**	.625	1.124	.250	†HM14	R
▲**6229**	.625	1.124	.375	†CRWA5	R
6231	.625	1.124	.374	†CRWA5	V
▲**6232**	.625	1.126	.250	†CRW5	R
	W/SS CASE & SPRING				
6243	.624	1.131	.188	†HM14	R
▲**6247**	.625	1.181	.250	†CRWA1	R
6248	.625	1.181	.256	†CRWA1	V
▲**6280**	.625	1.250	.313	CRWA5	R
	W/SS CASE & SPRING				
6285	.625	1.250	.313	CRWA5	V
	W/SS CASE & SPRING				
□**6287**	16.00	24.00	5.00	HMSA7	R
6293	.630	1.024	.250	HMSA7	P
6295	.630	1.757	.554	HM-SPL	R
□6302	16.00	24.00	4.00	HM102	R
6309	.625	1.250	.250	†CRW1	V
▲**6315**	.625	1.250	.250	†CRW1	R
6316	.625	1.250	.250	†CRWA1	R
▲**6323**	.625	1.250	.250	†HM14	R
▲**6330**	.625	1.259	.250	†HM14	R
□6340	16.00	35.00	10.00	HMS46	R
□6342	16.00	40.00	10.00	HMS47	R
□6345	16.00	30.00	10.00	HMS47	R
6367	.625	1.375	.250	CRWH3	R
	W/SS CASE & SPRING				
▲**6370**	.625	1.375	.250	†HM14	R
6371	.625	1.375	.250	†CRW5	P
▲**6372**	.625	1.375	.250	†CRW1	R
6373	.625	1.375	.250	†CRWA1	R
6379	.625	1.375	.250	†CRW1	V
6383	.625	1.375	.250	†CRWA1	V
▲**6386**	.625	1.499	.250	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
6388	.625	1.375	.375	†CRWA5	R
	W/SS CASE & SPRING				
▲**6391**	.625	1.377	.250	†CRWHA1	R
6393	.625	1.500	.313	†CRW5	V
	W/STAINLESS STEEL SPRING				
□6398	16.00	22.00	3.00	HM4	R
□6400	16.00	22.00	4.00	HM4	R
▲□6403	16.00	24.00	5.00	HMS4	R
□**6404**	16.00	27.00	6.00	HMS4	P
□**6405**	16.00	24.00	7.00	HMS4	R
□**6406**	16.00	28.00	6.00	HMS4	R
□**6407**	16.00	28.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□6408	16.00	26.00	7.00	HMS1	R
□**6409**	16.00	28.00	7.00	HMS4	V
□**6410**	16.00	28.00	7.00	†CRW1	R
▲□6411	16.00	28.00	7.00	HMS4	R
□**6412**	16.00	28.00	7.00	HMSA7	R
6413	.630	1.102	.595	HMS-SPL	P
□**6420**	16.00	30.00	7.00	†CRW1	R
□**6425**	16.00	30.00	7.00	HMS4	V
▲□6426	16.00	30.00	7.00	HMS4	R
□**6428**	16.00	30.00	7.00	HMSA7	R
□**6430**	16.00	32.00	7.00	†CRW1	R
□**6435**	16.00	32.00	7.00	HMS4	R
□**6437**	16.00	32.00	7.00	HMSA7	R
□**6440**	16.00	35.00	7.00	†CRW1	R
▲□6442	16.00	35.00	7.00	HMS4	R
□**6444**	16.00	35.00	7.00	HMSA7	R
6455	.630	2.205	.256	J-TYPE	V
	W/CW HELIX FROM AIR SIDE				
□**6473**	16.00	38.00	7.00	HMSA7	R
▲□6480	16.00	40.00	7.00	†CRW1	R
□**6481**	16.00	40.00	7.00	†CRWA1	R
▲**6521**	.656	1.124	.313	†CRW1	R
6539	.630	1.220	.787	HMSA12	R
▲**6541**	.656	1.250	.250	†CRW1	R
▲**6556**	.656	1.375	.313	†CRW1	R
▲**6580**	.656	1.575	.250	†CRW1	R
□**6592**	17.00	25.00	4.00	HMS4	R
□**6594**	17.00	25.00	4.00	HMSA7	R
6595	.669	.999	.188	†CRW1	R
▲**6597**	.669	1.573	.281	CRW1	V
	W/SS CASE & SPRING				
□6603	17.00	23.00	3.00	HM4	R
□**6608**	17.00	27.00	7.00	HMSA7	R
□**6609**	17.00	27.03	6.35	†CRW1	R
□**6610**	17.00	28.00	7.00	†CRW1	R
	W/STAINLESS STEEL SPRING				
□**6611**	17.00	28.00	7.00	†CRW1	V
□**6612**	17.00	28.00	7.00	HMS4	V
▲□6614	17.00	28.00	7.00	HMS4	R
□**6615**	17.00	29.00	5.00	HMS4	R
□**6620**	17.00	30.00	7.00	†CRW1	R
□**6622**	17.00	30.00	7.00	HMSA7	R
▲□6624	17.00	30.00	7.00	HMS4	R
□**6625**	17.00	30.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**6626**	17.00	30.00	7.00	HMS4	V
□**6627**	17.00	30.00	6.00	HMS4	R
□**6629**	17.00	30.00	8.00	HMS4	R
□**6630**	17.00	32.00	7.00	†CRW1	R
▲□6633	17.00	32.00	7.00	HMS4	R
□**6634**	17.00	32.00	7.00	HMSA7	R
□**6640**	17.00	35.00	7.00	†CRW1	R
6641	.669	1.378	.276	HMSA124	P
	W/1.703 FLANGE				
□**6642**	17.00	35.00	7.00	†CRW1	V
□**6643**	17.00	35.00	8.00	HMS4	R
▲□6644	17.00	35.00	7.00	HMS4	R
□**6646**	17.00	35.00	7.00	HMS4	V
□**6647**	17.00	35.00	7.00	HMSA7	R
▲□6653	17.00	37.00	7.00	HMSA7	R
□**6659**	17.00	40.00	8.00	HMS4	R
□**6660**	17.00	40.00	7.00	†CRW1	R
▲□6661	17.00	40.00	7.00	HMS4	R
□**6662**	17.00	40.00	10.00	HMS4	R
□**6663**	17.00	40.00	7.00	HMSA7	R
▲□6680	17.00	47.00	7.00	†CRW1	R
□**6681**	17.00	47.00	10.00	HMS4	R
□**6685**	17.00	47.00	8.00	HMSA7	R
□**6686**	17.00	32.00	8.00	HMSA7	R
□**6689**	17.00	28.00	6.00	HMSA7	R
□6690	17.00	26.00	6.00	HMS46	R
□**6695**	17.00	28.00	7.00	HMSA7	R
□6699	17.00	32.00	10.00	HMS46	R
□6706	17.00	34.00	4.00	CRS11	R
□6714	17.00	35.00	10.00	HMS46	R
6720	.688	.999	.188	†HM14	R
6728	.669	1.064	.250	†CRW1	R
	W/SS CASE & SPRING				
▲**6729**	.669	1.064	.250	†CRW1	R
6738	.688	1.124	.190	†CRW1	R
▲**6741**	.688	1.124	.250	†CRW1	R
6743	.688	1.124	.250	†CRW1	R
	W/SS CASE & SPRING				
6745	.688	1.124	.250	†CRW1	V
	W/STAINLESS STEEL SPRING				
6751	.688	1.250	.256	†CRWHA1	V
6757	.685	1.181	.276	HMSA7	R
▲**6759**	.688	1.124	.250	†HM14	R
6762	.688	1.187	.125	†HM14	R
▲**6763**	.688	1.188	.188	†CRW1	R
6765	.688	1.250	.256	†CRWA1	R
▲**6767**	.688	1.250	.313	†CRW1	R
6768	.688	1.250	.313	†CRW1	V
6769	.688	1.252	.220	†CRWH1	V
6770	.688	1.187	.188	†CRW1	V
▲**6806**	.669	1.250	.250	†HM14	R
6814	.688	1.375	.250	†CRWA1	R
▲**6816**	.688	1.375	.313	†CRW1	R
6817	.688	1.375	.313	†CRW1	V
6888	.688	1.250	.256	†CRWA1	S
6915	.688	1.375	.125	HM14	R
▲**6920**	.688	1.375	.250	†HM14	R
▲**6935**	.688	1.499	.250	†CRW1	R
6990	.688	1.624	.250	†CRWA1	R
6992	.669	1.339	.311	CRSA1	P
□6995	18.00	24.00	3.00	HM4	R
□**7000**	18.00	30.00	7.00	†CRW1	R
□**7001**	18.00	30.00	7.00	†CRW1	V
□**7002**	18.00	28.00	8.00	HMS4	R
□7003	18.00	26.00	4.00	HMA1	R
▲□7004	18.00	30.00	7.00	HMS4	R
□**7005**	18.00	32.00	7.00	†CRW1	R
□**7006**	18.00	32.00	7.00	†CRW1	V
□**7007**	18.00	32.00	7.00	HMSA7	R
▲□7009	18.00	32.00	7.00	HMS4	R
7010	.703	1.160	.250	HMS2	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**7012**	18.00	30.00	7.00	HMSA7	R
□**7013**	18.00	28.00	6.00	HMS4	R
□**7015**	18.00	35.00	7.00	†CRW1	R
▲□7016	18.00	35.00	7.00	HMS4	R
▲□7018	18.00	28.00	7.00	HMS4	R
□**7019**	18.00	28.00	7.00	HMSA7	R
□**7020**	18.00	28.00	7.00	HMS4	V
□**7023**	18.00	32.00	8.00	HMS4	R
□**7024**	18.00	35.00	7.00	HMSA7	R
□**7028**	18.00	35.00	7.00	HMS4	V
□**7032**	18.00	35.00	8.00	HMSA7	R
□**7061**	18.00	37.00	8.00	HMSA7	R
□**7071**	18.00	38.00	7.00	HMSA7	R
□**7080**	18.00	40.00	7.00	†CRW1	R
□**7081**	18.00	40.00	7.00	HMS4	V
▲□7082	18.00	40.00	7.00	HMS4	R
7089	.709	1.339	.315	CRSA1	P
□7091	18.00	30.00	6.00	HMSA7P2	R
□7100	18.00	35.00	6.00	HMSA7P2	R
□7109	18.00	35.00	10.00	HMS45	R
□7114	18.00	40.00	10.00	HMS46	R
□7200	19.00	27.00	4.00	HM4	R
▲□7202	19.00	27.00	6.00	HMS4	R
□**7205**	19.00	30.00	8.00	HMS4	R
□**7210**	19.00	32.00	6.35	†CRW1	R
□**7220**	19.00	35.00	7.00	†CRW1	R
□**7222**	19.00	35.00	8.00	HMS4	R
▲□7223	19.00	35.00	10.00	HMS4	R
□**7225**	19.00	35.00	10.00	HMSA7	R
□**7239**	19.00	30.00	7.00	HMS4	R
7251	.748	1.496	.300	HMSA7	R
	P.F. WIDTH .276 SPECIAL CONST				
7400	.736	1.378	.276	HMSA7	R
7408	.750	1.000	.125	†HM14	D
7409	.750	1.004	.156	HM8	R
▲**7410**	.750	.999	.125	HM14	R
▲**7411**	.750	1.006	.125	†HM14	R
7412	.750	1.031	.313	HMA6	R
▲**7413**	.750	1.062	.188	HM14	R
▲**7414**	.750	1.124	.188	†CRW1	R
▲**7415**	.750	1.124	.156	†HM14	R
7417	.750	1.124	.188	†CRW1	V
▲**7421**	.750	1.187	.156	HM14	R
7434	.750	1.250	.250	†CRWA5	R
7438	.750	1.250	.250	†CRW1	R
	W/BRASS CASE & SS SPRING				
▲**7439**	.750	1.250	.188	†CRW1	R
7440	.750	1.250	.250	†CRW1	R
7443	.750	1.250	.250	†CRWA1	R
▲**7449**	.750	1.250	.375	†CRWA5	R
7450	.750	1.250	.250	†CRW1	V
7453	.750	1.250	.250	†CRWA1	V
7455	.750	1.250	.250	†CRWA1	V
	W/SS CASE & SPRING				
▲**7464**	.750	1.250	.250	†HM14	R
7465	.750	1.250	.313	CRWA7	R
7467	.750	1.249	.188	CRW1	V
	W/STAINLESS STEEL SPRING				
▲**7469**	.750	1.252	.188	†CRW1	R
▲**7473**	.750	1.260	.250	†CRW1	R
▲**7474**	.750	1.312	.250	†CRW1	R
7475	.750	1.312	.250	†CRWA1	R
7477	.750	1.259	.250	†HM14	R
7478	.750	1.250	.188	CRW1	R
7481	.750	1.301	.250	†HM14	R
□7492	19.00	35.00	9.00	HMSA75	R
□**7495**	19.00	40.00	10.00	HMS4	R
□7497	19.00	40.00	10.00	HMS46	R
7509	.750	1.375	.250	†CRWA5	V
▲**7512**	.750	1.375	.250	†CRW1	R
7513	.750	1.375	.250	†CRWA1	R
7515	.750	1.375	.250	†CRW1	V
7517	.750	1.375	.250	†CRWA1	V
7533	.750	1.375	.250	†CRWA1	P
7535	.750	1.012	.226	CRW1	R
▲**7536**	.750	1.375	.250	HM14	R
7537	.750	1.375	.250	HM14	P
7539	.787	1.375	.250	CRWH3	R
	W/SS CASE & SPRING				
7541	.750	1.416	.266	HMS2	S
7550	.750	1.437	.250	†HM14	R
7566	.747	1.500	.375	KIT	R
7567	.750	1.499	.250	†CRW1	V
▲**7571**	.750	1.499	.250	†HM14	R
▲**7572**	.750	1.499	.250	CRW1	R
7573	.750	1.499	.250	†CRWA1	R
▲**7591**	.750	1.575	.250	†CRW1	R
★7620	.763	1.177	.390	SPLINSL	V
7623	.750	1.624	.250	†CRW1	V
	W/STAINLESS STEEL SPRING				
7624	.750	1.624	.250	†CRWA1	V
	W/STAINLESS STEEL SPRING				
▲**7627**	.750	1.624	.250	†CRW1	R
7628	.750	1.624	.250	†CRWA1	R
▲**7636**	.750	1.752	.250	†CRW1	R
7638	.750	1.752	.250	†CRWA1	V
7661	.750	1.828	.250	†CRW1	R
▲**7690**	.750	1.874	.250	†CRW1	R
▲**7693**	.750	2.047	.313	†CRW1	R
▲**7740**	.787	1.124	.188	†CRW1	R
□**7745**	20.00	34.00	7.00	HMSA7	P
7750	.762	1.160	.250	HMS2	R
▲□7800	19.00	32.00	7.00	HMS4	R
□**7803**	19.00	32.00	8.00	HMSA7	R
□**7810**	20.00	26.00	4.00	HMS4	R
□**7813**	20.00	26.00	4.00	HMSA7	R
7824	.781	1.375	.313	†CRW1	V
▲**7829**	.781	1.375	.313	CRW1	R
▲**7831**	.781	1.375	.197	†HM14	R
▲**7849**	.781	1.499	.313	†CRW1	R
□7854	20.00	26.00	4.00	HM4	R
□7855	20.00	28.00	4.00	HM4	R
7861	.787	1.181	.276	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
□**7867**	20.00	30.00	5.00	HMSA7	R
□**7868**	20.00	32.00	8.00	HMS4	R
□**7869**	20.00	32.00	6.00	HMS4	R
▲**7872**	.781	1.624	.313	†CRW1	R
▲**7889**	.781	1.828	.250	†CRW1	P
□**7892**	20.00	32.00	7.00	HMSA7	R
□7896	20.00	33.00	10.00	HMS47	R
▲□7900	20.00	30.00	5.00	HMS4	R
▲□7902	20.00	28.00	6.00	HMS4	R
□**7904**	20.00	30.00	5.00	HMS4	V
□**7905**	20.00	30.00	7.00	†CRW1	R
□7906	20.00	30.00	5.00	CRS1	R
□**7907**	20.00	31.00	7.00	†CRW1	R
□7909	20.00	30.00	7.00	CRS1	V
	W/STAINLESS STEEL SPRING				
□**7910**	20.00	32.00	7.00	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□7911	20.00	32.00	7.00	CRS1	V
□**7912**	20.00	30.00	7.00	HMSA7	R
□**7913**	20.00	32.00	7.00	HMS4	V
□**7914**	20.00	30.00	7.00	HMS4	R
□**7915**	20.00	35.00	7.00	†CRW1	R
□**7916**	20.00	35.00	7.00	†CRW1	V
□**7917**	20.00	35.00	6.00	HMS4	R
▲□7918	20.00	32.00	7.00	HMS4	R
□**7919**	20.00	36.00	7.00	HMS4	R
▲□7920	20.00	36.00	7.00	†CRW1	R
□**7921**	20.00	36.00	7.00	†CRW1	V
▲□7922	20.00	35.00	7.00	HMS4	R
□**7923**	20.00	35.00	7.00	HMSA7	R
□**7924**	20.00	36.00	7.00	HMSA7	R
▲□7925	20.00	37.00	7.00	†CRW1	R
□**7926**	20.00	35.00	8.00	HMSA7	R
□**7927**	20.00	35.00	10.00	HMS4	R
□**7929**	20.00	35.00	7.00	HMS4	V
□**7930**	20.00	38.00	7.00	†CRW1	R
▲□7933	20.00	38.00	7.00	HMS4	R
□**7936**	20.00	35.00	10.00	HMSA7	R
□**7940**	20.00	40.00	7.00	†CRW1	R
□**7941**	20.00	40.00	7.00	†CRW1	V
▲□7942	20.00	40.00	7.00	HMS4	R
□**7943**	20.00	40.00	10.00	HMS4	R
□**7944**	20.00	40.00	7.00	HMS4	V
□**7945**	20.00	40.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□7947	20.00	37.00	10.00	HMS47	R
□**7950**	20.00	42.00	7.00	†CRW1	R
□**7951**	20.00	40.00	10.00	HMSA7	R
▲□7952	20.00	42.00	7.00	HMS4	R
□7953	20.00	42.00	7.00	CRS1	V
□**7954**	20.00	42.00	7.00	HMSA7	R
□**7956**	20.00	40.00	7.00	HMSA7	R
□**7965**	20.00	47.00	7.00	†CRW1	R
▲□7966	20.00	47.00	7.00	HMS4	R
□**7967**	20.00	47.00	7.00	HMS4	V
□**7968**	20.00	47.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**7980**	20.00	52.00	7.00	†CRW1	R
□**7981**	20.00	52.00	7.00	†CRW1	P
□**7982**	20.00	52.00	10.00	HMS4	R
▲□7983	20.00	52.00	7.00	HMS4	R
□**7986**	20.00	42.00	10.00	HMSA7	R
□**7987**	20.00	47.00	7.00	HMSA7	R
□**7993**	20.00	47.00	10.00	HMS4	R
□**8000**	20.00	38.00	8.00	HMS4	R
□**8003**	20.00	40.00	8.00	HMSA7	R
□**8005**	20.00	42.00	8.00	HMSA7	R
□**8006**	20.00	42.00	10.00	HMS4	R
8009	.813	1.063	.125	HM3	R
□**8011**	20.00	45.00	12.00	HMS4	R
8013	.813	1.187	.313	†CRWA1	V
	W/SS CASE & SPRING				
▲**8017**	.813	1.250	.188	CRW1	R
8019	.813	1.250	.375	HMS4	R
□**8028**	20.00	52.00	8.00	HMSA7	R
□**8031**	20.00	47.00	8.00	HMSA7	R
□**8032**	20.00	52.00	7.00	HMSA7	R
□**8037**	20.00	52.00	10.00	HMSA7	R
8046	.787	1.457	.276	†CRW1	V
8053	.813	1.375	.375	†CRW1	V
▲**8060**	.813	1.375	.375	†CRW1	R
▲**8080**	.813	1.375	.234	CRW	R
	NO SPRING				
▲**8088**	.813	1.499	.250	CRW1	R
▲**8178**	.813	1.624	.250	†CRW1	V
8213	.781	1.752	.313	CRSHA1	R
▲**8215**	.813	1.752	.375	†CRW1	R
□8271	21.00	30.00	6.50	CRS11	R
□8273	21.00	32.00	7.00	HMS47	R
□8274	21.00	35.00	8.00	HMS46	R
□8276	21.00	40.00	10.00	HMS47	R
8278	.827	1.260	.315	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
▲□8305	21.00	35.00	7.00	†CRW1	R
□**8306**	21.00	35.00	7.00	†CRW1	V
□**8378**	21.00	40.00	7.00	HMSA7	R
□**8380**	21.00	40.00	8.00	†CRW1	R
▲8485	.844	1.828	.313	CRSA1	R
□8499	22.00	28.00	4.00	HM1	R
□★8500	22.00	28.00	5.00	HM3	R
□8501	22.00	28.00	4.00	HMA10	R
□8503	22.00	30.00	4.00	HM4	R
▲□8505	22.00	31.00	7.00	†CRW1	P
□8508	22.00	32.00	7.00	CRS1	V
□**8510**	22.00	32.00	7.00	†CRW1	R
□**8511**	22.00	36.00	7.00	HMSA7	R
□**8512**	22.00	32.00	7.00	HMSA7	R
□**8513**	22.00	35.00	6.00	HMS4	R
□**8514**	22.00	35.00	5.00	HM14	R
□**8515**	22.00	35.00	7.00	†CRW1	R
□**8516**	22.00	35.00	7.00	†CRW1	V
▲□8517	22.00	35.00	7.00	HMS4	R
□**8518**	22.00	35.00	10.00	HMS4	R
▲□8519	22.00	32.00	7.00	HMS4	R
□**8522**	22.00	35.00	7.00	HMSA7	R
□**8525**	22.00	35.00	8.00	HMSA7	R
□**8526**	22.00	40.00	7.00	HMSA7	R
▲□8540	22.00	38.00	7.00	†CRW1	R
□**8541**	22.00	38.00	7.00	†CRW1	V
□**8545**	22.00	38.00	8.00	HMSA7	R
□**8550**	22.00	40.00	6.35	†CRW1	R
▲□8551	22.00	40.00	7.00	HMS4	R
□**8552**	22.00	40.00	6.35	†CRW1	V
□**8553**	22.00	40.00	10.00	HMS4	R
□**8555**	22.00	42.00	7.00	†CRW1	R
□**8556**	22.00	42.00	10.00	HMSA7	R
□**8557**	22.00	40.00	7.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□**8558**	22.00	40.00	7.00	HMSA7	V
▲□8562	22.00	42.00	10.00	HMS4	R
▲□8563	22.00	45.00	7.00	HMS4	R
□**8564**	22.00	42.00	11.00	HMS4	R
▲□8568	22.00	47.00	7.00	HMS4	R
□**8570**	22.00	47.00	8.00	†CRW1	R
□**8573**	22.00	47.00	7.00	HMSA7	R
▲□8580	22.00	50.00	8.00	†CRW1	R
8619	.875	1.125	.125	†HM14	V
▲**8620**	.875	1.125	.125	HM14	R
8621	.875	1.250	.250	†CRW1	V
▲**8624**	.875	1.250	.188	†CRW1	R
▲**8625**	.875	1.246	.188	†HM14	R
▲**8627**	.875	1.251	.188	HM14	R
8631	.875	1.251	.188	HM3	R
	W/STAINLESS STEEL CASE				
▲**8632**	.875	1.255	.188	†HM14	R
8634	.875	1.250	.250	†CRWA5	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲**8637**	.875	1.308	.250	†HM14	R
▲**8645**	.875	1.312	.250	†HM14	R
8646	.875	1.375	.250	†CRW1	V
▲**8648**	.875	1.375	.256	†CRW1	R
8649	.875	1.308	.250	†CRW1	V
▲**8660**	.875	1.375	.250	†CRWA5	R
8665	.875	1.375	.250	†CRWA5	V
▲**8677**	.875	1.375	.188	†HM14	R
▲**8690**	.875	1.437	.250	†HM14	R
8691	.875	1.437	.250	†CRW1	R
▲**8694**	.875	1.497	.313	†CRWA5	V
	W/STAINLESS STEEL SPRING				
8698	.875	1.499	.313	HMSW87	R
	W/SS CASE & SPRING				
▲**8700**	.875	1.499	.250	†CRW1	R
8702	.875	1.499	.250	†CRWA1	R
8703	.875	1.499	.313	CRW1	R
8704	.875	1.499	.250	†CRW1	V
8707	.875	1.499	.250	†CRWA1	V
	W/STAINLESS STEEL SPRING				
□8739	22.00	37.00	7.00	HMS46	R
▲8741	.875	1.499	.250	†HM21	R
□**8743**	22.00	38.00	7.00	HMS4	R
▲**8748**	.875	1.502	.313	†CRWA1	R
8749	.875	1.499	.453	†DH2	RR
▲**8761**	.875	1.562	.250	HM14	R
▲**8763**	.875	1.575	.250	†CRW1	R
▲**8772**	.875	1.575	.250	HM14	R
□8776	22.00	47.00	10.00	HMS47	R
□**8781**	22.00	33.00	7.00	HMS4	R
8782	.875	1.624	.250	†CRWA1	R
8786	.875	1.375	.246	†CRWA1	R
8795	.875	1.624	.250	†CRW1	V
▲**8796**	.875	1.624	.250	†CRW1	R
8802	.875	1.624	.188	HM8	R
▲**8821**	.875	1.752	.250	†CRW1	R
▲**8842**	.875	1.828	.250	†CRW1	R
▲**8860**	.875	1.874	.250	†CRW1	R
▲**8870**	.875	2.000	.250	†CRW1	R
8871	.875	2.050	.375	†CRWH1	V
▲8885	.875	2.060	.359	W28	P
★**8891**	.878	1.249	.188	CRWH3	R
	W/SS CASE & SPRING				
9000	.882	2.088	.313	†CRWHA1	R
□9005	23.00	32.00	5.50	HM1	R
9006	.906	1.339	.256	HMS4	R
□9009	23.00	35.00	6.00	HMA10	R
□**9015**	23.00	42.00	11.00	HMS4	R
□**9055**	23.00	40.00	8.00	HMS4	R
□**9058**	23.00	40.00	10.00	HMSA7	R
□**9060**	23.00	40.00	10.00	HMS4	R
9065	.906	1.338	.315	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
9068	.906	1.575	.276	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
9176	.917	1.476	.236	HMSH4	R
▲**9243**	.938	1.375	.250	†HM14	R
▲**9244**	.938	1.375	.250	†CRWA1	R
▲**9298**	.938	1.499	.250	†HM14	R
▲**9303**	.938	1.500	.250	†CRW1	R
9304	.938	1.500	.250	†CRW1	V
▲**9307**	.938	1.624	.250	†CRW1	R
9308	.938	1.624	.250	†CRW1	V
▲**9347**	.938	1.752	.250	†CRW1	R
9354	.938	1.734	.250	†HM14	R

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲**9409**	.938	1.828	.250	†CRW1	R
9420	.942	2.110	.990	END CAP	P
□9445	24.00	32.00	4.00	HM4	R
□**9449**	24.00	35.00	8.00	HMSA7	R
□9451	24.00	32.00	7.00	CRSA11	R
□9455	24.00	36.00	9.00	HMS47	R
□9456	24.00	36.00	7.00	HMSA75	R
□9458	24.00	36.00	6.00	CRS11	R
□9466	24.00	40.00	10.00	HMS47	R
□9471	24.00	47.00	10.00	HMS47	R
□9476	24.00	50.00	10.00	HMS47	R
□**9479**	24.00	42.00	10.00	HMS4	R
□**9480**	24.00	52.00	7.00	HMSA7	R
▲□9500	24.00	35.00	7.00	HMS4	R
□**9502**	24.00	36.00	7.00	†CRW1	V
□**9503**	24.00	35.00	7.00	HMSA7	R
□**9504**	24.00	37.00	7.00	HMS4	R
□9505	24.00	38.00	10.00	CRS1	R
□**9506**	24.00	38.00	7.00	†CRW1	V
□**9508**	24.00	38.00	8.00	HMS4	R
9510	.950	2.060	.359	HMS11	P
□**9511**	24.00	37.00	7.00	HMSA7	R
▲□9514	24.00	40.00	7.00	HMS4	R
9515	.945	1.575	.315	CRS1	R
	W/CW HELIX FROM AIR SIDE				
□**9516**	24.00	40.00	7.00	HMSA7	R
□**9517**	24.00	40.00	7.00	HMS4	V
▲**9520**	.950	1.358	.275	†CRW1	P
□**9521**	24.00	40.00	7.00	HMSA7	V
▲□9533	24.00	42.00	8.00	HMS4	R
▲□9558	24.00	47.00	7.00	HMS4	R
□**9560**	24.00	47.00	8.00	†CRW1	R
▲**9604**	.969	1.406	.250	†CRWA1	P
9611	.969	1.499	.313	†CRW1	V
▲**9613**	.969	1.499	.313	CRW1	R
▲**9646**	.969	1.624	.250	†CRW1	R
9647	.969	1.624	.250	†CRW1	V
□**9652**	25.00	37.00	8.50	HMS4	R
□**9655**	25.00	37.00	8.50	HMSA7	R
9663	.969	1.686	.313	†CRWA1	R
▲**9664**	.969	1.686	.313	†CRW1	R
▲**9667**	.969	1.752	.250	†CRW1	R
□**9668**	25.00	38.00	7.00	HMSA7	R
□**9677**	25.00	37.00	7.00	HMSA7	R
▲**9681**	.969	1.828	.313	†CRW1	R
★9684	.969	1.828	.578	†E3	RR
▲**9686**	.984	1.499	.250	†CRW1	V
	W/SS CASE & SPRING				
9688	.969	2.048	.375	†CRS1	R
□9691	25.00	32.00	4.00	HM4	R
□9693	25.00	33.00	4.00	HM4	R
□9694	25.00	35.00	4.00	HM4	R
□**9695**	25.00	35.00	6.00	HMSA7	R
□9696	25.00	32.00	7.00	CRSA1	R
□**9699**	25.00	40.00	5.00	HMS4	R
▲**9700**	.984	1.596	.250	†CRWA5	R
9701	.984	1.496	.236	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
□**9702**	25.00	42.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**9703**	25.00	40.00	7.00	HMS4	V
□**9704**	25.00	42.00	10.00	HMS4	V
□**9705**	25.00	35.00	7.00	†CRW1	R
□**9706**	25.00	35.00	7.00	†CRW1	V
▲□9708	25.00	35.00	7.00	HMS4	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**10947**	28.00	40.00	8.00	HMSA7	R
□**10948**	28.00	40.00	7.00	HMSA7	R
□★10951	28.00	40.00	8.00	HMS4	R
□**10952**	28.00	42.00	10.00	HMSA7	R
10956	1.102	1.913	.315	HMS	P
	W/CW HELIX FROM AIR SIDE				
□**10957**	28.00	47.00	7.00	†CRW1	V
□**10958**	28.00	47.00	8.00	†CRW1	R
▲□10959	28.00	47.00	7.00	HMS4	R
□**10961**	28.00	47.00	7.00	HMSA7	R
□**10964**	28.00	48.00	8.00	HMSA7	R
10966	1.102	1.890	.550	D3	P
□**10967**	28.00	48.00	11.00	HMS4	R
□**10969**	28.00	47.00	10.00	HMS4	R
▲□10973	28.00	52.00	7.00	HMS4	R
□**10974**	28.00	52.00	7.00	HMS4	V
□**10975**	28.00	52.00	8.00	†CRW1	R
□**10976**	28.00	52.00	10.00	HMSA7	R
□**10977**	28.00	52.00	7.00	HMSA7	V
□**10979**	28.00	52.00	10.00	HMS4	R
10983	1.102	2.087	.378	HMSA96S	P
□**10984**	28.00	38.00	8.00	HMS4	R
□**10988**	28.00	38.00	8.00	HMSA7	R
11000	1.100	2.205	.394	HMSA7	P
□11020	28.00	35.00	6.00	HM102	R
□11026	28.00	40.00	10.00	CRS13	R
□**11031**	28.00	43.00	10.00	HMS4	R
□11036	28.00	47.00	10.00	CRSA11	R
□11041	28.00	47.00	5.00	HMS46	R
□11043	28.00	50.00	10.00	HMS47	R
▲**11050**	1.125	1.375	.125	HM14	R
11052	1.125	1.375	.125	†HM14	V
□11054	28.00	62.00	12.00	CRSH1	R
▲**11055**	1.125	1.438	.203	†HM14	R
▲**11060**	1.125	1.499	.188	†HM14	R
▲**11061**	1.125	1.499	.188	CRW1	R
11065	1.125	1.562	.188	HM8	R
11066	1.125	1.561	.250	†CRW1	P
▲**11067**	1.125	1.561	.250	†CRW1	R
11071	1.125	1.561	.250	†CRW1	V
11076	1.102	1.969	.315	HMSA7	P
▲**11081**	1.125	1.562	.250	HM14	R
11082	1.125	1.565	.250	†CRW1	R
▲**11086**	1.126	1.575	.236	†CRWA1	R
11096	1.250	1.625	.188	HM14	R
11111	1.125	1.624	.250	†CRW1	P
11122	1.122	1.624	.236	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲**11123**	1.125	1.624	.250	†CRW1	R
11124	1.125	1.624	.256	†CRWA1	R
▲11130	1.125	1.624	.250	†HM21	R
11133	1.125	1.624	.250	†CRW1	V
11134	1.125	1.624	.256	†CRWA1	V
11136	1.125	1.693	.256	HMSA1	R
▲**11138**	1.125	1.752	.250	†CRW1	R
11139	1.125	1.626	.250	†CRWA5	V
11143	1.125	1.630	.313	HMS4N	R
11144	1.125	1.752	.250	†CRW1	V
▲**11150**	1.125	1.750	.250	†HM14	R
11152	1.398	1.950	.276	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
▲11161	1.125	1.781	.250	†HM21	R
▲11164	1.125	1.781	.469	HM18	R
	CLEARANCE D .265				
▲**11170**	1.125	1.828	.250	†CRW1	R

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
11171	1.125	1.828	.250	†CRWA1	R
11172	1.125	1.828	.250	†CRW1	V
11175	1.125	1.828	.250	†CRWA1	V
11180	1.125	1.781	.406	†HMSA7	R
▲11191	1.125	1.828	.250	HM21	R
11194	1.125	1.781	.469	HM18	R
	CLEARANCE D .265				
▲**11197**	1.125	1.852	.313	†CRWH1	R
11200	1.125	1.852	.313	†CRWHA1	R
11207	1.125	1.874	.250	†CRW1	V
11208	1.125	1.874	.250	†CRWA1	V
▲**11209**	1.125	1.874	.250	†CRW1	R
11223	1.125	1.874	.250	†CRWA1	R
▲**11269**	1.125	1.938	.343	HM14	R
	CLEARANCE D .352				
▲11284	1.125	1.938	.625	HD2	R
	CLEARANCE D .415				
▲**11299**	1.125	1.983	.250	†CRW1	R
▲11334	1.125	2.000	.250	†HM21	R
▲**11340**	1.125	2.000	.256	†CRW1	R
11343	1.125	2.000	.375	†CRWA1	R
11344	1.125	2.000	.250	†CRW1	V
▲11352	1.125	2.047	.250	†HM21	R
▲**11353**	1.125	2.047	.313	†CRWA1	R
▲**11366**	1.125	2.062	.313	†CRW1	R
11368	1.125	2.062	.250	†CRWA1	V
▲**11372**	1.125	2.125	.313	†CRW1	R
11377	1.125	2.125	.375	†KIT	R
▲**11378**	1.125	2.250	.250	†CRW1	R
▲**11392**	1.125	2.441	.250	†CRW1	R
11405	1.125	2.835	.375	†CRSA1	R
□**11407**	29.00	37.44	5.00	HMS4	R
11410	1.125	2.875	.469	†CRSH1	R
11417	1.142	1.614	.236	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□11420	29.00	43.00	7.00	HMS47	R
□11421	29.00	47.00	10.00	CRSH11	R
11422	1.142	1.693	.315	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
□11423	29.00	50.00	10.00	CRSH11	R
□11424	29.00	52.00	10.00	CRSH11	R
11429	1.142	1.772	.315	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
□**11507**	30.00	40.00	4.00	HMS4	R
□**11510**	30.00	40.00	4.00	HMSA7	R
11512	1.156	1.686	.313	CRWA6	V
	W/STAINLESS STEEL SPRING				
11513	1.156	1.686	.312	CRWA6	R
▲**11514**	1.156	1.752	.250	†CRWA1	R
▲**11518**	1.156	1.686	.250	†CRWA1	R
▲**11524**	1.156	1.874	.250	†CRW1	R
11536	1.156	1.875	.375	CRWA1	R
	W/SS CASE & SPRING				
11544	1.156	2.000	.250	†CRW1	R
▲**11545**	1.156	2.000	.250	†CRWA1	R
11550	1.156	2.000	.250	†CRW1	V
▲**11553**	1.175	2.031	.500	†CRW1	R
▲**11557**	1.156	2.062	.313	†CRW1	R
▲11566	1.156	2.125	.438	†CRSH1	R
▲**11585**	1.188	1.875	.375	†CRW1	R
□**11586**	30.00	44.00	7.00	HMSA7	R
11589	1.181	1.772	.276	HMSA7	P
□**11591**	30.00	45.00	5.00	HMSA7	R
□**11592**	30.00	45.00	8.00	HMSA7	R
□11594	30.00	37.00	4.00	HM4	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**11595**	30.00	37.00	4.00	HMS4	R
□**11596**	30.00	37.00	4.00	HMSA7	R
□11597	30.00	40.00	4.00	HM4	R
□**11599**	30.00	42.00	7.00	HMSA7	R
▲□11600	30.00	40.00	7.00	HMS4	R
□**11601**	30.00	40.00	7.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□**11602**	30.00	40.00	7.00	HMSA7	R
□**11603**	30.00	40.00	7.00	HMSA7	V
□**11605**	30.00	40.00	7.00	†CRW1	R
□**11606**	30.00	40.00	7.00	†CRW1	V
□**11607**	30.00	40.00	10.00	HMS4	R
▲□11608	30.00	42.00	7.00	HMS4	R
□11609	30.00	45.00	8.00	CRS1	V
▲□11610	30.00	42.00	7.00	†CRW1	R
□**11611**	30.00	42.00	7.00	†CRW1	V
11612	1.181	1.732	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲□11614	30.00	44.00	7.00	HMSA1	R
□**11615**	30.00	45.00	8.00	†CRW1	R
□**11616**	30.00	44.00	10.00	HMS4	R
□**11617**	30.00	45.00	8.00	†CRW1	P
11618	1.181	1.772	1.181	HMSA90	P
	W/CCW HELIX FROM AIR SIDE				
11619	1.181	1.772	.313	HMSA93	P
	W/CCW HELIX FROM AIR SIDE				
▲□11622	30.00	45.00	8.00	HMS4	R
▲□11623	30.00	47.00	7.00	HMS4	R
□**11624**	30.00	47.00	7.00	HMSA7	R
□**11625**	30.00	47.00	7.00	†CRW1	R
□**11626**	30.00	47.00	8.00	†CRW1	V
□**11627**	30.00	47.00	7.00	HMS4	V
□**11628**	30.00	47.00	10.00	HMS4	R
□**11629**	30.00	47.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**11630**	30.00	48.00	8.00	†CRW1	R
▲□11631	30.00	50.00	7.00	HMS4	R
□**11632**	30.00	47.00	8.00	HMSA7	R
□**11633**	30.00	48.00	8.00	HMS4	R
□**11634**	30.00	50.00	8.00	HMS4	R
□**11635**	30.00	50.00	8.00	†CRW1	R
□**11636**	30.00	50.00	8.00	†CRW1	V
□**11637**	30.00	50.00	10.00	HMS4	R
▲□11638	30.00	52.00	7.00	HMS4	R
□**11639**	30.00	52.00	8.00	HMSA7	R
□**11640**	30.00	52.00	8.00	†CRW1	R
□**11641**	30.00	52.00	10.00	HMS4	V
□**11643**	30.00	52.00	10.00	HMS4	R
□**11644**	30.00	52.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**11646**	30.00	55.00	10.00	HMSA7	R
□**11647**	30.00	55.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
11650	1.178	2.073	.335	†CRW1	S
□**11652**	30.00	55.00	7.00	†CRW1	R
▲□11654	30.00	56.00	8.00	†CRW1	R
□**11655**	30.00	58.00	8.00	†CRWA1	R
▲□11656	30.00	55.00	7.00	HMS4	R
□**11658**	30.00	55.00	10.00	HMS4	R
□**11659**	30.00	47.00	6.00	HMS4	R
▲□11660	30.00	60.00	8.00	†CRW1	R
□**11662**	30.00	50.00	10.00	HMSA7	R
□**11663**	30.00	50.00	11.00	HMSA7	R
▲□11664	30.00	62.00	7.00	HMS4	R
□**11665**	30.00	62.00	7.00	†CRW1	R
□**11666**	30.00	62.00	7.00	†CRW1	V
□**11667**	30.00	62.00	10.00	HMS4	R
□**11668**	30.00	62.00	7.00	HMSA7	R
□**11669**	30.00	42.00	7.00	HMS4	V
▲□11671	30.00	46.00	7.00	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
11672	1.181	1.693	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
11673	1.181	2.126	.354	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
★**11674**	1.181	2.126	.354	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
□**11676**	30.00	62.00	8.00	HMSA7	R
□11677	30.00	48.00	10.00	HMS46	R
□**11678**	30.00	52.00	7.00	HMSA7	R
□**11682**	30.00	47.00	8.00	HMS4	R
□**11684**	30.00	72.00	12.00	†CRWA1	V
▲□11685	30.00	72.00	8.00	†CRW1	R
□**11686**	30.00	72.00	10.00	HMS4	R
□**11688**	30.00	48.00	8.00	HMSA7	R
□**11689**	30.00	72.00	10.00	HMSA7	R
11690	1.181	2.283	.315	†HMSHA4	P
□**11692**	30.00	45.00	10.00	HMS4	R
□**11694**	30.00	52.00	10.00	HMSA7	R
□**11695**	30.00	45.00	10.00	HMSA7	R
□**11697**	30.00	55.00	7.00	HMSA7	R
11700	1.175	1.771	.275	†HMS1	R
	W/CW HELIX FROM AIR SIDE				
□**11701**	30.00	62.00	10.00	HMSA7	R
▲11702	1.181	2.563	1.331	†HMSW108	R
	P.F. WIDTH .386 SPECIAL CONST.				
11703	1.181	2.440	.315	J2	#
	SEE TYPE J SECTION (HMSA LIP)				
□**11704**	30.00	62.00	8.00	HMS4	R
▲**11710**	1.188	1.561	.313	CRW1	V
	W/SS CASE & SPRING				
11711	1.188	1.687	.250	CRWH3	R
	W/SS CASE & SPRING				
11728	1.188	1.686	.250	†CRW1	P
▲**11730**	1.188	1.687	.250	†CRW1	R
11733	1.188	1.716	.270	HMS2	R
▲**11734**	1.188	1.752	.250	†CRW1	R
11736	1.188	1.752	.250	†CRW1	V
▲**11740**	1.188	1.828	.375	†CRW1	R
11763	1.188	1.875	.250	†CRW1	P
11764	1.188	1.875	.250	CRW7	R
11771	1.188	1.996	.250	HD1	R
	QUILL WIPER				
▲**11776**	1.188	1.983	.250	†CRW1	R
11777	1.188	1.983	.250	†CRWA1	R
11778	1.177	2.448	.500	CRSA4	V
	W/CW HELIX FROM AIR SIDE				
▲**11800**	1.188	2.000	.250	†CRW1	R
11801	1.188	2.000	.250	†CRWA1	R
11804	1.181	1.772	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
11806	1.188	2.000	.250	†CRW1	V
□**11807**	30.00	47.00	10.00	HMSA7	R
□11817	30.00	42.00	6.00	HMSA7P2	R
□**11823**	30.00	42.00	8.00	HMSA7	R
▲11836	1.188	2.000	.250	HM1	R
□**11842**	30.00	52.00	8.00	HMS4	R
▲11846	1.190	1.996	.250	†HM1	R
□11849	30.00	52.00	12.00	CRS12	R
□11851	30.00	52.00	9.00	CRSH1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□11867	30.00	56.00	10.00	HMS47	R
□**11868**	30.00	60.00	10.00	HMS4	R
▲**11878**	1.188	2.062	.250	†CRW1	R
11879	1.188	2.062	.250	†CRW1	P
□**11889**	30.00	52.00	12.00	HMS4	R
□**11891**	30.00	50.00	8.00	HMSA7	R
□**11892**	30.00	50.00	7.00	HMSA7	R
□**11893**	30.00	55.00	12.00	HMS4	R
11899	1.192	2.122	.350	HMSH87	R
	W/AXIAL SLINGER				
□**11902**	30.00	60.00	10.00	HMSA7	R
★11904	1.063	2.125	.625	KIT	P
	SEE KIT SECTION				
▲**11907**	1.188	2.125	.313	†CRW1	R
11908	1.190	2.125	.313	†CRWHA1	R
11911	1.188	2.165	.250	†CRW1	R
▲**11914**	1.188	2.250	.256	†CRW1	R
▲**11923**	1.188	2.437	.250	†CRW1	R
▲**11930**	1.188	2.441	.250	†CRW1	R
□★12011	31.00	44.00	6.50	HMS42	R
12124	1.219	1.979	.406	†HM14	R
12131	1.219	2.000	.438	†CRSH1	R
▲12165	1.219	1.979	.475	†HMA85	D
	P.F. WIDTH .375				
12187	1.220	2.402	.354	HMSA92S	R
	W/AXIAL DIRT LIP				
□12201	31.00	47.00	7.00	HMS44	R
□**12208**	31.00	44.00	6.50	HMS4	R
12220	1.220	1.969	.315	HMSA7	V
□**12250**	31.00	42.00	8.00	HMS4	V
12301	1.221	1.811	.315	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
12320	1.250	2.402	.382	HMSA12	R
▲**12325**	1.250	1.624	.250	†HM14	R
12327	1.250	1.751	.290	DL	D
▲**12329**	1.250	1.625	.188	†CRW1	R
▲**12330**	1.250	1.500	.125	†HM14	R
12333	1.250	1.687	.313	†CRWA5	R
▲**12334**	1.250	1.686	.188	†HM14	R
▲**12335**	1.250	1.687	.250	†CRW1	V
▲**12336**	1.250	1.687	.250	†CRW1	R
12337	1.250	1.687	.250	†CRWA1	V
12339	1.250	1.750	.250	†CRWA5	V
12340	1.250	1.752	.250	†CRW1	V
12343	1.250	1.752	.250	†CRWA1	V
12350	1.250	1.687	.313	†CRWA1	R
12355	1.250	1.752	.391	HMSA7	R
▲**12360**	1.250	1.750	.250	†CRWA5	R
▲12361	1.250	1.752	.188	†HM21	R
▲**12363**	1.250	1.752	.250	†CRW1	R
12364	1.250	1.752	.250	†CRWA1	R
12369	1.250	1.752	.250	HM21	R
▲**12371**	1.250	1.752	.313	HMS4	R
▲12375	1.250	1.828	.188	HM8	R
▲12379	1.250	1.874	.250	†HM21	R
12382	1.250	1.874	.250	†CRW1	P
12383	1.250	1.874	.250	†CRWA1	V
▲**12384**	1.250	1.874	.250	†CRW1	R
12386	1.250	1.874	.250	†CRWA1	R
▲**12391**	1.250	1.938	.250	†CRW1	R
12392	1.250	1.752	.968	KIT	RR
	SEE KIT SECTION				
▲**12396**	1.250	1.955	.250	†CRWA1	R
12398	1.250	1.968	.438	†HM14	R
▲12399	1.250	1.968	.469	†HM18	R
	CLEARANCE D .254				
12404	1.250	1.979	.406	†HM14	R
▲12407	1.250	1.979	.250	†HM21	R
▲12411	1.250	1.979	.406	HM18	R
	CLEARANCE D .200				
▲**12427**	1.250	1.983	.250	†CRW1	R
12428	1.250	1.983	.250	†CRWA1	R
12432	1.250	1.983	.250	†CRW1	V
▲12437	1.250	1.983	.250	HM21	R
▲**12438**	1.250	1.997	.438	†CRWA5	V
	W/STAINLESS STEEL SPRING				
12445	1.250	2.000	.250	†CRW1	V
12446	1.250	2.000	.250	†CRWA1	V
	W/STAINLESS STEEL SPRING				
▲**12456**	1.250	2.000	.250	†CRW1	R
12458	1.250	2.000	.250	†CRWA1	R
12459	1.250	2.000	.625	†D7	RR
▲12481	1.250	2.000	.250	†HM21	R
12483	1.250	2.000	.438	†CRW1	P
12494	1.248	2.044	.378	HMSA16	R
	W/3M BEAD ON O.D.				
12506	1.250	1.980	.406	†HMA22	R
▲12508	1.250	2.062	.250	†HM21	R
▲**12530**	1.250	2.062	.438	†CRWH1	R
12531	1.250	2.062	.250	†CRWA1	V
12533	1.250	2.062	.433	†CRWHA1	V
12536	1.250	2.100	.460	CRSH	R
12544	1.250	2.125	.250	†CRW1	V
▲**12545**	1.250	2.125	.250	†CRW1	R
12551	1.250	2.125	.250	†CRWA1	R
□**12560**	32.00	52.00	10.00	HMSA7	R
▲12565	1.250	2.125	.250	†HM21	R
▲**12577**	1.250	2.250	.250	†CRW1	R
12578	1.250	2.250	.313	†KIT	R
▲**12582**	1.250	2.250	.250	†HM14	R
12587	1.260	2.402	.551	UNITZED	P
12590	1.234	2.250	.250	†CRW1	R
12595	1.260	1.842	.276	HMS4	V
	W/CW HELIX FROM AIR SIDE				
□**12598**	32.00	47.00	10.00	HMS4	R
□**12601**	32.00	52.00	8.00	HMSA7	S
	W/CW HELIX FROM AIR SIDE				
□**12602**	32.00	42.00	7.00	HMS4	R
12609	1.250	2.328	.500	†CRWA5	R
	W/STAINLESS STEEL SPRING				
▲**12610**	1.250	2.327	.500	†CRW1	R
12611	1.250	2.328	.500	†HM18	R
	CLEARANCE D .286				
12612	1.250	2.374	.315	†CRW1	V
▲**12613**	1.250	2.374	.313	†CRW1	R
12614	1.250	2.374	.313	†CRWA1	R
▲**12621**	1.250	2.437	.250	†CRW1	R
▲**12631**	1.250	2.441	.250	†CRW1	R
▲**12637**	1.250	2.502	.313	†CRW1	R
12638	1.250	2.500	.310	†CRW1	V
□12639	32.00	50.00	7.00	HMS43	V
12640	1.250	2.502	.500	†CRWA5	R
	W/STAINLESS STEEL SPRING				
□12643	32.00	52.00	10.00	HMS46	R
□12648	32.00	52.00	5.00	HMS46	R
□12649	32.00	52.00	9.00	CRSH12	R
12655	1.250	2.561	.500	CRSH1	R
12660	1.250	2.713	.469	†CRSH1	R
□12662	32.00	56.00	12.00	CRSH11	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□12665	32.00	62.00	7.00	HMS46	R
□12667	32.00	72.00	12.00	CRSH11	R
▲**12668**	1.250	2.835	.375	HMSA7	R
□**12671**	32.00	42.00	8.00	HMSA7	R
□**12672**	32.00	40.00	7.00	HMS4	R
□**12674**	32.00	52.00	8.00	HMS4	R
□**12675**	32.00	52.00	8.00	HMSA7	R
▲12678	1.250	3.156	.500	CRSH1	R
12679	1.260	2.047	.394	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
12685	1.250	4.305	.484	J6	R
	SEE TYPE J SECTION (HMA LIP)				
□12691	32.00	42.00	4.00	HM4	R
12693	1.266	1.632	.500	CRWASPL	P
	BORE LISTED IS PRESSFIT I.D.				
□**12695**	32.00	43.00	7.00	HMSA7	R
□**12697**	32.00	42.00	7.00	HMSA7	R
12698	1.260	1.654	.394	HMSA6	V
▲□12700	32.00	42.00	7.00	†CRW1	R
□**12701**	32.00	42.00	7.00	†CRW1	V
□**12705**	32.00	44.00	9.00	HMS4	R
	W/STAINLESS STEEL SPRING				
12706	1.260	1.732	.236	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲□12709	32.00	45.00	7.00	HMS4	R
□**12710**	32.00	45.00	8.00	†CRW1	R
□**12711**	32.00	45.00	7.00	HMSA7	R
□**12713**	32.00	48.00	7.00	HMS4	R
□**12715**	32.00	50.00	8.00	HMSA7	R
12718	1.260	1.811	.236	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□12719	32.00	46.00	8.00	CRS1	R
□**12723**	32.00	48.00	5.00	HMS4	R
12724	1.260	1.850	.236	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
□**12726**	32.00	48.00	5.00	HMSA7	R
□**12729**	32.00	47.00	7.00	HMSA7	R
□**12730**	32.00	47.00	8.00	†CRW1	R
□**12731**	32.00	47.00	8.00	†CRW1	V
▲□12733	32.00	47.00	7.00	HMS4	R
▲□12734	32.00	48.00	8.00	HMSA7	R
□**12735**	32.00	48.00	8.00	†CRW1	R
□**12736**	32.00	48.00	8.00	†CRW1	V
□**12738**	32.00	50.00	10.00	HMS4	R
□**12739**	32.00	50.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**12740**	32.00	50.00	8.00	†CRW1	R
□**12741**	32.00	50.00	8.00	†CRW1	V
□**12742**	32.00	52.00	7.00	HMSA7	R
□**12743**	32.00	52.00	10.00	HMS4	V
▲□12744	32.00	52.00	7.00	HMS4	R
□**12745**	32.00	52.00	8.00	†CRW1	R
□**12746**	32.00	52.00	8.00	†CRW1	V
12747	1.260	2.087	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□**12748**	32.00	52.00	11.00	HMSA7	R
□**12749**	32.00	48.00	8.00	HMS4	R
12751	1.260	2.126	.394	HMSA12	P
	W/2.677 FLANGE				
▲□12752	32.00	50.00	8.00	HMS4	R
□**12753**	32.00	54.00	10.00	HMSA7	R
12754	1.260	1.890	.354	HMSA92	R
12756	1.260	1.969	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
□**12757**	32.00	55.00	10.00	HMS4	R
□**12759**	32.00	58.00	8.00	HMS4	R
□**12760**	32.00	56.00	8.00	†CRW1	R
▲□12763	32.00	56.00	10.00	HMS4	R
□**12764**	32.00	56.00	10.00	HMSA7	R
□**12766**	32.00	58.00	8.00	HMSA7	R
□★12770	32.00	60.00	8.00	†HMSA27	R
□**12773**	32.00	60.00	8.00	HMSA7	R
□**12777**	32.00	62.00	8.00	HMSA7	R
□**12780**	32.00	62.00	6.35	†CRW1	R
▲□12782	32.00	62.00	10.00	HMS4	R
□12785	32.00	65.00	12.00	HMSA1	P
□**12790**	32.00	72.00	9.53	HMSA7	R
□12810	33.00	44.00	8.00	HMSA1	R
12812	1.299	1.810	.276	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
12817	1.272	1.890	.270	HMSASPL	R
	W/CW HELIX FROM AIR SIDE				
▲**12830**	1.281	2.000	.375	HMSA7	R
□**12883**	33.00	50.00	6.00	HMSA7	R
12886	1.299	1.850	.313	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
12900	1.299	1.969	.472	HMSA7	R
▲□12901	33.00	50.00	10.00	HMS4	R
12905	1.301	2.000	.438	CRSA1	P
▲**12907**	1.301	2.046	.492	†CRWA1	R
12912	1.299	2.205	.315	HMSA35	P
▲12925	1.301	2.621	1.331	†HMSW108	R
	P.F. WIDTH .315 & 3.125 FLANGE				
12975	1.298	2.093	.286	HMS4	V
□**12989**	33.00	45.00	7.00	HMSA7	R
□12992	33.00	50.00	8.00	HMS46	R
□**12995**	33.00	45.00	7.00	HMS4	R
□12996	33.00	52.00	10.00	HMS46	R
□12998	33.00	52.00	6.00	HMS47	R
▲13005	1.299	2.323	.669	HMSA92	P
	P.F. WIDTH .315 & 3.125 FLANGE				
▲**13021**	1.313	1.828	.375	†CRW1	P
▲13027	1.313	1.874	.375	†CRSA1	R
13037	1.313	2.000	.313	CRSA1	R
▲**13050**	1.313	2.062	.313	†CRW1	R
13052	1.313	2.062	.313	†CRWA1	R
13054	1.313	2.062	.313	†CRW1	V
▲13060	1.313	2.063	.250	HM3	R
13084	1.313	2.106	.375	†CRSA1	R
▲**13092**	1.313	2.125	.313	†CRW1	R
▲**13112**	1.313	2.250	.313	†CRW1	R
13144	1.312	1.627	.331	CRS-SPL	R
	HUB SEAL				
13157	1.313	2.282	.250	†CRWA1	R
▲13165	1.313	2.281	.906	†HMS15	R
	P.F. WIDTH .350				
13168	1.313	2.281	1.150	HMS15	R
	P.F. WIDTH .350				
▲13246	1.313	2.620	1.281	HMS15	R
	P.F. WIDTH .350 W/SLINGER				
13275	1.313	2.996	.500	†CRSH1	R
▲**13350**	1.328	2.061	.313	†CRW1	R
□**13386**	34.00	45.00	8.00	HMSA7	R
□**13388**	34.00	46.00	8.00	HMSA7	R
□13390	34.00	45.00	7.00	CRS15	R
□13392	34.00	47.00	9.00	CRS11	R
□13396	34.00	50.00	10.00	HMS46	R
□13398	34.00	52.00	10.00	CRS1	R
□13403	34.00	58.00	13.00	CRSH11	R
□13405	34.00	72.00	12.00	CRSH11	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
13415	1.328	2.031	.313	CRW1	R
▲**13418**	1.328	2.227	.313	†CRW1	R
13419	1.328	2.312	.433	†CRS1	R
▲**13421**	1.344	2.106	.313	†CRW1	R
□**13423**	34.00	44.00	8.00	HMSA7	R
□**13424**	34.00	50.00	7.00	HMS4	R
□**13425**	34.00	48.00	8.00	†CRW1	R
□**13426**	34.00	48.00	8.00	†CRW1	V
13427	1.339	1.929	.315	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
13429	1.339	1.889	.315	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
□★13431	34.00	52.00	8.00	HMSA7	R
□**13433**	34.00	52.00	8.00	HMS4	R
13435	1.339	2.087	.315	HMSA7	R
▲**13437**	1.344	2.125	.313	†CRW1	R
□13438	34.00	54.00	11.00	CRS1	R
13439	1.339	2.126	.354	HMSA92	P
	W/AXIAL DIRT LIP				
□**13440**	34.00	54.00	9.00	HMSA7	R
13441	1.339	2.126	.354	HMSA92	V
▲□13445	34.00	55.00	8.00	†CRW1	R
□**13447**	34.00	55.00	9.00	HMSA7	R
□**13450**	34.00	56.00	8.00	†CRW1	R
13451	1.344	2.250	.500	†P1	L
□**13452**	34.00	56.00	8.00	†CRW1	V
□**13475**	34.00	62.00	8.00	†CRW1	R
▲13478	1.339	2.480	.361	HMSA92	P
	HELIX-CCW, P.F. WIDTH .354				
□**13483**	34.00	62.00	10.00	HMS4	R
13484	1.339	2.559	.460	HMSA24	P
▲**13492**	1.350	2.571	.540	CRW90	R
13495	1.358	2.756	1.602	CRS-SPL	P
13499	1.359	2.188	.375	†HMSA30	R
	P.F. WIDTH .250 & SS CASE				
▲13500	1.362	2.191	.250	CRS1	P
▲13508	1.375	4.555	.547	J8	R
	SEE TYPE J SECTION (HMSA LIP)				
13509	1.375	1.750	.197	†HM14	V
13510	1.375	1.828	.250	†CRWA1	V
13511	1.375	1.873	.313	†CRWA1	V
13512	1.375	1.874	.250	†CRW1	P
▲**13514**	1.375	1.750	.250	†CRW1	R
	W/STAINLESS STEEL SPRING				
▲**13527**	1.375	1.955	.433	†CRWA1	P
▲**13529**	1.375	1.750	.197	HM14	R
▲13533	1.375	1.834	.188	†HM8	R
▲**13534**	1.375	1.874	.256	†CRW1	R
13535	1.375	1.874	.313	†CRWA1	R
▲**13536**	1.375	1.835	.250	†CRW1	R
▲**13537**	1.375	1.828	.313	†CRW1	R
13538	1.375	1.874	.256	†CRW1	V
▲**13543**	1.375	1.874	.188	HM14	R
13545	1.375	1.874	.250	†HM14	P
13548	1.375	1.874	.250	†HM14	R
▲**13552**	1.375	1.938	.250	†CRWA1	R
▲**13556**	1.375	1.938	.250	†HM14	R
▲**13557**	1.375	1.983	.313	†CRW1	P
13562	1.375	2.000	.313	†CRWA1	P
▲**13568**	1.375	2.000	.313	†CRW1	R
13569	1.375	2.000	.313	†CRWA1	R
13571	1.375	2.000	.313	†CRWH1	R
▲13573	1.375	2.000	.250	†HM21	R
13579	1.375	2.000	.313	†CRW1	V
13581	1.375	2.000	.313	†CRWA1	V
13582	1.375	2.062	.313	†CRW1	V
▲**13585**	1.375	2.062	.313	CRW1	R
13588	1.375	2.062	.313	†CRWA1	P
13596	1.375	2.063	.375	HMS4	R
▲**13598**	1.365	2.081	.313	†CRW1	R
13602	1.375	2.106	.313	CRWA1	R
13612	1.375	2.106	.250	†HM21	R
▲**13614**	1.375	2.106	.313	†CRW1	P
13627	1.367	3.319	.496	HMSA97	P
	W/BI-DIR HELIX FROM AIR SIDE				
▲**13649**	1.375	2.125	.313	†CRW1	R
13650	1.375	2.125	.313	†CRWA1	R
13661	1.375	2.125	.313	†CRWA1	V
▲13662	1.375	2.125	.250	†HM21	R
13663	1.375	2.125	.313	†CRW1	V
★13668	1.375	2.162	.578	†HMSHA4	S
	P.F. WIDTH .350 W/SLINGER				
▲**13671**	1.375	2.250	.313	†CRW1	R
13676	1.375	2.250	.313	†CRWA1	R
▲13685	1.375	2.250	.386	CRSA3	R
	P.F. WIDTH .433" W/BOOT 1.188"				
13688	1.375	2.250	.313	†CRW1	V
▲**13689**	1.375	2.250	.250	†HM14	R
13691	1.375	2.250	.313	†CRWA1	V
13698	1.375	2.250	.250	†CRWA1	R
▲**13700**	1.365	2.261	.313	†CRW1	R
13703	1.378	2.126	.315	HMSA92	V
	W/BI-DIR HELIX FROM AIR SIDE				
13704	1.387	2.295	.559	HMSA16	P
	W/BI-DIR HELIX & PARTIAL OD RUBBER COVERED				
13709	1.378	1.890	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
▲**13710**	1.375	2.282	.250	†HM14	R
▲13711	1.375	2.328	.406	HM18	R
	CLEARANCE D .188				
□**13715**	35.00	47.00	5.00	HMS4	R
□**13718**	35.00	47.00	5.00	HMSA7	R
13720	1.378	2.159	.354	HMSA92	R
□**13723**	35.00	47.00	6.00	HMS4	R
□**13724**	35.00	47.00	6.00	HMSA7	R
13725	1.378	2.480	.394	HMSA35	P
	W/BI-DIR HELIX FROM AIR SIDE				
13726	1.378	2.283	.315	HMSA92	R
	W/CW HELIX FROM AIR SIDE				
13729	1.378	3.268	.320	†HMSHA4	R
★13731	1.377	2.874	.693	HMSA97	R
	W/BI-DIR HELIX FROM AIR SIDE				
13734	1.375	2.374	.313	†CRW1	V
13735	1.378	2.244	.601	HMSA16	R
▲**13738**	1.375	2.374	.313	†CRW1	R
13739	1.375	2.374	.313	†CRWA1	R
13741	1.378	2.205	.315	HMSA92	R
13742	1.378	2.638	.472	HMSA57	R
	W/CCW HELIX FROM AIR SIDE				
13744	1.378	2.126	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
13745	1.378	1.811	.276	HMSA7	P
13748	1.378	2.677	.354	HMSA35	P
13750	1.375	2.162	.578	†HMSHA4	E
13757	1.380	2.282	.354	HMSA97	V
▲13758	1.375	2.374	.250	†HM21	R
13759	1.375	2.244	.374	HMSA123	P
	W/BOOT				
13760	1.379	2.047	.236	HMS4	P
□13762	35.00	47.00	5.00	HM4	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□13776	35.00	42.00	4.00	HM4	R
□13779	35.00	45.00	4.00	HM4	R
13780	1.378	2.165	.209	X-SPL	R
	O.D. LISTED IS PRESSFIT I.D.				
13792	1.378	2.283	.394	ALH1	R
13794	1.378	2.008	.472	HMSA123	P
	W/CCW HELIX FROM AIR SIDE				
▲13796	1.375	2.437	.250	†HM21	R
▲13797	1.375	2.437	.250	†CRW1	R
□13805	35.00	47.00	10.00	CRS13	R
13807	1.375	2.438	.250	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲13810	1.375	2.441	.313	†CRW1	R
13812	1.375	2.441	.313	†CRWA1	R
□13829	35.00	52.00	6.00	HMSA7P2	R
▲13839	1.375	2.500	.328	HMSA36	R
13845	1.378	1.929	.295	HMSA92	R
	W/EXCLUDER LIP				
13849	1.378	2.992	.315	HMSA92	P
	W/CW HELIX FROM AIR SIDE				
13850	1.378	1.969	.472	HMSASPL	P
	W/CCW HELIX FROM AIR SIDE				
13853	1.378	2.874	.655	†HMSHA4	R
□13854	35.00	52.00	9.00	CRSHA13	R
13857	1.378	1.929	.236	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
13858	1.378	2.480	.354	HMSA92	R
□13860	35.00	50.00	10.00	HMSA7	R
□13861	35.00	55.00	8.00	HMSA7	R
▲13862	1.375	2.502	.250	†HM21	R
□13863	35.00	80.00	12.00	HMSA7	R
▲13865	1.375	2.502	.313	†CRW1	R
13867	1.375	2.502	.313	†CRW1	V
□13868	35.00	65.00	10.00	HMS4	R
13869	1.375	2.250	.313	†CRW1	P
▲13875	1.375	2.562	.375	†CRW1	R
13876	1.375	2.562	.375	†CRWA1	R
13878	1.375	2.562	.375	†CRWA1	V
▲13882	1.375	2.623	.313	†CRWA1	V
□13884	35.00	48.00	8.00	HMSA7	R
□13885	35.00	50.00	8.00	HMSA7	R
□13887	35.00	50.00	8.00	HMS4	R
□13888	35.00	52.00	8.00	HMS4	R
□13890	35.00	55.00	10.00	HMS4	V
□13891	35.00	55.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲13892	1.375	2.686	.500	†CRW1	R
□13893	35.00	55.00	10.00	HMSA7	R
▲□13894	35.00	58.00	10.00	HMS4	R
□13895	35.00	65.00	12.00	CRSA1	R
□13896	35.00	72.00	10.00	HMSA7	R
13897	1.378	2.126	.315	HMSA56	R
	W/2.667 FLANGE O.D.				
▲13900	1.375	2.716	.313	†CRW1	R
□13903	35.00	52.00	10.00	HMSA7	R
13906	1.375	2.750	.500	†CRSH1	R
□13907	35.00	50.00	7.00	HMSA7	R
□13908	35.00	46.00	8.00	HMSA7	R
□13909	35.00	48.00	9.00	HMS4	R
13911	1.378	1.614	.359	HMS41	R
	P.F. WIDTH .217				
13912	1.375	2.812	.375	†CRWHA1	R
13916	1.375	2.835	.594	†TL8	R
	SPECIAL CONST.				
13918	1.375	2.835	.313	†CRWA1	R
▲13920	1.375	2.835	.313	†CRW1	R
□13923	35.00	72.00	8.00	†CRW1	V
13925	1.375	2.835	.313	†CRWA1	P
13926	1.378	2.835	.313	†CRWA1	V
	W/STAINLESS STEEL SPRING				
▲□13927	35.00	45.00	7.00	HMS4	R
□13928	35.00	68.00	10.00	HMS4	R
13929	1.375	2.875	.313	†CRWA1	P
□13930	35.00	52.00	7.00	HMSA7	R
▲13931	1.378	1.890	.591	HMSA12	P
	W/2.165 FLANGE				
▲□13932	35.00	47.00	7.00	HMS4	R
▲□13933	35.00	50.00	7.00	HMS4	R
13934	1.375	3.350	.469	†CRSH1	R
13936	1.375	3.125	.500	CRSH1	R
13937	1.375	3.000	.500	CRSHA1	R
□13938	35.00	47.00	7.00	†CRW1	R
□13939	35.00	47.00	7.00	†CRW1	V
	W/STAINLESS STEEL SPRING				
□13940	35.00	55.00	11.00	HMS4	R
▲□13941	35.00	48.00	8.00	†CRW1	R
□13942	35.00	48.00	8.00	†CRW1	V
▲13943	1.378	1.969	.275	HMS4	S
	W/CW HELIX FROM AIR SIDE				
□13944	35.00	50.00	8.00	†CRW1	R
□13945	35.00	47.00	7.00	HMSA7	R
□13946	35.00	50.00	8.00	†CRW1	V
□13947	35.00	52.00	8.00	†CRWA1	P
▲□13948	35.00	52.00	7.00	HMS4	R
□13949	35.00	52.00	8.00	†CRW1	R
□13951	35.00	52.00	8.00	†CRWA1	R
□13952	35.00	54.00	7.00	†CRW1	R
▲13953	1.378	2.097	.315	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□13954	35.00	55.00	8.00	†CRW1	R
13955	1.375	4.577	.259	J5	R
	SEE TYPE J SECTION (HMS LIP)				
13956	1.375	4.577	.259	J5	R
	SEE TYPE J SECTION (HMS LIP)				
□13957	35.00	54.00	8.00	†CRW1	V
13958	1.378	1.983	1.549	HMSA122	P
	W/HELIX-CCW & P.F. WIDTH .368				
▲13959	1.378	2.240	.875	†CRWA21	S
	P.F. WIDTH .420 W/2.540 FLANGE				
□13960	35.00	55.00	10.00	HMS4	R
▲□13961	35.00	56.00	8.00	†CRW1	R
□13962	35.00	56.00	8.00	†CRW1	V
□13963	35.00	55.00	8.00	CRW1	V
▲□13966	35.00	62.00	7.00	HMS4	R
▲□13967	35.00	60.00	10.00	HMS4	R
□13969	35.00	62.00	8.00	†CRW1	V
□13970	35.00	62.00	8.00	†CRW1	R
13971	1.378	2.638	.472	HMSA96	P
	W/CW HELIX FROM AIR SIDE				
▲□13972	35.00	64.00	8.00	†CRW1	R
▲□13973	35.00	65.00	8.00	†CRW1	R
▲□13974	35.00	68.00	8.00	†CRW1	R
□13975	35.00	69.00	8.00	†CRW1	R
□13976	35.00	68.00	8.00	†CRW1	V
13978	1.378	2.638	.709	HMSA35	P
	W/HELIX-CW P.F. WIDTH .472				
□13979	35.00	72.00	8.00	†CRW1	R
□13980	35.00	72.00	8.00	†CRWA1	R
▲13981	1.378	2.992	.492	HMSA92	P
	W/CCW HELIX FROM AIR SIDE				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**13984**	35.00	78.00	8.00	†CRW1	R
▲**13985**	1.365	1.956	.438	†CRW1	R
▲□13986	35.00	80.00	8.00	†CRW1	R
□**13987**	35.00	50.00	10.00	HMS4	R
13988	1.399	2.252	.313	CRWA6	P
□**13989**	35.00	52.00	10.00	HMS4	R
▲13990	1.399	2.292	.500	†CRSA1	R
	W/BI-DIR HELIX FROM AIR SIDE				
13992	1.399	2.292	.469	†CRSA1	R
	W/BI-DIR HELIX FROM AIR SIDE				
▲□13993	35.00	55.00	8.00	HMS4	R
□**13994**	35.00	56.00	10.00	HMS4	R
13995	1.399	2.292	.500	D8	R
	W/BI-DIR & 2.750 FLG & SS SPG				
□**13996**	35.00	62.00	10.00	HMS4	R
□**13997**	35.00	62.00	8.00	HMSA7	R
□**13998**	35.00	62.00	10.00	HMSA7	R
▲□13999	35.00	72.00	10.00	HMS4	R
□**14000**	35.00	72.00	12.00	HMS4	R
□**14001**	35.00	60.00	14.00	HMSA7	R
14002	1.399	2.283	.500	†HMSA16	R
	P.F. WIDTH .310				
□**14003**	35.00	47.00	7.00	HMS4	V
□14004	36.00	46.00	9.00	CRS1	R
▲□14005	36.00	47.00	7.00	HMS4	R
14006	1.378	2.204	.354	HMSA92	P
14007	1.378	2.205	.630	HMSA92S	V
P.F. WIDTH .394 W/2.507 FLANGE O.D., W/ROCK GUARD					
14008	1.417	1.929	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□**14009**	36.00	50.00	7.00	†CRW1	R
□**14010**	36.00	50.00	8.00	†CRW1	R
▲□14011	36.00	50.00	7.00	HMS4	R
□**14012**	36.00	52.00	7.00	HMS4	V
▲□14013	36.00	52.00	7.00	HMS4	R
14014	1.417	1.892	.906	HMSASPL	P
	P.F. WIDTH .472				
□**14016**	36.00	52.00	8.00	†CRW1	R
□**14017**	36.00	52.00	8.00	†CRW1	V
14018	1.378	2.441	.394	HMSA92	P
14020	1.377	2.126	.276	HMSA92	P
	W/BI-DIR HELIX FROM AIR SIDE				
14021	1.378	2.165	.354	HMSA92	P
	W/BI-DIR HELIX FROM AIR SIDE				
□★14023	36.00	54.00	7.50	HMS4	R
□**14024**	36.00	54.00	8.00	†CRW1	R
□**14027**	36.00	54.00	8.00	†CRW1	V
14028	1.417	2.126	.354	HMSASPL	R
	W/EXCLUDER BOOT,W/BI-DIR HELIX				
□★14030	36.00	55.00	8.00	†HMSA27	R
14032	1.417	1.950	.395	HMSA33	P
	W/CW HELIX FROM AIR SIDE				
14033	1.417	1.811	.394	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
□14034	35.00	55.00	7.00	HMSA73	V
14035	1.414	2.250	.250	†CRSA1	R
□**14037**	36.00	56.00	10.00	HMS4	R
□**14039**	36.00	58.00	10.00	HMSA7	R
□**14040**	36.00	58.00	8.00	†CRW1	R
▲□14043	36.00	58.00	10.00	HMS4	R
□**14044**	36.00	58.00	12.00	HMS4	R
□**14045**	36.00	60.00	8.00	†CRW1	R
□**14046**	36.00	60.00	8.00	†CRW1	V
□**14047**	35.00	52.00	9.00	HMS4	R
□14048	35.00	56.00	12.00	HMS46	R
□**14050**	36.00	62.00	8.00	†CRW1	R
▲□14052	36.00	62.00	7.00	HMS4	R
14054	1.417	2.520	.748	HMSA56	R
	P.F. WIDTH .433 W/SLINGER				
□**14055**	36.00	65.00	8.00	†CRW1	R
14057	1.417	2.559	.472	HMSA96	P
	W/CW HELIX FROM AIR SIDE				
14058	1.417	1.732	.197	HMSA7	R
□**14065**	36.00	68.00	8.00	†CRW1	R
▲□14068	36.00	54.00	8.00	HMS4	R
□14077	35.00	62.00	12.00	HMSA77	R
14087	1.417	3.543	.394	HMSA7SP	R
	W/CW HELIX FROM AIR SIDE				
14092	1.417	2.616	.313	†CRW1	R
□14093	35.00	70.00	12.00	CRSH13	R
□14096	35.00	72.00	7.00	HMS48	R
□**14105**	35.00	52.00	12.00	HMS4	R
□**14107**	36.00	68.00	10.00	HMS4	R
□**14108**	35.00	52.00	8.00	HMSA7	R
□**14111**	35.00	55.00	12.00	HMSA7	R
□**14113**	35.00	62.00	7.00	HMSA7	R
□**14114**	35.00	60.00	10.00	HMSA7	R
□14115	36.00	50.00	7.00	HMSHA1	R
14116	1.142	2.047	.433	HMSA7	R
	W/BI-DIR HELIX FROM AIR SIDE				
□**14118**	35.00	45.00	7.00	HMSA7	R
14119	1.400	2.282	.547	HMSA25	V
	W/BI-DIR HELIX FROM AIR SIDE				
□**14121**	35.00	58.00	10.00	HMSA7	R
□**14123**	35.00	72.00	12.00	HMSA7	R
14125	1.378	2.126	.315	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
14129	1.378	2.204	.354	HMSA92S	P
□**14133**	35.00	80.00	10.00	HMS4	R
□**14135**	35.00	80.00	10.00	HMSA7	R
□**14157**	36.00	47.00	7.00	HMSA7	R
□**14163**	36.00	52.00	7.00	HMSA7	R
□**14166**	36.00	50.00	7.00	HMSA7	R
□14173	36.00	50.00	10.00	HMS46	R
□14176	36.00	52.00	9.00	CRSH11	R
□14177	36.00	54.00	7.00	HMS47	R
□14183	36.00	62.00	10.00	CRSH11	R
□14184	36.00	72.00	12.00	CRSH11	R
14190	3.228	3.937	.394	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲**14208**	1.438	1.875	.250	†CRWAR5	V
	W/STAINLESS STEEL SPRING				
14209	1.438	2.000	.125	HM4	R
▲**14211**	1.438	2.003	.313	CRWAR5	V
	W/STAINLESS STEEL SPRING				
14212	1.438	2.062	.313	CRW1	V
▲**14214**	1.438	2.062	.313	†CRWA1	R
14215	1.437	2.012	.312	HMSA7SP	V
▲**14223**	1.438	2.125	.313	†CRW1	R
14225	1.438	2.125	.313	†CRWA1	V
14234	1.502	2.132	1.080	CRSA3	R
14247	1.438	2.250	.313	†CRWA1	R
14257	1.438	2.250	.250	†HM14	R
14259	1.438	2.250	.313	†CRWA1	V
14260	1.438	2.250	.313	†CRW1	V
▲**14262**	1.438	2.250	.313	†CRW1	R
▲**14282**	1.438	2.374	.313	†CRW1	R
14283	1.438	2.374	.313	†CRWA1	R
▲14359	1.438	2.437	.250	†HM21	R
▲**14363**	1.438	2.437	.313	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲14381	1.400	2.484	.550	†HMSA16	R
	P.F. WIDTH .500 & 2.672 FLANGE				
▲**14383**	1.438	2.502	.313	†CRW1	R
14384	1.438	2.003	.313	CRWAR5	R
14387	1.399	2.482	.536	†HMSA16	V
	P.F. WIDTH .500 & 2.672 FLANGE				
14391	1.438	2.003	.313	CRWAR5	H
	W/STAINLESS STEEL SPRING				
▲14393	1.399	2.484	.515	HMSA16	V
	P.F. WIDTH .280 & 2.672 FLANGE				
▲**14404**	1.438	2.623	.313	†CRW1	R
▲**14423**	1.438	2.686	.313	†CRW1	R
▲**14458**	1.438	2.750	.313	†CRW1	R
□**14469**	37.00	47.00	4.00	HMS4	R
□**14471**	37.00	47.00	4.00	HMSA7	R
□14476	37.00	47.00	4.00	HM4	R
14477	1.437	1.987	.276	HMSA7	S
	W/CW HELIX FROM AIR SIDE				
14484	1.457	3.071	.472	HMS4SPL	R
	W/BI-DIR HELIX FROM AIR SIDE				
□**14489**	37.00	52.00	8.00	HMS4	R
□14494	37.00	55.00	10.00	CRSH1	R
14496	1.457	1.650	.315	ENDCAP	P
14500	1.457	2.441	.483	HMSA92	R
14502	1.457	2.441	.276	HMA12	P
14510	1.457	2.441	.492	ALH1	P
14514	1.457	2.165	.315	HMSA96	P
14520	1.457	2.402	.315	HMSA35	P
14560	1.377	1.949	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
14566	1.457	2.205	.354	HMS4	R
14569	1.457	2.378	.433	CRSA3	P
	W/BOOT				
□14571	37.00	52.00	10.00	CRSH13	R
□14572	37.00	58.00	13.00	CRSH11	R
□14573	37.00	62.00	9.00	CRSH13	R
□14574	37.00	62.00	10.00	HMS46	R
□14575	37.00	62.00	12.00	CRSH11	R
14600	1.457	2.047	.328	HMA11	R
	P.F. WD .228 W/AXIAL DIRT LIP				
14631	1.473	1.971	.563	HMA10	R
14634	1.475	2.509	.350	CRS-SPL	R
	HUB SEAL				
14635	1.465	2.372	1.508	CRSA3	P
	W/AUX DIRT BOOT & P.F. .433				
▲14641	1.469	2.374	.375	†CRSA1	R
14652	1.465	2.372	.433	HMS-SPL	R
□**14671**	37.00	50.00	6.00	HMSA7	P
	CW HELIX FROM AIR SIDE				
□14691	38.00	54.00	8.00	HMSA92	R
14694	1.470	2.913	1.688	†HMS-SPL	#
□14695	38.00	47.00	7.00	HMSA1	R
□14697	38.00	48.00	4.00	HM4	R
14700	1.479	2.563	.470	†HM79	R
□**14701**	38.00	50.00	7.00	†CRW1	R
□14702	38.00	51.00	7.50	HMSA1	R
□**14703**	38.00	50.00	7.00	†CRW1	V
□**14704**	38.00	52.00	8.00	†CRW1	R
□**14705**	38.00	52.00	8.00	†CRWA1	R
□**14706**	38.00	52.00	8.00	†CRW1	V
▲□14707	38.00	50.00	7.00	HMS4	R
▲□14708	38.00	53.00	8.00	†CRW1	R
▲□14709	38.00	52.00	7.00	HMS4	R
▲□14710	38.00	54.00	7.00	CRW1	P
□**14711**	38.00	52.00	8.00	HMS4	R
□**14712**	38.00	54.00	10.00	HMS4	R
14713	1.496	1.969	.315	HMSA7	S
	W/CW HELIX FROM AIR SIDE				
□**14714**	38.00	50.00	8.00	HMSA7	R
□**14716**	38.00	50.00	7.00	HMSA7	R
□**14717**	38.00	52.00	7.00	HMSA7	R
□**14718**	38.00	55.00	7.00	HMSA7	R
▲□14719	38.00	55.00	7.00	HMS4	R
□**14720**	38.00	55.00	8.00	†CRW1	R
□**14721**	38.00	55.00	8.00	†CRW1	V
14722	1.496	2.166	.512	HMSA122	P
	W/CCW HELIX FROM AIR SIDE				
□**14724**	38.00	56.00	8.00	†CRW1	V
□**14725**	38.00	56.00	8.00	†CRW1	R
□**14726**	38.00	62.00	10.00	HMS4	R
□**14727**	38.00	56.00	10.00	HMS4	R
▲□14730	38.00	58.00	8.00	†CRW1	R
14731	1.496	2.283	.315	KIT	R
	SEE KIT SECTION				
□**14732**	38.00	58.00	8.00	†CRW1	V
▲□14733	38.00	62.00	7.00	HMS4	R
□**14737**	38.00	62.00	10.00	HMSA7	R
14738	1.496	2.323	.354	HMSA6	P
	W/CW HELIX FROM AIR SIDE				
14739	1.496	2.362	.315	HMSA92	V
	HELIX-CW,/OVERALL WIDTH 14.58				
▲□14740	38.00	60.00	8.00	†CRW1	R
□**14741**	38.00	60.00	8.00	†CRW1	V
□**14742**	38.00	62.00	8.00	†CRW1	R
□**14743**	38.00	62.00	8.00	†CRWA1	R
□**14744**	38.00	62.00	8.00	†CRW1	V
□**14746**	38.00	60.00	10.00	HMS4	R
14747	1.496	2.283	.394	HMSA92	R
□14748	38.00	65.00	12.00	HMSA35	P
14749	1.496	2.480	.394	HMSA29	P
	W/AXIAL DIRT LIP				
▲□14750	38.00	65.00	8.00	†CRW1	R
□**14751**	38.00	62.00	10.00	HMS4	V
□**14752**	38.00	62.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□14753	38.00	58.00	11.00	HMSA3	R
▲□14755	38.00	68.00	8.00	†CRW1	R
14756	1.496	2.362	.433	HMSA-SP	S
	W/BI-DIR HELIX FROM AIR SIDE				
14758	1.496	2.559	.394	HMSA29	P
	W/AXIAL DIRT LIP				
14759	1.496	2.087	.304	HMSHA7	V
	HELIX-CCW & INNER CASE				
□**14760**	38.00	70.00	8.00	†CRW1	R
▲□14761	38.00	72.00	10.00	HMS4	R
14762	1.575	2.835	.433	HMSA92	P
□14763	38.00	58.00	8.00	HMSA3	R
□**14764**	38.00	72.00	8.00	†CRW1	R
□**14765**	38.00	73.00	8.00	†CRW1	R
14766	1.496	2.913	.433	HMSA29	P
	W/AXIAL DIRT LIP				
▲□14767	38.00	74.00	11.00	†CRWA1	R
□**14768**	38.00	74.00	11.00	†CRW1	V
□**14771**	38.00	62.00	7.00	HMSA7	R
□14772	38.00	55.00	8.50	HMSA1	R
14773	1.496	1.937	.354	HMSA1	P
□**14774**	38.00	80.00	8.00	†CRW1	R
★14775	1.496	2.047	.236	†WP2	R
□**14776**	38.00	70.00	10.00	HMS4	R
□**14778**	38.00	60.00	10.00	HMSA7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲14780	1.491	2.191	.250	CRSA1	R
14782	1.417	2.165	.433	ALA1	R
▲□14785	38.00	90.00	8.00	†CRWA1	R
14787	1.457	2.205	.354	HMSASPL	V
	W/BI-DIR HELIX FROM AIR SIDE				
▲14789	1.494	2.060	.270	†CRW1	R
14790	1.496	2.008	.512	HMSA25	P
14804	1.500	1.874	.188	HM14	R
▲14807	1.500	1.874	.250	CRW1	R
	W/STAINLESS STEEL SPRING				
14808	1.500	1.874	.188	†HM14	V
14809	1.500	1.918	.250	CRW1	V
	W/STAINLESS STEEL SPRING				
▲14810	1.500	1.874	.250	†HM14	R
▲14816	1.500	1.938	.250	†HM14	R
14821	1.500	1.983	.250	†CRW1	V
14824	1.500	1.983	.250	†CRWA1	R
▲14832	1.500	1.983	.313	†CRW1	R
14834	1.500	1.983	.250	†CRWA1	V
▲14840	1.500	1.983	.188	HM14	R
▲14844	1.500	1.997	.250	†CRWA5	V
	W/STAINLESS STEEL SPRING				
14846	1.500	2.000	.313	†CRWA1	R
▲14848	1.500	1.989	.250	†HMA22	R
▲14855	1.500	2.000	.313	†CRW1	R
▲14857	1.500	2.000	.250	†HM14	R
▲14858	1.500	2.048	.313	†CRWA1	R
14861	1.500	2.000	.313	†CRW1	V
▲14863	1.500	2.062	.210	†HM14	R
▲14864	1.500	2.062	.313	†CRW1	R
14867	1.500	2.062	.313	†CRW1	V
14868	1.500	2.064	.375	†CRWA5	V
	W/STAINLESS STEEL SPRING				
14869	1.500	2.000	.188	HM8	R
14872	1.500	2.125	.250	CRWH3	V
	W/SS CASE & SPRING				
▲14875	1.500	2.125	.313	†CRW1	R
14876	1.500	2.125	.313	†CRWA1	R
14886	1.500	2.125	.313	†CRW1	V
14887	1.500	2.125	.313	†CRWA1	V
14891	1.496	2.913	.433	HMSA96	P
	W/BI-DIR HELIX FROM AIR SIDE				
14896	1.500	2.187	.500	X1	L
	O.D. LISTED IS PRESSFIT I.D.				
14900	1.496	2.362	.433	HMSA123	P
	W/CCW HELIX FROM AIR SIDE				
14903	1.500	2.222	.313	†CRW1	R
14907	1.484	2.254	.313	†CRW1	R
14921	1.378	2.441	.472	HMSA35	P
	W/BI-DIR HELIX FROM AIR SIDE				
14922	1.496	2.564	.315	HMS4	R
	W/BI-DIR HELIX FROM AIR SIDE				
14934	1.496	2.559	.354	HMSA35	P
	W/BI-DIR HELIX FROM AIR SIDE				
14935	1.500	2.250	.313	†CRW1	S
14936	1.496	1.969	.394	HMSA7	V
	HELIX-CW FROM AIR SIDE				
▲14938	1.500	2.250	.313	†CRW1	R
14939	1.500	2.250	.313	†CRWA1	R
14940	1.500	2.250	.313	†CRW1	V
14942	1.500	2.250	.313	†CRWA1	V
14956	1.496	1.969	.315	HMSA7	V
14958	1.496	2.275	.427	HMSA7	P
▲14960	1.500	2.250	.250	HM21	R
▲14966	1.500	2.254	.250	†HM21	R
14968	1.500	2.260	.406	†CRW1	R
▲14970	1.500	2.286	.270	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
14971	1.500	2.286	.420	XH15	R
	O.D. LISTED IS PRESSFIT I.D.				
14972	1.500	2.328	.500	†HM14	R
▲14974	1.500	2.328	.500	HM18	R
	CLEARANCE D .286				
▲14975	1.500	2.328	.390	HM18	R
	CLEARANCE D .188				
14977	1.500	2.328	.500	†CRWA5	R
	W/STAINLESS STEEL SPRING				
▲14978	1.500	2.372	.375	†CRWA41	R
	W/EXTENDED RADIAL DIRT LIP				
14979	1.500	2.311	.500	†CRWA5	V
	W/STAINLESS STEEL SPRING				
14982	1.500	2.372	1.500	†KIT	R
□14984	38.00	50.00	10.00	CRS11	R
14992	1.500	2.374	.313	†CRW1	V
14994	1.500	2.374	.313	†CRWA1	V
▲15004	1.500	2.374	.313	†CRW1	R
15005	1.500	2.374	.313	†CRWA1	R
15012	1.500	2.250	.500	†CRWH1	R
15023	1.503	2.375	.720	HMSA26	V
	W/CCW HELIX				
15025	1.503	2.375	.720	CRSA3	P
	W/CCW HELIX & PF.314"				
▲15032	1.500	2.374	.250	†HM21	R
15039	1.500	2.374	.500	†CRWH1	R
▲15041	1.500	2.377	.453	†CRWA1	R
15047	1.500	2.376	.815	†HMSA25	P
	HELIX-CCW & P.F. WIDTH .402"				
□15053	38.00	54.00	6.50	HMS46	R
15054	1.500	2.377	.450	KIT	R
□15063	38.00	55.00	10.00	HMS47	R
□15067	38.00	56.00	12.00	CRS11	R
□15068	38.00	58.00	10.00	HMS46	R
□15071	38.00	60.00	7.00	HMS43	V
▲15076	1.500	2.437	.313	†CRW1	R
▲15080	1.500	2.437	.250	†HM14	R
15092	1.500	2.441	.313	CRW1	R
15093	1.500	2.441	.313	†CRWA1	R
15097	1.500	2.441	.313	†CRW1	V
□15112	38.00	72.00	12.00	HMS47	R
□15114	38.00	74.00	10.00	HMSA77	R
□15115	38.00	80.00	12.00	HMS46	R
15120	1.500	2.502	.625	†C8	RR
□15121	38.00	65.00	10.00	HMS4	R
15128	1.512	2.207	.354	†HMSHA4	#
15133	1.503	2.374	.374	†CRSA3	P
	W/CCW HELIX FROM AIR SIDE				
15138	1.500	2.502	.313	†CRW1	V
15141	1.500	2.502	.313	†CRW1	R
15142	1.500	2.502	.313	†CRWA1	R
15145	1.500	2.500	.375	KIT	R
▲15160	1.500	2.502	.250	†HM21	R
▲15174	1.500	2.462	.290	X13	R
	O.D. LISTED IS PRESSFIT I.D.				
▲15176	1.500	2.561	.313	†CRW1	R
▲15190	1.500	2.623	.250	HM21	R
▲15194	1.500	2.623	.313	†CRW1	R
▲15204	1.500	2.716	.438	†CRW1	R
▲15207	1.500	2.686	.500	†CRW1	R
▲15209	1.500	2.716	.250	†HM21	R
▲15214	1.500	2.750	.313	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲**15230**	1.500	2.758	.313	†CRW1	R
▲**15234**	1.500	2.835	.313	†CRW1	R
▲**15235**	1.500	2.875	.313	†CRW1	R
▲15240	1.500	2.996	.500	CRSH1	R
15241	1.500	3.000	.375	CRSA1	R
15243	1.500		.563	J6-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
15250	1.500	3.125	.625	C8	RR
15270	1.504	1.937	.475	HMSA76	P
	W/HELIX-CCW & P.F. WIDTH .315				
□**15292**	38.50	58.00	11.00	HMSA7	R
15298	1.535	2.047	.248	HMSA96	P
15300	1.535	2.047	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
15302	1.535	2.165	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
★15305	1.524	2.656	.424	†HMSA12	R
	W/CW HELIX FROM AIR SIDE				
▲15306	1.520	2.656	.425	HMSA16	R
	HELIX-CCW & PF WIDTH .388				
15310	1.535	2.244	.669	HMSA92	P
	W/AXIAL DIRT LIP				
15312	1.535	2.244	.844	HMSA92	P
	W/AXIAL DIRT LIP				
15315	1.524	2.656	.424	HMSA16	E
	W/CW HELIX FROM AIR SIDE				
15330	1.500	2.374	.563	KIT	R
15343	1.524	2.374	.375	†CRSH1	R
15345	1.535	2.244	.380	HMSA7	V
	W/CW HELIX				
□15352	39.00	62.00	12.00	CRSH11	R
15353	1.535	2.323	.472	D7-SPL	PP
□15354	39.00	65.00	9.00	HMS-SPL	P
	W/CCW HELIX FROM AIR SIDE				
□15356	39.00	68.00	9.00	HMS-SPL	P
	W/CW HELIX FROM AIR SIDE				
15357	1.535	3.228	.512	HMSA24	P
15359	1.535	1.969	.453	HMS4SPL	P
15363	1.535	2.126	.236	HMA1	R
15370	1.575	2.283	.394	HMSA7	P
▲15372	1.535	2.323	.669	HMSA92	R
	W/AXIAL DIRT LIP				
15376	1.524	2.714	.500	HMS9	R
15382	1.535	2.953	.647	HMSA56	P
15394	1.535	1.969	.315	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
15440	1.552	2.447	.500	HMSA78	RT
	W/EXTENDED RADIAL DIRT LIP				
▲15445	1.535	1.968	.335	HMSA3	R
▲**15450**	1.552	2.502	.500	†CRWA1	R
15451	1.535	1.969	.276	HMSHA7	V
	W/CCW HELIX FROM AIR SIDE				
▲**15460**	1.552	2.686	.500	†CRW1	R
15462	1.552	2.750	.500	†CRWHA1	P
15463	1.535	2.244	.512	F2	PF
15500	1.515	2.087	.315	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
15502	1.552	2.750	.590	CRSA8	R
	W/BI-DIR HELIX FROM AIR SIDE				
15503	1.552	3.160	.546	KIT	V
	W/BI HELIX & 3M BEAD ON OD				
15506	1.563	2.062	.250	†CRW1	V
▲**15508**	1.563	2.062	.250	†CRW1	R
▲**15509**	1.563	2.062	.203	†HM14	R
15510	1.578	2.082	.250	†CRW1	R
15512	1.578	2.165	.295	HMSA96	P
▲**15517**	1.563	2.125	.313	CRW1	R
15518	1.563	2.125	.313	†CRWA1	P
▲**15522**	1.563	2.250	.313	†CRW1	R
15525	1.552	3.160	.630	HMSHA25	V
	W/BI-DIR HELIX & 3M BEAD ON O.D.				
15529	1.552	2.447	.500	HMSA57	V
	W/CW HELIX				
15530	1.563	2.237	.290	X4	R
	O.D. LISTED IS PRESSFIT I.D.				
15532	1.563	2.250	.250	†HM14	R
15535	1.563	2.250	1.520	CRSA3	R
	P.F. WIDTH .327 & 2.515 FLANGE				
15536	1.563	2.250	1.520	KIT	R
15540	1.563	2.374	.313	CRW1	P
▲**15542**	1.563	2.374	.313	†CRW1	R
15543	1.563	2.374	.313	†CRWA1	R
15544	1.563	2.374	.250	†HM21	R
15545	1.552	3.160	.546	HMSHA26	V
	W/BI-DIR HELIX & 3M BEAD ON O.D.				
▲15546	1.563	2.372	1.070	HMSA31	P
	W/HELIX-CCW & 2.255 FLANGE				
15549	1.563	2.374	.313	†CRWA1	V
▲**15557**	1.578	2.408	.313	†CRWHA1	R
15558	1.575	2.461	.433	HMSA7	R
15560	1.552	2.446	.500	†D8	RT
15566	1.552	3.160	.546	HMSHA25	P
	W/BI-DIR HELIX & 3M BEAD ON O.D.				
▲**15592**	1.563	2.437	.313	CRW1	R
▲**15620**	1.563	2.441	.500	†CRWA1	R
15624	1.563	2.465	.374	†CRWA1	P
15629	1.562	2.442	.500	HMSA97	R
15635	1.563	2.502	.313	†CRWA1	R
▲15649	1.563	2.502	.250	†HM21	R
▲**15655**	1.563	2.502	.313	†CRW1	R
15656	1.563	2.502	.313	†CRW1	V
15660	1.563	2.531	.500	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
15662	1.562	2.460	.374	†CRWA1	V
15669	1.575	2.205	.354	HMSA35	P
	W/CW HELIX FROM AIR SIDE				
□**15672**	40.00	55.00	10.00	HMS4	R
□**15675**	40.00	55.00	10.00	HMSA7	R
▲**15677**	1.563	2.561	.313	†CRW1	R
15692	1.568	2.620	1.000	HMS15	R
	P.F. WIDTH .350				
15696	1.562	2.625	.562	†KIT	R
	SEE KIT SECTION				
▲**15699**	1.563	2.623	.313	†CRW1	R
15701	1.575	2.087	.315	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
15702	1.563	2.684	.438	X	R
	O.D. LISTED IS PRESSFIT I.D.				
15703	1.575	2.047	.276	CRSA1	R
	W/BI-DIR HELIX FROM AIR SIDE				
15704	1.575	2.520	.394	HMSA96	P
15706	1.575	2.244	.512	HMSA7S	P
▲**15707**	1.563	2.686	.313	†CRW1	R
15709	1.575	2.205	.354	HMSA7	P
	W/BI-DIR HELIX FROM AIR SIDE				
□**15712**	40.00	60.00	6.00	HMS4	V
□**15713**	40.00	46.00	8.00	HMS4	R
15714	1.457	2.378	.433	CRSA3	P
	W/CCW HELIX & BOOT				
□**15715**	40.00	46.00	8.00	HMSA7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
15716	1.575	2.161	.511	†HMSA16	P
15718	1.575	2.362	.198	HMS4	V
	W/CW HELIX FROM AIR SIDE				
15719	1.563	2.687	.250	†HM21	R
15721	1.575	2.281	.472	HMSHA4	P
	W/BI-DIR HELIX FROM AIR SIDE				
15724	1.575	2.048	.354	HMSA33	R
15727	1.575	2.283	.415	HMSA25	V
15729	1.563	2.441	.500	HMSA7	R
▲**15730**	1.563	2.686	.375	†HM14	R
15731	1.575	2.040	.290	HMSA32	R
□**15732**	40.00	50.00	7.00	HMSA7	R
15733	1.575	2.480	.315	HMSA92	P
15736	1.575	2.283	.236	HMSA7	P
15737	1.575	2.480	.354	HMSHA83	V
	W/CCW HELIX FROM AIR SIDE				
□15738	40.00	47.00	4.00	HM4	R
□15740	40.00	50.00	4.00	HM4	R
15742	1.575	2.283	.354	HMSA92	P
	W/CCW HELIX FROM AIR SIDE				
□15743	40.00	52.00	5.00	HM4	R
□**15745**	40.00	52.00	6.00	HMSA7	R
▲15746	1.575	2.165	.328	†HMA9	R
	P.F. WIDTH .220 & 2.550 FLANGE				
□**15747**	40.00	50.00	8.00	HMS4	R
15748	1.563	2.716	.469	†CRSH1	R
▲**15750**	1.575	2.283	.354	†CRWA3	R
	W/2.519 FLANGE				
15753	1.575	2.520	.472	HMSA12	P
	W/3.085 FLANGE				
▲**15761**	1.563	2.750	.500	†CRWH1	R
15766	1.563	2.758	.500	W4	R
▲**15773**	1.563	2.875	.313	†CRW1	R
15779	1.563	2.875	.313	†CRWA1	P
▲**15788**	1.552	3.160	.665	CRWA31	P
	P.F. WIDTH .250				
15790	1.563	2.920	.409	HMSA96S	R
	W/CW HELIX FROM AIR SIDE				
15791	1.552	3.160	.530	CRSHA8	V
15796	1.575	2.284	.315	HMSA92	P
□15798	40.00	55.00	12.00	HMS46	R
15799	1.575	2.953	.669	HMSA35	R
	W/3.327 FLANGE P.F. WIDTH .551				
15800	1.575	2.047	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□**15801**	40.00	52.00	7.00	HMSA7	R
15802	1.575	2.047	.260	HMSA92	R
	W/AXIAL DIRT LIP				
□**15803**	40.00	52.00	7.00	†CRW1	V
	W/STAINLESS STEEL SPRING				
▲□15804	40.00	52.00	7.00	HMS4	R
□**15805**	40.00	52.00	7.00	†CRW1	R
▲□15807	40.00	54.00	5.50	HMSA1	R
□**15808**	40.00	52.00	8.00	HMSA7	R
15809	1.575	2.087	.906	HMSA8	R
	P.F.WD .472, W/2.835 FLG O.D.				
▲□15810	40.00	54.00	7.00	†CRW1	R
▲□15815	40.00	55.00	7.00	HMS4	R
15818	1.575	2.165	.236	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
□**15819**	40.00	55.00	7.00	HMSA7	R
□**15820**	40.00	55.00	8.00	†CRW1	R
□**15821**	40.00	55.00	8.00	†CRW1	V
□**15822**	40.00	55.00	8.00	HMSA7	R
□**15823**	40.00	55.00	8.00	HMS4	R
□**15825**	40.00	56.00	8.00	†CRW1	R
□**15826**	40.00	56.00	7.00	†CRW1	V
▲□15828	40.00	56.00	8.00	HMS4	R
□**15829**	40.00	56.00	8.00	HMSA7	R
□**15830**	40.00	57.00	8.00	†CRW1	R
□**15835**	40.00	58.00	8.00	†CRW1	R
□**15836**	40.00	58.00	8.00	†CRW1	V
▲□15838	40.00	58.00	9.00	HMSA7	R
▲□15839	40.00	60.00	10.00	HMS4	R
□**15840**	40.00	60.00	8.00	†CRW1	R
□**15841**	40.00	60.00	8.00	†CRW1	V
15842	1.575	2.362	.315	HMSA35	R
	W/AXIAL DIRT LIP				
15843	1.575	2.126	.517	HMS15	R
	P.F. WIDTH .315				
□**15844**	40.00	60.00	10.00	HMSA7	R
□**15845**	40.00	62.00	8.00	†CRW1	R
□**15846**	40.00	62.00	8.00	†CRW1	V
▲□15847	40.00	62.00	7.00	HMS4	R
□**15848**	40.00	62.00	10.00	HMS4	R
15849	1.575	2.520	.688	HMSA92S	P
	P.F. WD .472 W/ROCK GUARD				
□**15850**	40.00	65.00	8.00	†CRW1	R
□**15851**	40.00	62.00	7.00	HMSA7	R
▲□15852	40.00	65.00	10.00	HMS4	R
□**15853**	40.00	68.00	10.00	HMS4	R
□**15854**	40.00	68.00	8.00	†CRW1	R
□**15855**	40.00	70.00	8.00	†CRW1	R
□**15856**	40.00	62.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□15857	40.00	72.00	7.00	HMS4	R
▲□15858	40.00	68.00	8.00	HMSA7	R
□**15859**	40.00	72.00	10.00	HMS4	R
□**15860**	40.00	72.00	8.00	†CRW1	R
□**15861**	40.00	72.00	7.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□**15862**	40.00	75.00	8.00	†CRW1	V
▲□15863	40.00	74.00	8.00	†CRW1	R
15866	1.575	2.992	.492	HMSA92	P
	HELIX-CW & P.F. WIDTH 9MM				
15867	1.575	2.992	.492	HMSA92	P
	HELIX-CCW,P.F. WIDTH .354(9MM)				
□**15868**	40.00	72.00	10.00	HMSA7	R
□**15869**	40.00	60.00	12.00	HMS4	R
□**15870**	40.00	80.00	8.00	†CRW1	R
□**15871**	40.00	80.00	10.00	HMS4	V
▲□15872	40.00	80.00	10.00	HMS4	R
□**15873**	40.00	80.00	10.00	HMSA7	V
□**15874**	40.00	65.00	14.00	HMSA7	R
□**15876**	40.00	58.00	10.00	HMS4	R
□**15877**	40.00	80.00	12.00	HMSA7	R
□**15878**	40.00	68.00	12.00	HMS4	R
□15879	40.00	58.00	9.00	CRSA13	R
15881	1.575	2.126	.394	HMSA7	P
	W/ENCAPSULARED SPRING				
15882	1.575	2.953	.467	HMSA29	R
	W/CCW HELIX FROM AIR SIDE				
15883	1.575	2.953	.394	HMSA96	P
15884	1.575	2.087	.197	HMA76	R
15886	1.575	2.953	.472	HMSA92	P
15887	1.575	2.559	.708	HMSASPL	P
15888	1.575	2.205	.315	HMSA92	P
▲□15890	40.00	90.00	8.00	†CRW1	R
15891	1.574	2.598	.315	HMSA96	P
	W/CW HELIX FROM AIR SIDE				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
15892	1.575	2.559	.472	HMSA92	R
□15893	40.00	60.00	10.00	CRSA1	R
□15898	40.00	62.00	6.00	HMSA7P2	R
15900	1.575	2.677	.500	D8-SPL	P
	P.F. WIDTH .455 W/2.988 FLANGE				
15902	1.575	2.441	.354	HMSA55	P
	P.F. WIDTH .455 W/2.600 FLANGE				
□**15907**	40.00	62.00	10.00	HMS4	V
15910	1.594	2.067	.236	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□**15914**	40.00	62.00	10.00	HMSA7	R
▲**15915**	1.594	2.125	.313	†CRW1	P
□15919	40.00	65.00	12.00	CRS13	R
15920	1.594	2.283	.315	HMSA7	P
□15922	40.00	68.00	7.00	CRS13	R
□15930	40.00	70.00	12.00	CRSH11	R
□**15934**	40.00	72.00	7.00	HMSA7	V
□15937	40.00	55.00	10.00	CRS1	R
□**15939**	40.00	80.00	10.00	HMSA7	R
15940	1.594	2.437	.313	†CRW1	P
□15944	40.00	90.00	10.00	HMS48	R
□15945	40.00	90.00	12.00	HMSA79	R
□**15948**	40.00	78.00	10.00	HMSA7	R
□**15950**	40.00	65.00	12.00	HMS4	R
▲**15955**	1.594	2.437	.313	†CRW1	R
□**15958**	40.00	62.00	8.00	HMS4	R
▲**15960**	1.594	2.502	.313	†CRW1	R
□**15961**	40.00	62.00	8.00	HMSA7	R
□**15963**	40.00	65.00	10.00	HMSA7	R
□**15964**	40.00	68.00	10.00	HMSA7	R
15966	1.598	2.476	.394	†CRSA3	P
	W/CCW HELIX FROM AIR SIDE				
15967	1.575	2.126	.315	HMSA1	R
15968	1.594	2.623	.313	†CRW1	R
15974	1.592	2.406	.354	HMSA96	P
	W/BI-DIR HELIX FROM AIR SIDE				
15975	1.594	2.758	.313	†CRW1	R
15977	1.598	2.476	.394	†CRSA3	P
	W/CCW HELIX, LONG BOOT				
15978	1.575	2.441	.365	HM4SPL	R
15984	1.594	3.150	.390	D7	P
□**15985**	40.00	72.00	7.00	HMSA7	R
□15989	40.00	62.00	7.00	HMSA92	P
	W/CW HELIX				
□**15998**	40.00	58.00	8.00	HMS4	R
16003	1.614	2.126	.236	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
□**16006**	40.00	62.00	12.00	HMS4	R
□**16009**	40.00	62.00	12.00	HMSA7	R
16013	1.614	2.244	.315	HMSA96	P
	W/CCW HELIX FROM AIR SIDE				
16015	1.614	2.284	.512	HMS15	P
	P.F. WIDTH .354 (9MM)				
16017	1.614	2.677	.456	DB-SPL	P
16019	1.614	2.677	.354	HMSA92	R
	W/CW HELIX FROM AIR SIDE				
▲16020	1.609	1.906	.250	HM3	R
	W/STAINLESS STEEL CASE				
16021	1.614	2.913	.354	HMSA29	R
16022	1.575	2.047	.276	HMSHA7	V
	W/CCW HELIX FROM AIR SIDE				
16023	1.614	2.323	.315	HMS4	R
	W/CW HELIX FROM AIR SIDE				
□**16024**	40.00	68.00	8.00	HMS4	R
▲□16032	41.00	53.00	7.00	†CRW1	R
▲□16034	41.00	55.00	8.00	†CRW1	R
16036	1.614	2.165	.275	HMSA29	R
	W/AXIAL DIRT LIP				
16037	1.614	2.323	.394	HMSA92	P
	W/AXIAL DIRT LIP, CW HELIX				
16038	1.614	2.402	.394	HMSA92	P
	W/CCW HELIX & AXIAL DIRT LIP				
16039	1.625	2.000	.250	†CRW1	V
16040	1.618	2.531	.438	†CRWA1	R
□**16041**	41.00	62.00	8.00	†CRW1	R
□16043	41.00	62.00	12.00	D8	P
▲16044	1.618	2.575	.500	†CRSA1	R
	W/BI-DIR HELIX FROM AIR SIDE				
16045	1.625	2.125	.250	CRWAR5	V
	W/STAINLESS STEEL SPRING				
▲**16046**	1.619	2.000	.250	†CRW1	R
16047	1.625	2.116	.313	†CRWA1	R
16048	1.625	2.125	.250	†CRW1	V
	W/STAINLESS STEEL SPRING				
16049	1.625	2.250	.375	†CRW1	P
▲**16054**	1.625	2.125	.250	†CRW1	R
▲**16055**	1.625	2.125	.250	†HM14	R
▲**16061**	1.625	2.250	.313	†CRW1	R
▲**16062**	1.625	2.248	.313	†CRWA1	R
16064	1.625	2.328	.438	TL7	R
▲16065	1.625	2.250	.250	†HM21	R
▲16069	1.625	2.328	.438	†HM18	R
	CLEARANCE D .235				
16072	1.625	2.374	.313	†CRWH1	R
16077	1.625	2.374	.313	†CRW1	V
16078	1.625	2.250	.313	CRW1	V
	W/STAINLESS STEEL SPRING				
16079	1.625	2.374	.500	†CRWH1	R
16083	1.625	2.282	.313	†CRW1	R
▲**16084**	1.625	2.374	.313	†CRW1	R
16085	1.625	2.374	.313	†CRWA1	R
16091	1.625	2.374	.313	CRWA1	P
▲16092	1.625	2.374	.250	†HM21	R
16094	1.625	2.374	.250	CRW1	R
16095	1.625	2.375	.250	HM14	R
16110	1.625	2.375	.395	CRWA6	R
16114	1.614	2.950	.430	HMSA96	P
	W/BI-DIR HELIX FROM AIR SIDE				
▲**16115**	1.625	2.375	.395	CRWA6	V
	W/STAINLESS STEEL SPRING				
16116	1.625	2.403	.360	CRSA4	R
	W/2.675 FLANGE O.D.				
▲**16117**	1.625	2.437	.313	†CRW1	R
16118	1.625	2.437	.313	†CRWA1	R
16119	1.625	2.437	.313	†CRW1	V
16120	1.625	2.437	.313	†CRWA1	V
16121	1.625	2.437	.374	CRSHA1	R
16122	1.648	2.332	.591	†HMSA1	V
16139	1.614	2.569	.433	HMSA25	P
	W/BI-DIR HELIX FROM AIR SIDE				
16144	1.614	2.950	.430	HMSA57	P
	W/CCW HELIX FROM AIR SIDE				
▲16146	1.618	2.841	.500	†CRSA4	R
	W/3.179 FLANGE O.D.				
16147	1.614	2.165	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲16168	1.625	2.437	.250	†HM21	R
▲**16180**	1.625	2.441	.313	†CRW1	R
16189	1.625	2.441	.625	CRWHA3	RR
16201	1.625	2.441	.313	†CRWA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
16204	1.625	2.443	.640	†C8	RR
16225	1.625	2.437	.313	†HMS14	S
	W/CW HELIX FROM AIR SIDE				
16242	1.625	2.502	.250	CRWH3	V
	W/SS CASE & SPRING				
16243	1.625	2.502	.313	†CRWA1	V
▲**16245**	1.625	2.502	.313	†CRW1	R
16246	1.625	2.502	.313	†CRWA1	R
16247	1.625	2.502	.313	CRWA1	P
16254	1.625	2.502	.375	†CRWHA1	R
16257	1.625	2.502	.374	†CRWHA1	V
16262	1.625	2.409	.545	HMSA24	R
▲16270	1.625	2.502	.250	†HM21	R
16271	1.627	2.365	.389	HMSA25	R
	W/CCW HELIX FROM AIR SIDE				
▲16284	1.625	2.562	.250	†HM21	R
▲16286	1.625	2.462	.250	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲16289	1.625	2.562	.438	†HM18	R
	CLEARANCE D .210				
16290	1.625	2.562	.313	†CRWA1	V
16295	1.625	2.565	.750	†HMSHASP	R
	W/BI-DIR HELIX FROM AIR SIDE				
▲**16314**	1.625	2.623	.313	†CRW1	R
16315	1.625	2.623	.313	†CRWA1	R
16316	1.625	2.623	.313	†CRW1	V
▲16322	1.625	2.623	.250	†HM21	R
▲**16337**	1.625	2.686	.313	†CRW1	R
16338	1.625	2.686	.313	†CRW1	V
16342	1.625	2.722	.406	FF2	F
▲16362	1.625	2.750	.250	†HM21	R
▲**16364**	1.625	2.750	.250	†CRW1	R
16368	1.625	2.750	.313	†CRWH1	R
16384	1.625	2.781	.313	†HM14	R
16386	1.625	2.835	.469	†CRSH1	R
16392	1.625	2.808	.500	†HMSHA4	P
	W/3.065 FLANGE O.D.				
▲**16406**	1.625	2.875	.313	†CRW1	R
▲**16422**	1.625	3.000	.313	†CRWH1	R
16431	1.625	3.062	.500	†CRSH1	R
16440	1.625	3.251	.500	CRSH1	R
□**16451**	42.00	60.00	9.00	HMSA7	R
16456	1.654	2.283	.472	CRS1SPL	P
	W/CW HELIX FROM AIR SIDE				
□★16466	42.00	56.00	7.00	CRSA1	R
16471	1.654	2.165	.276	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
16473	1.654	2.205	.315	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
16474	1.654	2.480	.433	CRSA3	P
	W/BI-DIR HELIX & BOOT				
□**16480**	42.00	50.00	4.00	HMSA7	R
□16483	42.00	52.00	4.00	HM4	R
16485	1.654	2.441	.472	D6	P
16487	1.654	2.094	.275	HMSA7	V
16489	1.654	2.362	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
16491	1.654	2.550	.530	HMSA95	R
▲□16492	42.00	56.00	7.00	HMS4	R
□**16493**	42.00	56.00	7.00	HMS4	V
□**16494**	42.00	56.00	7.00	HMSA7	R
□**16495**	42.00	55.00	7.00	HMSA7	R
□**16496**	42.00	56.00	7.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
16497	1.654	2.283	.270	CRSA1	R

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**16498**	42.00	58.00	10.00	HMS4	R
16499	1.654	2.550	.550	HMSA56	P
16500	1.645	2.656	.400	†CRSA1	P
□16502	42.00	55.00	6.00	HM1	R
▲□16503	42.00	55.00	8.00	†CRW1	R
□**16504**	42.00	56.00	7.00	†CRW1	V
▲□16505	42.00	56.00	8.00	†CRW1	R
▲16506	1.654	2.213	.236	HMA1	R
□**16507**	42.00	55.00	8.00	†CRW1	V
▲16508	1.654	2.213	.374	HMA101	R
	P.F. WIDTH .236				
□**16509**	42.00	58.00	8.00	†CRW1	R
□**16511**	42.00	58.00	8.00	†CRW1	V
□**16512**	42.00	55.00	8.00	HMS4	R
▲□16513	42.00	55.00	7.00	HMS4	R
▲□16514	42.00	60.00	7.00	HMSA7	R
□**16515**	42.00	60.00	8.00	†CRW1	R
□**16517**	42.00	60.00	8.00	†CRW1	V
□**16518**	42.00	62.00	8.00	HMSA7	R
□**16519**	42.00	62.00	8.00	†CRW1	R
16520	1.660	2.440	.594	HM11	R
▲□16521	42.00	62.00	8.00	HMS4	R
□16522	42.00	64.00	6.00	HMA1	R
□**16523**	42.00	62.00	8.00	†CRW1	V
16524	1.654	2.520	.472	D	PP
□**16525**	42.00	65.00	8.00	†CRW1	R
□**16527**	42.00	65.00	8.00	†CRW1	V
□**16528**	42.00	66.00	10.00	HMSA7	P
□**16529**	42.00	62.00	10.00	HMS4	R
□**16531**	42.00	55.00	9.00	HMSA7	R
16532	1.656	2.502	.500	†CRSH1	R
16533	1.654	2.362	.335	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
□**16534**	42.00	65.00	12.00	HMSA7	R
16536	1.654	2.323	.303	HMS4	R
	W/CW HELIX FROM AIR SIDE				
▲□16537	42.00	65.00	10.00	HMS4	R
16542	1.654	2.551	.531	HMSA95	R
	W/HELIX-CW P.F. WIDTH .375				
□**16543**	42.00	60.00	7.00	HMS4	R
▲**16545**	1.656	2.623	.375	†CRWA1	P
16546	1.654	2.217	.315	HMSA12	R
▲□16548	42.00	58.00	7.00	HMA1	R
16549	1.654	2.283	.472	HMSA123	P
	W/CW HELIX FROM AIR SIDE				
16551	1.654	2.559	.433	D7	P
□**16552**	42.00	68.00	10.00	HMS4	R
□**16553**	42.00	72.00	8.00	HMSA7	R
□**16554**	42.00	72.00	8.00	†CRW1	V
□**16555**	42.00	72.00	8.00	†CRW1	R
▲□16558	42.00	72.00	8.00	HMS4	R
□**16561**	42.00	72.00	10.00	HMS4	R
16564	1.654	2.992	.472	HMSA92	P
□**16565**	42.00	67.00	10.00	HMSA7	P
	W/ENCAPSULATED SPRING				
16578	1.688	2.551	.595	D8	RRT
	W/CW HELIX FROM AIR SIDE				
□**16579**	42.00	60.00	10.00	HMS4	R
□16581	42.00	62.00	10.00	CRS1	R
16594	1.654	3.543	.394	D8SPL	P
	W/AXIAL DIRT LIP				
16596	1.654	3.543	.472	D8-SPL	P
	W/AXIAL DIRT LIP				
▲16599	1.673	2.162	.290	†HMA9	R
	W/2.608 FLANGE				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□16605	42.00	70.00	12.00	CRSH11	R
□16609	42.00	72.00	12.00	CRS12	R
□**16615**	42.00	70.00	10.00	HMSA7	R
□**16616**	42.00	62.00	7.00	HMSA7	R
□**16617**	42.00	80.00	10.00	HMS4	R
□**16619**	45.00	70.00	10.00	HMSA7	R
16620	1.685	2.165	.433	HMSA7	R
16622	1.654	2.441	.315	HMS-SPL	R
16626	1.652	2.520	.390	HMSHA4	R
□**16628**	42.00	62.00	7.00	HMS4	R
□**16642**	42.00	58.00	7.00	HMS4	R
□**16647**	42.00	72.00	10.00	HMSA7	R
▲**16650**	1.688	2.279	.500	†CRWH1	R
▲**16657**	1.688	2.328	.313	†CRWA1	R
▲16659	1.688	2.328	.531	HMA5	R
▲16667	1.688	2.328	.500	HM18	R
	CLEARANCE D .286				
16669	1.688	2.374	.313	CRSA1	R
▲**16679**	1.688	2.437	.313	†CRW1	R
16680	1.688	2.437	.313	†CRWA1	R
16692	1.688	2.437	.250	†CRW1	S
16696	1.688	2.437	.469	†CRW1	S
▲**16719**	1.688	2.502	.313	†CRW1	R
▲**16725**	1.688	2.502	.835	†CRWA41	R
	P.F. WIDTH .360 & 2.750 FLANGE				
16727	1.688	2.502	1.535	†KIT	R
★16729	1.688	2.502	2.120	†KIT	R
▲**16735**	1.688	2.551	.470	HMSA7	R
▲16743	1.688	2.502	.281	†HM21	R
16747	1.688	2.551	.375	HMSA95	R
▲16754	1.688	2.562	.250	†HM21	R
▲**16757**	1.688	2.605	.250	†HM14	R
16787	1.675	2.000	.200	WIPER	R
	WIPER SEAL				
▲16805	1.688	2.623	.531	HMSA16	R
	W/CW HELIX FROM AIR SIDE				
▲16811	1.688	2.623	.375	†HM21	R
16814	1.688	2.623	.313	†CRWA1	R
▲**16816**	1.688	2.623	.500	†CRW1	R
16817	1.688	2.623	.500	†CRWA1	V
▲16818	1.688	2.650	.290	X4	R
	O.D. LISTED IS PRESSFIT I.D.				
▲16820	1.688	2.688	.250	X9	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**16842**	1.688	2.686	.313	†CRW1	R
▲**16854**	1.688	2.716	.313	†CRW1	R
▲**16871**	1.688	2.502	.500	†CRWA3	R
	W/2.750 FLANGE				
16889	1.673	2.146	.236	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
16891	1.693	2.126	.295	CRSHA1	R
▲□16892	43.00	54.00	7.50	CRSA1	R
16893	1.654	2.165	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
16894	1.693	2.480	.354	HMSA92	R
	W/CCW HELIX FROM AIR SIDE				
□**16895**	43.00	57.00	8.00	†CRW1	R
16896	1.693	2.283	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□**16897**	43.00	60.00	8.00	†CRW1	R
□**16898**	43.00	62.00	8.00	HMSA7	P
▲**16900**	1.688	2.750	.313	CRW1	R
▲16901	1.654	2.520	.390	HMSHA4	R
16903	1.688	2.750	.375	†CRWA1	R
16904	1.688	2.760	.974	HDDF1	R
□**16905**	43.00	69.00	8.00	†CRW1	R
16906	1.688			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
□**16914**	43.00	73.00	8.00	†CRW1	R
16917	1.693	2.756	.354	HMSA29	R
16924	1.692	2.303	.295	HMSA96	P
16926	1.693	2.480	.394	CRSA3	R
□16936	43.00	72.00	10.00	CRSH11	R
□**16937**	43.00	60.00	10.00	HMS4	R
□16939	43.00	62.00	10.00	CRSH1	R
□**16942**	43.00	60.00	10.00	HMSA7	R
16945	1.688	2.623	.500	CRW2	P
▲16960	1.688	2.835	.469	CRSA1	R
□**16984**	43.00	60.00	9.00	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
▲**16999**	1.688	2.875	.313	†CRW1	R
17005	1.705	3.080	.550	†HMSA25	R
17035	1.688	3.061	.375	†CRW1	R
▲17037	1.688	3.091	.500	†CRSA4	R
	W/3.453 FLANGE & BI-DIR HELIX				
17038	1.688	3.125	.375	†CRWA1	R
▲17053	1.705	3.084	.500	CRS1	R
▲**17100**	1.704	3.034	.500	†CRWA1	R
▲17106	1.709	2.209	.355	†HMSA23	P
	HELIX-CW,W/2.505 FLG,PF WD.295				
17107	1.709	2.209	.355	†HMSA23	V
	HELIX-CW,W/2.505 FLG,PF WD.295				
17110	1.730	2.336	.470	HMA95	R
	P.F. WIDTH .250 & SLINGER				
17113	1.772	2.323	.315	HMA83	P
	W/FELT 'A' LIP WASHER				
▲17115	1.730	2.336	.250	HMA85	R
17122	1.732	2.165	.236	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
17124	1.719	2.437	.469	P1	L
17131	1.734	2.449	.250	†HM21	R
17134	1.732	2.320	.260	HMS4	R
	W/CW HELIX FROM AIR SIDE				
17136	1.719	2.623	.500	†CRSH1	R
▲□17139	44.00	60.00	8.00	†CRW1	R
□**17142**	44.00	60.00	8.00	CRW1	V
□**17143**	44.00	60.00	9.00	HMSA7	R
17144	1.719	2.561	.315	†CRWA1	R
▲17145	1.734	2.726	.512	†HM18	R
	CLEARANCE D .218				
▲17146	1.719	2.562	.500	†HM18	R
	CLEARANCE D .286				
17147	1.732	2.441	.315	HMSA45	R
	W/AXIAL DIRT LIP				
□**17148**	44.00	60.00	10.00	HMS4	R
▲□17149	44.00	62.00	8.00	†CRW1	R
17154	1.732	2.362	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
□**17160**	44.00	65.00	8.00	†CRW1	R
17162	1.719	2.875	.469	P1	L
□**17166**	44.00	68.00	8.00	†CRW1	V
□**17168**	44.00	65.00	10.00	HMS4	R
□**17179**	44.00	70.00	8.00	†CRW1	R
□**17184**	44.00	72.00	8.00	†CRW1	R
□**17186**	44.00	72.00	10.00	HMS4	R
▲17187	1.734	2.401	.210	†G2	R
▲17190	1.739	2.812	.594	†HMSA16	R
	W/HELIX-CW, W/3.270 FLANGE				
17191	1.732	3.150	.354	HMSA92	P

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
17193	1.732	3.622	.748	†HMSA7SP	R
	P.F. WIDTH .492				
17194	1.732	3.543	.787	HMSASPL	P
▲17227	1.750	2.125	.188	†HMS1	R
▲17231	1.750	2.250	.313	†CRW1	R
17234	1.750	2.250	.313	†CRW1	V
▲17240	1.750	2.250	.188	†HM14	R
□17255	45.00	68.00	12.00	†HMSA1	R
17257	1.750	2.328	.438	CRS1	R
17259	1.720	2.921	.468	†HMSA57	P
	W/BI-DIR HELIX FROM AIR SIDE				
17261	1.750	2.374	.313	†CRWA1	V
★17265	1.750	2.374	.438	HMS6	R
▲17270	1.750	2.374	.313	†CRW1	R
17271	1.750	2.374	.313	†CRWA1	R
▲17277	1.750	2.374	.250	HM21	R
▲17280	1.750	2.411	.375	†CRW1	P
17283	1.750	2.437	.313	†CRW1	R
	W/SS CASE & SPRING				
▲17284	1.750	2.437	.313	†CRW1	R
17285	1.750	2.437	.315	†CRWA1	R
▲17286	1.766	2.412	.375	†HMSA1	R
	W/CW HELIX FROM AIR SIDE				
17292	1.750	2.437	.313	†CRW1	V
17293	1.750	2.437	.315	†CRWA1	V
17296	1.732	2.614	.394	HMSA97	V
	W/3.012 FLG O.D. & .394 PRESS				
17298	1.732	2.283	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
17300	1.732	2.283	.315	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
▲17310	1.750	2.437	.250	HM21	R
▲17315	1.750	2.441	.313	†CRW1	R
17320	1.750	2.441	.375	†CRWA1	V
□**17324**	44.00	62.00	10.00	HMSA7	R
17327	1.705	3.034	.562	HMSA25	V
★**17330**	1.732	2.362	.394	HMSA7	V
□**17335**	44.00	62.00	10.00	HMS4	R
▲17340	1.750	2.441	.250	†HM21	R
17341	1.750	2.441	.250	†HM21	R
	W/STAINLESS STEEL CASE				
□17347	44.00	72.00	12.00	CRSH11	R
17353	1.750	2.500	.484	D7	P
▲17359	1.750	2.441	.469	†HM18	R
	CLEARANCE D .254				
17374	1.750	2.502	.500	†CRWA5	R
	W/STAINLESS STEEL SPRING				
17379	1.750	2.502	.313	†CRW1	V
	W/STAINLESS STEEL SPRING				
17381	1.750	2.502	.313	†CRWA1	V
17385	1.750	2.502	.250	CRWH3	V
	W/SS CASE & SPRING				
▲17386	1.750	2.502	.313	†CRW1	R
17387	1.750	2.502	.313	†CRWA1	R
▲17392	1.750	2.502	.250	†HM21	R
17395	1.750	2.502	.375	†CRWHA1	V
17399	1.750	2.502	.375	†CRW1	S
▲17404	1.750	2.561	.313	†CRW1	R
▲17406	1.750	2.562	.500	†HM18	R
	CLEARANCE D .286				
17407	1.732	2.653	.375	HMSASPL	P
	W/BI-DIR HELIX FROM AIR SIDE				
▲17413	1.750	2.565	.313	†CRWA1	R
▲17415	1.750	2.561	.250	†HM21	R
17435	1.772	2.561	.197	†CRSA1	R
▲17442	1.750	2.623	.313	†CRW1	R
17443	1.750	2.623	.313	†CRWA1	R
17444	1.750	2.623	.313	†CRW1	S
17448	1.750	2.623	.313	†CRWA1	V
17456	1.750	2.623	.375	†CRWH1	R
▲17458	1.747	2.623	.365	†HMS14	E
	W/HELIX-CW & 2.870 FLANGE				
17459	1.747	2.623	.365	†KIT	E
▲17461	1.750	2.623	.250	HM21	R
▲17484	1.750	2.686	.313	CRW1	R
17485	1.750	2.718	.294	X4	R
	O.D. LISTED IS PRESSFIT I.D.				
▲17488	1.750	2.716	.250	†HM21	R
17490	1.750	2.326	.275	KIT	R
17502	1.771	2.362	.495	D7	PP
17520	1.750	2.620	.354	HMSA97	V
17523	1.750	2.750	.313	†CRWA1	R
▲17544	1.750	2.750	.250	†HM21	R
▲17557	1.750	2.750	.313	†CRW1	R
17558	1.750	2.750	.313	†CRW1	V
17588	1.889	2.440	.276	CRSA1	R
17599	1.750	2.750	.484	†HM21	R
▲17605	1.750	2.758	.313	†CRW1	R
▲17607	1.750	2.717	.438	†CRWA1	R
▲17617	1.750	2.718	.359	†HM18	R
	CLEARANCE D .160				
17618	1.750	2.718	.359	TL2	R
▲17620	1.750	2.786	.294	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲17624	1.750	2.810	.313	CRWA1	R
17627	1.750	2.810	.313	†CRWA1	V
17629	1.772	2.362	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲17633	1.750	2.830	.375	†HM21	R
17645	1.750	2.875	.375	†CRWHA1	R
▲17653	1.750	2.875	.313	†CRW1	R
17657	1.750	2.875	.313	†CRW1	V
17658	1.772	2.520	.472	CRSHA1	R
	W/BI-DIR HELIX FROM AIR SIDE				
17662	1.772	2.441	.394	HMSA32	R
17666	1.772	2.441	.394	CRSA1	R
17667	1.772	2.835	.472	HMSA-DL	P
	W/CW HELIX, 19MM OVERALL WIDTH				
17670	1.772	2.598	.394	HMSA92	V
	W/BI-DIR HELIX FROM AIR SIDE				
▲17671	1.750	2.875	.250	†HM21	R
17673	1.771	2.835	.450	HMSA21	E
17674	1.750	2.875	.500	TL7	R
▲17675	1.750	2.981	.438	CRWHA1	R
17677	1.772	2.756	.433	HMSA16	V
	W/BI-DIR HELIX FROM AIR SIDE				
17678	1.750	2.997	.313	†CRWHA1	R
□**17679**	45.00	63.00	7.70	HMS4	S
17683	1.772	3.130	.571	HMSA7S	V
17686	1.772	2.953	.472	HMSA92S	P
	W/CW HELIX				
□**17688**	45.00	60.00	10.00	HMSA7	R
□**17690**	45.00	60.00	9.00	HMSA7	R
▲17691	1.811	2.732	.433	HMSA45	P
	W/AXIAL DIRT LIP & 3.146 FLANGE				
□17692	45.00	52.00	4.00	HM4	R
□**17694**	45.00	68.00	7.00	HMSA7	R
▲17695	1.750	2.997	.313	†CRW1	R
17696	1.772	2.559	.315	HMSA85	P
	W/CCW HELIX FROM AIR SIDE				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
17699	1.750	3.000	.313	†CRWA1	R
17701	1.772	2.402	.315	HMSA35	R
	W/CCW HELIX FROM AIR SIDE				
▲17702	1.750	3.000	.250	†HM21	R
□**17703**	45.00	72.00	7.00	HMS4	R
▲**17707**	1.750	3.000	.313	†CRW1	R
17709	1.750	3.000	.313	†CRW1	V
□**17713**	45.00	75.00	10.00	HMS4	R
▲**17716**	1.750	3.061	.313	†CRW1	R
□**17717**	45.00	65.00	8.00	HMSA7	R
17718	1.750	3.061	.375	†CRWA1	R
▲17720	1.750	3.062	.485	D7	RT
17722	1.750	3.061	.484	D	R
	SPECIAL CONST.				
17724	1.750	3.149	.290	TL6	R
▲17726	1.750	3.154	.313	CRS1	R
▲**17727**	1.739	3.000	.500	CRWA4	P
▲□17728	45.00	58.00	7.00	HMS4	R
□**17729**	45.00	60.00	7.00	HMSA7	R
□**17730**	45.00	60.00	8.00	HMSA7	R
□**17732**	45.00	60.00	10.00	HMS4	R
▲□17734	45.00	65.00	8.00	HMS4	R
□**17736**	45.00	62.00	10.00	HMS4	R
□**17738**	45.00	62.00	8.00	HMSA7	R
▲□17740	45.00	60.00	8.00	HMS4	R
▲□17741	45.00	60.00	7.00	HMS4	R
□**17742**	45.00	62.00	7.00	HMS4	R
□**17744**	45.00	72.00	12.00	HMSA7	R
▲**17746**	1.750	3.189	.313	†CRW1	R
□**17749**	45.00	62.00	9.00	HMS4	R
□**17750**	45.00	60.00	8.00	†CRW1	R
▲17751	1.750	3.371	.625	C8	RR
□**17752**	45.00	60.00	8.00	†CRW1	V
□**17753**	45.00	62.00	8.00	†CRWA1	V
□**17754**	45.00	62.00	8.00	†CRW1	R
▲**17756**	1.750	3.543	.438	†CRW1	R
▲□17757	45.00	65.00	5.00	HM1	R
□**17758**	45.00	68.00	9.00	HMSA7	R
□**17759**	45.00	65.00	8.00	†CRW1	R
▲**17761**	1.750	3.625	.438	†CRW1	R
□**17762**	45.00	65.00	8.00	†CRW1	V
□**17764**	45.00	65.00	10.00	HMS4	R
▲□17766	45.00	68.00	8.00	†CRW1	R
□**17767**	45.00	68.00	8.00	†CRW1	V
□**17769**	45.00	68.00	10.00	HMS4	R
17771	1.750	3.937	.313	†CRSA1	R
□**17773**	45.00	72.00	8.00	†CRW1	V
▲□17774	45.00	72.00	8.00	HMS4	R
17775	1.766	2.412	.370	HMSA1	P
	W/CW HELIX FROM AIR SIDE				
□**17776**	45.00	72.00	10.00	HMS4	R
□**17778**	45.00	72.00	8.00	†CRW1	R
▲**17780**	1.768	2.363	.313	†CRWHA1	V
▲17781	1.770	2.364	.427	†HMSA21	P
▲□17782	45.00	75.00	8.00	†CRW1	R
□**17783**	45.00	75.00	8.00	†CRW1	V
□17784	45.00	58.00	9.00	CRSA1	R
□**17785**	45.00	70.00	12.00	HMSA7	R
□**17786**	45.00	78.00	10.00	HMS4	R
▲17787	1.772	2.500	.432	†HMSA16	S
	HELIX-CW & 3.046 FLG,PF WD.359				
17788	1.772	2.480	.294	HMA16	R
	W/2.835 FLANGE				
▲17789	1.772	2.520	.354	HMA101	R
	W/AXIAL DIRT LIP				

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲□17790	45.00	62.00	8.00	HMS4	R
□**17791**	45.00	80.00	8.00	†CRW1	R
▲17792	1.772	2.835	.228	J2	R
	SEE TYPE J SECTION (HMA LIP)				
▲□17794	45.00	80.00	10.00	HMS4	R
□**17795**	45.00	72.00	10.00	HMSA7	R
□**17796**	45.00	85.00	8.00	†CRW1	R
▲□17797	45.00	85.00	10.00	HMS4	R
□**17798**	45.00	80.00	10.00	HMSA7	R
17799	1.772	3.346	.740	D8	R
	W/STAINLESS STEEL CASE				
17801	1.772	2.520	.354	HMA101	P
	W/AXIAL DIRT LIP				
17802	1.781	2.126	.250	HM14	R
	W/STAINLESS STEEL CASE				
17803	1.772	2.913	.433	HMSA96	P
	W/CW HELIX FROM AIR SIDE				
▲**17806**	1.781	2.252	.313	†CRWA1	R
17808	1.772	3.071	.433	HMSA96	P
	W/CW HELIX FROM AIR SIDE				
□17809	45.00	55.00	7.00	HMS47	R
▲**17810**	1.781	2.502	.313	†CRWH1	R
17811	1.781	2.502	.313	†CRWH1	V
□17812	45.00	58.00	7.00	HMS46	R
17813	1.772	3.858	.413	HMSA96	P
	W/BI-DIR HELIX FROM AIR SIDE				
▲17815	1.734	2.328	.270	†HM19	R
	W/2.625 FLANGE				
□17818	45.00	72.00	8.00	HMA22	R
▲**17821**	1.781	2.623	.313	†CRW1	R
17824	1.772	2.441	.472	HMSASPL	R
	W/EXCLUDER LIP				
▲**17832**	1.781	2.686	.313	CRW1	R
▲**17836**	1.797	2.726	.516	†HM14	R
□17845	45.00	62.00	12.00	HMS45	R
▲17846	1.792	2.500	.600	XHA79N	R
	O.D. LISTED IS PRESSFIT I.D.				
17847	1.781	2.750	.500	CRSH1	R
▲17849	1.787	3.234	.335	†HMSH22	S
17851	1.781	2.758	.500	†CRSH1	R
□**17868**	45.00	65.00	10.00	HMSA7	R
□17873	45.00	65.00	7.00	HMSA7P2	R
□17874	45.00	66.00	6.00	HMS46	R
17897	1.811	2.283	.276	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
□17898	45.00	80.00	13.00	HMS46	R
□17900	45.00	85.00	13.00	CRSH11	R
□17901	45.00	100.00	10.00	HMS46	R
□17904	45.00	55.00	4.00	HM4	R
17905	1.811	2.323	.457	HMSA56	P
□**17906**	45.00	75.00	7.00	HMSA7	R
17907	1.772	2.638	.315	HMSA7	P
□**17908**	45.00	58.00	7.00	HMSA7	R
▲□17909	46.00	59.00	12.00	HMA10	R
□**17910**	46.00	60.00	8.00	†CRW1	R
□**17911**	45.00	62.00	7.00	HMSA7	R
□**17912**	45.00	62.00	10.00	HMSA7	R
17914	1.811	2.362	.276	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
17915	1.811	2.740	.583	HMSA45	P
	P.F. WIDTH .315				
17919	1.772	2.401	.315	HMSA92	R
	W/CCW HELIX FROM AIR SIDE				
17921	1.772	2.638	.394	HMSA7	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
17922	1.772	2.520	.807	HMSA97	P
	W/DIRT LIP				
□**17925**	45.00	68.00	10.00	HMSA7	R
□**17927**	45.00	72.00	8.00	HMSA7	R
□**17928**	45.00	75.00	8.00	HMS4	R
□**17929**	45.00	75.00	8.00	HMSA7	R
□**17930**	46.00	65.00	8.00	†CRW1	R
□**17933**	45.00	75.00	10.00	HMSA7	R
□**17935**	45.00	85.00	10.00	HMSA7	R
□**17937**	45.00	55.00	7.00	HMS4	R
□**17939**	45.00	55.00	7.00	HMSA7	R
□**17941**	45.00	100.00	10.00	HMSA7	R
17943	1.772	1.969	.512	END CAP	P
□**17945**	45.00	55.00	4.00	HMS4	R
□**17948**	45.00	55.00	4.00	HMSA7	R
□**17950**	46.00	68.00	8.00	†CRW1	R
□**17952**	45.00	68.00	12.00	HMS4	R
□**17954**	45.00	68.00	12.00	HMSA7	R
17955	1.811	2.697	.295	HMA8	R
□**17975**	46.00	72.00	8.00	†CRW1	R
□**17980**	46.00	73.00	8.00	†CRW1	R
18000	1.811	3.543	.630	HMSA7SP	P
	P.F. WIDTH .433 (11MM)				
18003	1.811	4.016	.394	CRSSPL	R
▲18009	1.809	2.361	.370	†HMA9	R
	P.F. WIDTH .340 & 2.865 FLANGE				
18014	1.811	2.480	.300	HMS4	P
	W/CW HELIX FROM AIR SIDE				
18015	1.811	2.520	.354	HMSA92	P
	W/CW HELIX FROM AIR SIDE				
▲18024	1.813	3.092	.469	HMSA25	R
▲**18025**	1.813	2.279	.313	†CRW1	R
18030	1.813	2.408	.300	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**18039**	1.813	2.437	.313	†CRW1	R
▲**18049**	1.813	2.562	.313	†CRWA1	V
▲18050	1.813	2.562	.438	†HM18	R
	CLEARANCE D .224				
▲18055	1.825	2.623	.250	†HM21	R
18098	1.813	2.562	.313	SL1	T
▲**18100**	1.813	2.623	.500	CRW79	R
	P.F. WIDTH .375				
18101	1.811	2.480	.291	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
18102	1.811	2.874	.572	UNITIZE	V
	VITON,W/HNBR SLEEVE				
▲**18104**	1.813	2.623	.313	†CRW1	R
18108	1.177	2.559	.433	HMSA57	P
	W/BI-DIR HELIX FROM AIR SIDE				
□18113	46.00	65.00	10.00	HMS47	R
18114	1.813	2.686	.313	†CRWA1	P
□18118	46.00	80.00	10.00	CRSH11	R
★18122	1.811	2.874	.394	HMSHA7	R
	W/BI-DIR HELIX FROM AIR SIDE				
18124	1.811	2.667	.315	HMS4	P
	W/CW HELIX FROM AIR SIDE				
▲18127	1.813	2.719	.270	TL7	R
18136	1.813	2.776	.432	181367	R
	W/CW HELIX FROM AIR SIDE				
▲18149	1.825	2.750	.484	†HM18	R
	CLEARANCE D .275				
▲**18159**	1.813	2.750	.313	†CRW1	R
▲18190	1.813	2.777	.432	†HMSA25	R
	W/CW HELIX FROM AIR SIDE				
▲**18242**	1.813	2.875	.313	†CRW1	R
18257	1.813			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
18258	1.813	2.965	.250	FF1	F
18259	1.813	3.003	.892	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
▲**18264**	1.813	3.000	.375	†CRWA1	P
18412	1.844	2.502	.375	†CRSA1	R
▲18415	1.825	2.570	.250	†HM21	R
▲**18425**	1.844	2.623	.313	†CRW1	R
▲18436	1.849	2.717	.398	D7	P
18443	1.890	2.440	.405	†HMSA23	E
	P.F WIDTH .354				
▲**18444**	1.844	2.750	.313	†CRW1	P
18446	1.844	2.750	.375	†CRSA1	R
□**18447**	47.00	60.00	7.00	†CRW1	R
□**18450**	47.00	62.00	8.00	†CRW1	R
18452	1.850	2.441	.354	HMS9	P
▲18454	1.850	2.520	.550	HMA5	R
	P.F. WIDTH .236				
18458	1.850	2.520	.276	D8	R
▲18465	1.850	2.598	.433	HMSA29	R
	P.F. WD .236 W/AXIAL DIRT LIP				
▲□18467	47.00	65.00	10.00	HMS4	R
18472	1.842	2.748	.426	†HMSA16	V
	W/BI-DIR HELIX FROM AIR SIDE				
□**18480**	47.00	70.00	10.00	HMSA7	R
▲□18485	47.00	72.00	8.00	†CRW1	R
18488	1.850	3.150	.511	HMSASPL	P
	W/.276 P.F. WIDTH				
18489	1.850	3.307	.374	HMA101	P
▲**18492**	1.868	2.518	.315	†CRWA1	P
18496	1.850	2.283	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
18499	1.850	2.698	.354	CRSA3	P
	WBI-DIR HELIX				
□18500	47.00	65.00	12.00	CRSH13	R
□18501	47.00	70.00	12.00	CRSH11	R
□18502	47.00	72.00	10.00	CRSH11	R
18505	1.850	3.976	.472	HMSA92	P
18507	1.850	2.756	.472	HMSA123	P
18508	1.875	2.625	.375	HMS4	S
	W/CW HELIX FROM AIR SIDE				
18510	1.872	2.684	.544	X13	R
	O.D. LISTED IS PRESSFIT I.D.				
18512	1.850	2.402	.276	HMSA7	V
	W/CW HELIX FROM AIR SIDE				
18513	1.850	2.835	.394	HMSA92	P
18531	1.890	2.835	.394	D7	R
▲18536	1.875	2.318	.203	HMSA11	V
	W/2.333 NOSE GASKET				
▲**18543**	1.875	2.401	.275	†HM14	R
18544	1.875	2.561	.600	†HMSA16	V
	W/HELIX-CW P.F. WIDTH .582				
▲**18545**	1.875	2.471	.313	†CRWA1	R
18546	1.875	2.562	.313	†CRWA1	V
▲18548	1.875	2.561	.600	†HMSA16	P
	W/HELIX-CW, P.F. WIDTH .528				
▲**18549**	1.875	2.398	.256	†CRW1	R
18550	1.875	2.398	.250	†KIT	R
	SEE KIT SECTION				
18551	1.875	2.398	.250	KIT	R
	SEE KIT SECTION				
▲**18555**	1.875	2.500	.313	†CRW1	P
▲18558	1.875	2.502	.250	†HM21	R
18562	1.875	2.562	.313	†CRW1	P

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲**18565**	1.875	2.502	.313	†CRW1	R
▲**18580**	1.875	2.623	.313	†CRW1	R
18581	1.875	2.623	.313	†CRWA1	R
18582	1.875	2.623	.313	†CRW1	V
18584	1.875	2.623	.313	†CRWA1	V
▲18591	1.875	2.623	.250	†HM21	R
18592	1.875	2.623	.374	†CRW1	S
▲**18603**	1.875	2.628	.328	†HM14	R
18623	1.875	2.716	.394	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
▲**18626**	1.875	2.686	.313	†CRW1	R
18630	1.873	2.716	.281	X13	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**18640**	1.875	2.721	.266	HM14	R
18652	1.875	2.750	.313	†CRW1	V
▲**18657**	1.875	2.750	.313	†CRW1	R
18658	1.875	2.750	.313	†CRWA1	R
▲18659	1.875	2.750	.250	†HM21	R
▲18662	1.875	2.750	.500	†HMSA26	R
18666	1.875	2.750	.313	†CRW1	P
▲**18671**	1.875	2.758	.313	†CRW1	P
18676	1.875	2.758	.531	D5	RR
18679	1.875	2.758	.313	†CRW1	S
18687	1.875	2.750	1.370	CRSA3	P
▲18692	1.875	2.760	.400	†HMS14	S
	W/CW HELIX FROM AIR SIDE				
▲**18693**	1.875	2.782	.438	†CRWH1	R
18695	1.875	2.782	.438	†CRWHA1	R
▲18697	1.875	2.804	.300	HMA22	R
▲18704	1.875	2.780	.250	†HM21	R
▲18708	1.875	2.813	.500	†HMSA16	R
	W/CW HELIX FROM AIR SIDE				
▲18710	1.875	2.868	.544	HMSA95	R
	P.F. WD .450 W/2.898 RIBBED OD				
18724	1.874	2.496	.351	HMSA92	V
□18727	47.00	72.00	6.00	HMA85	R
▲18731	1.875	2.868	.375	HMSA95	R
18732	1.875	2.875	.313	†CRW1	V
▲**18733**	1.875	2.875	.313	†CRW1	R
18734	1.875	2.875	.313	†CRWA1	R
18737	1.875	2.875	.313	†CRWA1	V
▲18750	1.875	2.875	.250	†HM21	R
18752	1.875	3.061	.485	D7	RT
18757	1.877	2.503	.341	HMSA7	V
18758	1.872	2.750	.677	†HMSA96	V
18761	1.875	2.628	.415	HMSA16	R
▲18765	1.875	2.903	.424	HMA84	R
	W/3.150 FLANGE				
▲18771	1.875	2.750	.500	†D8	ET
	P.F. WD .500, W/2.950 FLG O.D.				
▲**18772**	1.875	2.965	.234	†HM14	R
18782	1.890	3.071	.551	HMSA35	R
▲**18785**	1.875	2.997	.313	†CRW1	R
▲**18808**	1.875	2.997	.250	†HM14	R
▲**18817**	1.875	3.000	.313	†CRW1	R
18818	1.875	3.000	.313	†CRW1	V
▲18823	1.875	3.000	.250	†HM21	R
18829	1.875	3.000	.625	†UNITIZE	S
	P.F. WIDTH .562				
▲18833	1.813	3.001	.563	†HMSA25	P
	P.F. WIDTH .375 W/3.313 FLANGE				
18844	1.890	2.810	.700	X-SPL	P
	HUB SEAL				
18852	1.893	2.811	.468	HMSA97	P
	W/BI-DIR HELIX & 3M BEAD & FLG				
18854	1.890	2.677	.433	HMSA7	R
	W/CW HELIX FROM AIR SIDE				
18857	1.890	2.362	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
18860	1.886	2.690	.350	CRSA3	P
	W/CCW HELIX FROM AIR SIDE				
18862	1.851	2.441	.354	†HMS1	R
18864	1.890	2.441	.236	HMA1	R
18865	1.890	2.441	.296	†CRSHA1	R
18866	1.890	2.520	.472	CRSA1	R
□18868	47.90	72.00	11.43	HMSA21	V
	W/CCW HELIX AND 270 DEG SPRING				
18871	1.890	3.160	.620	KIT	R
▲**18872**	1.875	3.061	.313	†CRWA1	R
18873	1.890	2.756	.354	HMSA7	R
18875	1.890	3.160	.620	CRSHA32	R
18876	1.890	2.756	.669	D8-SPL	R
18877	1.890	2.559	.315	HMSA1	R
18878	1.889	2.685	.512	†D8-SPL	P
18879	1.875	3.125	.313	†CRSA1	R
▲**18880**	1.875	3.105	.500	†CRWA1	R
▲18881	1.875	3.150	.930	HMSA41	R
▲**18888**	1.875	3.160	.531	CRWA32	P
	P.F. WIDTH .254 W/O BUMPER				
▲18889	1.875	3.150	.250	†HM21	R
▲**18891**	1.875	3.160	.770	CRWA31	P
	P.F. WIDTH .254 & BUMPER				
18892	1.889	2.750	.520	HMSA92	P
	W/BI-DIR HELIX FROM AIR SIDE				
18895	1.890	2.624	.315	HMS4	S
18896	1.875	3.160	.695	CRSA8	V
	P.F. WIDTH .250 & BUMPER				
18897	1.890	2.362	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲**18899**	1.875	3.189	.469	†CRWH1	R
▲**18912**	1.875	3.105	.500	CRW2	R
	W/3.266 FLANGE				
▲**18916**	1.875	3.371	.438	†CRWH1	R
□18919	48.00	70.00	10.00	HMS47	R
□18921	48.00	70.00	9.00	CRSA1	R
▲**18922**	1.875	3.249	.484	†CRWA1	R
▲**18924**	1.875	3.496	.438	†CRWA1	R
18926	1.875	3.500	.438	†CRW1	R
□18935	48.00	72.00	12.00	HMS46	R
□18940	48.00	80.00	13.00	CRSH11	R
▲18948	1.875	3.744	.430	HMSH1	R
□**18951**	48.00	65.00	10.00	HMSA7	R
▲□18952	48.00	68.00	10.00	HMS4	R
□**18953**	48.00	68.00	10.00	HMSA7	R
□**18955**	48.00	62.00	8.00	HMSA7	R
□**18956**	48.00	62.00	8.00	HMSA7	V
□**18957**	48.00	62.00	8.00	HMS4	V
▲□18958	48.00	62.00	8.00	HMS4	R
▲18959	1.890	2.520	.540	HMSA65	R
	W/2.815 FLANGE				
18961	1.875	3.375	.313	J2	R
	SEE TYPE J SECTION (HMS LIP)				
□**18962**	48.00	62.00	8.00	†CRW1	R
□**18963**	48.00	62.00	8.00	†CRW1	P
18964	1.890	2.441	.945	HMA31	R
□**18965**	48.00	65.00	8.00	†CRW1	R
□**18966**	48.00	65.00	8.00	†CRW1	V
▲□18967	48.00	65.00	10.00	HMS4	R
□**18968**	48.00	68.00	8.00	†CRW1	R
▲□18970	48.00	70.00	8.00	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**18971**	48.00	70.00	8.00	†CRW1	V
□**18972**	48.00	72.00	8.00	†CRW1	R
□**18973**	48.00	72.00	8.00	†CRW1	V
□**18974**	48.00	74.00	10.00	HMSA7	R
▲□18976	48.00	72.00	8.00	HMS4	R
□**18977**	48.00	72.00	10.00	HMS4	R
18979	1.890	2.874	.276	CRSA1	P
▲□18981	48.00	80.00	8.00	†CRW1	R
18983	1.889	3.110	.688	CRSA1	P
18984	1.890	2.520	.472	HMSA96	R
18987	1.890	2.910	.390	HMSA92	P
□18989	48.00	80.00	10.00	HMS48	R
▲18990	1.886	2.561	.250	HM22	R
▲18992	1.886	2.700	.550	†HMSA16	P
	W/HELIX-CCW & 3.000 FLANGE				
18994	1.886	2.750	.469	HMSA92S	P
	W/BI-DIR HELIX FROM AIR SIDE				
□18997	48.00	58.00	4.00	HM4	R
18998	1.886	2.700	1.000	†KIT	P
18999	1.885	2.700	.552	HMSA25	#
	W/HELIX-CW W/3.000 FLANGE O.D.				
▲**19000**	1.893	2.434	.250	CRW1	R
□**19002**	48.00	72.00	7.00	HMSA7	R
□**19003**	48.00	90.00	10.00	HMS4	R
□**19007**	48.00	72.00	10.00	HMSA7	R
19010	1.915	2.533	.250	†CRW1	R
19011	1.893	2.533	.250	KIT	R
	SEE KIT SECTION				
19012	1.893	2.533	.250	†KIT	R
	SEE KIT SECTION				
19013	1.938	2.500	.300	†HMA9	R
19017	1.906	2.752	.375	†CRWA1	P
□**19021**	48.00	72.00	8.00	HMSA7	R
□**19028**	48.00	72.00	7.00	HMS4	R
19062	1.906	3.189	.313	CRSA1	P
▲19090	1.929	2.441	.315	HMSA45	R
	W/AXIAL DIRT LIP & SS SPRING				
□**19092**	49.00	68.00	7.00	HMSA7	V
19095	1.929	2.756	.472	HMSA-SP	R
	W/3.031 FLANGE O.D.				
19097	1.929	2.441	.441	HMSA45	P
▲19100	1.929	2.843	.315	HMA22	R
	P.F. WIDTH .236 - RC				
19192	1.929	2.756	.394	HM-SPL	R
	W/BI-DIR HELIX FROM AIR SIDE				
19200	1.929	2.520	.492	HMA16	R
	P.F. WIDTH .236 & 2.805 FLANGE				
▲19206	1.938	2.471	.313	†HMSA1	V
19208	1.927	2.910	1.210	†HMS-SPL	#
▲**19210**	1.938	2.437	.250	†CRW1	R
▲**19211**	1.938	2.563	.313	†CRW1	R
19212	1.938	2.437	.250	†CRW1	R
	W/SS CASE & SPRING				
19213	1.938	2.675	.250	†CRWA5	R
▲19214	1.938	2.500	.380	†HMA9	R
	P.F. WIDTH .306				
▲**19215**	1.938	2.412	.313	†CRW1	R
▲**19219**	1.938	2.502	.281	†HM14	R
▲**19220**	1.938	2.502	.375	†CRWA1	R
▲19221	1.938	2.502	.281	HMA4	R
▲19223	1.938	2.578	.294	HMA4	R
	W/2.840 FLANGE				
▲**19226**	1.938	2.623	.313	†CRW1	R
19227	1.938	2.623	.313	†CRWA1	V
▲**19229**	1.938	2.623	.313	†CRWA1	R
19234	1.938	2.686	.304	†CRWA1	P
▲**19236**	1.938	2.686	.304	†CRW1	R
19237	1.938	2.686	.304	†CRWA1	R
19240	1.938	2.686	.375	†CRW1	S
19243	1.938	2.686	.304	†CRWA1	V
19244	1.938	2.686	.304	†CRW1	P
19251	1.938	2.686	.594	†TL8	R
19252	1.937	2.687	.375	KIT	R
19255	1.938	2.680	.500	†D3	R
▲**19264**	1.938	2.750	.313	†CRW1	R
▲**19267**	1.938	2.750	.313	†CRW1	V
▲19273	1.938	2.762	.500	†CRSA1	R
	W/CW HELIX FROM AIR SIDE				
19274	1.938	2.825	.500	CRSH1	P
▲19277	1.938	2.813	.500	HMSA23	R
	W/CCW HELIX FROM AIR SIDE				
19278	1.938	2.835	.250	†CRWA5	R
19286	1.938	2.875	.563	KIT	RR
	SEE KIT SECTION				
□19290	49.00	65.00	10.00	HMS46	R
□19292	49.00	68.00	10.00	CRSH13	R
19293	1.929	2.677	.394	HMSA7	R
	W/BI-DIR HELIX FROM AIR SIDE				
▲**19300**	1.938	2.875	.313	†CRW1	R
19301	1.938	2.875	.313	†CRWA1	R
19304	1.938	2.875	.313	†CRWH1	V
19305	1.938	2.875	.718	KIT	P
	SEE KIT SECTION				
▲19306	1.938	2.875	.250	†HM21	R
19310	1.938	2.884	.313	†CRWA1	P
▲19314	1.940	2.909	.516	CRSA6	R
	HELIX-CW & 3.583 FLG,PF WD.370				
19317	1.890	2.677	.433	CRSA3	P
	W/BI-DIR HELIX FROM AIR SIDE				
19324	1.811	3.189	1.090	HMSA97S	P
19333	1.930	3.940	.315	HM83	R
▲**19350**	1.938	2.997	.313	†CRW1	R
▲**19359**	1.938	3.000	.313	†CRW1	R
19360	1.938	3.000	.313	CRWA1	R
19368	1.938	3.000	.313	†CRWA1	V
19372	1.938	2.693	.507	D8	R
19377	1.937	2.650	.350	†AHL1FLG	S
▲**19380**	1.938	3.061	.313	†CRW1	R
19387	1.938	2.750	.360	†HMSA16	V
▲**19400**	1.938	3.125	.500	†CRW1	R
▲**19407**	1.938	3.189	.313	†CRW1	R
19428	1.940	2.900	.400	HMSA16	R
19433	1.938	3.251	.313	†CRWA1	V
▲**19434**	1.938	3.251	.313	†CRW1	R
19438	1.938	3.062	.500	†CRW1	S
19445	1.938	3.350	.469	†CRWHA1	R
▲**19449**	1.938	3.543	.313	†CRW1	R
19455	1.938	3.622	.375	FF1	F
19466	1.938	3.751	.500	†CRSH1	R
▲19500	1.938	2.621	.570	†HMA8	R
	P.F. WIDTH .255				
▲19510	1.945	2.892	.294	†TL6	R
□**19564**	50.00	68.00	8.00	HMSA7	R
19569	1.969	2.750	.530	CRSHA1	R
19578	1.969	3.150	.433	HMSA96	P
	W/CCW HELIX FROM AIR SIDE				
19579	1.969	2.657	.531	CRSHA1	R
□**19581**	50.00	60.00	7.00	HMS4	R
□**19584**	50.00	60.00	7.00	HMSA7	R
□**19587**	50.00	62.00	10.00	HMS4	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**19589**	50.00	62.00	5.00	HMS4	R
□19590	50.00	58.00	4.00	HM4	R
□**19592**	50.00	62.00	10.00	HMSA7	R
□19595	50.00	62.00	5.00	HM4	R
19596	1.969	2.677	.354	CRSHA1	R
□**19597**	50.00	62.00	5.00	HMSA7	R
□**19598**	50.00	68.00	9.00	HMS4	R
19599	1.968	2.362	.236	HMA10	R
▲□19600	50.00	65.00	8.00	HMS4	R
□**19601**	50.00	65.00	8.00	HMSA7	R
□19602	50.00	62.00	7.00	CRS1	R
□**19603**	50.00	62.00	7.00	HMSA7	R
▲□19604	50.00	64.00	6.50	HMSA7	R
□**19605**	50.00	65.00	8.00	†CRW1	R
□**19606**	50.00	65.00	8.00	†CRW1	V
▲**19607**	1.969	2.623	.313	†CRWA1	R
□**19608**	50.00	68.00	8.00	†CRW1	R
▲19610	1.969	2.686	.375	HMS2	S
□**19611**	50.00	68.00	8.00	†CRW1	V
▲19612	1.969	2.618	.591	HMSA92	R
	P.F. WD .750 W/AXIAL DIRT LIP				
19613	1.969	2.677	.270	HMSA45	R
	W/AXIAL DIRT LIP				
□**19614**	50.00	68.00	8.00	HMS4	V
19615	1.969	2.686	.500	CRSH1	R
▲□19616	50.00	68.00	8.00	HMS4	R
□**19618**	50.00	68.00	10.00	HMS4	R
□**19619**	50.00	68.00	10.00	HMSA7	R
19620	1.969	2.742	.500	CRSH1	P
□**19621**	50.00	68.00	6.50	HMSA7	R
▲□19622	50.00	62.00	7.00	HMS4	R
19623	1.969	2.571	.315	HMSA24	P
	W/BI-DIR HELIX FROM AIR SIDE				
19624	1.969	2.638	.216	HMA90	R
▲19626	1.969	2.638	.433	HMA76	R
19627	1.969	2.638	.354	HMA8	R
▲19628	1.969	2.638	.354	CRSA1	R
□19629	50.00	62.00	10.00	CRS1	R
▲□19630	50.00	70.00	8.00	†CRW1	R
□**19631**	50.00	70.00	8.00	†CRW1	V
▲□19632	50.00	70.00	10.00	HMS4	R
□**19634**	50.00	70.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
19635	1.969	2.756	.315	HMSA92	P
	W/CW HELIX FROM AIR SIDE				
□**19636**	50.00	72.00	8.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□**19637**	50.00	65.00	10.00	HMSA7	R
▲□19638	50.00	72.00	8.00	HMS4	R
▲19639	1.969	2.835	.640	D5-SPL	R
	SPECIAL CONST.				
□**19640**	50.00	72.00	8.00	†CRW1	R
□**19641**	50.00	72.00	8.00	†CRW1	V
▲19643	1.969	2.875	.469	CRSH1	R
▲19644	1.969	2.874	.468	KIT	R
□**19645**	50.00	72.00	10.00	HMS4	R
□**19646**	50.00	72.00	8.00	HMSA7	R
19647	1.969	2.559	.384	HMA8	P
□**19648**	50.00	72.00	9.00	HMS4	R
□**19649**	50.00	72.00	10.00	HMSA7	R
□19650	50.00	87.00	11.00	HMSA92	P
19651	1.969	2.368	.276	HMSA7	V
□**19652**	50.00	72.00	12.00	HMSA7	R
□**19654**	50.00	75.00	8.00	†CRWA1	R
▲□19655	50.00	75.00	10.00	HMS4	R
19656	1.969	2.913	.354	HMSA92	P
□**19657**	50.00	75.00	10.00	HMSA7	R
▲19660	1.969	2.960	.250	HD1	R
	QUILL WIPER				
□**19662**	50.00	80.00	8.00	HMSA7	R
□**19663**	50.00	80.00	10.00	HMS4	R
□**19664**	50.00	80.00	8.00	†CRW1	R
▲□19665	50.00	80.00	8.00	HMS4	R
□**19666**	50.00	80.00	8.00	†CRW1	V
□**19667**	50.00	80.00	13.00	HMS4	R
□**19668**	50.00	82.00	8.00	†CRWA1	R
□**19669**	50.00	80.00	10.00	HMS4	V
	W/STAINLESS STEEL SPRING				
★19672	1.969	3.150	.630	HMSA92	P
	W/BI-DIR HELIX FROM AIR SIDE				
□**19674**	50.00	85.00	8.00	†CRW1	R
□**19675**	50.00	85.00	10.00	HMS4	R
19676	2.244	3.150	.402	HMSA56	R
19677	1.969	3.228	.315	HMSA96	P
□**19681**	50.00	65.00	9.00	HMSA7	R
19682	1.969	3.386	.748	HMSA96	R
	W/CCW HELIX FROM AIR SIDE				
□**19683**	50.00	75.00	12.00	HMSA7	R
▲□19684	50.00	90.00	8.00	†CRW1	R
□**19686**	50.00	90.00	8.00	†CRW1	V
□**19687**	50.00	90.00	10.00	HMS4	R
□**19688**	50.00	64.00	10.00	HMSA7	R
19689	1.969	2.835	.570	D8SPL	R
	AXIAL DIRT LIP-SEAL				
19709	1.988	3.051	.354	HMSA96	P
□19710	50.00	68.00	7.00	HMSA7P2	R
□**19714**	50.00	65.00	10.00	HMS4	R
□**19715**	50.00	72.00	12.00	HMS4	R
19720	1.991	2.900	.290	X4	R
	O.D. LISTED IS PRESSFIT I.D.				
□**19723**	50.00	70.00	10.00	HMSA7	R
□19728	50.00	72.00	7.00	HMSA7P2	R
19730	1.996	3.111	.344	†HMSA16	V
	W/HELIX-CW W/3.425 FLANGE				
19731	2.000	2.375	.188	HMS1	R
19733	2.000	2.375	.188	HM14	R
▲**19737**	2.000	2.371	.250	†HM14	R
19739	2.000	2.500	.438	†CRW1	S
□19741	50.00	75.00	9.00	CRS11	R
▲19743	2.000	2.622	.280	†HMA9	R
	W/3.000 FLG & AXIAL DIRT LIP				
▲**19745**	2.000	2.502	.313	†CRW1	P
19746	2.000	2.623	.250	†HM21	V
▲19748	2.000	2.500	.250	HM1	R
19753	2.000	2.562	.234	†HM14	R
▲**19754**	2.000	2.502	.250	†HM14	R
▲**19757**	2.000	2.565	.500	†HM14	R
▲**19760**	2.000	2.623	.313	†CRW1	R
19762	2.000	2.623	.313	†CRWA1	R
▲19763	2.000	2.623	.250	†HM21	R
▲**19768**	2.000	2.627	.234	†HM14	R
19770	2.000	2.635	.234	†HM14	R
19773	2.000	2.652	.365	HMA2	R
19777	2.000	2.623	.313	†CRWA1	V
▲**19778**	2.000	2.686	.375	†CRW1	R
19782	2.000	2.623	.313	†CRWA1	V
	W/STAINLESS STEEL SPRING				
▲19783	2.000	2.686	.250	†HM21	R
19784	2.000	2.560	.234	†HMA85	R
▲**19785**	2.000	2.716	.375	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
19786	2.000	2.716	.375	†CRWA1	R
□19791	50.00	78.00	13.00	CRSH13	R
19793	2.000	2.720	.210	X	R
	O.D. LISTED IS PRESSFIT I.D.				
▲19799	2.000	2.742	.375	†HMS13	P
	W/CW HELIX FROM AIR SIDE				
▲19803	2.000	2.745	.234	HM14	R
▲19807	2.000	2.746	.375	†CRW1	S
▲19820	2.000	2.752	.188	†HM14	R
19823	2.000	2.750	.313	†CRW1	V
▲19831	2.000	2.750	.313	†CRW1	R
19832	2.000	2.750	.313	†CRWA1	R
▲19834	2.000	2.750	.250	†HM21	R
19839	2.000	2.750	.313	†CRWA1	V
19840	2.000	2.750	.313	†CRW1	V
	W/SS CASE & SPRING				
19841	2.000	2.834	.197	SL2	T
	W/ALUMINUM CASE				
▲19844	2.000	2.802	.250	X15	D
	O.D. LISTED IS PRESSFIT I.D.				
▲19848	2.000	2.835	.469	†CRWH1	R
▲19852	2.000	2.562	.335	CRW2	R
	W/2.860 FLANGE				
19876	2.000	2.874	.703	†C8	RR
□19878	50.00	85.00	13.00	CRSH1	R
▲19880	2.000	2.875	.250	†HM21	R
19882	2.000	2.875	.256	XHM	R
	O.D. LISTED IS PRESSFIT I.D.				
19884	2.000	2.875	.313	†CRW1	V
▲19886	2.000	2.875	.313	†CRW1	R
19887	2.000	2.875	.313	†CRWA1	R
□19894	50.00	90.00	13.00	CRSH13	R
19896	2.000	2.875	.375	†CRWHA1	R
19900	2.000	2.875	.500	†CRWH1	R
	W/SS CASE & SPRING				
□19903	50.00	78.00	10.00	HMS47	R
19905	2.000	2.623	.311	HMSA1	V
	W/CW HELIX FROM AIR SIDE				
▲19922	2.000	2.880	.375	†CRWA1	R
19923	2.000	2.880	.375	†CRWA1	P
□**19925**	50.00	80.00	10.00	HMSA7	R
□**19927**	50.00	90.00	10.00	HMSA7	R
19938	2.000	2.965	.500	†HM14	R
	CLEARANCE D .275				
19939	2.000	2.880	.368	†HMS14	R
	W/CW HELIX FROM AIR SIDE				
▲19940	2.000	2.965	.313	†HM14	R
19955	1.995	2.620	.492	KIT	
▲19965	2.000	2.997	.250	HM21	R
19966	2.000	2.754	.302	†HMS14	S
▲19969	2.000	2.997	.375	†CRWH1	R
19970	2.000	2.997	.375	†CRWHA1	R
19974	2.000	2.997	.375	†CRWHA1	V
19979	2.000	2.997	.375	†CRWH1	V
19982	2.000	2.997	.438	†HMSA24	P
19984	2.000	2.560	.224	†HMA84	R
▲19992	2.000	3.000	.313	†CRW1	R
19993	2.000	3.000	.313	†CRWA1	R
19995	2.000	3.000	.313	†CRWA1	V
20002	2.000	3.000	.375	†CRWH1	V
20004	2.000	3.000	.375	†CRWH1	R
20005	2.000	3.000	.375	†CRWHA1	R
▲20006	2.000	3.000	.250	†HM21	R
20012	1.969	2.953	.354	CRSA1	P
20016	2.000	2.631	.272	HMA94	R
	P.F. WD IS.257",MINOR OD=2.628				
20018	2.000	2.620	.355	HMSA96	VT
20038	2.047	2.590	.290	HMSA96	P
▲20044	2.000	3.061	.250	†HM21	R
▲20045	2.000	3.061	.375	†CRW1	R
20053	2.000	3.061	.500	†CRWH1	R
20054	2.000	3.061	.500	†CRWHA1	R
▲20070	2.000	3.125	.375	†CRW1	R
▲20078	2.000	3.148	.250	HM14	R
▲20079	2.000	3.150	.375	†CRW1	R
▲20098	2.000	3.189	.469	†CRWH1	R
20100	2.000	3.189	.469	†CRWHA1	R
20108	2.000	3.251	.437	KIT	R
▲20109	2.000	3.251	.438	†CRWH1	R
▲20113	2.000	2.962	.250	†HM20	R
	W/3.209 FLANGE				
▲20118	2.000	2.968	.313	†HM14	R
20122	2.000	3.371	.438	†CRW1	V
▲20124	2.000	3.371	.438	†CRWH1	R
20125	2.000	3.371	.438	†CRWHA1	R
20127	2.000	3.371	.438	CRWH1	V
20136	2.000	3.370	1.031	CRSA4	P
	HELIX-CW & 3.800 FLG,PF WD.358				
▲20140	2.000	3.543	.433	†CRWH1	R
▲20144	2.000	3.623	.438	†CRWH1	R
20146	1.980	3.371	.563	†KIT	V
	SEE KIT SECTION				
▲20148	2.000	3.623	.250	HM21	R
▲20158	2.000	4.003	.438	†CRWH1	R
20168	2.000		.562	J2-KIT	R
	SEE TYPE J SECTION (HM LIP)				
▲□20205	51.00	63.00	6.00	HMA2	R
20209	2.008	2.480	.470	HMSA96	R
	P.F. WIDTH .337"				
▲□20210	51.00	65.00	7.00	†CRWA1	R
20215	2.008	2.598	.413	HMSA96	R
	P.F. WIDTH .295 (7.5MM)				
20216	2.008	2.756	.433	HMSASPL	P
	W/CCW HELIX FROM AIR SIDE				
□**20255**	51.00	73.00	8.00	†CRWA1	R
□**20275**	51.00	80.00	9.53	†CRW1	R
□**20280**	51.00	81.00	9.53	†CRWH1	R
□**20281**	51.00	81.00	9.53	†CRWHA1	R
□**20292**	51.00	92.00	11.13	†CRWH1	R
□**20400**	52.00	62.00	7.00	HMSA7	R
20403	2.043	2.835	.315	HMSA29	R
□**20405**	52.00	63.00	8.00	HMSA7	P
□**20408**	52.00	65.00	9.00	HMSA7	R
□**20415**	52.00	69.00	10.00	HMS4	R
20417	2.047	2.441	.217	XA-SPL	P
	O.D. LISTED IS PRESSFIT I.D.				
▲20420	2.047	2.561	.315	†CRW1	R
□**20421**	52.00	68.00	8.00	†CRW1	R
▲20422	2.047	2.638	.264	X	P
	O.D. LISTED IS PRESSFIT I.D.				
□**20424**	52.00	68.00	8.00	†CRW1	V
▲20425	2.048	2.727	.570	†HMA8	R
	W/AXIAL DIRT LIP				
▲□20426	52.00	68.00	8.00	HMS4	R
20427	2.047	2.677	.276	HMA8	P
	W/AXIAL DIRT LIP				
▲20428	2.047	2.677	.512	HMSA7SP	R
	SPECIAL CONST.				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
20429	2.047	2.953	.294	HMSA29	R
	W/AXIAL DIRT LIP				
▲□20430	52.00	70.00	8.00	†CRW1	R
▲20431	2.047	2.599	.295	HMSA96	P
20432	2.047	2.756	.374	HMSA1	V
	W/CW HELIX FROM AIR SIDE				
20433	2.047	2.561	.354	†CRS1	R
□**20434**	52.00	66.00	9.00	HMS4	R
□**20435**	52.00	72.00	8.00	†CRWA1	V
□**20437**	52.00	72.00	8.00	HMSA7	R
20438	2.047	2.835	.315	HMSA35	P
	W/CW HELIX FROM AIR SIDE				
▲20439	2.047	2.756	.294	X	R
	O.D. LISTED IS PRESSFIT I.D.				
□**20440**	52.00	72.00	8.00	†CRW1	R
□**20441**	52.00	72.00	8.00	†CRW1	V
□**20442**	52.00	72.00	10.00	HMS4	R
□**20443**	52.00	72.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□20444	52.00	72.00	8.00	HMS4	R
20445	2.045	2.835	.618	HMSA7SP	P
20446	2.047	2.874	.315	KIT	P
20447	2.283	2.992	.630	HMSASPL	R
20448	2.047	2.717	.583	D7-SPL	P
□**20453**	52.00	75.00	12.00	HMS4	R
20455	2.047	2.677	.315	HMSA96	P
20457	2.047	2.756	.354	HMSA1	R
20463	2.047	2.835	.315	HMSA96	R
▲20465	2.047	3.071	.368	X	P
	O.D. LISTED IS PRESSFIT I.D.				
□**20466**	52.00	68.00	8.00	HMSA7	R
□**20473**	52.00	80.00	10.00	HMS4	R
□**20478**	52.00	68.00	10.00	HMSA7	R
□20479	52.00	72.00	12.00	CRSA13	R
□20481	52.00	72.00	12.00	HMS45	R
□20488	52.00	75.00	10.00	HMS46	R
□**20490**	52.00	85.00	8.00	†CRW1	R
□20491	52.00	80.00	13.00	CRS15	R
▲□20495	52.00	85.00	10.00	HMS4	R
20501	2.047	3.268	.315	KIT	R
	SEE KIT SECTION				
□**20507**	52.00	72.00	10.00	HMSA7	R
20520	2.063	2.561	.313	†CRW1	V
20525	2.063	2.661	.188	HMS4	R
20526	2.063	2.661	.188	KIT	R
	SEE KIT SECTION				
20530	2.063	2.750	.313	CRWH1	R
▲**20538**	2.063	2.842	.438	†CRWH1	R
▲**20554**	2.063	2.875	.438	†CRWH1	R
20560	2.063	2.938	.344	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**20586**	2.063	2.997	.438	†CRWH1	R
▲**20594**	2.063	3.000	.375	†CRW1	R
20599	2.063	3.000	.375	†CRWA1	V
▲20608	2.063	3.000	.313	†HM21	R
▲**20643**	2.063	3.061	.313	†CRWH1	R
20659	2.063	3.125	.375	†CRW1	R
20669	2.063	3.149	.250	†HM21	R
20672	2.063	3.149	.500	†TL6	D
	P.F. WIDTH .395				
▲20674	2.063	3.150	.266	TL7	R
20700	2.047	3.268	.709	KIT	R
▲**20702**	2.063	3.189	.375	†CRW1	R
▲20735	2.063	3.250	.294	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
20747	2.063	3.251	.438	†CRWHA1	R
▲**20749**	2.063	3.251	.438	†CRWH1	R
20766	2.063		.348	J2-KIT	R
	SEE TYPE J SECTION (CRWH LIP)				
20866	2.087	2.795	.453	CRSA1	R
□20872	53.00	72.00	12.00	CRSH11	R
□20873	53.00	80.00	13.00	CRSH13	R
20875	2.087	3.203	.610	†HMSA9	R
20880	2.088	2.911	.500	HMSA97	V
	W/3.309 FLANGE O.D.				
□**20902**	53.08	71.29	8.91	HMS4	P
□**20904**	53.00	68.00	8.00	CRW1	V
□**20905**	53.00	68.00	10.00	HMS4	R
20906	2.086	2.685	.276	HMSA7	R
▲20952	2.094	2.718	.359	†HM18	R
	CLEARANCE D .160				
20965	2.094	3.149	.550	†HM21	R
21020	2.102	3.038	.315	HMSW7	V
▲□21040	54.00	65.00	8.00	†CRW1	R
□**21041**	54.00	65.00	8.00	†CRW1	V
21043	2.126	2.559	.512	CRSA1	R
▲21045	2.125	2.960	.669	HMSA45	R
	W/P.F. WIDTH 8.00MM (.315)				
21048	2.126	2.598	.315	HMSA96	P
21052	2.126	2.717	.296	D5SPL	R
▲21059	2.125	2.750	.250	†HM21	R
▲**21061**	2.125	2.750	.500	†CRWA1	R
21063	2.125	2.750	.375	†CRW1	V
▲21064	2.126	2.756	.374	HMSHA1	R
	P.F. WIDTH .276				
21069	2.125	2.763	.250	†CRW1	R
21070	2.125	2.763	.250	KIT	R
	SEE KIT SECTION				
21091	2.125	2.875	.438	†CRW1	V
▲**21098**	2.125	2.875	.438	†CRW1	R
▲**21100**	2.125	2.875	.438	†CRWA1	R
▲**21101**	2.125	2.875	.250	†HM14	R
▲**21103**	2.125	2.875	.375	†CRW1	S
21108	2.125	2.875	.438	†CRWHA1	R
▲21110	2.125	2.880	.500	†HMSA16	R
	W/CW HELIX FROM AIR SIDE				
▲**21111**	2.125	2.880	.550	†CRWA3	P
	W/HELIX-CCW & 3.180 FLANGE				
▲**21121**	2.125	2.891	.250	†HM14	R
21128	2.125	2.953	.472	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
▲**21134**	2.125	2.997	.438	†CRWH1	R
21136	2.125	2.997	.438	†CRWHA1	R
▲21159	2.125	3.000	.250	†HM21	R
▲**21163**	2.125	3.000	.375	†CRW1	R
21164	2.125	3.000	.375	†CRWA1	R
21167	2.125	3.000	.313	†CRWHA1	V
21171	2.125	3.000	.438	†CRWH1	V
21172	2.125	3.000	.438	†CRWH1	R
21173	2.125	3.000	.438	†CRWHA1	R
▲**21203**	2.125	3.061	.438	†CRWH1	V
	W/STAINLESS STEEL SPRING				
▲21208	2.125	3.061	.250	†HM21	R
▲**21210**	2.125	3.061	.500	†CRW1	R
21211	2.125	3.061	.500	CRWA1	R
21213	2.125	3.061	.500	†CRWHA1	R
▲**21234**	2.125	3.125	.438	†CRWH1	R
21236	2.125	2.880	.552	†HMSA25	V
21239	2.125	2.884	.401	D8	V
21241	2.122	3.030	.430	HMSA97	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
21244	2.128	3.150	.532	HMSA95	R
21245	2.125	3.125	.438	†CRWHA1	P
21247	2.126	2.559	.276	HMS18SP	P
21248	2.126	2.992	.315	HMSA96	P
□21261	54.00	70.00	10.00	CRS13	R
□21262	54.00	70.00	12.00	CRSH13	R
▲21265	2.125	3.189	.250	†HM21	R
▲21267	2.125	3.189	.375	†CRWA1	R
21269	2.125	3.189	.375	†CRWA1	V
21270	2.125	3.189	.469	†CRWHA1	S
□21273	54.00	80.00	13.00	CRSH13	R
21281	2.126	3.228	.315	HMSA96	V
□21283	54.00	80.00	10.00	CRSH1	R
21285	2.125	2.763	.500	HMSA97	V
	W/CW HELIX FROM AIR SIDE				
□21290	54.00	70.00	8.00	HMSA7	P
21291	2.130	2.745	.958	HM-SPL	R
21294	2.125	3.058	.235	KIT	R
	FLG OD 3.266				
▲21298	2.125	3.250	.270	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲21302	2.125	3.251	.438	†CRWH1	R
21306	2.125	3.250	.900	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
21307	2.125			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
□21318	54.00	72.00	10.00	HMSA7	R
▲□21320	54.00	73.00	11.00	†CRW1	R
□21324	54.00	73.00	11.13	†CRWA1	R
21327	2.126	2.992	.563	D6	P
	RUBBER COVERED				
▲21336	2.125	3.350	.438	†CRWH1	R
▲□21345	54.00	81.00	9.53	†CRWA1	R
▲21352	2.125	3.371	.375	†CRWA1	R
▲21353	2.125	3.371	.438	†CRWH1	R
▲21358	2.125	3.543	.438	†CRWH1	R
□21361	54.00	85.00	10.00	HMS4	R
▲21379	2.125	3.623	.469	CRSA1	P
▲21400	2.136	2.904	.453	†HMS17	R
	P.F. WIDTH .310 & 3.110 FLANGE				
21410	2.141	3.484	.329	HMS14	P
	W/CW HELIX				
▲21538	2.145	3.188	.469	CRSH1	R
▲□21603	55.00	68.00	8.00	HMS4	R
□21610	55.00	70.00	8.00	†CRW1	R
□21611	55.00	70.00	8.00	†CRW1	V
▲□21612	55.00	70.00	8.00	HMS4	R
□21613	55.00	70.00	8.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□21615	55.00	70.00	9.00	HMSA7	R
□21619	55.00	72.00	8.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□21620	55.00	72.00	8.00	†CRW1	R
□21621	55.00	72.00	8.00	†CRW1	V
□21622	55.00	73.00	8.00	†CRW1	V
▲□21623	55.00	72.00	8.00	HMS4	R
□21624	55.00	72.00	10.00	HMS4	R
□21625	55.00	75.00	8.00	†CRW1	R
□21626	55.00	75.00	8.00	†CRW1	V
▲□21627	55.00	75.00	10.00	HMS4	R
21628	2.165	2.913	.276	HMA8	P
	W/AXIAL DIRT LIP				
□21629	55.00	72.00	9.00	HMSA7	R
□21630	55.00	78.00	9.00	HMS1	R
□21631	55.00	78.00	10.00	HMS4	R
□21632	55.00	78.00	12.00	HMSA7	R
□21633	55.00	85.00	14.00	HMS4	R
□21634	55.00	75.00	10.00	HMSA7	R
▲□21637	55.00	80.00	8.00	HMS4	R
□21638	55.00	80.00	8.00	HMSA7	R
21639	2.165	3.150	.315	HMSA16	V
□21640	55.00	80.00	8.00	†CRW1	R
□21641	55.00	80.00	8.00	†CRW1	V
□21642	55.00	80.00	10.00	HMS4	R
□21643	55.00	70.00	10.00	HMSA7	R
□21644	55.00	80.00	12.00	HMS4	R
□21645	55.00	80.00	13.00	HMS4	R
□21646	55.00	70.00	10.00	HMS4	R
□21648	55.00	68.00	8.00	HMSA7	R
21650	2.172	2.426	.484	SL1	T
	W/3.000 FLANGE				
□21651	55.00	82.00	12.00	HMS4	R
21652	2.165	2.670	.310	HMSA56	P
□21656	55.00	70.00	8.00	HMSA7	R
□21660	55.00	85.00	8.00	†CRW1	R
▲□21661	55.00	85.00	8.00	HMS4	R
□21664	55.00	72.00	7.00	HMSA7P2	R
□21667	55.00	72.00	8.00	HMSA7	V
□21668	55.00	85.00	10.00	HMS4	R
▲□21670	55.00	90.00	8.00	†CRW1	R
▲□21671	55.00	90.00	10.00	HMS4	R
□21673	55.00	90.00	13.00	HMS4	R
□21682	55.00	75.00	12.00	HMS4	R
▲□21685	55.00	100.00	8.00	†CRW1	R
□21693	55.00	100.00	12.00	HMS4	R
□21699	55.00	80.00	10.00	HMSA7	R
□21709	55.00	85.00	13.00	HMS47	R
□21711	55.00	90.00	10.00	HMSA7	R
□21716	55.00	100.00	13.00	CRSH13	R
□21717	55.00	78.00	13.00	CRSH11	R
□21723	55.00	72.00	8.00	HMSA7	R
□21727	55.00	72.00	10.00	HMSA7	R
□21732	55.00	85.00	10.00	HMSA7	R
21735	2.180	3.059	.300	†HMA22	R
▲21736	2.188	2.875	.438	†CRWH1	R
□21744	55.00	78.00	8.00	HMS4	R
□21747	55.00	78.00	8.00	HMSA7	R
▲21749	2.188	2.997	.438	†CRWH1	R
21756	2.188	3.000	.256	HMA22	R
▲21759	2.188	3.000	.375	†CRWA1	R
21763	2.188	3.000	.375	†CRWA1	V
21764	2.188	3.000	.500	†CRWH1	R
★21769	2.188	3.000	.340	†HMA22	R
▲21771	2.188	3.000	.500	†HMA22	R
▲21775	2.188	3.061	.500	†CRWH1	R
21814	2.188	3.188	.688	KIT	R
	SEE KIT SECTION				
21820	2.188	3.188	.469	KIT	R
	SEE KIT SECTION				
▲21840	2.188	3.251	.438	†CRWH1	R
▲21890	2.188	3.350	.438	†CRWH1	R
▲21910	2.188	3.371	.438	†CRWH1	R
21915	2.191	3.055	.170	X-SPL	P
	O.D. LISTED IS PRESSFIT I.D.				
21918	2.186	3.131	.729	VACBOOT	R
	HUB SEAL				
▲21938	2.188	3.189	.640	HMA4	R
21950	2.188	3.623	.500	CRSHA1	R
▲21952	2.199	2.737	.438	†HMA90	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
21953	2.199	2.804	.300	HMA85	P
	W/ALUMINUM CASE				
▲21955	2.201	3.519	.591	†HMSA16	R
	W/CW HELIX FROM AIR SIDE				
21961	2.201	2.738	.197	HMA73	R
	W/2.913 FLG & AXIAL DIRT LIP				
21962	2.123	2.737	.438	†KIT	R
22005	2.205	2.638	.217	X	R
	O.D. LISTED IS PRESSFIT I.D.				
22013	2.205	2.992	.484	HMSA101	R
	W/AXIAL DIRT EXCLUDER & BUMPER				
▲□22015	56.00	70.00	8.00	HMS4	R
▲□22018	56.00	72.00	8.00	HMS4	R
□22020	56.00	72.00	9.00	†HMS1	R
22022	2.205	2.835	.453	HMSA57	R
	P.F. WIDTH .453 W/3.032 FLANGE				
22024	2.205	2.843	.315	HMS4SPL	P
22026	2.205	2.846	.315	HMSA92	R
22027	2.205	2.835	.492	†HMAS21	R
▲22028	2.205	3.054	.551	HMSASPL	R
	P.F. WIDTH .276				
22029	2.205	3.031	.394	CRSA3	R
	W/BOOT & 3.360" FLG OD				
▲□22030	56.00	75.00	8.00	†CRW1	R
22031	2.205	2.953	.433	HMSA7SP	R
	W/CW HELIX FROM AIR SIDE				
22033	2.205	2.953	.315	HMSA96	P
22035	2.205	2.992	.472	†CRSA9	R
	P.F. WIDTH .236 SPECIAL CONST.				
▲22037	2.205	2.874	.315	HMSA96	P
□**22038**	56.00	72.00	8.00	HMSA7	R
□22040	56.00	78.00	10.00	HMS1	R
22041	2.205	2.870	.315	HMSA96	P
22042	2.205	3.071	.295	HMSA96	R
	W/AXIAL DIRT LIP				
22045	2.205	3.471	.876	HMSASPL	P
22047	2.205	2.874	.315	KIT	P
22048	2.205	2.835	.433	†HMSA56	R
22049	2.205	3.031	.472	CRSA3	P
	P.F. WIDTH .472 & 13.398 WIDTH				
□22051	56.00	70.00	8.00	CRS11	R
▲□22053	56.00	80.00	8.00	HMS4	R
□22059	56.00	72.00	10.00	CRSH11	R
□★22060	56.00	82.00	8.00	†HMSA27	R
□22067	56.00	80.00	13.00	CRSH11	R
▲□22071	56.00	85.00	8.00	HMS4	R
□**22074**	56.00	82.00	8.00	HMSA7	R
22075	2.047	2.953	.390	KIT	P
22120	2.208	2.913	.394	HMSA57	R
	W/3.268 FLANGE O.D.				
▲22125	2.205	2.992	.435	HMSA57	R
	W/AXIAL DIRT LIP				
22175	2.222	3.543	.750	UNITZED	SR
22224	2.244	2.835	.331	HMSA21	P
▲**22225**	2.244	2.638	.236	HMSA7	R
▲22230	2.244	3.110	.531	HMSA55	R
	W/3.366 FLG & AXIAL DIRT LIP				
□**22240**	57.00	81.00	11.00	†CRW1	R
□**22245**	57.00	81.00	11.00	†CRWA1	P
22250	2.244	3.189	.450	HMSA96	P
□**22260**	57.00	92.00	11.00	†CRWH1	R
□**22262**	57.00	92.00	11.00	†CRWHA1	R
22284	2.244	4.810	.413	HMS83	R
	P.F. WIDTH .315 (8MM)				
▲**22306**	2.250	2.625	.188	†HM14	R
▲**22311**	2.250	3.110	.469	VR1	R
	SHAFT RANGE 2.090 - 2.290				
22319	2.250	2.891	.563	†CRWA1	R
▲22325	2.250	2.875	.250	HM21	R
▲**22328**	2.250	2.875	.313	†CRWA1	R
▲**22338**	2.250	2.997	.438	†CRWH1	R
22340	2.250	2.997	.438	†CRWHA1	R
▲**22353**	2.250	3.000	.375	†CRW1	R
22354	2.250	3.000	.375	†CRWA1	R
22358	2.250	3.000	.438	†CRWH1	R
22359	2.250	3.000	.438	†CRWHA1	R
22361	2.250	3.000	.375	†CRWA1	V
22363	2.250	3.000	.375	†CRW1	V
22367	2.250	3.000	.438	†CRWH1	V
▲22368	2.250	3.000	.250	†HM21	R
22371	2.250	3.035	.374	HMSH4	R
▲**22382**	2.250	3.061	.375	†CRW1	R
22390	2.250	3.061	.438	†CRWH1	R
22391	2.250	3.061	.438	†CRWHA1	R
▲22392	2.250	3.061	.250	HM21	R
22394	2.250	3.061	.438	†CRWHA1	S
▲**22400**	2.250	3.125	.375	†CRWA1	R
22405	2.250	3.125	.375	†CRWA1	V
22407	2.250	3.125	.500	CRWH1	R
22411	2.250	3.125	.563	HM18	R
	CLEARANCE D .214				
▲**22424**	2.250	3.189	.438	†CRW1	R
22425	2.250	3.189	.438	†CRWA1	P
▲22430	2.250	3.250	.270	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**22440**	2.250	3.251	.375	†CRW1	R
22441	2.250	3.251	.375	†CRWA1	R
22446	2.250	3.251	.438	†CRWH1	R
22448	2.250	3.251	.438	†CRWHA1	R
22449	2.250	3.251	.438	†CRWH1	V
22450	2.250	3.251	.375	†CRWA1	P
□22453	57.00	72.00	10.00	CRSH1	R
22454	2.205	2.677	.433	HMA8	R
□22457	57.00	80.00	12.00	CRSH11	R
□22458	57.00	85.00	10.00	CRSH11	R
□22463	57.00	90.00	13.00	CRS13	R
□22467	57.00	90.00	13.00	CRSH11	R
▲22468	2.250	3.251	.250	HM21	R
□**22469**	57.00	85.00	13.00	HMSA7	R
▲22483	2.250	3.310	.375	†HM18	R
	CLEARANCE D .130				
22484	2.250	3.350	.375	†CRW1	P
▲**22492**	2.250	3.350	.438	CRWH1	R
22493	2.250	3.350	.438	†CRWHA1	R
22495	2.250	3.350	.438	†CRWH1	V
22532	2.250	3.371	.438	†CRWHA1	R
▲**22550**	2.250	3.371	.375	†HM14	R
▲**22558**	2.250	3.371	.438	†CRWH1	R
22561	2.250	3.371	.438	†CRWH1	V
22562	2.250	3.251	.500	†KIT	V
	SEE KIT SECTION				
▲22563	2.250	3.400	.294	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**22565**	2.250	3.440	.250	†HM14	R
22573	2.250	3.371	.375	†CRSH1	V
22582	2.250	3.500	.438	†CRWHA1	R
▲**22583**	2.250	3.500	.438	†CRWH1	R
22587	2.125	3.500	.750	KIT	R
22590	2.250	3.500	.438	†CRWHA1	V
▲**22610**	2.250	3.565	.438	†CRWA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
22614	2.240	3.189	.610	†HM14	R
▲**22618**	2.250	3.623	.438	†CRWH1	R
22619	2.250	3.623	.438	†CRWHA1	R
▲**22626**	2.250	3.751	.438	†CRWH1	R
22640	2.250	3.251	.520	†HMSHA16	P
	W/CCW HELIX				
▲**22644**	2.250	3.876	.438	†CRWH1	R
▲**22647**	2.250	4.003	.438	†CRWH1	R
22653	2.250	4.063	1.220	†CRWA3	P
	W/4.438 FLANGE				
22742	2.272	2.656	.250	SL1	T
	W/BRASS CASE				
□**22804**	58.00	72.00	8.00	HMSA7	R
22808	2.283	2.874	.507	HMSA57	R
□22811	58.00	78.00	8.00	HMSHA1	R
□**22813**	58.00	72.00	8.00	HMS4	V
□**22815**	58.00	72.00	8.00	†CRW1	R
▲□22816	58.00	72.00	8.00	HMS4	R
□**22818**	58.00	72.00	8.00	†CRW1	S
22819	2.283	2.913	.512	D7	P
22821	2.283	2.992	.276	HMSA29	R
▲□22822	58.00	75.00	8.00	†CRW1	R
□**22823**	58.00	75.00	9.00	HMSA7	R
□**22824**	58.00	75.00	11.00	HMS4	R
22826	2.283	3.031	.335	HMS83	R
▲□22827	58.00	80.00	8.00	HMS4	R
□**22828**	58.00	80.00	12.00	HMSA7	R
□**22831**	58.00	80.00	10.00	HMS4	R
□**22832**	58.00	80.00	8.00	†CRW1	R
□**22833**	58.00	80.00	8.00	†CRW1	V
□**22834**	58.00	80.00	10.00	HMSA7	R
▲22835	2.281	3.154	.375	†HM21	R
22840	2.283	2.953	.276	HMS4SPL	P
22841	2.283	2.951	.292	HMSA45	P
22842	2.283	2.910	.390	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
22845	2.283	3.070	.394	HMSA92	R
	W/CCW HELIX FROM AIR SIDE				
□**22849**	58.00	85.00	8.00	†CRW1	R
▲□22851	58.00	85.00	10.00	HMS4	R
□22862	58.00	90.00	13.00	CRSH13	R
□22866	58.00	85.00	13.00	CRSH1	R
□**22869**	58.00	90.00	8.00	†CRW1	R
▲22870	2.297	3.148	.359	HM18	R
	CLEARANCE D .185				
□**22875**	58.00	90.00	10.00	HMSA7	R
22878	2.283	4.055	.435	HMSA96	P
	W/CW HELIX FROM AIR SIDE				
23000	2.500	3.350	.438	†CRSA3	R
▲**23030**	2.313	2.997	.375	†CRW1	R
▲**23035**	2.313	3.000	.250	†HM14	R
▲**23040**	2.313	3.000	.438	†CRWH1	V
▲**23046**	2.313	3.061	.313	†CRW1	R
23050	2.313	3.065	.281	HM1	R
▲**23061**	2.313	3.125	.375	†CRW1	R
23063	2.313	3.125	.375	†CRWA1	V
▲**23093**	2.313	3.251	.438	†CRWH1	R
23099	2.313	3.251	.438	CRWHA1	V
▲23130	2.313	3.310	.375	†HM21	R
▲**23152**	2.313	3.350	.438	†CRWH1	R
▲**23167**	2.313	3.371	.438	†CRW1	R
▲**23169**	2.313	3.374	.438	†CRWHA1	R
▲**23184**	2.313	3.500	.313	CRW1	R
23228	2.323	2.835	.472	HMSA7	R
▲23240	2.313	3.500	.250	†HM21	R
23244	2.324	3.541	.591	HMSA97	R
	W/4 .018" FLANGE O.D.				
23276	2.327	3.130	.315	†RRH1	R
23277	2.313	3.751	.500	†CRW1	R
▲□23278	59.00	75.00	9.11	HMSA29	R
23279	2.313	3.751	.500	†KIT	R
23284	2.322	3.937	.394	D8-SPL	P
23286	2.323	3.937	.394	HMSA7SP	P
23297	2.323	3.080	.315	HMSA92	P
23299	2.323	3.083	.315	HMSA24	R
▲**23300**	2.328	3.000	.395	†CRW1	P
□**23414**	60.00	80.00	12.00	HMS4	R
□**23425**	60.00	72.00	8.00	HMS4	R
▲□23426	60.00	75.00	8.00	HMS4	R
□**23427**	60.00	75.00	8.00	HMSA7	R
□**23428**	60.00	75.00	8.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**23429**	60.00	75.00	8.00	†CRW1	R
□**23430**	60.00	75.00	8.00	†CRW1	V
□**23431**	60.00	75.00	10.00	HMSA7	R
▲23432	2.362	2.953	.465	HMSA	R
	W/P.F. WIDTH 5.80MM (.228)				
□**23433**	60.00	75.00	9.00	HMS4	R
□23435	60.00	78.00	9.00	†CRS1	R
□**23436**	60.00	78.00	9.00	HMSA7	R
□**23438**	60.00	80.00	10.00	HMSA7	R
▲□23439	60.00	80.00	8.00	HMS4	R
□**23440**	60.00	80.00	8.00	†CRW1	R
□**23441**	60.00	80.00	8.00	†CRW1	V
□**23442**	60.00	80.00	10.00	HMS4	R
□**23443**	60.00	80.00	13.00	HMS4	R
□**23444**	60.00	80.00	8.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□23445	60.00	82.00	8.00	†CRWA1	R
23446	2.362	3.228	.472	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
□**23447**	60.00	85.00	8.00	†CRW1	V
□**23449**	60.00	85.00	8.00	†CRW1	R
23450	2.362	3.374	.395	HMS14	S
	W/CW HELIX FROM AIR SIDE				
▲□23451	60.00	85.00	8.00	HMS4	R
□**23452**	60.00	85.00	8.00	HMSA7	R
□**23453**	60.00	85.00	10.00	HMS4	R
□**23454**	60.00	85.00	12.00	HMS4	R
□**23456**	60.00	82.00	12.00	HMSA7	R
23458	2.362	3.386	.276	HMSA29	R
□**23462**	60.00	85.00	10.00	HMSA7	R
23464	2.362	3.543	.866	D5-SPL	R
□**23465**	60.00	90.00	8.00	†CRW1	R
□**23466**	60.00	90.00	10.00	HMS4	R
▲□23467	60.00	90.00	8.00	HMS4	R
▲□23468	60.00	95.00	10.00	HMSA7	R
□**23471**	60.00	90.00	14.00	HMS4	R
□**23475**	60.00	90.00	10.00	HMSA7	R
□**23476**	60.00	95.00	8.00	HMSA7	R
23483	2.362	3.937	1.063	KIT	R
	SEE KIT SECTION				
23484	2.362	4.055	.472	HMSA96	P
□**23486**	60.00	105.00	8.00	†CRW1	R
▲□23488	60.00	110.00	8.00	†CRW1	R
23590	2.359	3.938	.686	PLUS XL	P
	SCOTSEAL PLUS XL				
23615	2.362	2.954	.208	†HMSA56	R
□23618	60.00	70.00	7.00	CRS1	R
□**23619**	60.00	80.00	12.00	HMSA7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲23630	2.375	2.997	.250	†HM21	R
▲23632	2.375	2.997	.438	†CRWH1	R
□★23636	60.00	80.00	7.00	HMSA71	R
□23639	60.00	80.00	10.00	CRSHA1	R
▲23640	2.375	3.000	.250	HM21	R
▲23641	2.375	3.000	.375	†CRW1	V
▲23644	2.375	3.061	.438	†CRWH1	R
23645	2.375	3.061	.438	†CRWH1	P
▲23646	2.375	3.125	.375	†CRW1	R
23652	2.375	3.125	.438	†CRWH1	R
23654	2.375	3.125	.438	†CRWHA1	R
23655	2.375	3.061	.438	†CRWH1	V
	W/STAINLESS STEEL SPRING				
23656	2.375	3.125	.438	†CRWHA1	V
23659	2.375	3.125	.375	†CRW1	S
▲23666	2.375	3.189	.438	†CRWH1	R
23678	2.375	3.251	.433	†CRWHA1	V
▲23685	2.375	3.251	.453	†CRW1	P
▲23691	2.375	3.251	.625	†CRWA3	P
	P.F. WIDTH .528 & 3.841 FLANGE				
23695	2.375	3.350	.669	†HMSA24	V
□**23697**	60.00	80.00	8.00	HMSA7	R
23698	2.375	3.251	.625	†CRWA3	V
	P.F. WIDTH .528 & 3.841 FLANGE				
▲23701	2.375	3.350	.375	†CRW1	R
23702	2.375	3.350	.375	†CRWA1	R
23703	2.375	3.350	.375	†CRW1	P
23706	2.375	3.350	.375	†CRW1	S
23708	2.375	3.350	.438	†CRWH1	R
23710	2.375	3.350	.438	†CRWHA1	R
□**23715**	60.00	80.00	8.00	HMS4	V
▲23725	2.375	3.350	.250	†HM21	R
▲23742	2.375	3.371	.438	†CRWH1	R
▲23744	2.375	3.471	.250	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
23746	2.375	3.371	.438	†CRWH1	V
□**23747**	60.00	90.00	8.00	HMSA7	R
23751	2.375	4.498	.391	†HMSA25	V
▲23755	2.375	3.481	.438	†CRWH1	R
23756	2.375	3.481	.438	CRWHA1	R
23770	2.375	3.500	.375	†CRWA1	P
23771	2.375	3.500	.375	†CRWH1	V
▲23779	2.375	3.500	.375	†CRWH1	R
23782	2.375	3.500	.438	†CRWHA1	R
□23787	60.00	90.00	13.00	HMS48	R
□23789	60.00	90.00	10.00	CRSH1	R
□**23799**	60.00	100.00	10.00	HMS4	R
□23804	60.00	110.00	13.00	HMS46	R
23806	2.375	3.876	1.150	CRSA4	P
	P.F. WIDTH .402 W/4.250 FLANGE				
▲23808	2.375	3.543	.438	†CRWH1	R
23809	2.375	3.543	.438	†CRWHA1	V
23815	2.375	3.543	.250	†HM21	R
□23818	60.00	85.00	13.00	HMS46	R
▲23820	2.375	3.601	.438	†CRW1	R
□23822	60.00	95.00	13.00	CRSH13	R
▲23839	2.375	3.623	.438	†CRWH1	R
23841	2.375	3.623	.438	†CRWHA1	P
23843	2.375	3.623	.438	†CRWHA1	V
	W/STAINLESS STEEL SPRING				
▲23844	2.375	3.876	.438	†CRWH1	R
23857	2.375	4.063	1.094	†CRWA3	P
	W/4.438 FLANGE				
▲23860	2.375	4.498	1.150	CRSA4	P
	HELIX-CW W/4.875 FLG,PF WD.402				
23870	2.375		.275	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
23880	2.402	3.460	.284	X-SPL	R
	O.D. LISTED IS PRESSFIT I.D.				
23885	2.402	2.992	.276	HMSA96	P
	W/AXIAL DIRT LIP				
23888	2.402	3.071	.531	D7-SPL	P
24012	2.420	3.000	.402	HMHASPL	R
24017	2.420	3.000	.280	HMA9	R
▲24097	2.420	3.554	.276	HMA7	R
	W/AXIAL DIRT LIP				
▲24110	2.432	3.070	.227	CRSA1	P
	W/BI-DIR HELIX FROM AIR SIDE				
▲24255	2.438	3.125	.500	†CRWH1	R
▲24263	2.438	3.251	.438	†CRWH1	R
24283	2.441	3.071	.276	HMA8	R
▲24286	2.438	3.350	.375	†CRW1	R
24287	2.438	3.350	.375	†CRWA1	R
▲24320	2.438	3.371	.438	†CRWH1	R
▲24340	2.438	3.481	.438	†CRWH1	R
▲24370	2.438	3.500	.438	†CRWH1	R
24372	2.438	3.500	.438	†CRWH1	V
□24432	62.00	90.00	13.00	CRS13	R
□24433	62.00	95.00	13.00	CRS13	R
24441	2.441	2.699	.350	HMA8	P
	W/FLANGE				
▲24445	2.438	3.543	.438	†CRWH1	R
▲24459	2.438	3.623	.359	†G2	L
	CLEARANCE D .156				
24466	2.438	3.751	.750	†KIT	R
□24600	62.00	75.00	10.00	CRS1	R
▲□24620	62.00	80.00	8.00	†CRW1	R
□**24626**	62.00	80.00	10.00	HMS4	R
□**24627**	60.00	82.00	9.00	HMSA7	R
▲□24635	62.00	85.00	8.00	†CRW1	R
▲□24638	62.00	85.00	10.00	HMS4	R
□**24639**	62.00	85.00	10.00	HMSA7	R
□**24640**	62.00	85.00	10.00	HMSA7	R
24642	2.441	3.346	.394	HMSHA96	P
□**24645**	62.00	85.00	12.00	HMS4	R
□**24659**	62.00	90.00	8.00	†CRW1	R
□**24661**	62.00	90.00	11.13	†CRWH1	R
▲□24662	62.00	90.00	10.00	HMS4	R
□**24665**	62.00	90.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲24670	2.474	3.543	.290	TL1	R
▲□24678	62.00	100.00	12.00	HMS4	R
□**24710**	63.00	78.00	8.00	†CRW1	R
□**24725**	63.00	80.00	8.00	†CRW1	R
□**24729**	63.00	80.00	9.00	HMSA7	R
▲□24755	63.00	85.00	8.00	†CRW1	R
□**24758**	63.00	85.00	10.00	HMS4	R
□**24770**	63.00	88.00	8.00	†CRW1	R
□**24788**	63.00	90.00	10.00	HMS4	R
24800	2.480	3.543	.276	HMSA96	P
□24808	63.00	90.00	12.00	CRSH11	R
24816	2.480	4.035	.236	HMSHA16	P
▲24863	2.500	3.000	.250	†HM14	R
24865	2.500	3.000	.313	HM1	R
24868	2.500	3.130	.315	KIT	T
	W/CW HELIX FROM AIR SIDE				
▲24875	2.500	3.125	.250	†HM21	R
▲24880	2.500	3.150	.250	†HM21	R
▲24881	2.500	3.189	.438	†CRWH1	R
24883	2.500	3.189	.438	†CRWH1	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲24886	2.500	3.226	.190	HMA73	R
	W/3.405 FLG & AXIAL DIRT LIP				
▲24888	2.497	3.245	.420	HM16	R
▲**24889**	2.500	3.245	.438	†CRWH1	R
24892	2.500	3.251	.350	†CRWA5	R
	W/SS CASE & SPRING & GRD O.D.				
▲**24897**	2.500	3.251	.375	†CRW1	R
24898	2.500	3.251	.375	†CRWA1	R
24899	2.500	3.251	.375	†CRWA1	V
▲24904	2.500	3.251	.250	†HM21	R
24910	2.500	3.251	.438	†CRWH1	R
24911	2.500	3.251	.438	†CRWHA1	R
24913	2.500	3.251	.500	†CRW1	V
24914	2.500	3.251	.438	†CRWH1	V
24916	2.500	3.251	.438	†CRWHA1	V
▲24917	2.500	3.301	.453	†HMSA16	R
	P.F. WIDTH .330 & 3.580 FLANGE				
24920	2.480	3.314	.500	FF4	F
★**24926**	2.500	3.351	.433	†CRWH1	V
▲**24931**	2.500	3.350	.438	†CRWH1	R
24932	2.500	3.350	.438	†CRWHA1	R
24934	2.500	3.371	.375	CRWHA1	R
24936	2.500	3.371	.438	†CRWHA1	V
24941	2.500	3.371	.500	†CRWH1	S
	W/STAINLESS STEEL SPRING				
24949	2.500	3.428	.375	†CRWA1	P
▲**24951**	2.500	3.428	.375	†CRWA1	R
▲**24954**	2.500	3.371	.438	†CRWH1	R
★**24960**	2.500	3.500	.625	CRWH	R
24964	2.500	3.428	.709	†HMSA25	V
24971	2.500	3.500	.375	†CRWA1	V
▲**24980**	2.500	3.500	.438	†CRW1	R
24982	2.500	3.500	.438	†CRWA1	R
24984	2.500	3.500	.438	†CRWH1	V
	W/STAINLESS STEEL SPRING				
24986	2.500	3.500	.438	†CRWH1	R
24988	2.500	3.500	.438	†CRWHA1	R
24989	2.500	3.500	.438	†CRWH1	P
24990	2.500	3.500	.438	†CRWHA1	V
25004	2.559	3.230	.334	†HMSA96	R
25005	2.502	3.628	.559	†HMSA25	V
★25006	2.500	4.040	.634	CRSA9	R
▲25007	2.500	3.500	.250	†HM21	R
25009	2.500	3.223	.728	VACBOOT	R
25013	2.500	3.305	.276	†KIT	R
▲25028	2.500	3.505	.250	†HM21	R
25037	2.500	3.544	.433	†CRWHA1	V
▲**25043**	2.500	3.543	.438	†CRWH1	R
25050	2.500	3.223	.728	†KIT	R
25065	2.500	3.543	.438	CRWHA1	P
25066	2.500	3.543	.875	D5	R
25071	2.500	3.623	.438	CRWH1	R
▲**25074**	2.500	3.623	.375	†CRW1	R
25075	2.500	3.623	.375	†CRWA1	R
25076	2.500	3.623	.375	†CRWA1	V
25077	2.500	3.623	.500	†HMSA16	R
	W/BI-DIR HELIX FROM AIR SIDE				
▲25078	2.496	3.672	.313	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
25082	2.500	3.502	.406	†CRW1	S
25085	2.500	3.695	.500	†ALH1	S
▲**25091**	2.500	3.751	.438	CRWH1	R
25096	2.500	3.761	.907	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
25097	2.500			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
▲**25100**	2.500	3.876	.438	†CRWH1	R
25102	2.500	3.876	.469	†CRWHA1	P
25106	2.500	3.876	.559	†HMSA25	V
▲**25108**	2.500	4.003	.375	†CRWA1	R
25110	2.500	4.003	.375	†CRWA1	V
25140	2.500	4.035	.640	CRSA9	V
▲**25146**	2.500	4.938	.500	CRWA22	P
25160	2.500		.438	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
25176	2.520	3.032	.276	HMS-SPL	R
▲□25185	64.00	80.00	8.00	HMS4	R
25190	2.519	5.236	.511	HMSA7SP	R
	SPECIAL CONST.				
25196	2.520	3.228	.354	XA-SPL	R
	O.D. LISTED IS PRESSFIT I.D.				
□25203	64.00	80.00	13.00	CRSH11	R
□25204	64.00	85.00	10.00	CRSH13	R
□25205	64.00	85.00	13.00	CRSH13	R
□25207	64.00	90.00	10.00	HMS46	R
□**25396**	65.00	85.00	8.00	HMS4	R
□**25398**	65.00	85.00	8.00	HMSA7	R
□**25400**	65.00	85.00	12.00	HMS4	R
□**25409**	65.00	80.00	8.00	HMSA7	R
□**25410**	65.00	80.00	8.00	†CRW1	R
▲□25416	65.00	80.00	8.00	HMS4	R
□**25417**	65.00	82.00	10.00	HMS4	R
25418	2.559	3.228	.354	HMSASPL	R
25419	2.559	3.307	.354	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲□25420	65.00	85.00	8.00	†CRW1	R
□**25421**	65.00	85.00	8.00	†CRW1	V
	W/STAINLESS STEEL SPRING				
▲□25422	65.00	85.00	10.00	HMS4	R
□**25424**	65.00	85.00	10.00	HMSA7	R
▲□25425	65.00	88.00	8.00	†CRW1	R
□**25426**	65.00	90.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**25427**	65.00	90.00	10.00	HMS4	V
▲□25428	65.00	90.00	10.00	HMS4	R
□**25429**	65.00	90.00	10.00	HMSA7	R
▲□25430	65.00	90.00	8.00	†CRW1	R
□**25431**	65.00	90.00	8.00	†CRW1	V
□**25432**	65.00	92.00	11.13	†CRWH1	R
□**25433**	65.00	88.00	12.00	HMSA7	R
□**25434**	65.00	90.00	13.00	HMS4	R
▲□25436	65.00	95.00	10.00	HMS4	R
□**25437**	65.00	95.00	14.00	HMSA7	R
□**25438**	65.00	88.00	10.00	HMSA7	R
▲□25440	65.00	100.00	8.00	†CRW1	R
□**25441**	65.00	100.00	8.00	†CRW1	V
▲□25442	65.00	100.00	10.00	HMS4	R
□**25443**	65.00	100.00	10.00	HMSA7	R
25445	2.500	4.035	.640	HMSA14	P
	W/BUMPER				
□**25446**	65.00	100.00	10.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□**25455**	65.00	110.00	10.00	†CRW1	R
□**25465**	65.00	120.00	8.00	†CRW1	R
□**25514**	65.00	80.00	8.00	†CRW1	V
▲25515	2.560	3.094	.256	HMA7	R
25518	2.559	3.189	.276	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲**25561**	2.563	3.481	.500	†CRWHA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**25573**	65.00	90.00	13.00	HMSA7	R
▲**25577**	2.563	3.500	.438	†CRWH1	R
□**25581**	65.00	85.00	13.00	HMSA7	R
25584	2.559	3.465	.394	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
□**25586**	65.00	90.00	12.00	HMS4	R
25587	2.563	3.500	.500	CRSHA1	P
□**25588**	65.00	85.00	12.00	HMSA7	R
□25590	65.00	75.00	8.00	HM102	R
□25596	65.00	85.00	10.00	CRSH12	R
□25605	65.00	90.00	13.00	CRSA13	R
□25633	65.00	100.00	13.00	CRSA12	R
▲**25641**	2.563	3.623	.438	†CRWH1	R
25652	2.562	3.625	.438	†CRWA1	V
25661	2.563	3.623	.469	†CRWA1	P
▲**25713**	2.563	3.751	.438	†CRWH1	R
25714	2.563	3.751	.438	†CRWHA1	R
25725	2.563	3.751	.438	†CRWH1	V
▲**25745**	2.563	3.873	.438	CRWHA1	R
▲**25748**	2.563	3.876	.438	†CRWH1	R
▲**25950**	2.607	3.350	.375	†CRWH1	P
□25965	66.00	80.00	8.90	CRSHA1	R
▲□25968	66.00	85.00	10.00	CRSHA1	R
▲**25970**	2.598	3.481	.438	†CRWHA1	P
□25979	66.00	90.00	13.00	CRSH1	R
▲**25990**	2.598	3.999	.787	CRWA3	P
	W/4.600 FLANGE				
▲**26110**	2.625	3.251	.438	†CRWH1	R
26122	2.625	3.350	.375	†CRW1	V
▲**26123**	2.625	3.350	.375	†CRW1	R
26124	2.625	3.350	.375	†CRWA1	R
26128	2.625	3.350	.438	CRW1	R
▲**26141**	2.625	3.374	.438	†CRWHA1	R
▲**26144**	2.625	3.371	.250	†HM14	R
▲**26153**	2.625	3.371	.438	†CRWHA1	R
26163	2.625	3.481	.438	†CRWH1	R
26177	2.625	3.500	.375	†CRW1	V
▲**26186**	2.625	3.500	.375	†CRWA1	R
▲**26189**	2.625	3.500	.438	†CRWH1	R
26190	2.625	3.500	.438	†CRWHA1	R
26191	2.625	3.500	.438	†CRWA1	P
▲**26194**	2.625	3.543	.438	†CRWH1	R
26196	2.625	3.500	.374	†KIT	R
26204	2.625	3.623	.375	†CRW1	V
26208	2.625	3.623	.438	†CRWH1	V
26209	2.625	3.623	.438	†CRWH1	R
26211	2.625	3.623	.438	†CRWHA1	R
26220	2.625	3.623	.375	†CRWA1	P
▲**26237**	2.625	3.623	.375	†CRW1	R
26238	2.625	3.623	.375	†CRWA1	R
26239	2.625	3.623	.460	†HMSA24	V
26247	2.624	3.946	.891	UNITIZE	R
▲26260	2.625	3.623	.250	†HM21	R
▲**26284**	2.625	3.751	.375	†CRWA1	R
26289	2.625	3.751	.715	TL4	RR
	P.F. WIDTH .640				
26297	2.625	3.751	.438	†CRWH1	R
26298	2.625	3.751	.438	†CRWHA1	R
26299	2.625	3.751	.438	†CRWHA1	V
▲26310	2.625	3.813	.415	TL5	R
	P.F. WIDTH .300				
▲**26328**	2.625	3.876	.438	†CRWH1	R
▲**26346**	2.625	3.936	.438	†CRWH1	R
▲**26354**	2.625	4.003	.375	†CRWA1	R
26356	2.625	4.003	.438	†CRWH1	R
▲**26358**	2.625	4.063	1.094	†CRWA3	P
	W/4.438 FLANGE				
▲**26359**	2.625	4.370	.438	†CRWHA1	R
▲**26368**	2.625	4.438	.438	†CRWH1	R
▲**26373**	2.625	4.563	.719	†CRWA3	P
26378	2.625	4.562	.468	†HMSA25	V
	REMOVE OEM SLINGER				
□**26379**	67.00	88.00	8.00	HMS4	P
□26381	67.00	85.00	10.00	CRSH12	R
□26383	67.00	90.00	13.00	CRSH11	R
26387	2.638	3.503	.354	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
26388	2.638	3.228	.315	HMSASPL	P
	W/CCW HELIX FROM AIR SIDE				
26620	2.667	3.751	.500	HM1	R
26625	2.677	3.307	.335	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
▲□26630	68.00	85.00	8.00	†CRW1	R
□**26632**	68.00	85.00	8.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□26635	68.00	85.00	10.00	CRS1	R
□**26640**	68.00	88.00	8.00	†CRW1	R
▲□26648	68.00	90.00	10.00	HMS4	R
□**26649**	68.00	90.00	10.00	HMSA7	R
▲□26650	68.00	90.00	8.00	†CRW1	R
□**26651**	68.00	90.00	12.00	HMS4	R
□**26652**	68.00	90.00	8.00	†CRW1	V
□**26653**	68.00	90.00	10.00	HMS4	V
□**26657**	68.00	90.00	10.00	HMSA7	V
▲□26660	68.00	95.00	10.00	†CRW1	R
□**26661**	68.00	95.00	10.00	†CRW1	V
□**26665**	68.00	95.00	13.00	HMS4	R
□**26670**	68.00	100.00	10.00	†CRW1	R
▲□26673	68.00	100.00	10.00	HMS4	R
□**26683**	68.00	100.00	13.00	HMSA7	R
26695	2.677	4.882	1.063	HMSA	P
	W/HELIX-CW, P.F. WIDTH .453				
▲26747	2.700	3.498	.475	†HMS17	R
	W/3.704 FLANGE				
26748	2.717	3.386	.315	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
26749	2.717	3.380	.310	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
▲**26761**	2.688	3.751	.438	†CRWH1	R
26877	2.648	3.812	.500	CRS1	R
▲**26921**	2.688	3.876	.438	†CRWH1	R
▲**26975**	2.688	4.003	.469	†CRWH1	R
27117	2.717	3.386	.276	CRSA79	P
□27170	69.00	90.00	10.00	HMS47	R
27210	2.750	3.125	.188	HM1	R
▲27225	2.750	3.250	.313	HM1	R
27230	2.750	3.544	.433	†CRWHA1	V
▲**27251**	2.750	3.481	.438	CRW1	R
▲**27268**	2.750	3.500	.375	†CRW1	R
27269	2.750	3.500	.375	†CRWA1	R
▲**27271**	2.750	3.500	.250	†HM14	R
27272	2.750	3.500	.375	†CRWA1	V
27280	2.750	3.500	.438	†CRWH1	R
▲**27284**	2.750	3.538	.438	†CRWH1	R
▲**27292**	2.750	3.543	.438	†CRWH1	P
27293	2.750	3.543	.433	†CRWH1	V
27295	2.750	3.543	.438	†CRWHA1	P
27324	2.750	3.623	.438	†CRWH1	V
▲**27334**	2.750	3.623	.438	†CRWH1	R
▲**27361**	2.750	3.751	.438	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
27362	2.750	3.751	.438	†CRWA1	R
27365	2.750	3.751	.438	†CRWH1	V
▲**27368**	2.750	3.751	.438	†CRWH1	R
27370	2.750	3.751	.438	†CRWHA1	R
27377	2.750	3.751	.438	†CRWA1	P
▲27394	2.750	3.751	.250	†HM21	R
▲**27426**	2.750	3.765	.438	†CRWH1	R
▲27430	2.750	3.773	.350	HMA84	R
27438	2.750	3.779	.762	†SCOT1	R
	SCOTSEAL				
27452	2.750	3.876	.433	†CRWHA1	P
27461	2.750	3.876	.591	†HMSA25	V
27467	2.750	3.876	.438	†CRWA1	R
▲**27470**	2.750	3.876	.438	†CRWH1	R
27471	2.750	3.876	.438	†CRWHA1	R
27486	2.748	3.543	.591	HM-SPL	P
27501	2.750	3.876	.703	†B5	PL
▲**27525**	2.750	3.936	.438	†CRWH1	R
27526	2.750	3.937	.438	†CRWA1	P
27535	2.750			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
27536	2.750	4.030	.918	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
27539	2.750	4.003	.375	†CRWA1	V
▲**27541**	2.750	4.003	.438	†CRWH1	R
27542	2.750	4.001	.500	†HMSA25	V
27558	2.750	3.543	.500	†HMSA25	V
27565	2.750	4.003	.438	CRWHA1	P
□27571	70.00	90.00	7.00	HMSA7P2	R
27576	2.750	4.125	.438	†CRS1	P
27577	2.750	4.125	.563	CRSA1	R
□**27587**	70.00	90.00	13.00	HMS4	R
□27596	70.00	95.00	10.00	HMS47	R
□**27598**	70.00	95.00	10.00	HMSA7	V
▲**27600**	2.750	4.249	.438	†CRWH1	R
27601	2.750	4.249	.438	†CRWHA1	P
□27606	70.00	100.00	6.00	HMS46	R
□**27607**	70.00	100.00	10.00	HMSA7	R
□**27608**	70.00	100.00	12.00	HMS4	R
□**27619**	70.00	110.00	13.00	HMS4	R
□27620	70.00	110.00	8.00	HMS47	R
▲**27625**	2.750	4.331	.500	†CRWHA1	R
27630	2.750		.500	J2-KIT	R
	SEE TYPE J SECTION (CRWHA LIP)				
□**27636**	70.00	90.00	12.00	HMSA7	R
□**27637**	70.00	90.00	12.00	HMS4	R
□**27640**	70.00	90.00	13.00	HMSA7	R
▲**27642**	2.750	5.501	1.375	†CRWA2	P
	P.F. WIDTH .500				
□**27710**	70.00	85.00	8.00	†CRW1	R
▲□27714	70.00	85.00	8.00	HMS4	R
□**27715**	70.00	85.00	8.00	HMSA7	R
□**27719**	70.00	85.00	7.00	HMSA7	R
□**27721**	70.00	85.00	7.00	HMS4	R
27723	2.756	3.425	.335	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
▲□27725	70.00	88.00	8.00	†CRW1	R
□**27726**	70.00	88.00	8.00	†CRW1	V
□**27727**	70.00	88.00	12.00	HMS4	R
▲□27739	70.00	90.00	10.00	HMS4	R
▲□27740	70.00	90.00	8.00	†CRW1	R
□**27741**	70.00	90.00	10.00	HMSA7	R
□**27743**	70.00	90.00	10.00	†CRW1	V
□**27746**	70.00	90.00	10.00	†CRWHA1	P
▲□27748	70.00	92.00	11.00	†CRWH1	R
□**27749**	70.00	92.00	11.00	†CRWH1	V
□**27750**	70.00	92.00	12.00	HMSA7	R
□**27755**	70.00	95.00	10.00	†CRW1	R
□**27757**	70.00	95.00	10.00	HMS4	V
	W/STAINLESS STEEL SPRING				
▲□27759	70.00	95.00	13.00	HMS4	R
□**27760**	70.00	95.00	13.00	HMSA7	R
▲□27768	70.00	100.00	10.00	HMS4	R
□**27770**	70.00	100.00	10.00	†CRW1	R
□**27773**	70.00	100.00	10.00	HMS4	V
□**27775**	70.00	100.00	13.00	HMS4	R
▲□27783	70.00	105.00	13.00	HMS4	R
□**27785**	70.00	105.00	10.00	†CRW1	R
□**27788**	70.00	110.00	10.00	HMS4	R
□**27789**	70.00	110.00	10.00	HMSA7	R
▲□27790	70.00	110.00	10.00	†CRW1	R
□**27791**	70.00	110.00	12.70	CRWHA1	R
□**27792**	70.00	110.00	12.00	HMS4	R
▲**28035**	2.813	3.751	.438	†CRWH1	R
▲**28116**	2.813	3.876	.438	†CRWH1	R
▲**28175**	2.813	4.003	.438	†CRWH1	R
▲**28270**	2.813	4.249	.313	†CRW1	R
28275	2.813	4.249	.438	†CRWH1	R
28276	2.813	4.250	.438	†CRWH1	P
28305	2.835	3.370	.709	HMS1	R
	P.F. I.D. FOR 84MM SHOULDER				
□**28307**	72.00	86.00	7.50	HMSA7	R
28308	2.835	3.780	.354	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
□**28310**	72.00	88.00	8.00	†CRW1	R
□28325	73.00	90.00	8.00	HMSA27	R
▲□28330	72.00	90.00	10.00	HMS4	R
□**28331**	72.00	90.00	10.00	HMSA7	R
28332	2.832	3.622	.374	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
▲□28341	72.00	95.00	10.00	HMS4	R
▲□28354	72.00	100.00	10.00	HMS4	R
□★28358	72.00	100.00	12.00	HMS4	R
□28362	72.00	95.00	13.00	CRS13	R
□28375	72.00	105.00	13.00	CRSA13	R
▲**28425**	2.844	3.939	.500	†CRWA1	R
28426	2.844	3.939	.550	†CRWHA1	R
28446	2.844	3.939	.550	†KIT	R
▲**28464**	2.844	4.003	.438	†CRWH1	R
28474	2.844	4.003	.500	†CRWH1	V
	W/STAINLESS STEEL SPRING				
28554	2.854	3.932	.748	UNITIZE	P
□**28612**	73.00	92.00	11.13	†CRWH1	R
□**28622**	73.00	110.00	11.13	†CRWA1	P
28646	2.875	3.434	.294	†CRSA1	R
▲**28654**	2.875	3.623	.438	†CRWH1	R
28655	2.875	3.623	.438	†CRWHA1	R
28656	2.875	3.623	.500	†AL1	S
▲**28669**	2.875	3.751	.375	†CRWA1	R
28670	2.875	3.751	.375	†CRWA1	V
▲**28686**	2.875	3.751	.438	†CRWH1	R
28687	2.875	3.751	.438	†CRWHA1	R
28697	2.875	3.751	.438	†CRWH1	P
28698	2.875	3.751	.438	†CRWH1	V
28699	2.875	3.751	.438	†CRWHA1	V
▲28700	2.875	3.751	.250	†HM21	R
▲28720	2.875	3.876	.610	†HMSHA16	R
	P.F. WIDTH .365 & 4.150 FLANGE				
▲28725	2.875	3.876	.188	†HM1	R
□28740	73.00	95.00	10.00	CRSH13	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□28744	73.00	100.00	13.00	CRSH11	R
▲**28745**	2.875	3.876	.438	†CRWH1	R
28746	2.875	3.876	.438	†CRWHA1	R
28748	2.875	3.876	.438	†CRWHA1	V
28751	2.875	3.876	.250	†HM21	R
28754	2.875	3.876	.610	HMSHA16	V
28758	2.875	3.875	.781	†SCOT1	R
	SCOTSEAL				
▲**28760**	2.875	4.003	.438	†CRWH1	R
28761	2.875	4.003	.438	†CRWHA1	R
▲**28778**	2.875	4.003	.375	†CRWA1	R
28779	2.875	4.003	.375	†CRWA1	V
28790	2.875	4.003	.750	C8	RR
	P.F. WIDTH .688				
▲28800	2.875	4.003	.250	†HM21	R
▲**28817**	2.875	4.125	.375	†CRWH1	R
28820	2.875	4.126	.844	†SCOT1	R
	SCOTSEAL				
▲28828	2.875	4.125	.813	†HMSH12	R
	P.F. WIDTH .375				
▲**28830**	2.875	4.176	.813	†CRWH2	R
	P.F. WIDTH .375				
28832	2.875	4.176	.844	†SCOT1	R
	SCOTSEAL				
▲**28841**	2.875	4.331	.438	†CRWA1	P
▲**28848**	2.875	4.501	.433	†CRWH1	R
29105	2.913	3.543	.394	CRSA1	P
	W/CCW HELIX FROM AIR SIDE				
29112	2.913	3.858	.472	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□29129	74.00	100.00	13.00	CRSH1	R
□29132	74.00	90.00	10.00	HMS46	R
□29133	74.00	95.00	10.00	CRSH13	R
□29134	74.00	95.00	10.00	HMS48	R
29208	2.938	3.378	.180	HMS1	R
▲**29218**	2.938	3.623	.375	†CRW1	R
▲**29223**	2.938	3.751	.375	†CRW1	R
29224	2.938	3.751	.375	†CRWA1	R
29226	2.938	3.751	.375	†CRWA1	V
29250	2.938	3.784	.500	HM23	RT
▲**29260**	2.938	3.876	.375	CRWHA1	R
29262	2.938	3.876	.375	†CRWHA1	V
▲**29273**	2.938	3.937	.438	†CRWA1	P
29288	2.938	3.937	.591	†HMSA25	V
29292	2.938	4.003	.619	†HMSA24	V
▲**29316**	2.938	4.003	.438	†CRWH1	R
29317	2.938	4.003	.438	CRWHA1	R
29322	2.938	4.003	.438	†CRWA1	P
29383	2.938	4.004	.433	†CRWHA1	V
▲**29384**	2.938	4.125	.375	†CRWH1	R
29385	2.938	4.125	.375	†CRWHA1	R
▲**29465**	2.938	4.501	.438	†CRWH1	R
▲**29471**	2.938	4.938	1.375	†CRWA3	P
	W/5.375 FLANGE				
29472	2.941	3.882	.774	UNITIZD	P
29480	2.948	4.725	.630	PLUS XL	
	SCOTSEAL PLUS XL				
□**29495**	75.00	100.00	13.00	HMS4	R
29505	2.953	3.425	.276	X-SPL	R
	O.D. LISTED IS PRESSFIT I.D.				
▲□29510	75.00	90.00	8.00	†CRW1	R
□**29512**	75.00	90.00	10.00	HMSA7	R
□**29513**	75.00	90.00	10.00	HMS4	R
★**29518**	2.952	3.708	.327	HMSA7	R
29519	2.992	3.692	.354	HMSA7	V
29520	2.952	4.409	.688	HMSA8	R
	P.F. WIDTH 10MM				
□**29521**	75.00	95.00	10.00	HMSA7	R
▲□29524	75.00	95.00	10.00	HMS4	R
□**29525**	75.00	95.00	10.00	†CRW1	R
□**29526**	75.00	95.00	10.00	†CRW1	V
□**29527**	75.00	95.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**29529**	75.00	90.00	8.00	HMS4	R
□**29530**	75.00	95.00	12.00	HMS4	V
□**29536**	75.00	95.00	8.00	HMSA7	R
□**29537**	75.00	95.00	12.00	HMS4	R
□**29540**	75.00	100.00	10.00	†CRW1	R
□**29542**	75.00	100.00	10.00	†CRW1	V
▲□29543	75.00	100.00	10.00	HMS4	R
□**29544**	75.00	100.00	10.00	HMS4	V
□**29545**	75.00	100.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**29551**	75.00	95.00	12.00	HMSA7	R
□**29554**	75.00	100.00	10.00	HMSA7	R
□**29555**	75.00	105.00	10.00	†CRW1	R
□**29563**	75.00	100.00	12.00	HMS4	R
▲□29567	75.00	105.00	13.00	HMS4	R
□29568	75.00	110.00	13.00	CRS13	R
□29569	75.00	110.00	13.00	CRSH13	R
□**29570**	75.00	110.00	10.00	†CRW1	R
▲□29575	75.00	110.00	12.00	HMS4	R
□**29580**	75.00	100.00	13.00	HMSA7	R
□**29581**	75.00	110.00	13.00	HMSA7	R
□29582	75.00	115.00	13.00	CRSH1	R
▲□29585	75.00	115.00	12.00	†CRW1	R
▲□29587	75.00	120.00	12.00	HMS4	R
29590	2.953	4.724	.320	†TL1	R
29675	2.992	3.661	.394	HMSA6	S
	W/CCW HELIX FROM AIR SIDE				
29685	2.992	3.858	.472	HMSA7	S
	W/CW HELIX FROM AIR SIDE				
29804	2.992	4.370	.512	UNITIZD	V
	W/FELT "A" LIP				
▲29840	3.000	3.500	.313	HM1	R
29841	3.000	3.500	.375	†CRW1	V
▲**29850**	3.000	3.623	.250	HM14	R
29862	2.992	3.623	.385	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
▲29863	3.000	3.751	.250	†HM21	R
▲**29865**	3.000	3.751	.375	CRW1	R
29866	3.000	3.751	.375	†CRWA1	R
29867	3.000	3.751	.375	†CRWA1	P
29868	3.000	3.751	.375	†CRW1	V
29870	3.000	3.751	.375	†CRWA1	V
29871	3.000	3.751	.438	†CRWH1	R
29872	3.000	3.751	.438	†CRWHA1	R
29877	3.000	3.876	.313	†CRW1	V
▲**29887**	3.000	3.876	.438	†CRWH1	R
29891	3.000	3.876	.469	†CRWH1	V
	W/STAINLESS STEEL SPRING				
▲29900	3.000	4.000	.500	X2	L
	O.D. LISTED IS PRESSFIT I.D.				
▲**29906**	3.000	4.003	.375	†CRW1	R
29907	3.000	4.003	.375	†CRWA1	R
29912	3.000	4.003	.375	†CRWA1	V
29917	3.000	4.939	.662	†UNITIZE	P
29918	2.992	4.213	.315	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
29925	3.000	4.003	.438	CRWHA1	P

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□29931	76.00	95.00	10.00	CRS11	R
□29936	76.00	100.00	10.00	HMS47	R
29950	3.000	4.003	.375	†CRWH1	P
29951	3.000	4.003	.438	CRWH1	R
29952	3.000	4.003	.438	†CRWHA1	R
29958	3.000	4.003	.438	†CRWH1	V
29961	3.000	4.003	.312	†HMSA25	V
	W/CCW HELIX FROM AIRSIDE				
29967	3.000	4.003	.312	HMSA25	V
	W/CW HELIX FROM AIRSIDE				
▲29968	3.000	4.003	.250	HM21	R
29987	2.992	3.741	.370	HMSA83	V
	W/CW HELIX FROM AIR SIDE				
▲**30000**	3.000	4.125	.438	†CRWH1	R
30003	3.000	4.125	.438	†CRWH1	V
30007	3.000	3.751	.452	†HMSA25	V
30015	3.000	3.683	.540	CRWA86	P
	W/4.180 FLANGE				
30026	3.002	3.751	.991	†UNITIZE	V
	HD PINION SEAL				
▲**30033**	3.000	4.249	.438	CRWH1	R
▲30049	3.000	4.249	.250	†HM21	R
30055	3.000	4.249	.438	†CRWHA1	P
30057	3.000	4.249	.438	†HMSA25	V
▲**30060**	3.000	4.331	.438	†CRWH1	R
▲**30070**	3.000	4.376	.438	†CRWH1	R
▲**30087**	3.000	4.500	.438	†CRWH1	R
30095	3.000	4.500	.438	†CRWHA1	R
30098	3.000	4.501	.438	†CRWH1	V
30100	3.000	4.501	.383	†HMSA25	V
▲30108	3.000	4.525	.375	X12	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**30125**	3.000	4.999	.438	†CRWH1	R
30140	3.000	5.750	.982	HMSA25	V
30144	3.000	5.501	1.375	CRWHA6	P
▲**30145**	3.000	4.939	.750	†CRWA1	P
	P.F. WIDTH .438 W/5.690 FLANGE				
▲30147	3.000	5.750	1.300	HMSA16	P
	HELIX-CW W/6.250 FLG,PF WD.400				
▲30148	3.000	5.750	.840	HMSA16	P
	P.F. WIDTH .400 W/6.250 FLANGE				
30153	3.000	4.936	.755	†HMSA25	V
□30310	77.00	95.00	10.00	CRSH13	R
□30311	77.00	100.00	10.00	CRSH13	R
30360	3.040	3.937	.250	HMS4	R
30370	3.307	3.813	.354	HMSASPL	V
	W/CCW HELIX FROM AIR SIDE				
30651	3.063	4.500	1.016	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
30654	3.063			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
□30716	78.00	105.00	13.00	CRSH11	R
□30717	78.00	110.00	13.00	CRSH11	R
▲□30725	78.00	100.00	10.00	HMS4	R
□**30726**	78.00	100.00	10.00	HMSA7	R
30771	3.071	6.417	.630	HMSA7SP	R
▲30772	3.075	3.540	.380	HMA18	P
	W/3.790 FLANGE O.D.				
▲31129	3.125	3.751	.250	†HMA1	R
31132	3.125	3.811	.355	†CRW1	V
▲**31135**	3.125	3.811	.355	†CRW1	R
▲**31139**	3.125	4.003	.375	†CRWA1	R
31144	3.125	3.936	.512	†CRSHA1	V
▲**31147**	3.125	4.003	.438	†CRWH1	R
31148	3.125	4.003	.438	†CRWHA1	R
31152	3.125	4.003	.375	†CRWHA1	V
31158	3.125	4.049	.438	P2	R
31173	3.125	4.125	.438	†CRWHA1	P
31175	3.125	4.126	.781	†SCOT1	R
	SCOTSEAL				
▲**31177**	3.125	4.125	.375	†CRW1	R
31179	3.125	4.125	.375	†CRWA1	V
31185	3.125	4.125	.438	†CRWHA1	S
31189	3.125	4.125	.438	CRWH1	R
▲31192	3.125	4.125	.250	HMA1	R
▲31203	3.125	4.174	.290	HMA1	R
▲**31227**	3.125	4.249	.438	†CRWH1	R
31228	3.125	4.249	.438	†CRWHA1	R
31237	3.125	4.249	.438	†CRWHA1	V
31244	3.125	4.373	.781	†SCOT1	R
	SCOTSEAL				
31247	3.125	4.125	.437	†SL1	T
	W/CW HELIX FROM AIR SIDE				
▲**31250**	3.125	4.376	.438	†CRWH1	R
31261	3.125	4.376	.438	†CRWHA1	P
31266	3.125	4.438	.781	†SCOT1	R
	SCOTSEAL				
▲**31269**	3.125	4.501	.438	†CRWH1	R
31281	3.125	4.500	.672	†SCOT1	R
	SCOTSEAL				
▲**31284**	3.125	4.562	.750	CRWH2	R
▲**31299**	3.125	4.626	.438	†CRWH1	R
31307	3.125	4.626	.672	†SCOT1	R
	SCOTSEAL				
▲**31316**	3.125	4.751	.438	†CRWH1	R
▲**31333**	3.125	4.999	.438	†CRWH1	R
▲**31353**	3.125	5.251	.438	†CRWH1	R
31361	3.109		.325	J2-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
31362	3.125	5.985	.953	CRS-SPL	R
31372	3.125	5.495	1.003	J2	R
	SEE TYPE J SECTION (CRSH LIP)				
31378	3.109		1.016	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
31385	3.109		.500	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
31390	3.109		.500	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
31490	3.149	4.448	.866	HMSA8	R
	P.F. WIDTH 12MM				
31492	3.150	3.946	.394	HMSA7	S
31494	3.150	3.946	.335	HMSA92	R
	W/CCW HELIX FROM AIR SIDE				
31497	3.150	3.858	.393	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
□**31499**	80.00	100.00	12.00	HMSA7	R
□31501	80.00	95.00	10.00	CRSH13	R
□31503	80.00	100.00	13.00	CRSA1	R
▲31504	3.150	3.740	.551	HMA18	P
	W/3.990 FLANGE O.D.				
31506	3.150	3.780	.354	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
31507	3.150	3.858	.393	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
□**31509**	80.00	100.00	10.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**31510**	80.00	100.00	10.00	†CRW1	R
31511	3.150	3.946	.394	†CRW1	V
▲□31512	80.00	100.00	10.00	HMS4	R
□**31513**	80.00	100.00	10.00	HMSA7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
31514	3.150	3.994	.591	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲□31515	80.00	105.00	10.00	†CRW1	R
□**31516**	80.00	100.00	10.00	HMS4	V
□**31517**	80.00	105.00	10.00	†CRW1	V
□**31520**	80.00	110.00	10.00	†CRW1	R
□**31521**	80.00	105.00	13.00	HMSA7	R
□**31524**	80.00	100.00	10.00	†CRW1	V
▲□31525	80.00	110.00	10.00	HMS4	R
□**31526**	80.00	110.00	12.00	HMS4	V
□**31530**	80.00	110.00	12.00	HMS4	R
□**31531**	80.00	110.00	12.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□31533	80.00	100.00	7.00	HMSA7P2	R
□31539	80.00	100.00	13.00	HMS47	R
□**31546**	80.00	120.00	13.00	HMS4	R
□**31547**	80.00	105.00	13.00	HMS4	R
▲□31551	80.00	125.00	10.00	†CRW1	R
□**31552**	80.00	125.00	10.00	†CRW1	V
□**31560**	80.00	110.00	10.00	HMSA7	R
□31562	80.00	115.00	10.00	HMS46	R
□31563	80.00	115.00	13.00	CRS13	R
□**31565**	80.00	130.00	12.00	†CRWA1	R
□31568	80.00	125.00	13.00	HMS43	R
□**31573**	80.00	110.00	13.00	HMS4	R
□31576	80.00	125.00	13.00	CRSH1	R
□**31580**	80.00	110.00	12.00	HMSA7	R
31582	3.150	3.946	.394	HMSA7	R
□**31585**	80.00	140.00	12.00	†CRW1	R
□**31588**	80.00	100.00	13.00	HMS4	R
□**31590**	80.00	100.00	13.00	HMSA7	R
▲31753	3.188	4.180	.750	†HMSHA4	R
	W/4.500 FLANGE				
▲**31758**	3.188	4.249	.438	†CRWH1	R
▲**31825**	3.188	4.376	.438	†CRWH1	R
▲**31855**	3.188	4.501	.438	†CRWH1	R
▲**31870**	3.188	4.626	.438	†CRWH1	R
□31891	81.00	100.00	10.00	CRSH11	R
31897	3.189	3.801	.630	HMA8	R
	W/FLANGE				
▲**31955**	3.188	4.999	.438	†CRWH1	R
32243	3.226	3.858	.394	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
□**32275**	82.00	110.00	12.00	HMSA7	R
32283	3.228	3.791	.315	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
□32285	82.00	105.00	13.00	CRSH13	R
□**32286**	82.00	110.00	12.00	HMS4	R
32289	3.228	3.920	.500	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
32290	3.228	3.937	.394	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
□**32302**	82.00	105.00	12.00	HMS4	R
32304	3.228	4.134	.512	HMSA12	S
	W/4.331 FLANGE				
32325	3.250	3.750	.250	†HMA1	R
▲**32330**	3.250	3.876	.375	†CRW1	P
32332	3.250	3.876	.375	†CRS1	V
	W/CW HELIX FROM AIR SIDE				
▲**32344**	3.250	4.003	.375	†CRW1	R
32347	3.250	4.003	.375	†CRWA1	P
32362	3.250	4.125	.563	†CRSH1	R
32380	3.250	4.249	.438	CRWH1	P
32385	3.250	4.249	.438	†CRWHA1	P
32392	3.250	4.249	.375	†CRWA1	V
▲**32393**	3.250	4.249	.375	†CRW1	R
32394	3.250	4.249	.750	†F1	LF
32395	3.250	4.249	.375	†CRWA1	R
32396	3.250	4.249	.438	†CRWH1	R
32397	3.250	4.249	.438	†CRWHA1	R
32403	3.250	4.249	.438	†CRWH1	V
32410	3.250	4.249	.670	†HMSWD26	V
▲**32412**	3.250	4.249	.250	†HM14	R
▲**32424**	3.250	4.376	.438	†CRWH1	R
32437	3.250	4.468	.315	X4	R
	O.D. LISTED IS PRESSFIT I.D.				
▲32441	3.250	4.500	.313	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
32448	3.250	4.500	.438	†CRWA1	P
32470	3.250	4.501	.672	†SCOT1	R
	SCOTSEAL				
▲**32477**	3.250	4.501	.375	†CRW1	R
32501	3.250	4.501	.438	†CRWH1	R
32502	3.250	4.501	.438	†CRWHA1	R
▲32510	3.250	4.501	.250	†HM21	R
32514	3.250	4.626	.433	CRWHA1	R
★32519	3.250	4.500	.610	†HMSHA4	R
	BI-DIRECTIONAL P.F. WIDTH .436				
32527	3.250	4.500	.610	†HMSHA4	V
	BI-DIRECTIONAL P.F. WIDTH .436				
32532	3.250	4.328	.500	CRWA5	R
32535	3.250	5.501	.650	†UNITIZE	P
▲**32540**	3.250	4.626	.438	†CRWH1	R
▲**32555**	3.250	4.718	.438	†CRWH1	R
▲**32560**	3.250	4.751	.438	†CRWH1	R
▲**32582**	3.250	4.999	.438	†CRWH1	R
32583	3.250	4.999	.438	†CRWHA1	R
32710	3.262	4.626	.500	CRWA1	R
	W/4.910 FLANGE				
32715	3.268	3.937	.354	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
32815	3.298	4.125	.563	†CRSA1	R
32870	3.250	5.501	.650	†UNITIZE	P
33007	3.307	4.094	.433	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
▲**33033**	3.313	4.125	.438	†CRWH1	R
□33070	84.00	100.00	10.00	HMSA1	R
□33072	84.00	110.00	12.00	CRSH11	R
▲**33073**	3.313	4.249	.438	†CRWH1	R
□**33115**	84.00	127.00	11.00	†CRWH1	R
▲**33136**	3.313	4.500	.438	†CRWH1	R
33206	3.313	4.999	.438	†CRWH1	R
33251	3.312	5.000	.562	KIT	R
33254	3.250	5.501	.650	HMSA25S	P
	W/EXTRA 'A' LIP, DL PINION				
33405	3.307	4.094	.433	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
33408	3.346	4.134	.394	HMSA7	R
▲□33410	85.00	105.00	10.00	†CRW1	R
□**33412**	85.00	105.00	10.00	†CRW1	V
□**33413**	85.00	105.00	12.00	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
□**33415**	85.00	105.00	13.00	HMS4	R
□**33416**	85.00	105.00	13.00	HMSA7	R
▲□33425	85.00	110.00	10.00	†CRW1	R
□**33426**	85.00	110.00	10.00	†CRWA1	V
□**33427**	85.00	110.00	12.00	HMS4	R
□**33428**	85.00	110.00	12.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□**33429**	85.00	110.00	12.00	HMSA7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**33431**	85.00	110.00	13.00	HMSA7	R
▲□33443	85.00	115.00	13.00	HMS4	R
33454	3.346	4.094	.354	HMSA7	P
□**33456**	85.00	100.00	9.00	HMS4	R
□**33458**	85.00	100.00	9.00	HMSA7	R
□33459	85.00	100.00	9.00	CRS1	R
33460	3.346	5.039	.826	HMSA8	R
	P.F. WIDTH 11MM				
□33463	85.00	100.00	12.00	CRSA12	R
□33464	85.00	100.00	13.00	CRSH13	R
□33488	85.00	115.00	13.00	CRSH13	R
□**33555**	85.00	120.00	12.00	†CRW1	R
▲□33563	85.00	120.00	12.00	HMS4	R
□**33564**	85.00	120.00	12.00	HMSA7	R
□**33585**	85.00	130.00	12.00	†CRW1	R
□**33586**	85.00	130.00	12.00	HMS4	R
□**33587**	85.00	130.00	12.00	HMSA7	R
□**33593**	85.00	130.00	14.00	HMSA7	R
33624	3.375	4.045	.500	J-TYPE	R
	W/4 EA .254 HOLES				
33628	3.375	3.948	.375	HMSA7	P
▲**33645**	3.375	4.125	.375	†CRW1	R
33654	3.375	4.280	.406	†CRWA1	S
33659	3.250	4.249	.750	KIT	P
	SEE KIT SECTION				
33665	3.375	4.249	.438	†CRWHA1	R
33699	3.375	4.376	.375	†CRWA1	V
▲**33700**	3.375	4.376	.375	†CRW1	R
33701	3.375	4.376	.375	†CRWA1	R
33711	3.375	4.376	.438	†CRWH1	R
33712	3.375	4.376	.438	†CRWHA1	R
33733	3.375	4.501	.438	†CRWA1	V
▲**33735**	3.375	4.501	.438	†CRWH1	R
▲**33772**	3.375	4.626	.438	†CRWH1	R
33773	3.375	4.626	.438	†CRWHA1	R
33775	3.375	4.626	.438	†CRWHA1	V
▲**33807**	3.375	4.686	.438	CRWH1	R
▲**33837**	3.375	4.999	.438	CRWH1	R
33861	3.346	4.055	.315	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
□33862	86.00	105.00	13.00	HMS46	R
□33863	86.00	110.00	13.00	CRSH11	R
33866	3.375	5.251	.438	†CRWHA1	R
34000	3.400	4.500	.281	†X14	V
	O.D. LISTED IS PRESSFIT I.D.				
34115	3.425	3.937	.295	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
34116	3.465	4.252	.453	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
34120	3.425	3.937	.315	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
□34251	87.00	110.00	13.00	CRSH13	R
▲**34256**	3.438	4.249	.375	†CRW1	R
34279	3.438	4.501	.375	†CRWA1	R
▲**34282**	3.438	4.501	.438	†CRWH1	R
34283	3.438	4.501	.438	†CRWHA1	R
▲**34336**	3.438	4.626	.438	†CRWH1	R
34338	3.438	4.626	.438	†CRWHA1	R
34379	3.438	4.751	.438	†CRWA1	R
▲**34383**	3.438	4.756	.438	†CRWH1	R
34384	3.438	4.757	.700	PLUS XL	H
	SCOTSEAL PLUS XL				
34387	3.438	4.757	.859	†SCOT1	R
	SCOTSEAL				
▲**34398**	3.438	4.876	.438	†CRWH1	R
▲**34407**	3.438	4.999	.438	†CRWH1	R
34408	3.438	4.999	.438	†CRWHA1	R
▲**34611**	3.465	4.252	.427	HMS4	V
	W/CCW HELIX FROM AIR SIDE				
▲□34623	88.00	110.00	12.00	HMS4	R
34647	3.375	4.125	.375	†CRWA1	V
□34653	88.00	120.00	13.00	CRSH13	R
□34655	88.00	110.00	13.00	CRSH1	R
▲34700	3.469	4.626	.625	CRSA1	R
34835	3.500	4.000	.300	HM1	R
▲**34840**	3.500	4.003	.250	†HM14	R
▲**34848**	3.500	4.125	.250	HM14	R
▲**34857**	3.500	4.249	.438	†CRWHA1	V
▲**34860**	3.500	4.376	.375	†CRW1	R
34861	3.500	4.376	.375	†CRWA1	R
34866	3.500	4.376	.375	†CRWA1	V
34867	3.500	4.376	.438	†CRWH1	R
34868	3.500	4.376	.438	†CRWHA1	R
34869	3.500	4.376	.433	†CRWHA1	V
34882	3.500	4.499	.500	†HMSA25	V
34883	3.500	4.501	.375	†CRWA1	V
▲34885	3.500	4.450	.531	HM12	R
▲**34886**	3.500	4.501	.375	†CRW1	R
34887	3.500	4.501	.375	†CRWA1	R
34888	3.500	4.501	.438	†CRWH1	R
34889	3.500	4.501	.438	†CRWHA1	R
34890	3.500	4.438	.438	X1	L
	O.D. LISTED IS PRESSFIT I.D.				
34891	3.500	4.501	.438	CRWHA1	P
34892	3.500	4.501	.438	†CRWH1	V
34928	3.500	4.682	.451	†HMSHA16	V
▲34967	3.500	4.501	.250	HM21	R
34971	3.500	4.547	.900	PLUS XL	H
	SCOTSEAL PLUS XL				
34975	3.500	4.547	.862	†SCOT1	R
	SCOTSEAL				
▲**34980**	3.500	4.547	.740	†CRWHA2	R
	P.F. WIDTH .640				
▲**34985**	3.500	4.626	.438	†CRWH1	R
34994	3.500	4.750	.706	PLUS XL	H
	SCOTSEAL PLUS XL				
35000	3.500	4.626	.986	†SCOT1	R
	SCOTSEAL				
▲**35012**	3.500	4.751	.438	†CRWH1	R
35020	3.500	4.751	.438	†CRWHA1	R
35029	3.500	4.751	.625	†CRWH1	R
35039	3.500	4.751	.375	†CRWA1	V
▲**35040**	3.500	4.751	.375	†CRWA1	P
▲35042	3.500	4.751	.250	†HM21	R
35058	3.500	4.842	.903	PLUS XL	H
	SCOTSEAL PLUS XL				
35060	3.500	4.814	.906	†SCOT1	R
	SCOTSEAL				
▲**35062**	3.500	4.842	.906	CRWHA2	R
	P.F. WIDTH .737				
35066	3.500	4.842	.904	†SCOT1	R
	SCOTSEAL				
35072	3.500	4.852	.904	†SCOT1	R
	SCOTSEAL				
35075	3.500	5.000	.891	†SCOT1	R
	SCOTSEAL				
35076	3.500	4.953	1.096	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
35079	3.500			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
35080	3.500	4.999	.438	†CRWA1	V
▲**35082**	3.500	4.999	.438	†CRWH1	R
35083	3.500	4.999	.438	†CRWHA1	P
▲**35086**	3.500	5.126	.438	†CRWH1	R
35095	3.500	5.126	.438	†CRWHA1	R
▲**35096**	3.500	5.251	.438	†CRWH1	R
▲**35098**	3.500	5.251	.750	†CRWHA11	P
35103	3.500	4.842	.904	†SCOTLL	H
	SCOTSEAL LONGLIFE				
35105	3.500	5.750	.413	†HMSA25	V
35111	3.500	5.751	.563	†CRSH1	R
35116	3.500	4.260	.500	HMSA7S	RT
35120	3.504	4.173	.354	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
□**35125**	89.00	127.00	11.13	†CRWH1	R
□**35127**	89.00	127.00	11.13	†CRWHA1	P
35405	3.543	4.134	.394	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
35407	3.543	4.291	.354	HMSA35	V
	W/CCW HELIX FROM AIR SIDE				
35409	3.543	4.331	.354	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
□**35410**	90.00	110.00	12.00	†CRW1	R
▲□35411	90.00	110.00	12.00	HMS4	R
□**35412**	90.00	110.00	12.00	†CRW1	V
□**35414**	90.00	110.00	12.00	HMSA7	R
35418	3.543	4.252	.394	HMA7	P
▲□35420	90.00	115.00	12.00	†CRWA1	R
□**35421**	90.00	115.00	13.00	HMSA7	R
35422	3.543	4.528	.512	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
□**35425**	90.00	110.00	8.00	HMSA7	R
□**35428**	90.00	110.00	8.00	HMS4	R
□**35430**	90.00	120.00	12.00	†CRW1	R
□**35431**	90.00	120.00	12.00	†CRW1	V
▲□35432	90.00	120.00	12.00	HMS4	R
□**35435**	90.00	120.00	12.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□35439	90.00	110.00	7.50	HMSA7P2	R
▲□35440	90.00	125.00	12.00	†CRW1	R
□**35441**	90.00	125.00	12.00	†CRW1	V
□**35449**	90.00	110.00	13.00	HMSA7	R
□**35450**	90.00	130.00	12.00	†CRW1	R
□35453	90.00	115.00	9.00	CRSH11	R
□**35455**	95.00	130.00	15.00	HMSA7	R
□**35459**	90.00	120.00	13.00	HMS4	R
□**35461**	90.00	120.00	12.00	HMS4	V
□**35468**	90.00	120.00	13.00	HMSA7	R
□35472	90.00	130.00	13.00	HMS46	R
□35477	90.00	125.00	13.00	CRSH1	R
□**35481**	90.00	140.00	12.00	†CRWA1	R
□**35482**	90.00	140.00	13.00	HMS4	R
□**35483**	90.00	115.00	13.00	HMS4	R
□**35484**	90.00	120.00	12.00	HMSA7	R
35495	3.543	6.299	.800	HMSHASP	R
	P.F. WIDTH .669 & 6.713 FLANGE				
□**35498**	90.00	110.00	13.00	HMS4	R
□**35501**	90.00	110.00	5.50	HMS4	R
□**35504**	90.00	110.00	5.50	HMSA7	R
□**35508**	90.00	125.00	13.00	HMS4	R
□**35511**	90.00	125.00	13.00	HMSA7	R
▲**35556**	3.563	4.501	.438	†CRWH1	R
▲**35593**	3.563	4.626	.438	†CRWH1	R
▲**35649**	3.563	4.751	.438	†CRWH1	R
▲**35676**	3.563	4.876	.438	†CRWH1	R
▲**35716**	3.563	4.999	.438	†CRWH1	R
35810	3.574	4.758	.625	†HMSA16	P
35828	3.582	4.370	.374	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
35833	3.543	4.094	.433	HMSA1	V
35836	3.583	4.094	.433	UNITIZE	VR
▲35905	3.583	4.370	.394	†HMSA1	V
	W/CCW HELIX FROM AIR SIDE				
36005	3.622	4.331	.374	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
□**36013**	92.00	120.00	13.00	HMS4	R
□**36015**	92.00	120.00	14.00	HMS4	R
□**36025**	92.00	127.00	11.13	†CRWH1	R
□**36027**	92.00	127.00	11.00	†CRWHA1	R
▲36120	3.620	4.626	.500	†ALH1	S
▲**36147**	3.625	4.240	.380	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
36153	3.625	4.376	.375	†CRWA1	V
36155	3.625	4.376	.375	†CRWA1	R
▲**36157**	3.625	4.376	.375	†CRWH1	R
36158	3.625	4.376	.375	†CRWH1	P
36166	3.625	4.501	.375	†CRW1	R
36172	3.625	4.500	.294	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**36177**	3.625	4.626	.375	†CRW1	R
36179	3.625	4.626	.375	†CRWA1	V
36185	3.625	4.626	.438	†CRWH1	R
36186	3.625	4.626	.438	†CRWHA1	R
36204	3.622	4.370	.315	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
▲**36220**	3.625	4.751	.438	†CRWH1	R
36221	3.625	4.695	.395	X13	R
	O.D. LISTED IS PRESSFIT I.D.				
□36222	92.00	120.00	12.00	HMS46	R
36234	3.625	4.751	.500	†CRWA1	S
	W/STAINLESS STEEL SPRING				
36250	3.625	4.751	.500	†SL1	T
	W/HELIX-CW W/INSTALLATION SLV				
36282	3.625	4.814	.906	CRWA2	R
	W/ZINC PLATED CASE, W/.433 P.F				
36285	3.625	4.813	.906	†SCOT1	R
	SCOTSEAL				
36289	3.625	4.839	.500	P1	L
▲**36314**	3.625	4.876	.438	†CRWH1	R
36337	3.625	4.876	.375	CRW	R
	NO SPRING				
36340	3.625	4.876	.750	C8	RR
36358	3.625	5.000	.859	†SCOT1	R
	SCOTSEAL				
36359	3.625	4.999	.375	†CRWA1	V
36361	3.625	4.999	.375	†CRWA1	R
▲**36363**	3.625	4.999	.438	†CRWH1	R
36364	3.625	4.999	.438	†CRWHA1	R
36365	3.625	5.001	.891	†SCOT1	R
	SCOTSEAL				
36381	3.500	5.251	.718	KIT	P
	SEE KIT SECTION				
▲**36382**	3.625	5.251	.375	†CRWA1	R
36391	3.625	5.375	.438	†CRWHA1	R
36601	3.661	4.488	.551	HMSA7	V
36614	3.661	4.331	.512	HMSA7	V
	W/CCW HELIX				
36650	3.661	6.063	.315	J-TYPE	P
	W/7-.320 HOLES AT 5.000 B.C.				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
36655	3.661	6.649	.449	J-TYPE	P
	W/4-.477" HOLES				
36658	3.661	4.331	.276	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
36660	3.661	4.252	.394	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
▲**36740**	3.688	4.501	.438	†CRWHA1	R
▲**36770**	3.688	4.751	.438	†CRWH1	R
▲**36880**	3.688	4.999	.438	†CRWH1	R
36895	3.688	5.126	.438	†CRWA1	R
36910	3.688	5.626	.438	†CRWA1	R
36944	3.688	5.250	.718	KIT	P
	SEE KIT SECTION				
□37001	95.00	110.00	9.00	CRS1	R
□**37005**	95.00	110.00	9.00	HMS4	R
□**37008**	95.00	110.00	9.00	HMSA7	R
▲□37015	95.00	110.00	10.00	†CRW1	R
▲□37020	95.00	115.00	12.00	HMS4	R
□**37025**	95.00	115.00	12.00	†CRW1	R
□**37026**	95.00	115.00	12.00	†CRW1	V
□37027	95.00	115.00	12.00	CRSA1	R
37030	3.740	4.646	.394	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
□**37039**	95.00	120.00	12.00	HMS4	R
▲□37040	95.00	120.00	12.00	†CRW1	R
□**37041**	95.00	120.00	12.00	†CRW1	V
□**37042**	95.00	120.00	12.00	†CRWA1	V
□**37043**	95.00	120.00	12.00	HMSA7	R
▲□37047	95.00	125.00	12.00	HMS4	R
□**37050**	95.00	125.00	12.00	†CRW1	R
□**37075**	95.00	130.00	12.00	†CRW1	R
37076	3.740	5.118	.472	†CRW1	V
▲□37081	95.00	130.00	12.00	HMS4	R
▲**37320**	3.750	4.376	.250	†HM14	R
37325	3.750	4.376	.250	†HM14	V
37327	3.750	4.501	.375	CRW1	R
37328	3.750	4.501	.375	†CRW1	V
▲**37330**	3.750	4.501	.469	†CRWHA1	P
37332	3.750	4.502	.469	†CRWHA1	V
37338	3.750	4.500	.381	HMSA7	P
	W/CW HELIX FROM AIR SIDE				
▲**37340**	3.750	4.501	.380	HMS4	S
	W/CCW HELIX FROM AIR SIDE				
37341	3.750	4.501	.376	HMS4	V
	W/CCW HELIX FROM AIR SIDE				
37342	3.750	4.501	.380	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
37381	3.750	4.751	.875	†E3	RR
37387	3.750	4.751	.375	†CRW1	P
▲**37388**	3.750	4.751	.375	†CRW1	R
37389	3.750	4.751	.375	†CRWA1	R
37390	3.750	4.751	.438	†CRWA1	P
37395	3.750	4.751	.438	†CRWHA1	S
37396	3.750	4.751	.438	†CRWH1	R
37403	3.750	4.750	.438	†CRWHA1	P
37405	3.750	4.751	.438	†CRWH1	V
37408	3.740	5.196	.866	HMSA8	R
	P.F. WIDTH 12MM				
37410	3.750	4.751	.500	†HMSA24	V
□**37424**	95.00	125.00	12.00	HMSA7	R
▲**37433**	3.750	4.876	.438	†CRWH1	R
□**37439**	95.00	120.00	13.00	HMSA7	R
□**37440**	95.00	110.00	12.00	HMS4	R
37442	3.745	6.161	.305	J-TYPE	P
37504	3.750	4.532	.482	HMA11	VT
37507	3.750	4.573	.571	S1	T
37520	3.753	4.720	.607	†UNITIZE	V
	UNITIZED TRANSMISSION SEAL				
37524	3.750	4.999	.375	†CRW1	V
▲**37525**	3.750	4.999	.375	†CRW1	R
37526	3.750	4.999	.375	†CRWA1	R
37532	3.750	4.999	.438	†CRWH1	R
37533	3.750	4.999	.438	†CRWHA1	R
★37565	3.750	4.999	.469	†HM21	R
37570	3.778	4.567	.354	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
▲**37574**	3.750	5.251	.438	†CRWH1	R
37577	3.750	5.251	.438	†CRWH1	V
	W/STAINLESS STEEL SPRING				
37775	3.777	4.567	.508	†UNITIZD	V
37795	3.740	4.440	.315	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
37825	3.780	4.606	.472	HMSA7	S
	W/CCW HELIX FROM AIR SIDE				
▲38040	3.813	4.501	.250	†HD1	R
	QUILL WIPER				
38041	3.813	4.501	.250	†HD1	V
	QUILL WIPER				
38160	3.813	4.999	.469	CRSH1	R
□38191	97.00	120.00	13.00	CRSH11	R
38196	3.819	4.724	.512	HMSA7	R
	W/CCW HELIX FROM AIR SIDE				
38220	3.813	5.251	.469	CRSH1	R
□**38520**	98.00	120.00	12.00	†CRW1	V
▲□38523	98.00	120.00	13.00	HMS4	R
□38581	98.00	125.00	12.00	HMS45	R
□38583	98.00	130.00	13.00	CRSH11	R
38585	3.858	4.567	.394	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
▲38590	3.875	5.390	.375	X12	R
	O.D. LISTED IS PRESSFIT I.D.				
38646	3.875	4.751	.375	†CRW1	R
	W/SS CASE & SPRING				
38647	3.875	4.751	.375	†CRWA1	R
38649	3.875	4.751	.375	†CRWA1	V
▲**38653**	3.875	4.751	.438	†CRWH1	R
▲**38669**	3.875	4.876	.500	†CRWH1	R
38673	3.875	4.876	.438	†CRWHA1	R
38678	3.875	4.876	.500	†CRWHA1	V
▲**38691**	3.875	4.999	.375	†CRW1	R
38692	3.875	4.999	.375	†CRWA1	R
38694	3.875	4.999	.375	†CRWA1	V
38702	3.875	5.126	.438	†CRWHA1	V
▲**38703**	3.875	5.126	.438	†CRWH1	R
38709	3.875	5.129	.844	†SCOT1	R
	SCOTSEAL				
38713	3.875	5.126	.438	†CRWHA1	R
▲**38730**	3.875	5.251	.438	†CRWH1	R
38731	3.875	5.251	.438	†CRWHA1	R
38736	3.875	5.248	.844	†SCOT1	R
	SCOTSEAL				
38739	3.875	5.251	.438	†CRWHA1	P
38740	3.875	5.312	1.102	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
38741	3.875			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
▲**38745**	3.875	5.376	.438	†CRWH1	R
38747	3.875	5.376	1.016	†SCOT1	R
	SCOTSEAL				
38749	3.875	5.501	.500	†CRSHA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
38750	3.875	5.501	.938	†SCOT1	R
	SCOTSEAL				
38751	3.875	5.562	1.267	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
38752	3.875			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
38758	3.875	5.626	.433	†CRWHA1	R
38774	3.875	5.690	.500	†CRWH1	R
38776	3.875	5.691	.892	PLUS XL	H
	SCOTSEAL PLUS XL				
▲38777	3.875	5.690	.750	CRSHA2	R
38780	3.875	5.691	.938	†SCOT1	R
	SCOTSEAL				
38810	3.875	5.751	.563	CRSH1	R
38845	3.875	6.000	.625	HMSA1	R
38880	3.898	4.680	.370	HMSA7	VR
38883	3.898	4.331	.276	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
□**38890**	99.00	124.00	9.53	†CRW1	R
39070	3.907	5.708	1.023	HMSA8	R
	P.F. WIDTH 14.8MM				
□**39100**	100.00	115.00	9.00	HMS4	R
□**39114**	100.00	120.00	10.00	HMSA7	R
▲□39118	100.00	120.00	10.00	HMS4	R
▲□39120	100.00	120.00	12.00	†CRW1	R
□**39122**	100.00	120.00	12.00	HMS4	R
□**39125**	100.00	120.00	12.00	†CRW1	V
□**39129**	100.00	120.00	12.00	HMSA7	R
▲□39135	100.00	125.00	12.00	†CRW1	R
□**39136**	100.00	125.00	12.00	†CRW1	V
▲□39139	100.00	125.00	12.00	HMS4	R
□**39140**	100.00	125.00	12.00	HMSA7	R
□**39142**	100.00	125.00	13.00	HMS4	R
□**39145**	100.00	127.00	11.13	†CRWH1	R
□**39155**	100.00	130.00	12.00	†CRW1	R
▲□39156	100.00	130.00	12.00	HMS4	R
□**39158**	100.00	130.00	12.00	HMSA7	R
□**39159**	100.00	130.00	12.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**39170**	100.00	135.00	12.00	†CRWA1	R
□**39180**	100.00	140.00	12.00	†CRWA1	R
□**39183**	100.00	140.00	13.00	HMS4	R
□**39184**	100.00	140.00	13.00	HMSA7	R
▲**39245**	3.938	4.876	.438	†CRWH1	R
▲**39275**	3.938	4.999	.438	†CRWH1	R
39276	3.938	4.999	.438	†CRWH1	V
39277	3.938	4.999	.438	†CRWH1	R
	W/SS CASE & SPRING				
▲**39304**	3.938	5.126	.472	†CRWHA1	V
▲**39320**	3.938	5.251	.438	†CRWH1	R
▲**39350**	3.938	5.375	.438	†CRWH1	R
39361	3.937	4.724	.374	HMSA7	V
39367	3.937	4.882	.512	HMSA7	V
	W/CCW HELIX				
39380	3.938	5.374	1.016	†SCOT1	R
	SCOTSEAL				
□39384	100.00	120.00	8.00	CRS13	R
▲**39385**	3.938	5.372	1.031	CRWH2	R
	P.F. WIDTH .527				
□39387	100.00	120.00	13.00	CRSH1	R
□**39392**	100.00	125.00	13.00	HMSA7	R
□39399	100.00	130.00	10.00	HMS46	R
□**39403**	100.00	130.00	12.00	HMS4	V
□39406	100.00	135.00	13.00	HMS47	R
□**39415**	100.00	130.00	13.00	HMSA7	R

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**39416**	100.00	120.00	13.00	HMSA7	R
39420	3.938	5.501	.938	†SCOT1	R
	SCOTSEAL				
□**39421**	100.00	150.00	12.00	HMS4	R
▲**39423**	3.938	5.501	.438	†CRWH1	R
39425	3.938	5.504	1.016	†SCOT1	R
	SCOTSEAL				
39426	3.938	5.512	.591	SCOTPLS	R
	SCOTSEAL PLUS				
□39760	101.00	114.00	10.00	HMSA1	R
▲**39835**	4.000	4.501	.250	†HM14	R
39838	4.000	4.562	.375	HMS2	P
▲**39851**	4.000	4.876	.438	†CRW1	R
▲39860	4.000	4.876	.250	†HM21	R
39895	4.000	4.999	.375	†CRW1	P
39921	4.000	4.999	.375	†CRWA1	V
▲**39922**	4.000	4.999	.375	†CRW1	R
39923	4.000	4.999	.375	†CRWA1	R
39930	4.000	4.999	.438	†CRWHA1	P
39932	4.000	4.999	.438	†CRWH1	V
39933	4.000	4.999	.438	†CRWH1	R
39934	4.000	4.999	.438	†CRWHA1	R
39935	4.000	4.999	.438	†CRWH1	S
39946	4.000	4.999	.438	†D	SS
	P.F. WIDTH .438 SPECIAL CONST.				
▲39961	4.000	4.999	.250	†HM21	R
▲**39975**	4.000	5.126	.438	†CRWH1	R
39979	4.000	5.122	.953	PLUS XL	H
	SCOTSEAL PLUX XL				
39988	4.000	5.126	1.047	†SCOT1	R
	SCOTSEAL				
39996	4.000	5.251	.438	†CRWH1	V
▲**39997**	4.000	5.251	.438	†CRWH1	R
40000	4.000	5.251	.438	†CRWA1	R
▲**40020**	4.000	5.310	.500	†CRWHA1	R
▲**40036**	4.000	5.376	.438	†CRWH1	R
40040	4.000	5.376	1.016	†SCOT1	R
	SCOTSEAL				
▲**40049**	4.000	5.501	.438	†CRWH1	R
▲**40077**	4.000	5.626	.375	†CRWA1	R
▲**40078**	4.000	5.626	.438	†CRWH1	R
40086	4.000	5.626	.688	†SCOT2	R
	SCOTSEAL				
40091	4.000	5.626	.688	PLUS XL	H
	SCOTSEAL PLUS XL				
▲**40108**	4.000	5.751	.438	†CRWH1	R
40129	4.000	5.754	.995	PLUS XL	H
	SCOTSEAL PLUS XL				
40131	4.000	5.813	.500	X	R
	O.D. LISTED IS PRESSFIT I.D.				
40136	4.000	5.754	1.079	†SCOT1	R
	SCOTSEAL				
▲**40138**	4.000	6.001	.500	†CRWH1	R
40139	4.000	5.760	1.079	†SCOT1	R
	SCOTSEAL				
□40151	102.00	116.00	14.00	HMSA1	R
▲**40158**	4.000	6.250	.500	†CRWH1	R
▲40210	4.012	5.693	.813	†HMSA16	P
□**40248**	102.00	130.00	13.00	HMS4	R
▲**40360**	4.050	5.501	.550	†CRWH6	R
	W/5.750 FLANGE				
40510	4.063	5.390	.375	X12	R
	O.D. LISTED IS PRESSFIT I.D.				
□**40939**	104.00	125.00	10.00	HMS4	R
▲**41125**	4.125	4.999	.438	†CRWH1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
41126	4.125	4.999	.438	CRWH1	V
41130	4.125	4.999	.438	†CRWH1	S
41152	4.125	4.999	.718	KIT	P
	SEE KIT SECTION				
▲**41170**	4.125	5.126	.438	†CRWH1	R
41171	4.125	5.126	.438	†CRWH1	V
▲**41185**	4.125	5.251	.438	†CRWH1	R
41186	4.125	5.251	.438	†CRWH1	V
▲**41265**	4.125	5.501	.438	†CRWH1	R
▲**41287**	4.125	5.751	.438	†CRWH1	R
▲**41305**	4.125	6.001	.438	†CRWH1	R
41307	4.125	6.001	.438	†CRWH1	V
□41340	105.00	120.00	8.00	CRSA13	R
□41352	105.00	135.00	13.00	CRSH11	R
□41358	105.00	145.00	15.00	CRS11	R
□41360	105.00	150.00	15.00	CRSH11	R
□**41367**	105.00	125.00	13.00	HMS4	R
□**41370**	105.00	125.00	13.00	HMSA7	R
41401	4.134	4.724	.433	HMSA7	S
□★41410	105.00	125.00	12.00	HMSA27	R
□41411	105.00	125.00	12.00	CRS1	R
□**41415**	105.00	127.00	11.13	†CRWH1	R
□**41425**	105.00	130.00	12.00	†CRW1	R
□**41426**	105.00	130.00	12.00	†CRW1	V
▲□41430	105.00	130.00	12.00	HMS4	R
□**41433**	105.00	130.00	12.00	HMSA7	R
□**41440**	105.00	135.00	12.00	†CRWA1	R
□**41443**	105.00	135.00	14.00	HMSA7	R
□**41455**	105.00	140.00	12.00	†CRWA1	R
▲□41456	105.00	140.00	12.00	HMS4	R
□**41457**	105.00	140.00	15.00	HMS4	R
□**41460**	105.00	140.00	12.00	HMSA7	R
□**41475**	105.00	160.00	12.00	†CRW1	R
▲41550	4.166	5.501	.600	†HMSHA3	R
41555	4.165	5.625	.210	J5SPLIT	R
	W/8 EA .390 DIA. HOLES				
▲41751	4.188	4.999	.469	CRSHA1	R
▲41761	4.188	5.251	.469	CRSH1	R
▲41813	4.188	5.501	.500	†HMSHA3	R
41814	4.188	5.501	.500	†HMSHA3	V
41833	4.188	5.751	.500	CRSHA1	R
□42120	107.00	123.00	11.00	CRSA1	R
□42130	107.00	130.00	13.00	CRSH11	R
42340	4.250	4.813	.313	HM14	R
42380	4.250	5.126	.250	†HM21	R
▲**42419**	4.250	5.251	.375	†CRWA1	R
42422	4.250	5.251	.375	†CRW1	S
42426	4.250	5.251	.438	†CRWH1	R
42427	4.250	5.251	.438	†CRWHA1	R
42433	4.250	5.251	.438	†CRWH1	V
▲42470	4.250	5.251	.250	†HM21	R
▲**42474**	4.250	5.373	.438	†CRWA1	V
▲**42475**	4.250	5.376	.438	†CRWH1	R
□42520	108.00	130.00	13.00	CRSH1	R
▲**42528**	4.250	5.501	.438	†CRWH1	R
42540	4.250	5.501	.750	C8	RR
42550	4.250	5.501	.938	†SCOT1	R
	SCOTSEAL				
42557	4.250	5.626	.438	†CRWA1	R
▲**42573**	4.250	5.751	.438	†CRWH1	R
42592	4.250	5.876	.500	†CRWH1	V
	W/STAINLESS STEEL SPRING				
▲**42616**	4.250	6.001	.500	†CRWH1	R
42623	4.250	6.009	.984	†SCOT1	R
	SCOTSEAL				
42624	4.250	6.043	.984	†SCOT1	R
	SCOTSEAL				
42625	4.250	6.009	1.122	SCOTPLS	R
	SCOTSEAL				
42627	4.250	6.009	.971	PLUS XL	H
	SCOTSEAL PLUS XL				
42631	4.250	6.008	.984	†SCOTLL	
	SCOTSEAL LONGLIFE				
▲**42635**	4.250	6.126	.500	†CRWH1	R
▲**42644**	4.250	6.250	.500	†CRWH1	R
42672	4.250	6.254	1.250	†SCOT1	R
	SCOTSEAL				
42673	4.250	6.254	1.245	PLUS XL	H
	SCOTSEAL PLUS XL				
42800	4.266	6.066	.875	†SCOT1	R
	SCOTSEAL				
43072	4.313	5.501	.433	†CRWHA1	P
▲**43073**	4.313	5.501	.438	†CRWHA1	R
43131	4.313	5.751	.500	CRSH1	R
43135	4.312	5.823	1.102	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
43136	4.312			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
43149	4.312			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
43150	4.312	6.000	1.320	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
43201	4.313	6.250	.500	HMSH1	R
□**43300**	110.00	130.00	12.00	HMS4	V
□**43301**	110.00	130.00	12.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□43303	110.00	130.00	12.00	HMS4	R
□**43304**	110.00	130.00	12.00	HMSA7	R
□**43310**	110.00	130.00	12.00	†CRW1	R
□**43311**	110.00	130.00	12.00	†CRW1	V
□43313	110.00	128.00	9.00	CRSA13	R
□**43324**	110.00	140.00	12.00	HMSA7	R
□**43326**	110.00	135.00	12.00	†CRW1	V
▲□43327	110.00	135.00	12.00	HMS4	R
□**43334**	110.00	150.00	13.00	HMS4	R
□**43338**	110.00	140.00	12.00	†CRW1	V
□**43340**	110.00	140.00	12.00	†CRW1	R
▲□43341	110.00	140.00	12.00	HMS4	R
□**43342**	110.00	140.00	13.00	HMS4	R
□**43343**	110.00	140.00	14.00	HMSA7	R
43345	4.331	5.626	.472	†CRWHA1	V
▲□43355	110.00	145.00	12.00	†CRW1	R
□**43357**	110.00	145.00	15.00	HMSA7	R
□**43359**	110.00	130.00	13.00	HMS4	R
□**43361**	110.00	140.00	13.00	HMSA7	R
□**43363**	110.00	130.00	13.00	HMSA7	R
□**43390**	110.00	160.00	12.00	†CRWH1	R
▲**43650**	4.375	5.376	.438	†CRWH1	R
▲**43691**	4.375	5.501	.438	†CRWH1	R
43746	4.374	5.737	.207	SPLIT	R
▲**43751**	4.375	5.751	.438	†CRWH1	R
43752	4.375	5.751	1.016	†SCOT1	R
	SCOTSEAL				
43754	4.375	5.751	.995	PLUS XL	H
	SCOTSEAL PLUS XL				
43761	4.375	5.900	1.000	PLUS XL	H
	SCOTSEAL PLUS XL				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲**43762**	4.375	5.907	.984	†CRWHA2	R
	P.F. WIDTH .640				
43764	4.375	5.905	1.000	†SCOT1	R
	SCOTSEAL				
▲**43771**	4.375	6.001	.500	†CRWH1	R
43800	4.375	6.003	1.047	†SCOT1	R
	SCOTSEAL				
▲**43820**	4.375	6.250	.500	†CRWH1	R
43860	4.375	6.254	.922	†SCOT1	R
	SCOTSEAL				
43865	4.375	6.254	1.047	†SCOT1	R
	SCOTSEAL				
43875	4.375	6.311	1.125	†SCOT1	R
	SCOTSEAL				
44000	4.400	5.230	.375	HMSA7	P
	W/CCW HELIX FROM AIR SIDE				
□44092	112.00	140.00	13.00	CRSA11	R
□44094	112.00	140.00	13.00	HMS47	R
□44095	112.00	150.00	15.00	CRSH11	R
▲44269	4.375	5.373	.570	X1	V
	O.D. LISTED IS PRESSFIT I.D.				
▲**44275**	4.438	5.501	.500	†CRWH1	R
44276	4.438	5.501	.500	†CRWH1	V
▲**44295**	4.438	5.751	.500	†CRWH1	R
▲**44320**	4.438	6.001	.500	†CRWH1	R
▲**44350**	4.438	6.250	.500	†CRWH1	R
□44493	113.00	140.00	13.00	CRSH1	R
▲**44630**	4.477	6.250	.500	†CRWH1	R
□**44880**	114.00	140.00	13.00	HMSA7	R
▲44892	4.500	6.015	.550	X12	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**44913**	4.500	5.251	.438	†CRWH1	R
44916	4.500	5.375	.975	PLUS XL	H
	SCOTSEAL PLUS XL				
44917	4.500	5.251	.438	†CRWHA1	V
▲**44920**	4.500	5.376	.438	†CRWH1	R
44922	4.500	5.375	.984	†SCOT1	R
	SCOTSEAL				
44926	4.500	5.376	.438	†CRWHA1	V
▲**44959**	4.500	5.501	.375	†CRW1	R
44960	4.500	5.501	.375	†CRWA1	R
44964	4.500	5.501	.750	†SCOT1	R
	SCOTSEAL				
44967	4.500	5.501	.438	†CRWH1	R
44968	4.500	5.501	.438	†CRWHA1	R
44973	4.500	5.501	.438	†CRWH1	V
44980	4.500	5.501	.435	†CRWH1	V
	W/STAINLESS STEEL SPRING				
45001	4.500	5.501	.500	†KIT	S
	SEE KIT SECTION				
45010	4.500	5.501	.938	†SCOT1	R
	SCOTSEAL				
▲**45025**	4.500	5.501	.250	HM14	R
▲**45032**	4.500	5.626	.438	†CRWH1	R
45033	4.500	5.626	.438	†CRWHA1	V
45064	4.500	5.751	.375	†CRWA1	V
▲**45069**	4.500	5.751	.438	†CRWH1	R
45070	4.500	5.751	.438	†CRWHA1	R
45093	4.500	5.751	.767	PLUS XL	H
	SCOTSEAL PLUS XL				
45095	4.500	5.876	1.009	PLUS XL	H
	SCOTSEAL PLUS XL				
45099	4.500	5.751	1.016	†SCOT1	R
	SCOTSEAL				
45103	4.500	5.876	.984	†SCOT1	R
	SCOTSEAL				
▲**45110**	4.500	6.001	.500	†CRWH1	R
45111	4.500	6.001	.500	†CRWHA1	R
45112	4.500	6.001	.500	†CRWHA1	V
▲**45140**	4.500	6.126	.563	†CRWH1	R
▲**45150**	4.500	6.250	.500	†CRWH1	R
45152	4.500	6.311	1.125	†SCOT1	R
	SCOTSEAL				
45157	4.500	6.254	.750	PLUS XL	H
	SCOTSEAL PLUS XL				
45160	4.500	6.254	1.047	†SCOT1	R
	SCOTSEAL				
45161	4.500	6.409	.415	X12	D
	O.D. LISTED IS PRESSFIT I.D.				
45162	4.500	6.441	.938	†SCOT1	R
	SCOTSEAL				
□**45210**	115.00	135.00	12.00	†CRW1	R
▲□45220	115.00	140.00	12.00	†CRW1	R
□**45221**	115.00	140.00	12.00	†CRW1	R
	W/SS CASE & SPRING				
□**45222**	115.00	140.00	12.00	†CRW1	V
▲□45223	115.00	140.00	12.00	HMS4	R
□**45224**	115.00	140.00	12.00	HMSA7	R
□**45225**	115.00	140.00	13.00	HMS4	R
▲□45230	115.00	145.00	12.00	†CRW1	R
□**45233**	115.00	145.00	14.00	HMSA7	R
□**45250**	115.00	150.00	12.00	†CRW1	R
▲□45252	115.00	150.00	12.00	HMS4	R
45280	4.528	6.142	1.063	HMSA8	R
	P.F. WIDTH 15.6MM				
□**45290**	115.00	160.00	12.00	†CRW1	R
□45299	115.00	160.00	15.00	CRSH1	R
▲45550	4.563	5.751	.500	CRSHA1	R
45560	4.563	6.250	.500	CRSH1	R
46060	4.606	6.850	1.063	HMSA8	R
	P.F. WIDTH 15.6MM				
46125	4.625	5.501	.500	†ALH1	S
▲**46144**	4.625	5.626	.500	†CRWH1	R
46155	4.625	5.626	.500	†CRWH1	V
▲**46200**	4.625	5.751	.500	†CRWH1	R
▲**46208**	4.625	5.751	.500	†CRWH1	S
▲**46285**	4.625	6.001	.500	†CRWH1	R
46300	4.625	6.001	.912	PLUS XL	H
	SCOTSEAL PLUS XL				
46305	4.625	6.001	1.063	†SCOT1	R
	SCOTSEAL				
46308	4.625	6.000	1.063	†SCOTLL	H
	SCOTSEAL LONGLIFE				
▲46309	4.625	6.186	1.250	HMSA8	R
	P.F. WIDTH .813				
▲**46324**	4.625	6.250	.500	†CRWH1	R
46390	4.635	6.009	1.031	†SCOT1	R
	SCOTSEAL				
▲**46395**	4.625	6.623	1.094	†CRWA79	R
	P.F. WIDTH .484				
46396	4.625	6.623	1.093	OILBATH	R
□46460	118.00	140.00	13.00	CRSH11	R
46790	4.688	5.751	.512	†CRWH1	S
▲**46800**	4.688	5.751	.512	†CRWH1	R
▲46851	4.688	5.751	.250	†HD1	R
	QUILL WIPER				
▲46920	4.688	6.001	.266	†HD1	P
	QUILL WIPER				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲46935	4.688	6.001	.380	†HMSW90	P
	P.F. WIDTH .281				
46950	4.688	6.250	.500	†CRWH1	R
46975	4.688	6.400	1.525	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
46976	4.688			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
□**47210**	120.00	140.00	12.00	†CRWA1	R
▲□47212	120.00	140.00	13.00	HMS4	R
□**47214**	120.00	140.00	13.00	HMSA7	R
□**47225**	120.00	145.00	12.00	HMS4	R
▲□47230	120.00	145.00	12.00	†CRW1	R
□**47240**	120.00	150.00	13.00	HMS4	R
47245	4.724	5.906	.590	SCOTPLS	R
	SCOTSEAL PLUS				
▲□47250	120.00	150.00	12.00	†CRW1	R
▲□47252	120.00	150.00	12.00	HMS4	R
□**47253**	120.00	150.00	12.00	HMS4	V
	W/STAINLESS STEEL SPRING				
□**47254**	120.00	150.00	12.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□**47260**	120.00	150.00	14.00	HMSA7	R
□47264	120.00	150.00	15.00	CRSH1	R
□47272	120.00	160.00	15.00	CRSH11	R
□**47273**	120.00	155.00	16.00	HMSA7	R
□**47276**	120.00	150.00	12.00	HMSA7	R
□**47287**	120.00	160.00	12.00	HMS4	R
□**47289**	120.00	160.00	12.00	HMS4	V
	W/STAINLESS STEEL SPRING				
▲□47291	120.00	160.00	12.00	†CRWH1	R
47375	4.750	5.749	.438	†CRW1	P
47378	4.750	5.375	.313	†HM14	R
47379	4.750	5.751	.500	†CRW1	V
47382	4.750	5.751	.500	†CRWA1	V
	W/STAINLESS STEEL SPRING				
47383	4.750	5.751	.500	†CRW1	R
47385	4.646	5.751	.625	KIT	V
	SEE KIT SECTION				
▲**47394**	4.750	5.751	.500	†CRWH1	R
47395	4.750	5.751	.500	†CRWHA1	R
▲**47441**	4.750	5.875	.500	†CRWH1	R
47455	4.750	6.002	.300	X15	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**47474**	4.750	6.001	.500	†CRWH1	R
47475	4.750	6.001	.500	†CRWHA1	R
47481	4.750	6.001	.500	†CRW1	V
47483	4.750	6.001	1.063	†SCOT1	R
	SCOTSEAL				
▲**47583**	4.750	6.250	.500	†CRWH1	R
47586	4.750	6.250	.500	†CRWHA1	V
47587	4.750	6.250	.500	†KIT	R
47591	4.750	6.250	.610	†HMSA24	R
▲47660	4.750	6.619	1.181	†HMSA28	R
	P.F. WIDTH .550				
47690	4.766	6.001	1.063	†SCOT1	R
	SCOTSEAL				
47691	4.767	6.308	1.035	†PLUS XL	
	DRIVE AXLE ABS VERSION				
47692	4.767	6.308	1.420	PLUS XL	H
	SCOTSEAL PLUS XL				
47693	4.767	6.316	1.125	†SCOTLL	H
	SCOTSEAL LONGLIFE				
47697	4.766	6.311	1.125	†SCOT1	R
	SCOTSEAL				
47698	4.767	6.313	1.125	†SCOT1	R
	SCOTSEAL				
47699	4.766	7.000	1.250	†SCOT1	R
	SCOTSEAL				
48000	4.766	6.254	1.047	†SCOT1	R
	SCOTSEAL				
48002	4.766	6.254	.795	PLUS XL	H
	SCOTSEAL PLUS XL				
□48030	122.00	150.00	13.00	CRSH13	R
□48031	122.00	150.00	15.00	HMSA75	R
48046	4.811	5.543	.472	HMSA7	V
	W/CCW HELIX FROM AIR SIDE				
▲**48060**	4.813	5.751	.563	†CRWH1	P
48062	4.813	5.751	.563	†CRWH1	V
48065	4.813	5.751	.563	†CRWH1	S
48070	4.813	5.751	.813	†D7	VV
48075	4.813	5.755	.750	†D7	PP
48297	4.824	6.311	1.125	†SCOT1	R
	SCOTSEAL				
48298	4.824	6.501	1.125	†SCOT1	R
	SCOTSEAL				
48650	4.875	5.501	.250	HM14	R
48689	4.875	6.001	.500	†CRWHA1	R
48690	4.875	6.001	.875	†SCOT1	R
	SCOTSEAL				
48692	4.875	6.001	.500	†CRWH1	V
▲**48693**	4.875	6.001	.500	†CRWH1	R
48697	4.875	6.000	.750	KIT	S
	SEE KIT SECTION				
▲**48726**	4.875	6.126	.500	†CRWH1	R
48768	4.875	6.250	.500	†CRWHA1	R
▲**48769**	4.875	6.250	.500	†CRWH1	R
★48792	4.875	6.254	1.047	†SCOT1	R
	SCOTSEAL				
48794	4.875	6.379	.938	†SCOT1	R
	SCOTSEAL				
48796	4.875	6.441	.938	†SCOT1	R
	SCOTSEAL				
48881	4.881	6.693	.571	X14	R
	O.D. LISTED IS PRESSFIT I.D.				
48883	4.875	6.375	.516	CRW3	R
48884	4.875	6.503	1.063	†SCOT1	R
	SCOTSEAL				
48886	4.875	6.440	.500	†CRW3	R
	P.F. WIDTH .375 W/6.735 FLANGE				
49050	4.902	6.309	.709	†CRWA3	R
	W/6.695 FLANGE				
49060	4.902	7.085	.475	X12	R
	O.D. LISTED IS PRESSFIT I.D.				
□49208	125.00	146.00	14.00	CRSA1	P
□**49210**	125.00	150.00	12.00	†CRW1	R
□**49211**	125.00	150.00	12.00	†CRW1	V
□**49213**	125.00	150.00	12.00	HMSA7	R
□**49214**	125.00	150.00	12.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□49215	125.00	150.00	12.00	HMS4	R
□49221	125.00	150.00	15.00	HMS43	V
□**49235**	125.00	170.00	15.00	HMSA7	R
▲□49240	125.00	155.00	14.00	HMS1	R
□**49243**	125.00	155.00	14.00	HMSA7	R
▲**49251**	4.938	6.001	.500	†CRWH1	R
□**49264**	125.00	150.00	13.00	HMS4	R
□**49267**	125.00	150.00	13.00	HMSA7	R
▲□49268	125.00	160.00	12.00	HMS4	R
□**49270**	125.00	160.00	12.00	†CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
49274	4.921	6.375	.500	†CRWHA1	V
▲**49301**	4.938	6.250	.500	†CRWH1	R
□49600	126.00	147.00	11.00	CRSA1	R
▲49920	5.000	5.751	.500	†HMS1	V
	W/STAINLESS STEEL SPRING				
49921	4.841	5.751	.750	KIT	V
	SEE KIT SECTION				
49927	5.000	6.001	.500	†CRWHA1	V
▲**49928**	5.000	6.001	.500	†CRWH1	R
49929	5.000	6.001	.500	†CRWHA1	R
49935	5.000	6.000	.500	†AL1	S
49951	5.000	6.125	.500	†HDW1	R
49960	5.000	6.126	.500	†CRW1	V
▲**49966**	5.000	6.250	.500	†CRWH1	R
49984	5.000	6.250	.500	†CRW1	R
49985	5.000	6.250	.500	†CRWA1	R
49990	5.000	6.250	.500	CRWH1	P
49991	5.000	6.250	.500	†CRWH1	V
49998	5.000	6.250	.500	†CRWHA1	R
▲50070	5.000	6.250	.250	†HM21	R
50124	5.000	6.254	1.047	†SCOT1	R
	SCOTSEAL				
▲**50130**	5.000	6.375	.500	†CRWH1	R
50138	5.000	6.375	.500	†CRWHA1	R
▲**50148**	5.000	6.500	.500	†CRWH1	R
50151	5.000	6.500	.500	†CRWH1	V
▲**50167**	5.000	6.623	.906	†CRWA79	R
▲**50168**	5.000	6.750	.500	†CRWH1	R
50172	5.000	6.750	.500	†CRWHA1	R
50185	5.000	7.000	.500	CRSHA1	R
50186	5.000	7.125	.500	†HDW1	R
50195	5.000	7.500	.500	CRSHA1	R
□50390	128.00	146.00	13.50	CRSH12	R
□50391	128.00	150.00	13.00	HMS47	R
□50394	128.00	160.00	15.00	CRSH13	R
□**50600**	128.00	150.00	15.00	HMS4	R
▲**50618**	5.063	6.126	.500	†CRWH1	R
50620	5.063	6.125	.500	†HDW1	R
50640	5.063	6.310	1.313	CRWH2	R
50650	5.063	6.375	.500	†CRWH1	R
50655	5.062	6.750	1.280	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
50656	5.062			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
□50790	129.00	160.00	15.00	CRSH11	R
□**51117**	130.00	160.00	15.00	HMSA7	R
□**51120**	130.00	160.00	15.00	HMS4	R
□**51123**	130.00	160.00	13.00	HMS4	R
□**51125**	130.00	160.00	12.00	†CRW1	R
□**51126**	130.00	160.00	12.00	†CRW1	V
□**51128**	130.00	160.00	13.00	HMSA7	R
▲□51130	130.00	160.00	12.00	HMS4	R
□**51131**	130.00	160.00	12.00	HMSA7	R
□**51135**	130.00	160.00	14.00	HMSA7	R
▲□51140	130.00	170.00	12.00	HMS4	R
□**51143**	130.00	170.00	15.00	HMS4	R
□51151	130.00	165.00	13.00	CRSH1	R
□51179	130.00	155.00	10.00	CRSH1	R
□**51180**	130.00	170.00	12.00	†CRW1	R
□51181	130.00	150.00	14.00	CRSA1	R
□51182	130.00	150.00	10.00	CRSA1	R
□**51185**	130.00	170.00	12.00	HMS4	V
□51189	130.00	160.00	13.00	CRS1	R
□51190	130.00	160.00	13.00	CRSA1	R
□★51193	130.00	160.00	15.00	HMSA7	R
□51203	130.00	180.00	15.00	CRSH13	R
▲**51240**	5.125	6.126	.500	†CRWHA1	R
51242	5.125	6.126	.750	†KIT	V
	SEE KIT SECTION				
51243	5.125	6.126	.500	†CRW1	V
51247	5.125	6.126	.500	†CRW1	R
▲**51248**	5.125	6.375	.500	CRWH1	R
▲**51252**	5.125	6.250	.500	†CRWHA1	R
51253	5.125	6.250	.500	†CRWA1	V
51255	5.125	6.375	.500	†CRWH1	V
51260	5.125	6.408	.625	X	D
	O.D. LISTED IS PRESSFIT I.D.				
51276	5.125	6.500	.500	CRSHA1	R
51277	5.125	6.625	.500	†HDW1	R
51320	5.125	7.000	.500	†HDW1	R
51800	5.188	6.250	.500	†HDW1	R
★**51851**	5.188	6.501	.625	†CRWH1	R
▲**51852**	5.188	6.501	.625	†CRWH1	V
▲**52440**	5.250	6.001	.375	†CRW1	R
52443	5.250	6.001	.500	†CRWH1	V
▲**52445**	5.250	6.250	.500	†CRWH1	R
52447	5.250	6.250	.500	†CRWH1	V
▲52475	5.250	6.250	.250	HM4	R
▲**52488**	5.250	6.500	.500	†CRWH1	R
52489	5.250	6.500	.500	†CRWH1	V
52492	5.250	6.375	.500	CRWHA1	R
52498	5.250	6.375	.500	CRWHA1	V
▲**52648**	5.250	6.750	.500	†CRWH1	R
52649	5.250	6.750	.500	†CRWH1	V
52651	5.250	6.750	.500	†HDW1	R
52655	5.250	7.125	.500	†HDW1	R
52658	5.250	7.376	.945	†SCOT1	R
	SCOTSEAL				
★52664	5.250	7.379	2.500	†SCOT1	R
	SCOTSEAL				
53100	5.313	6.375	.500	†HDW1	R
▲□53135	135.00	160.00	12.00	HMS4	R
□**53140**	135.00	160.00	15.00	HMS4	R
□**53142**	135.00	160.00	13.00	HMSA7	R
□**53143**	135.00	160.00	13.00	HMS4	R
□**53145**	135.00	165.00	14.00	HMSA7	R
□**53149**	135.00	170.00	12.00	HMSA7	R
53151	5.313	6.500	.500	CRSHA1	R
□★53152	135.00	160.00	13.00	CRSH1	R
□53154	135.00	160.00	13.00	CRSH12	R
□**53155**	135.00	170.00	12.00	HMS4	R
□53156	135.00	165.00	13.00	CRSH13	R
□53162	135.00	170.00	15.00	CRSH1	R
□53165	135.00	180.00	15.00	CRSH13	R
53688	5.375	6.374	.500	†CRSHA1	R
53692	5.375	6.499	.563	CRSH1	R
▲**53701**	5.375	6.625	.500	†CRWH1	R
53702	5.375	6.625	.500	†CRWH1	V
53771	5.375	6.750	.500	†CRWH1	V
▲**53775**	5.375	6.750	.500	†CRWH1	R
▲**53790**	5.375	6.876	1.000	†CRWHA2	R
	P.F. WIDTH .375				
54000	5.400	6.990	1.310	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
54001	5.400			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
54300	5.438	6.625	.500	†HDW1	R
□54330	138.00	152.00	12.00	CRSA1	R
54925	5.500	6.250	.500	†CRWA1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲**54929**	5.500	6.310	1.188	†CRWHA9	R
	P.F. WIDTH .500				
54930	4.824	6.310	.875	†KIT	R
	SEE KIT SECTION				
▲**54931**	5.500	6.500	.500	†CRWH1	R
54934	5.500	6.500	.500	†CRWH1	V
54935	4.824	6.500	.875	†KIT	R
	SEE KIT SECTION				
54936	5.500	6.500	.500	†CRWH1	P
54940	5.500	6.499	1.063	†CRWHA2	R
54949	5.500	6.626	.563	CRSHA1	R
54959	5.500	6.750	.500	†CRW1	R
54960	5.500	6.750	.500	†CRWA1	R
54971	5.500	6.750	.500	†CRWHA1	R
▲**54972**	5.500	6.750	.500	†CRWH1	R
54974	5.500	6.750	.500	†CRWH1	V
□**55113**	140.00	170.00	12.00	HMSA7	R
▲□55115	140.00	160.00	12.00	†CRW1	R
▲□55116	140.00	160.00	13.00	HMS4	R
▲□55118	140.00	170.00	12.00	†CRW1	R
▲□55119	140.00	170.00	13.00	HMS4	R
□**55120**	140.00	170.00	15.00	HMS4	R
□**55121**	140.00	170.00	15.00	HMSA7	R
55122	5.512	6.693	.591	SCOTPLS	R
	SCOTSEAL PLUS				
□**55125**	140.00	170.00	12.00	CRW1	V
▲□55127	140.00	180.00	12.00	HMS4	R
□55134	140.00	165.00	12.00	HMS45	R
55152	5.500	6.780	.380	X	R
	O.D. LISTED IS PRESSFIT I.D.				
55157	5.500	6.876	.563	CRSHA1	R
□55160	140.00	180.00	15.00	CRSA13	R
55165	4.824	6.998	.875	†KIT	R
	SEE KIT SECTION				
▲**55170**	5.500	6.998	1.188	†CRWHA2	R
	SEE KIT SECTION				
55172	5.500	7.126	1.187	OILBATH	R
	OILBATH				
▲**55175**	5.500	7.250	.625	†CRWHA22	R
	P.F. WIDTH .536 & 7.625 FLANGE				
55177	5.500	7.250	1.187	OILBATH	R
55179	5.500	7.501	.563	CRSH1	R
▲**56101**	5.625	6.625	.500	†CRWH1	R
56102	5.625	6.625	.500	†CRWH1	V
56103	5.500	6.625	.875	KIT	P
	SEE KIT SECTION				
56112	5.625	6.750	.750	D5	VV
▲**56136**	5.625	6.875	.500	†CRWH1	R
56137	5.625	6.875	.500	†CRWH1	V
▲**56160**	5.625	7.125	.500	†CRWHA1	R
56170	5.625	7.250	1.366	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
56171	5.625			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
□**56315**	143.00	181.00	12.70	†CRWHA1	R
□**56340**	144.00	160.00	12.00	HMSA7	R
□57080	145.00	164.00	14.00	CRSA1	R
□**57088**	145.00	170.00	12.00	HMSA7	R
□57089	145.00	165.00	13.00	CRSH12	R
□57094	145.00	170.00	13.00	CRSA11	R
▲□57110	145.00	170.00	15.00	HMS4	R
▲□57118	145.00	175.00	15.00	HMS4	R
□57120	145.00	175.00	14.00	CRS1	R
□**57123**	145.00	175.00	14.00	HMSA7	R
▲□57125	145.00	180.00	12.00	HMS4	R
57502	5.750	6.375	.250	HMA1	R
▲**57505**	5.750	6.625	.500	†CRWH1	R
57506	5.750	6.625	.500	†CRW1	V
57509	5.750	6.751	.500	CRWHA1	R
▲**57510**	5.750	6.750	.500	†CRWH1	R
57519	5.750	6.876	.563	CRSHA1	R
▲**57521**	5.750	7.000	.500	†CRWH1	R
57522	5.750	6.750	.500	†CRWH1	V
57523	5.750	7.000	.500	†CRWH1	V
57531	5.750	7.000	.500	†CRWHA1	R
□**57533**	145.00	190.00	16.00	HMSA7	R
57571	5.750	7.003	.250	HMA21	R
57578	5.750	7.126	.563	CRSHA1	R
▲57584	5.750	7.502	.563	CRSHA1	R
□**57599**	148.00	170.00	15.00	HMS4	R
58709	5.875	6.875	.500	†HDW1	R
	W/STAINLESS STEEL SPRING				
58710	5.875	7.000	.500	†HDW1	R
▲**58716**	5.875	7.125	.500	†CRWH1	R
58717	5.875	7.125	.500	†CRWH1	V
58741	5.875	7.125	.500	†CRWHA1	R
▲**58760**	5.875	7.500	.500	†CRWH1	R
58775	5.875	7.641	1.510	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
58776	5.875			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
▲□59005	150.00	180.00	12.00	HMS4	R
□**59010**	150.00	180.00	15.00	HMS4	R
□**59053**	150.00	180.00	14.00	HMSA7	R
□**59057**	150.00	180.00	13.00	HMSA7	R
□**59059**	150.00	180.00	14.00	HMS4	R
□**59061**	150.00	180.00	15.00	HMS4	V
□59062	150.00	170.00	15.00	CRSH1	R
□**59063**	150.00	180.00	13.00	HMS4	R
□59065	150.00	180.00	13.00	CRSH1	R
□59071	150.00	190.00	15.00	CRSH13	R
□★59076	150.00	180.00	15.00	HMSA7	R
□59077	150.00	200.00	15.00	CRSH1	R
59300	5.938	7.000	.500	†HDW1	R
▲59380	5.938	6.801	1.125	J2	R
	SEE TYPE J SECTION (HMSA LIP)				
59997	6.000	6.750	.437	†SL1	T
	HELIX-CCW & INSTALLATION SLV				
59999	6.000	6.750	.500	†CRWA1	V
▲**60000**	6.000	6.750	.500	†CRW1	V
★60004	6.000	7.126	.563	CRSHA1	R
▲60006	6.000	7.002	.500	†CRSHA1	R
60009	6.000	7.250	.500	†HDW1	R
▲**60012**	6.000	7.126	.500	†CRWHA1	R
60013	6.000	7.126	.500	†CRWHA1	V
60016	6.000	7.500	.500	†CRWA1	R
60026	6.000	7.500	.500	†CRWHA1	V
60028	6.000	7.500	.500	†CRWHA1	R
60037	6.000	7.500	.535	HS8	R
▲60075	6.000	7.500	.250	HM4	R
60620	6.062	6.772	.551	CRSA1	R
▲□60622	154.00	175.00	13.00	CRSA1	R
60650	6.063	7.500	.500	†HDW1	R
□**60920**	155.00	190.00	15.00	HMS4	R
□61024	155.00	200.00	15.00	CRSH11	R
□**61031**	155.00	180.00	15.00	HMSA7	R
▲**61210**	6.125	7.125	.625	CRWH1	R
▲**61212**	6.125	7.125	.550	†CRWA	V
	P.F. WIDTH .500 & SS SPRING				
61215	6.125	7.125	.500	†HDW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
61230	6.125	7.250	.500	†HDW1	R
61235	6.125	7.375	.500	†HDW1	R
61248	6.125	7.502	.563	CRSHA1	R
▲**61255**	6.125	7.625	.625	CRWH1	R
61256	6.125	7.625	.625	CRWH1	P
61500	6.151	7.865	.210	SPLIT	R
61840	6.188	7.500	.563	CRSH1	P
62000	6.204	7.330	.500	†ALH1	S
□62200	158.00	180.00	15.00	CRSH13	R
▲**62480**	6.250	7.250	.500	†HDW1	R
▲**62482**	6.250	7.252	.500	CRWH1	R
▲**62495**	6.250	7.500	.500	CRWH1	R
62497	6.250	7.500	.500	CRWH1	V
62530	6.250	7.750	.350	X	R
	O.D. LISTED IS PRESSFIT I.D.				
▲**62535**	6.250	7.750	.500	†CRWH1	R
62572	6.250	7.875	.625	†CRWH1	R
▲□62930	160.00	185.00	10.00	HMS4	R
□62935	160.00	185.00	13.00	CRSA1	V
	W/STAINLESS STEEL SPRING				
□**62939**	160.00	190.00	15.00	HMSA7	R
▲□62940	160.00	190.00	15.00	HMS4	R
□**62941**	160.00	190.00	15.00	†CRW1	V
□**62945**	160.00	190.00	15.00	HMSA7	V
□62989	160.00	180.00	15.00	CRSH13	R
□62995	160.00	185.00	14.00	HMS47	R
□62998	160.00	190.00	13.00	CRS11	R
□**63005**	160.00	200.00	15.00	HMSA7	R
▲**63700**	6.375	7.375	.625	†CRWH1	R
63717	6.375	7.500	.500	†HDW1	R
63733	6.375	7.875	.625	CRWH1	R
▲**63734**	6.375	7.875	.563	†CRWHA1	R
□63781	162.00	190.00	12.00	HMS46	R
63796	6.375	8.120	1.265	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
63797	6.375			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
□**63825**	162.00	200.00	15.88	†CRWH1	R
□**63829**	162.00	200.00	14.30	†CRWHA1	R
64330	6.438	7.500	.500	†HDW1	R
▲□64500	165.00	190.00	13.00	HMS4	R
□64960	165.00	190.00	13.00	CRS13	R
□64964	165.00	200.00	15.00	CRSH11	R
64993	6.500	7.500	.500	†CRWA1	R
▲**64994**	6.500	7.500	.500	CRWH1	R
64998	6.500	7.500	.500	†CRWH1	V
65021	6.500	8.000	.500	†CRW1	R
★**65036**	6.500	8.000	.500	CRWH1	R
65037	6.500	8.000	.500	CRWHA1	R
□66145	168.00	200.00	15.00	CRSH1	R
66217	6.625	7.625	.500	†HDW1	R
66219	6.625	7.750	.500	†HDW1	R
66222	6.625	7.875	.500	†HDW1	R
66230	6.625	8.000	.500	†HDW1	R
▲**66241**	6.625	8.125	.500	CRWH1	R
□**66918**	170.00	200.00	16.00	HMS4	R
□**66920**	170.00	200.00	16.00	HMSA7	R
□**66922**	170.00	200.00	15.00	HMSA7	R
▲□66925	170.00	200.00	12.00	HMS4	R
□66927	170.00	190.00	15.00	CRSH1	R
□**66930**	170.00	200.00	15.00	HMS4	R
□**66947**	170.00	210.00	15.00	HMSA7	R
67510	6.750	7.750	.500	†HDW1	R
67512	6.750	7.750	.625	HDS1	V
▲**67515**	6.750	8.000	.500	†CRWH1	R
▲**67533**	6.750	8.250	.500	CRWH1	R
67540	6.750	8.419	1.563	†CRWH19	R
	W/SLINGER				
67560	6.750	8.620	1.375	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
67561	6.750			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
67600	6.750	8.750	.500	†HDW1	R
68730	6.875	8.250	.500	†HDW1	R
▲**68745**	6.875	8.375	.500	CRWH1	R
68760	6.875	8.500	.500	†HDW1	R
▲□68800	175.00	200.00	15.00	HMS4	R
□**68803**	175.00	200.00	15.00	HMSA7	R
□**68905**	175.00	205.00	15.00	HMS4	R
70008	7.000	8.000	.500	HS8	D
▲**70016**	7.000	8.000	.630	†CRWH1	R
▲**70028**	7.000	8.250	.625	CRWH1	R
70034	7.000	8.375	.625	CRSHA1	R
70037	7.000	8.375	1.000	KIT	P
	SEE KIT SECTION				
▲**70052**	7.000	8.500	.625	†CRWH1	R
70053	7.000	8.500	.625	†CRWHA1	R
70054	7.000	8.500	.625	†CRWHA1	V
70055	7.000	8.500	.625	HDS1	V
70080	7.000	8.500	.500	†CRWA1	R
□70082	178.00	215.00	16.00	CRSH11	R
□70801	180.00	200.00	12.00	CRS1	R
□70803	180.00	210.00	15.00	HMS1	V
	W/STAINLESS STEEL SPRING				
▲□70805	180.00	210.00	15.00	HMS4	R
□**70809**	180.00	210.00	15.00	HMSA7	R
□**70813**	180.00	200.00	15.00	HMS4	R
□70869	180.00	215.00	16.00	CRS1	R
□70876	180.00	215.00	15.00	CRSHA13	R
□**70879**	180.00	215.00	15.00	HMSA7	R
71220	7.125	8.250	.500	†HDW1	R
▲**71245**	7.125	8.625	.625	CRWH1	R
72510	7.250	8.750	.625	HDS2	V
▲**72515**	7.250	8.250	.625	CRW1	R
▲**72539**	7.250	8.750	.625	†CRWHA1	R
72542	7.250	8.750	.750	CRWH1	P
72543	7.250	8.750	.625	HDS1	V
▲**72570**	7.250	9.055	.625	†CRWHA1	R
72594	7.250	8.750	.875	HDSA2	VD
72805	7.283	8.850	.625	HDS2	R
□**72813**	185.00	210.00	13.00	HMS4	R
□72832	185.00	215.00	16.00	CRSHA11	R
73720	7.375	8.375	.500	†HDW1	R
73730	7.375	8.500	.500	†HDW1	R
▲**73745**	7.375	8.875	.625	CRWH1	R
74310	7.438	9.400	1.656	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
74311	7.438			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
▲74540	7.453	8.500	.750	†ALH1	S
□**74800**	188.00	215.00	16.00	†CRWH1	R
□74801	190.00	215.00	15.00	CRS13	R
□**74803**	190.00	220.00	12.00	HMSA7	R
▲□74805	190.00	220.00	15.00	HMS4	R
□**74807**	190.00	220.00	15.00	HMS4	V
□**74808**	190.00	220.00	15.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
□★74812	190.00	225.00	16.00	HMS47	R
□**74813**	190.00	220.00	15.00	HMSA7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
74814	7.480	8.858	.630	HMSA7	V
	W/STAINLESS STEEL SPRING				
□74815	190.00	215.00	16.00	CRSH1	R
□**74820**	190.00	225.00	16.00	HMS4	R
□**74824**	190.00	225.00	16.00	HMSA7	R
▲**75030**	7.500	8.500	.625	CRWH1	R
75038	7.500	8.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
75046	7.500	8.750	.500	†HDW1	R
75048	7.500	8.750	.625	HDS1	V
▲**75050**	7.500	9.000	.625	†CRWH1	R
75052	7.500	9.000	.625	†CRWHA1	P
75053	7.500	9.000	.625	HDS1	V
75054	7.500	9.000	.750	HDS2	V
75067	7.500	9.250	.625	HDS1	V
75069	7.500	9.250	.500	†HDW1	R
75090	7.500		1.918	J1-KIT	R
	SEE TYPE J SECTION (CRW LIP)				
▲**76215**	7.625	8.625	.563	CRWH1	R
76225	7.625	8.875	.500	†HDW1	R
▲**76255**	7.625	9.125	.625	CRWH1	R
□76770	195.00	220.00	16.00	CRSH13	R
□76790	195.00	230.00	15.00	CRSH1	R
77506	7.750	8.750	.500	†HDW1	R
77531	7.750	9.000	.625	HDS1	R
77539	7.750	9.250	.625	HDS1	V
▲**77540**	7.750	9.250	.625	CRWH1	R
77996	8.000	9.250	.625	HDS1	V
78020	7.800	10.000	1.750	HDDF1	R
78021	7.800			HDDFBV1	R
□**78703**	200.00	230.00	15.00	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□78705	200.00	230.00	15.00	HMS4	R
□**78706**	200.00	230.00	15.00	HMSA7	R
□78708	200.00	238.00	19.00	HDS1	V
78710	7.875	8.875	.500	†HDW1	R
▲**78725**	7.875	9.250	1.000	CRWHA1	R
▲**78738**	7.875	9.375	.625	CRWH1	R
□78742	200.00	230.00	13.00	HMSA7P2	R
□78745	200.00	230.00	16.00	CRS13	R
□78751	200.00	250.00	15.00	CRSH1	R
□78757	205.00	230.00	15.00	CRS11	R
78760	7.874	9.252	.591	HMSA7	R
	W/STAINLESS STEEL SPRING				
78790	7.875	10.234	.625	HDS2	R
79302	7.938	8.750	.344	HM14	R
79620	7.938	9.125	.500	†HDW1	R
□★79825	203.00	254.00	15.88	†CRWH1	R
□**79826**	203.00	254.00	15.88	CRWHA1	R
▲**79960**	8.000	9.000	.625	CRWH1	R
79961	8.000	9.000	.625	CRWHA1	R
▲**79997**	8.000	9.250	.625	CRWH1	R
79998	8.000	9.250	.625	†CRWHA1	R
80009	8.000	9.500	.687	HDS2	V
▲**80010**	8.000	9.500	.625	†CRWH1	R
80030	8.000	9.750	.750	HDS1	V
★**80037**	8.000	10.000	.625	†CRWH1	R
80038	8.000	10.000	.625	CRWHA1	R
80086	8.000	10.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
80087	8.000	10.000	.750	HDS1	R
	W/3 EA .125 LUGS				
80088	8.000	10.000	1.000	HDS1	R
80091	8.000	10.000	1.000	HDS1	V
80092	8.000	10.125	1.250	HDSB1	RD
80097	8.000	11.625	1.079	CRSHA2	R
80184	4.688			S1	
	SEE SLEEVE & WIPER SECTION				
▲**81245**	8.125	10.125	.625	CRWH1	R
81246	8.125	10.125	.625	CRWHA1	R
81252	8.125	10.125	.750	HDS1	V
81253	8.125	10.125	1.000	HDS1	R
81351	11.000		1.000	LDSLV3	
	FOR SEAL SH SIZE 11.188		(284.18MM)		
81352	14.000		1.500	LDSLV3	
	FOR SEAL SH SIZE 14.188		(360.38MM)		
81354	16.000		2.000	LDSLV3	
	FOR SEAL SH SIZE 16.188		(411.18MM)		
81389	10.813		1.000	LDSLV3	
	FOR SEAL SH SIZE 11.000		(279.40MM)		
81390	13.813		1.500	LDSLV3	
	FOR SEAL SH SIZE 14.000		(355.60MM)		
81391	14.813		2.125	LDSLV3	
	FOR SEAL SH SIZE 15.000		(381.00MM)		
81587	28.313		2.000	LDSLV3	
	FOR SEAL SH SIZE 28.500		(723.90MM)		
81753	38.500		1.500	LDSLV4	
	FOR SEAL SH SIZE 38.688		(982.68MM)		
81774	4.766			S6	
	SEE SLEEVE & WIPER SECTION				
81826	39.813		2.125	LDSLV4	
	FOR SEAL SH SIZE 40.000		(1016.00MM)		
82099	12.750		1.125	LDSLV3	
	FOR SEAL SH SIZE 12.938		(328.63MM)		
▲**82510**	8.250	9.250	.625	CRWH1	R
▲**82512**	8.250	9.252	.500	†CRWH1	R
▲**82521**	8.250	9.500	.578	CRW1	R
82524	8.250	9.500	.625	HDS2	R
82526	8.250	9.500	.625	HDS2	V
82540	8.250	10.062	1.560	HDDF1	R
82541	8.250			HDDFBV1	R
82555	8.250	10.250	.813	HDS2	V
82559	8.250	10.250	.625	HDS2	V
▲**82560**	8.250	10.250	.625	CRWH1	R
82561	8.250	10.250	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
82562	8.250	10.250	.750	HDS1	R
82563	8.250	10.250	.750	HDS1	V
82570	8.250	11.500	.750	HDS1	R
□**82607**	210.00	250.00	15.00	HMS4	R
▲□82610	210.00	240.00	15.00	HMS4	R
□82615	210.00	250.00	20.00	HDS1	V
83701	8.375	9.750	.750	HDS2	V
83702	8.375	9.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
83705	8.375	9.875	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
83760	12.313		.750	LDSLV4	
	FOR SEAL SH SIZE 12.500		(317.50MM)		
83978	38.500		1.250	LDSLV4	
	FOR SEAL SH SIZE 38.688		(982.68MM)		
84041	4.646	4.705	.625	S1	
	SEE SLEEVE & WIPER SECTION				
84094	11.313		1.500	LDSLV4	
	FOR SEAL SH SIZE 11.500		(292.10MM)		
84156	9.813		2.000	LDSLV3	
	FOR SEAL SH SIZE 10.000		(254.00MM)		

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
84263	12.813		1.375	LDSLV4	
FOR SEAL SH SIZE 13.000			(330.20MM)		
84369	8.438	10.000	.625	HDS1	R
84385	8.438	10.000	.625	HDS1	V
84390	12.813		2.000	LDSLV3	
FOR SEAL SH SIZE 13.000			(330.20MM)		
84472	27.500		2.000	LDSLV3	
FOR SEAL SH SIZE 27.688			(703.28MM)		
84510	10.875		2.000	LDSLV4	
FOR SEAL SH SIZE 11.063			(281.00MM)		
84576	17.250		2.000	LDSLV4	
FOR SEAL SH SIZE 17.438			(442.93MM)		
84579	20.990		2.250	LDSLV3	
FOR SEAL SH SIZE 21.178			(537.92MM)		
84590	21.813		2.250	LDSLV4	
FOR SEAL SH SIZE 22.000			(558.80MM)		
84616	16.813		2.250	LDSLV4	
FOR SEAL SH SIZE 17.000			(431.80MM)		
84641	28.813		2.250	LDSLV4	
FOR SEAL SH SIZE 29.000			(736.60MM)		
84642	29.813		2.250	LDSLV4	
FOR SEAL SH SIZE 30.000			(762.00MM)		
84643	9.250		.875	LDSLV4	
FOR SEAL SH SIZE 9.438			(239.73MM)		
□84650	215.00	240.00	12.00	HMS47	R
□84651	215.00	250.00	16.00	HMS47	R
84661	14.313		2.000	LDSLV3	
FOR SEAL SH SIZE 14.500			(368.30MM)		
84697	16.313		2.000	LDSLV4	
FOR SEAL SH SIZE 16.500			(419.10MM)		
84711	27.500		2.250	LDSLV4	
FOR SEAL SH SIZE 27.688			(703.28MM)		
84730	33.313		2.625	LDSLV4	
FOR SEAL SH SIZE 33.500			(850.90MM)		
84764	27.063		2.250	LDSLV4	
FOR SEAL SH SIZE 27.250			(692.15MM)		
84781	19.813		1.250	LDSLV4	
FOR SEAL SH SIZE 20.000			(508.00MM		
84819	11.813		2.250	LDSLV3	
FOR SEAL SH SIZE 12.000			(304.80MM)		
84843	9.313		2.250	LDSLV3	
FOR SEAL SH SIZE 9.500					
84962	10.188		1.125	LDSLV4	
FOR SEAL SH SIZE 10.375			(263.53MM)		
84963	13.063		1.125	LDSLV4	
FOR SEAL SH SIZE 13.250			(336.50MM)		
84964	15.250		.750	LDSLV3	
FOR SEAL SH SIZE 15.438			(392.13MM)		
84965	9.750		1.438	LDSLV4	
FOR SEAL SH SIZE 9.938			(252.43MM)		
▲**85002**	8.500	9.750	.625	†CRWH1	R
85007	8.500	10.000	.625	HDS3	D
W/4 EA .500 ADJ. LUGS					
85008	8.500	10.000	.688	HDS1	R
W/6 EA .063 LUGS					
▲**85009**	8.500	10.000	.625	CRWH1	R
85011	27.313		2.250	LDSLV4	
FOR SEAL SH SIZE 27.500			(698.50MM)		
85012	8.500	10.000	.750	HDS2	V
85013	8.500	10.500	.625	HDS3	D
W/4 EA .500 ADJ. LUGS					
★**85014**	8.500	10.500	.625	CRWA1	R
▲**85015**	8.500	10.500	.625	CRWH1	R
85017	8.500	10.500	.688	HDS2	R
W/4 EA .125 LUGS					
85018	8.500	10.500	.625	HDS1	V
85019	8.500	10.000	.625	HDS1	V
85033	10.813		2.000	LDSLV4	
FOR SEAL SH SIZE 11.000			(279.40MM)		
85038	42.063		2.125	LDSLV4	
FOR SEAL SH SIZE 42.250			(1073.15MM)		
85039	30.813		2.000	LDSLV4	
FOR SEAL SH SIZE 31.000			(787.40MM		
85045	9.750		2.250	LDSLV4	
FOR SEAL SH SIZE 9.938			(252.43MM)		
85046	11.813		2.250	LDSLV4	
FOR SEAL SH SIZE 12.000			(304.80MM)		
85072	10.500		1.000	LDSLV4	
FOR SEAL SH SIZE 10.688			(271.48MM)		
85073	9.563		1.000	LDSLV4	
FOR SEAL SH SIZE 9.750			(247.65MM)		
85074	13.813		1.000	LDSLV4	
FOR SEAL SH SIZE 14.000			(355.60MM)		
▲**85085**	8.500	10.625	.625	CRWHA1	R
85104	18.813		1.500	LDSLV3	
FOR SEAL SH SIZE 19.000			(482.60MM)		
85106	7.813		2.250	LDSLV4	
FOR SEAL SH SIZE 8.000			(203.20MM)		
□**85115**	216.00	254.00	15.88	†CRWH1	R
85122	27.433		1.500	LDSLV4	
FOR SEAL SH SIZE 27.625			(701.68MM)		
85123	38.813		2.125	LDSLV4	
FOR SEAL SH SIZE 39.000			(990.60MM)		
85158	8.500		1.000	LDSLV3	
FOR SEAL SH SIZE 8.688			(220.68MM)		
85179	13.813		2.000	LDSLV4	
FOR SEAL SH SIZE 14.000			(355.60MM)		
85181	15.813		2.000	LDSLV4	
FOR SEAL SH SIZE 16.000			(406.40MM)		
85191	10.313		2.250	LDSLV3	
FOR SEAL SH SIZE 10.500					
85212	11.188		2.250	LDSLV4	
FOR SEAL SH SIZE 11.375			(288.93MM)		
85367	20.813		2.125	LDSLV4	
FOR SEAL SH SIZE 21.000			(533.40MM)		
85377	9.313		1.500	LDSLV3	
FOR SEAL SH SIZE 9.500			(241.30MM)		
85384	26.813		1.250	LDSLV4	
FOR SEAL SH SIZE 27.000			(685.80MM)		
85397	9.563		2.000	LDSLV4	
FOR SEAL SH SIZE 9.750			(247.65MM)		
85418	12.063		.625	LDSLV4	
FOR SEAL SH SIZE 12.250			(311.15MM)		
85469	11.054		1.750	LDSLV4	
FOR SEAL SH SIZE 11.250			(285.75MM)		
85491	10.557		2.250	LDSLV4	
FOR SEAL SH SIZE 10.745			(272.92MM)		
85531	26.813		2.250	LDSLV4	
FOR SEAL SH SIZE 27.000			(685.80MM)		
85535	13.000		1.750	LDSLV4	
FOR SEAL SH SIZE 13.188			(334.98MM)		
85577	12.000		2.250	LDSLV4	
FOR SEAL SH SIZE 12.188			(309.58MM)		
85582	15.560		.906	LDSLV4	
FOR SEAL SH SIZE 15.750			(400.00MM)		
85629	10.313		2.000	LDSLV4	
FOR SEAL SH SIZE 10.500			(266.70MM)		
85636	10.313		1.500	LDSLV4	
FOR SEAL SH SIZE 10.500			(266.70MM)		

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
85643	8.625		2.750	LDSLV3	
	FOR SEAL SH SIZE 8.813		(223.85MM)		
85654	19.563		2.750	LDSLV4	
	FOR SEAL SH SIZE 19.750		(501.60MM)		
85688	8.813		1.000	LDSLV3	
	FOR SEAL SH SIZE 9.000		(228.60MM)		
85691	22.250		1.000	LDSLV3	
	FOR SEAL SH SIZE 22.438		(569.93MM)		
85762	17.449		2.000	LDSLV4	
	FOR SEAL SH SIZE 17.637		(447.98MM)		
85800	20.813		1.250	LDSLV3	
	FOR SEAL SH SIZE 21.000		(533.40MM)		
85814	35.313		2.500	LDSLV4	
	FOR SEAL SH SIZE 35.500		(901.70MM)		
85839	10.500		1.500	LDSLV4	
	FOR SEAL SH SIZE 10.688		(271.48MM)		
85844	11.813		2.750	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)		
85846	9.000		1.750	LDSLV4	
	FOR SEAL SH SIZE 9.188		(233.38MM)		
85852	13.313		2.000	LDSLV3	
	FOR SEAL SH SIZE 13.500		(342.90MM)		
85874	11.813		2.000	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)		
85881	9.055		1.575	LDSLV4	
	FOR SEAL SH SIZE 9.243		(234.77MM)		
85885	8.313		1.250	LDSLV4	
	FOR SEAL SH SIZE 8.500		(215.90MM)		
85900	16.000		2.000	LDSLV4	
	FOR SEAL SH SIZE 16.188		(411.18MM)		
85907	22.313		1.250	LDSLV4	
	FOR SEAL SH SIZE 22.500		(571.50MM)		
85908	15.998		2.250	LDSLV3	
	FOR SEAL SH SIZE 16.188		(411.18MM)		
85914	14.500		1.000	LDSLV4	
	FOR SEAL SH SIZE 14.688		(373.08MM)		
85920	8.813		2.250	LDSLV3	
	FOR SEAL SH SIZE 9.000		(228.60MM)		
85931	9.063		1.500	LDSLV4	
	FOR SEAL SH SIZE 9.250		(234.95MM)		
85973	8.875		1.250	LDSLV3	
	FOR SEAL SH SIZE 9.063		(230.20MM)		
85979	11.813		1.500	LDSLV4	
	FOR SEAL SH SIZE 12.000		(304.80MM)		
85987	9.813		.625	LDSLV4	
	FOR SEAL SH SIZE 10.000		(254.00MM)		
85995	8.313		2.000	LDSLV4	
	FOR SEAL SH SIZE 8.500		(215.90MM)		
85999	8.813		2.250	LDSLV4	
	FOR SEAL SH SIZE 9.000		(228.60MM)		
86000	10.063		2.250	LDSLV4	
	FOR SEAL SH SIZE 10.250		(260.35MM)		
86013	10.500		2.750	LDSLV4	
	FOR SEAL SH SIZE 10.688				
86029	34.813		1.313	LDSLV4	
	FOR SEAL SH SIZE 35.000		(899.00MM)		
86062	3.000		.625	S1	
86071	4.250		.750	S1	
86076	5.250		.750	S1	
86090	32.313		2.000	LDSLV4	
	FOR SEAL SH SIZE 32.500		(825.50MM)		
86091	25.313		2.000	LDSLV4	
	FOR SEAL SH SIZE 25.500		(647.70MM)		
86111	36.375		2.500	LDSLV4	
	FOR SEAL SH SIZE 36.555		(928.50MM)		
86145	11.375		2.250	LDSLV4	
	FOR SEAL SH SIZE 11.563		(293.70MM)		
86150	11.500		.750	LDSLV4	
	FOR SEAL SH SIZE 11.688		(296.88MM)		
86153	14.000		2.000	LDSLV4	
	FOR SEAL SH SIZE 14.188		(360.38MM)		
86167	8.500		2.125	LDSLV3	
	FOR SEAL SH SIZE 8.688		(220.68MM)		
86168	11.000		2.125	LDSLV3	
	FOR SEAL SH SIZE 11.188		(284.18MM		
86169	12.500		2.125	LDSLV3	
	FOR SEAL SH SIZE 12.688		(322.28MM)		
86175	16.063		1.250	LDSLV4	
	FOR SEAL SH SIZE 16.250		(411.18MM)		
86225	8.625	10.125	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
86230	8.625	10.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
86235	8.625	10.500	.750	HDS1	V
86240	8.625	10.625	.750	HDS1	V
86258	12.813		1.000	LDSLV4	
	FOR SEAL SH SIZE 13.000		(330.20MM		
▲**86260**	8.625	10.625	.625	CRWH1	R
86269	11.187		1.250	LDSLV4	
	FOR SEAL SH SIZE 11.375		(288.93MM)		
86319	13.313		.813	LDSLV4	
	FOR SEAL SH SIZE 13.500				
86343	18.163		2.000	LDSLV4	
	FOR SEAL SH SIZE 18.350		(466.09MM)		
86357	14.000		1.500	LDSLV4	
	FOR SEAL SH SIZE 14.000		(355.60MM)		
86378	11.000		2.500	LDSLV3	
	FOR SEAL SH SIZE 11.188		(284.18MM)		
86403	14.438		2.500	LDSLV3	
	FOR SEAL SH SIZE 14.625		(371.48MM)		
86404	12.063		2.500	LDSLV3	
	FOR SEAL SH SIZE 12.250		(311.15MM)		
86405	17.813		2.500	LDSLV3	
	FOR SEAL SH SIZE 18.000		(457.20MM)		
86407	15.813		2.500	LDSLV4	
	FOR SEAL SH SIZE 16.000				
86413	9.813		1.125	LDSLV4	
	FOR SEAL SH SIZE 10.000		(254.00MM)		
86426	16.063		1.300	LDSLV4	
	FOR SEAL SH SIZE 16.250				
86429	14.313		1.500	LDSLV4	
	FOR SEAL SH SIZE 14.500		(368.30MM)		
86430	17.313		1.500	LDSLV4	
	FOR SEAL SH SIZE 17.500		(444.50MM)		
86435	10.750		2.500	LDSLV4	
	FOR SEAL SH SIZE 10.938		(277.83MM)		
86441	11.417		1.750	LDSLV4	
	FOR SEAL SH SIZE 11.605		(294.77MM)		
86454	11.000		2.500	LDSLV4	
	FOR SEAL SH SIZE 11.188		(284.18MM)		
86458	36.813		2.500	LDSLV4	
	FOR SEAL SH SIZE 37.000		(939.80MM)		
86468	10.562		1.750	LDSLV4	
	FOR SEAL SH SIZE 10.750		(273.05MM)		
86469	10.813		1.750	LDSLV4	
	FOR SEAL SH SIZE 11.001		(279.43MM)		
86473	14.000		2.500	LDSLV4	
	FOR SEAL SH SIZE 14.188		(360.38MM)		
86486	11.000		1.500	LDSLV4	
	FOR SEAL SH SIZE 11.188		(284.18MM)		

★Contact manufacturer for availability
Bold numbers are preferred designs
☐ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
86533	11.000		1.375	LDSLV4	
FOR SEAL SH SIZE 11.188			(284.18MM)		
86543	8.687		2.250	LDSLV3	
FOR SEAL SH SIZE 8.875			(225.43MM)		
86544	10.562		1.813	LDSLV4	
FOR SEAL SHAFT SIZE 10.750					
86545	37.813		2.250	LDSLV4	
FOR SEAL SHAFT SIZE 38.000					
86546	8.938		2.500	LDSLV4	
FOR SEAL SH SIZE 9.126			(231.80MM)		
86547	9.125		1.000	LDSLV4	
FOR SEAL SH SIZE 9.313			(236.55MM)		
86551	8.812		2.000	LDSLV4	
FOR SEAL SH SIZE 9.000			(228.60MM)		
86562	9.500		2.500	LDSLV4	
FOR SEAL SH SIZE 9.688			(246.08MM)		
86563	18.813		1.750	LDSLV4	
FOR SEAL SH SIZE 19.000			(482.60MM)		
86564	9.500		1.250	LDSLV4	
FOR SEAL SH SIZE 9.688			(246.08MM)		
86567	25.000		2.500	LDSLV4	
FOR SEAL SH SIZE 25.188			(639.78MM)		
86575	16.063		2.000	LDSLV4	
FOR SEAL SH SIZE 16.250			(412.75MM)		
86600	11.968		.709	LDSLV4	
FOR SEAL SH SIZE 12.156			(308.76MM)		
86601	10.846		.709	LDSLV4	
FOR SEAL SH SIZE 11.034			(280.26MM)		
□**86603**	220.00	250.00	16.00	HMS4	R
□**86606**	220.00	250.00	16.00	HMSA7	R
86607	8.661	9.843	.630	HMSA7	V
W/STAINLESS STEEL SPRING					
86610	8.661	10.228	.625	HDS2	R
□★86611	220.00	250.00	15.00	HMS43	V
86612	8.661	9.911	.625	HS8	V
□**86614**	220.00	250.00	15.00	HMS4	V
▲□86615	220.00	250.00	15.00	HMS4	R
□**86616**	220.00	250.00	15.00	HMSA7	R
□**86617**	220.00	250.00	16.00	CRWH1	R
86631	17.750		2.500	LDSLV3	
FOR SEAL SH SIZE 17.938			(455.63MM)		
86633	9.500		1.000	LDSLV3	
FOR SEAL SH SIZE 9.688			(246.08MM)		
86640	26.000		2.250	LDSLV3	
FOR SEAL SHAFT SIZE 26.188					
86641	30.000		2.500	LDSLV3	
FOR SEAL SH SIZE 30.188			(766.78MM		
86643	11.812		1.125	LDSLV4	
FOR SEAL SH SIZE 12.000			(304.80MM)		
86687	11.812		1.125	LDSLV4	
FOR SEAL SH SIZE 12.000			(304.80MM)		
86688	13.313		.813	LDSLV4	
FOR SEAL SH SIZE 13.500			(342.90MM)		
86716	18.813		2.500	LDSLV4	
FOR SEAL SH SIZE 19.000			(482.60MM)		
86721	12.813		1.500	LDSLV4	
FOR SEAL SH SIZE 13.000			(330.20MM)		
86722	12.813		2.500	LDSLV4	
FOR SEAL SH SIZE 13.000			(330.20MM)		
86737	16.812		1.000	LDSLV4	
FOR SEAL SH SIZE 17.000			(431.80MM)		
86738	16.812		2.500	LDSLV4	
FOR SEAL SH SIZE 17.000			(431.80MM)		
86739	20.312		1.000	LDSLV4	
FOR SEAL SH SIZE 20.500			(520.70MM)		
86754	9.312		.750	LDSLV4	
FOR SEAL SH SIZE 9.500			(241.30MM)		
86798	10.441		2.165	LDSLV4	
FOR SEAL SH SIZE 10.629			(269.98MM)		
86799	17.543		2.362	LDSLV4	
FOR SEAL SH SIZE 17.731			(450.37MM)		
86805	20.813		2.000	LDSLV4	
FOR SEAL SH SIZE 21.000			(533.40MM)		
86840	38.000		1.500	LDSLV4	
FOR SEAL SH SIZE 38.188			(969.98MM)		
86841	27.000		2.000	LDSLV4	
FOR SEAL SH SIZE 27.188			(690.58MM)		
86850	8.688	10.911	1.924	HDDF1	R
86851	8.688			HDDFBV1	R
86903	11.811		2.500	LDSLV4	
FOR SEAL SH SIZE 11.999			(284.46MM)		
86907	8.353		1.500	LDSLV4	
FOR SEAL SH SIZE 8.541			(216.94MM)		
86947	12.500		2.500	LDSLV4	
FOR SEAL SH SIZE 12.688			(322.28MM)		
86970	12.812		1.750	LDSLV4	
FOR SEAL SH SIZE 13.000			(330.20MM)		
86972	37.813		2.500	LDSLV4	
FOR SEAL SH SIZE 38.000			(965.20MM)		
86973	37.813		1.500	LDSLV4	
FOR SEAL SH SIZE 38.000			(965.20MM)		
86974	26.813		2.000	LDSLV4	
FOR SEAL SH SIZE 27.000			(685.80MM)		
87015	18.813		2.250	LDSLV4	
FOR SEAL SH SIZE 19.000			(482.60MM)		
87054	42.125		2.125	LDSLV4	
FOR SEAL SH SIZE 42.313			(1074.75MM)		
87067	9.813		2.000	LDSLV4	
FOR SEAL SH SIZE 10.000			(254.00MM)		
87069	21.803		2.362	LDSLV4	
FOR SEAL SH SIZE 21.991			(558.57MM)		
87070	22.303		2.362	LDSLV4	
FOR SEAL SH SIZE 22.491			(571.27MM)		
87089	9.055		2.500	LDSLV4	
FOR SEAL SH SIZE 9.243			(234.77MM)		
87090	21.000		2.250	LDSLV4	
FOR SEAL SH SIZE 21.188			(538.18MM)		
87142	11.023		1.181	LDSLV4	
FOR SEAL SH SIZE 11.212			(284.80MM)		
87143	8.661		1.181	LDSLV4	
FOR SEAL SH SIZE 8.850			(224.79MM)		
87144	9.449		1.181	LDSLV4	
FOR SEAL SH SIZE 9.637					
87166	8.866		2.500	LDSLV4	
FOR SEAL SHAFT SIZE 9.054					
87196	8.750		1.500	LDSLV3	
FOR SEAL SH SIZE 8.938			(227.03MM)		
87241	20.813		2.250	LDSLV4	
FOR SEAL SH SIZE 21.000			(533.40MM)		
87246	12.750		.875	LDSLV4	
FOR SEAL SH SIZE 12.938			(328.63MM)		
87247	15.000		1.000	LDSLV4	
FOR SEAL SH SIZE 15.188			(385.78MM)		
87248	12.063		.875	LDSLV4	
FOR SEAL SH SIZE 12.250			(311.15MM		
87271	17.812		2.125	LDSLV4	
FOR SEAL SH SIZE 18.000			(457.20MM)		
87280	9.440		2.500	LDSLV3	
FOR SEAL SH SIZE 9.628			(244.51MM)		

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
87298	20.813		2.500	LDSLV4	
	FOR SEAL SH SIZE 21.000				
87319	8.661		1.000	LDSLV4	
	FOR SEAL SH SIZE 8.849		(224.77MM)		
87379	42.312		1.250	LDSLV4	
	FOR SEAL SH SIZE 42.500		(1079.50MM)		
87392	42.500		1.250	LDSLV4	
	FOR SEAL SH SIZE 42.688		(1084.28MM)		
87406	12.000		2.250	LDSLV3	
	FOR SEAL SH SIZE 12.188		(309.58MM		
87421	27.812		2.500	LDSLV4	
	FOR SEAL SH SIZE 28.000		(711.20MM)		
87434	12.598		.980	LDSLV3	
	FOR SEAL SH SIZE 12.786		(324.76MM)		
87435	9.448		.984	LDSLV3	
	FOR SEAL SH SIZE 9.636		(244.75MM)		
87440	8.750	9.750	.500	HS8	V
87445	14.173		1.000	LDSLV4	
	FOR SEAL SH SIZE 14.361		(364.77MM)		
87446	15.813		2.000	LDSLV3	
	FOR SEAL SH SIZE 16.000		(406.40MM		
87451	35.812		2.000	LDSLV4	
	FOR SEAL SH SIZE 36.000		(914.40MM)		
★87460	8.750	10.000	.625	†HMS1	R
87461	15.560		2.500	LDSLV4	
	FOR SEAL SHAFT SIZE 400.00MM				
87462	8.867		1.000	LDSLV4	
	FOR SEAL SH SIZE 9.055				
87463	13.313		1.500	LDSLV4	
	FOR SEAL SH SIZE 13.500				
87490	8.750	10.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
87491	8.750	10.250	.688	HDS1	R
87492	8.750	10.250	.625	HDS2	V
87493	8.750	10.250	.688	HDS1	V
87496	8.750	10.500	.750	HDS1	V
87499	8.750	10.750	.750	HDS1	V
87500	14.173		1.732	LDSLV4	
	FOR SEAL SH SIZE 364.78MM				
87503	19.497		1.181	LDSLV4	
	FOR SEAL SH SIZE 500.00MM				
87504	17.922		1.968	LDSLV4	
	FOR SEAL SH SIZE 460.00MM				
87513	12.750		.688	LDSLV4	
	FOR SEAL SH SIZE 12.938				
87524	8.866		2.500	LDSLV4	
	FOR SEAL SH SIZE 9.055				
87525	11.031		1.260	LDSLV4	
	FOR SEAL SH SIZE 11.219				
87526	8.875		1.250	LDSLV4	
	FOR SEAL SH SIZE 9.063				
87529	34.312		1.750	LDSLV4	
	FOR SEAL SH SIZE 34.500				
87530	30.309		1.375	LDSLV4	
	FOR SEAL SH SIZE 30.497				
87531	14.378		.787	LDSLV4	
	FOR SEAL SH SIZE 370.00MM				
▲**87541**	8.750	10.750	.625	CRWH1	R
87555	9.000		1.000	LDSLV3	
	FOR SEAL SH SIZE 9.188				
87566	11.190		2.250	LDSLV4	
	FOR SEAL SH SIZE 11.378				
87569	15.188		2.500	LDSLV4	
	FOR SEAL SH SIZE 15.375				
87577	8.000		1.500	LDSLV4	
	FOR SEAL SH SIZE 8.188				
87580	14.313		1.375	LDSLV4	
	FOR SEAL SH SIZE 14.500				
87585	16.750		1.500	LDSLV4	
	FOR SEAL SH SIZE 16.938				
87605	30.320		1.375	LDSLV4	
	FOR SEAL SH SIZE 30.508				
87613	16.063		.500	LDSLV4	
	FOR SEAL SH SIZE 16.250				
87623	28.312		2.313	LDSLV3	
	FOR SEAL SH SIZE 28.500				
87631	19.496		2.362	LDSLV4	
	FOR SEAL SH SIZE 19.684				
★87632	19.496		2.360	LDSLV4	
	FOR SEAL SH SIZE 19.685				
87634	15.812		2.500	LDSLV3	
	FOR SEAL SHAFT SIZE 16.000				
87707	8.662		2.250	LDSLV3	
	FOR SEAL SHAFT SIZE 8.850				
87723	14.813		1.500	LDSLV4	
	FOR SEAL SH SIZE 15.000				
87738	10.236		1.968	LDSLV3	
	FOR SEAL SH SIZE 10.424				
87746	11.313		2.000	LDSLV4	
	FOR SEAL SH SIZE 11.501				
87768	10.563		1.500	LDSLV4	
	FOR SEAL SH SIZE 10.563				
87777	23.434		.984	LDSLV4	
	FOR SEAL SH SIZE 23.434				
87783	20.866		.787	LDSLV4	
	FOR SEAL SH SIZE 535.00MM				
87784	9.250		.625	LDSLV4	
	FOR SEAL SH SIZE 9.438				
87785	19.497		1.575	LDSLV4	
	FOR SEAL SH SIZE 19.497				
87789	9.260		1.102	LDSLV4	
	FOR SEAL SHAFT SIZE 9.448				
87802	25.312		2.500	LDSLV4	
	FOR SEAL SHAFT SIZE 25.500				
87807	9.312		1.250	LDSLV4	
	FOR SEAL SHAFT SIZE 9.500				
87813	15.813		2.500	LDSLV3	
	FOR SEAL SH SIZE 16.000				
87817	25.403		2.500	LDSLV3	
	FOR SEAL SH SIZE 650.00MM				
87820	28.142		1.968	LDSLV4	
	FOR SEAL SHAFT SIZE 720.00MM				
87823	2.437	2.565	.550	S7	
	BORE SLEEVE				
87831	8.472		1.378	LDSLV3	
	FOR SEAL SH SIZE 220.00MM				
87842	30.312		2.500	LDSLV3	
	FOR SEAL SH SIZE 30.500				
87850	32.812		2.220	LDSLV4	
	FOR SEAL SH SIZE 33.000				
87861	23.434		.689	LDSLV4	
	FOR SEAL SH SIZE 23.622				
87871	15.066		1.000	LDSLV3	
	FOR SEAL SH SIZE 15.254				
87872	11.750		2.375	LDSLV3	
	FOR SEAL SH SIZE 11.938				
87875	11.623		1.417	LDSLV3	
	FOR SEAL SH SIZE 11.811				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
87901	13.198		.709	LDSLV4	
	FOR SEAL SH SIZE 340.00MM				
87907	23.687		1.950	LDSLV4	
	FOR SEAL SH SIZE 23.875				
87911	9.457		1.732	LDSLV4	
	FOR SEAL SH SIZE 245.00MM				
87914	8.661		1.574	LDSLV3	
	FOR SEAL SH SIZE 225.00MM				
87915	8.661	8.849	2.000	LDSLV3	
	FOR SEAL SH SIZE 225.00MM				
87916	17.134		2.500	LDSLV4	
	FOR SEAL SH SIZE 440.00MM				
87921	18.708		.787	LDSLV4	
	FOR SEAL SHAFT SIZE 480.00MM				
87922	23.812		.750	LDSLV4	
	FOR SEAL SH SIZE 24.000				
87923	8.319		2.500	LDSLV4	
	FOR SEAL SH SIZE 8.507				
87924	18.812		1.575	LDSLV4	
	FOR SEAL SH SIZE 19.000				
87960	23.812		2.500	LDSLV4	
	FOR SEAL SHAFT SIZE 24.000				
87981	29.732		2.500	LDSLV3	
	FOR SEAL SHAFT SIZE 760.00MM				
88702	8.875	10.125	.750	HDS1	R
88706	8.875	10.875	.625	HDS1	V
▲**88710**	8.875	10.125	.625	CRWH1	R
▲**88760**	8.875	10.875	.625	CRWH1	R
89943	9.055		1.000	LDSLV3	
	FOR SEAL SH SIZE 9.243				
89946	43.315		2.480	LDSLV4	
	FOR SEAL SH SIZE 1105.00MM				
89947	41.312		2.362	LDSLV4	
	FOR SEAL SH SIZE 1054.00MM				
89948	41.312		1.968	LDSLV4	
	FOR SEAL SH SIZE 41.500				
89949	28.986		2.480	LDSLV4	
	FOR SEAL SH SIZE 740.00MM				
89951	14.000	14.188	1.375	LDSLV3	
	FOR SEAL SH SIZE 14.188				
89997	23.434		2.500	LDSLV4	
	FOR SEAL SH SIZE 600.00MM				
90004	25.403		2.500	LDSLV4	
	FOR SEAL SH SIZE 650.00MM				
▲**90006**	9.000	10.000	.625	CRWH1	R
90017	9.000	10.250	.750	HDS1	R
90018	9.000	10.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
90019	9.000	10.250	.625	HDS1	R
90020	9.000	10.500	.625	HDS2	V
90022	9.000	10.500	.625	HDS1	V
90023	9.000	10.500	.625	HDS1	R
90024	9.000	10.500	.750	HDS1	R
90027	9.000	10.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
▲**90036**	9.000	11.000	.625	CRWH1	R
90042	15.954		1.969	LDSLV4	
	FOR SEAL SH SIZE 410.00MM				
90054	9.000	10.250	.875	HDSA2	VD
90056	9.048	10.630	.625	HDS2	V
□**90057**	230.00	260.00	15.00	HS8	R
90062	9.000	11.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
90063	9.000	11.000	.750	HDS1	R
90064	9.000	11.000	1.000	HDS1	R
90065	9.000	11.000	.625	HDS1	V
90066	9.000	11.000	.750	HDS1	V
90067	9.000	11.000	.750	HDS2	V
90070	10.000		1.000	LDSLV3	
	FOR SEAL SH SIZE 10.188				
90075	21.859		2.500	LDSLV4	
	FOR SEAL SH SIZE 560.00MM				
90103	34.456		2.500	LDSLV4	
	FOR SEAL SH SIZE 880.00MM				
90113	13.386		1.969	LDSLV3	
	FOR SEAL SH SIZE 345.00MM				
90114	11.622		1.260	LDSLV3	
	FOR SEAL SHAFT SIZE 300.00MM				
90120	23.435		2.290	LDSLV3	
	FOR SEAL SH SIZE 600.00MM				
90130	9.125		1.500	LDSLV4	
	FOR SEAL SHAFT SIZE 9.313				
90139	11.001		1.000	LDSLV4	
	FOR SEAL SH SIZE 284.28MM				
90143	12.750		1.500	LDSLV3	
	FOR SEAL SH SIZE 328.63MM				
90146	23.000		2.000	LDSLV4	
	FOR SEAL SH SIZE 23.188				
90149	19.813		.945	LDSLV4	
	FOR SEAL SH SIZE 508.00MM				
90150	12.000		1.375	LDSLV4	
	FOR SEAL SHAFT SIZE 310.00MM				
90155	12.409		2.500	LDSLV4	
	FOR SEAL SH SIZE 320.00MM				
90156	9.449		.689	LDSLV3	
	FOR SEAL SHAFT SIZE 250.00MM				
90163	22.812	23.000	2.000	LDSLV4	
	FOR SEAL SH SIZE 23.000				
90174	12.312		1.500	LDSLV4	
	FOR SEAL SH SIZE 12.500				
90179	8.465		1.000	LDSLV3	
	FOR SEAL SH SIZE 220.00MM				
90198	12.598		2.500	LDSLV4	
	FOR SEAL SH SIZE 325.00MM				
90221	34.064		2.500	LDSLV4	
	FOR SEAL SH SIZE 870.00MM				
90238	11.229		2.500	LDSLV4	
	FOR SEAL SH SIZE 290.00MM				
90239	12.804		2.500	LDSLV4	
	FOR SEAL SH SIZE 330.00MM				
90241	23.434		1.969	LDSLV3	
	FOR SEAL SH SIZE 600.00MM				
90259	19.466		4.380	LDSLV4	
	FOR SEAL SH SIZE 500.00MM				
90272	15.062		.750	LDSLV4	
	FOR SEAL SH SIZE 15.250				
90292	23.040		2.165	LDSLV4	
	FOR SEAL SH SIZE 590.00MM				
90332	35.812		1.500	LDSLV4	
	FOR SEAL SHAFT SIZE 36.000				
90333	11.562		1.000	LDSLV4	
	FOR SEAL SH SIZE 298.45MM				
90334	14.312		1.000	LDSLV4	
	FOR SEAL SH SIZE 14.500				
90347	17.922		1.181	LDSLV4	
	FOR SEAL SH SIZE 460.00MM				
90437	11.024		1.772	LDSLV4	
	FOR SEAL SH SIZE 285.00MM				
90546	10.827		.866	LDSLV4	
	FOR SEAL SH SIZE 280.00MM				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□ **90554**	230.00	260.00	15.00	HMSA7	R
▲□90555	230.00	260.00	15.00	HMS4	R
□90559	230.00	270.00	15.00	CRSH11	R
90761	11.500		.750	LDSLV4	
	FOR SEAL SHAFT SIZE 11.688				
★90765	17.913	18.101	1.181	LDSLV4	
	FOR SEAL SH SIZE 460.00MM				
90766	9.654		2.500	LDSLV3	
	FOR SEAL SH SIZE 250.00MM				
90769	19.500		1.250	LDSLV4	
	FOR SEAL SH SIZE 19.688				
90770	17.500		1.250	LDSLV4	
	FOR SEAL SH SIZE 17.688				
90773	9.835		1.575	LDSLV4	
	FOR SEAL SH SIZE 10.023				
90774	17.750		1.250	LDSLV4	
	FOR SEAL SHAFT SIZE 17.938				
90777	13.197		1.535	LDSLV4	
	FOR SEAL SH SIZE 340.00MM				
90778	13.984		1.000	LDSLV4	
	FOR SEAL SH SIZE 360.00MM				
90779	17.250		1.000	LDSLV4	
	FOR SEAL SH SIZE 17.438				
90951	22.647		2.500	LDSLV4	
	FOR SEAL SH SIZE 580.00MM				
90952	9.261		.709	LDSLV4	
	FOR SEAL SH SIZE 240.00MM				
90953	26.977		2.500	LDSLV4	
	FOR SEAL SH SIZE 960.00MM				
91202	9.125	11.125	.812	HDS2	R
91235	9.125	11.125	.812	HDS2	R
	W/4 EA .500 ADJ. LUGS				
91250	9.125	10.625	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
91255	9.125	10.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
91256	9.125	10.750	.750	HDS1	R
91260	9.125	11.125	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
91261	9.125	11.125	.688	HDS1	V
92532	9.250	11.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
92534	9.250	10.750	.656	HDS1	R
▲ **92536**	9.250	11.250	.625	†CRWHA1	R
92537	9.250	10.750	.656	HDS3	D
	W/4 EA .500 ADJ. LUGS				
92543	9.250	11.250	.625	HDS1	V
92544	9.250	11.250	.813	HDS2	V
▲ **92570**	9.250	12.750	.625	CRWHA1	R
92574	9.250	12.750	1.250	CRWHA1	R
92591	9.250	10.438	.875	HDSA1	RD
93115	9.312	11.000	1.437	HDDF1	R
93116	9.312			HDDFBV1	R
93125	9.312	11.625	1.754	HDDF1	R
93126	9.313			HDDFBV1	R
93751	9.375	11.375	.875	HDS1	R
□ **94480**	240.00	275.00	16.00	HMS4	R
□ **94484**	240.00	275.00	16.00	HMSA7	R
94485	9.449	10.827	.630	HMSA7	V
	W/STAINLESS STEEL SPRING				
▲□94495	240.00	270.00	15.00	HMS4	R
□ **94498**	240.00	280.00	16.00	HDS2	R
95000	9.500	10.500	.500	HS8	D
95042	9.500	11.000	.688	HDS1	V
95044	9.500	10.750	.625	HDS2	V
95045	9.500	10.750	.625	HDS2	R
95046	9.500	11.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
95047	9.500	11.000	.750	HDS1	R
▲ **95048**	9.500	10.500	.438	†CRW1	R
	W/SS CASE & SPRING				
95052	9.500	10.750	.313	HM21	R
95056	9.500	11.125	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
▲ **95062**	9.500	11.500	.625	†CRW1	R
95068	9.500	11.500	.813	HDS1	V
95069	9.500	11.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
95071	9.500	11.500	.875	HDS2	R
95072	9.500	11.500	1.000	HDS2	R
95075	9.500	11.000	.625	HS8	V
95081	9.500	12.500	.688	CRSA4	R
95620	9.563	11.859	1.949	HDDF1	R
95621	9.563			HDDFBV1	R
96230	9.625	11.625	1.000	HDS2	V
96231	9.625	11.625	.813	HDS2	V
▲ **96245**	9.625	11.625	.625	CRWH1	R
96290	9.620	12.750	1.250	HDSA1	RD
96880	9.688	11.500	1.000	HDS2	V
97064	16.535		2.500	LDSLV3	
	FOR SEAL SH SIZE 425.00MM				
97526	9.750	11.000	.625	HDS1	R
97527	9.750	11.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
97528	9.750	11.000	.625	HDS1	V
97529	9.750	11.000	.625	HDS2	V
▲ **97542**	9.750	11.125	.625	CRWH1	R
▲ **97545**	9.750	11.250	.625	CRWH1	R
97548	9.750	11.750	1.000	HDS1	R
97549	9.750	11.750	.625	HDS1	V
▲ **97550**	9.750	11.750	.625	CRWH1	R
97551	9.750	11.750	1.000	HDS2	V
▲□98435	250.00	280.00	15.00	HMS4	R
98444	9.844	11.409	.625	HDS2	R
98445	9.844	11.409	.625	HDS2	R
	W/4 EA .375 LUGS				
□ **99049**	12.00		6.00	SSLEEVE	
	SHAFT RANGE 11.91MM - 12.07MM				
99050	.500		.250	SSLEEVE	
	SHAFT RANGE .498 - .502				
□ **99055**	14.00		6.35	SSLEEVE	
	SHAFT RANGE 13.89MM - 14.00MM				
99056	.563		.250	SSLEEVE	
	SHAFT RANGE .560 - .566				
□ **99058**	16.00		7.95	SSLEEVE	
	SHAFT RANGE 15.89MM - 16.00MM				
□ **99059**	15.00		5.00	SSLEEVE	
	SHAFT RANGE 14.96MM - 15.06MM				
99060	.684		.313	SSLEEVE	
	SHAFT RANGE .682 - .686				
99062	.625		.313	SSLEEVE	
	SHAFT RANGE .623 - .627				
□ **99068**	17.00		7.95	SSLEEVE	
	SHAFT RANGE 16.94MM - 17.04MM				
□ **99076**	19.00		7.95	SSLEEVE	
	SHAFT RANGE .748 - .752				
□ **99078**	20.00		8.00	SSLEEVE	
	SHAFT RANGE 19.94MM - 20.04MM				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
99080	.781		.313	SSLEEVE	
	SHAFT RANGE .780 - .784				
99081	.760		.313	SSLEEVE	
	SHAFT RANGE .759 - .761				
□**99082**	18.00		8.00	SSLEEVE	
	SHAFT RANGE 17.87MM - 18.00MM				
99083	.813		.375	SSLEEVE	
	SHAFT RANGE .811 - .815				
□**99084**	22.00		6.57	SSLEEVE	
	SHAFT RANGE 21.87MM - 22.00MM				
□**99085**	22.00		8.00	SSLEEVE	
	SHAFT RANGE 21.87MM - 22.00MM				
99086	.859		.250	SSLEEVE	
	SHAFT RANGE .857 - .861				
99087	.875		.313	SSLEEVE	
	SHAFT RANGE .873 - .877				
99091	.910		.313	SSLEEVE	
	SHAFT RANGE .908 - .912				
□**99092**	24.00		7.95	SSLEEVE	
	SHAFT RANGE 23.87MM - 24.00MM				
99094	.969		.313	SSLEEVE	
	SHAFT RANGE .966 - .970				
99096	.969		.625	SSLEEVE	
	SHAFT RANGE .966 - .970				
□**99098**	25.00		7.95	SSLEEVE	
	SHAFT RANGE 24.94MM - 25.04MM				
99100	1.000		.313	SSLEEVE	
	SHAFT RANGE .998 - 1.002				
□**99103**	26.00		8.00	SSLEEVE	
	SHAFT RANGE 25.88MM - 26.01MM				
□**99106**	27.00		7.95	SSLEEVE	
	SHAFT RANGE 1.060 - 1.064				
99108	1.089		.313	SSLEEVE	
	SHAFT RANGE 1.087 - 1.091				
□**99111**	28.00		9.52	SSLEEVE	
	SHAFT RANGE 27.94MM - 28.04MM				
99112	1.125		.313	SSLEEVE	
	SHAFT RANGE 1.123 - 1.127				
□**99114**	30.00		8.00	SSLEEVE	
	SHAFT RANGE 29.95MM - 30.08MM				
99116	1.125		.375	SSLEEVE	
	SHAFT RANGE 1.123 - 1.127				
99118	1.188		.313	SSLEEVE	
	SHAFT RANGE 1.185 - 1.190				
99120	1.156		.375	SSLEEVE	
	SHAFT RANGE 1.154 - 1.158				
99121	1.299		.591	SSLEEVE	
	SHAFT RANGE 32.94MM - 33.05MM				
99122	1.175		.313	SSLEEVE	
	SHAFT RANGE 1.173 - 1.178				
□**99123**	31.00		7.95	SSLEEVE	
	SHAFT RANGE 1.216 - 1.222				
99125	1.250		.313	SSLEEVE	
	SHAFT RANGE 1.247 - 1.253				
99128	1.260		.315	SSLEEVE	
	SHAFT RANGE 31.92MM - 32.08MM				
99129	1.313		.250	SSLEEVE	
	SHAFT RANGE 1.308 - 1.314				
99131	1.313		.500	SSLEEVE	
	SHAFT RANGE 1.310 - 1.316				
99133	1.375		.313	SSLEEVE	
	SHAFT RANGE 1.371 - 1.377				
99134	1.339		.500	SSLEEVE	
	SHAFT RANGE 33.86MM - 34.01MM				
99138	1.375		.500	SSLEEVE	
	SHAFT RANGE 1.371 - 1.377				
99139	1.375		.512	SSLEEVE	
	SHAFT RANGE 34.92MM - 35.08MM				
□**99141**	31.50		8.00	SSLEEVE	
	SHAFT RANGE 31.42MM - 31.58MM				
99143	1.438		.563	SSLEEVE	
	SHAFT RANGE 1.432 - 1.438				
99144	1.438		.375	SSLEEVE	
	SHAFT RANGE 1.435 - 1.441				
99146	1.417		.512	SSLEEVE	
	SHAFT RANGE 35.85MM - 36.00MM				
99147	1.496		.512	SSLEEVE	
	SHAFT RANGE 37.85MM - 38.00MM				
99149	1.500		.563	SSLEEVE	
	SHAFT RANGE 1.497 - 1.503				
99150	1.500		.375	SSLEEVE	
	SHAFT RANGE 1.497 - 1.503				
99152	1.523		.438	SSLEEVE	
	SHAFT RANGE 1.520 - 1.526				
99153	1.575		.390	SSLEEVE	
	SHAFT RANGE 39.84MM - 40.00M				
99155	1.552		.438	SSLEEVE	
	SHAFT RANGE 1.549 - 1.555				
99156	1.563		.563	SSLEEVE	
	SHAFT RANGE 1.559 - 1.565				
99157	1.578		.512	SSLEEVE	
	SHAFT RANGE 39.93MM - 40.09MM				
99159	1.569		.625	SSLEEVE	
	SHAFT RANGE 1.566 - 1.572				
99160	1.605		.500	SSLEEVE	
	SHAFT RANGE 1.602 - 1.608				
99161	1.625		.313	SSLEEVE	
	SHAFT RANGE 1.622 - 1.628				
99162	1.625		.563	SSLEEVE	
	SHAFT RANGE 1.622 - 1.628				
99163	1.614		.500	SSLEEVE	
	SHAFT RANGE 40.84MM - 41.00MM				
99165	1.656		.550	SSLEEVE	
	SHAFT RANGE 1.653 - 1.659				
99166	1.650		.445	SSLEEVE	
	SHAFT RANGE 41.84MM - 42.00MM				
99167	1.688		.313	SSLEEVE	
	SHAFT RANGE 1.685 - 1.691				
99168	1.688		.563	SSLEEVE	
	SHAFT RANGE 1.684 - 1.690				
99169	1.650		.563	SSLEEVE	
	SHAFT RANGE 41.84MM - 42.00MM				
99170	1.739		.375	SSLEEVE	
	SHAFT RANGE 1.736 - 1.742				
99171	1.719		.563	SSLEEVE	
	SHAFT RANGE 1.715 - 1.721				
99172	1.750		.375	SSLEEVE	
	SHAFT RANGE 1.747 - 1.753				
99174	1.750		.563	SSLEEVE	
	SHAFT RANGE 1.747 - 1.753				
99175	1.750		.750	SSLEEVE	
	SHAFT RANGE 1.747 - 1.753				
99176	1.766		.563	SSLEEVE	
	SHAFT RANGE 1.761 - 1.767				
99177	1.772		.551	SSLEEVE	
	SHAFT RANGE 44.93MM - 45.09MM				
99179	1.781		.667	SSLEEVE	
	SHAFT RANGE 1.778 - 1.784				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
99180	1.750		.531	SSLEEVE	
	SHAFT RANGE 1.747 - 1.753				
99181	1.813		.563	SSLEEVE	
	SHAFT RANGE 1.809 - 1.815				
99182	1.693		.500	SSLEEVE	
	SHAFT RANGE 42.84MM - 43.00MM				
99184	1.875		.375	SSLEEVE	
	SHAFT RANGE 1.872 - 1.878				
99185	1.859		.563	SSLEEVE	
	SHAFT RANGE 1.857 - 1.863				
99186	1.868		.889	SSLEEVE	
	SHAFT RANGE 1.866 - 1.872				
99187	1.875		.563	SSLEEVE	
	SHAFT RANGE 1.872 - 1.878				
99188	1.875		.295	SSLEEVE	
	SHAFT RANGE 1.872 - 1.878				
99189	1.891		.551	SSLEEVE	
	SHAFT RANGE 47.93MM - 48.09MM				
99190	1.875		.175	SSLEEVE	
	SHAFT RANGE 1.872 - 1.878				
99192	1.912		.375	SSLEEVE	
	SHAFT RANGE 1.909 - 1.915				
99193	1.938		.563	SSLEEVE	
	SHAFT RANGE 1.934 - 1.940				
99196	1.969		.551	SSLEEVE	
	SHAFT RANGE 49.91MM - 50.07MM				
99198	1.980		.563	SSLEEVE	
	SHAFT RANGE 1.977 - 1.983				
99199	2.000		.563	SSLEEVE	
	SHAFT RANGE 1.997 - 2.003				
99200	2.000		.875	SSLEEVE	
	SHAFT RANGE 1.997 - 2.003				
99204	2.047		.500	SSLEEVE	
	SHAFT RANGE 51.81MM - 52.00MM				
99205	2.063		.781	SSLEEVE	
	SHAFT RANGE 2.057 - 2.063				
99210	2.125		.500	SSLEEVE	
	SHAFT RANGE 2.123 - 2.128				
99212	2.125		.781	SSLEEVE	
	SHAFT RANGE 2.124 - 2.130				
99215	2.165		.787	SSLEEVE	
	SHAFT RANGE 54.91MM - 55.07MM				
99218	2.188		.781	SSLEEVE	
	SHAFT RANGE 2.186 - 2.192				
99219	2.283		.787	SSLEEVE	
	SHAFT RANGE 2.280 - 2.286				
99220	2.205		.500	SSLEEVE	
	SHAFT RANGE 55.81MM - 56.00MM				
99225	2.250		.781	SSLEEVE	
	SHAFT RANGE 2.249 - 2.255				
99226	2.240		.764	SSLEEVE	
	SHAFT RANGE 2.237 - 2.243				
99227	2.250		.313	SSLEEVE	
	SHAFT RANGE 2.249 - 2.255				
99229	2.230		.500	SSLEEVE	
	SHAFT RANGE 2.227 - 2.233				
99230	2.230		.781	SSLEEVE	
	SHAFT RANGE 2.227 - 2.233				
99231	2.313		.781	SSLEEVE	
	SHAFT RANGE 2.309 - 2.315				
99233	2.328		.750	SSLEEVE	
	SHAFT RANGE 2.327 - 2.333				
99235	2.362		.787	SSLEEVE	
	SHAFT RANGE 59.91MM - 60.07MM				
99237	2.375		.781	SSLEEVE	
	SHAFT RANGE 2.374 - 2.380				
99238	2.375		.594	SSLEEVE	
	SHAFT RANGE 2.372 - 2.378				
99240	2.375		.526	SSLEEVE	
	SHAFT RANGE 2.374 - 2.380				
99241	2.362		.370	SSLEEVE	
	SHAFT RANGE 59.92MM - 60.08MM				
99242	2.438		.500	SSLEEVE	
	SHAFT RANGE 2.435 - 2.441				
99243	2.438		.781	SSLEEVE	
	SHAFT RANGE 2.434 - 2.440				
99244	2.441		.500	SSLEEVE	
	SHAFT RANGE 61.81MM - 62.00MM				
99248	2.500		.500	SSLEEVE	
	SHAFT RANGE 2.500 - 2.506				
99249	2.492		.781	SSLEEVE	
	SHAFT RANGE 2.489 - 2.495				
99250	2.500		.781	SSLEEVE	
	SHAFT RANGE 2.500 - 2.506				
99251	2.516		.781	SSLEEVE	
	SHAFT RANGE 2.510 - 2.516				
99253	2.500		.555	SSLEEVE	
	SHAFT RANGE 2.497 - 2.503				
99254	2.559		.787	SSLEEVE	
	SHAFT RANGE 64.92MM - 65.08MM				
99256	2.563		.781	SSLEEVE	
	SHAFT RANGE 2.560 - 2.566				
99259	2.598		.781	SSLEEVE	
	SHAFT RANGE 65.91MM - 66.07MM				
99260	2.625		.500	SSLEEVE	
	SHAFT RANGE 2.622 - 2.628				
99261	2.621		.781	SSLEEVE	
	SHAFT RANGE 2.618 - 2.624				
99262	2.625		.781	SSLEEVE	
	SHAFT RANGE 2.625 - 2.631				
99264	2.625		.781	SSLEEVE	
	SHAFT RANGE 2.621 - 2.627				
99266	2.677		.750	SSLEEVE	
	SHAFT RANGE 67.81MM - 68.00MM				
99267	2.750		1.438	SSLEEVE	
	SHAFT RANGE 2.747 - 2.753				
99268	2.730		.781	SSLEEVE	
	SHAFT RANGE 2.727 - 2.733				
99269	2.750		1.125	SSLEEVE	
	SHAFT RANGE 2.750 - 2.756				
99272	2.750		.406	SSLEEVE	
	SHAFT RANGE 2.750 - 2.756				
99273	2.743		.781	SSLEEVE	
	SHAFT RANGE 2.740 - 2.746				
99274	2.750		.781	SSLEEVE	
	SHAFT RANGE 2.745 - 2.751				
99275	2.750		.781	SSLEEVE	
	SHAFT RANGE 2.750 - 2.756				
99276	2.756		.787	SSLEEVE	
	SHAFT RANGE 69.92MM - 70.08MM				
99281	2.813		.594	SSLEEVE	
	SHAFT RANGE 2.809 - 2.815				
99282	2.838		.500	SSLEEVE	
	SHAFT RANGE 2.838 - 2.844				
99284	2.835		.750	SSLEEVE	
	SHAFT RANGE 71.81MM - 72.00MM				
99286	2.869		.781	SSLEEVE	
	SHAFT RANGE 2.866 - 2.872				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
99287	2.875		.781	SSLEEVE	
	SHAFT RANGE 2.873 - 2.879				
99289	2.953		.594	SSLEEVE	
	SHAFT RANGE 74.93MM - 75.09MM				
99290	2.938		.500	SSLEEVE	
	SHAFT RANGE 2.937 - 2.943				
99291	2.993		.484	SSLEEVE	
	SHAFT RANGE 2.990 - 2.996				
99292	2.974		.813	SSLEEVE	
	SHAFT RANGE 2.972 - 2.976				
99293	2.940		.781	SSLEEVE	
	SHAFT RANGE 2.937 - 2.943				
99294	2.953		.866	SSLEEVE	
	SHAFT RANGE 74.93MM - 75.09MM				
99296	3.000		.813	SSLEEVE	
	SHAFT RANGE 2.997 - 3.003				
99298	2.993		.563	SSLEEVE	
	SHAFT RANGE 2.990 - 2.996				
99299	2.993		.813	SSLEEVE	
	SHAFT RANGE 2.990 - 2.996				
99300	3.000		.813	SSLEEVE	
	SHAFT RANGE 3.000 - 3.006				
99301	3.011		.500	SSLEEVE	
	SHAFT RANGE 3.008 - 3.014				
99303	3.000		.625	SSLEEVE	
	SHAFT RANGE 3.000 - 3.006				
99306	3.071		.750	SSLEEVE	
	SHAFT RANGE 77.81MM - 78.00MM				
99307	3.125		.551	SSLEEVE	
	SHAFT RANGE 3.124 - 3.132				
99311	3.125		.688	SSLEEVE	
	SHAFT RANGE 3.120 - 3.126				
99312	3.125		.813	SSLEEVE	
	SHAFT RANGE 3.120 - 3.126				
99313	3.150		.750	SSLEEVE	
	SHAFT RANGE 3.142 - 3.150				
99315	3.150		.827	SSLEEVE	
	SHAFT RANGE 79.90MM - 80.08MM				
99317	3.150		.433	SSLEEVE	
	SHAFT RANGE 79.90MM - 80.08MM				
99322	3.250		.813	SSLEEVE	
	SHAFT RANGE 3.247 - 3.253				
99324	3.250		.595	SSLEEVE	
	SHAFT RANGE 3.250 - 3.256				
99325	3.250		.813	SSLEEVE	
	SHAFT RANGE 3.250 - 3.256				
99326	3.250		.688	SSLEEVE	
	SHAFT RANGE 3.250 - 3.256				
99328	3.228		.660	SSLEEVE	
	SHAFT RANGE 3.225 - 3.231				
99331	3.310		.813	SSLEEVE	
	SHAFT RANGE 3.307 - 3.313				
99332	3.342		.669	SSLEEVE	
	SHAFT RANGE 84.76MM - 85.02MM				
99333	3.342		.827	SSLEEVE	
	SHAFT RANGE 84.76MM - 85.02MM				
99334	3.346		.399	SSLEEVE	
	SHAFT RANGE 84.78MM - 85.00MM				
99337	3.375		.813	SSLEEVE	
	SHAFT RANGE 3.373 - 3.379				
99338	3.375		.375	SSLEEVE	
	SHAFT RANGE 3.373 - 3.379				
99339	3.438		.781	SSLEEVE	
	SHAFT RANGE 3.435 - 3.441				
99340	3.480		.781	SSLEEVE	
	SHAFT RANGE 3.477 - 3.483				
99346	3.500		.625	SSLEEVE	
	SHAFT RANGE 3.497 - 3.503				
99347	3.500		.313	SSLEEVE	
	SHAFT RANGE 3.500 - 3.506				
99349	3.504		.625	SSLEEVE	
	SHAFT RANGE 88.92MM - 89.08MM				
99350	3.500		.813	SSLEEVE	
	SHAFT RANGE 3.500 - 3.506				
99351	3.543		.710	SSLEEVE	
	SHAFT RANGE 89.91MM - 90.07MM				
99352	3.543		.438	SSLEEVE	
	SHAFT RANGE 89.91MM - 90.07MM				
99353	3.543		.526	SSLEEVE	
	SHAFT RANGE 89.91MM - 90.07MM				
99354	3.543		.906	SSLEEVE	
	SHAFT RANGE 89.91MM - 90.07MM				
99356	3.563		.813	SSLEEVE	
	SHAFT RANGE 3.560 - 3.566				
99359	3.730		.469	SSLEEVE	
	SHAFT RANGE 3.727 - 3.733				
99360	3.621		.813	SSLEEVE	
	SHAFT RANGE 3.618 - 3.624				
99362	3.625		.813	SSLEEVE	
	SHAFT RANGE 3.623 - 3.629				
99363	3.625		.500	SSLEEVE	
	SHAFT RANGE 3.623 - 3.629				
99364	3.743		.469	SSLEEVE	
	SHAFT RANGE 3.740 - 3.746				
99365	3.688		.813	SSLEEVE	
	SHAFT RANGE 3.685 - 3.691				
99366	3.730		.781	SSLEEVE	
	SHAFT RANGE 3.727 - 3.733				
99367	3.753		.344	SSLEEVE	
	SHAFT RANGE 3.750 - 3.756				
99368	3.688		.313	SSLEEVE	
	SHAFT RANGE 3.684 - 3.690				
99369	3.740		.827	SSLEEVE	
	SHAFT RANGE 94.92MM - 95.08MM				
99372	3.753		.688	SSLEEVE	
	SHAFT RANGE 3.750 - 3.756				
99374	3.743		.344	SSLEEVE	
	SHAFT RANGE 3.740 - 3.746				
99376	3.749		.563	SSLEEVE	
	SHAFT RANGE 3.746 - 3.752				
99386	3.871		.813	SSLEEVE	
	SHAFT RANGE 3.868 - 3.874				
99387	3.875		.813	SSLEEVE	
	SHAFT RANGE 3.873 - 3.879				
99393	3.938		.813	SSLEEVE	
	SHAFT RANGE 3.935 - 3.941				
99395	4.000		.600	SSLEEVE	
	SHAFT RANGE 3.998 - 4.006				
99399	4.000		.813	SSLEEVE	
	SHAFT RANGE 3.998 - 4.006				
99400	4.000		.650	SSLEEVE	
	SHAFT RANGE 3.998 - 4.006				
99401	4.000		.500	SSLEEVE	
	SHAFT RANGE 3.998 - 4.006				
99409	4.094		.787	SSLEEVE	
	SHAFT RANGE 103.89MM-104.09MM				
99412	4.125		.813	SSLEEVE	
	SHAFT RANGE 4.122 - 4.130				

★Contact manufacturer for availability
Bold numbers are preferred designs
☐ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
99413	4.134		.787	SSLEEVE	
	SHAFT RANGE 104.90MM-105.10MM				
99418	4.188		.813	SSLEEVE	
	SHAFT RANGE 4.183 - 4.191				
99423	4.234		.781	SSLEEVE	
	SHAFT RANGE 4.226 - 4.234				
99424	4.250		.813	SSLEEVE	
	SHAFT RANGE 4.248 - 4.256				
99434	4.331		.448	SSLEEVE	
	SHAFT RANGE 109.78MM-110.00MM				
99435	4.328		.509	SSLEEVE	
	SHAFT RANGE 109.91MM-110.11MM				
99437	4.375		.813	SSLEEVE	
	SHAFT RANGE 4.370 - 4.378				
99438	4.409		.750	SSLEEVE	
	SHAFT RANGE 111.78MM-112.00MM				
99439	4.438		1.000	SSLEEVE	
	SHAFT RANGE 4.434 - 4.442				
99450	4.500		.813	SSLEEVE	
	SHAFT RANGE 4.496 - 4.504				
99452	4.528		.813	SSLEEVE	
	SHAFT RANGE 114.89MM-115.09MM				
99463	4.625		1.000	SSLEEVE	
	SHAFT RANGE 4.621 - 4.629				
99465	4.625		.438	SSLEEVE	
	SHAFT RANGE 4.621 - 4.629				
99468	4.688		.813	SSLEEVE	
	SHAFT RANGE 4.685 - 4.693				
99471	4.724		.315	SSLEEVE	
	SHAFT RANGE 119.89MM-120.09MM				
99472	4.803		.787	SSLEEVE	
	SHAFT RANGE 121.90MM-122.10MM				
99473	4.724		.787	SSLEEVE	
	SHAFT RANGE 119.89MM-120.09MM				
99475	4.750		.500	SSLEEVE	
	SHAFT RANGE 4.746 - 4.754				
99484	4.843		.787	SSLEEVE	
	SHAFT RANGE 122.91MM-123.11MM				
99487	4.875		.625	SSLEEVE	
	SHAFT RANGE 4.871 - 4.879				
99490	4.921		.394	SSLEEVE	
	SHAFT RANGE 124.90MM-125.10MM				
99491	5.125		.866	SSLEEVE	
	SHAFT RANGE 5.117 - 5.125				
99492	4.921		1.024	SSLEEVE	
	SHAFT RANGE 124.89MM-125.09MM				
99494	5.114		.750	SSLEEVE	
	SHAFT RANGE 129.80MM-130.00MM				
99498	5.000		.688	SSLEEVE	
	SHAFT RANGE 4.998 - 5.006				
99499	5.000		.813	SSLEEVE	
	SHAFT RANGE 4.998 - 5.006				
99501	5.000		.540	SSLEEVE	
	SHAFT RANGE 4.998 - 5.006				
99513	5.125		.813	SSLEEVE	
	SHAFT RANGE 5.120 - 5.128				
99525	5.250		.813	SSLEEVE	
	SHAFT RANGE 5.246 - 5.254				
99533	5.311		.807	SSLEEVE	
	SHAFT RANGE 5.307 - 5.315				
99537	5.375		.813	SSLEEVE	
	SHAFT RANGE 5.371 - 5.379				
99547	5.476		.563	SSLEEVE	
	SHAFT RANGE 5.472 - 5.480				
99548	5.438		1.500	SSLEEVE	
	SHAFT RANGE 5.434 - 5.442				
99549	5.500		.813	SSLEEVE	
	SHAFT RANGE 5.498 - 5.506				
99550	5.500		.518	SSLEEVE	
	SHAFT RANGE 5.498 - 5.506				
99552	5.512		.807	SSLEEVE	
	SHAFT RANGE 139.90MM-140.11MM				
99560	5.625		.875	SSLEEVE	
	SHAFT RANGE 5.621 - 5.629				
99562	5.734		.563	SSLEEVE	
	SHAFT RANGE 5.726 - 5.734				
99571	5.709		.750	SSLEEVE	
	SHAFT RANGE 144.75MM-145.00MM				
99575	5.750		.813	SSLEEVE	
	SHAFT RANGE 5.746 - 5.754				
99587	5.875		1.000	SSLEEVE	
	SHAFT RANGE 5.871 - 5.879				
99595	5.905		1.024	SSLEEVE	
	SHAFT RANGE 149.75MM-150.00MM				
99596	5.938		1.000	SSLEEVE	
	SHAFT RANGE 5.934 - 5.942				
99599	6.000		1.000	SSLEEVE	
	SHAFT RANGE 5.995 - 6.003				
99601	6.000		.500	SSLEEVE	
	SHAFT RANGE 5.995 - 6.003				
99605	6.063		1.024	SSLEEVE	
	SHAFT RANGE 153.87MM-154.13MM				
99606	6.097		1.024	SSLEEVE	
	SHAFT RANGE 154.75MM-155.00MM				
99620	6.203		.813	SSLEEVE	
	SHAFT RANGE 6.198 - 6.208				
99625	6.250		1.031	SSLEEVE	
	SHAFT RANGE 6.245 - 6.255				
99630	6.299		1.000	SSLEEVE	
	SHAFT RANGE 6.289 - 6.299				
99640	6.688		1.250	SSLEEVE	
	SHAFT RANGE 6.683 - 6.693				
99650	6.500		1.000	SSLEEVE	
	SHAFT RANGE 6.495 - 6.505				
99675	6.750		.813	SSLEEVE	
	SHAFT RANGE 6.745 - 6.755				
99687	6.890		1.102	SSLEEVE	
	SHAFT RANGE 6.880 - 6.890				
99700	7.000		1.000	SSLEEVE	
	SHAFT RANGE 6.995 - 7.005				
99721	7.087		1.299	SSLEEVE	
	SHAFT RANGE 7.077 - 7.087				
99725	7.250		1.250	SSLEEVE	
	SHAFT RANGE 7.244 - 7.254				
99726	7.278		1.260	SSLEEVE	
	SHAFT RANGE 184.75MM-185.00MM				
99745	7.453		.813	SSLEEVE	
	SHAFT RANGE 7.444 - 7.454				
99750	7.500		.813	SSLEEVE	
	SHAFT RANGE 7.495 - 7.505				
99775	7.750		1.000	SSLEEVE	
	SHAFT RANGE 7.745 - 7.755				
99787	7.875		1.359	SSLEEVE	
	SHAFT RANGE 7.869 - 7.879				
99799	7.938		1.000	SSLEEVE	
	SHAFT RANGE 7.933 - 7.943				
99800	8.000		1.000	SSLEEVE	
	SHAFT RANGE 7.995 - 8.005				

★Contact manufacturer for availability
Bold numbers are preferred designs
☐ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
99810	.625		.313	GSLEEVE	
	SHAFT RANGE 0.623 - 0.627				
□99811	19.00		7.95	GSLEEVE	
	SHAFT RANGE 0.748 - 0.752				
99812	.875		.313	GSLEEVE	
	SHAFT RANGE 0.873 - 0.877				
□99813	25.00		7.95	GSLEEVE	
	SHAFT RANGE 0.982 - 0.986				
99814	1.000		.313	GSLEEVE	
	SHAFT RANGE 0.998 - 1.002				
□99815	27.00		7.95	GSLEEVE	
	SHAFT RANGE 1.060 - 1.064				
99816	1.125		.313	GSLEEVE	
	SHAFT RANGE 1.123 - 1.127				
99817	1.250		.313	GSLEEVE	
	SHAFT RANGE 1.247 - 1.253				
99819	1.375		.500	GSLEEVE	
	SHAFT RANGE 1.371 - 1.377				
99820	1.375		.512	GSLEEVE	
	SHAFT RANGE 1.375 - 1.381				
99821	1.438		.563	GSLEEVE	
	SHAFT RANGE 1.432 - 1.438				
99822	1.500		.563	GSLEEVE	
	SHAFT RANGE: 1.497 - 1.503				
99823	1.500		.375	GSLEEVE	
	SHAFT RANGE: 1.497 - 1.503				
99824	1.563		.563	GSLEEVE	
	SHAFT RANGE: 1.559 - 1.565				
99825	1.578		.512	GSLEEVE	
	SHAFT RANGE 39.929 - 40.081MM				
99826	1.625		.563	GSLEEVE	
	SHAFT RANGE 1.622 - 1.628				
99827	1.750		.563	GSLEEVE	
	SHAFT RANGE 1.747 - 1.753				
99828	1.750		.750	GSLEEVE	
	SHAFT RANGE 1.747 - 1.753				
99829	1.766		.563	GSLEEVE	
	SHAFT RANGE 1.761 -1.767				
99830	1.772		.551	GSLEEVE	
	SHAFT RANGE 44.933 - 45.085MM				
99832	1.875		.563	GSLEEVE	
	SHAFT RANGE 1.872 - 1.878				
99833	1.938		.563	GSLEEVE	
	SHAFT RANGE 1.934 - 1.940				
99834	2.000		.563	GSLEEVE	
	SHAFT RANGE 1.997 - 2.003				
99835	2.000		.875	GSLEEVE	
	SHAFT RANGE 1.997 - 2.003				
99836	2.125		.781	GSLEEVE	
	SHAFT RANGE 2.124 - 2.130				
99837	2.250		.781	GSLEEVE	
	SHAFT RANGE 2.249 - 2.255				
99839	2.375		.781	GSLEEVE	
	SHAFT RANGE 2.374 - 2.380				
99840	2.500		.781	GSLEEVE	
	SHAFT RANGE 2.500 - 2.506				
99841	2.559		.787	GSLEEVE	
	SHAFT RANGE 64.922 - 65.075 MM				
99842	2.625		.781	GSLEEVE	
	SHAFT RANGE 2.625 - 2.631				
99843	2.750		.781	GSLEEVE	
	SHAFT RANGE 2.745 - 2.751				
99844	2.750		.781	GSLEEVE	
	SHAFT RANGE 2.750 - 2.756				
99845	2.838		.500	GSLEEVE	
	SHAFT RANGE 2.838 - 2.844				
99846	2.875		.781	GSLEEVE	
	SHAFT RANGE 2.873 - 2.879				
99847	2.938		.781	GSLEEVE	
	SHAFT RANGE 2.937 - 2.943				
99848	3.000		.813	GSLEEVE	
	SHAFT RANGE 3.000 - 3.006				
99849	3.125		.813	GSLEEVE	
	SHAFT RANGE 3.120 - 3.126				
99850	3.250		.595	GSLEEVE	
	SHAFT RANGE 3.250 - 3.256				
99851	3.250		.813	GSLEEVE	
	SHAFT RANGE 3.250 - 3.256				
99852	3.500		.813	GSLEEVE	
	SHAFT RANGE 3.500 - 3.506				
99853	3.750		.688	GSLEEVE	
	SHAFT RANGE 3.750 - 3.756				
99854	3.938		.813	GSLEEVE	
	SHAFT RANGE 3.935 - 3.941				
99855	4.000		.813	GSLEEVE	
	SHAFT RANGE 3.998 - 4.006				
99856	4.500		.813	GSLEEVE	
	SHAFT RANGE 4.496 - 4.504				
99857	5.000		.688	GSLEEVE	
	SHAFT RANGE 4.998 - 5.006				
99858	5.000		.813	GSLEEVE	
	SHAFT RANGE 4.998 - 5.006				
99860	.910		.313	GSLEEVE	
	SHAFT RANGE 0.908 - 0.912				
99862	5.875		1.000	GSLEEVE	
	SHAFT RANGE 5.871- 5.879				
99863	2.165		.787	GSLEEVE	
	SHAFT RANGE 2.162 - 2.169				
□99866	28.00		9.52	GSLEEVE	
	SHAFT RANGE 27.94 MM- 28.04 MM				
▲100042	10.000	11.000	.375	HMS4	R
▲100044	10.000	11.252	.625	CRWHA1	R
▲100051	10.000	12.000	.625	CRWH1	R
100075	10.000	12.000	.625	†CRWA1	R
□102360	260.00	280.00	16.00	HMS1	V
	W/STAINLESS STEEL SPRING				
□102365	260.00	300.00	20.00	CRS1	R
102520	10.250	11.250	.563	CRWH1	R
102530	10.250	12.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
▲102540	10.250	12.250	.625	CRWH1	R
□104300	265.00	290.00	16.00	CRSH13	R
▲105010	10.500	11.750	.625	CRWH1	R
▲105051	10.500	12.500	.625	CRWH1	R
105080	10.500	12.125	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
106205	10.625	11.375	.313	HM14	R
▲107551	10.750	12.750	.625	CRWH1	R
107591	10.750	13.371	1.250	HDSB1	RD
108710	10.875	12.969	1.540	HDDF1	R
108711	10.875			HDDFBV1	R
▲110030	11.000	12.250	.625	CRWHA1	R
▲110051	11.000	13.000	.625	CRWH1	R
□**110222**	280.00	310.00	16.00	HMS4	R
▲□110245	280.00	320.00	20.00	†CRWA1	R
□**110246**	280.00	320.00	20.00	†CRWA1	V
▲113740	11.375	13.000	.625	CRW1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
▲**115021**	11.500	13.000	.625	CRWH1	R
115025	11.500	13.000	.750	HDSA1	RD
▲**115041**	11.500	13.500	.625	CRWH1	R
116500	11.625	13.250	1.290	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
116501	11.625			HDDFBV1	R
117570	11.750	13.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
□**118100**	300.00	340.00	18.00	HMS4	R
□118101	300.00	335.00	18.00	CRSH11	R
□118102	300.00	340.00	16.00	HMS46	R
□**118103**	300.00	340.00	16.00	HMS4	R
□**118106**	300.00	340.00	16.00	HMSA7	R
120045	12.000	13.625	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
▲**120060**	12.000	14.000	.625	CRW1	R
▲**122555**	12.250	13.375	.625	CRWH1	R
▲**122580**	12.250	13.813	.625	CRW1	R
▲**122590**	12.250	14.250	1.000	CRWHA1	R
124020	12.400	14.375	1.656	HDDF1	R
124021	12.400			HDDFBV1	R
127540	12.750	13.625	.563	HMSA7	R
137570	13.750	15.817	1.875	HDDF1	R
	O.D. LISTED IS SEAL I.D.				
137571	13.750			HDDFBV1	R
140080	14.000	16.750	.930	†HMSA22	D
	P.F. WIDTH .700				
161550	16.125	17.375	.930	†HMSA11	D
	P.F. WIDTH .700				
171025	17.125	19.240	1.531	HDDF1	R
171026	17.125			HDDFBV1	R
	BELLEVILLE WASHERS (2 EA/KIT)				
178750	17.875	19.137	.930	†HMSA11	D
	P.F. WIDTH .930				
191021	19.125			HDDFBV1	R
191022	19.125	21.500	1.640	HDDF1	R
238020	23.875	26.875	2.125	HDDF1	R
238021	23.875			HDDFBV1	R
400030	.125		.100	VR1	R
	SHAFT RANGE .110 - .140				
400034	.118		.100	VR1	V
	SHAFT RANGE .110 - .140				
400040	.156		.120	VR1	R
	SHAFT RANGE .140 - .180				
400044	.156		.120	VR1	V
	SHAFT RANGE .140 - .180				
400050	.188		.120	VR1	R
	SHAFT RANGE .180 - .210				
400051	.188		.180	VR2	R
	SHAFT RANGE .180 - .210				
400054	.188		.120	VR1	V
	SHAFT RANGE .180 - .210				
400055	.188		.180	VR2	V
	SHAFT RANGE .180 - .210				
400060	.250		.120	VR1	R
	SHAFT RANGE .210 - .260				
400061	.250		.180	VR2	R
	SHAFT RANGE .210 - .260				
400064	.250		.120	VR1	V
	SHAFT RANGE .210 - .260				
400065	.250		.180	VR2	V
	SHAFT RANGE .210 - .260				
400070	.281		.120	VR1	R
	SHAFT RANGE .260 - .310				
400071	.281		.180	VR2	R
	SHAFT RANGE .260 - .310				
400074	.281		.120	VR1	V
	SHAFT RANGE .260 - .310				
400075	.281		.180	VR2	V
	SHAFT RANGE .260 - .310				
400080	.313		.120	VR1	R
	SHAFT RANGE .310 - .370				
400081	.313		.180	VR2	R
	SHAFT RANGE .310 - .370				
400084	.313		.120	VR1	V
	SHAFT RANGE .310 - .370				
400085	.313		.180	VR2	V
	SHAFT RANGE .310 - .370				
400100	.375		.180	VR1	R
	SHAFT RANGE .370 - .450				
400101	.375		.260	VR2	R
	SHAFT RANGE .370 - .450				
400104	.375		.180	VR1	V
	SHAFT RANGE .370 - .450				
400105	.375		.260	VR2	V
	SHAFT RANGE .370 - .450				
400120	.500		.180	VR1	R
	SHAFT RANGE .450 - .530				
400121	.500		.260	VR2	R
	SHAFT RANGE .450 - .530				
400124	.500		.180	VR1	V
	SHAFT RANGE .450 - .530				
400125	.500		.260	VR2	V
	SHAFT RANGE .450 - .530				
400130	.531		.180	VR1	R
	SHAFT RANGE .490 - .570				
400134	.531		.180	VR1	V
	SHAFT RANGE .490 - .570				
400140	.570		.180	VR1	R
	SHAFT RANGE .530 - .610				
400141	.563		.260	VR2	R
	SHAFT RANGE .530 - .610				
400144	.563		.180	VR1	V
	SHAFT RANGE .530 - .610				
400145	.563		.260	VR2	V
	SHAFT RANGE .530 - .610				
400160	.625		.180	VR1	R
	SHAFT RANGE .610 - .690				
400161	.625		.260	VR2	R
	SHAFT RANGE .610 - .690				
400164	.625		.180	VR1	V
	SHAFT RANGE .610 - .690				
400165	.625		.260	VR2	V
	SHAFT RANGE .610 - .690				
400180	.688		.180	VR1	R
	SHAFT RANGE .690 - .750				
400181	.688		.260	VR2	R
	SHAFT RANGE .690 - .770				
400184	.688		.180	VR1	V
	SHAFT RANGE .690 - .750				
400185	.688		.260	VR2	V
	SHAFT RANGE .690 - .770				
400200	.750		.236	VR1	R
	SHAFT RANGE .750 - .830				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
400201	.813		.350	VR2	R
	SHAFT RANGE .770 - .830				
400204	.750		.240	VR1	V
	SHAFT RANGE .750 - .830				
400205	.813		.350	VR2	V
	SHAFT RANGE .770 - .830				
400220	.875		.240	VR1	R
	SHAFT RANGE .830 - .950				
400221	.875		.350	VR2	R
	SHAFT RANGE .830 - .950				
400224	.875		.240	VR1	V
	SHAFT RANGE .830 - .950				
400225	.875		.350	VR2	V
	SHAFT RANGE .830 - .950				
400250	1.000		.240	VR1	R
	SHAFT RANGE .950 - 1.070				
400251	1.000		.350	VR2	R
	SHAFT RANGE .950 - 1.070				
400254	1.000		.240	VR1	V
	SHAFT RANGE .950 - 1.070				
400255	1.000		.350	VR2	V
	SHAFT RANGE .950 - 1.070				
400280	1.125		.240	VR1	R
	SHAFT RANGE 1.070 - 1.140				
400281	1.125		.350	VR2	R
	SHAFT RANGE 1.070 - 1.140				
400284	1.125		.240	VR1	V
	SHAFT RANGE 1.070 - 1.140				
400285	1.125		.350	VR2	V
	SHAFT RANGE 1.070 - 1.140				
400300	1.188		.240	VR1	R
	SHAFT RANGE 1.140 - 1.220				
400301	1.188		.350	VR2	R
	SHAFT RANGE 1.140 - 1.220				
400304	1.188		.240	VR1	V
	SHAFT RANGE 1.140 - 1.220				
400305	1.188		.350	VR2	V
	SHAFT RANGE 1.140 - 1.220				
400320	1.250		.240	VR1	R
	SHAFT RANGE 1.220 - 1.300				
400321	1.250		.350	VR2	R
	SHAFT RANGE 1.220 - 1.300				
400324	1.250		.240	VR1	V
	SHAFT RANGE 1.220 - 1.300				
400325	1.250		.350	VR2	V
	SHAFT RANGE 1.220 - 1.300				
400350	1.375		.240	VR1	R
	SHAFT RANGE 1.300 - 1.420				
400351	1.375		.350	VR2	R
	SHAFT RANGE 1.300 - 1.420				
400354	1.375		.240	VR1	V
	SHAFT RANGE 1.300 - 1.420				
400355	1.375		.350	VR2	V
	SHAFT RANGE 1.300 - 1.420				
400380	1.438		.240	VR1	R
	SHAFT RANGE 1.420 - 1.500				
400381	1.438		.350	VR2	R
	SHAFT RANGE 1.420 - 1.500				
400384	1.438		.240	VR1	V
	SHAFT RANGE 1.420 - 1.500				
400385	1.438		.350	VR2	V
	SHAFT RANGE 1.420 - 1.500				
400400	1.500		.280	VR1	R
	SHAFT RANGE 1.500 - 1.700				
400401	1.500		.430	VR2	R
	SHAFT RANGE 1.500 - 1.700				
400404	1.500		.280	VR1	V
	SHAFT RANGE 1.500 - 1.700				
400405	1.500		.430	VR2	V
	SHAFT RANGE 1.500 - 1.700				
400450	1.750		.280	VR1	R
	SHAFT RANGE 1.700 - 1.890				
400451	1.750		.430	VR2	R
	SHAFT RANGE 1.700 - 1.890				
400454	1.750		.280	VR1	V
	SHAFT RANGE 1.700 - 1.890				
400455	1.750		.430	VR2	V
	SHAFT RANGE 1.700 - 1.890				
400500	2.000		.280	VR1	R
	SHAFT RANGE 1.890 - 2.090				
400501	2.000		.430	VR2	R
	SHAFT RANGE 1.890 - 2.090				
400504	2.000		.280	VR1	V
	SHAFT RANGE 1.890 - 2.090				
400505	2.000		.430	VR2	V
	SHAFT RANGE 1.890 - 2.090				
400509	2.000		.193	VRINGSP	R
	SHAFT RANGE 1.890 - 2.090				
400550	2.125		.280	VR1	R
	SHAFT RANGE 2.090 - 2.290				
400551	2.125		.430	VR2	R
	SHAFT RANGE 2.090 - 2.290				
400554	2.125		.280	VR1	V
	SHAFT RANGE 2.090 - 2.290				
400555	2.125		.430	VR2	V
	SHAFT RANGE 2.090 - 2.290				
★**400578**	2.250		.469	VR1	R
	SHAFT RANGE 2.090 - 2.290				
400600	2.375		.280	VR1	R
	SHAFT RANGE 2.290 - 2.480				
400601	2.375		.430	VR2	R
	SHAFT RANGE 2.290 - 2.480				
400604	2.375		.280	VR1	V
	SHAFT RANGE 2.290 - 2.480				
400605	2.375		.430	VR2	V
	SHAFT RANGE 2.290 - 2.480				
400650	2.500		.280	VR1	R
	SHAFT RANGE 2.480 - 2.680				
400651	2.500		.430	VR2	R
	SHAFT RANGE 2.480 - 2.680				
400654	2.500		.280	VR1	V
	SHAFT RANGE 2.480 - 2.680				
400655	2.500		.430	VR2	V
	SHAFT RANGE 2.480 - 2.680				
400659	2.500		.410	VR1-SPL	R
	SHAFT RANGE 2.480 - 2.680				
400700	2.750		.350	VR1	R
	SHAFT RANGE 2.680 - 2.880				
400701	2.750		.530	VR2	R
	SHAFT RANGE 2.680 - 2.880				
400704	2.750		.350	VR1	V
	SHAFT RANGE 2.680 - 2.880				
400705	2.750		.530	VR2	V
	SHAFT RANGE 2.680 - 2.880				
400750	3.000		.350	VR1	R
	SHAFT RANGE 2.880 - 3.070				
400751	3.000		.530	VR2	R
	SHAFT RANGE 2.880 - 3.070				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
400754	3.000		.350	VR1	V
	SHAFT RANGE 2.880 - 3.070				
400755	3.000		.530	VR2	V
	SHAFT RANGE 2.880 - 3.070				
400800	3.125		.350	VR1	R
	SHAFT RANGE 3.070 - 3.270				
400801	3.125		.530	VR2	R
	SHAFT RANGE 3.070 - 3.270				
400804	3.125		.350	VR1	V
	SHAFT RANGE 3.070 - 3.270				
400805	3.125		.530	VR2	V
	SHAFT RANGE 3.070 - 3.270				
400850	3.375		.350	VR1	R
	SHAFT RANGE 3.270 - 3.470				
400851	3.375		.530	VR2	R
	SHAFT RANGE 3.270 - 3.470				
400854	3.375		.350	VR1	V
	SHAFT RANGE 3.270 - 3.470				
400855	3.375		.530	VR2	V
	SHAFT RANGE 3.270 - 3.470				
400900	3.500		.350	VR1	R
	SHAFT RANGE 3.470 - 3.660				
400901	3.500		.530	VR2	R
	SHAFT RANGE 3.470 - 3.660				
400904	3.500		.350	VR1	V
	SHAFT RANGE 3.470 - 3.660				
400905	3.500		.530	VR2	V
	SHAFT RANGE 3.470 - 3.660				
400950	3.750		.350	VR1	R
	SHAFT RANGE 3.660 - 3.860				
400951	3.750		.530	VR2	R
	SHAFT RANGE 3.660 - 3.860				
400954	3.750		.350	VR1	V
	SHAFT RANGE 3.660 - 3.860				
400955	3.750		.530	VR2	V
	SHAFT RANGE 3.660 - 3.860				
401000	4.000		.350	VR1	R
	SHAFT RANGE 3.860 - 4.140				
401001	4.000		.530	VR2	R
	SHAFT RANGE 3.860 - 4.140				
401004	4.000		.350	VR1	V
	SHAFT RANGE 3.860 - 4.140				
401005	4.000		.530	VR2	V
	SHAFT RANGE 3.860 - 4.140				
401100	4.250		.410	VR1	R
	SHAFT RANGE 4.140 - 4.530				
401101	4.250		.610	VR2	R
	SHAFT RANGE 4.140 - 4.530				
401104	4.250		.410	VR1	V
	SHAFT RANGE 4.140 - 4.530				
401105	4.250		.610	VR2	V
	SHAFT RANGE 4.140 - 4.530				
401200	4.625		.410	VR1	R
	SHAFT RANGE 4.530 - 4.920				
401201	4.625		.610	VR2	R
	SHAFT RANGE 4.530 - 4.920				
401204	4.625		.410	VR1	V
	SHAFT RANGE 4.530 - 4.920				
401205	4.625		.610	VR2	V
	SHAFT RANGE 4.530 - 4.920				
401208	4.625		.260	VR1-SPL	#
	SHAFT RANGE 4.531 - 4.917				
401300	5.125		.410	VR1	R
	SHAFT RANGE 4.920 - 5.320				
401301	5.125		.610	VR2	R
	SHAFT RANGE 4.920 - 5.320				
401304	5.125		.410	VR1	V
	SHAFT RANGE 4.920 - 5.320				
401305	5.125		.610	VR2	V
	SHAFT RANGE 4.920 - 5.320				
401400	5.500		.410	VR1	R
	SHAFT RANGE 5.320 - 5.710				
401401	5.500		.610	VR2	R
	SHAFT RANGE 5.320 - 5.710				
401402	5.500		.310	VR3	R
	SHAFT RANGE 5.320 - 5.710				
401404	5.500		.410	VR1	V
	SHAFT RANGE 5.320 - 5.710				
401405	5.500		.610	VR2	V
	SHAFT RANGE 5.320 - 5.710				
401406	5.500		.310	VR3	V
	SHAFT RANGE 5.320 - 5.710				
401500	5.875		.410	VR1	R
	SHAFT RANGE 5.710 - 6.100				
401501	5.875		.610	VR2	R
	SHAFT RANGE 5.710 - 6.100				
401502	5.875		.310	VR3	R
	SHAFT RANGE 5.710 - 6.100				
401504	5.875		.410	VR1	V
	SHAFT RANGE 5.710 - 6.100				
401505	5.875		.610	VR2	V
	SHAFT RANGE 5.710 - 6.100				
401506	5.875		.310	VR3	V
	SHAFT RANGE 5.710 - 6.100				
401600	6.250		.470	VR1	R
	SHAFT RANGE 6.100 - 6.500				
401601	6.250		.710	VR2	R
	SHAFT RANGE 6.100 - 6.500				
401602	6.250		.310	VR3	R
	SHAFT RANGE 6.100 - 6.500				
401604	6.250		.470	VR1	V
	SHAFT RANGE 6.100 - 6.500				
401605	6.250		.710	VR2	V
	SHAFT RANGE 6.100 - 6.500				
401606	6.250		.310	VR3	V
	SHAFT RANGE 6.100 - 6.500				
401608	6.250		.275	VR1-SPL	#
	SHAFT RANGE 6.100 - 6.500				
401700	6.750		.470	VR1	R
	SHAFT RANGE 6.500 - 6.890				
401701	6.750		.710	VR2	R
	SHAFT RANGE 6.500 - 6.890				
401702	6.750		.310	VR3	R
	SHAFT RANGE 6.500 - 6.890				
401704	6.750		.470	VR1	V
	SHAFT RANGE 6.500 - 6.890				
401705	6.750		.710	VR2	V
	SHAFT RANGE 6.500 - 6.890				
401706	6.750		.310	VR3	V
	SHAFT RANGE 6.500 - 6.890				
401800	7.000		.470	VR1	R
	SHAFT RANGE 6.890 - 7.290				
401801	7.000		.710	VR2	R
	SHAFT RANGE 6.890 - 7.290				
401802	7.000		.310	VR3	R
	SHAFT RANGE 6.890 - 7.290				
401804	7.000		.470	VR1	V
	SHAFT RANGE 6.890 - 7.290				

★Contact manufacturer for availability
Bold numbers are preferred designs
☐ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
401805	7.000		.710	VR2	V
	SHAFT RANGE 6.890 - 7.290				
401806	7.000		.310	VR3	V
	SHAFT RANGE 6.890 - 7.290				
401900	7.500		.470	VR1	R
	SHAFT RANGE 7.290 - 7.680				
401901	7.500		.710	VR2	R
	SHAFT RANGE 7.290 - 7.680				
401902	7.500		.310	VR3	R
	SHAFT RANGE 7.290 - 7.680				
401904	7.500		.470	VR1	V
	SHAFT RANGE 7.290 - 7.680				
401905	7.500		.710	VR2	V
	SHAFT RANGE 7.290 - 7.680				
401906	7.500		.310	VR3	V
	SHAFT RANGE 7.290 - 7.680				
401990	8.000		.470	VR1	R
	SHAFT RANGE 7.680 - 8.270				
401991	8.000		.710	VR2	R
	SHAFT RANGE 7.680 - 8.270				
401994	8.000		.470	VR1	V
	SHAFT RANGE 7.680 - 8.270				
401995	8.000		.710	VR2	V
	SHAFT RANGE 7.680 - 8.270				
402000	7.875		.790	VR1	R
	SHAFT RANGE 7.480 - 8.270				
402002	8.000		.310	VR3	R
	SHAFT RANGE 7.680 - 8.270				
402004	7.875		.790	VR1	V
	SHAFT RANGE 7.480 - 8.270				
402006	8.000		.310	VR3	V
	SHAFT RANGE 7.680 - 8.270				
402200	8.661		.787	VR1	R
	SHAFT RANGE 8.268 - 9.252				
402202	8.750		.310	VR3	R
	SHAFT RANGE 8.270 - 9.170				
402204	8.750		.790	VR1	V
	SHAFT RANGE 8.270 - 9.250				
402206	8.750		.310	VR3	V
	SHAFT RANGE 8.270 - 9.170				
402500	9.875		.790	VR1	R
	SHAFT RANGE 9.250 - 10.430				
402502	9.750		.310	VR3	R
	SHAFT RANGE 9.170 - 10.240				
402504	9.875		.790	VR1	V
	SHAFT RANGE 9.250 - 10.430				
402506	9.750		.310	VR3	V
	SHAFT RANGE 9.170 - 10.240				
402750	11.000		.790	VR1	R
	SHAFT RANGE 10.430 - 11.420				
402752	10.750		.310	VR3	R
	SHAFT RANGE 10.240 - 11.220				
402754	11.000		.790	VR1	V
	SHAFT RANGE 10.430 - 11.420				
402756	10.750		.310	VR3	V
	SHAFT RANGE 10.240 - 11.220				
403000	11.875		.790	VR1	R
	SHAFT RANGE 11.420 - 12.200				
403002	11.750		.310	VR3	R
	SHAFT RANGE 11.220 - 12.200				
403004	11.875		.790	VR1	V
	SHAFT RANGE 11.420 - 12.200				
403006	11.750		.310	VR3	V
	SHAFT RANGE 11.220 - 12.200				
403203	12.598		.196	VR4	R
	SHAFT RANGE 12.598-12.795				
403250	12.625		.790	VR1	R
	SHAFT RANGE 12.200 - 13.190				
403252	12.625		.310	VR3	R
	SHAFT RANGE 12.200 - 13.190				
403254	12.625		.790	VR1	V
	SHAFT RANGE 12.200 - 13.190				
403256	12.625		.310	VR3	V
	SHAFT RANGE 12.200 - 13.190				
403500	13.750		.790	VR1	R
	SHAFT RANGE 13.190 - 14.370				
403502	13.750		.310	VR3	R
	SHAFT RANGE 13.190 - 14.370				
403504	13.750		.790	VR1	V
	SHAFT RANGE 13.190 - 14.370				
403506	13.750		.310	VR3	V
	SHAFT RANGE 13.190 - 14.370				
403603	14.173		.196	VR4	R
	SHAFT RANGE 14.173-14.370				
403750	14.875		.790	VR1	R
	SHAFT RANGE 14.370 - 15.350				
403752	14.875		.310	VR3	R
	SHAFT RANGE 14.370 - 15.150				
403753	14.764		.196	VR4	R
	SHAFT RANGE 14.764-14.961				
403754	14.875		.790	VR1	V
	SHAFT RANGE 14.370 - 15.350				
403756	14.875		.310	VR3	V
	SHAFT RANGE 14.370 - 15.150				
403903	15.354		.196	VR4	R
	SHAFT RANGE 15.354-15.551				
404000	16.000		.790	VR1	R
	SHAFT RANGE 15.350 - 16.930				
404002	16.000		.310	VR3	R
	SHAFT RANGE 15.150 - 16.730				
404003	15.748		.196	VR4	R
	SHAFT RANGE 15.748-15.945				
404004	16.000		.790	VR1	V
	SHAFT RANGE 15.350 - 16.930				
404006	16.000		.310	VR3	V
	SHAFT RANGE 15.150 - 16.930				
404103	16.142		.196	VR4	R
	SHAFT RANGE 16.142-16.339				
404303	16.929		.196	VR4	R
	SHAFT RANGE 16.929-17.126				
404500	18.000		.790	VR1	R
	SHAFT RANGE 16.930 - 18.900				
404502	18.000		.310	VR3	R
	SHAFT RANGE 16.730 - 18.700				
404503	17.717		1.969	VR4	R
	SHAFT RANGE 17.717-17.913				
404504	18.000		.790	VR1	V
	SHAFT RANGE 16.930 - 18.900				
404506	18.000		.310	VR3	V
	SHAFT RANGE 16.730 - 18.700				
404553	17.913		.196	VR4	R
	SHAFT RANGE 17.913-18.110				
404603	18.110		1.969	VR4	R
	SHAFT RANGE 18.110-18.307				
404703	18.504		.196	VR4	R
	SHAFT RANGE 18.504-18.701				
404803	18.898		.196	VR4	R
	SHAFT RANGE 18.898-19.094				

★Contact manufacturer for availability
Bold numbers are preferred designs

☐ Metric numbers

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
404853	19.094		.196	VR4	R
	SHAFT RANGE 19.094-19.291				
404903	19.291		.196	VR4	R
	SHAFT RANGE 19.291-19.488				
405000	19.875		.790	VR1	R
	SHAFT RANGE 18.900 - 20.870				
405002	19.875		.310	VR3	R
	SHAFT RANGE 18.900 - 20.870				
405003	19.685		.196	VR4	R
	SHAFT RANGE 19.685-19.882				
405004	19.875		.790	VR1	V
	SHAFT RANGE 18.900 - 20.870				
405006	19.875		.310	VR3	V
	SHAFT RANGE 18.700 - 20.080				
405103	20.079		.196	VR4	R
	SHAFT RANGE 20.079-20.276				
405203	20.472		.196	VR4	R
	SHAFT RANGE 20.472-20.669				
405252	20.700		.310	VR3	R
	SHAFT RANGE 20.080 - 21.260				
405303	20.866		.196	VR4	R
	SHAFT RANGE 20.866-21.063				
405500	21.875		.790	VR1	R
	SHAFT RANGE 20.870 - 22.830				
405502	21.875		.310	VR3	R
	SHAFT RANGE 20.870 - 22.830				
405503	21.654		.196	VR4	R
	SHAFT RANGE 21.654-21.850				
405504	21.875		.790	VR1	V
	SHAFT RANGE 20.870 - 22.830				
405603	22.047		.196	VR4	R
	SHAFT RANGE 22.047-22.244				
405703	22.441		.196	VR4	R
	SHAFT RANGE 22.441-22.638				
405753	22.638		.196	VR4	R
	SHAFT RANGE 22.638-22.835				
405803	22.835		.196	VR4	R
	SHAFT RANGE 22.835-23.031				
405903	23.228		.196	VR4	R
	SHAFT RANGE 23.228-23.622				
406000	23.750		.790	VR1	R
	SHAFT RANGE 22.830 - 24.800				
406002	23.750		.310	VR3	R
	SHAFT RANGE 22.830 - 24.800				
406003	23.622		.196	VR4	R
	SHAFT RANGE 23.622-24.016				
406004	23.750		.790	VR1	V
	SHAFT RANGE 22.830 - 24.800				
406103	24.016		.196	VR4	R
	SHAFT RANGE 24.016-24.409				
406203	24.409		.196	VR4	R
	SHAFT RANGE 24.409-24.803				
406303	24.803		.196	VR4	R
	SHAFT RANGE 24.803-25.197				
406403	25.197		.196	VR4	R
	SHAFT RANGE 25.197-25.591				
406500	25.500		.790	VR1	R
	SHAFT RANGE 24.800 - 26.180				
406503	25.591		.196	VR4	R
	SHAFT RANGE 25.591-25.984				
406803	26.772		.196	VR4	R
	SHAFT RANGE 26.772-27.165				
406903	27.165		.196	VR4	R
	SHAFT RANGE 27.165-27.559				
407000	27.000		.790	VR1	R
	SHAFT RANGE 26.180 - 27.760				
407003	27.559		.196	VR4	R
	SHAFT RANGE 27.559-27.953				
407250	28.500		.790	VR1	R
	SHAFT RANGE 27.760 - 29.330				
407254	28.540		.790	VR1	V
	SHAFT RANGE 27.760 - 29.330				
407303	28.740		.196	VR4	R
	SHAFT RANGE 28.740-29.134				
407403	29.134		.196	VR4	R
	SHAFT RANGE 29.134-29.528				
407500	30.125		.790	VR1	R
	SHAFT RANGE 29.330 - 30.910				
407502	29.823		.315	VR3	R
	SHAFT RANGE 29.130 -30.510				
407503	29.528		.196	VR4	R
	SHAFT RANGE 29.528-29.843				
407603	29.921		.196	VR4	R
	SHAFT RANGE 29.843-30.157				
407703	30.315		.196	VR4	R
	SHAFT RANGE 30.157-30.472				
407803	30.709		.196	VR4	R
	SHAFT RANGE 30.472-30.827				
408000	31.750		.790	VR1	R
	SHAFT RANGE 30.910 - 32.680				
408003	31.496		.196	VR4	R
	SHAFT RANGE 31.181-31.535				
408500	33.500		.790	VR1	R
	SHAFT RANGE 32.680 - 34.450				
408503	33.465		.196	VR4	R
	SHAFT RANGE 33.110-33.504				
408903	35.039		.196	VR4	R
	SHAFT RANGE 34.724-35.118				
409000	35.313		.790	VR1	R
	SHAFT RANGE 34.450 - 36.220				
409003	35.433		.196	VR4	R
	SHAFT RANGE 35.315-36.102				
409203	36.220		.196	VR4	R
	SHAFT RANGE 35.906-36.299				
409500	37.125		.790	VR1	R
	SHAFT RANGE 36.220 - 37.990				
409503	37.402		.196	VR4	R
	SHAFT RANGE 37.165-37.598				
409703	38.189		.196	VR4	R
	SHAFT RANGE 38.031-38.465				
409808	38.583		.196	VR4	R
	SHAFT RANGE 38.465-38.898				
410000	39.500		.790	VR1	R
	SHAFT RANGE 37.990 - 39.960				
410003	39.370		.196	VR4	R
	SHAFT RANGE 39.331-39.764				
410500	41.000		.790	VR1	R
	SHAFT RANGE 39.960 - 41.930				
410503	41.000		2.000	VR4	R
	SHAFT RANGE 40.550 - 41.350				
410603	41.732		.196	VR4	R
	SHAFT RANGE 41.142-41.929				
411000	43.000		.790	VR1	R
	SHAFT RANGE 41.930 - 43.900				
411003	43.307		.196	VR4	R
	SHAFT RANGE 42.717-43.504				
411004	43.307		.790	VR1	V
	SHAFT RANGE 41.929-43.897				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
411500	44.875		.790	VR1	R
	SHAFT RANGE 43.900 - 45.870				
411603	45.669		.196	VR4	R
	SHAFT RANGE 45.079-45.866				
412000	47.244		.787	VR1	R
	SHAFT RANGE 45.870 - 47.840				
412003	47.244		.196	VR4	R
	SHAFT RANGE 46.654-47.441				
412500	49.000		.790	VR1	R
	SHAFT RANGE 47.840 - 50.000				
412503	49.000		2.000	VR4	R
	SHAFT RANGE 48.520 - 49.320				
413000	51.000		.790	VR1	R
	SHAFT RANGE 50.000 - 51.970				
413003	51.181		.196	VR4	R
	SHAFT RANGE 50.984-51.772				
413500	53.000		.790	VR1	R
	SHAFT RANGE 51.970 - 53.940				
413503	53.150		.196	VR4	R
	SHAFT RANGE 52.756-53.740				
414000	55.000		.790	VR1	R
	SHAFT RANGE 53.940 - 55.910				
414003	55.118		.196	VR4	R
	SHAFT RANGE 54.724-55.709				
414500	56.875		.790	VR1	R
	SHAFT RANGE 55.910 - 57.870				
414503	57.087		.196	VR4	R
	SHAFT RANGE 56.693-57.677				
415000	57.875		.790	VR1	R
	SHAFT RANGE 57.870 - 59.840				
415003	59.055		.196	VR4	R
	SHAFT RANGE 58.661-59.646				
415500	60.875		.790	VR1	R
	SHAFT RANGE 59.840 - 61.810				
415503	61.024		.196	VR4	R
	SHAFT RANGE 60.630-61.811				
416000	62.750		.790	VR1	R
	SHAFT RANGE 61.810 - 63.780				
416003	62.992		.196	VR4	R
	SHAFT RANGE 62.992-64.567				
416500	64.750		.790	VR1	R
	SHAFT RANGE 63.780 - 65.750				
416503	64.961		.196	VR4	R
	SHAFT RANGE 64.567-66.142				
417000	66.750		.790	VR1	R
	SHAFT RANGE 65.750 - 67.720				
417003	66.929		.196	VR4	R
	SHAFT RANGE 66.142-67.717				
417500	68.750		.790	VR1	R
	SHAFT RANGE 67.720 - 69.690				
417503	68.898		.196	VR4	R
	SHAFT RANGE 67.717-69.488				
418000	70.625		.790	VR1	R
	SHAFT RANGE 69.690 - 71.650				
418003	70.866		.196	VR4	R
	SHAFT RANGE 69.488-71.260				
418500	72.625		.790	VR1	R
	SHAFT RANGE 71.650 - 73.620				
418503	72.835		.196	VR4	R
	SHAFT RANGE 71.260-73.031				
419000	74.625		.790	VR1	R
	SHAFT RANGE 73.620 - 75.590				
419003	74.803		.196	VR4	R
	SHAFT RANGE 73.031-75.000				
419500	76.500		.790	VR1	R
	SHAFT RANGE 75.590 - 77.560				
419503	76.772		.196	VR4	R
	SHAFT RANGE 75.000-76.969				
419990	78.500		.790	VR1	R
	SHAFT RANGE 77.560 - 79.530				
419993	78.740		.196	VR4	R
	SHAFT RANGE 76.969-79.134				
420503	80.709		.196	VR4	R
	SHAFT RANGE 79.134-81.496				
450024	5.125			AXGSKT1	
	8-.516 DIA BOLT HOLES				
450155	7.000			AXGSKT1	
	8-.688 DIA BOLT HOLES				
450158	7.250			AXGSKT1	
	10-.656 DIA BOLT HOLES				
450166	3.000			AXGSKT6	
	4-.328 DIA BOLT HOLES				
450176	2.700			AXGSKT1	
	.406 DIA BOLT HOLE				
450189	5.250			AXGSKT1	
	6-.469 DIA BOLT HOLES				
450194	4.000			AXGSKT1	
	6-.469 DIA BOLT HOLES				
450431	5.047			AXGSKT1	
	8-.531 DIA BOLT HOLES				
450447	5.688		.035	AXGSKT1	
	8-.688 DIA BOLT HOLES				
451032	.938	1.188	.063	BUW	T
451033	9.313	10.000	.063	BUW	#
451037	2.000	2.375	.063	BUW	#
451046	1.625	2.000	.063	BUW	#
451047	1.000	1.313	.063	BUW	#
451056	.375	.625	.063	BUW	#
★451058	2.375	2.750	.063	BUW	#
451063	1.188	1.500	.063	BUW	T
451065	3.500	4.000	.063	BUW	#
451066	6.375	7.000	.063	BUW	#
451068	3.750	4.250	.063	BUW	#
451069	2.125	2.500	.063	BUW	#
451078	2.250	2.625	.063	BUW	#
451079	1.438	1.750	.063	BUW	#
451080	1.250	1.563	.063	BUW	#
451081	.625	.875	.063	BUW	#
451094	1.375	1.688	.063	BUW	#
451096	7.375	8.000	.063	BUW	#
451100	2.813	3.250	.063	BUW	#
451225	.500	.750	.063	BUW	#
★451232	.438	.688	.063	BUW	#
★451240	.563	.813	.063	BUW	#
451242	.875	1.125	.063	BUW	#
451245	.750	1.000	.063	BUW	#
451246	.813	1.063	.063	BUW	#
451248	2.500	2.938	.063	BUW	#
451249	1.875	2.250	.063	BUW	#
451253	2.500	2.875	.063	BUW	#
★451258	1.313	1.625	.063	BUW	#
451264	1.750	2.125	.063	BUW	#
451265	3.000	3.438	.063	BUW	#
451266	4.000	4.500	.063	BUW	#
451268	2.563	3.000	.063	BUW	#
451273	3.375	3.875	.063	BUW	#
451275	3.250	3.625	.063	BUW	#
451276	4.250	4.750	.063	BUW	#
451284	.688	.938	.063	BUW	#

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
451286	1.125	1.438	.063	BUW	#
451290	2.750	3.188	.063	BUW	#
451291	3.063	3.500	.063	BUW	#
451293	5.125	5.750	.063	BUW	#
451300	13.000	14.000	.063	BUW	#
451352	4.500	5.000	.063	BUW	#
★451439	5.375	6.000	.063	BUW	#
451486	.125	.313	.063	BUW	#
451487	1.500	1.875	.063	BUW	#
451488	2.688	3.125	.063	BUW	#
451489	2.938	3.375	.063	BUW	#
451490	3.313	3.750	.063	BUW	#
451491	4.688	5.250	.063	BUW	#
★451493	4.938	5.500	.063	BUW	#
451495	5.500	6.125	.063	BUW	#
480050	.500	.750		KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480074	.750	.999		KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480097	1.000	1.250	.313	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480098	1.000	1.499	.313	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480099	1.000	1.499	.313	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480125	1.250	2.000	.313	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480148	1.500	2.372	.563	†KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480149	1.550	2.254	.563	†KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480150	1.500	2.377	.563	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480151	1.500	2.502	.563	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480152	1.500	2.374	.563	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480168	1.688	2.502	.835	†KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480173	1.750	2.374	.563	†KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480176	1.750	2.718	.563	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480177	1.766	2.412	.563	†KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480184	1.868	2.518	.889	†KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480185	1.875	2.561	.563	†KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480186	1.875	2.561	.563	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480187	1.875	2.760	.563	†KIT	S
	SPEEDI-SLEEVE & SEAL KIT				
480198	2.000	2.745	.563	KIT	S
	SPEEDI-SLEEVE & SEAL KIT				
480219	2.188	3.188	.781	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480233	2.328	3.000	.750	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480249	2.500	3.500	.781	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480250	2.500	3.251	.781	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480260	2.625	3.623	.781	†KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480261	2.625	4.438	.781	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480262	2.625	4.563	.781	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480273	2.750	3.543	.781	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480274	2.750	3.751	.781	†KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480275	2.750	3.876	.781	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480278	2.750	4.249	.781	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480293	2.938	3.938	.781	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480294	2.938	4.003	.781	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480299	3.000	3.751	.813	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
480300	3.000	4.003	.813	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480303	3.000	4.249	.813	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480325	3.250	4.249	.813	†KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480350	3.500	4.501	.813	KIT	P
	SPEEDI-SLEEVE & SEAL KIT				
480450	4.500	5.501	.813	KIT	R
	SPEEDI-SLEEVE & SEAL KIT				
504260	.500	1.000	.281	†SC	R
504261	.625	1.124	.281	SC	R
504262	.750	1.250	.281	SC	R
504263	.875	1.375	.281	SC	R
504264	1.000	1.500	.281	SC	R
504265	1.125	1.628	.281	SC	R
504266	1.250	1.752	.281	SC	R
504267	1.375	1.874	.281	SC	R
504268	1.500	2.000	.281	SC	R
504269	1.625	2.125	.281	SC	R
504270	1.750	2.250	.281	SC	R
504271	1.875	2.375	.281	SC	R
504272	2.000	2.502	.281	SC	R
504273	2.000	2.623	.281	SC	R
504275	2.250	2.750	.281	SC	R
504277	2.500	3.000	.281	SC	R
504279	2.750	3.250	.281	SC	R
504281	3.000	3.500	.281	SC	R
504283	3.250	3.875	.328	SC	R
504285	3.500	4.125	.328	SC	R
504287	3.750	4.375	.328	SC	R
504289	4.000	4.625	.328	SC	R
504291	4.250	4.875	.328	SC	R
504293	4.500	5.125	.328	SC	R
504297	5.500	6.127	.359	SC	R
505774	2.500	3.125	.281	SC	R
509543	1.688	2.183	.313	SC	R
510304	10.750	12.938	.719	HS9	R
510871	16.000	17.500	.734	HS9	R
510966	9.000	10.500	.609	HS9	R
511156	15.000	16.500	.734	HS9	R
511193	6.500	7.500	.350	HD1	D
	QUILL WIPER				
511195	8.000	9.000	.350	HD1	D
	QUILL WIPER				
511196	8.000	9.500	.350	HD1	D
	QUILL WIPER				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
511197	9.500	10.500	.350	HD1	D
	QUILL WIPER				
511198	10.000	11.000	.350	HD1	D
	QUILL WIPER				
511199	10.000	12.000	.350	HD1	D
	QUILL WIPER				
511200	12.000	13.000	.350	HD1	D
	QUILL WIPER				
511201	15.000	16.000	.350	HD1	D
	QUILL WIPER				
511202	16.000	17.000	.350	HD1	D
	QUILL WIPER				
511203	16.500	17.500	.350	HD1	D
	QUILL WIPER				
511204	22.000	23.000	.350	G1	L
	QUILL WIPER				
511220	7.000	8.500	.350	HD1	D
	QUILL WIPER				
511460	11.000	12.625	.250	HD1	D
	QUILL WIPER				
511501	8.750	9.750	.350	HD1	D
	QUILL WIPER				
511701	14.000	15.734	.531	HS9	R
511705	12.500	14.000	.500	HS9	R
511766	11.500	13.500	1.000	HS7	R
511822	24.000	25.580	.578	HS9	R
511843	12.500	13.922	.516	HS9	R
511853	3.938	4.906	.484	HS9	R
511855	42.000	44.188	.953	HS9	R
511856	76.500	78.688	.953	HS9	R
512289	36.000	38.109	.953	HS9	R
513034	12.500	13.500	.350	HD1	D
	QUILL WIPER				
513112	46.000	47.984	.950	HS9	R
513184	31.000	33.188	.953	HS9	R
513509	13.000	14.606	.703	HS9	R
513529	8.625	10.125	.609	HS9	R
513680	16.500	18.000	.734	HS9	R
514423	14.000	15.000	.350	HD1	D
	QUILL WIPER				
514635	13.000	14.734	.703	HS9	R
514649	15.250	16.750	.734	HS9	R
515028	9.125	10.750	.250	HD1	D
	QUILL WIPER				
515259	25.375	27.391	1.000	HS9	R
515883	14.750	16.108	.703	HS9	R
516226	17.500	18.500	.350	HD1	D
	QUILL WIPER				
518039	16.750	18.484	.703	HS9	R
518386	8.750	10.250	.609	HS9	R
520868	9.250	10.750	.609	HS9	R
521726	5.438	6.688	.625	HS9	R
522281	2.362	2.948	.281	SC	R
	OD IS 75MM / BORE IS 74.88MM				
522342	31.000	32.500	.750	HDS1	D
522353	3.543	4.331	.328	SC	R
522374	1.969	2.561	.281	SC	R
522676	44.875	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
522677	47.625	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
522679	17.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
522828	49.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
□522856	2540.00	27.00	38.10	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523063	34.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523133	42.500	.688	1.125	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
523154	36.875	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523171	1.575	2.047	.281	SC	R
523184	23.750	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523547	17.500	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523584	39.875	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523586	7.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523587	13.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523826	16.750	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
523886	8.375	9.750	.750	HDS1	R
524204	9.000	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
□524205	254.00	17.48	28.57	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524206	11.000	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524208	12.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524209	13.000	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524210	21.813	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524211	21.938	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524212	22.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524213	24.750	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524214	25.125	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524215	26.938	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524216	27.750	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524217	29.750	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524218	29.750	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524219	33.688	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
□524220	889.00	20.65	31.75	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524221	35.438	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524222	35.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524223	36.000	.750	1.188	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524224	36.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524225	37.875	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				

★Contact manufacturer for availability
Bold numbers are preferred designs

□ Metric numbers

† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
524226	38.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524227	41.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524228	41.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524229	44.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524230	47.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524231	48.250	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524232	51.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524294	32.250	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524347	22.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524360	17.000	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524362	21.500	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524363	22.000	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524364	23.500	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524365	23.750	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524366	28.000	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524367	32.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524368	37.250	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524369	43.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524370	44.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524371	48.865	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524372	51.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524373	71.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524375	8.875	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524380	12.000	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524381	13.125	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524382	15.313	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524383	15.313	.750	.938	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524386	16.313	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524388	17.313	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524389	17.688	.750	.938	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524434	10.188	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
524587	20.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524591	26.000	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524592	27.250	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524599	21.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524657	22.750	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524768	37.125	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524815	16.750	.875	1.313	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524853	29.375	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524909	43.375	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524928	11.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524940	29.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
524973	29.750	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525029	13.563	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
525030	20.313	.750	.938	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
525031	23.438	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525032	28.813	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
525033	30.063	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525034	32.188	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
□525035	1016.00	25.40	36.53	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525036	41.125	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525091	47.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525092	75.750	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525212	31.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525320	37.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525327	1.181	1.654	.281	SC	R
525426	40.250	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525448	9.625	11.000	.750	HDS1	R
525582	12.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525627	23.375	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525633	40.875	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525637	23.750	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
525669	11.500	13.500	1.000	HS6	R
525708	18.500	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
525737	17.500	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
525953	50.625	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
526021	47.500	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526192	18.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526244	31.750	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
526245	37.000	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
526246	37.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526277	24.250	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
526302	9.500	11.500	.625	HDS1	R
526339	22.000	24.000	1.250	HDS1	D
526582	37.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526618	49.250	51.125	.813	HS7	R
526650	16.750	19.250	1.000	HDS1	R
	W/LIGHT SPRING				
526651	16.500	19.000	1.000	HDS1	R
	W/LIGHT SPRING				
526715	31.750	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526741	21.500	3.313	3.750	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
526806	39.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526807	55.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526808	63.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526809	70.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
526867	33.063	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
527099	10.875	12.875	.578	HS6	R
527120	61.250	63.438	.953	HS9	R
527121	63.250	65.434	.953	HS9	R
527211	47.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
527232	28.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
527301	6.500	7.500	.625	HS7	R
527312	10.750	12.750	.750	HDS1	V
527345	.551	1.063	.281	SC	R
527474	41.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
527664	2.205	2.716	.281	SC	R
□527806	254.00	17.48	28.57	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
527819	9.000	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
527820	8.250	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
□527903	1016.00	27.00	38.10	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
▲527935	.375	.625	.125	BB	R
▲527937	.625	1.125	.125	BB	R
▲527938	.750	1.250	.125	BB	R
▲527939	1.000	1.563	.188	BB	R
528002	44.000	1.313	1.750	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528035	8.000	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
528036	11.968	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
528070	17.688	3.313	3.750	CT4	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
528210	31.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528232	8.813	9.375	.250	HD1	D
	QUILL WIPER				
528267	23.750	1.375	1.813	CT4	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
528268	27.750	1.938	2.375	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528269	29.000	1.313	1.750	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528270	29.375	1.125	1.563	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528271	41.969	2.063	2.500	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528272	41.875	1.188	1.625	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528273	44.000	1.313	1.750	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528307	14.000	16.250	1.000	HDSA2	VD
528308	18.000	20.250	1.000	HDSA2	VD
528377	7.250	8.250	.500	HS7	R
528415	44.000	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528416	36.000	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528525	57.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528526	53.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528532	40.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528535	17.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528536	20.875	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
528623	25.750	26.875	.500	HS8	R
	2 PKGS REQ'D - 1 CUT EACH				
□528631	229.01	18.11	29.21	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528651	23.750	1.375	1.813	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
528720	9.000	10.500	.625	HS7	R
528745	8.000	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
528759	.375	.625	.125	BB	R
	W/STAINLESS STEEL CASE				
528762	.750	1.250	.125	BB	R
	W/STAINLESS STEEL CASE				
□528780	254.00	20.62	25.40	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
528926	27.000	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
528927	52.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
528975	67.750	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
529086	46.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
□529129	1270.00	23.83	34.92	CT1	R
	BORE DIA. IS SHOULDER WIDTH				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
529130	51.250	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
529276	24.250	1.438	1.875	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
529379	39.875	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
529452	39.500	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
529489	6.625	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
529490	8.625	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
529517	77.500	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
529601	7.750	8.750	.500	HS8	R
529752	9.938	12.000	1.000	HDS2	R
529760	16.000	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
529823	26.875	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
529858	15.500	17.500	1.031	HDSA2	VD
530096	8.875	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
530396	40.063	1.718	2.156	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
530414	33.000	34.250	.625	HS5	D
530441	48.000	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
530448	41.375	.875	1.313	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
530466	36.000	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
530468	20.500	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
530484	1.000	1.781	.250	HM21	R
530513	11.688	13.500	.866	HS8	R
	1 PKG/2 CUTS				
530589	23.750	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
530606	47.500	.750	1.188	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
530661	51.500	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
530733	14.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
531069	35.125	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
531194	7.874	9.055	.625	HDS2	R
531331	9.500	11.000	.625	HS8	R
531456	73.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
531572	60.250	62.313	.750	HS8	R
531635	8.938	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
531679	9.500	11.500	1.250	HDSD1	VV
531719	28.188	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
532293	10.500	11.500	.350	HD1	D
	QUILL WIPER				
532866	1.063	1.512	.256	†CRW1	P
533803	1.618	2.254	.235	CRW1	R
534948	.625	1.850	.276	CRWA1	V
534949	.945	2.441	.315	CRWA1	V
534950	1.312	2.062	.315	CRWA1	V
534951	1.378	1.850	.276	CRWA1	V
534952	1.375	2.047	.276	†CRWA1	V
534953	.875	1.624	.256	†CRWA1	V
534954	4.250	5.251	.374	†CRWA1	V
534955	1.250	2.125	.256	†CRWA1	V
534956	.748	2.047	.276	†CRWA1	V
534957	1.875	2.441	.315	CRWA1	V
534958	1.563	2.047	.276	†CRWA1	V
535107	1.189	1.654	.236	HM3	H
536585	1.312	1.813	.280	HMS-SPL	R
536587	1.245	1.750	.312	HMS-SPL	R
536588	1.245	1.750	.390	HMS-SPL	R
536589	.788	1.262	.250	CRWA6	R
536599	.815	1.623	.248	HMS-SPL	R
538266	1.000	2.356	.270	X15	R
★**538338**	1.562	2.460	.374	CRWA1	V
538565	1.399	1.964	.235	SPL	R
539171	3.625	4.235	.195	SLINGER	R
541651	2.375	3.251	.433	†CRWHA1	R
541974	4.375	6.063	.500	CRWH1	R
542726	1.875	2.875	.315	CRWH1	R
544167	1.000	1.499	.374	†CRWA5	P
544257	1.000	1.686	.256	†CRW1	V
546751	2.750	3.500	.250	†HM14	V
546770	3.500	4.125	.250	†HM14	V
546953	1.500	2.000	.313	CRW1	V
546966	.500	1.250	.250	†CRW1	V
550074	1.000	1.442	.250	HMS1	P
550085	2.063	2.875	.375	†CRSA1	R
550095	1.375	1.947	.563	F2	RF
550154	1.750	2.441	.313	†CRWA1	R
550185	1.875	2.830	.391	HMS4	R
550189	.859	1.574	.630	HMSA127	R
□**550199**	40.00	62.00	11.50	HMS4	R
▲550217	1.496	2.051	.335	HMSA33	R
	W/2.275 FLANGE				
550224	1.281	2.047	.625	HMSA92	R
	P.F. WIDTH .451				
□550225	48.00	65.00	7.00	HMA2	R
□★550227	36.00	52.00	9.50	HMA10	R
▲□550228	43.00	55.00	8.00	HMA3	R
▲□550230	40.00	62.00	10.00	HMA10	R
□**550231**	35.00	55.00	11.00	HMSA7	R
▲□550232	41.00	56.00	7.00	HMS4	R
550234	1.535	2.913	.433	†HMSA2	R
★550235	1.535	2.559	.472	HMSA35	R
	W/AXIAL DIRT LIP				
□550237	42.00	55.00	7.00	HMSA3	R
□550241	55.00	82.00	10.00	†HM3	R
550242	1.890	2.441	.354	HMA31	R
	P.F. WIDTH .354				
▲□550244	43.00	65.00	12.00	†HMSA2	R
▲550247	1.575	2.049	.354	HMSA32	R
	W/2.204 FLANGE				
★**550250**	1.496	2.165	.315	†CRWA1	R
★**550253**	1.654	2.480	.276	HMS4	R
★**550259**	1.575	2.205	.276	HMS4	R
▲550270	1.496	2.047	.335	HMSA33	R
	W/2.266 FLANGE				
□**550280**	48.00	63.00	11.00	HMSA7	R
□**550284**	22.00	40.00	12.00	HMSA7	R
□**550294**	45.00	68.00	8.00	†CRWA1	R
555364	1.378	1.851	.276	HMSA7	R
562456	5.512	6.693	.591	HMSA7	V
590015	9.620	10.875	.625	HDS1	R
590039	9.250	11.250	1.375	HDSD1	DD

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
590062	9.000	10.375	.625	HDS1	R
590070	9.500	11.125	.625	HDS1	R
590093	9.250	10.750	.750	HDS1	R
590133	9.750	11.000	.750	HDS1	R
590166	9.500	11.000	.750	HS7	R
590174	9.125	11.125	.688	HDS1	R
590237	8.250	10.250	.813	HDS1	R
590244	8.500	10.500	1.000	HDS1	R
	W/4 EA .188 LUGS				
590245	8.500	10.500	1.250	HDSA1	RD
590252	8.250	10.250	.688	HDS1	R
590270	9.125	10.625	.688	HDS1	R
590284	9.438	11.500	.875	HDS1	R
590312	8.125	10.125	.750	HDS1	R
590326	8.000	10.000	.750	HS7	R
590351	9.938	12.000	1.000	HDS1	R
590357	8.250	10.250	1.250	HDSB1	RD
590358	8.250	10.250	1.000	HDS1	R
590363	9.875	11.375	.750	HDS1	R
590375	9.500	11.500	1.250	HDSA1	RD
590376	8.063	10.062	1.000	HDS1	R
590408	8.750	10.000	.625	HDS1	R
590419	9.000	10.000	.500	HS8	R
590422	9.750	12.000	.875	HDS1	R
590442	9.125	10.625	.750	HDS1	R
590444	9.938	11.938	.875	HDS1	R
590448	8.750	10.500	.750	HDS1	R
590463	8.000	10.000	.750	HDS1	R
590465	8.438	10.438	.875	HDS1	R
590472	9.250	11.375	.875	HDS1	R
590485	9.375	11.000	.750	HDS1	R
590492	9.000	10.000	.625	HS7	R
590503	8.500	10.000	.625	HDS1	R
590546	8.750	10.250	.750	HDS1	R
590567	9.125	11.000	.750	HDS1	R
590568	8.750	11.000	.875	HDS1	R
590578	8.500	10.500	.750	HS7	R
590609	9.125	11.125	1.000	HDS1	R
590622	9.000	10.375	.750	HDS1	R
□**590632**	230.00	280.00	16.00	HDS2	R
	W/4 EA 3.20MM LUGS				
590653	9.500	11.000	.625	HDS1	R
590655	9.750	11.250	.625	HDS1	R
590665	9.719	11.625	.700	HDS1	R
590688	9.375	12.750	1.250	HDSB1	RD
590701	9.250	11.250	.688	HDS1	R
590720	8.250	9.750	.625	HDS1	R
590723	8.750	10.000	.625	HS7	R
590724	9.000	10.000	.500	HS7	R
590725	8.000	10.000	.688	HDS1	R
590726	8.000	10.000	.750	HDS2	R
	W/3 EA .125 LUGS				
590727	8.000	10.000	1.250	HDSC1	RD
590729	8.250	10.000	.750	HDS1	R
590730	8.500	10.000	.688	HDS1	R
590731	8.500	10.000	1.000	HDSA1	RD
590732	8.625	10.000	.750	HDS1	R
590733	8.000	10.002	1.000	HDSB1	RD
590735	8.625	10.125	.688	HDS1	R
590738	9.000	10.125	.750	HDS1	R
590739	8.125	10.250	.875	HDS1	R
590741	8.250	10.250	.875	HDS1	R
590746	8.375	10.375	1.000	HDS1	R
590747	9.188	10.375	.750	HDS2	D
590749	9.500	10.500	.500	HS7	R
590750	8.250	10.500	.875	HDS1	R
590751	8.500	10.500	.688	HDS1	R
590754	8.500	10.500	1.000	HDS1	R
590755	8.500	10.500	1.125	HDSA1	RD
590756	8.500	10.500	1.250	HDS1	R
590757	8.500	10.500	1.250	HDSD1	RR
590758	8.625	10.500	.750	HDS1	R
590761	9.000	10.500	.688	HDS1	R
590762	9.250	10.500	.625	HDS1	R
590763	9.250	10.500	.750	HDS1	R
590764	9.375	10.625	.625	HS7	R
590765	8.375	10.625	.875	HDS1	R
590766	8.625	10.625	.688	HDS1	R
□590767	240.00	270.00	16.00	HDS1	R
590769	8.750	10.750	.875	HDS1	R
590770	8.750	10.750	1.000	HDS1	R
590773	8.750	10.750	1.750	HDSE1	RR
590774	9.000	10.750	.750	HDS1	R
590775	9.250	10.750	.688	HDS1	R
590776	9.500	10.750	.625	HDS1	R
590778	8.661	10.819	.950	HDS1	R
590779	9.375	10.875	.750	HS7	R
590780	8.875	10.875	.750	HDS1	R
590781	8.875	10.875	1.000	HDS1	R
590782	9.563	10.875	.625	HDS1	R
590783	9.625	10.875	.750	HDS1	R
590784	9.625	10.875	.875	HDS1	R
590785	9.750	11.000	.625	HS7	R
590787	9.000	11.000	.750	HDS2	R
590788	9.000	11.000	.875	HDS2	D
590791	9.250	11.000	1.375	HDSD1	RR
590792	9.500	11.000	.625	HDS1	R
	W/4 EA .125 LUGS				
590795	9.750	11.125	.750	HDS1	R
590797	9.250	11.250	.750	HDS1	R
590798	9.250	11.250	1.000	HDS1	R
590800	9.750	11.250	.750	HDS1	R
590806	9.375	11.375	.750	HDS1	R
590810	9.438	11.438	.875	HDS1	R
590811	9.000	11.500	1.000	HDS1	R
590812	9.375	11.500	.875	HDS1	R
590813	9.500	11.500	.750	HDS1	R
590814	9.500	11.500	.813	HDS1	R
590816	9.500	11.500	.938	HDS1	R
590817	9.500	11.500	.938	HDS2	R
590818	9.500	11.500	.938	HDS1	R
	W/6 EA .125 LUGS				
590819	9.500	11.500	.938	HDS2	R
	W/6 EA .250 LUGS				
590820	9.500	11.500	1.000	HDS1	R
590828	8.625	11.750	1.000	HDS1	R
590832	9.750	11.750	.750	HDS1	R
590839	9.449	11.803	.984	HDS1	R
590841	9.875	11.875	.688	HDS1	R
590842	9.875	11.875	.875	HDS1	R
590848	8.500	10.500	.750	HS8	R
590850	9.875	12.000	.875	HDS1	R
590851	9.875	12.000	1.000	HDS1	R
591881	9.250	10.500	.625	HS7	R
591897	9.750	11.750	.688	HDS1	R
591905	9.875	10.875	.500	HS7	R
591921	8.250	10.250	.875	HDSB1	RD
591929	8.250	10.250	.750	HS7	R
591932	9.500	11.250	.625	HDS1	R
591939	8.625	10.750	1.000	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□591941	250.00	280.00	16.00	HDS1	D
591960	9.500	11.500	1.250	HDSC1	DD
591973	9.250	10.750	.688	HDS1	R
	W/4 EA .125 LUGS				
591977	8.000	10.000	.875	HDSA1	RD
591978	8.375	10.375	.750	HDS1	R
591981	9.620	10.625	.500	HS8	R
591984	8.875	10.875	.875	HDSA1	RD
591988	9.375	10.875	.750	HDS1	R
592013	9.125	11.375	.875	HDS1	R
592016	9.250	10.875	.750	HDS1	R
592028	9.000	11.000	1.250	HDSD1	RR
592042	9.500	11.000	.625	HS7	R
592051	9.438	10.625	.750	HDS1	R
592075	8.000	10.000	1.125	HDSA2	RD
592092	8.375	9.625	.625	HS7	R
592126	9.438	10.688	.625	HS7	R
592149	8.500	10.500	1.000	HDSB1	RD
592161	8.000	10.000	.906	HDSB1	RD
592180	8.250	9.500	.625	HS7	R
592199	9.620	10.625	.500	HS7	R
592206	8.625	10.125	.750	HDS1	R
592209	9.500	10.750	.625	HS7	R
592214	9.000	10.625	.625	HDS1	R
592217	8.625	10.125	.750	HS7	R
592272	9.750	11.500	.750	HDS1	R
592289	8.875	10.125	.625	HDS1	R
592327	8.750	10.750	1.375	HDSE1	RR
592328	8.000	10.000	1.000	HDSB1	RD
592336	8.000	10.000	1.250	HDSA1	RD
592345	9.125	11.125	.813	HDS1	R
592348	9.250	10.750	.750	HDS2	D
592358	8.625	10.625	.750	HDS2	R
592376	8.000	9.250	.625	HS8	R
592380	8.250	10.250	1.750	HDSE1	RR
592397	9.438	11.500	1.000	HDS1	R
592404	8.625	10.125	.625	HS7	R
592420	9.625	10.875	.750	HDS2	R
592428	8.750	10.625	.750	HDS1	R
592433	8.625	10.625	.750	HDS1	R
592452	9.250	11.000	1.375	HDSA1	RD
592458	8.875	10.125	.625	HS7	R
592459	8.875	10.125	.625	HS8	R
592462	9.375	11.375	.750	HDS1	D
592463	9.938	12.000	.750	HDS1	D
592464	8.875	11.250	.875	HDSA1	RD
592480	8.500	10.000	.750	HDS1	R
592483	8.750	10.750	.750	HDS1	R
592488	8.500	10.500	.875	HDSA1	RD
592492	8.750	10.750	.875	HDSA1	RD
592493	8.000	10.000	.875	HDS2	D
592501	9.750	11.125	.750	HDS2	R
592514	9.000	10.187	.625	HDS2	R
□592515	220.00	260.00	16.00	HDS1	R
592519	6.750	8.000	.625	HS8	R
592520	9.625	11.125	.625	HS7	R
592529	9.938	11.438	.750	HS7	R
592546	9.375	11.375	1.000	HS8	R
592556	8.250	10.250	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
592562	9.250	11.500	.875	HDS1	R
592572	8.500	10.500	.750	HDS1	R
592576	8.625	10.750	.875	HDS1	R
592580	9.063	11.214	1.000	HDSA1	RD
592581	9.000	10.250	.625	HS7	R
592600	9.000	10.500	.750	HS8	R
592607	9.500	10.500	.500	HS8	R
592623	9.563	10.563	.500	HS8	R
592626	8.750	10.000	.625	HDS2	R
592627	8.750	10.000	.625	HS8	R
592631	8.500	10.000	.500	HS8	R
592642	9.375	11.375	1.000	HDS1	R
592650	8.875	11.000	.875	HDS1	R
592651	9.375	11.375	.875	HS8	R
592652	8.625	10.625	1.000	HDS1	R
592653	9.125	10.375	.625	HDS1	R
592654	9.000	11.250	.875	HDS1	R
592661	8.625	10.250	.750	HDS1	R
592669	9.000	10.250	.750	HDS1	D
592683	9.055	10.621	.630	HDS1	R
592692	8.500	10.500	.625	HS8	R
592693	9.500	11.000	.625	HDS2	R
592707	8.188	10.188	1.000	HDS1	R
592713	9.375	10.625	.625	HS6	R
592714	9.000	11.054	.750	HDS1	R
592723	8.250	9.500	.625	HDS1	R
	W/4 EA .125 LUGS				
592727	9.875	11.500	.750	HDS1	R
592731	9.938	11.438	.750	HS8	R
592741	9.250	10.500	.750	HDS2	R
592763	9.875	11.375	.750	HDS2	R
592773	25.980	27.625	1.500	HDS2	R
	W/4EA .500 LUGS				
592779	9.000	10.674	.703	HS8	R
592780	8.250	9.500	.875	HDS1	R
□592787	335.00	375.00	18.00	HDS1	R
592795	8.858	11.016	.906	HDS1	R
592796	47.375	48.875	.750	HS7	R
592798	8.500	10.500	.875	HDSA1	VD
592800	8.125	10.135	.750	HDS1	R
592816	9.938	12.125	1.000	HDS1	R
592817	33.000	35.000	.813	HS7	D
592826	8.063	10.190	.875	HDS1	R
592830	8.375	10.375	.750	HS7	R
592835	8.250	9.500	.625	HDS2	R
	W/4 EA .125 LUGS				
592845	28.000	29.500	.750	HDS2	R
592847	9.875	11.875	1.000	HDSA2	RD
592858	9.250	11.250	.750	HS8	R
592865	15.313	17.313	.813	HDSA2	RD
□592869	320.00	350.00	18.00	HDS1	R
592879	45.000	47.000	.813	HDS1	R
592880	51.000	53.000	.813	HDS1	R
592914	9.000	11.062	.750	HDS1	R
592915	11.417	12.984	.630	HDS1	R
592917	9.842	11.016	.630	HDS1	R
592920	13.125	15.125	.750	HS8	R
592934	16.250	3.063	3.500	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
592939	18.500	20.500	.875	HDS2	D
592942	8.250	9.500	.625	HDS2	D
□592944	454.03	504.83	19.05	HDS1	R
	W/SS CASE				
□592964	240.00	300.00	25.00	HDS1	R
592982	8.000	11.000	1.000	HDS1	R
592988	9.750	10.750	.500	HS7	R
592991	8.875	10.375	.750	HS8	R
593020	8.500	9.750	.625	HDS1	R
593037	14.000	.938	1.375	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
593047	43.500	45.500	.875	HDS1	R
	W/6 EA .125 LUGS				
593053	9.750	11.000	.875	HDSA1	RD
593081	9.500	11.500	1.250	HDSD1	RR
593129	9.438	11.250	.625	HDS1	R
593133	9.500	11.000	.625	HDS2	R
593138	9.000	10.500	.625	HDS2	D
□593171	380.00	27.00	38.10	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
593177	9.750	11.250	.750	HS7	R
593180	44.000	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
593198	8.125	9.378	.625	HDS1	R
593212	8.375	10.500	.875	HDS1	R
593239	8.125	10.000	.625	HDS2	R
593263	9.250	11.250	1.375	HDSE2	RR
593285	36.563	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
593302	9.063	10.750	.625	HDS1	R
593312	9.250	11.250	.875	HDSA1	VD
593315	15.000	16.500	1.250	HDSD1	VV
593340	8.125	10.125	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593342	8.250	9.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593344	8.250	11.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593345	8.375	10.375	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593346	8.375	10.375	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593349	8.500	10.500	.625	HS7	R
593350	8.625	10.625	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593351	8.750	10.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593352	8.750	10.250	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593353	8.750	10.750	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593354	8.875	10.875	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593355	8.875	11.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593357	9.000	10.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593362	9.000	11.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593363	9.125	10.625	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593365	9.250	10.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593366	9.250	10.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593368	9.250	11.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593369	9.250	11.250	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593370	9.250	11.250	.750	HS7	R
593371	9.250	11.500	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593372	9.375	10.625	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593373	9.375	11.375	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593374	9.438	11.500	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593375	9.500	10.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593376	9.500	10.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593378	9.500	11.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593380	9.625	10.875	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593382	9.750	11.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593384	9.750	11.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593385	9.750	11.250	.625	HS7	R
593386	9.750	11.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593387	9.750	11.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593388	9.750	11.750	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593389	9.875	11.875	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
593392	8.500	10.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593393	8.750	10.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593394	8.875	10.125	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593395	9.000	10.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593396	9.000	10.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593397	9.375	10.625	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593398	9.500	10.500	.500	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
593428	9.750	11.000	1.000	HDSA1	DD
593434	8.250	10.385	.875	HDS1	R
□593438	210.00	245.00	16.00	HDS1	R
593446	8.000	10.000	.750	HDS2	R
593460	9.016	10.236	.625	HS8	R
593467	9.250	11.250	.625	HDS2	R
593487	8.688	10.500	.625	HDS1	R
□593489	224.00	260.00	16.00	HDS1	R
593492	9.750	11.000	.625	HDS2	R
	W/4 EA .375 LUGS				
593499	12.500	14.500	.750	HDS2	R
593511	8.250	10.000	.750	HDS2	R
593517	13.500	15.500	1.250	HDSB1	VD
□593525	1270.00	20.62	25.40	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
593526	15.313	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
□593546	230.00	285.00	23.00	HDS1	R
593564	42.563	.813	1.000	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
593604	26.911	2.438	2.875	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
593606	36.000	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
593607	9.134	10.624	.688	HDS2	D
593611	9.750	11.000	.625	HDS2	R
593624	14.500	15.906	.770	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
593625	9.250	11.250	.625	HS7	R
593629	11.750	.688	1.125	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□593637	185.00	24.99	30.00	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
593644	8.250	10.250	.750	HDS2	D
593646	9.750	11.000	.625	HDS2	D
593650	12.000	13.500	.750	HS9	R
593659	9.625	11.625	1.000	HDSC1	RD
593666	9.500	11.500	.625	HDS2	D
593667	9.500	11.500	1.250	HDSA2	DD
593729	9.000	10.250	.625	HDS2	D
W/4 EA .500 LUGS					
593740	8.500	10.000	.625	HDS2	D
593743	9.000	10.500	.625	HDS2	R
□593764	1260.00	1300.00	18.00	HDS1	R
593768	8.500	9.750	.625	HDS2	D
593779	8.875	10.125	.625	HDS2	D
593782	8.500	10.000	.625	HDS2	R
593789	20.000	21.500	.875	HDSA1	VD
593810	23.000	24.500	.875	HDSC1	DD
593855	8.540	9.750	.625	HDS2	D
593880	22.000	24.000	1.250	HDS2	D
593894	9.438	10.635	.750	HDS1	R
593907	8.625	10.000	.625	HDS1	R
593936	9.790	11.125	.625	HDS2	D
593949	32.375	.813	1.250	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
593959	22.000	25.750	1.250	HDS2	R
593960	22.000	26.000	1.750	HDS2	R
593975	8.750	10.625	.750	HDS2	R
594007	9.000	11.000	1.250	HDSD1	VV
594025	15.000	.688	1.125	CT1	R
BORE DIA. IS SHOULDER WIDTH					
594057	13.375	14.875	.625	HS8	R
594059	24.000	.813	1.000	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594080	9.688	10.875	.625	HDS1	R
594082	163.078	.813	1.250	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594083	103.000	.813	1.250	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594084	25.625	27.750	1.000	HDSA1	VL
594110	13.813	1.063	1.500	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594146	9.563	10.563	.500	HS8	D
W/HOOK & EYE SPRING CONNECTOR					
594163	59.000	1.188	1.625	CT4	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594181	19.500	.688	1.125	CT1	R
BORE DIA. IS SHOULDER WIDTH					
594186	8.345	10.750	1.250	HDS1	R
□594190	389.99	20.62	25.40	CT3	R
BORE DIA. IS SHOULDER WIDTH					
594196	14.000	16.000	.625	HS8	R
W/HOOK & EYE SPRING CONNECTOR					
594197	15.000	17.000	.625	HS8	R
W/HOOK & EYE SPRING CONNECTOR					
594200	10.500	11.500	.500	HS8	V
594201	21.000	23.000	.813	HS8	V
594202	36.563	2.523	2.960	CT4	R
BORE DIA. IS SHOULDER WIDTH					
594211	7.480	8.480	.500	HS8	D
594222	13.500	15.500	.813	HS8	R
W/HOOK & EYE SPRING CONNECTOR					
□594241	533.00	20.65	31.75	CT1	R
BORE DIA. IS SHOULDER WIDTH					
594250	15.250	.688	1.125	CT1	R
BORE DIA. IS SHOULDER WIDTH					
□594271	220.00	260.00	20.00	HDS1	R
□594272	280.00	330.00	24.00	HDS1	R
594292	9.625	11.625	1.500	HDSE1	RR
W/8 EA LUBE HOLES					
594316	76.000	78.000	.813	HS8	R
594318	8.500	10.000	.625	HS8	R
594326	14.000	15.000	.625	HS8	V
594327	12.750	14.250	.625	HS8	V
594330	12.100	14.000	1.250	HDSB1	R
594333	8.750	10.250	.875	HDSC1	RD
594334	6.625	.688	1.125	CT1	R
BORE DIA. IS SHOULDER WIDTH					
594341	7.087	8.087	.500	HS8	V
594343	8.500	.813	1.000	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594356	21.500	23.500	1.000	HDSA1	RD
594360	21.750	23.250	.625	HS8	R
594361	24.000	25.500	.750	HS8	R
594362	25.000	27.000	.875	HS8	R
594364	9.875	11.375	.750	HDS2	R
W/4 EA .500 ADJ. LUGS					
594369	10.750	.688	1.125	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594375	25.000	26.500	.750	HS8	D
594376	11.500	12.750	.625	HDS2	R
594395	41.250	.688	.875	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594396	53.000	.813	1.000	CT3	R
BORE DIA. IS SHOULDER WIDTH					
□**594397**	240.00	270.00	16.00	HDS2	R
W/6 EA 3.20MM LUGS					
□594431	600.00	18.90	30.00	CT1	R
BORE DIA. IS SHOULDER WIDTH					
594432	15.500	.688	.875	CT3	R
BORE DIA. IS SHOULDER WIDTH					
594494	42.000	1.063	1.500	CT4	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594502	9.500	10.500	.500	HS8	V
594503	8.500	9.500	.500	HS7	V
594508	7.438	8.438	.500	HS8	V
594528	9.435	10.500	.625	HS7	R
594536	6.614	7.638	.512	HS8	D
594641	9.000	10.500	.625	HS5	R
594648	7.000	1.063	1.500	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594653	15.313	.750	.938	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594654	17.688	.750	.938	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
594681	16.813	.813	1.000	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□**594732**	250.00	280.00	15.00	HS8	R
□594734	300.00	19.23	24.00	CT3	R
BORE DIA. IS SHOULDER WIDTH					
594740	15.000	16.000	.350	HD1	D
QUILL WIPER					
594744	7.000	8.250	.625	HDS1	R
594745	8.500	9.500	.500	HS8	V
594753	9.938	11.188	.625	HS8	R
594760	6.438	7.688	.625	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
594768	7.000	8.250	.625	HS6	R
	W/HOOK & EYE SPRING CONNECTOR				
□**594770**	530.00	575.00	20.00	HS5	R
□594780	240.00	23.80	28.57	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
□594784	655.00	28.91	40.00	CT4	R
	BORE DIA. IS SHOULDER WIDTH				
□594785	825.00	17.48	28.57	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
594799	32.500	.500	.688	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
□594814	300.00	19.23	24.00	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
594828	6.625	8.125	.875	HDSA2	V
594829	9.000	10.125	.625	HS8	R
594846	7.000	8.500	.750	HS6	R
	W/HOOK & EYE SPRING CONNECTOR				
□**594849**	410.00	454.00	20.00	HS5	R
594850	11.500	13.250	.750	HS5	R
594856	29.000	.688	.875	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
□**594857**	190.00	230.00	16.00	HS8	R
□594874	573.00	18.99	31.97	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
594889	10.000	12.000	.625	HS8	V
594890	6.750	8.250	.750	HS8	R
□**594897**	240.00	280.00	16.00	HDS2	D
594902	8.500	10.500	1.000	HDSA2	VD
594903	9.000	11.000	1.000	HDSA2	VD
594906	9.688	11.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
□**594916**	185.00	220.00	12.70	HS8	R
□**594917**	220.00	260.00	14.27	HS8	R
594926	106.000	107.000	.500	HS8	R
594934	8.750	10.250	.625	HDS1	R
594935	8.000	9.000	.625	HS8	V
594939	8.750	10.000	.750	HDS1	V
594941	8.500	10.000	.500	HS8	D
594954	15.250	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
594967	8.500	10.500	.625	HDS2	V
594972	7.000	8.375	.688	HS8	R
594974	9.750	11.125	.875	HDSA2	D
594975	7.000	8.375	.625	HS8	R
595004	8.938	9.938	.625	HS7	R
595012	7.250	8.250	.500	HS8	R
595014	6.750	8.000	.625	HS8	V
595016	36.750	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
595022	8.000	9.000	.500	HS8	V
595036	8.000	9.750	.750	HDS2	V
595042	8.750	10.000	.625	HS8	D
595044	20.000	22.000	.500	HS5	R
595055	5.500	6.750	.750	HS7	R
□**595058**	235.00	270.00	16.00	HDS2	R
595063	7.875	9.375	1.281	HDSE1	RR
□**595073**	170.00	200.00	16.00	HS8	V
□**595075**	220.00	250.00	15.00	HS8	R
595079	6.250	1.000	1.437	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
595093	7.000	8.000	.500	HS8	V
□**595101**	200.00	238.10	19.10	HS8	R
595106	9.875	11.875	1.000	HDS2	R
595109	7.086	.688	.876	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
□595110	410.00	12.50	23.83	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
□**595118**	978.00	1018.00	18.00	HS5	R
□**595122**	250.00	285.00	16.00	HDS2	D
595126	6.000	7.702	.734	HS8	R
595127	8.875	10.125	.875	HDSA2	DD
595130	9.375	11.375	.875	HDS1	V
□595139	200.00	230.00	15.87	HDS1	R
595145	7.875	9.375	.625	HDS2	D
	W/SPARK FREE I.D.				
595146	7.750	9.250	.625	HDS2	D
	W/SPARK FREE I.D.				
□**595165**	240.00	270.00	15.00	HS8	R
□**595167**	778.00	818.00	20.50	HS5	D
□**595168**	712.00	757.00	20.50	HS5	D
□**595169**	490.00	530.00	20.50	HS5	D
595175	14.361	15.748	.709	HS4	R
595181	11.500	12.500	.500	HS5	R
□**595185**	186.00	226.00	16.00	HS8	R
595189	9.063	10.300	.625	HDS1	R
□**595190**	240.00	279.00	22.00	HS5	R
□**595191**	350.00	400.00	25.40	HS5	R
□**595192**	520.00	570.00	24.00	HS5	R
□**595193**	280.00	325.00	24.00	HS5	R
□**595194**	400.00	450.00	25.00	HS5	R
□**595195**	230.00	269.00	22.00	HS5	R
□**595196**	215.00	270.00	23.00	HDS2	R
□**595199**	480.00	530.00	25.00	HS5	R
□595203	250.00	310.00	25.00	HDS1	R
595206	6.875	8.125	.625	HS8	R
595207	7.625	8.875	.625	HS8	R
595208	125.000	126.250	.625	HS8	R
□**595210**	2850.00	2900.00	20.62	HS8	D
□**595211**	3000.00	3050.00	20.62	HS8	D
595214	171.900	173.876	.812	HS8	R
□**595215**	1055.00	1100.00	25.00	HS5	D
595219	9.844	11.409	.875	HDSC2	R
595248	9.000	10.250	.625	HS8	V
□595249	225.00	257.00	16.00	HDS1	R
595267	7.000	8.500	.625	HDS2	R
595276	9.063	11.214	1.257	HDSD2	DD
595279	8.500	9.750	.625	HDS1	D
	W/ LT. SPRING				
□**595291**	400.00	444.00	20.00	HS5	R
□**595294**	160.00	200.00	15.88	HS8	D
	W/ LT. SPRING				
□**595298**	240.00	270.00	16.00	HDS2	V
	W/4 EA 3.20MM LUGS				
595304	8.500	9.750	.625	HS7	R
□595315	240.00	290.00	20.00	HDS1	R
□**595319**	220.00	260.00	22.00	HDS2	D
595322	16.250	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
595323	7.188	8.640	.625	HS7	R
595326	8.000	10.000	.750	HS6	R
595327	8.000	10.000	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
595328	8.188	10.000	.750	HDS2	R
595331	9.250	10.438	.875	HDSA1	VD
595348	7.250	8.750	.625	HDS2	R
□**595371**	250.00	280.00	16.00	HDS2	D
□595373	1612.00	20.65	25.40	CT3	R
	BORE DIA. IS SHOULDER WIDTH				
595376	8.250	11.500	.750	HDS2	D
595389	6.750	7.750	.625	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
595404	8.000	9.500	.625	HS5	R
□**595408**	200.00	240.00	20.00	HDS2	R
□**595409**	200.00	255.00	22.00	HDS2	R
□**595410**	210.00	265.00	23.00	HDS2	R
□**595411**	224.00	274.00	20.00	HDS2	R
□**595412**	230.00	285.00	23.00	HDS2	R
□**595413**	238.00	290.00	25.40	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
□**595414**	245.00	305.00	28.00	HDS2	R
□**595415**	250.00	285.00	16.00	HDS2	R
595431	9.500	11.500	1.000	HS8	R
595437	8.000	10.000	1.375	HDSE2	R
	W/8 EA LUBE HOLE				
595438	9.000	11.000	.750	HDS2	H
595455	20.313	.750	.938	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595457	8.500	9.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□595464	240.00	23.82	29.00	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595473	8.500	10.000	.625	HDS1	V
595474	7.750	9.250	.625	HDS1	V
595475	7.875	9.375	.625	HDS1	V
595476	9.625	10.625	.500	HS8	V
	W/HOOK & EYE SPRING CONNECTOR				
595485	9.000	10.187	.625	HDS2	V
595493	8.500	10.500	.625	HS8	H
	W/HOOK & EYE SPRING CONNECTOR				
595513	8.500	9.750	.870	HDSA2	D
595514	9.750	11.250	.875	HDSA2	D
595527	8.500	10.000	1.250	HDSD1	DD
	W/LUBE HOLES ON O.D.				
595529	9.438	11.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
595530	9.750	10.750	.500	HS6	R
	W/HOOK & EYE SPRING CONNECTOR				
595536	9.000	10.500	.750	HS8	D
595566	8.625	10.125	.609	HS5	R
595568	9.750	11.750	1.000	HDSA1	D
□595573	240.00	280.00	23.00	HDSA1	R
□**595577**	240.00	270.00	16.00	HDS2	D
595604	9.500	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595613	9.500	.688	1.125	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
595617	7.250	8.750	.625	HDS1	V
	W/4 EA .250 LUGS				
595635	23.250	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595636	33.250	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595637	18.750	.813	1.250	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595643	7.188	8.640	.625	HS5	R
□**595651**	224.00	260.00	16.00	HDS2	R
□595668	240.00	280.00	20.00	HS7	R
595670	36.563	.815	.875	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595675	8.250	9.500	.625	HDS1	R
□**595680**	325.00	368.00	20.00	HS5	R
□**595681**	310.00	354.00	20.00	HS5	R
595683	9.000	10.125	.625	HS8	R
595687	25.500	27.500	1.000	HS5	R
□595693	200.00	238.00	19.00	HS6	R
595718	9.000	10.500	.750	HDS2	R
	W/4 EA .250 LUGS				
595732	8.000	9.375	.750	HDS1	R
595752	8.900	10.625	.625	HDS1	R
595761	7.125	8.125	.500	HS5	R
595762	6.750	8.125	.750	HS8	R
□**595763**	250.00	280.00	16.00	HDS2	R
□595792	250.00	290.00	16.00	HDS1	R
595810	9.688	10.875	.625	HDS1	D
595813	7.750	8.750	.625	HS5	D
595822	7.500	8.750	.625	HS5	D
595826	6.000	7.000	.625	HSF1	R
□595831	250.00	280.00	16.00	HDS1	V
□595847	250.00	290.00	16.50	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□**595851**	220.00	260.00	22.00	HDS2	V
595873	16.000	17.000	.500	HS5	D
□595880	210.00	245.00	16.00	HDS1	V
595881	53.000	54.875	.813	HS4	R
595888	8.000	10.000	.688	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
595909	9.500	11.500	1.000	HDS1	R
	W/4 EA .375 LUGS				
595922	9.500	10.750	.625	HDS2	D
□**595930**	240.00	275.00	16.00	HDS2	D
□595932	170.00	210.00	16.00	HDS1	R
595943	18.875	.750	.938	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
595958	6.875	8.375	.750	HS7	R
□595998	230.00	265.00	16.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
□595999	220.00	255.00	16.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
□596014	240.00	275.00	16.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
□596016	230.00	270.00	16.00	HDS1	R
596043	6.438	7.688	.625	HS5	R
□596044	420.00	460.00	20.00	HDS1	V
□596045	500.00	560.00	18.00	HDS1	V
	W/6 EA 12.70MM ADJ. LUGS				
□596046	600.00	660.00	18.00	HDS1	V
	W/6 EA 12.70MM ADJ. LUGS				
596047	27.953	29.921	.787	HS8	D
□**596048**	220.00	260.00	15.00	HS8	R
□596050	3810.00	20.65	31.75	CT3	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
596054	8.661	9.661	.500	HS6	V
	W/HOOK & EYE SPRING CONNECTOR				
596055	11.811	12.811	.500	HS6	V
	W/HOOK & EYE SPRING CONNECTOR				
596061	8.875	10.375	.625	HS8	V
596062	9.840	11.020	.625	HS8	V
□**596075**	519.00	560.00	25.00	HS5	D
596076	7.025	8.500	.625	HDS2	V
596078	7.938	9.500	.625	HDS2	V
596079	7.875	9.500	.625	HDS2	V
596080	7.835	9.500	.625	HDS2	V
596098	12.625	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT				
596110	10.438	1.063	1.500	CT1	R
	BORE DIA. IS SHOULDER WIDTH				
596111	8.375	9.875	.687	HDS1	R
596128	7.188	8.640	.625	HDS2	R
□**596132**	150.00	180.00	15.88	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
596161	6.000	.687	.875	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
596174	8.653	10.039	.630	HDS1	R
★596179	17.000	18.500	.625	HDS7	R
596180	19.250	20.750	.625	HDS7	R
□596185	210.00	240.00	20.00	HDS1	V
596196	8.500	10.000	.875	HDSA1	V
596198	8.375	9.750	.750	HDS7	R
596199	9.000	10.498	.750	HDS7	R
W/4 EA .250 LUGS					
596200	9.000	10.498	.750	HDS7	R
596207	7.938	9.500	.625	HDS2	R
□**596225**	220.00	250.00	16.00	HS8	D
596227	9.000	10.750	.250	HD1	D
QUILL WIPER					
596233	8.813	10.125	.625	HDS3	D
W/4 EA .500 ADJ. LUGS					
□**596239**	250.00	290.00	15.88	HS8	R
□596289	2500.00	20.73	25.50	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□596290	3980.00	20.73	25.50	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□596296	200.00	240.00	16.00	HDS1	H
□596309	245.00	290.00	15.00	HS4	V
□**596324**	220.00	260.00	16.00	HS8	R
596327	48.000	.812	1.000	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□596335	230.00	260.00	16.00	HDS1	R
□596344	235.00	270.00	16.00	HDS7	H
□596345	235.00	270.00	15.00	HDS7	H
596346	8.071	9.843	.630	HDS1	R
596362	6.438	7.688	.625	HS8	R
596375	7.750	9.250	1.250	HDSE2	VV
□596382	290.00	350.00	25.00	HDS7	R
□596393	364.00	406.00	17.00	HDS7	D
596394	9.055	10.236	.591	HDS1	V
596400	42.000	3.313	3.750	CT4	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
596405	77.500	2.938	3.375	CT4	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
596414	10.000	12.000	.625	HS8	V
W/HOOK & EYE SPRING CONNECTOR					
596415	8.500	10.000	.625	HDS7	R
596425	7.680	9.250	.500	HS8	R
W/HOOK & EYE SPRING CONNECTOR					
596435	13.125	.687	.875	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□**596450**	170.00	200.00	15.00	HDS2	R
596455	9.750	10.750	.350	HD1	D
QUILL WIPER					
□596462	230.00	260.00	15.88	HDS1	V
596465	6.938	9.000	.625	HDS1	V
596466	9.250	10.500	.625	HDS2	V
□**596468**	210.00	240.00	20.00	HDS2	V
596487	9.188	10.938	.750	HDS1	R
□596490	310.00	350.00	18.00	HDS3	D
W/4 EA 12.70MM ADJ. LUGS					
596517	13.250	14.750	.688	†HDS2	R
□596518	215.00	248.00	15.00	HDS1	R
□**596548**	230.00	270.00	16.00	HDS2	V
596556	6.938	9.000	.625	HDS1	V
596561	9.750	11.000	.625	HDS7	R
596566	9.500	11.000	.625	HDS7	H
596567	8.000	9.500	.625	HDS7	H
596570	22.750	.938	1.375	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
596571	20.500	.813	1.000	CT3	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□**597284**	220.00	255.00	18.00	HDS2	R
□**597287**	240.00	275.00	18.00	HDS2	R
□597293	230.00	260.00	15.00	HDS7	R
597304	5.750	7.202	.750	HS6	R
597334	6.250	1.000	1.437	CT1	R
BORE DIA. IS SHOULDER WIDTH W/BUTT JOINT					
□597336	2900.00	2959.00	17.33	HS6	R
597343	9.000	10.500	.875	HDSA1	RD
700036	.258	.449	.109	BV	R
700054	.313	.500	.094	BV	R
700101	.438	.688	.125	BV	R
701084	1.000	1.313	.156	BV	D
702011	1.750	2.125	.188	BV	D
702028	2.000	2.375	.188	BV	D
703023	3.000	3.438	.219	BV	D
704009	4.000	4.500	.250	BV	R
★705012	5.125	5.750	.313	BV	R
709001	.500	.802	.203	WS	R
709002	.625	.927	.203	WS	R
709003	.688	.990	.203	WS	R
709004	.750	1.052	.203	WS	R
709005	.875	1.240	.219	WS	R
709006	1.000	1.365	.219	WS	R
709007	1.125	1.490	.219	WS	R
709008	1.250	1.615	.219	WS	R
709009	1.375	1.740	.219	WS	R
709010	1.500	1.865	.219	WS	R
709011	1.625	1.990	.219	WS	R
709012	1.750	2.115	.219	WS	R
709014	2.000	2.365	.219	WS	R
709015	2.125	2.490	.219	WS	R
709016	2.250	2.745	.281	WS	R
709018	2.500	2.995	.281	WS	R
709019	2.750	3.245	.281	WS	R
709020	3.000	3.495	.281	WS	R
709021	3.250	3.745	.281	WS	R
709022	3.500	3.995	.281	WS	R
709023	3.750	4.245	.281	WS	R
709024	4.000	4.495	.281	WS	R
709025	4.250	4.745	.281	WS	R
709026	4.500	4.995	.281	WS	R
709029	5.000	5.495	.281	WS	R
709030	5.250	5.745	.281	WS	R
709031	5.500	5.995	.281	WS	R
709034	6.000	6.495	.281	WS	R
710087	2.125	2.500	.188	BV	D
710212	.625	.875	.125	BV	R
★710695	9.313	10.000	.344	BV	D
710696	.563	.813	.125	BV	R
710989	1.250	1.563	.156	BV	R
711080	1.000	1.250	.125	BV	R
711566	11.250	12.000	.375	BV	R
711800	.125	.313	.094	BV	R
711801	.188	.375	.094	BV	R
711802	.188	.438	.125	BV	R
711803	.250	.500	.125	BV	R
711804	.313	.563	.125	BV	R
711805	.375	.625	.125	BV	R
711806	.500	.750	.125	BV	R
711807	.688	.938	.125	BV	R
711809	.813	1.063	.125	BV	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
711810	.875	1.125	.125	BV	R
711811	.938	1.188	.125	BV	R
711812	.938	1.250	.156	BV	R
711814	1.063	1.375	.156	BV	R
711816	1.125	1.438	.156	BV	R
711817	1.188	1.500	.156	BV	D
711818	1.313	1.625	.156	BV	R
711820	1.438	1.750	.156	BV	R
711822	1.500	1.875	.188	BV	R
711823	1.625	2.000	.188	BV	D
711824	1.875	2.250	.188	BV	R
711825	.750	1.000	.125	BV	R
711826	1.375	1.688	.156	BV	D
711828	2.375	2.750	.188	BV	R
711829	2.500	2.875	.188	BV	R
711831	2.563	3.000	.219	BV	D
711832	2.750	3.188	.219	BV	R
711833	2.688	3.125	.219	BV	R
711834	2.813	3.250	.219	BV	D
711835	2.938	3.375	.219	BV	R
711836	3.063	3.500	.219	BV	R
711838	3.250	3.625	.188	BV	R
711839	3.375	3.875	.250	BV	R
711840	3.313	3.750	.219	BV	R
711841	3.500	4.000	.250	BV	D
★711844	3.750	4.250	.250	BV	R
711845	4.250	4.750	.250	BV	R
711846	4.688	5.250	.281	BV	R
711848	4.938	5.500	.281	BV	R
711849	5.000	5.563	.281	BV	D
711850	5.375	6.000	.313	BV	D
711851	5.500	6.125	.313	BV	D
711852	6.375	7.000	.313	BV	D
711853	7.375	8.000	.313	BV	D
711854	13.000	14.000	.500	BV	D
711856	2.250	2.625	.188	BV	R
711857	4.500	5.000	.250	BV	D
711878	1.500	1.813	.156	BV	R
712120	.625	.927	.203	WS	V
712121	1.000	1.365	.219	WS	V
712122	1.375	1.740	.219	WS	V
712123	1.750	2.115	.219	WS	V
712124	2.000	2.365	.219	WS	V
712125	2.500	2.995	.281	WS	V
712126	3.000	3.495	.281	WS	V
712127	4.500	4.995	.281	WS	V
712128	5.000	5.495	.281	WS	V
712129	5.500	5.995	.281	WS	V
712130	.625	.875	.125	BV	V
712131	1.000	1.250	.125	BV	V
712132	1.375	1.688	.156	BV	V
★712135	2.500	2.938	.219	BV	V
712136	3.000	3.438	.219	BV	V
712138	5.000	5.563	.281	BV	V
712542	3.500	3.995	.281	WS	V
712548	4.438	5.000	.281	BV	V
712549	5.375	6.000	.313	BV	V
712550	6.375	7.000	.313	BV	V
712552	9.313	10.000	.344	BV	V
712564	1.750	2.125	.188	BV	V
712589	1.000	1.500	.250	BV	R
714884	4.000	4.495	.281	WS	V
★714885	4.000	4.500	.250	BV	V
★718053	11.000	12.000	.500	BV	R
721502	.375	.625	.125	BV	V
721503	.625	.875	.125	BV	V
721506	.813	1.063	.125	BV	D
721507	.813	1.063	.125	BV	V
721508	1.125	1.438	.156	BV	D
721509	1.875	2.250	.188	BV	D
721510	.438	.688	.125	BV	D
★721511	.938	1.188	.125	BV	D
721512	.313	.563	.125	BV	V
721513	.500	.750	.125	BV	V
721514	.875	1.125	.125	BV	V
721515	1.625	2.000	.188	BV	V
721516	.750	1.000	.125	BV	V
721517	2.563	3.000	.219	BV	V
721518	.500	.750	.125	BV	D
721519	.188	.375	.094	BV	V
721520	.625	.875	.125	BV	D
721521	.375	.625	.125	BV	D
★721522	.188	.375	.094	BV	D
721523	.125	.313	.094	BV	V
721524	.875	1.125	.125	BV	D
721526	.250	.500	.125	BV	V
721527	.438	.688	.125	BV	V
721528	.938	1.250	.156	BV	V
721529	1.000	1.313	.156	BV	V
721530	1.125	1.438	.156	BV	V
721531	1.188	1.500	.156	BV	V
721532	1.250	1.563	.156	BV	V
721533	1.375	1.688	.156	BV	V
721534	2.000	2.375	.188	BV	V
721535	2.125	2.500	.188	BV	V
721536	2.250	2.625	.188	BV	V
721537	2.750	3.188	.219	BV	V
721538	2.813	3.250	.219	BV	V
721539	3.000	3.438	.219	BV	V
721540	3.250	3.625	.188	BV	V
721541	3.500	4.000	.250	BV	V
721542	4.000	4.500	.250	BV	V
721543	4.500	5.000	.250	BV	V
721545	5.375	6.000	.313	BV	V
★721547	6.375	7.000	.313	BV	V
721548	7.375	8.000	.313	BV	V
721550	11.000	12.000	.500	BV	V
★721551	.750	1.000	.125	BV	D
721552	1.750	2.125	.188	BV	V
★721555	.688	.938	.125	BV	D
721556	1.500	1.875	.188	BV	V
721557	.563	.813	.125	BV	D
721558	1.000	1.250	.125	BV	V
721559	1.313	1.625	.156	BV	V
721560	1.875	2.250	.188	BV	V
721563	3.750	4.250	.250	BV	V
721564	4.250	4.750	.250	BV	V
★721565	4.938	5.500	.281	BV	V
721566	2.500	2.875	.188	BV	V
721569	.563	.813	.125	BV	V
721570	.688	.938	.125	BV	V
721571	1.438	1.750	.156	BV	V
721572	2.375	2.750	.188	BV	V
721573	2.688	3.125	.219	BV	V
721575	3.375	3.875	.250	BV	V
721578	.125	.313	.094	BV	D
★721580	.938	1.250	.156	BV	D
★721581	1.000	1.250	.125	BV	D
★721582	1.063	1.375	.156	BV	D
750551	2.500	2.875	.188	BV	D

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
962952	9.625	11.625	1.500	HDSE2	RR
1000017	10.000	11.000	.500	HS7	R
1000018	10.000	11.000	.562	HS8	R
1000025	10.000	12.000	.625	HS7	V
1000108	10.000	11.250	.625	HDS1	R
1000110	10.000	11.250	.625	HDS1	R
1000111	10.000	11.250	.625	HDS2	R
1000113	10.000	11.250	.625	HDS1	R
	W/4 EA .125 LUGS				
1000114	10.000	11.250	.625	HDS2	V
1000115	10.000	11.250	.625	HDS2	R
	W/4 EA .125 LUGS				
1000116	10.000	11.250	.625	HDS1	V
	W/6 EA .125 LUGS				
1000117	10.000	11.250	.625	HS7	R
1000118	10.000	11.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1000119	10.000	11.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1000126	10.000	11.250	.625	HDS2	V
	W/4 EA .125 LUGS				
1000128	10.000	11.250	.625	HS8	D
1000129	10.000	11.250	.625	HDS7	R
1000130	10.000	11.250	.750	HDS1	R
1000180	10.000	11.375	.750	HDS1	R
1000183	10.000	11.370	.750	HDS2	V
1000230	10.000	11.500	.625	HDS1	R
1000232	10.000	11.500	.625	HDS2	R
1000233	10.000	11.500	.625	HDS2	V
1000237	10.000	11.500	.625	HS7	R
1000238	10.000	11.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1000239	10.000	11.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1000240	10.000	11.500	.688	HDS1	R
1000243	10.000	11.500	.688	HDS2	V
1000250	10.000	11.500	.750	HDS1	R
1000257	10.000	11.500	.750	HS7	R
1000258	10.000	11.500	.750	HS8	R
1000313	10.000	11.250	.625	HDS1	V
1000330	10.000	11.625	.750	HDS1	R
1000335	10.000	11.687	.750	HDS1	R
1000360	10.000	11.750	.625	HDS1	R
1000367	10.000	11.750	.625	HS7	R
1000369	10.000	11.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1000380	10.000	11.750	.750	HDS1	R
1000420	10.000	11.750	1.000	HDS1	R
1000450	10.000	11.875	.625	HDS1	R
1000520	10.000	12.000	.625	HDS1	R
1000523	10.000	12.000	.750	HDS2	V
1000527	10.000	12.000	.625	HS7	R
1000528	10.000	12.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1000529	10.000	12.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1000530	10.000	12.000	.688	HDS1	R
1000540	10.000	12.000	.750	HDS1	R
	W/4 EA .500 ADJ. LUGS				
1000541	10.000	12.000	.750	HDS1	R
	W/3 EA .125 LUGS				
1000542	10.000	12.000	.750	HDS2	R
1000543	10.000	12.000	.750	HDS1	V
1000550	10.000	12.000	.813	HDS1	R
1000558	10.000	12.000	.810	HS8	V
1000560	10.000	12.000	.875	HDS1	R
1000568	10.000	12.000	.875	HS8	D
1000580	10.000	12.000	1.000	HDS1	R
1000582	10.000	12.000	1.000	HDS2	R
1000588	10.000	12.000	1.000	HS8	R
1000620	10.000	12.125	.875	HDS1	R
1000660	10.000	12.250	.875	HDS1	R
1000740	10.000	12.438	.875	HDS1	R
1000910	10.000	11.250	.875	HDSA1	RD
1000914	10.000	11.250	.875	HDSA2	V
1000920	10.000	11.500	1.250	HDSA1	RD
1000940	10.000	11.750	.938	HDSC1	RD
1000941	10.000	11.750	1.000	HDSC1	RD
1000943	10.000	11.750	.938	HDSC2	DD
1000948	10.000	11.875	1.250	HDSD2	RR
1000950	10.000	12.000	.875	HDSA1	RD
1000952	10.000	12.000	1.250	HDSA1	RD
1000953	10.000	12.000	1.250	HDSB1	RD
1000954	10.000	12.000	1.500	HDSA1	RD
1000955	10.000	12.000	1.250	HDSE1	RR
1000958	10.000	12.000	1.750	HDSD2	RR
1000971	10.000	12.500	1.000	HDSA1	RD
1006330	10.063	11.688	.750	HDS1	R
1006332	10.063	11.688	.750	HDS1	R
	W/4 EA .125 LUGS				
1012334	10.125	11.750	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1012338	10.125	11.750	.750	HS8	R
1012500	10.120	12.000	1.000	HDS1	R
1013117	10.125	11.375	.625	HS7	R
1013237	10.125	11.625	.625	HS7	R
1013240	10.125	11.625	.688	HDS1	R
1013242	10.125	11.625	.688	HDS2	R
1013244	10.125	11.625	.688	HDS1	R
	W/4 EA .125 LUGS				
1013245	10.125	11.625	.688	HDS2	R
	W/4 EA .125 LUGS				
1013249	10.125	11.625	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1013250	10.125	11.625	.750	HDS1	R
1013257	10.125	11.625	.750	HS7	R
1013320	10.125	11.750	.688	HDS1	R
1013329	10.125	11.750	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1013470	10.125	12.000	.750	HDS1	R
1013490	10.125	12.000	1.000	HDS1	R
1013528	10.125	12.125	.625	HS8	R
1013560	10.125	12.125	.875	HDS1	R
1013620	10.125	12.250	.875	HDS1	R
1013660	10.125	12.375	.875	HDS1	R
1013930	10.125	11.750	.938	HDSC1	RD
1016018	10.160	11.160	.500	HS8	R
1018019	10.188	11.188	.500	HS8	D
1018452	10.188	12.000	.750	HDS2	V
1019017	10.188	11.188	.500	HS7	R
1019018	10.188	11.188	.500	HS8	R
1019110	10.188	11.438	.625	HDS1	R
1019230	10.188	11.688	.625	HDS1	R
1019347	10.188	11.875	.625	HS7	R
1019560	10.188	12.188	.875	HDS1	R
1019600	10.188	12.250	1.000	HDS1	R
1019620	10.188	12.313	.875	HDS1	R
1019640	10.188	12.372	.719	HDS1	R
1019660	10.188	12.438	.875	HDS1	R
1022300	10.220	11.750	.750	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
☐ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□**1023015**	260.00	285.40	12.70	HS5	R
□**1023282**	260.00	300.00	16.00	HDS2	R
	W/ 4 EA 6.35MM LUGS				
□1023287	260.00	300.00	20.00	HDS1	V
□**1023398**	260.00	304.00	20.00	HS8	R
□**1023452**	260.00	290.00	16.00	HDS2	R
□**1023453**	260.00	290.00	16.00	HDS2	V
□1023670	260.00	320.00	25.00	HDS1	V
□**1023972**	260.00	320.00	25.00	HDS2	R
1024018	10.236	11.236	.500	HS8	R
□**1024068**	260.00	290.00	16.00	HS8	R
□**1024081**	260.00	290.00	16.00	HDS2	D
□**1024218**	260.00	300.00	20.00	HDS2	D
□**1024232**	260.00	300.00	16.00	HDS2	R
□1024280	260.00	300.00	20.00	HDS1	R
□**1024632**	260.00	315.00	24.00	HDS2	R
1024690	10.236	12.590	.984	HDS1	R
1025017	10.250	11.250	.625	HS7	R
1025018	10.250	11.250	.625	HS8	V
1025104	10.250	11.438	1.000	HDS1	R
1025112	10.250	11.500	.625	HDS2	D
1025117	10.250	11.500	.625	HS7	R
1025118	10.250	11.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1025119	10.250	11.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1025133	10.250	12.500	.750	HDS2	R
1025237	10.250	11.750	.625	HS7	R
1025240	10.250	11.750	.688	HDS1	R
1025244	10.250	11.750	.688	HDS2	V
1025249	10.250	11.750	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1025250	10.250	11.750	.750	HDS1	R
1025252	10.250	11.750	.750	HDS2	R
1025257	10.250	11.750	.750	HS7	R
1025368	10.250	12.000	.625	HS8	R
1025380	10.250	12.000	.750	HDS1	R
1025428	10.250	12.017	.750	HS8	R
1025435	10.250	12.017	.750	HS5	R
1025520	10.250	12.250	.625	HDS1	R
1025527	10.250	11.750	.625	HS7	R
1025528	10.250	12.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1025529	10.250	12.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1025540	10.250	12.250	.750	HDS1	R
1025543	10.250	12.250	.750	HDS1	V
1025580	10.250	12.250	1.000	HDS1	R
1025582	10.250	12.250	1.000	HDS2	D
1025620	10.250	12.375	.875	HDS1	R
1025660	10.250	12.500	.875	HDS1	R
1025951	10.250	12.250	1.250	HDSC1	RD
1031490	10.313	12.188	1.000	HDS1	R
1037143	10.375	11.625	.875	HDS1	V
1037912	10.375	11.625	.875	HDSA2	D
1038117	10.375	11.625	.625	HS7	R
1038140	10.375	11.625	.875	HDS1	R
1038142	10.375	11.625	.875	HDS2	R
1038143	10.375	11.625	.875	HDS2	D
1038250	10.375	11.875	.750	HDS1	R
1038252	10.375	11.875	.750	HDS2	D
1038257	10.375	11.875	.750	HS7	R
1038440	10.375	12.197	1.000	HDS1	R
1038490	10.375	12.250	1.000	HDS1	R
1038560	10.375	12.375	.875	HDS1	R
1038563	10.375	12.375	.875	HDS2	D
1038620	10.375	12.500	.875	HDS1	R
1038660	10.375	12.625	.875	HDS1	R
1041162	10.415	11.625	.875	HDS2	D
1043148	10.438	11.688	.875	HS8	R
□1043240	265.00	305.00	18.00	HDS1	R
□1043360	265.00	310.00	16.00	HDS1	R
□1043427	265.00	310.00	22.00	HS7	R
1044140	10.438	11.679	.875	HDS1	R
1044257	10.438	11.938	.750	HS7	R
1044550	10.438	12.430	1.000	HDS1	R
1044560	10.438	12.438	.875	HDS1	R
1044600	10.438	12.500	1.000	HDS1	R
1044620	10.438	12.563	.875	HDS1	R
1044640	10.438	12.625	1.000	HDS1	R
1044660	10.438	12.688	.875	HDS1	R
□**1047388**	266.00	310.00	20.00	HS8	R
1050014	10.500	11.500	.500	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1050017	10.500	11.500	.500	HS7	R
1050018	10.500	11.500	.500	HS8	R
1050037	10.500	11.500	.625	HS7	R
1050038	10.500	11.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1050110	10.500	11.750	.625	HDS1	R
1050112	10.500	11.750	.625	HDS2	R
1050113	10.500	11.750	.625	HDS1	V
1050117	10.500	11.750	.625	HS7	R
1050118	10.500	11.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1050119	10.500	11.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1050140	10.500	11.750	.875	HDS1	R
1050211	10.500	12.000	.688	HDS7	H
1050230	10.500	12.000	.625	HDS1	R
1050236	10.500	12.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1050237	10.500	12.000	.625	HS7	R
1050238	10.500	12.000	.625	HS8	R
1050239	10.500	12.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1050240	10.500	12.000	.688	HDS1	R
1050242	10.500	12.000	.688	HDS2	V
1050243	10.500	12.000	.688	HDS2	R
1050244	10.500	12.000	.688	HDS2	D
1050248	10.500	12.000	.688	HDS2	V
	W/4 EA .250 LUGS				
1050250	10.500	12.000	.750	HDS1	R
1050251	10.500	12.000	.750	HDS2	V
1050252	10.500	12.000	.750	HDS2	R
1050253	10.500	12.000	.750	HDS2	R
	W/4 EA .188 LUGS				
1050254	10.500	12.000	.750	HDS2	D
1050257	10.500	12.000	.750	HS7	R
1050258	10.500	12.000	.750	HS8	R
1050291	10.500	12.000	1.000	HDS1	D
1050312	10.500	12.125	.625	HDS2	D
1050330	10.500	12.125	.750	HDS1	R
1050380	10.500	12.250	.750	HDS1	R
1050440	10.500	12.344	.906	HDS1	R
1050520	10.500	12.500	.625	HDS1	R
1050523	10.500	12.500	.625	HDS2	R
1050524	10.500	12.500	.625	HDS2	V
1050525	10.500	12.500	.625	HDS1	R
	W/6 EA .125 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1050527	10.500	12.500	.625	HS7	R
1050528	10.500	12.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1050529	10.500	12.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1050530	10.500	12.500	.688	HDS1	R
1050540	10.500	12.500	.750	HDS1	R
1050542	10.500	12.500	.750	HDS2	R
1050543	10.500	12.000	.750	HDS1	V
1050544	10.500	12.500	.750	HDS2	V
1050550	10.500	12.500	.813	HDS1	R
1050560	10.500	12.500	.875	HDS1	R
1050570	10.500	12.500	.906	HDS1	R
1050577	10.500	12.500	.916	HS7	R
1050578	10.500	12.500	1.000	HDS1	D
1050580	10.500	12.500	1.000	HDS1	R
1050582	10.500	12.500	1.000	HDS2	R
1050593	10.500	12.500	1.000	HDS2	V
1050620	10.500	12.625	.875	HDS1	R
1050630	10.500	12.625	1.000	HDS1	R
1050660	10.500	12.750	.875	HDS1	R
1050690	10.500	12.750	1.250	HDS1	R
1050754	10.500	13.000	.688	HDS2	V
1050912	10.500	12.000	1.250	HDSD2	RR
1050916	10.500	12.000	.875	HDSC1	RD
1050956	10.500	12.500	1.000	HDSA1	RD
1050957	10.500	12.500	1.250	HDSD2	RR
	W/LUBE HOLES ON O.D.				
1050958	10.500	12.500	1.000	HDSB1	RD
1053237	10.531	12.031	.625	HS7	R
1062945	10.625	12.500	.969	HDSA1	RD
1063100	10.625	11.812	.625	HDS1	R
1063117	10.625	11.875	.625	HS7	R
□1063240	270.00	310.00	16.00	HDS1	R
□**1063242**	270.00	310.00	16.00	HDS2	R
□**1063248**	270.00	310.00	20.00	HDS2	V
	W/SPRING KOVER				
1063250	10.625	12.125	.750	HDS1	R
□**1063252**	270.00	310.00	20.00	HDS2	R
□1063253	270.00	310.00	16.00	HDS1	V
1063257	10.625	12.125	.750	HS7	R
□**1063258**	270.00	310.00	20.00	HS8	R
□**1063268**	270.00	310.00	20.00	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□**1063284**	270.00	310.00	16.00	HDS2	V
□1063303	270.00	310.00	20.50	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
1063310	10.630	12.254	.630	HDS1	R
□1063318	270.00	310.00	16.00	HDS3	V
	W/6 EA 12.70MM ADJ. LUGS				
1063330	10.625	12.250	.750	HDS1	R
1063380	10.625	12.375	.750	HDS1	R
1063470	10.625	12.500	.750	HDS1	R
1063560	10.625	12.625	.875	HDS1	R
1063620	10.625	12.750	.875	HDS1	R
1063660	10.625	12.875	.875	HDS1	R
1063710	10.625	13.000	.750	HDS1	R
1063712	10.625	13.000	.750	HDS2	R
□**1063744**	270.00	330.00	25.00	HDS2	V
□1063780	270.00	314.00	20.00	HDS1	R
□1063790	270.00	335.00	18.00	HDS1	R
□1063960	270.00	330.00	25.40	HDSA1	R
1063971	10.625	13.000	1.000	HDSB1	RD
1068453	10.688	12.500	.625	HDS2	V
1068456	10.688	12.500	.625	HDS1	V
1068693	10.688	13.000	.688	HDS2	V
1068940	10.688	12.500	1.000	HDSA1	RD
1069540	10.688	12.688	.750	HDS1	R
1071110	10.709	11.960	.630	HDS1	R
1071448	10.710	12.511	.625	HS8	R
1075018	10.750	11.750	.500	HS8	R
1075110	10.750	12.000	.625	HDS1	R
1075112	10.750	12.000	.625	HDS2	R
1075114	10.750	12.000	.625	HDS2	V
1075115	10.750	12.000	.625	HDS2	R
	W/4 EA .125 LUGS				
1075117	10.750	12.000	.625	HS7	R
1075118	10.750	12.000	.625	HS8	R
1075128	10.750	12.000	.625	HS8	V
1075230	10.750	12.250	.625	HDS1	R
1075232	10.750	12.250	.625	HDS2	D
1075237	10.750	12.250	.625	HS7	R
1075238	10.750	12.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1075239	10.750	12.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1075240	10.750	12.250	.688	HDS1	R
1075250	10.750	12.250	.750	HDS1	R
1075257	10.750	12.250	.750	HS7	R
1075310	10.750	12.375	.625	HDS1	R
1075360	10.750	12.500	.625	HDS1	R
1075365	10.750	12.500	.625	HDS2	R
	W/4 EA .125 LUGS				
1075366	10.750	12.500	.625	HDS2	V
1075367	10.750	12.500	.625	HDS1	V
1075369	10.750	12.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1075375	10.750	12.500	.688	HDS2	R
	W/4 EA .125 LUGS				
1075470	10.750	12.625	.750	HDS1	R
1075520	10.750	12.750	.625	HDS1	R
1075523	10.750	12.750	.625	HDS2	D
1075524	10.750	12.750	.625	HDS2	V
1075527	10.750	12.750	.625	HS7	R
1075528	10.750	12.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1075529	10.750	12.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1075540	10.750	12.750	.750	HDS1	R
1075550	10.750	12.750	.813	HDS1	R
1075560	10.750	12.750	.875	HDS1	R
1075580	10.750	12.750	1.000	HDS1	R
1075582	10.750	12.750	1.000	HDS2	R
1075583	10.750	12.750	1.000	HDS1	V
1075584	10.750	12.750	1.000	HDS2	V
1075620	10.750	12.875	.875	HDS1	R
1075642	10.750	12.900	1.375	HDS1	R
1075660	10.750	13.000	.875	HDS1	R
1075780	10.750	13.250	1.000	HDS1	R
1075910	10.750	12.250	1.025	HDSC1	R
1075912	10.750	12.000	1.375	HDSD2	RR
	W/LUBE HOLES ON O.D.				
1075918	10.750	12.000	1.375	HDSE1	RR
	W/SS SPRING & LUBE HOLES				
1075920	10.750	12.250	.813	HDSA1	RD
1075923	10.750	12.250	1.250	HDSD2	VV
1075928	10.750	12.250	.875	HDSC1	RD
1075942	10.750	12.500	.875	HDSA2	RD
1078192	10.788	12.250	.688	HDS2	D
1082150	10.827	12.205	.630	HDS1	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□1082160	275.00	310.00	16.00	HDS1	R
1087253	10.875	12.375	.750	HDS1	V
1087468	10.875	12.750	.688	HS8	R
1088068	10.885	12.125	.625	HDS1	R
1088110	10.875	12.125	.625	HDS1	R
1088118	10.875	12.125	.625	HS8	R
1088190	10.875	12.260	1.000	HDS1	R
1088250	10.875	12.375	.750	HDS1	R
1088257	10.875	12.375	.750	HS7	R
1088340	10.875	12.500	1.000	HDS1	R
1088560	10.875	12.875	.875	HDS1	R
1088620	10.875	13.000	.875	HDS1	R
1088660	10.875	13.125	.875	HDS1	R
1093440	10.938	12.750	.625	HDS1	R
1094110	10.938	12.188	.625	HDS1	R
1094360	10.938	12.688	.625	HDS1	R
1100017	11.000	12.000	.500	HS7	R
1100027	11.000	12.000	.625	HS7	R
1100048	11.000	12.181	.591	HS8	R
1100102	11.000	12.250	.625	HDS2	D
	W/4 EA .125 LUGS				
1100103	11.000	12.250	.625	HDS1	V
1100104	11.000	12.250	.625	HDS2	V
1100110	11.000	12.250	.625	HDS1	R
1100112	11.000	12.250	.625	HDS2	R
1100113	11.000	12.250	.625	HDS2	D
1100115	11.000	12.250	.625	HDS2	R
	W/4 EA .125 LUGS				
1100117	11.000	12.250	.625	HS7	R
1100118	11.000	12.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1100119	11.000	12.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1100152	11.000	12.500	.750	HS6	R
	W/HOOK & EYE SPRING CONNECTOR				
1100220	11.000	12.500	.625	HDS1	R
	W/4 EA .500 ADJ. LUGS				
1100230	11.000	12.500	.625	HDS1	R
1100233	11.000	12.500	.625	HDS1	V
1100237	11.000	12.500	.625	HS7	R
1100238	11.000	12.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1100239	11.000	12.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1100250	11.000	12.500	.750	HDS1	R
1100257	11.000	12.500	.750	HS7	R
1100258	11.000	12.500	.750	HS8	R
1100270	11.000	12.500	.875	HDS1	R
1100330	11.000	12.680	.750	HDS1	R
1100518	11.000	13.000	.625	HDS3	D
	W/4 EA .500 ADJ LUGS & SS CASE				
1100520	11.000	13.000	.625	HDS1	R
1100521	11.000	13.000	.625	HS8	D
	W/HOOK & EYE SPRING CONNECTOR				
1100523	11.000	13.000	.625	HDS2	V
1100524	11.000	13.000	.625	HDS1	V
1100526	11.000	13.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1100527	11.000	13.000	.625	HS7	R
1100528	11.000	13.000	.625	HS8	R
1100529	11.000	13.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1100530	11.000	13.000	.688	HDS1	R
1100540	11.000	13.000	.750	HDS1	R
1100550	11.000	13.000	.813	HDS1	R
1100553	11.000	13.000	.813	HDS2	R
1100555	11.000	13.000	.812	HDS2	R
	W/4 EA .500 ADJ. LUGS				
1100557	11.000	13.000	.813	HS7	R
1100558	11.000	13.000	.813	HS8	V
1100560	11.000	13.000	.875	HDS1	R
1100580	11.000	13.000	1.000	HDS1	R
1100585	11.000	13.000	1.000	HDS2	R
1100620	11.000	13.125	.875	HDS1	R
1100660	11.000	13.250	.875	HDS1	R
1100912	11.000	12.500	1.250	HDSD2	RR
1100918	11.000	12.500	1.250	HDSA1	RD
1100950	11.000	13.000	.875	HDSA1	RD
1100951	11.000	13.000	1.000	HDSA1	RD
1100952	11.000	13.000	1.250	HDSA1	RD
1100953	11.000	13.000	1.250	HDSB1	RD
1100954	11.000	13.000	1.250	HDSC1	RD
1100958	11.000	13.000	1.250	HDSE1	RR
1100971	11.000	13.500	1.250	HDSA1	RD
□**1102012**	280.00	310.00	16.00	HDS2	R
1102042	11.026	12.256	.750	HDS2	R
□1102060	280.00	310.00	16.00	HDS1	V
□**1102078**	280.00	310.00	15.00	HS8	R
□1102080	280.00	310.00	16.00	HDS1	R
1102082	11.024	12.197	.630	HDS2	D
□**1102108**	280.00	310.00	16.00	HS8	R
□**1102118**	280.00	310.00	16.00	HDS2	D
□**1102218**	280.00	320.00	18.00	HDS2	D
□1102220	280.00	320.00	16.00	HDS1	R
□1102250	280.00	320.00	20.00	HDS1	R
□**1102252**	280.00	320.00	20.00	HDS2	R
□**1102258**	280.00	320.00	19.05	HS8	R
□1102260	280.00	320.00	18.00	HDS1	R
□**1102378**	280.00	324.00	20.00	HS8	R
1102690	11.024	13.378	.984	HDS1	R
□1102720	280.00	340.00	25.00	HDS1	R
1103027	11.031	12.031	.625	HS7	R
□1103258	280.00	320.00	18.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
1105201	11.063	12.250	.750	HDS1	R
1106200	11.063	12.500	.750	HDS1	R
1106340	11.063	12.750	.750	HDS1	R
1106430	11.063	13.000	.750	HDS1	R
1106560	11.063	13.063	.875	HDS1	R
1106620	11.063	13.188	.875	HDS1	R
1106660	11.063	13.313	.875	HDS1	R
1112018	11.125	12.125	.500	HS8	R
1113118	11.125	12.375	.625	HS8	R
1113340	11.125	12.750	1.000	HDS1	R
1113490	11.125	13.000	1.000	HDS1	R
1113560	11.125	13.125	.875	HDS1	R
1113620	11.125	13.250	.875	HDS1	R
1113660	11.125	13.375	.875	HDS1	R
1118122	11.188	12.500	.625	HDS2	R
1118130	11.188	12.500	.750	HDS1	R
1118680	11.188	13.500	1.000	HDS1	R
1119017	11.188	12.188	.500	HS7	R
□**1122162**	285.00	320.00	16.00	HDS2	R
□**1122165**	285.00	320.00	16.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
□1122230	285.00	325.00	16.00	HDS1	R
1125027	11.250	12.250	.625	HS7	R
1125110	11.250	12.500	.625	HDS1	R
1125111	11.250	12.500	.625	HDS2	R
1125113	11.250	12.500	.625	HDS1	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1125117	11.250	12.500	.625	HS7	R
1125218	11.250	12.750	.750	HS8	V
	W/HOOK & EYE SPRING CONNECTOR				
1125219	11.250	12.750	.625	HDS7	H
1125230	11.250	12.750	.625	HDS1	R
1125235	11.250	12.750	.625	HS5	R
1125237	11.250	12.750	.625	HS7	R
1125238	11.250	12.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1125239	11.250	12.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1125240	11.250	12.750	.688	HDS1	R
1125250	11.250	12.750	.750	HDS1	R
1125252	11.250	12.750	.750	HDS2	D
1125253	11.250	12.750	.750	HDS1	V
1125257	11.250	12.750	.750	HS7	R
1125270	11.250	12.750	.875	HDS1	R
1125522	11.250	13.250	.625	HDS2	R
1125524	11.250	13.250	.625	HDS2	R
	W/4 EA .375 LUGS				
1125527	11.250	13.250	.625	HS7	R
1125528	11.250	13.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1125529	11.250	13.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1125550	11.250	13.250	.813	HDS1	R
1125553	11.250	13.250	.813	HDS2	R
1125557	11.250	13.250	.813	HS7	R
1125560	11.250	13.250	.875	HDS1	R
1125570	11.250	13.250	.938	HDS1	R
1125580	11.250	13.250	1.000	HDS1	R
1125620	11.250	13.375	.875	HDS1	R
1125660	11.250	13.500	.875	HDS1	R
1125661	11.250	13.500	.875	HDS1	R
	W/4 EA .125 LUGS				
1125680	11.250	13.500	1.000	HDS1	R
1125792	11.250	13.500	1.000	HDS2	R
1125920	11.250	12.750	1.250	HDSE1	RR
1131340	11.313	13.000	.625	HDS1	R
1131560	11.313	13.312	.875	HDS1	R
1131620	11.313	13.438	.875	HDS1	R
1131660	11.313	13.562	.875	HDS1	R
1134117	11.344	12.594	.625	HS7	R
1138017	11.375	12.375	.500	HS7	R
1138117	11.375	12.625	.625	HS7	R
1138250	11.375	12.875	.750	HDS1	R
1138251	11.375	12.875	.750	HDS1	R
	W/4 EA .125 LUGS				
1138252	11.375	12.875	.750	HDS2	R
1138256	11.375	12.875	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1138257	11.375	12.875	.750	HS7	R
1138258	11.375	12.875	.750	HS8	R
1138259	11.375	12.875	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1138319	11.375	13.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1138320	11.375	13.000	.688	HDS1	R
1138322	11.375	13.000	.688	HDS1	R
	W/4 EA .125 LUGS				
1138323	11.375	13.000	.688	HDS2	R
1138325	11.375	13.000	.688	HDS1	R
	W/8 EA .250 LUGS				
1138330	11.375	13.000	.750	HDS1	R
1138331	11.375	13.000	.750	HDS1	R
	W/4 EA .125 LUGS				
1138334	11.375	13.000	.750	HDS1	R
	W/8 EA .250 LUGS				
1138550	11.375	13.375	.813	HDS1	R
1138580	11.375	13.375	1.000	HDS1	R
1138588	11.375	13.375	1.000	HS8	R
1138620	11.375	13.500	.875	HDS1	R
1138630	11.375	13.500	1.000	HDS1	R
1138660	11.375	13.625	.875	HDS1	R
1141228	11.417	12.981	.625	HS8	R
□**1141258**	290.00	330.00	20.00	HS8	R
1141273	11.417	13.000	.875	HDSA2	V
□**1141282**	290.00	330.00	18.00	HDS2	D
	W/6 EA 9.00MM LUGS				
□1141288	290.00	330.00	16.00	CRSA13	R
□**1141744**	290.00	350.00	25.00	HDS2	V
1141937	11.417	12.994	.875	HDSA1	V
□**1142242**	290.00	330.00	18.00	HDS2	R
1142257	11.422	12.922	.750	HS7	R
1142332	11.417	13.142	.750	HDS2	R
1142334	11.417	13.142	.750	HDS2	R
	W/4 EA .375 LUGS				
□1142427	290.00	335.00	24.00	HS7	R
□**1142732**	290.00	350.00	25.00	HDS2	R
1144300	11.438	13.000	.688	HDS1	R
1144305	11.438	13.000	.688	HDS1	R
	W/4 EA .500 LUGS				
1144560	11.446	13.430	.875	HDS1	R
1144620	11.438	13.625	.875	HDS1	R
1144660	11.438	13.688	.875	HDS1	R
1150017	11.500	12.500	.625	HS7	R
1150018	11.500	12.500	.500	HS8	R
1150019	11.500	12.500	.500	HS8	D
	W/HOOK & EYE SPRING CONNECTOR				
1150028	11.500	12.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1150110	11.500	12.750	.625	HDS1	R
1150112	11.500	12.750	.625	HDS2	R
1150113	11.500	12.750	.625	HDS2	D
1150114	11.500	13.000	.625	HDS2	V
1150116	11.500	12.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1150117	11.500	12.750	.625	HS7	R
1150118	11.500	12.750	.625	HS8	R
1150119	11.500	12.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1150127	11.500	12.750	.625	HDS1	V
1150170	11.500	12.875	.688	HDS1	R
1150210	11.500	13.000	.688	HDS2	V
1150212	11.500	13.000	.688	HDS2	R
	W/4 EA .125 LUGS				
1150237	11.500	13.000	.625	HS7	R
1150238	11.500	13.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1150239	11.500	13.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1150240	11.500	13.000	.688	HDS1	R
1150241	11.500	13.000	.709	HDS1	R
1150242	11.500	13.000	.688	HDS1	R
	W/6 EA .375 LUGS				
1150243	11.500	13.000	.688	HDS2	R
1150244	11.500	13.000	.688	HDS2	R
	W/6 EA .250 LUGS				
1150250	11.500	13.000	.750	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1150253	11.500	13.000	.750	HDS2	R
1150254	11.500	13.000	.750	HDS1	D
1150257	11.500	13.000	.750	HS7	R
1150258	11.500	13.000	.750	HS8	R
1150259	11.500	13.000	.750	HS8	D
	W/HOOK & EYE SPRING CONNECTOR				
1150283	11.500	13.000	.750	HDS1	V
1150284	11.500	13.500	.688	HDS1	V
1150340	11.500	13.125	1.000	HDS1	R
1150380	11.500	13.250	.750	HDS1	R
1150470	11.500	13.375	.750	HDS1	R
1150522	11.500	13.500	.625	HDS2	R
1150524	11.500	13.500	.625	HDS2	V
1150526	11.500	13.500	.625	HS8	D
1150527	11.500	13.500	.625	HS7	R
1150528	11.500	13.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1150529	11.500	13.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1150530	11.500	13.500	.688	HDS1	R
1150540	11.500	13.500	.750	HDS1	R
1150546	11.500	13.500	.750	HDS2	R
	W/4 EA .125 LUGS				
1150547	11.500	13.500	.750	HDS1	V
1150550	11.500	13.500	.813	HDS1	R
1150552	11.500	13.500	.813	HDS2	V
1150553	11.500	13.500	.813	HDS1	V
1150557	11.500	13.500	.813	HS7	R
1150560	11.500	13.500	.875	HDS1	R
1150572	11.500	13.500	1.000	HDS2	D
1150578	11.500	13.500	1.000	HS8	R
1150580	11.500	13.500	1.000	HDS1	R
1150582	11.500	13.500	1.000	HDS2	R
1150587	11.500	13.500	1.000	HS7	R
1150620	11.500	13.625	.875	HDS1	R
1150660	11.500	13.750	.875	HDS1	R
1150912	11.500	12.750	1.500	HDSE2	DD
1150919	11.500	13.000	.750	HDSA1	DD
1150920	11.500	13.000	1.063	HDSA1	RD
1150925	11.500	13.000	.875	HDSA1	DD
1150953	11.500	13.500	1.250	HDSD1	RR
1150954	11.500	13.500	1.250	HDSD2	RR
1158017	11.575	12.575	.500	HS7	R
□1161170	295.00	330.00	17.48	HDS1	V
□**1161174**	295.00	330.00	17.48	HDS2	V
□1161300	295.00	335.00	18.00	HDS1	R
1162112	11.625	12.875	.625	HDS2	R
1162216	11.625	13.125	.750	HS6	R
1163244	11.625	13.125	.688	HDS2	V
1163250	11.625	13.191	.750	HDS1	R
1163257	11.625	13.125	.750	HS7	R
1163259	11.625	13.125	.750	HS8	D
1163290	11.625	13.125	1.000	HDS1	R
1163557	11.625	13.625	.813	HS7	R
1169110	11.688	12.938	.625	HDS1	R
1169180	11.688	13.062	.750	HDS1	R
1169235	11.688	13.188	.625	HS7	V
1175118	11.750	13.000	.625	HS8	R
1175190	11.750	13.188	.875	HDS1	R
1175219	11.750	13.250	.688	HDS7	R
1175224	11.750	13.250	.688	HDS2	V
1175236	11.750	13.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1175237	11.750	13.250	.625	HS7	R
1175238	11.750	13.250	.625	HS8	R
1175239	11.750	13.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1175240	11.750	13.250	.688	HDS1	R
1175243	11.750	13.250	.688	HDS1	V
1175250	11.750	13.250	.750	HDS1	R
1175252	11.750	13.250	.750	HDS2	R
1175253	11.750	13.250	.750	HDS1	R
	W/4 EA .125 LUGS				
1175254	11.750	13.250	.750	HDS2	R
	W/4 EA .125 LUGS				
1175255	11.750	13.250	.750	HDS2	V
1175257	11.750	13.250	.750	HS7	R
1175258	11.750	13.250	.750	HS8	V
	W/HOOK & EYE CONNECTOR				
1175283	11.750	13.250	.750	HDS1	V
1175300	11.750	13.252	.750	HDS1	R
1175360	11.750	13.500	.625	HDS1	R
1175527	11.750	13.750	.625	HS7	R
1175557	11.750	13.750	.813	HS7	R
1175560	11.750	13.750	.875	HDS1	R
1175563	11.750	13.750	.875	HDS2	D
1175565	11.750	13.750	.875	HDS2	R
	W/4 EA .125 LUGS				
1175569	11.750	13.750	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1175580	11.750	13.750	1.000	HDS1	R
1175582	11.750	13.750	1.000	HDS2	R
1175583	11.750	13.750	1.000	HDS1	V
1175587	11.750	13.750	1.000	HS7	R
1175595	11.750	13.750	1.813	HDS1	R
1175620	11.750	13.875	.875	HDS1	R
1175660	11.750	14.000	.875	HDS1	R
1175680	11.750	14.000	1.000	HDS1	R
1175920	11.750	13.250	.875	HDSC1	RD
1175924	11.750	13.250	.875	HDSA2	VD
1175952	11.750	13.750	1.250	HDSB1	RD
1180257	11.808	13.308	.750	HS7	R
1180614	11.813	14.000	.750	HDS2	R
	W/4 EA .250 LUGS				
1181017	11.813	12.813	.500	HS7	R
□**1181052**	300.00	332.00	16.00	HDS2	R
□**1181182**	300.00	335.00	18.00	HDS2	R
1181195	11.813	13.250	1.000	HDS1	R
1181218	11.811	13.311	.750	HS8	R
□1181220	300.00	340.00	18.00	HDS1	D
□1181231	300.00	340.00	18.00	HDS7	R
□**1181232**	300.00	340.00	18.00	HDS2	R
□**1181234**	300.00	340.00	20.00	HDS2	V
□**1181252**	300.00	338.09	19.05	HDS2	R
1181257	11.813	13.313	.750	HS7	R
1181258	11.811	13.386	.787	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□**1181262**	300.00	340.00	18.00	HDS2	V
□**1181268**	300.00	340.00	20.00	HS8	R
1181300	11.811	13.378	.709	HDS1	R
□1181303	300.00	340.00	16.50	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□1181307	300.00	340.00	18.00	HDS1	V
□1181310	300.00	340.00	16.00	HDS1	R
□**1181372**	300.00	344.00	20.00	HDS2	V
□1181410	300.00	345.00	22.00	HDS1	R
□1181420	300.00	350.00	25.00	HDS1	R
1181428	11.811	13.575	.984	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1181500	11.811	13.780	.984	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1181560	11.813	13.812	.875	HDS1	R
1181577	11.813	13.780	1.000	HS7	R
□1181587	300.00	345.00	22.00	HS7	R
1181593	11.813	14.000	.875	HDS2	V
1181619	11.813	14.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1181620	11.813	13.938	.875	HDS1	R
1181640	11.813	14.000	.875	HDS1	R
1181641	11.813	14.000	1.000	HDS1	R
1181660	11.813	14.063	.875	HDS1	R
□**1181704**	300.00	360.00	25.00	HDS2	V
□**1181712**	300.00	360.00	25.00	HDS2	R
□1181921	300.00	340.00	22.22	†HDSA2	R
	W/ BORE-TITE ON OD				
1181960	11.813	14.000	1.250	HDSE1	RR
1187028	11.875	12.875	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1188118	11.875	13.125	.625	HS8	R
1188257	11.875	13.375	.750	HS7	R
1191117	11.906	13.156	.625	HS7	R
1194520	11.938	13.938	.625	HDS1	R
1194527	11.938	13.938	.625	HS7	R
1194588	11.947	13.947	1.000	HS8	R
1195530	11.950	14.000	.688	HDS1	R
1195588	11.952	13.952	1.000	HS8	R
1196588	11.963	13.963	1.000	HS8	R
1197588	11.971	13.771	1.000	HS8	R
1200015	12.000	13.000	.500	HS5	R
1200017	12.000	13.000	.500	HS7	R
1200018	12.000	13.000	.500	HS8	R
1200028	12.000	13.000	.500	HS8	D
1200037	12.000	13.000	.625	HS7	R
1200100	12.000	13.250	1.000	HDS1	V
1200103	12.000	13.279	1.000	HDS2	V
1200110	12.000	13.250	.625	HDS1	R
1200117	12.000	13.250	.625	HS7	R
1200118	12.000	13.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1200119	12.000	13.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1200150	12.000	13.250	1.000	HDS1	R
1200220	12.000	13.500	.688	HDS1	R
	W/4 EA .500 ADJ. LUGS				
1200230	12.000	13.500	.625	HDS1	R
1200231	12.000	13.500	.625	HDS2	R
1200233	12.000	13.500	.625	HDS1	V
1200235	12.000	13.500	.625	HDS2	R
	W/ 4 EA .125" LUGS				
1200236	12.000	13.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1200237	12.000	13.500	.625	HS7	R
1200238	12.000	13.500	.625	HS8	R
1200239	12.000	13.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1200240	12.000	13.500	.688	HDS1	R
1200241	12.000	13.500	.688	HDS1	R
	W/4 EA .063 LUGS				
1200242	12.000	13.500	.688	HDS1	R
	W/4 EA .125 LUGS				
1200243	12.000	13.500	.688	HDS2	R
1200245	12.000	13.500	.688	HDS1	R
	W/4 EA .375 LUGS				
1200250	12.000	13.500	.750	HDS1	R
1200252	12.000	13.500	.750	HDS1	R
	W/4 EA .188 LUGS				
1200254	12.000	13.500	.750	HDS1	R
	W/8 EA .125 LUGS				
1200255	12.000	13.500	.750	HDS2	R
1200257	12.000	13.500	.750	HS7	R
1200258	12.000	13.500	.750	HS8	R
1200259	12.000	13.500	.750	HS7	V
1200280	12.000	13.500	.625	HDS1	D
1200300	12.000	13.625	.688	HDS1	D
1200320	12.000	13.625	.688	HDS1	R
1200324	12.000	13.625	.688	HDS1	R
	W/4 EA .250 LUGS				
1200330	12.000	13.625	.750	HDS1	R
1200338	12.000	13.625	.750	HDS1	D
1200340	12.000	13.688	.875	HDS1	R
1200380	12.000	13.750	.750	HDS1	R
1200500	12.000	13.938	.688	HDS7	R
1200518	12.000	14.000	.625	HDS3	D
	W/4 EA .500 ADJ LUGS & SS CASE				
1200520	12.000	14.000	.625	HDS1	R
1200521	12.000	14.000	.812	HDS7	R
1200522	12.000	14.000	.625	HDS1	R
	W/4 EA .125 LUGS				
1200523	12.000	14.000	.625	HDS1	V
1200524	12.000	14.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1200526	12.000	14.000	.625	HDS2	R
	W/4 EA .125 LUGS				
1200527	12.000	14.000	.625	HS7	R
1200529	12.000	14.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1200530	12.000	14.000	.688	HDS1	R
1200533	12.000	14.000	.688	HDS1	V
1200535	12.000	14.000	.688	HDS1	R
	W/4 EA .500 LUGS				
1200538	12.000	14.000	.688	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1200540	12.000	14.000	.750	HDS1	R
1200541	12.000	14.000	.750	HDS2	R
1200545	12.000	14.000	.750	HDS2	R
	W/4 EA .125 LUGS				
1200550	12.000	14.000	.813	HDS1	R
1200553	12.000	14.000	.813	HDS2	R
1200557	12.000	14.000	.813	HS7	R
1200558	12.000	14.000	.813	HS8	R
1200559	12.000	14.000	.813	HS8	D
1200560	12.000	14.000	.875	HDS1	R
1200580	12.000	14.000	1.000	HDS1	R
1200585	12.000	14.000	1.000	HDS2	R
1200587	12.000	14.000	1.000	HS7	R
1200593	12.000	14.000	1.000	HDS1	V
1200640	12.000	14.188	1.000	HDS1	R
1200660	12.000	14.250	.875	HDS1	R
1200680	12.000	14.250	1.000	HDS1	R
1200691	12.000	14.250	1.188	HDS2	R
1200730	12.000	14.375	1.000	HDS1	R
1200760	12.000	14.500	.875	HDS1	R
1200782	12.000	14.500	1.000	HDS1	D
1200820	12.000	14.750	.875	HDS1	R
1200920	12.000	13.500	.875	HDSA1	RD
1200940	12.000	13.992	1.750	HDSD1	RR
1200952	12.000	14.000	1.250	HDSB1	RD
1200955	12.000	14.000	1.000	HDSA2	RD
1200958	12.000	14.000	1.000	†HDSB1	RD
1200962	12.000	14.000	.844	HDSA2	VD
	W/LIGHT SPRING				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1200968	12.000	14.000	1.250	HDSD1	RR
1205144	12.050	13.313	.750	HDS1	R
1206030	12.063	13.125	.875	HDS1	R
1206130	12.063	13.313	.750	HDS1	R
1212018	12.125	13.125	.500	HS8	R
1213118	12.125	13.375	.625	HS8	R
1213160	12.125	13.500	.625	HDS1	R
1213210	12.000	13.500	.625	HDS7	R
1213211	12.000	13.500	.625	HDS7	R
	W/4 EA .313 LUGS				
1213380	12.125	13.875	.750	HDS1	R
1213382	12.125	13.875	.750	HDS2	R
1213490	12.125	14.000	1.000	HDS1	R
1213620	12.125	14.250	.875	HDS1	R
1215110	12.156	13.500	.625	HDS1	R
1215508	12.125	14.000	.855	HS8	R
1218238	12.188	13.688	.625	HS8	R
1219112	12.188	13.438	.625	HDS2	R
1219230	12.188	13.688	.625	HDS1	R
1219237	12.188	13.688	.625	HS7	R
□**1220055**	310.00	340.00	15.00	HS8	V
□**1220058**	310.00	340.00	15.00	HS8	R
□**1220224**	310.00	350.00	18.00	HDS2	V
□**1220228**	310.00	350.00	20.00	HDS2	D
□**1220254**	310.00	350.00	18.00	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□1220283	310.00	350.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□**1220289**	310.00	350.00	20.00	HS8	D
□1220343	310.00	354.00	20.50	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□1220720	310.00	370.00	25.00	HDS1	R
□**1220722**	310.00	370.00	25.00	HDS2	D
□1220960	310.00	370.00	25.40	HDSA1	R
□**1220972**	310.00	370.00	25.00	HDS2	R
□1221728	310.00	370.00	25.00	HDS1	R
	W/4 EA 4.77MM LUGS				
1223312	12.238	13.750	.750	HDS2	H
1225118	12.250	13.500	.625	HS8	R
1225125	12.250	13.750	.750	HS5	R
1225230	12.250	13.750	.625	HDS1	R
1225232	12.250	13.750	.625	HDS2	V
1225237	12.250	13.750	.625	HS7	R
1225238	12.250	13.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1225239	12.250	13.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1225240	12.250	13.750	.688	HDS1	R
1225241	12.250	13.750	.719	HDS1	R
1225245	12.250	13.750	.688	HDS2	R
	W/4 EA .125 LUGS				
1225247	12.250	13.750	.688	HDS1	V
1225250	12.250	13.750	.750	HDS1	R
1225252	12.250	13.750	.750	HDS2	R
1225257	12.250	13.750	.750	HS7	R
1225259	12.250	13.750	.750	HDS7	D
1225282	12.250	13.750	.688	HDS2	D
1225283	12.250	13.813	.625	HDS2	V
1225300	12.250	13.813	.719	HDS1	R
1225370	12.250	14.250	.812	HDS7	R
1225379	12.250	14.000	.688	HDS7	R
1225380	12.250	14.000	.750	HDS1	R
1225410	12.250	14.000	.875	HDS1	R
1225495	12.250	14.250	.665	HDS2	R
1225496	12.250	14.250	.665	HDS1	R
1225500	12.250	14.250	.719	HDS1	R
1225518	12.250	14.250	.500	HS8	R
1225523	12.250	14.250	.640	HDS2	D
1225525	12.250	14.250	.640	HDS2	R
1225529	12.250	14.250	.640	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1225532	12.250	14.250	.625	HDS2	R
1225540	12.250	14.250	.750	HDS1	R
1225541	12.250	14.250	.750	HDS1	R
	W/4 EA .125 LUGS				
1225542	12.250	14.250	.750	†HDS2	R
1225543	12.250	14.250	.750	HDS2	D
1225544	12.250	14.250	.750	HDS1	R
	W/4 EA .250 LUGS				
1225545	12.250	14.250	.750	HDS2	R
	W/4 EA .250 LUGS				
1225549	12.250	14.250	.750	HDS7	R
1225550	12.250	14.250	.813	HDS1	R
1225554	12.250	14.250	.813	HDS2	V
1225557	12.250	14.250	.813	HS7	R
1225573	12.250	14.250	.750	HDS2	V
1225580	12.250	14.250	1.000	HDS1	R
1225582	12.250	14.250	1.000	HDS2	D
1225583	12.250	14.250	1.000	HDS2	R
1225588	12.250	14.250	1.250	HDSA2	RD
1225589	12.250	14.250	1.250	HDS7	R
1225590	12.250	14.250	1.125	HDS1	R
1225600	12.250	14.250	1.250	HDS1	R
1225660	12.250	14.500	.875	HDS1	R
1225912	12.250	14.250	1.250	HDSE2	RR
	W/8 EA .125 LUBE HOLES on O.D.				
1225918	12.250	14.250	1.250	HDSE1	RR
	W/8 EA .125 LUBE HOLES ON O.D.				
1225920	12.250	13.750	1.105	HDSC1	R
1225928	12.250	13.750	.875	HDSC1	RD
1225960	12.250	14.250	1.250	HDSA1	RD
1228172	12.283	13.750	.688	HDS2	D
1238237	12.375	13.875	.625	HS7	R
1238240	12.375	13.875	.688	HDS1	R
1238242	12.373	13.875	.688	HDS2	D
1238250	12.375	13.875	.750	HDS1	R
1238257	12.375	13.875	.750	HS7	R
1238330	12.375	14.000	.750	HDS1	R
1238480	12.375	14.250	.875	HDS1	R
1238580	12.375	14.375	1.000	HDS1	R
1238620	12.375	14.500	.875	HDS1	R
1238630	12.375	14.500	1.000	HDS1	R
□1240230	315.00	355.00	20.00	HDS1	V
□1240234	315.00	355.00	16.00	HS4	V
□1240240	315.00	355.00	18.00	HDS1	V
□1240250	315.00	355.00	18.00	HDS1	R
□1240470	315.00	365.00	20.00	HDS1	R
1247300	12.469	14.000	.750	HDS1	R
□1248920	317.00	352.00	23.00	HDSA1	RD
1250017	12.500	13.500	.500	HS7	R
1250018	12.500	13.500	.500	HS8	R
1250027	12.500	13.500	.500	HS7	R
1250110	12.500	13.750	.625	HDS1	R
1250113	12.500	13.750	.625	HDS1	V
1250115	12.500	13.750	.625	HDS2	V
1250117	12.500	13.750	.625	HS7	R
1250118	12.500	13.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1250119	12.500	13.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1250128	12.500	13.750	.625	HS8	H
1250130	12.500	13.750	.750	HDS1	R
1250230	12.500	14.000	.625	HDS1	R
1250238	12.500	14.000	.625	HS8	R
1250239	12.500	14.000	.688	HDS7	R
1250240	12.500	14.000	.688	HDS1	R
1250242	12.500	14.000	.688	HDS2	R
1250244	12.500	14.000	.688	HDS2	R
	W/4 EA .125 LUGS				
1250249	12.500	14.000	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1250250	12.500	14.000	.750	HDS1	R
1250252	12.500	14.000	.750	HDS2	R
1250257	12.500	14.000	.750	HS7	R
1250258	12.500	14.000	.750	HS8	R
1250260	12.500	14.000	.813	HDS1	R
1250272	12.500	14.000	.875	HDSA2	D
1250350	12.500	14.250	.875	HDS1	V
1250410	12.500	14.250	.875	HDS1	R
1250540	12.500	14.500	.750	HDS1	R
1250542	12.500	14.500	.750	HDS2	R
1250549	12.500	14.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1250550	12.500	14.500	.813	HDS1	R
1250553	12.500	14.500	.813	HDS2	R
1250554	12.500	14.500	.813	HDS2	V
1250555	12.500	14.500	.813	HDS2	R
	W/4 EA .500 LUGS				
1250557	12.500	14.500	.813	HS7	R
1250558	12.500	14.500	.813	HS8	R
1250560	12.500	14.500	.875	HDS1	R
1250561	12.500	14.500	.875	HDS1	R
	W/4 EA .125 LUGS				
1250564	12.500	14.500	.875	HDS2	R
1250565	12.500	14.500	.875	HDS1	R
	W/4 EA .375 LUGS				
1250566	12.500	14.500	.875	HDS1	R
	W/4 EA .188 LUGS				
1250567	12.500	14.500	.875	HDS2	R
	W/4 EA .125 LUGS				
1250570	12.500	14.000	.906	HDS1	R
1250574	12.500	14.500	.906	HDS1	R
	W/4 EA .438 LUGS				
1250578	12.500	14.500	1.000	HS8	R
1250580	12.500	14.500	1.000	HDS1	R
1250582	12.500	14.500	1.000	HDS2	R
1250630	12.500	14.625	1.000	HDS1	R
1250660	12.500	14.750	.875	HDS1	R
1250680	12.500	14.750	1.000	HDS1	R
1250750	12.500	15.000	.813	HDS1	R
1250912	12.500	13.750	.906	HDSA2	RD
1250922	12.500	14.000	.875	HDSA2	D
1250924	12.500	14.000	.906	HDSA2	V
1250950	12.500	14.500	1.250	HDSA1	RD
1250952	12.500	14.500	1.250	HDSD1	RR
□**1252340**	318.00	360.00	20.00	HDS2	R
1256250	12.565	14.063	.750	HDS1	R
1256330	12.563	14.250	.750	HDS1	R
□1259100	320.00	350.00	16.00	HDS1	R
□1259160	320.00	355.00	16.00	HDS1	R
□1259220	320.00	360.00	16.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□1259240	320.00	358.00	19.00	HDS1	R
□**1259247**	320.00	360.00	18.00	HDS2	V
□1259280	320.00	360.00	20.00	HDS1	V
□**1259288**	320.00	360.00	20.00	HS8	R
	W/THREADED SPRING CONNECTOR				
1259300	12.590	14.125	1.000	HDS1	R
□**1259343**	320.00	364.00	20.00	HDS2	D
□1259370	320.00	360.00	18.00	HDS1	R
□1259380	320.00	360.00	20.00	HDS1	R
1259476	12.598	14.492	.750	HS6	R
□1259670	320.00	380.00	25.00	HDS1	R
□1259720	320.00	380.00	28.00	HDS7	R
□1259928	320.00	360.00	25.00	HDSB2	RD
□1259937	320.00	360.00	22.23	HDSC1	VD
□1259962	320.00	380.00	28.00	HDSA2	RD
□1260690	320.00	380.00	25.00	HDS1	R
□1260720	320.00	380.00	30.00	HDS1	R
□**1260732**	320.00	380.00	25.00	HDS2	R
1262112	12.625	13.875	.625	HDS2	R
1262340	12.620	14.250	.750	HDS1	R
1263117	12.625	13.875	.625	HS7	R
1263237	12.625	14.125	.750	HS7	R
1263238	12.625	14.125	.625	HS8	R
1263250	12.625	14.125	.750	HDS1	R
1263252	12.625	14.125	.750	HDS2	D
1263290	12.625	14.125	1.000	HDS1	R
1263330	12.625	14.250	.750	HDS1	R
1263480	12.625	14.500	.875	HDS1	R
1263490	12.625	14.500	1.000	HDS1	R
1263569	12.625	14.625	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1263580	12.625	14.625	1.000	HDS1	R
1263583	12.625	14.625	1.000	†HDS2	D
1263620	12.625	14.750	.875	HDS1	R
1263710	12.625	15.000	.875	HDS1	R
1268018	12.688	13.688	.500	HS8	R
1268130	12.688	14.000	.750	HDS1	R
1269290	12.688	14.250	.750	HDS1	R
1269557	12.688	14.688	.813	HS7	R
1269600	12.688	14.750	1.000	HDS1	R
1269700	12.688	15.000	.875	HDS1	R
1269800	12.688	15.250	.875	HDS1	R
1269900	12.688	16.500	.688	HDS2	R
1275219	12.750	14.250	.625	HDS7	H
1275238	12.750	14.250	.625	HS8	R
1275240	12.750	14.250	.688	HDS1	R
1275242	12.750	14.250	.688	HDS2	R
1275243	12.750	14.250	.688	HDS2	V
1275244	12.750	14.250	.688	HDS1	V
1275246	12.750	14.250	.688	HDS2	D
	W/4 EA .500 LUGS				
1275249	12.750	14.250	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1275250	12.750	14.250	.750	HDS1	R
1275252	12.750	14.250	.750	HDS2	R
1275255	12.750	14.250	.750	HS7	V
1275256	12.750	14.250	.688	HDS2	V
	W/4 EA .500 ADJ. LUGS				
1275257	12.750	14.250	.750	HS7	R
1275368	12.750	14.500	.625	HS8	R
1275373	12.750	14.500	.688	HDS2	V
1275560	12.750	14.750	.875	HDS1	R
1275569	12.750	14.750	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1275580	12.750	14.750	1.000	HDS1	R
1275582	12.750	14.750	1.000	HDS2	R
1275590	12.750	14.750	1.250	HDS1	R
1275660	12.750	15.000	.875	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1275740	12.750	15.250	.688	HDS1	R
1275760	12.750	15.250	.875	HDS1	R
1275820	12.750	15.500	.875	HDS1	R
1275892	12.750	15.750	1.000	HDS2	R
1275950	12.750	14.750	1.250	HDSB1	RD
1279282	12.795	14.370	.630	HDS2	D
1281250	12.813	14.312	.750	HDS1	R
1281260	12.813	14.375	.625	HDS1	V
1287912	12.875	14.125	.875	HDSA2	R
1288237	12.875	14.375	.625	HS7	R
1288257	12.875	14.375	.750	HS7	R
1288322	12.875	14.500	.688	HDS2	R
1288480	12.875	14.750	.875	HDS1	R
1288490	12.875	14.750	1.000	HDS1	R
1288580	12.875	14.875	1.000	HDS1	R
1288620	12.875	15.000	.875	HDS1	R
1288710	12.875	15.250	.875	HDS1	R
1288800	12.875	15.500	.875	HDS1	R
1293098	12.938	14.250	.625	HS8	R
1297218	12.975	14.500	.750	HS8	R
□**1299212**	330.00	370.00	20.00	HDS2	R
	W/4 EA 4.77MM LUGS				
□**1299242**	330.00	370.00	18.00	HDS2	V
□**1299252**	330.00	370.00	18.00	HDS2	R
□**1299262**	330.00	370.00	20.00	HDS2	R
□**1299272**	330.00	370.00	25.00	HDS2	R
□1299280	330.00	370.00	20.00	HDS1	R
□1299300	330.00	370.00	18.00	HDS1	R
□**1299302**	330.00	370.00	18.00	HDS2	D
□1299303	330.00	370.00	20.00	HDS1	R
□**1299312**	330.00	370.00	16.00	HDS2	R
□1299340	330.00	374.00	18.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
□**1299382**	330.00	374.00	20.00	HDS2	R
□1299700	330.00	390.00	25.00	HDS1	R
□**1299732**	330.00	390.00	28.00	HDS2	D
1300018	13.000	14.000	.500	HS8	R
1300019	13.000	14.000	.500	HS8	D
1300237	13.000	14.500	.625	HS7	R
1300240	13.000	14.500	.688	HDS1	R
1300242	13.000	14.500	.688	HDS1	R
	W/4 EA .125 LUGS				
1300243	13.000	14.500	.688	HDS1	R
	W/4 EA .375 LUGS				
1300244	13.000	14.500	.688	HDS2	R
1300249	13.000	14.500	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1300250	13.000	14.500	.750	HDS1	R
1300251	13.000	14.500	.750	HDS1	D
1300252	13.000	14.500	.750	HDS2	R
1300253	13.000	14.500	.750	HDS1	V
1300254	13.000	14.500	.688	HDS1	V
1300257	13.000	14.500	.750	HS7	R
1300258	13.000	14.500	.750	HS8	R
1300259	13.000	14.500	.750	HS8	D
1300283	13.000	14.500	.688	HDS2	V
1300290	13.000	14.500	1.000	HDS1	R
1300292	13.000	14.500	1.000	HDS2	R
1300330	13.000	14.625	.750	HDS1	R
1300337	13.000	14.625	.750	HS7	R
1300410	13.000	14.750	.875	HDS1	R
1300420	13.000	14.750	1.000	HDS1	R
1300444	13.000	14.812	.625	HDS1	R
1300480	13.000	14.875	.875	HDS1	R
1300527	13.000	15.000	.625	HS7	R
1300540	13.000	15.000	.750	HDS1	R
1300542	13.000	15.000	.750	HDS2	R
1300548	13.000	15.000	.750	HS8	R
1300549	13.000	15.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1300550	13.000	15.000	.813	HDS1	R
1300552	13.000	15.000	.813	HDS2	R
1300553	13.000	15.000	.813	HDS1	R
	W/4 EA .344 LUGS				
1300557	13.000	15.000	.813	HS7	R
1300558	13.000	15.000	.813	HS8	R
1300560	13.000	15.000	.875	HDS1	R
1300565	13.000	15.000	.875	HDS2	R
	W/4 EA .125 LUGS				
1300568	13.000	15.000	.813	HS8	D
1300570	13.000	15.000	.938	HDS1	R
1300573	13.000	15.000	.938	HDS1	V
1300580	13.000	15.000	1.000	HDS1	R
1300582	13.000	15.000	1.000	HDS2	V
1300585	13.000	15.000	1.000	HDS2	R
1300587	13.000	15.000	1.000	HS7	R
1300590	13.000	15.000	1.313	HDSE1	RR
1300600	13.000	15.000	1.000	HDS7	R
1300900	13.000	14.500	.875	HDSA1	RD
1300901	13.000	14.500	.875	HDSA2	D
1300920	13.000	14.500	1.000	HDSA1	RD
1300921	13.000	14.500	1.500	HDSD2	DD
1300929	13.000	14.500	.875	HDSB1	RD
1300973	13.000	15.375	1.375	HDSE2	DD
1300990	13.000	16.000	1.000	HDSA1	RD
1313257	13.125	14.625	.750	HS7	R
1313557	13.125	15.125	.813	HS7	R
1313560	13.125	15.125	.875	HDS1	R
1313620	13.125	15.250	.875	HDS1	R
1313710	13.125	15.500	.875	HDS1	R
1313800	13.125	15.750	.875	HDS1	R
1318102	13.188	14.500	.750	HDS2	R
1318222	13.187	14.688	.688	HDS2	R
□1318303	335.00	375.00	18.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
1318920	13.188	14.500	1.250	HDSD2	RR
1319017	13.188	14.188	.500	HS7	R
□1319430	335.00	380.00	20.00	HDS1	R
1322100	13.220	14.407	.625	HDS1	R
1325228	13.250	14.750	.625	HS8	R
1325230	13.250	14.750	.625	HDS1	R
1325232	13.250	14.750	.625	HDS2	D
1325235	13.250	14.750	.625	HDS1	V
1325237	13.250	14.750	.625	HS7	R
1325238	13.250	14.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1325239	13.250	14.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1325240	13.250	14.750	.688	HDS1	R
1325242	13.250	14.750	.688	HDS2	R
1325243	13.250	14.750	.688	HDS2	V
1325244	13.250	14.750	.688	HDS2	R
	W/4 EA .125 LUGS				
1325250	13.250	14.750	.750	HDS1	R
1325252	13.250	14.750	.750	HDS2	R
1325257	13.250	14.750	.750	HS7	R
1325290	13.250	14.750	1.000	HDS1	R
1325300	13.250	14.875	.688	HDS1	R
1325330	13.250	14.875	.750	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1325339	13.250	14.875	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1325340	13.250	14.875	.938	HDS1	R
1325380	13.250	15.000	.750	HDS1	R
1325389	13.250	15.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1325410	13.250	15.000	.875	HDS1	R
1325420	13.250	15.000	1.000	HDS1	R
1325480	13.250	15.125	.875	HDS1	R
1325540	13.250	15.250	.750	HDS1	R
1325549	13.250	15.250	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1325557	13.250	15.250	.813	HS7	R
1325560	13.250	15.250	.875	HDS1	R
1325569	13.250	15.250	.750	HDS7	R
1325580	13.250	15.250	1.000	HDS1	R
1325588	13.250	15.250	1.000	HS8	R
1325590	13.250	15.250	1.125	HDS1	R
1325600	13.250	15.250	1.250	HDS1	R
1325605	13.250	15.250	1.250	HDS2	R
1325606	13.250	15.250	1.250	HDS2	D
1325630	13.250	15.375	1.000	HDS1	R
1325660	13.250	15.500	.875	HDS1	R
1325680	13.250	15.500	1.000	HDS1	R
1325760	13.250	15.750	.875	HDS1	R
1325820	13.250	16.000	.875	HDS1	R
1325922	13.250	14.750	.906	HDSA2	D
1325928	13.250	14.750	.906	HDSA2	V
1325932	13.250	14.875	1.000	HDSA2	D
1325940	13.250	15.000	1.250	HDSA1	RD
1325950	13.250	15.250	1.000	HDSA1	RD
1331300	13.313	14.875	.750	HDS1	R
1331340	13.313	15.000	.750	HDS1	R
1331348	13.313	15.000	1.000	HS8	R
1331500	13.313	15.250	.875	HDS1	R
1331600	13.313	15.375	.875	HDS1	R
1331620	13.313	15.438	.875	HDS1	R
1331630	13.313	15.500	.875	HDS1	R
1331640	13.313	15.500	1.000	HDS1	R
1331740	13.313	15.750	.875	HDS1	R
1331800	13.313	16.000	.875	HDS1	R
1335340	13.358	15.000	.750	HDS1	R
1337712	13.375	15.750	.875	HDS2	R
	WITH 4 EA .252 FIXED LUGS				
1338017	13.375	14.375	.500	HS7	R
□1338233	340.00	380.00	20.00	HDS3	D
	W/4 EACH 12.70MM ADJ.LUGS				
1338235	13.375	14.875	.625	HS5	R
1338238	13.375	14.875	.625	HS8	R
1338250	13.375	14.875	.750	HDS1	R
1338257	13.375	14.875	.750	HS7	R
1338273	13.386	15.000	.875	HDSA2	V
□**1338288**	340.00	380.00	20.00	HS8	R
□**1338304**	340.00	380.00	20.00	HDS2	V
1338330	13.375	15.000	.750	HDS1	R
1338332	13.386	15.118	.787	HDS2	R
□1338340	340.00	384.00	20.00	HDS1	R
1338480	13.375	15.250	.875	HDS1	R
1338557	13.375	15.375	.813	HS7	R
1338560	13.375	15.375	.875	HDS1	R
1338577	13.386	15.354	1.000	HS7	R
1338587	13.375	15.375	1.000	HS7	R
1338620	13.375	15.500	.875	HDS1	R
1338710	13.375	15.750	.875	HDS1	R
1338800	13.375	16.000	.875	HDS1	R
□1339110	340.00	372.00	16.00	HDS1	R
□**1339114**	340.00	372.00	16.00	HDS2	V
□**1339128**	340.00	372.00	18.00	HS8	R
□1339211	340.00	380.00	18.00	HDS1	V
□**1339214**	340.00	380.00	18.00	HDS2	V
□**1339251**	340.00	380.00	20.00	HDS2	H
□**1339252**	340.00	380.00	20.00	HDS2	R
□1339300	340.00	380.00	20.00	HDS1	R
□1339301	340.00	380.00	18.00	HDS1	R
□**1339302**	340.00	380.00	18.00	HDS2	R
□1339490	340.00	390.00	25.40	HDS1	R
1339680	13.386	15.748	1.094	HDS1	R
1339690	13.386	15.740	.984	HDS1	R
1347017	13.469	14.469	.500	HS7	R
1350014	13.500	14.500	.500	HS8	R
1350018	13.500	14.500	.500	HS8	R
1350028	13.500	14.500	.500	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1350112	13.500	14.750	.625	HDS2	R
1350158	13.500	14.922	.500	HS8	R
1350212	13.500	15.000	.750	HDS2	V
1350230	13.500	15.000	.625	HDS1	R
1350232	13.500	15.000	.625	HDS2	D
	W/4 EA .125 LUGS				
1350233	13.500	15.000	.625	HDS2	D
1350235	13.500	15.000	.625	HS5	D
1350237	13.500	15.000	.625	HS7	R
1350238	13.500	15.000	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1350239	13.500	15.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1350240	13.500	15.000	.688	HDS1	R
1350245	13.500	15.000	.688	HDS1	V
1350250	13.500	15.000	.750	HDS1	R
1350251	13.500	15.000	.750	HDS1	R
	W/4 EA .125 LUGS				
1350252	13.500	15.000	.750	HDS2	R
1350253	13.500	15.000	.750	HDS1	D
1350257	13.500	15.000	.750	HS7	R
1350258	13.500	15.000	.750	HS8	R
1350259	13.500	15.000	.750	HS8	D
1350330	13.500	15.125	.750	HDS1	R
1350380	13.500	15.250	.750	HDS1	R
1350387	13.500	15.250	.750	HS7	R
1350410	13.500	15.250	.875	HDS1	R
1350444	13.500	15.312	.625	HDS1	R
1350480	13.500	15.375	.875	HDS1	R
1350510	13.500	15.438	.875	HDS1	R
1350520	13.500	15.500	.812	HDS7	R
1350527	13.500	15.500	.625	HS7	R
1350532	13.500	15.500	1.000	HDS2	R
	WITH SPRING KOVER				
1350540	13.500	15.500	.750	HDS1	R
1350542	13.500	15.500	.750	HDS2	R
1350549	13.500	15.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1350550	13.500	15.500	.813	HDS1	R
1350551	13.500	15.500	.813	HDS1	R
	W/4 EA .375 LUGS				
1350552	13.500	15.500	.813	HDS2	R
1350553	13.500	15.500	.813	HDS1	R
	W/4 EA .375 LUGS				
1350554	13.500	15.500	.813	HDS2	R
	W/4 EA .125 LUGS				
1350555	13.500	15.500	.813	HDS1	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1350557	13.500	15.500	.813	HS7	R
1350560	13.500	15.500	.875	HDS1	R
1350564	13.500	15.500	.813	HDS2	V
1350580	13.500	15.500	1.000	HDS1	R
1350583	13.500	15.500	1.000	HDS1	V
1350587	13.500	15.500	1.000	HS7	R
1350590	13.500	15.500	1.063	HDS1	R
	W/4 EA .438 LUGS				
1350591	13.500	15.500	1.250	HDS1	R
1350592	13.500	15.500	1.500	HDS1	R
1350660	13.500	15.750	.875	HDS1	R
1350690	13.500	15.752	1.000	HDS1	R
1350750	13.500	16.500	1.000	HDS1	R
1350760	13.500	16.000	.875	HDS1	R
1350900	13.500	17.300	1.000	HDS1	R
1350953	13.500	15.500	1.250	HDSE1	RR
1350954	13.500	15.500	.875	HDSA2	RD
1350962	13.500	15.500	1.375	HDSD2	R
1350970	13.500	15.500	1.250	HDSB1	RD
1350980	13.500	15.500	1.375	HDSD1	RR
1352480	13.520	15.500	.813	HDS1	R
1356257	13.563	15.063	.750	HS7	R
1358017	13.580	14.580	.500	HS7	R
□**1358418**	345.00	390.00	25.00	HS8	R
1363238	13.625	15.125	.625	HS8	R
1363490	13.625	15.500	1.000	HDS1	R
1363557	13.625	15.625	.813	HS7	R
1363587	13.625	15.625	1.000	HS7	R
1363790	13.625	16.125	1.250	HDS1	R
1369290	13.688	15.188	1.000	HDS1	R
1375017	13.750	14.750	.500	HS7	R
1375018	13.750	14.750	.500	HS8	R
1375110	13.750	15.000	.625	HDS1	R
1375130	13.750	15.000	.750	HDS1	R
1375131	13.750	15.000	.750	HDS1	D
1375133	13.750	15.000	.750	HDS2	R
	W/4 EA .125 LUGS				
1375224	13.750	15.250	.688	HDS2	V
1375230	13.750	15.250	.625	HDS1	R
1375236	13.750	15.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1375237	13.750	15.250	.625	HS7	R
1375238	13.750	15.250	.625	HS8	R
1375239	13.750	15.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1375240	13.750	15.250	.688	HDS1	R
1375242	13.750	15.250	.688	HDS2	R
1375250	13.750	15.250	.750	HDS1	R
1375257	13.750	15.250	.750	HS7	R
1375340	13.750	15.438	.750	HDS1	R
1375380	13.750	15.500	.750	HDS1	R
1375382	13.750	15.500	.750	HDS2	R
1375387	13.750	15.500	.750	HDS1	V
1375388	13.750	15.500	.750	HDS2	H
1375418	13.750	15.500	.875	HDSA1	VD
1375430	13.750	15.508	.750	HDS1	R
1375445	13.750	15.563	1.000	HDS1	R
1375522	13.750	15.750	.625	HDS2	R
1375527	13.750	15.750	.625	HS7	R
1375528	13.750	15.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1375529	13.750	15.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1375540	13.750	15.750	.750	HDS1	R
1375542	13.750	15.750	1.000	HDS2	R
1375543	13.750	15.750	.750	HDS1	V
1375544	13.750	15.750	.750	HDS2	V
1375550	13.750	15.750	.813	HDS1	R
1375553	13.750	15.750	.813	HDS2	V
1375557	13.750	15.750	.813	HS7	R
1375560	13.750	15.750	.875	HDS1	R
1375580	13.750	15.750	1.000	HDS1	R
1375588	13.750	15.750	1.000	HS8	R
1375660	13.750	16.000	.875	HDS1	R
1375680	13.750	16.000	1.000	HDS1	R
1375719	13.750	15.250	.625	HDS7	H
1375760	13.750	16.250	.875	HDS1	R
1375820	13.750	16.500	.875	HDS1	R
□**1377040**	350.00	380.00	16.00	HDS2	V
□**1377050**	350.00	380.00	16.00	HDS2	R
□1377100	350.00	380.00	16.00	HDS1	R
□**1377242**	350.00	390.00	18.00	HDS2	D
□1377280	350.00	390.00	18.00	HDS1	D
□1377287	350.00	390.00	18.00	HDS1	V
□**1378212**	350.00	390.00	18.00	HDS2	V
1378257	13.780	15.279	.750	HS7	R
□**1378268**	350.00	390.00	18.00	HS8	R
□**1378372**	350.00	380.00	20.50	HDS2	H
□**1378392**	380.00	425.00	20.00	HDS2	R
1378508	13.780	15.708	.787	HS8	R
□1378540	350.00	400.00	17.00	HDS1	R
1381600	13.813	16.000	1.000	HDS1	R
1381602	13.813	16.000	1.000	HDS2	R
1387238	13.875	15.375	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1387610	13.875	16.000	1.000	HDS7	R
1387912	13.875	15.125	.875	HDSA2	RD
1388257	13.875	15.375	.750	HS7	R
1388300	13.875	15.440	.750	HDS1	R
1388588	13.875	15.875	1.000	HS8	R
1388630	13.875	16.000	1.000	HDS1	R
1394230	13.938	15.438	.625	HDS1	R
1394240	13.938	15.438	.688	HDS1	R
1394250	13.938	15.438	.750	HDS1	R
1394257	13.938	15.437	.750	HS7	R
1394260	13.938	15.500	.750	HDS1	R
1394262	13.938	15.500	.750	HDS2	R
1394430	13.938	15.744	1.000	HDS1	R
1394432	13.938	15.744	1.000	HDS2	R
1394450	13.938	15.750	.938	HDS1	R
1394600	13.938	16.000	.875	HDS1	R
1394700	13.938	16.250	.875	HDS1	R
1394740	13.938	16.500	.875	HDS1	R
1394942	13.938	15.744	1.250	HDSA2	RD
1398232	13.980	15.500	.625	HDS2	R
1400017	14.000	15.000	.500	HS7	R
1400018	14.000	15.000	.500	HS8	R
1400222	14.000	15.510	.688	HDS2	D
1400223	14.000	15.510	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1400227	14.000	15.500	.625	HS7	D
1400230	14.000	15.500	.625	HDS1	R
1400232	14.000	15.500	.625	HDS2	R
1400233	14.000	15.500	.625	HDS2	D
1400234	14.000	15.500	.625	HDS2	V
1400235	14.000	15.500	.625	HDS2	R
	W/4 EA .125 LUGS				
1400237	14.000	15.500	.625	HS7	R
1400238	14.000	15.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1400239	14.000	15.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1400240	14.000	15.500	.688	HDS1	R
1400250	14.000	15.500	.750	HDS1	R
1400253	14.000	15.500	.750	HDS1	V
1400254	14.000	15.500	.750	HDS1	D
	W/4 EA .125 LUGS				
1400255	14.000	15.500	.750	HDS1	R
	W/4 EA .188 LUGS				
1400257	14.000	15.500	.750	HS7	R
1400258	14.000	15.500	.750	HS8	R
1400259	14.000	15.500	.750	HS8	D
1400300	14.000	15.562	.750	HDS1	R
1400303	14.000	15.562	.750	HDS2	R
1400309	14.000	15.562	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1400310	14.000	15.625	.625	HDS1	R
1400313	14.000	15.625	.625	HDS1	R
	W/4 EA .125 LUGS				
1400314	14.000	15.625	.625	HDS1	V
1400370	14.000	15.750	.688	HDS1	R
1400380	14.000	15.750	.750	HDS1	R
1400382	14.000	15.750	.750	HDS2	R
1400383	14.000	15.750	.750	HDS2	V
1400384	14.000	15.750	.750	HDS2	R
	W/4 EA .125 LUGS				
1400388	14.000	15.750	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1400389	14.000	15.750	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1400390	14.000	15.750	.813	HDS1	R
1400410	14.000	15.750	.875	HDS1	R
1400430	14.000	15.752	.813	HDS1	R
1400528	14.000	16.000	.625	HS8	R
1400538	14.000	16.000	.625	HS8	R
1400540	14.000	16.000	.750	HDS1	R
1400543	14.000	16.000	.750	HDS1	V
1400545	14.000	16.000	.750	HDS2	R
	W/4 EA .125 LUGS				
1400548	14.000	16.000	.750	HS7	R
1400549	14.000	16.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1400550	14.000	16.000	.813	HDS1	R
1400553	14.000	16.000	.813	HDS2	R
1400554	14.000	16.000	.813	HDS1	V
1400557	14.000	16.000	.813	HS7	R
1400560	14.000	16.000	.875	HDS1	R
1400578	14.000	16.000	1.000	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1400580	14.000	16.000	1.000	HDS1	R
1400582	14.000	16.000	1.000	HDS2	D
1400583	14.000	16.000	1.000	HDS1	V
1400585	14.000	16.000	1.000	HDS2	R
1400587	14.000	16.000	1.000	HS7	R
1400588	14.000	16.000	1.000	HS8	R
1400598	14.000	16.000	1.000	HS8	R
1400680	14.000	16.250	1.000	HDS1	R
1400683	14.000	16.250	1.000	HDS1	V
1400730	14.000	16.375	1.000	HDS1	R
1400750	14.000	16.500	.813	HDS1	R
1400753	14.000	16.500	.813	HDS1	V
1400780	14.000	16.500	1.000	HDS1	R
1400800	14.000	16.625	.625	HDS1	R
1400840	14.000	16.875	.750	HDS1	R
1400905	14.000	18.000	.750	HDS1	R
1400910	14.000	15.500	.985	HDSC1	R
1400925	14.000	15.500	1.000	HDSA1	RD
1400926	14.000	15.500	1.500	HDSD2	DD
1400928	14.000	15.500	.875	HDSC1	RD
1400950	14.000	16.000	1.375	HDSA1	RD
1400958	14.000	16.000	1.000	HDSA1	RD
1400965	14.000	16.250	1.000	HDSA2	RD
1400970	14.000	16.000	1.375	HDSD1	RR
1400972	14.000	16.000	1.375	HDSD2	RR
1400981	14.000	16.750	.968	†HDSB2	RD
1401257	14.013	15.513	.750	HS7	R
1402170	14.016	15.500	.688	HDS2	D
1406557	14.063	16.063	.813	HS7	R
1413257	14.125	15.625	.750	HS7	R
1413762	14.125	16.712	.875	HDS2	D
1413805	14.125	16.745	.875	HDS2	D
1413975	14.125	16.745	1.703	HDSD2	DD
1417047	14.173	15.354	.625	HS7	R
□1417060	360.00	392.00	15.88	HDS1	R
□**1417075**	360.00	390.00	18.00	HS5	H
1417102	14.173	15.433	.787	HDS2	D
□1417130	360.00	392.00	20.00	HDS1	R
□1417220	360.00	404.00	16.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□**1417222**	360.00	398.00	20.00	HDS2	R
□**1417245**	360.00	400.00	17.00	HDS2	R
	W/4 EA 4.77MM LUGS				
□1417250	360.00	400.00	18.00	HDS1	R
□1417251	360.00	400.00	20.00	HDS1	V
□**1417252**	360.00	400.00	17.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
□**1417253**	360.00	400.00	20.00	HDS2	R
1417257	14.173	15.673	.750	HS7	R
1417258	14.173	15.673	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□**1417268**	360.00	400.00	18.00	HS8	R
□**1417275**	360.00	400.00	25.00	HDS2	R
□1417287	360.00	400.00	20.00	HS7	R
□1417310	360.00	400.00	20.00	HDS1	R
□1417337	360.00	400.00	18.00	HDS1	V
□**1417342**	360.00	404.00	20.00	HDS2	R
□1417351	360.00	404.00	20.00	HDS7	R
□**1417442**	360.00	390.00	15.88	HDS2	R
□**1417588**	360.00	410.80	22.26	HS8	R
□1417720	360.00	420.00	25.00	HDS1	R
1417740	14.173	16.734	.844	HDS1	R
1417743	14.173	16.734	.844	HDS1	R
	W/6 EA .063 LUGS				
1417760	14.173	16.712	.875	HDS2	D
1417973	14.173	16.712	1.703	HDSD2	DD
1418118	14.188	15.438	.625	HS8	R
1418120	14.188	15.500	.688	HDS1	D
1419140	14.188	15.500	.688	HDS1	R
1419300	14.188	15.750	.750	HDS1	R
1419440	14.188	16.000	.875	HDS1	R
1419550	14.188	16.188	.813	HDS1	R
1419557	14.188	16.188	.813	HS7	R
1419600	14.188	16.250	.875	HDS1	R
1419700	14.188	16.500	.875	HDS1	R
1419790	14.188	16.742	.875	HDS1	R
1419800	14.188	16.750	.875	HDS1	R
1425250	14.250	15.750	.750	HDS1	R
1425252	14.250	15.750	.750	HDS2	R
1425257	14.250	15.750	.750	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1425258	14.250	15.750	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1425410	14.250	16.000	.875	HDS1	R
1425520	14.250	16.250	.625	HDS1	R
1425550	14.250	16.250	.813	HDS1	R
1425552	14.250	16.250	.813	HDS2	R
1425557	14.250	16.250	.813	HS7	R
1425558	14.250	16.250	.813	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1425559	14.250	16.250	.813	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1425560	14.250	16.250	.875	HDS1	R
1425580	14.250	16.250	1.000	HDS1	R
1425585	14.250	16.250	1.000	HDS2	R
1425587	14.250	16.250	1.000	HS7	R
1425660	14.250	16.500	.875	HDS1	R
1425760	14.250	16.750	.875	HDS1	R
1425820	14.250	17.000	.875	HDS1	R
1425920	14.250	15.750	1.000	HDSA1	RD
1425950	14.250	16.250	1.000	HDSB1	RD
1432343	14.325	16.000	.688	HDS2	D
□1433962	364.00	420.00	25.00	HDSA2	RD
□1433970	364.00	420.00	25.00	HDSC7	RD
□1436170	365.00	400.00	17.00	HDS1	R
1437240	14.370	15.938	.709	HDS1	R
□**1437242**	365.00	405.00	18.00	HDS2	R
□**1437254**	365.00	405.00	18.00	HDS2	V
□1437283	365.00	405.00	18.00	HDS3	R
	W/6 EA 12.70MM ADJ. LUGS				
1438215	14.375	15.875	.750	HS8	V
1438250	14.375	15.875	.750	HDS1	R
1438258	14.375	15.875	.750	HS8	R
1438320	14.375	16.000	.688	HDS1	R
1438321	14.375	16.000	.688	HDS2	D
1438322	14.375	16.000	.688	HDS2	R
1438323	14.375	16.000	.688	HDS2	R
	W/4 EA .125 LUGS				
1438324	14.375	16.000	.688	HDS2	D
	W/4 EA .125 LUGS				
1438329	14.375	16.000	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1438547	14.375	16.375	.750	HS7	R
1440901	14.400	15.587	.875	HDSB1	RD
1444230	14.438	15.938	.625	HDS1	R
1450018	14.500	15.500	.500	HS8	R
1450027	14.500	15.500	.625	HS7	R
1450140	14.500	15.750	.750	†HDS1	R
1450212	14.500	15.984	.688	HDS2	R
1450214	14.500	15.984	.688	HDS2	R
	W/4 EA .125 LUGS				
1450220	14.500	16.000	.688	HDS7	R
1450228	14.500	16.000	.625	HS8	V
	W/HOOK & EYE SPRING CONNECTOR				
1450230	14.500	16.000	.625	HDS1	V
1450240	14.500	16.000	.688	HDS1	R
1450241	14.500	16.000	.688	HDS1	R
	W/4 EA .125 LUGS				
1450242	14.500	16.000	.688	HDS2	R
1450244	14.500	16.000	.688	HDS2	R
	W/4 EA .125 LUGS				
1450249	14.500	16.000	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1450250	14.500	16.000	.750	†HDS1	R
	W/BORE-TITE				
1450252	14.500	16.000	.750	HDS2	R
1450253	14.500	16.000	.750	HDS1	D
1450257	14.500	16.000	.750	HS7	R
1450290	14.500	16.000	1.000	HDS1	R
1450360	14.500	16.250	.625	HDS1	R
1450380	14.500	16.250	.750	HDS1	R
1450390	14.500	16.250	.813	HDS1	R
1450410	14.500	16.250	.875	HDS1	R
1450420	14.500	16.250	1.000	HDS1	R
1450540	14.500	16.500	.750	HDS1	R
1450542	14.500	16.500	.750	HDS2	R
1450549	14.500	16.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1450550	14.500	16.500	.813	HDS1	R
1450553	14.500	16.500	.813	HDS2	D
1450557	14.500	16.500	.813	HS7	R
1450559	14.500	16.500	.813	HDS7	R
1450570	14.500	16.500	.938	HDS1	R
1450580	14.500	16.500	1.000	HDS1	R
1450583	14.500	16.500	1.000	HDS1	V
1450660	14.500	16.750	.875	HDS1	R
1450757	14.500	16.000	.688	HDS1	V
1450760	14.500	17.000	.875	HDS1	R
1450900	14.500	18.250	.875	HDS1	R
1450922	14.500	16.000	.870	HDSC2	DD
1450951	14.500	16.500	1.750	HDSE1	RR
1456200	14.563	16.000	.625	HDS1	R
□**1456232**	370.00	410.00	16.00	HDS2	R
□1456240	370.00	410.00	18.00	HDS1	R
□1456490	370.00	420.00	25.00	HDS1	R
□1456491	370.00	420.00	25.00	HDS1	R
	W/4 EA 4.77MM LUGS				
□1457230	360.00	410.00	17.00	HDS1	R
1459743	14.593	17.000	.875	HDS2	R
1462018	14.625	15.625	.500	HS8	R
1462208	14.625	16.133	.500	HS8	R
1462330	14.625	16.250	.750	HDS1	V
1462912	14.625	16.133	1.250	HDSE2	RR
	W/8 EA .125 LUBE HOLES on O.D.				
1462918	14.625	16.133	1.250	HDSE1	RR
	W/8 EA .125 LUBE HOLES ON O.D.				
1463250	14.625	16.125	.750	HDS1	R
1463252	14.625	16.125	.750	HDS2	R
1463257	14.625	16.125	.750	HS7	R
1463330	14.625	16.250	.750	HDS1	R
1463480	14.625	16.500	.875	HDS1	R
1463565	14.625	16.625	.875	HDS2	R
1463600	14.625	16.742	1.000	HDS1	R
1463630	14.625	16.750	1.000	HDS1	R
1463710	14.625	17.000	.875	HDS1	R
1463800	14.625	17.250	.875	HDS1	R
1468129	14.688	16.000	.688	HDS2	D
1469230	14.688	16.188	.625	HDS1	R
1469257	14.688	16.188	.750	HS7	R
1469557	14.688	16.688	.813	HS7	R
1475218	14.750	16.250	.750	HS8	V
	W/HOOK & EYE SPRING CONNECTOR				
1475228	14.750	16.250	.625	HS8	V
1475230	14.750	16.250	.625	HDS1	R
1475232	14.750	16.250	.625	HDS1	R
	W/4 EA .125 LUGS				
1475237	14.750	16.250	.625	HS7	R
1475238	14.750	16.250	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1475239	14.750	16.250	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1475240	14.750	16.250	.688	HDS1	R
1475242	14.750	16.250	.688	HDS1	R
	W/4 EA .125 LUGS				
1475243	14.750	16.250	.688	HDS2	D
1475244	14.750	16.250	.688	HDS1	V
	W/4 EA .125 LUGS				
1475245	14.750	16.250	.688	HDS2	D
	W/4 EA .313 LUGS				
1475250	14.750	16.250	.750	HDS1	R
1475252	14.750	16.250	.750	HDS2	R
1475253	14.750	16.250	.750	HDS2	V
1475257	14.750	16.250	.750	HS7	R
1475258	14.750	16.250	.750	HS8	R
1475302	14.750	16.252	.750	HDS2	R
1475370	14.750	16.500	.688	HDS1	R
1475371	14.750	16.500	.688	HDS1	R
	W/4 EA .375 LUGS				
1475372	14.750	16.500	.688	HDS2	R
1475374	14.750	16.500	.688	HDS2	R
	W/4 EA .375 LUGS				
1475377	14.750	16.500	.688	HS7	R
1475378	14.750	16.500	.688	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1475379	14.750	16.500	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1475383	14.750	16.500	.688	HDS2	V
1475410	14.750	16.500	.875	HDS1	R
1475411	14.750	16.500	.875	HDS2	R
1475420	14.750	16.500	1.000	HDS1	R
1475430	14.750	16.500	.688	HDS7	R
1475557	14.750	16.750	.813	HS7	R
1475560	14.750	16.750	.875	HDS1	R
1475561	14.750	16.750	.875	HDS1	R
	W/4 EA .125 LUGS				
1475660	14.750	17.000	.875	HDS1	R
1475760	14.750	17.250	.875	HDS1	R
1475820	14.750	17.500	.875	HDS1	R
1475942	14.750	16.500	1.250	HDSD2	RR
□1476380	375.00	420.00	18.00	HDS1	R
□**1476432**	375.00	420.00	18.00	HDS2	R
1487337	14.875	16.500	.750	HDS1	V
1488252	14.875	16.375	.750	HDS2	R
1488257	14.875	16.375	.750	HS7	R
1488330	14.875	16.500	.750	HDS1	R
1488332	14.875	16.500	.750	HDS2	R
1488480	14.875	16.750	.875	HDS1	R
1488557	14.875	16.875	.813	HS7	R
1488560	14.875	16.875	.875	HDS1	R
1488580	14.875	16.875	1.000	HDS1	R
1488587	14.875	16.875	1.000	HS7	R
1488620	14.875	17.000	.875	HDS1	R
1488710	14.875	17.250	.875	HDS1	R
1488800	14.875	17.500	.875	HDS1	R
1488935	14.875	16.500	1.250	HDSD2	RR
1491600	14.906	17.000	.875	HDS1	R
1491603	14.906	17.000	.875	HDS2	R
1494257	14.938	16.438	.750	HS7	R
□1496223	380.00	420.00	16.00	HDS3	R
	W/4 EA .500 ADJ. LUGS				
□**1496238**	380.00	420.00	20.00	HS8	D
□1496247	380.00	420.00	20.00	HS7	R
□**1496248**	380.00	420.00	20.00	HS8	H
□1496250	380.00	420.00	20.00	HDS1	R
□**1496252**	380.00	420.00	20.00	HDS2	R
□**1496254**	380.00	420.00	20.00	HDS2	R
	W/4 EA 9.50MM LUGS				
□**1496256**	380.00	420.00	20.00	HDS2	V
□1496257	380.00	418.00	19.00	HS7	R
□**1496258**	380.00	418.00	19.00	HS8	R
□**1496259**	380.00	420.00	20.00	HDS2	D
□1496263	380.00	420.00	20.00	HDS3	D
	W/4 EACH 12.70MM ADJ LUGS				
□**1496268**	380.00	420.00	19.05	HS8	V
□1496283	380.00	420.00	16.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□**1496289**	380.00	420.00	20.00	HS8	D
□**1496308**	380.00	420.00	20.00	HS8	R
□**1496384**	380.00	424.00	20.00	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□**1496470**	380.00	430.00	19.00	HDS2	R
□**1496508**	380.00	430.00	20.00	HS8	R
□1496671	380.00	440.00	25.00	HDS1	R
□**1496672**	380.00	440.00	25.00	HDS2	R
□1496944	380.00	420.00	22.20	HDSA2	VD
□1496972	380.00	440.00	28.00	HDSA2	RD
1500017	15.000	16.000	.500	HS7	R
1500018	15.000	16.000	.500	HS8	R
1500157	15.000	16.420	.500	HS7	R
1500222	15.000	16.500	.750	HDS2	R
1500240	15.000	16.500	.688	HDS1	R
1500243	15.000	16.500	.688	HDS2	V
1500244	15.000	16.500	.688	HDS2	D
1500245	15.000	16.500	.688	HDS2	R
1500248	15.000	16.500	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1500249	15.000	16.500	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1500250	15.000	16.500	.750	HDS1	R
1500252	15.000	16.500	.750	HDS1	D
1500253	15.000	16.500	.750	HDS1	V
1500254	15.000	16.500	.750	HDS2	V
1500257	15.000	16.500	.750	HS7	R
1500258	15.000	16.500	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1500283	15.000	16.500	.688	HDS2	V
1500290	15.000	16.500	1.000	HDS1	R
1500292	15.000	16.500	1.000	HDS2	R
1500380	15.000	16.750	.750	HDS1	R
1500383	15.000	16.750	.750	HDS1	V
1500410	15.000	16.750	.875	HDS1	R
1500432	15.000	16.750	1.125	HDS2	R
1500470	15.000	16.875	.750	HDS1	R
1500480	15.000	16.875	.875	HDS1	R
1500510	15.000	17.000	.812	HDS7	R
1500522	15.000	17.000	1.000	HDS2	R
	WITH SPRING KOVER				
1500528	15.000	17.000	.625	HS8	R
1500540	15.000	17.000	.750	HDS1	R
1500542	15.000	17.000	.750	HDS2	D
1500543	15.000	17.000	.750	HDS2	R
1500549	15.000	17.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1500550	15.000	17.000	.813	HDS1	R
1500552	15.000	17.000	.813	HDS2	R
1500553	15.000	17.000	.813	HDS2	V
1500555	15.000	17.000	.813	HDS1	R
	W/4 EA .125 LUGS				
1500556	15.000	17.000	.813	HDS1	R
	W/4 EA .063 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1500557	15.000	17.000	.813	HS7	R
1500558	15.000	17.000	.813	HS8	R
1500560	15.000	17.000	.875	HDS1	R
1500563	15.000	17.000	.875	HDS2	R
1500564	15.000	17.000	.875	HDS1	V
1500568	15.000	17.000	.875	HS8	R
1500580	15.000	17.000	1.000	HDS1	R
1500590	15.000	17.000	1.250	HDS1	R
1500660	15.000	17.250	.875	HDS1	R
1500680	15.000	17.250	1.000	HDS1	R
1500760	15.000	17.500	.875	HDS1	R
1500770	15.000	17.500	.938	HDS1	R
1500772	15.000	17.500	.938	HDS2	R
1500774	15.000	17.500	.938	HDS1	R
	W/4 EA .125 LUGS				
1500779	15.000	17.500	.938	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1500780	15.000	17.500	1.000	HDS1	R
1500790	15.000	17.500	1.125	HDS1	R
1500800	15.000	17.500	1.250	HDS1	R
1500820	15.000	17.750	.875	HDS1	R
1500822	15.000	17.750	.875	HDS2	R
1500902	15.000	16.188	1.250	HDSE2	RR
1500920	15.000	16.500	1.250	HDSD1	RR
1500950	15.000	17.000	1.250	HDSA1	RD
1500951	15.000	17.000	.875	HDSA1	RD
1500956	15.000	17.000	.875	HDSC1	RD
	W/4 EA .125 LUGS				
1500972	15.000	17.375	1.750	HDSD1	RR
1500973	15.000	17.500	1.000	HDSA1	RD
1500974	15.000	17.500	1.250	HDSE2	RR
1512912	15.125	16.375	.875	HDSA2	RD
1513330	15.125	16.750	.750	HDS1	R
1518448	15.188	17.000	.625	HS8	R
1519110	15.188	16.500	.625	HDS1	R
1525158	15.250	16.625	.500	HS8	R
1525162	15.250	16.625	.625	HS8	R
1525168	15.250	16.625	.593	HS8	R
1525220	15.250	16.754	.750	HDS1	R
1525228	15.250	16.750	.688	HDS1	H
1525240	15.250	16.750	.688	HDS1	R
1525241	15.250	16.750	.688	HDS1	R
	W/4 EA .375 LUGS				
1525242	15.250	16.750	.688	HDS2	R
1525249	15.250	16.750	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1525250	15.250	16.750	.750	HDS1	R
1525252	15.250	16.750	.750	HDS2	R
1525253	15.250	16.750	.750	HDS2	V
1525257	15.250	16.750	.750	HS7	R
1525278	15.250	16.750	.875	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1525302	15.250	16.752	.688	HDS2	R
1525380	15.250	17.000	.750	HDS1	R
1525410	15.250	17.000	.875	HDS1	R
1525511	15.250	17.250	.625	HDS7	R
1525525	15.250	17.250	.625	HDS2	R
	W/4 EA .500 ADJ. LUGS				
1525540	15.250	17.250	.750	HDS1	R
1525542	15.250	17.250	.750	HDS2	R
1525549	15.250	17.250	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1525550	15.250	17.250	.813	HDS1	R
1525554	15.250	17.250	.813	HDS2	R
1525557	15.250	17.250	.813	HS7	R
1525560	15.250	17.250	.875	HDS1	R
1525562	15.250	17.250	.875	HDS1	R
	W/4 EA .250 LUGS				
1525580	15.250	17.250	1.000	HDS1	R
1525590	15.250	17.250	1.125	HDS1	R
1525660	15.250	17.500	.875	HDS1	R
1525740	15.250	17.750	.750	HDS1	R
1525760	15.250	17.750	.875	HDS1	R
1525820	15.250	18.000	.875	HDS1	R
1525952	15.250	17.250	1.500	HDSD2	RR
1531300	15.313	16.875	.688	HDS1	R
1531310	15.313	16.875	.750	HDS1	R
1531400	15.313	17.000	.750	HDS1	R
1531500	15.313	17.250	.875	HDS1	R
1531530	15.313	17.313	.688	HDS1	R
1531532	15.312	17.312	.688	HDS2	V
1531534	15.313	17.313	.688	HDS1	R
	W/4 EA .125 LUGS				
1531537	15.313	17.313	.688	HDS1	V
1531540	15.313	17.313	.750	HDS1	R
1531541	15.313	17.313	.750	HDS1	R
	W/4 EA .125 LUGS				
1531550	15.313	17.313	.813	HDS1	R
1531640	15.313	17.500	.875	HDS1	R
1531740	15.313	17.750	.875	HDS1	R
1531800	15.313	18.000	.875	HDS1	R
1531950	15.313	17.313	.875	HDSA1	RD
1534258	15.344	16.875	.750	HS8	R
1534900	15.335	18.875	.875	HDS1	R
□**1535242**	390.00	430.00	18.00	HDS2	R
□**1535248**	390.00	430.00	20.00	HDS2	D
1535257	15.350	16.850	.750	HS7	R
□**1535284**	390.00	430.00	20.00	HDS2	V
□1535300	390.00	430.00	16.00	HDS1	R
□**1535304**	390.00	430.00	16.00	HDS2	R
□1535340	390.00	434.00	18.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□**1535345**	390.00	434.00	20.00	HS5	R
□**1535382**	390.00	434.00	20.00	HDS2	R
□1535710	390.00	450.00	25.00	HDS1	R
□1535934	390.00	434.00	22.00	HDSA2	V
1536690	15.359	17.709	.906	HDS1	R
1536691	15.359	17.709	.906	HDS7	R
1537142	15.375	16.625	.875	HDSA2	R
1538257	15.375	16.875	.750	HS7	R
1538470	15.375	17.250	.750	HDS1	R
1538530	15.375	17.375	.688	HDS1	R
1538540	15.375	17.375	.750	HDS1	R
1538550	15.375	17.375	.813	HDS1	R
1538552	15.375	17.375	.813	HDS2	R
1538554	15.375	17.375	.813	HDS2	R
	W/4 EA .375 LUGS				
1538557	15.375	17.375	.813	HS7	R
1538580	15.375	17.375	1.000	HDS1	R
1538581	15.375	17.375	1.000	HDS1	R
	W/4 EA .125 LUGS				
1538587	15.375	17.375	1.000	HS7	R
1538630	15.375	17.500	1.000	HDS1	R
1538700	15.375	17.728	.875	HDS1	R
1538710	15.375	17.750	.875	HDS1	R
1544219	15.438	16.938	.750	HS8	D
1547530	15.472	17.502	.709	HDS1	R
1550018	15.500	16.500	.500	HS8	R
1550028	15.500	16.500	.500	HS8	D
1550130	15.500	16.750	.750	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1550137	15.500	16.750	.750	HS7	R
1550160	15.500	16.875	.625	HDS1	R
1550162	15.500	16.875	.625	HDS2	R
1550163	15.500	16.875	.625	HDS2	V
1550169	15.500	16.875	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1550250	15.500	17.000	.750	HDS1	R
1550252	15.500	17.000	.750	HDS1	R
	W/4 EA .125 LUGS				
1550253	15.500	17.000	.750	HDS1	V
	W/8 EA .375 LUGS				
1550254	15.500	17.000	.750	HDS1	V
	W/4 EA .188 LUGS				
1550255	15.500	17.000	.750	HDS2	R
	W/4 EA .125 LUGS				
1550257	15.500	17.000	.750	HS7	R
1550258	15.500	17.000	.750	HS8	R
1550283	15.500	17.000	.750	HDS2	V
	W/4 EA .188 LUGS				
1550284	15.500	17.000	.750	HDS2	V
1550290	15.500	17.000	1.000	HDS1	R
1550292	15.500	17.000	1.000	HDS2	R
1550458	15.500	16.875	.625	HS8	R
1550488	15.500	17.375	.813	HS8	R
1550528	15.500	17.500	1.000	HS8	R
1550530	15.500	17.500	.688	HDS1	R
1550540	15.500	17.500	.750	HDS1	R
1550541	15.500	17.500	.750	HDS1	R
	W/4 EA .125 LUGS				
1550542	15.500	17.500	.750	HDS2	R
1550543	15.500	17.500	.750	HDS2	V
1550544	15.500	17.500	.813	HDS2	V
1550549	15.500	17.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1550550	15.500	17.500	.813	HDS1	R
1550551	15.500	17.500	.813	HDS7	R
	W/4 EA .250 LUGS				
1550552	15.500	17.500	.813	HDS1	R
	W/4 EA .375 LUGS				
1550553	15.500	17.500	.813	HDS2	R
1550554	15.500	17.500	.813	HDS1	V
1550555	15.500	17.500	.813	HDS2	R
	W/4 EA .125 LUGS				
1550557	15.500	17.500	.813	HS7	R
1550558	15.500	17.500	.813	HDS2	D
1550559	15.500	17.500	.813	HDS7	R
1550560	15.500	17.500	.875	HDS1	R
1550565	15.500	17.500	.813	HDS2	R
	W/4 EA .250 LUGS				
1550570	15.500	17.500	.950	HDS1	R
1550575	15.500	17.500	.813	HDS2	R
	W/4 EA .375 LUGS				
1550580	15.500	17.500	1.000	HDS1	R
1550587	15.500	17.500	1.000	HS7	R
1550600	15.500	17.550	1.000	HDS1	R
1550660	15.500	17.750	.875	HDS1	R
1550680	15.500	17.750	1.000	HDS1	R
1550760	15.500	18.000	.875	HDS1	R
1550780	15.500	18.000	1.000	HDS1	R
1550782	15.500	18.000	1.000	HDS2	R
1550789	15.500	18.000	1.000	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1550792	15.500	18.000	1.000	HDS2	D
1550920	15.500	17.000	1.375	HDSD1	RR
□1551038	394.00	420.00	16.00	HMS46	R
1551568	15.515	17.515	.813	HS8	R
□**1555185**	395.00	430.00	18.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
□1555193	395.00	430.00	18.00	HDS1	V
1556190	15.563	16.929	.709	HDS1	R
1556560	15.563	17.625	.875	HDS1	R
1560146	15.604	16.974	.625	HDS1	R
1562118	15.625	16.875	1.250	HDSD2	D
1563250	15.625	17.125	.750	HDS1	R
1563257	15.625	17.125	.750	HS7	R
1563480	15.625	17.500	.875	HDS1	R
1563560	15.625	17.625	.875	HDS1	R
1563588	15.625	17.625	1.000	HS8	R
1563600	15.625	17.727	.875	HDS1	R
1563620	15.625	17.750	.875	HDS1	R
1563710	15.625	18.000	.875	HDS1	R
□1574220	400.00	440.00	18.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
1574240	15.740	17.250	.688	HDS1	R
1574243	15.740	17.250	.688	HDS2	D
1574245	15.740	17.250	.688	HDS2	R
□1574250	400.00	444.00	20.00	HDS7	R
□**1574264**	400.00	440.00	20.00	HDS2	V
□1574267	400.00	440.00	20.00	HS7	R
□1574340	400.00	444.00	22.00	HDS1	R
□1574350	400.00	444.00	20.00	HDS1	R
□**1574368**	400.00	444.00	13.50	HS8	R
1574443	15.748	17.717	.890	HS4	R
□**1574445**	400.00	447.00	20.00	HS5	R
□**1574488**	400.00	450.00	25.00	HS8	R
□1574500	400.00	450.00	20.00	HDS1	R
□**1574503**	400.00	450.00	20.00	HDS2	R
□**1574504**	400.00	450.00	17.50	HDS2	R
	W/4 EA 3.20MM LUGS				
□1574520	400.00	450.00	20.00	HDS1	V
□**1574558**	400.00	451.00	22.22	HS8	R
□1574573	400.00	450.00	20.00	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1574722	15.748	18.110	.984	HDS2	R
□1574972	400.00	460.00	28.00	HDSA2	RD
1575110	15.750	17.000	.625	HDS1	R
1575210	15.750	17.250	.750	HDS7	H
□**1575212**	400.00	440.00	20.00	HDS2	R
1575240	15.750	17.250	.688	HDS1	R
1575242	15.750	17.250	.688	HDS1	R
	W/4 EA .250 LUGS				
1575243	15.750	17.250	.688	HDS2	D
1575244	15.750	17.250	.688	HDS1	V
1575245	15.750	17.250	.688	HDS2	R
1575246	15.750	17.250	.688	HDS2	R
	W/4 EA .250 LUGS				
1575248	15.750	17.250	.685	HS8	R
1575249	15.750	17.250	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1575252	15.750	17.250	.750	HDS1	R
	W/4 EA .188 LUGS				
1575253	15.750	17.250	.750	HDS2	R
1575254	15.750	17.250	.787	HDS2	R
1575257	15.750	17.250	.750	HS7	R
□1575280	400.00	440.00	20.00	HDS1	R
1575283	15.750	17.250	.688	HDS2	V
□1575337	400.00	440.00	20.00	HDS1	V
1575370	15.750	17.500	.688	HDS1	R
1575377	15.750	17.500	.688	HDS1	V
□**1575382**	400.00	444.00	20.00	HDS2	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1575532	15.750	17.750	.688	HDS2	R
1575560	15.750	17.750	.875	HDS1	R
1575580	15.750	17.750	1.000	HDS1	R
1575587	15.750	17.750	1.000	HS7	R
1575620	15.750	17.875	.875	HDS1	R
1575660	15.750	18.000	.875	HDS1	R
1575680	15.750	18.000	1.000	HDS1	R
□1575720	400.00	460.00	25.00	HDS1	R
1575760	15.750	18.250	.875	HDS1	R
1575820	15.750	18.500	.875	HDS1	R
1575843	15.750	18.625	.875	HDS1	V
1575870	15.750	18.625	.875	HDS1	R
1575910	15.750	17.750	1.250	HDSA1	RD
1579557	15.785	17.785	.813	HS7	R
1581200	15.813	17.312	.813	HDS1	R
1582800	15.820	17.500	.688	HDS1	R
1587330	15.875	17.500	.750	HDS7	H
1587331	15.875	17.500	.750	HDS7	R
1587638	15.875	18.000	.916	HS8	R
1588257	15.875	17.375	.750	HS7	R
1588332	15.875	17.500	.750	HDS2	D
1588480	15.875	17.750	.875	HDS1	R
1588550	15.875	17.875	.813	HDS1	R
1588552	15.875	17.875	.813	HDS2	R
1588560	15.875	17.875	.875	HDS1	R
1588563	15.875	17.875	.875	HDS1	R
1588620	15.875	18.000	.875	HDS1	R
1594160	15.938	17.313	.625	HDS1	R
1594161	15.938	17.313	.625	HDS1	R
	W/4 EA .125 LUGS				
1594162	15.938	17.313	.625	HDS1	R
	W/4 EA .063 LUGS				
1600014	16.000	17.000	.500	HS4	R
1600017	16.000	17.000	.500	HS7	R
1600018	16.000	17.000	.500	HS8	R
1600019	16.000	17.000	.500	HS8	D
1600211	16.000	17.500	.625	HDS7	H
1600234	16.000	17.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1600238	16.000	17.500	.625	HS8	R
1600240	16.000	17.500	.688	HDS1	R
1600241	16.000	17.500	.688	HDS1	R
	W/4 EA .063 LUGS				
1600242	16.000	17.500	.688	HDS2	R
1600243	16.000	17.500	.688	HDS1	R
	W/4 EA .375 LUGS				
1600244	16.000	17.500	.688	HDS2	D
1600245	16.000	17.500	.688	HDS2	R
	W/4 EA .063 LUGS				
1600249	16.000	17.500	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1600250	16.000	17.500	.750	HDS1	R
1600255	16.000	17.500	.750	HDS2	R
1600256	16.000	17.500	.750	HS6	D
1600257	16.000	17.500	.750	HS7	R
1600258	16.000	17.500	.750	HS8	R
1600259	16.000	17.500	.750	HS8	D
1600283	16.000	17.500	.688	HDS1	V
1600288	16.000	17.500	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1600290	16.000	17.500	1.000	HDS1	R
1600293	16.000	17.500	1.000	HDS1	V
1600330	16.000	17.625	.750	HDS1	R
1600340	16.000	17.625	1.000	HDS1	R
1600342	16.000	17.625	1.000	HDS2	R
1600519	16.000	18.000	.813	HDS7	H
1600520	16.000	18.000	.813	HDS7	H
	W/4 EA .250 LUGS				
1600544	16.000	18.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1600545	16.000	17.996	.813	HDS1	R
1600546	16.000	17.996	.813	HDS1	R
	W/4 EA .125 LUGS				
1600548	16.000	18.000	.750	HDS1	R
1600549	16.000	18.000	.750	HDS2	R
1600550	16.000	18.000	.813	HDS1	R
1600551	16.000	18.000	.813	HDS1	R
	W/4 EA .125 LUGS				
1600552	16.000	18.000	.813	HDS1	R
	W/4 EA .250 LUGS				
1600553	16.000	18.000	.813	HDS1	R
	W/4 EA .500 LUGS				
1600554	16.000	18.000	.813	HDS1	R
	W/4 EA .188 LUGS				
1600555	16.000	18.000	.813	HDS2	R
1600556	16.000	18.000	.813	HDS2	R
	W/4 EA .250 LUGS				
1600557	16.000	18.000	.813	HS7	R
1600558	16.000	18.000	.813	HS8	R
1600559	16.000	18.000	.813	HDS2	D
1600560	16.000	18.000	.875	HDS1	R
1600561	16.000	18.000	.812	HDS7	R
	W/4 EA .125 LUGS				
1600567	16.000	18.000	.938	HS7	R
1600570	16.000	18.000	.938	HDS1	R
1600572	16.000	18.000	.938	HDS2	R
1600574	16.000	18.000	.813	HDS2	V
1600575	16.000	18.000	.938	HDS2	R
	W/4 EA .250 LUGS				
1600577	16.000	18.000	.813	HS7	V
1600578	16.000	18.000	.750	HS8	R
1600580	16.000	18.000	1.000	HDS1	R
1600583	16.000	18.000	1.000	HDS1	V
1600584	16.000	18.000	1.000	HDS2	V
1600585	16.000	18.000	1.000	HDS2	R
1600587	16.000	18.000	1.000	HS7	R
1600620	16.000	18.125	.875	HDS1	R
1600623	16.000	18.125	.875	†HDS1	V
1600650	16.000	18.250	.750	HDS1	R
1600660	16.000	18.250	.875	HDS1	R
1600690	16.000	18.311	1.000	HDS1	R
1600750	16.000	18.500	.813	HDS1	R
1600780	16.000	18.500	1.000	HDS1	R
1600782	16.000	18.500	1.000	HDS1	D
1600860	16.000	19.000	.750	HDS1	R
1600924	16.000	17.500	1.250	HDSE1	RR
1600925	16.000	17.500	1.250	HDSE2	RR
1600926	16.000	17.500	.875	HDSA2	RD
	W/4 EA .063 LUGS				
1600940	16.000	18.000	1.125	HDSB1	RD
1600941	16.000	18.000	1.125	HDSA1	RD
1600950	16.000	18.000	1.250	HDSA1	RD
1600951	16.000	18.000	.875	HDSA1	RD
1600954	16.000	18.000	1.750	HDSE1	RR
	W/LUBE HOLES ON O.D.				
1600955	16.000	18.000	1.000	HDSA2	RD
1600958	16.000	18.000	1.250	HDSE1	HH
1600963	16.000	18.000	1.250	HDSE1	DD
	W/LUBE HOLES ON O.D.				
1612473	16.125	18.000	.750	HDS1	V

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1613557	16.125	18.125	.813	HS7	R
□1614237	410.00	450.00	17.50	HDS1	V
□**1614242**	410.00	450.00	20.00	HDS2	R
□**1614388**	410.00	454.00	19.00	HS8	R
1614557	16.141	18.141	.813	HS7	R
□**1614572**	410.00	460.00	22.00	HDS2	R
□1614720	410.00	470.00	25.00	HDS1	R
	W/4 EA 6.30MM LUGS				
□1614721	410.00	470.00	25.00	HDS1	R
1619557	16.188	18.188	.813	HS7	R
1623257	16.225	17.725	.750	HS7	R
1625210	16.250	17.750	.688	HDS7	R
1625211	16.250	17.750	.688	HDS7	R
	W/4 EA .125 LUGS				
1625228	16.250	17.750	.625	HS8	R
1625230	16.250	17.750	.625	HDS1	R
1625237	16.250	17.750	.625	HS7	R
1625238	16.250	17.750	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1625239	16.250	17.750	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1625240	16.250	17.750	.688	HDS1	R
1625242	16.250	17.750	.688	HDS1	R
	W/4 EA .125 LUGS				
1625243	16.250	17.750	.688	HDS2	R
1625245	16.250	17.750	.688	HDS2	R
	W/4 EA .125 LUGS				
1625250	16.250	17.750	.750	HDS1	R
1625258	16.250	17.750	.750	HS8	R
1625330	16.250	17.875	.750	HDS1	R
1625362	16.250	18.000	.625	HDS2	R
1625364	16.250	18.000	.625	HDS2	R
	W/4 EA .063 LUGS				
1625369	16.250	18.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1625380	16.250	18.000	.750	HDS1	R
1625383	16.250	18.000	.750	HDS1	V
1625390	16.250	18.000	.813	HDS1	R
1625410	16.250	18.000	.938	HDS1	R
1625412	16.250	18.000	.938	HDS1	R
	W/4 EA .125 LUGS				
1625420	16.250	18.000	1.000	HDS1	R
1625422	16.250	18.000	1.000	HDS2	R
1625425	16.250	18.000	1.000	HDS1	R
	W/4 EA .500 LUGS				
1625510	16.250	18.242	1.000	HDS1	R
1625530	16.250	18.250	.688	HDS1	R
1625540	16.250	18.250	.750	HDS1	R
1625557	16.250	18.250	.813	HS7	R
1625580	16.250	18.250	1.000	HDS1	R
1625587	16.250	18.250	1.000	HS7	R
1625588	16.250	18.250	1.000	HS8	R
1625690	16.250	18.500	1.250	HDS1	R
1631190	16.310	17.686	.688	HDS1	R
1635017	16.350	17.350	.500	HS7	R
1637901	16.375	17.562	1.000	HDSA1	RD
1638250	16.375	17.875	.750	HDS1	R
1638257	16.375	17.875	.750	HS7	R
1638557	16.375	18.375	.813	HS7	R
1638580	16.375	18.375	1.000	HDS1	R
1640554	16.400	18.500	.813	HDS2	R
	W/4 EA .250 LUGS				
1640932	16.400	18.500	1.625	HDSD2	RR
1650017	16.500	17.500	.500	HS7	R
1650130	16.500	17.750	.750	HDS1	R
1650132	16.500	17.750	.625	HDS1	R
1650138	16.500	17.750	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1650200	16.500	18.000	.750	HDS1	D
1650220	16.500	18.000	.750	HDS1	D
1650250	16.500	18.000	.750	HDS1	R
1650252	16.500	18.000	.750	HDS2	R
1650253	16.500	18.000	.750	HDS1	V
1650254	16.500	18.000	.750	HDS1	R
	W/6 EA .125 LUGS				
1650255	16.500	18.000	.750	HDS2	R
	W/4 EA .375 LUGS				
1650257	16.500	18.000	.750	HS7	R
1650258	16.500	18.000	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1650259	16.500	18.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1650280	16.500	18.000	.750	HDS7	R
1650290	16.500	18.000	1.000	HDS1	R
1650342	16.535	18.102	.787	HDS2	D
1650380	16.500	18.250	.750	HDS1	R
1650390	16.500	18.250	.813	HDS1	R
1650540	16.500	18.500	.750	HDS1	R
1650549	16.500	18.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1650550	16.500	18.500	.813	HDS1	R
1650552	16.500	18.500	.813	HDS2	V
1650553	16.500	18.500	.813	HDS2	R
1650555	16.500	18.500	.813	HDS2	R
	W/4 EA .250 LUGS				
1650557	16.500	18.500	.813	HS7	R
1650573	16.500	18.500	.813	HDS1	V
1650579	16.500	18.500	1.000	HS8	D
1650580	16.500	18.500	1.000	HDS1	R
1650582	16.500	18.500	1.000	HDS2	R
1650587	16.500	18.500	1.000	HS7	R
1650660	16.500	19.000	.875	HDS1	R
1650769	16.500	19.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1650780	16.500	19.000	1.000	HDS1	R
1653257	16.531	18.031	.750	HS7	R
□**1653262**	420.00	460.00	20.00	HDS2	R
□1653267	420.00	460.00	20.00	HS7	R
1653282	16.535	18.110	.787	HDS2	D
□1653300	420.00	460.00	20.00	HDS1	R
□**1653342**	420.00	464.00	20.00	HDS2	R
□1653502	420.00	470.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□1653570	420.00	470.00	22.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□1653742	420.00	470.00	20.00	HDS3	H
	W/6 EA 12.70MM ADJ. LUGS				
□1653927	420.00	460.00	22.23	HDSC1	VD
□1654730	420.00	480.00	25.00	HDS1	R
□1654740	420.00	480.00	28.00	HDS1	R
1663017	16.625	17.625	.500	HS7	R
1675148	16.750	18.000	.875	HS8	R
1675240	16.750	18.250	.688	HDS1	R
1675242	16.750	18.250	.688	HDS2	R
1675250	16.750	18.250	.750	HDS1	R
1675257	16.750	18.250	.750	HS7	R
1675258	16.750	18.250	.750	HS8	R
1675410	16.750	18.500	.875	HDS1	R
1675413	16.750	18.500	.875	HDS1	V
1675420	16.750	18.500	1.000	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1675510	16.750	18.750	.875	HDS2	R
1675557	16.750	18.750	.813	HS7	R
1675560	16.750	18.750	.875	HDS1	R
1675588	16.750	18.750	1.000	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1675660	16.750	19.000	.875	HDS1	R
1675780	16.750	19.250	1.000	HDS1	R
1688217	16.875	18.375	.500	HS7	R
1688557	16.875	18.875	.813	HS7	R
□**1692502**	430.00	480.00	18.00	HDS2	R
	W/4 EA 3.18MM LUGS				
□1692567	430.00	480.00	22.00	HDS1	V
1693257	16.929	18.429	.750	HS7	R
1693460	16.929	18.898	.629	HDS1	R
□**1693502**	430.00	480.00	25.00	HDS2	R
□**1693506**	430.00	480.00	16.00	HDS2	R
□**1693562**	430.00	480.00	22.00	HDS2	R
□1693780	430.00	490.00	25.00	HDS1	R
1694193	16.938	18.311	1.250	HDS1	R
1694692	16.938	19.291	.906	HDS2	R
1694696	16.938	19.283	.906	HDS1	R
	W/6 EA .063 LUGS				
1694697	16.938	19.291	.906	HDS1	R
1694700	16.938	19.291	1.063	HDS1	R
1694725	16.938	19.291	.906	HDS2	R
	W/6 EA .063 LUGS				
1700018	17.000	18.000	.500	HS8	D
1700110	17.000	18.250	.625	HDS1	R
1700118	17.000	18.250	.625	HS8	R
1700142	17.000	18.250	.875	HDSA2	R
1700212	17.000	18.500	.750	HDS2	V
	W/4 EA .500 ADJ. LUGS				
1700228	17.000	18.500	.625	HS8	V
1700230	17.000	18.500	.625	HDS1	R
1700232	17.000	18.500	.625	HDS2	R
1700237	17.000	18.500	.625	HS7	R
1700238	17.000	18.500	.625	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1700239	17.000	18.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1700240	17.000	18.500	.688	HDS1	R
1700242	17.000	18.500	.688	HDS1	R
	W/6 EA .125 LUGS				
1700243	17.000	18.500	.688	HDS2	V
1700244	17.000	18.500	.688	HDS2	R
	W/4 EA .125 LUGS				
1700245	17.000	18.500	.688	HDS2	R
1700249	17.000	18.500	.625	HS8	D
1700250	17.000	18.500	.750	HDS1	R
1700251	17.000	18.500	.750	HDS2	D
1700253	17.000	18.500	.750	HDS1	V
1700257	17.000	18.500	.750	HS7	R
1700280	17.000	18.500	.625	HDS7	R
1700283	17.000	18.500	.688	HDS1	V
1700523	17.000	19.000	.625	HDS3	D
	W/4 EA .500 ADJ LUGS				
1700528	17.000	19.000	.625	HDS2	D
1700532	17.000	19.000	.688	HDS2	R
1700534	17.000	19.000	.687	HDS2	V
1700537	17.000	19.000	.687	HDS1	V
1700540	17.000	19.000	.750	HDS1	R
1700541	17.000	19.000	.750	HDS2	R
1700542	17.000	19.000	.750	HDS1	R
	W/4 EA .375 LUGS				
1700549	17.000	19.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1700550	17.000	19.000	.813	HDS1	R
1700552	17.000	19.000	.813	HDS2	R
1700553	17.000	19.000	.813	HDS1	V
1700554	17.000	19.000	.813	HDS1	R
	W/4 EA .188 LUGS				
1700557	17.000	19.000	.813	HS7	R
1700558	17.000	19.000	.813	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1700559	17.000	19.000	.813	HS8	D
	W/HOOK & EYE SPRING CONNECTOR				
1700560	17.000	19.000	.875	HDS1	R
1700562	17.000	19.000	.875	HDS1	R
	W/6 EA .063 LUGS				
1700565	17.000	19.000	.906	HDS2	D
	W/6 EA .063 LUGS				
1700567	17.000	19.000	.906	HDS1	R
	W/6 EA .219 LUGS				
1700570	17.000	19.000	.938	HDS1	R
1700573	17.000	19.000	.813	HDS2	V
1700576	17.000	19.000	.813	HS6	D
	W/HOOK & EYE SPRING CONNECTOR				
1700579	17.000	19.000	.813	HDS7	R
1700580	17.000	19.000	1.000	HDS1	R
1700584	17.000	19.000	1.000	HDS2	D
1700585	17.000	19.000	1.000	HDS1	D
1700587	17.000	19.000	1.000	HS7	R
1700680	17.000	19.250	1.000	HDS1	R
1700700	17.000	19.291	.875	HDS1	R
1700760	17.000	19.500	.875	HDS1	R
1700920	17.000	18.500	1.375	HDSD1	RR
1700922	17.000	18.500	1.375	HDSD2	RR
1700950	17.000	19.000	1.250	HDSA1	RD
1700952	17.000	19.000	1.250	HDSE2	DD
1700953	17.000	19.000	2.000	HDSE2	RR
1700958	17.000	19.000	2.000	HDSE2	RR
	W/ LUBE HOLES ON O.D.				
□1712240	435.00	475.00	20.00	HDS1	R
□**1712472**	435.00	485.00	18.00	HDS2	R
	W/6 EA 9.50MM ADJ. LUGS				
□**1712522**	435.00	485.00	18.00	HDS2	R
□**1712562**	435.00	485.00	18.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
1713017	17.125	18.125	.500	HS7	R
1713257	17.125	18.625	.750	HS7	R
1713557	17.125	19.125	.813	HS7	R
1717600	17.172	19.250	.750	HDS1	R
1719170	17.188	18.562	.688	HDS1	R
1725230	17.250	18.750	.625	†HDS1	R
1725250	17.250	18.750	.750	HDS1	R
1725255	17.250	18.750	.750	HDS2	R
1725257	17.250	18.750	.750	HS7	R
1725258	17.250	18.750	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1725259	17.250	18.750	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1725410	17.250	19.000	.875	HDS1	R
1725557	17.250	19.250	.813	HS7	R
1725560	17.250	19.250	.875	HDS1	R
1725570	17.250	19.250	.938	HDS1	R
1725571	17.250	19.250	.938	HDS1	D
1725580	17.250	19.250	1.000	HDS1	R
1725583	17.250	19.250	1.000	HDS1	V
1725587	17.250	19.250	1.000	HS7	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1725660	17.250	19.500	.875	HDS1	R
□**1732118**	440.00	472.00	16.00	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□1732130	440.00	470.00	20.00	HDS1	R
□1732250	440.00	480.00	20.00	HDS1	R
□1732253	440.00	480.00	20.00	HDS1	V
□1732258	440.00	480.00	20.00	HDS1	R
	W/4 EA 9.52MM LUGS				
□1732259	440.00	480.00	20.00	HDS7	R
□**1732288**	440.00	480.00	20.00	HS8	R
□**1732308**	440.00	480.00	21.00	HS8	H
□1732490	440.00	490.00	20.00	HDS1	R
□1732934	440.00	480.00	22.23	HDSA2	V
1733257	17.332	18.832	.750	HS7	R
1737118	17.375	18.625	1.250	HDSH2	D
1737219	17.375	18.875	.750	HDS7	R
1737630	17.375	19.500	1.000	HDS1	R
1738257	17.375	18.875	.750	HS7	R
1743182	17.438	18.750	.750	HDS2	R
1743410	17.438	19.250	.875	HDS1	R
1750017	17.500	18.500	.500	HS7	R
1750220	17.500	19.000	.688	HDS7	H
1750221	17.500	19.000	.688	HDS7	R
1750230	17.500	19.000	.625	HDS1	R
1750240	17.500	19.000	.688	HDS1	R
1750244	17.500	19.000	.688	HDS2	V
1750245	17.500	19.000	.688	HDS2	R
1750249	17.500	19.000	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1750250	17.500	19.000	.750	HDS1	R
1750251	17.500	19.000	.750	HDS1	D
1750253	17.500	19.000	.750	HDS1	V
1750254	17.500	19.000	.750	HDS2	V
1750257	17.500	19.000	.750	HS7	R
1750259	17.500	19.000	.750	HS8	D
1750290	17.500	19.000	1.000	HDS1	R
1750368	17.500	19.250	.625	HS8	V
1750370	17.500	19.250	.688	HDS1	R
1750372	17.500	19.250	.688	HDS2	R
1750379	17.500	19.250	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1750380	17.500	19.250	.750	HDS1	R
1750385	17.500	19.250	.750	HDS2	R
1750420	17.500	19.250	1.000	HDS1	R
1750425	17.500	19.250	1.000	HDS2	R
	W/4 EA .125 LUGS				
1750426	17.500	19.250	1.000	HDS2	R
	W/4 EA .500 ADJ. LUGS				
1750433	17.500	19.250	.938	HDS1	D
1750516	17.500	19.500	.750	HS6	R
1750530	17.500	19.500	.688	HDS1	R
1750532	17.500	19.500	.688	HDS1	R
	W/4 EA .125 LUGS				
1750533	17.500	19.500	.688	HDS2	D
1750534	17.500	19.500	.688	HDS2	R
	W/4 EA .125 LUGS				
1750538	17.500	19.500	.688	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1750539	17.500	19.500	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1750540	17.500	19.500	.750	HDS1	R
1750557	17.500	19.500	.813	HS7	R
1750560	17.500	19.500	.875	HDS1	R
1750580	17.500	19.500	1.000	HDS1	R
1750585	17.500	19.500	1.000	HDS1	R
	W/4 EA .125 LUGS				
1750587	17.500	19.500	1.000	HS7	R
1750659	17.500	19.750	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1750780	17.500	20.000	1.000	HDS1	R
1750890	17.500	20.500	1.000	HDS1	R
1750900	17.500	20.522	1.500	HDS1	R
1750901	17.500	20.522	1.500	HDS2	R
1750920	17.500	19.000	1.250	HDSA1	RD
1750952	17.500	19.500	1.250	HDSA1	RD
1750958	17.500	19.500	1.000	HDSA2	RD
□1752270	445.00	485.00	20.00	HDS1	R
1753230	17.531	19.125	.719	HDS1	V
1755250	17.558	19.063	.750	HDS1	R
□1755500	446.00	496.00	22.00	HDS1	R
1756257	17.563	19.063	.750	HS7	R
□**1763110**	448.00	480.00	16.00	HDS2	R
1763210	17.625	19.125	.750	HDS1	D
1763217	17.625	19.125	.750	HDS1	V
1763250	17.625	19.125	.750	HDS1	R
1763320	17.625	19.250	.688	HDS1	R
1763380	17.625	19.375	.750	HDS1	R
1763410	17.625	19.375	.875	HDS1	R
1763412	17.625	19.375	.875	HDS2	R
1763470	17.625	19.500	.750	HDS1	R
1763530	17.625	19.625	.688	HDS1	R
1763550	17.625	19.625	.813	HDS1	R
1763557	17.625	19.625	.813	HS7	R
1763840	17.625	20.500	1.000	HDS1	R
□1771250	450.00	490.00	20.00	HDS1	R
□1771470	450.00	500.00	20.00	HDS1	R
□**1771508**	450.00	500.00	25.00	HS8	R
1771557	17.716	19.716	.813	HS7	R
1771690	17.718	20.079	.719	HDS1	R
1772257	17.719	19.219	.750	HS7	R
1775017	17.750	18.750	.500	HS7	R
1775257	17.750	19.250	.750	HS7	R
1775518	17.750	19.750	.813	HS8	R
1775540	17.750	19.750	.750	HDS1	R
1775543	17.750	19.750	.750	HDS1	R
	W/4 EA .250 LUGS				
1775550	17.750	19.750	.813	HDS1	R
1775557	17.750	19.750	.813	HS7	R
1775570	17.750	19.750	1.000	HDS1	D
1775580	17.750	19.750	1.000	HDS1	R
1775690	17.750	20.089	.875	HDS1	R
1775700	17.750	20.089	1.000	HDS1	R
1775760	17.750	20.250	.875	†HDS1	R
1781145	17.813	19.125	.625	HDS2	R
1781502	17.818	19.750	.750	HDS2	R
1782790	17.818	20.500	1.000	HDS1	R
1783500	17.818	19.750	.750	HDS1	R
1787068	17.875	19.137	.930	HDS1	D
1787622	17.875	20.000	.875	HDS2	R
	W/4 EA .250 LUGS				
1787623	17.875	20.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1788322	17.875	19.500	.688	HDS2	D
1788540	17.875	19.875	.750	HDS1	R
1788541	17.875	19.875	.750	HDS1	R
	W/4 EA .125 LUGS				
1788550	17.875	19.875	.813	HDS1	R
1788552	17.875	19.875	.813	HDS2	R
1788558	17.875	19.875	.813	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1788710	17.875	20.250	.875	HDS1	R
1790257	17.900	19.400	.750	HS7	R
1793442	17.938	19.750	1.000	HDS2	R
1793490	17.938	19.750	1.000	HDS1	R
1800017	18.000	19.000	.500	HS7	R
1800018	18.000	19.000	.500	HS8	R
1800027	18.000	19.000	.625	HS7	R
1800218	18.000	19.500	.688	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1800224	18.000	19.500	.687	HDS2	V
1800240	18.000	19.500	.688	HDS1	R
1800244	18.000	19.500	.688	HDS2	D
	W/4 EA .125 LUGS				
1800245	18.000	19.500	.688	HDS2	R
1800246	18.000	19.500	.688	HDS2	D
1800249	18.000	19.500	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1800250	18.000	19.500	.750	HDS1	R
1800257	18.000	19.500	.750	HS7	R
1800290	18.000	19.500	1.000	HDS1	R
1800300	18.000	19.515	.875	HDS1	R
1800380	18.000	19.750	.750	HDS1	R
1800382	18.000	19.750	.750	HDS2	R
1800387	18.000	19.750	.750	HS7	R
1800389	18.000	19.750	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1800410	18.000	19.750	.875	HDS1	R
1800423	18.000	19.750	1.000	HDS1	V
1800430	18.000	19.750	.938	HDS1	R
1800470	18.000	19.875	.750	HDS1	R
1800520	18.000	20.000	.625	HDS2	R
1800540	18.000	20.000	.750	HDS1	R
1800542	18.000	20.000	.750	HDS2	D
1800543	18.000	20.000	.750	HDS1	R
	W/4 EA .375 LUGS				
1800549	18.000	20.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1800550	18.000	20.000	.813	HDS1	R
1800557	18.000	20.000	.813	HS7	R
1800558	18.000	20.000	.813	HS8	R
1800559	18.000	20.000	.813	HS8	D
1800560	18.000	20.000	.875	HDS1	R
1800563	18.000	20.000	.875	HDS2	R
1800564	18.000	20.000	.875	HDS1	R
	W/4 EA .125 LUGS				
1800565	18.000	20.000	.875	HDS2	R
	W/4 EA .125 LUGS				
1800570	18.000	20.000	1.250	HDSD2	RR
1800573	18.000	20.000	.875	HDS2	V
1800580	18.000	20.000	1.000	HDS1	R
1800581	18.000	20.000	1.000	HDS1	R
	W/4 EA .375 LUGS				
1800582	18.000	20.000	1.000	HDS2	R
1800583	18.000	20.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1800587	18.000	20.000	1.000	HS7	R
1800591	18.000	20.000	1.250	HDS1	R
1800592	18.000	20.000	1.250	HDS1	R
	W/4 EA .125 LUGS				
1800593	18.000	20.000	1.813	HDS1	R
1800680	18.000	20.250	1.000	HDS1	R
1800683	18.000	20.250	1.000	HDS1	V
1800790	18.000	20.500	1.125	HDS1	R
1800800	18.000	20.500	1.250	HDS1	R
1800850	18.000	21.000	.688	HDS1	R
1800890	18.000	21.000	1.500	HDS1	R
1800896	18.000	21.000	1.125	HDS2	R
	W/4 EA .375 LUGS				
1800912	18.000	19.500	1.250	HDSE2	RR
	W/8 EA .125 LUBE HOLES ON O.D.				
1800918	18.000	19.500	1.250	HDSE1	RR
	W/8 EA .125 LUBE HOLES ON O.D.				
1800922	18.000	19.500	1.438	HDSE2	RR
1800950	18.000	20.000	1.500	HDSA1	RD
1800956	18.000	20.000	1.500	HDSD1	RR
1800965	18.000	20.250	1.000	HDSA2	RD
1800966	18.000	20.250	1.250	HDSE2	RR
□**1803452**	458.00	505.00	20.62	HDS2	R
1803557	18.031	20.031	.813	HS7	R
1806557	18.063	20.063	.813	HS7	R
□1811280	460.00	500.00	20.00	HDS1	R
□1811287	460.00	500.00	20.00	HDS1	V
□1811300	460.00	500.00	23.00	HDS1	V
□1811340	460.00	504.00	20.00	HDS1	R
□**1811452**	460.00	510.00	20.62	HDS2	R
1811550	18.110	20.115	.813	HDS1	R
1811557	18.110	20.110	.813	HS7	R
□**1811564**	460.00	510.00	22.00	HDS2	V
1811632	18.110	20.276	1.102	HDS2	R
□**1811722**	460.00	520.00	25.00	HDS2	R
1813558	18.125	20.125	.813	HS8	R
1813720	18.120	20.500	1.000	HDS1	R
1813730	18.125	20.500	1.000	HDS1	R
□1815180	461.00	495.00	20.00	HDS7	H
1817138	18.175	19.500	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1817258	18.175	19.750	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
1819690	18.188	20.500	1.000	HDS1	R
1825250	18.250	19.750	.750	HDS1	R
1825252	18.250	19.750	.750	HDS2	R
1825253	18.250	19.750	.750	HDS1	V
1825255	18.250	19.750	.750	HDS1	R
	W/4 EA .375 LUGS				
1825257	18.250	19.750	.750	HS7	R
1825258	18.250	19.750	.750	HS8	R
1825268	18.250	19.781	.750	HS8	R
1825300	18.250	19.867	1.000	HDS1	R
1825338	18.250	19.750	.750	HS8	H
1825340	18.250	19.875	.875	HDS1	R
1825350	18.250	19.875	1.000	HDS1	R
1825352	18.250	19.875	1.000	HDS2	R
1825410	18.250	20.000	.875	HDS1	R
1825486	18.250	20.125	.938	HDS1	R
1825540	18.250	20.250	.750	HDS1	R
1825550	18.250	20.250	.813	HDS1	R
1825557	18.250	20.250	.813	HS7	R
1825674	18.250	20.500	1.188	HDS1	V
1825680	18.250	20.500	1.000	HDS1	R
1825900	18.250	21.250	1.500	HDS1	R
1831070	18.313	19.492	.750	HDS1	R
1837570	18.375	20.375	.813	HDS1	R
1837608	18.375	20.500	.875	HS8	R
1838240	18.375	19.875	.688	HDS1	R
1838241	18.375	19.875	.688	HDS2	R
1838244	18.375	19.875	.688	HDS2	R
	W/4 EA .250 LUGS				
1838245	18.375	19.875	.688	HDS2	R
	W/4 EA .125 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1838249	18.375	19.875	.688	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1838257	18.375	19.875	.750	HS7	R
1838300	18.375	19.938	.625	HDS1	R
1838301	18.375	19.938	.625	HDS1	R
	W/4 EA .063 LUGS				
1838330	18.375	20.000	.750	HDS1	R
□**1838342**	467.00	510.00	20.00	HDS2	V
1838557	18.375	20.375	.813	HS7	R
1838558	18.375	20.375	.813	HS8	R
1838560	18.375	20.375	.875	HDS1	R
1838620	18.375	20.500	.875	HDS1	R
1838710	18.375	20.750	.875	HDS1	R
1850017	18.500	19.500	.500	HS7	R
1850212	18.500	20.000	.750	HDS2	V
1850248	18.500	20.000	.750	HS8	D
1850250	18.500	20.000	.750	HDS1	R
□**1850253**	470.00	510.00	20.00	HDS2	V
1850257	18.500	20.000	.750	HS7	R
□1850280	470.00	510.00	20.00	HDS1	R
□**1850302**	470.00	510.00	20.00	HDS2	R
1850306	18.504	20.079	.787	HDS3	V
	W/4 EA .500 ADJ LUGS				
1850380	18.500	20.250	.750	HDS1	R
□1850503	470.00	520.00	20.70	HS4	R
□1850510	470.00	520.00	20.00	HDS1	V
1850540	18.500	20.500	.750	HDS1	R
1850542	18.500	20.500	.750	HDS2	R
1850543	18.500	20.500	.750	HDS1	R
	W/4 EA .125 LUGS				
1850545	18.500	20.500	.750	HDS2	R
	W/4 EA .125 LUGS				
1850548	18.500	20.500	.750	HDS3	V
	W/4 EA .500 ADJ LUGS				
1850549	18.500	20.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1850550	18.500	20.500	.813	HDS1	R
1850551	18.500	20.500	.813	HDS1	R
	W/4 EA .188 LUGS				
1850552	18.500	20.500	.813	HDS2	R
1850553	18.500	20.500	.875	HDS2	V
1850554	18.500	20.500	.813	HDS2	V
1850555	18.500	20.500	.813	HDS1	D
1850557	18.500	20.500	.813	HS7	R
1850560	18.500	20.500	.875	HDS1	R
1850561	18.500	20.500	.875	HDS2	R
1850562	18.500	20.500	.875	HDS1	R
	W/4 EA .250 LUGS				
1850563	18.500	20.500	.875	HDS1	R
	W/4 EA .438 LUGS				
1850564	18.500	20.500	.875	HDS1	R
	W/4 EA .375 LUGS				
1850565	18.500	20.500	.875	HDS1	R
	W/4 EA .406 LUGS				
1850567	18.500	20.500	.875	HDS2	R
	W/4 EA .375 LUGS				
1850570	18.500	20.500	.906	HDS1	R
1850572	18.500	20.500	.906	HDS1	R
	W/4 EA .250 LUGS				
1850576	18.500	20.500	.906	HDS2	R
	W/4 EA .250 LUGS				
1850580	18.500	20.500	1.000	HDS1	R
1850584	18.500	20.500	1.000	HDS2	D
1850585	18.500	20.500	1.000	HDS1	D
1850587	18.500	20.500	1.000	HS7	R
□1850590	470.00	520.00	20.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
□1850660	463.00	528.00	20.00	HDS1	R
□**1850702**	470.00	530.00	26.00	HDS2	R
□1850710	470.00	530.00	28.00	HDS7	R
□1850720	470.00	530.00	25.00	HDS1	D
□**1850722**	470.00	530.00	25.00	HDS2	R
□1850728	470.00	530.00	25.00	HDS1	R
	W/4 EA 9.50MM LUGS				
1850790	18.500	21.248	1.000	HDS1	R
1850905	18.500	22.750	1.000	HDS1	R
1850922	18.500	20.000	1.250	HDSD2	RR
1850952	18.500	20.500	.968	HDSA2	V
1856193	18.560	20.000	.750	HDS1	R
1863557	18.625	20.625	.813	HS7	R
□1870504	475.00	525.00	25.00	HS4	R
1873440	18.730	20.500	.750	HDS1	R
1875017	18.750	19.750	.500	HS7	R
1875250	18.750	20.250	.750	HDS1	R
1875253	18.750	20.250	.750	HDS2	R
1875257	18.750	20.250	.750	HS7	R
1875258	18.750	20.250	.750	HS8	R
1875259	18.750	20.250	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1875380	18.750	20.500	.750	HDS1	R
1875381	18.750	20.500	.750	HDS1	V
1875410	18.750	20.500	.875	HDS1	R
1875412	18.750	20.500	.875	HDS2	R
1875433	18.750	20.563	.813	HDS2	R
	W/4 EA .063 LUGS				
1875513	18.750	20.750	.813	HDS1	D
1875540	18.750	20.750	.750	HDS1	R
1875550	18.750	20.750	.813	HDS1	R
1875553	18.750	20.750	.813	HDS2	R
1875557	18.750	20.750	.813	HS7	R
1875580	18.750	20.750	1.000	HDS1	R
1882557	18.818	20.818	.813	HS7	R
1888391	18.875	20.625	.875	HDS1	R
1888557	18.875	20.875	.813	HS7	R
□1889260	480.00	520.00	20.00	HDS1	D
□**1889284**	480.00	520.00	20.00	HDS2	V
□1889502	480.00	530.00	20.00	HDS3	D
	W/4 EA .500 ADJ. LUGS				
□1889570	480.00	530.00	18.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
1889572	18.898	20.861	.866	HDS2	D
□1889742	480.00	530.00	20.00	HDS3	H
	W/4 EA .500 ADJ. LUGS				
□1890260	480.00	520.00	20.00	HDS1	R
□**1890548**	480.00	530.00	20.00	HS8	R
1894557	18.937	20.937	.813	HS7	R
1900017	19.000	20.000	.500	HS7	R
1900211	19.000	20.500	.750	HDS7	R
1900232	19.000	20.500	.625	HDS2	H
1900250	19.000	20.500	.750	HDS1	R
1900251	19.000	20.500	.750	HDS2	R
	W/6 EA .375 LUGS				
1900252	19.000	20.500	.750	HDS1	R
	W/4 EA .250 LUGS				
1900253	19.000	20.500	.750	HDS1	R
	W/6 EA .250 LUGS				
1900254	19.000	20.500	.750	HDS2	R
1900255	19.000	20.500	.750	HDS2	R
	W/4 EA .125 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1900256	19.000	20.500	.750	HDS2	R
	W/6 EA .250 LUGS				
1900257	19.000	20.500	.750	HS7	R
1900258	19.000	20.500	.750	HS8	R
1900259	19.000	20.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1900260	19.000	20.500	.750	HDS2	V
1900265	19.000	20.500	.750	HDS2	V
	W/6 EA .375 LUGS				
1900274	19.000	20.500	.875	HDS2	D
1900275	19.000	20.500	.875	HDS2	D
	W/4 EA .125 LUGS				
1900282	19.000	20.500	.938	HDS1	R
	W/4 EA .125 LUGS				
1900512	19.000	21.000	1.000	HDS2	R
1900540	19.000	21.000	.750	HDS1	R
1900548	19.000	21.000	.750	HS8	R
1900557	19.000	21.000	.813	HS7	R
1900560	19.000	21.000	.875	HDS1	R
1900562	19.000	21.000	.875	HDS2	V
1900563	19.000	21.000	.875	HDS2	R
1900564	19.000	21.000	.875	HDS2	R
	W/4 EA .188 LUGS				
1900565	19.000	21.000	.875	HDS2	R
	W/4 EA .125 LUGS				
1900566	19.000	21.000	.875	HDS2	V
	W/4 EA .125 LUGS				
1900569	19.000	21.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1900580	19.000	21.000	1.000	HDS1	R
1900592	19.000	21.000	1.313	HDS1	R
1900616	19.000	21.125	.813	HDS2	R
	W/4 EA .063 LUGS				
1900660	19.000	21.250	.875	HDS1	R
1900740	19.000	21.500	.750	HDS1	R
1900741	19.000	21.500	.750	HDS2	R
1900800	19.000	21.500	1.250	HDS1	R
1900830	19.000	21.750	1.000	HDS1	R
1900950	19.000	21.000	1.250	HDSC1	RD
1901254	19.000	20.500	.750	HDS2	D
1901257	19.000	20.500	.750	HS7	D
□1909500	485.00	535.00	22.00	HDS1	R
□1909503	485.00	535.00	20.00	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1913017	19.125	20.125	.500	HS7	R
1913557	19.125	21.125	.813	HS7	R
1913960	19.125	21.250	1.750	HDSD1	RR
1919170	19.188	20.563	.688	HDS1	R
1919557	19.188	21.188	.813	HS7	R
1925250	19.250	20.750	.750	HDS1	R
1925252	19.250	20.750	.750	HDS2	R
1925253	19.250	20.750	.750	HDS1	R
	W/6 EA .125 LUGS				
1925254	19.250	20.750	.750	HDS1	D
	W/4 EA .125 LUGS				
1925255	19.250	20.750	.750	HDS2	R
	W/6 EA .125 LUGS				
1925380	19.250	21.000	.750	HDS1	R
1925540	19.250	21.250	.750	HDS1	R
1925557	19.250	21.250	.813	HS7	R
1925570	19.250	21.250	.938	HDS1	R
1925580	19.250	21.250	1.000	HDS1	R
1925660	19.250	21.500	.875	HDS1	R
1925920	19.250	20.750	.875	HDSA1	RD

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□1929218	490.00	530.00	20.00	HDS1	R
	W/4 EA 4.80MM ADJ. LUGS				
□**1929228**	490.00	530.00	20.00	HS8	R
□1929250	490.00	530.00	20.00	HDS1	R
□1929570	490.00	540.00	25.00	HDS1	R
□1929576	490.00	541.00	20.70	HS6	R
□**1929578**	490.00	540.00	25.00	HS8	R
1938340	19.375	21.000	.813	HDS1	R
1938345	19.375	21.000	.813	HDS2	D
	W/4 EA .188 LUGS				
1938557	19.375	21.375	.813	HS7	R
1950017	19.500	20.500	.500	HS7	R
1950211	19.500	21.500	.750	HDS7	R
1950250	19.500	21.000	.750	HDS1	R
1950518	19.500	21.500	.813	HS8	R
1950540	19.500	21.500	.750	HDS1	R
1950542	19.500	21.500	.750	HDS2	R
1950544	19.500	21.500	.750	HDS2	R
	W/4 EA .375 LUGS				
1950549	19.500	21.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1950557	19.500	21.500	.813	HS7	R
1950560	19.500	21.500	.875	HDS1	R
1950563	19.500	21.500	.875	HDS2	V
1950570	19.500	21.500	.938	HDS1	R
1950571	19.500	21.500	.938	HDS1	R
	W/4 EA .125 LUGS				
1950580	19.500	21.500	1.000	HDS1	R
1950583	19.500	21.500	1.000	HDS1	V
1950588	19.500	21.500	1.000	HS8	R
1950640	19.500	21.688	.750	HDS1	R
1950660	19.500	21.750	.875	HDS1	R
1950760	19.500	22.000	.875	HDS1	R
1950800	19.500	22.125	.875	HDS1	R
1950820	19.500	22.250	.875	HDS1	R
1950950	19.500	21.500	1.250	HDSA1	RD
1963340	19.625	21.260	1.563	HDS1	R
1963341	19.625	21.260	.787	HDS1	R
1963550	19.625	21.625	.813	HDS1	R
1963557	19.625	21.625	.813	HS7	R
1963570	19.625	21.625	.938	HDS1	R
□1968190	500.00	540.00	20.00	HDS1	R
□1968223	500.00	540.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□1968257	500.00	540.00	20.00	HDS1	V
□1968280	500.00	540.00	20.00	HDS1	R
	W4/ EA 10.00MM LUGS				
□**1968388**	500.00	550.00	25.00	HS8	R
□1968458	500.00	550.00	18.00	HDS1	D
□**1968462**	500.00	550.00	18.00	HDS2	D
□**1968500**	500.00	550.00	18.00	HDS2	R
□1968570	500.00	550.00	18.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
1968710	19.685	22.047	.984	HDS1	R
1969300	19.688	21.250	.787	HDS1	R
1975018	19.750	20.750	.500	HS8	R
1975150	19.750	21.125	.875	HDS1	R
1975420	19.750	21.500	1.000	HDS1	R
1975526	19.750	20.750	.625	HS6	R
1975528	19.750	21.750	.625	HS8	R
1975553	19.750	21.750	.813	HDS2	V
1975557	19.750	21.750	.813	HS7	R
1975560	19.750	21.750	.875	HDS1	R
1975569	19.750	21.750	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
1975580	19.750	21.750	1.000	HDS1	R
1975582	19.750	21.750	1.000	HDS2	R
1975585	19.750	21.750	1.000	HDS2	R
	W/4 EA. .125 LUGS				
1975660	19.750	22.000	.875	HDS1	R
1975680	19.750	22.000	1.000	HDS1	R
1975710	19.750	22.125	.875	HDS1	R
1975732	19.750	22.125	1.000	HDS2	R
1975760	19.750	22.250	.875	HDS1	R
1975972	19.750	22.125	1.000	HDSA1	RD
□1985539	500.00	550.00	20.00	HDS7	D
	W/6 EA 12.70MM ADJ. LUGS				
□**1988462**	505.00	555.00	20.62	HDS2	R
1988470	19.875	21.750	.750	HDS1	R
1988528	19.875	21.875	.625	HS8	R
1988557	19.875	21.875	.813	HS7	R
1988620	19.875	22.000	.875	HDS1	R
1988630	19.875	22.000	1.000	HDS1	R
1988710	19.875	22.250	.875	HDS1	R
1989557	19.881	21.881	.813	HS7	R
1994300	19.938	21.500	.750	HDS1	R
1994360	19.938	21.688	.625	HDS1	R
1994361	19.938	21.688	.625	HDS1	R
	W/4 EA .063 LUGS				
1994363	19.938	21.688	.625	HDS1	R
	W/4 EA .125 LUGS				
1994430	19.938	21.750	.750	HDS1	R
1998523	19.983	22.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
1998603	19.983	22.000	.875	HDS3	D
	W/4 EA .500 ADJ LUGS				
2000017	20.000	21.000	.500	HS7	R
2000018	20.000	21.000	.500	HS8	D
2000230	20.000	21.500	.625	HDS1	R
2000232	20.000	21.500	.750	HDS2	R
2000237	20.000	21.500	.625	HS7	R
2000238	20.000	21.500	.625	HS8	R
2000239	20.000	21.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2000240	20.000	21.500	.750	HDS7	R
2000250	20.000	21.500	.750	HDS1	R
2000253	20.000	21.500	.750	HDS1	R
	W/8 EA .125 LUGS				
2000254	20.000	21.500	.750	HDS1	R
	W/4 EA .250 LUGS				
2000258	20.000	21.500	.750	HS8	R
2000262	20.000	21.500	.750	HDS2	V
2000283	20.000	21.500	.750	HDS1	V
2000380	20.000	21.750	.750	HDS1	R
2000388	20.000	21.750	.750	HS8	R
2000500	20.000	22.000	.906	HDS1	R
2000520	20.000	22.000	.625	HDS1	R
2000522	20.000	22.000	.625	HDS2	V
2000527	20.000	22.000	.625	HS7	R
2000528	20.000	22.000	.625	HS8	R
2000529	20.000	22.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2000543	20.000	22.000	.750	HDS1	V
2000557	20.000	22.000	.813	HS7	R
2000558	20.000	22.000	.813	HS8	R
2000560	20.000	22.000	.875	HDS1	R
2000561	20.000	22.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2000563	20.000	22.000	.875	HDS1	R
	W/8 EA .125 LUGS				
2000564	20.000	22.000	.875	HDS1	V
2000565	20.000	22.000	.875	HDS2	R
2000566	20.000	22.000	.875	HDS2	R
	W/4 EA .250 LUGS				
2000568	20.000	22.000	.875	HS8	R
2000570	20.000	22.000	.906	HDS1	R
2000580	20.000	22.000	1.000	HDS1	R
2000582	20.000	22.000	1.000	HDS1	R
	W/6 EA .250 LUGS				
2000584	20.000	22.000	1.000	HDS2	R
	W/6 EA .250 LUGS				
2000585	20.000	22.000	1.000	HDS2	R
2000587	20.000	22.000	1.000	HS7	R
2000590	20.000	22.000	1.812	HDS1	R
2000592	20.000	22.000	1.250	HDS2	R
2000630	20.000	22.125	1.000	HDS1	R
2000638	20.000	22.125	.916	HS8	V
2000648	20.000	22.125	.916	HS8	R
2000649	20.000	22.125	.916	HS8	D
2000660	20.000	22.250	.875	HDS1	R
2000760	20.000	22.500	.875	HDS1	R
2000795	20.000	22.500	1.250	HDS1	R
2000803	20.000	22.625	.750	HDS2	R
2000913	20.000	21.250	1.375	HDSA1	RD
2000920	20.000	21.500	.875	HDSA1	V
2000951	20.000	22.000	1.813	HDSE1	RR
□2007260	510.00	550.00	20.00	HDS1	D
□2007340	510.00	554.00	20.00	HDS1	D
□**2007502**	510.00	560.00	25.00	HDS2	D
□2008570	510.00	560.00	25.00	HDS1	D
2019690	20.188	22.500	1.000	HDS1	R
2025017	20.250	21.250	.500	HS7	R
2025214	20.250	21.750	.750	HDS2	V
2025250	20.250	21.750	.750	HDS1	R
2025251	20.250	21.750	.750	HDS1	R
	W/4 EA .125 LUGS				
2025252	20.250	21.750	.750	HDS2	R
2025254	20.250	21.750	.750	HDS2	R
	W/4 EA .125 LUGS				
2025284	20.250	21.750	1.500	†HDS2	R
2025340	20.250	21.875	.875	HDS1	R
2025380	20.250	22.000	.750	HDS1	R
2025528	20.250	22.250	.625	HS8	R
2025543	20.250	22.250	.750	HDS1	V
2025557	20.250	22.250	.813	HS7	R
2025560	20.250	22.250	.875	HDS1	R
2025562	20.250	22.250	.875	HDS2	R
2025564	20.250	22.250	.875	HDS1	R
	W/4 EA .125 LUGS				
2025568	20.250	22.250	1.000	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2025569	20.250	22.250	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2025570	20.250	22.250	.875	HDS1	D
2025580	20.250	22.250	1.000	HDS1	R
2025630	20.250	22.375	1.000	HDS1	R
2025660	20.250	22.500	.875	HDS1	R
2025662	20.250	22.500	.875	HDS2	R
2025664	20.250	22.500	.875	HDS2	R
	W/4 EA .375 LUGS				
2025665	20.250	22.500	.875	HDS2	R
	W/4 EA .500 ADJ. LUGS				
2025901	20.250	24.000	1.000	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2027118	20.275	21.535	.630	HS8	R
□2027280	515.00	555.00	20.00	HDS7	R
□**2027282**	515.00	555.00	20.00	HDS2	R
□**2027295**	515.00	555.00	20.00	HS5	R
	W/SPRING KOVER				
□**2028258**	515.00	555.00	20.00	HS8	R
□**2043308**	519.00	560.00	25.00	HS8	D
2044580	20.438	22.500	1.000	HDSA1	R
2044600	20.438	22.500	.750	HDS1	R
2044602	20.438	22.500	.750	HDS2	R
2044603	20.438	22.500	.750	HDS2	R
	W/4 EA .250 LUGS				
2044604	20.438	22.500	.750	HDS1	R
	W/4 EA .250 LUGS				
2044790	20.438	23.000	.875	HDS1	R
2044793	20.438	23.000	1.250	HDS1	R
2044800	20.438	23.125	.875	HDS1	R
□2047220	520.00	560.00	20.00	HDS1	R
□2047258	520.00	560.00	20.00	HDS1	R
	W/4 EA 9.50MM LUGS				
□2047283	520.00	560.00	20.00	HDS1	V
□2047500	520.00	570.00	18.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
2047673	20.472	22.834	.984	HDS3	D
	W/4 EA .500 ADJ. LUGS				
□**2047692**	520.00	580.00	25.00	HDS2	R
□2047700	520.00	580.00	20.00	HDS1	R
□**2047702**	520.00	580.00	20.00	HDS2	R
□**2047705**	520.00	580.00	25.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
2050212	20.500	22.000	.750	HDS2	R
	W/4 EA .188 LUGS				
2050250	20.500	22.000	.750	HDS1	R
2050252	20.500	22.000	.750	HDS2	R
2050254	20.500	22.000	.750	HDS2	V
2050258	20.500	22.000	.750	HS8	R
2050282	20.500	22.000	1.500	HDSA2	RD
2050520	20.500	22.500	.625	HDS1	R
2050523	20.500	22.500	.625	HDS2	D
2050527	20.500	22.500	.625	HS7	R
2050528	20.500	22.500	.625	HS8	R
2050529	20.500	22.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2050540	20.500	22.500	.750	HDS1	R
2050542	20.500	22.500	.750	HDS2	R
2050550	20.500	22.500	.844	HDS1	R
2050552	20.500	22.500	.813	HDS2	R
2050553	20.500	22.500	.813	HDS2	V
2050557	20.500	22.500	.813	HS7	R
2050558	20.500	22.500	.812	HS8	R
2050560	20.500	22.500	.875	HDS1	R
2050562	20.500	22.500	.875	HDS1	R
	W/4 EA .250 LUGS				
2050563	20.500	22.500	.875	HDS2	R
2050565	20.500	22.500	.875	HDS1	R
	W/4 EA .125 LUGS				
2050568	20.500	22.500	.875	HS8	R
2050573	20.500	22.500	.906	HDS1	R
	W/4 EA .188 LUGS				
2050575	20.500	22.500	.906	HDS2	R
	W/4 EA .250 LUGS				
2050580	20.500	22.500	1.000	HDS1	R
2050586	20.500	22.500	1.000	HDS1	R
	W/4 EA .500 LUGS				
2050596	20.500	22.500	1.500	HDS1	R
2050660	20.500	22.750	.875	HDS1	R
2050740	20.500	22.999	1.125	HDS1	R
2050750	20.500	22.999	1.250	HDS1	R
2050760	20.500	23.000	.875	HDS1	R
2050791	20.500	23.000	1.250	HDS1	R
2050793	20.500	23.000	1.250	HDS1	R
	W/4 EA .250 LUGS				
2050953	20.500	22.500	1.500	HDSE2	RR
	W/LUBE HOLES ON O.D.				
2050954	20.500	22.500	.875	HDSA2	V
2052557	20.515	22.515	.813	HS7	R
2063300	20.625	22.265	1.000	HDS1	R
2063557	20.625	22.625	.813	HS7	R
2063580	20.625	22.625	1.000	HDS1	R
□2066500	525.00	575.00	22.00	HDS1	R
□2066503	525.00	575.00	20.70	HS4	R
□2066573	525.00	575.00	20.00	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2068710	20.866	22.866	.812	HDS1	R
2072200	20.719	22.125	.875	HDS1	R
2072440	20.719	22.500	.875	HDS1	R
2072500	20.719	22.625	.875	HDS1	R
2072600	20.719	22.750	.875	HDS1	R
2072954	20.719	22.750	1.250	HDS2	D
2075238	20.750	22.750	.625	HS8	R
2075340	20.750	22.375	.875	HDS1	R
2075540	20.750	22.750	.750	HDS1	R
2075543	20.750	22.750	.750	HDS3	V
	W/4 EA .500 ADJ. LUGS				
2075549	20.750	22.750	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2075557	20.750	22.750	.813	HS7	R
2075560	20.750	22.750	.875	HDS1	R
2075561	20.750	22.750	.875	HDS1	D
2075562	20.750	22.750	.875	HDS2	D
2075563	20.750	22.750	.875	HDS2	R
2075569	20.750	22.750	.875	HDS7	D
2075580	20.750	22.750	1.000	HDS1	R
2075588	20.750	22.750	1.000	HS8	R
2075602	20.750	22.752	.875	HDS2	R
2075660	20.750	23.000	.875	HDS1	R
2075662	20.750	23.000	.875	HDS1	R
	W/4 EA .188 LUGS				
2075907	20.750	23.750	1.188	HDS1	R
	W/4 EA .313 LUGS				
2075908	20.750	23.750	1.500	HDS1	R
2075950	20.750	22.750	1.250	HDSA1	RD
2083557	20.827	22.827	.813	HS7	R
□**2086448**	530.00	576.00	21.00	HS8	R
□2086500	530.00	580.00	22.00	HDS7	R
2086502	20.861	22.835	.860	HDS2	D
□**2086508**	530.00	580.00	20.00	HS8	R
□2086510	530.00	580.00	20.00	HDS1	R
□2086539	530.00	580.00	20.00	HDS7	D
	W/6 EA 12.70MM ADJ. LUGS				
□2086540	530.00	580.00	22.00	HDS1	R
□2086541	530.00	580.00	22.00	HDS1	R
	W/6 EA 6.40MM LUGS				
□2086573	530.00	580.00	22.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
2086710	20.866	22.866	.812	HDS1	R
2087490	20.875	22.750	1.000	HDS1	R
□2087547	530.00	580.00	20.00	HDS1	V
2087557	20.866	22.866	.813	HS7	R
□**2087568**	530.00	580.00	22.00	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2088540	20.875	22.875	.750	HDS1	R
2088557	20.875	22.875	.813	HS7	R
2088610	20.875	23.000	.750	HDS1	R
2088648	20.875	23.000	.750	HS8	R
2088700	20.875	23.228	.875	HDS1	R
2088702	20.875	23.228	.906	HDS1	R
2088800	20.875	23.500	.875	HDS1	R
2100017	21.000	22.000	.500	HS7	R
2100228	21.000	22.580	.578	HS8	R
2100250	21.000	22.500	.750	HDS1	R
2100257	21.000	22.500	.750	HS7	R
2100258	21.000	22.500	.750	HS8	R
2100370	21.000	22.750	.688	HDS1	R
2100380	21.000	22.750	.750	HDS1	R
2100390	21.000	22.750	.813	HDS1	R
2100391	21.000	22.750	.813	HDS1	R
	W/4 EA .125 LUGS				
2100393	21.000	22.750	.813	HDS1	V
2100430	21.000	22.751	.813	HDS1	R
2100432	21.000	22.751	.813	HDS1	R
	W/4 EA .125 LUGS				
2100490	21.000	22.938	1.000	HDS1	R
2100516	21.000	23.000	.625	HDS2	V
	W/4 EA .500 ADJ. LUGS				
2100517	21.000	23.000	.813	HS7	V
2100520	21.000	23.000	.625	HDS1	R
2100521	21.000	23.000	.625	HDS1	R
	W/4 EA .125 LUGS				
2100522	21.000	23.000	.625	HDS2	R
2100527	21.000	23.000	.625	HS7	R
2100528	21.000	23.000	.625	HS8	R
2100529	21.000	23.000	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2100532	21.000	23.000	.708	HDS2	R
2100539	21.000	23.000	.750	HDS7	R
	W/4 EA .125 LUGS				
2100540	21.000	23.000	.750	HDS1	R
2100543	21.000	23.012	.750	HDS1	R
2100544	21.000	23.000	.750	HDS2	R
	W/4 EA .125 LUGS				
2100545	21.000	23.000	.750	HDS2	R
2100550	21.000	23.000	.813	HDS1	R
2100553	21.000	23.000	.813	HDS2	V
2100557	21.000	23.000	.813	HS7	R
2100558	21.000	23.000	.813	HS8	R
2100560	21.000	23.000	.875	HDS1	R
2100561	21.000	23.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2100562	21.000	23.000	.875	HDS2	R
	W/6 EA .125 LUGS				
2100563	21.000	23.000	.875	HDS1	R
	W/4 EA .500 LUGS				
2100564	21.000	23.000	.875	HDS2	R
2100565	21.000	23.000	.875	HDS2	D
2100566	21.000	23.000	.875	HDS2	D
	W/4 EA .250 LUGS				
2100567	21.000	23.000	.875	HDS1	V
	W/4 EA .375 LUGS				
2100568	21.000	23.000	.875	HDS3	D
	W/4 EA. .125 LUGS				
2100575	21.000	23.000	.875	HDS2	R
	W/6 EA .500 ADJ. LUGS				
2100580	21.000	23.000	1.000	HDS1	R
2100583	21.000	23.000	1.000	HDS1	V
2100584	21.000	23.000	1.000	HDS2	R
	W/4 EA .250 LUGS				
2100588	21.000	23.000	1.000	HS8	V
2100660	21.000	23.250	.875	HDS1	R
2100760	21.000	23.500	.875	HDS1	R
2100780	21.000	23.500	1.000	HDS1	R
2100790	21.000	23.500	1.125	HDS1	R
2100791	21.000	23.500	1.125	HDS1	R
	W/4 EA .125 LUGS				
2100800	21.000	23.500	1.250	HDS1	R
2100870	21.000	24.000	.875	HDS1	R
2100913	21.000	22.250	1.375	HDSA1	RD
2100951	21.000	23.000	.875	HDSA1	RD
2100952	21.000	23.000	.875	HDSC2	RD
	W/6 EA .500 LUGS				
2100955	21.000	23.000	.875	HDSC2	RD
2100957	21.000	23.000	.875	HDSA2	V
□2105443	535.00	580.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
2112570	21.125	23.125	1.000	HDS1	V
2120550	21.204	23.204	.813	HDS1	R
2121900	21.210	24.500	1.000	HDS1	R
2125257	21.250	22.750	.750	HS7	R
2125380	21.250	23.000	.750	HDS1	R
2125520	21.250	23.250	.625	HDS1	R
2125527	21.250	23.250	.625	HS7	R
2125540	21.250	23.250	.750	HDS1	R
2125555	21.250	23.250	.813	HDS2	D
2125557	21.250	23.250	.813	HS7	R
2125560	21.250	23.250	.875	HDS1	R
2125562	21.250	23.250	.875	HDS1	R
	W/4 EA .313 LUGS				
2125563	21.250	23.250	.875	HDS2	R
2125564	21.250	23.250	.875	HDS2	V
2125660	21.250	23.500	.875	HDS1	R
2125890	21.250	24.250	1.000	HDS1	R
2125895	21.250	24.250	1.000	HDS1	D
2125940	21.250	23.000	.875	HDSA1	RD
□2126280	540.00	580.00	20.00	HDS1	R
□2126344	540.00	584.00	20.00	HS4	R
□**2126502**	540.00	590.00	20.00	HDS2	D
□**2126504**	540.00	590.00	20.00	HDS2	V
2126510	21.260	23.228	.984	HDS7	R
□2126540	540.00	590.00	20.00	HDS1	R
2126557	21.260	23.260	.813	HS7	R
2131440	21.313	23.125	.750	HDS1	R
2131560	21.313	23.312	.875	HDS1	R
2131561	21.313	23.312	.875	HDS1	R
	W/4 EA .063 LUGS				
2131580	21.313	23.312	1.000	HDS1	R
2131640	21.313	23.500	.875	HDS1	R
□2133181	542.00	578.00	16.00	HDS7	D
	W/4 EACH .500 ADJ LUGS				
2138480	21.375	23.250	.875	HDS1	R
2138557	21.375	23.375	.813	HS7	R
2138560	21.375	23.375	.875	HDS1	R
2138620	21.375	23.500	.875	HDS1	R
2144300	21.438	23.000	.750	HDS1	R
2144360	21.438	23.188	.625	HDS1	R
2144361	21.438	23.188	.625	HDS1	R
	W/4 EA .125 LUGS				
2144362	21.438	23.188	.625	HDS1	R
	W/4 EA .031 LUGS				
2144363	21.438	23.188	.625	HDS1	R
	W/4 EA .063 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2144380	21.438	23.188	.750	HDS1	R
2144440	21.438	23.250	.875	HDS1	R
2144600	21.438	23.500	.875	HDS1	R
□2145500	545.00	595.00	22.00	HDS1	R
2146557	21.456	23.456	.813	HS7	R
2150070	21.500	22.688	.625	HDS1	R
2150238	21.500	23.000	.625	HS8	R
2150257	21.500	23.000	.750	HS7	R
2150258	21.500	23.000	.750	HS8	R
2150380	21.500	23.250	.750	HDS1	R
2150384	21.500	23.250	.750	HDS2	V
2150387	21.500	23.250	.750	HDS1	V
2150388	21.500	23.250	.750	HDS1	D
2150520	21.500	23.500	.625	HDS1	R
2150527	21.500	23.500	.625	HS7	R
2150540	21.500	23.500	.750	HDS1	R
2150542	21.500	23.500	.750	HDS2	R
2150549	21.500	23.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2150550	21.500	23.500	.813	HDS1	R
2150554	21.500	23.500	.813	HDS1	R
	W/6 EA .375 LUGS				
2150555	21.500	23.500	.813	HDS2	R
	W/6 EA .375 LUGS				
2150557	21.500	23.500	.813	HS7	R
2150560	21.500	23.500	.875	HDS1	R
2150562	21.500	23.500	.875	HDS2	V
2150565	21.500	23.500	.875	HDS2	D
2150574	21.500	23.500	.800	HDS2	V
2150580	21.500	23.500	1.000	HDS1	R
2150600	21.500	23.563	.875	HDS1	R
2150660	21.500	23.750	.875	HDS1	R
2150760	21.500	24.000	.875	HDS1	R
2150780	21.500	24.000	1.000	HDS1	R
2150800	21.500	24.000	1.250	HDS1	R
2163380	21.625	23.375	.750	HDS1	R
2163557	21.625	23.625	.813	HS7	R
2163560	21.625	23.625	.875	HDS1	R
2163580	21.625	23.625	1.000	HDS1	R
2163620	21.625	23.750	.875	HDS1	R
□**2163672**	550.00	610.00	25.00	HDS2	R
□2165250	550.00	590.00	20.00	HDS1	R
□2165255	550.00	590.00	20.00	HDS1	R
	W/4 EA 4.80MM LUGS				
2165257	21.653	23.153	.750	HS7	R
□2165258	550.00	590.00	20.00	HDS1	R
	W/4 EA 9.50MM LUGS				
□**2165288**	550.00	590.00	20.00	HS8	R
□**2165492**	550.00	600.00	25.00	HDS2	R
□2165500	550.00	600.00	20.00	HDS1	R
□2165720	550.00	610.00	25.00	HDS1	R
□2165840	550.00	620.00	25.00	HDS1	V
2169257	21.688	23.188	.750	HS7	R
2169557	21.691	23.691	.813	HS7	R
2175230	21.750	23.250	.625	HDS1	R
2175232	21.750	23.250	.625	HDS2	R
2175237	21.750	23.250	.625	HS7	R
2175238	21.750	23.250	.625	HS8	R
2175250	21.750	23.250	.750	HDS1	R
2175252	21.750	23.250	.750	HDS2	R
2175253	21.750	23.250	.750	HDS1	R
	W/4 EA .125 LUGS				
2175257	21.750	23.250	.750	HS7	R
2175540	21.750	23.750	.750	HDS1	R
2175542	21.750	23.750	.750	HDS2	R
2175545	21.750	23.750	.750	HDS2	R
	W/4 EA .500 LUGS				
2175557	21.750	23.750	.813	HS7	R
2175569	21.750	23.750	.875	HDS7	R
2175580	21.750	23.750	1.000	HDS1	R
2175581	21.750	23.750	1.000	HDS1	R
	W/4 EA .063 LUGS				
2175585	21.750	23.750	1.000	HDS2	R
	W/4 EA .500 LUGS				
2175660	21.750	24.000	.875	HDS1	R
2175664	21.750	24.000	.875	HDS2	R
	W/4 EA .125 LUGS				
2175680	21.750	24.000	1.000	HDS1	R
2175760	21.750	24.250	.875	HDS1	R
2175830	21.750	24.500	1.000	HDS1	R
2175895	21.750	24.750	1.500	HDS1	R
2175899	21.750	24.750	1.000	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2175920	21.750	24.750	1.500	HDSD1	RR
2175992	21.750	24.750	1.500	HDSD2	VV
2175997	21.750	24.750	1.500	HDSD1	VV
2175998	21.750	24.750	1.500	HDSE1	VV
2188557	21.875	23.875	.813	HS7	R
□2189637	556.00	610.00	25.40	HS7	R
2200017	22.000	23.000	.500	HS7	R
2200027	22.000	23.000	.500	HS7	V
2200140	22.000	24.000	.875	HDS1	R
	W/4 EA .188 LUGS				
2200212	22.000	23.500	.750	HDS2	D
2200213	22.000	23.500	.750	HDS2	V
2200218	22.000	23.500	.750	HS8	R
2200230	22.000	23.500	.625	HDS1	R
2200237	22.000	23.500	.625	HS7	R
2200238	22.000	23.500	.625	HS8	R
2200239	22.000	23.500	.625	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2200250	22.000	23.500	.750	HDS1	R
2200252	22.000	23.500	.750	HDS2	R
2200253	22.000	23.500	.750	HDS1	D
2200255	22.000	23.500	.750	HDS2	R
	W/4 EA .250 LUGS				
2200256	22.000	23.500	.750	HDS1	R
	W/6 EA .125 LUGS				
2200257	22.000	23.500	.750	HS7	R
2200390	22.000	23.750	.813	HDS1	R
2200393	22.000	23.750	.813	HDS1	D
2200398	22.000	23.750	.813	HS8	D
2200513	22.000	24.000	.750	HDS3	V
	W/4 EA .500 ADJ. LUGS				
2200522	22.000	24.000	.625	HDS2	D
	W/4 EA .375 LUGS				
2200529	22.000	24.000	.625	HS8	D
2200540	22.000	24.000	.750	HDS1	R
2200542	22.000	24.000	.750	HDS2	R
2200549	22.000	24.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2200550	22.000	24.000	.813	HDS1	R
2200555	22.000	24.000	.812	HS8	V
2200557	22.000	24.000	.813	HS7	R
2200558	22.000	24.000	.813	HS8	D
2200560	22.000	24.000	.875	HDS1	R
2200561	22.000	24.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2200562	22.000	24.000	.875	HDS1	R
	W/4 EA .250 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2200563	22.000	24.000	.875	HDS2	R
	W/4 EA .125 LUGS				
2200564	22.000	24.000	.875	HDS2	D
2200565	22.000	24.000	.875	HDS2	R
2200566	22.000	24.000	.875	HDS2	R
	W/4 EA .250 LUGS				
2200567	22.000	24.000	.875	HDS2	D
	W/4 EA .250 LUGS				
2200580	22.000	24.000	1.000	HDS1	R
2200585	22.000	24.000	1.000	HDS1	R
	W/4 EA .125 LUGS				
2200587	22.000	24.000	1.000	HS7	R
2200590	22.000	24.000	1.250	HDS1	R
2200591	22.000	24.000	1.281	HDS1	R
2200592	22.000	24.000	1.250	HDS2	D
2200680	22.000	24.250	1.000	HDS1	R
2200760	22.000	24.500	.875	HDS1	R
2200762	22.000	24.500	.875	HDS1	R
	W/4 EA .250 LUGS				
2200780	22.000	24.500	1.000	HDS1	R
2200800	22.000	24.500	1.250	HDS1	R
2200804	22.000	24.500	1.250	HDS1	D
2200820	22.000	24.750	.875	HDS1	R
2200900	22.000	26.000	1.250	HDS1	R
2200920	22.000	23.500	.875	HDSA1	RD
2200953	22.000	24.000	1.250	HDSD1	RR
2200954	22.000	24.000	.875	HDSA1	RL
2200955	22.000	24.000	.875	HDSA2	RL
2200958	22.000	24.000	1.250	HDSE2	DD
2200961	22.000	24.000	1.875	HDSE2	RR
	W/LUBE HOLES ON O.D.				
2200962	22.000	24.000	1.250	HDSD2	DD
2201560	22.000	24.000	.875	HDS2	D
	W/4 EA .125 LUGS				
2201564	22.000	24.000	.875	HDS1	D
2201565	22.000	24.000	.875	HDS1	R
	W/6 EA .125 LUGS				
□**2204242**	560.00	600.00	18.00	HDS2	R
□**2204332**	560.00	604.00	16.00	HDS2	R
	W/4 EA 3.20MM LUGS				
□2204340	560.00	604.00	20.00	HDS1	R
□2204380	560.00	604.00	20.00	HDS7	R
□2204473	560.00	610.00	20.00	HDS1	V
□2204500	560.00	610.00	20.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
□2204508	560.00	610.00	20.00	HMS46	R
□2204510	560.00	610.00	22.00	HDS7	R
□2204720	560.00	620.00	29.34	HDS7	R
□2204962	560.00	620.00	30.00	HDSA2	RD
□**2205382**	560.00	604.00	20.00	HDS2	R
2206557	22.063	24.063	.813	HS7	R
2213490	22.125	24.000	1.000	HDS1	R
2213550	22.125	24.125	.813	HDS1	R
2213557	22.125	24.125	.813	HS7	R
2225230	22.250	23.750	.625	HDS1	R
2225350	22.250	24.000	.750	HDS1	V
2225380	22.250	24.000	.750	HDS1	R
2225511	22.250	24.250	.875	HDS7	H
2225550	22.250	24.250	.813	HDS1	R
2225553	22.250	24.250	.813	HDS2	V
2225557	22.250	24.250	.813	HS7	R
2225560	22.250	24.250	.875	HDS1	R
2225561	22.250	24.250	.875	HDS7	R
	W/4 EA .250 LUGS				
2225562	22.250	24.250	.875	HDS2	R
2225563	22.250	24.250	.875	HDS2	R
	W/4 EA .125 LUGS				
2225564	22.250	24.250	.875	HDS1	R
	W/4 EA .250 LUGS				
2225565	22.250	24.250	.875	HDS2	R
	W/4 EA .250 LUGS				
2225568	22.250	24.250	.875	HDS3	H
	W/4 EA .500 ADJ .LUGS				
2225569	22.250	24.250	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2225580	22.250	24.250	1.000	HDS1	R
	W/4 EA .500 ADJ. LUGS				
2225588	22.250	24.250	1.000	HS8	R
2225660	22.250	24.500	.875	HDS1	R
2225680	22.250	24.500	1.000	HDS1	R
2237515	22.375	24.375	.750	HDS1	R
	W/4 EA .125 LUGS				
2237541	22.375	24.375	.750	HDS1	R
	W/4 EA .125 LUGS				
2237710	22.375	24.368	.875	HDS2	R
2238470	22.375	24.250	.750	HDS1	R
2238500	22.375	24.368	.875	HDS1	R
2238505	22.375	24.368	.875	HDS1	R
	W/4 EA .375 LUGS				
2238509	22.375	24.368	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2238540	22.375	24.375	.750	HDS1	R
2238550	22.375	24.373	.875	HDS1	R
2238560	22.375	24.375	.875	HDS1	R
2238563	22.375	24.375	.875	HDS1	R
	W/4 EA .375 LUGS				
2238565	22.375	24.368	.875	HDS2	D
	W/4 EA .375 LUGS				
2238610	22.375	24.500	.750	HDS1	R
2238620	22.375	24.500	.875	HDS1	R
2238710	22.375	24.750	.875	HDS1	R
2243303	22.438	24.000	.750	HDS1	V
2243468	22.438	24.250	.688	HS8	R
□2244260	570.00	610.00	20.00	HDS1	R
2244300	22.438	24.000	.750	HDS1	R
2244440	22.438	24.250	.750	HDS1	R
2244453	22.438	24.376	.875	HDS1	R
	W/4 EA .375 LUGS				
2244540	22.438	24.438	.750	HDS1	R
2244542	22.438	24.438	.906	HDS2	R
□**2244552**	570.00	620.00	22.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
2244560	22.438	24.438	.875	HDS1	R
2250100	22.500	23.688	.625	HDS1	R
2250105	22.500	23.688	.625	HDS1	D
2250230	22.500	24.000	.625	HDS1	R
2250380	22.500	24.250	.750	HDS1	R
2250381	22.500	24.250	.750	HDS1	R
	W/4 EA .063 LUGS				
2250388	22.500	24.250	.750	HDS3	R
	W/4 EA .375 LUGS				
2250390	22.500	24.250	.813	HDS1	R
2250391	22.500	24.250	.813	HDS1	R
	W/4 EA .063 LUGS				
2250400	22.500	24.260	.750	HDS1	R
2250410	22.500	24.250	.875	HDS1	R
2250500	22.500	24.495	.875	HDS1	R
2250501	22.500	24.495	.875	HDS1	R
	W/4 EA .125 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2250502	22.500	24.495	.875	HDS1	R
	W/4 EA .313 LUGS				
2250520	22.500	24.500	.625	HDS1	R
2250540	22.500	24.500	.750	HDS1	R
2250545	22.500	24.500	.750	HDS1	R
	W/4 EA .125 LUGS				
2250549	22.500	24.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2250552	22.500	24.500	.875	HDS2	V
2250557	22.500	24.500	.813	HS7	R
2250560	22.500	24.500	.875	HDS1	R
2250580	22.500	24.500	1.000	HDS1	R
2250660	22.500	24.750	.875	HDS1	R
2263548	22.638	24.638	.750	HS8	D
2267257	22.673	24.173	.750	HS7	R
2275380	22.750	24.500	.750	HDS1	R
2275557	22.750	24.750	.813	HS7	R
2275558	22.750	24.750	.813	HS8	R
2275560	22.750	24.750	.875	HDS1	R
2275562	22.750	24.750	.875	HDS2	R
2275580	22.750	24.750	1.000	HDS1	R
2275660	22.750	25.000	.875	HDS1	R
2275820	22.750	25.500	.875	HDS1	R
□2276740	578.00	640.00	30.00	HDS1	R
2281558	22.814	24.814	.813	HS8	R
□2283228	580.00	620.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□**2283282**	580.00	620.00	20.00	HDS2	D
□2283500	580.00	630.00	18.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
2283557	22.834	24.834	.813	HS7	R
□2283700	580.00	640.00	25.00	HDS1	R
□2283972	580.00	640.00	30.00	HDSA2	RD
□2284578	580.00	630.00	25.00	HDS1	R
	W/4 EA 4.77MM ADJ.LUGS				
□**2284732**	580.00	640.00	25.00	HDS2	R
2288557	22.875	24.875	.813	HS7	R
2300017	23.000	24.000	.500	HS7	R
2300214	23.000	24.500	.750	HDS2	V
2300220	23.000	24.500	.750	HDS1	R
	W/4 EA .500 ADJ. LUGS				
2300250	23.000	24.500	.750	HDS1	R
2300252	23.000	24.500	.750	HDS2	R
2300254	23.000	24.500	.750	HDS2	R
	W/4 EA .125 LUGS				
2300255	23.000	24.500	.750	HDS1	D
2300257	23.000	24.500	.750	HS7	R
2300258	23.000	24.500	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
2300259	23.000	24.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2300370	23.000	24.750	.688	HS8	R
2300380	23.000	24.750	.750	HDS1	R
2300381	23.000	24.750	.750	HDS1	R
	W/6 EA .063 LUGS				
2300382	23.000	24.750	.750	HDS2	R
2300383	23.000	24.750	.750	HDS2	D
2300384	23.000	24.750	.750	HDS2	V
2300388	23.000	24.750	.750	HDS1	D
2300412	23.000	24.750	.938	HDS1	R
	W/8 EA .125 LUGS				
2300540	23.000	25.000	.750	HDS1	R
2300551	23.000	25.000	.813	HS8	D
2300557	23.000	25.000	.813	HS7	R
2300558	23.000	25.000	.813	HS8	R
2300559	23.000	25.000	.813	HS8	D
2300560	23.000	25.000	.875	HDS1	R
2300561	23.000	25.000	.875	HDS2	R
2300563	23.000	25.000	.875	HDS1	R
	W/6 EA .250 LUGS				
2300565	23.000	25.000	.875	HDS1	R
	W/8 EA .125 LUGS				
2300569	23.000	25.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2300570	23.000	25.000	.938	HDS1	R
2300580	23.000	25.000	1.000	HDS1	R
2300582	23.000	25.000	1.000	HDS2	R
2300591	23.000	25.000	1.281	HDS1	R
2300660	23.000	25.250	.875	HDS1	R
2300710	23.000	25.375	.875	HDS1	R
2300717	23.000	25.375	.875	HDS1	V
2300760	23.000	25.500	.875	HDS1	R
2300780	23.000	25.500	1.000	HDS1	R
2300800	23.000	25.500	1.250	HDS1	R
2300921	23.000	24.500	.875	HDSB1	RD
2300952	23.000	25.000	1.000	HDSA2	RL
2300983	23.000	24.750	1.250	HDSE1	VV
□**2303192**	585.00	620.00	20.00	HDS2	R
2307558	23.074	24.954	.813	HS8	R
□2307740	586.00	650.00	25.00	HDS1	R
2320558	23.208	25.208	.813	HS8	R
□2322218	590.00	630.00	20.00	HDS1	R
	W/4 EA 4.80MM ADJ. LUGS				
□2322221	590.00	630.00	20.00	HDS7	D
	W/6 EA 12.70MM ADJ. LUGS				
□2322250	590.00	630.00	20.00	HDS1	R
□**2322498**	590.00	640.00	25.00	HS8	R
□2323253	590.00	630.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□**2323562**	590.00	640.00	22.00	HDS2	R
2325380	23.250	25.000	.750	HDS1	R
2325381	23.250	25.000	.750	HDS1	R
	W/4 EA .125 LUGS				
2325382	23.250	25.000	.750	HDS1	R
	W/4 EA .250 LUGS				
2325383	23.250	25.000	.750	HDS1	R
	W/6 EA .250 LUGS				
2325385	23.250	25.000	.750	HDS2	R
2325386	23.250	25.000	.750	HDS2	R
	W/4 EA .250 LUGS				
2325540	23.250	25.250	.750	HDS1	R
2325550	23.250	25.250	.813	HDS1	R
2325557	23.250	25.250	.813	HS7	R
2325560	23.250	25.250	.875	HDS1	R
2325562	23.250	25.250	.875	HDS1	R
	W/6 EA .250 LUGS				
2325660	23.250	25.500	.875	HDS1	R
2325780	23.250	25.750	1.000	HDS1	R
2330017	23.300	24.300	.500	HS7	R
2331568	23.310	25.310	.875	HS8	R
2331580	23.313	25.313	1.000	HDS1	R
2338250	23.375	24.875	.750	HDS1	R
2338557	23.375	25.375	.813	HS7	R
2338580	23.375	25.375	1.000	HDS1	R
2350017	23.500	24.500	.500	HS7	R
2350238	23.500	25.000	.625	HS8	R
2350380	23.500	25.250	.750	HDS1	R
2350382	23.500	25.250	.750	HDS2	R
2350540	23.500	25.500	.750	HDS1	R
2350550	23.500	25.500	.813	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2350557	23.500	25.500	.813	HS7	R
2350560	23.500	25.500	.875	HDS1	R
2350562	23.500	25.500	.875	HDS1	R
	W/6 EA .250 LUGS				
2350567	23.000	25.500	.875	HDS1	V
2350570	23.500	25.500	.875	HDS1	V
2350580	23.500	25.500	1.000	HDS1	R
2350652	23.500	25.250	.750	HDS2	V
2350660	23.500	25.750	.875	HDS1	R
2350840	23.500	26.375	1.000	HDS1	R
2350955	23.500	25.500	1.250	HDSD2	RR
2356340	23.563	25.250	.750	HDS1	R
2356343	23.563	25.250	.750	HDS2	D
2356380	23.562	25.312	.750	HDS1	R
2356383	23.562	25.312	.750	HDS3	R
	W/4 EA .375 LUGS				
2356440	23.563	25.375	.750	HDS1	R
2356500	23.563	25.500	.750	HDS1	R
2357257	23.570	25.070	.750	HS7	R
2360557	23.595	25.095	.750	HS7	R
□2362250	600.00	640.00	20.00	HDS1	R
□2362253	600.00	640.00	20.00	HDS1	V
2362418	23.625	25.375	.812	HDS2	D
□2362500	600.00	650.00	25.00	HDS1	R
□2362580	600.00	650.00	18.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
2363557	23.625	25.625	.813	HS7	R
2363620	23.625	25.750	.875	HDS1	R
2363710	23.625	26.000	.875	HDS1	R
2363800	23.625	26.250	.875	HDS1	R
2375557	23.750	25.750	.813	HS7	R
2375580	23.750	25.750	1.000	HDS1	R
2375660	23.750	26.000	.875	HDS1	R
2375746	23.750	26.242	.750	HDS1	R
2375900	23.750	26.750	1.125	HDS1	R
2375902	23.750	26.750	1.500	HDS1	R
2375903	23.750	26.750	1.500	HDS1	V
□2378190	604.00	640.00	22.00	HDS1	R
2387960	23.875	26.000	.875	HDSA1	RL
2387962	23.875	26.000	.875	HDSA2	RL
2387967	23.875	26.000	.875	HDSA2	V
2388017	23.875	24.875	.500	HS7	R
2388480	23.875	25.750	.875	HDS1	R
2388620	23.875	26.000	.875	HDS1	R
2388710	23.875	26.250	.875	HDS1	R
2394590	23.938	26.010	1.000	HDS1	R
2400220	24.000	25.500	.750	HDS1	D
	W/4 EA .500 ADJ. LUGS				
2400250	24.000	25.500	.750	HDS1	R
2400251	24.000	25.500	.750	HDS1	R
	W/4 EA .125 LUGS				
2400255	24.000	25.500	.750	HDS2	R
	W/4 EA .250 LUGS				
2400257	24.000	25.500	.750	HS7	R
2400258	24.000	25.500	.750	HS8	R
2400259	24.000	25.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2400488	24.000	25.875	.813	HS8	R
2400550	24.000	26.000	.813	HDS1	R
2400552	24.000	26.000	.813	HDS1	R
	W/4 EA .375 LUGS				
2400554	24.000	26.000	.813	HS8	R
	W/THREADED SPRING CONNECTOR				
2400556	24.000	26.000	.813	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2400557	24.000	26.000	.813	HS7	R
2400558	24.000	26.000	.813	HS8	R
2400559	24.000	26.000	.875	HDS2	R
2400560	24.000	26.000	.875	HDS1	R
2400561	24.000	26.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2400562	24.000	26.000	.875	HDS1	R
	W/4 EA .375 LUGS				
2400563	24.000	26.000	.875	HDS1	R
	W/4 EA .250 LUGS				
2400565	24.000	26.000	.875	HDS1	R
	W/4 EA .063 LUGS				
2400567	24.000	26.000	.875	HDS2	V
2400568	24.000	26.000	.875	HDS1	H
2400580	24.000	26.000	1.000	HDS1	R
2400587	24.000	26.000	1.000	HS7	R
2400588	24.000	26.000	1.000	HS8	R
2400598	24.000	26.000	1.000	HS8	D
2400660	24.000	26.250	.875	HDS1	R
2400661	24.000	26.250	.875	HDS1	R
	W/4 EA .125 LUGS				
2400663	24.000	26.250	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2400680	24.000	26.250	1.000	HDS1	R
2400682	24.000	26.250	1.000	HDS1	R
	W/6 EA .250 LUGS				
2400683	24.000	26.250	1.000	HDS1	R
	W/4 EA .375 LUGS				
2400684	24.000	26.250	1.000	HDS2	R
	W/6 EA .250 LUGS				
2400685	24.000	26.250	1.000	HDS2	R
2400718	24.000	26.250	.688	HS8	R
2400760	24.000	26.500	.875	HDS1	R
2400761	24.000	26.500	.875	HDS1	R
	W/4 EA .125 LUGS				
2400784	24.000	26.500	1.000	HDS2	R
2400790	24.000	26.500	1.125	HDS1	R
2400800	24.000	26.500	1.250	HDS1	R
2400820	24.000	26.750	.875	HDS1	R
2400962	24.000	26.250	.870	HDSA2	RL
□**2407542**	610.00	660.00	20.00	HDS2	R
2409557	24.093	26.093	.813	HS8	R
□**2410488**	615.00	665.00	24.00	HS8	R
2425410	24.250	26.000	.875	HDS1	R
2425420	24.250	26.000	1.000	HDS1	R
2425422	24.250	26.000	1.000	HDS2	R
2425440	24.250	26.063	.844	HDS1	R
2425560	24.250	26.250	.875	HDS1	R
2425562	24.250	26.250	.875	HDS2	V
2425580	24.250	26.250	1.000	HDS1	R
2425588	24.250	26.250	1.000	HS8	R
2425660	24.250	26.500	.875	HDS1	R
2425780	24.250	26.750	1.000	HDS1	R
2438540	24.375	26.375	.750	HDS1	R
2438542	24.375	26.375	.750	HDS2	R
2438843	24.375	27.250	1.375	HDS1	R
□**2440509**	620.00	670.00	22.00	HS8	D
2440660	24.409	26.929	.787	HDS1	R
□2440670	620.00	680.00	20.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
□2441540	620.00	670.00	20.00	HDS1	R
□2441548	620.00	670.00	20.00	HDS1	R
	W/4 EA 3.18MM LUGS				
2443544	24.437	26.437	.750	HDS2	V
2444300	24.438	26.000	.750	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2444301	24.438	26.000	.750	HDS1	R
	W/4 EA .125 LUGS				
2444302	24.438	26.000	.750	HDS1	R
	W/4 EA .250 LUGS				
2444304	24.438	26.000	.750	HDS2	R
2444305	24.438	26.000	.750	HDS1	R
	W/6 EA .500 LUGS				
2444306	24.438	26.000	.750	HDS2	R
	W/4 EA .250 LUGS				
2444430	24.438	26.250	.750	HDS1	R
2444520	24.438	26.438	.625	HDS1	R
2444521	24.438	26.438	.625	HDS1	R
	W/4 EA .063 LUGS				
2444536	24.438	26.438	.719	HDS2	R
	W/4 EA .063 LUGS				
2444540	24.438	26.438	.750	HDS1	R
2444541	24.438	26.438	.750	HDS1	R
	W/4 EA .063 LUGS				
2444542	24.438	26.438	.750	HDS2	R
2444550	24.438	26.438	.813	HDS1	R
2444560	24.438	26.438	.875	HDS1	R
2448950	24.438	26.438	1.500	HDSD1	RR
	W/LUBE HOLES ON O.D.				
2450017	24.500	25.500	.500	HS7	R
2450018	24.500	25.500	.500	HS8	R
2450068	24.500	25.625	.625	HS8	R
2450257	24.500	26.000	.750	HS7	R
2450557	24.500	26.500	.813	HS7	R
2450560	24.500	26.500	.875	HDS1	R
2450563	24.500	26.500	.875	HDS2	R
2450564	24.500	26.500	.875	HDS1	V
2450565	24.500	26.500	.875	HDS2	R
	W/6 EA .250 LUGS				
2450567	24.500	26.500	.875	HDS2	V
2450569	24.500	26.500	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2450580	24.500	26.500	1.000	HDS1	R
2450587	24.500	26.500	1.000	HS7	R
2450710	24.500	26.875	.875	HDS1	R
2450790	24.500	27.000	1.125	HDS1	R
2450800	24.500	27.000	1.250	HDS1	R
2450820	24.500	27.250	.875	HDS1	R
□2460220	625.00	665.00	25.00	HDS1	R
□**2460548**	625.00	676.00	19.00	HS8	D
2475520	24.750	26.750	.625	HDS1	R
2475540	24.750	26.750	.750	HDS1	R
2475557	24.750	26.750	.813	HS7	R
2475558	24.750	26.750	.813	HS8	R
2475587	24.750	26.750	1.000	HS7	R
□**2480242**	630.00	670.00	20.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
□2480250	630.00	670.00	20.00	HDS1	R
□2480253	630.00	670.00	20.00	HDS1	V
□2480255	630.00	670.00	20.00	HDS3	R
	W/6 EA 12.70MM ADJ. LUGS				
2480257	24.803	26.303	.750	HS7	R
□**2480258**	630.00	670.00	20.00	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□2480283	630.00	670.00	20.00	HDS3	D
	W/4 EA .500 ADJ. LUGS				
□2480300	630.00	670.00	20.00	HDS1	R
	W/ 6 EA. 12.70 MM LUGS				
□2480380	630.00	674.00	20.00	†HDS1	R
2481557	24.813	26.813	.813	HS7	R
2487101	24.875	26.126	.813	HDS1	R
2488557	24.875	26.875	.813	HS7	R
2500017	25.000	26.000	.500	HS7	R
2500217	25.000	26.500	.750	HDS1	V
2500247	25.000	26.500	.750	HS7	D
2500249	25.000	26.500	.750	HS8	D
2500250	25.000	26.500	.750	HDS1	R
2500251	25.000	26.500	.750	HDS1	R
	W/6 EA .125 LUGS				
2500252	25.000	26.500	.750	HDS1	R
	W/6 EA .375 LUGS				
2500253	25.000	26.500	.750	HDS2	R
2500254	25.000	26.500	.750	HDS2	R
	W/6 EA .125 LUGS				
2500255	25.000	26.500	.750	HDS1	D
2500256	25.000	26.500	.750	HDS1	D
	W/6 EA .125 LUGS				
2500257	25.000	26.500	.750	HS7	R
2500258	25.000	26.500	.750	HS8	R
2500259	25.000	26.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2500540	25.000	27.000	.750	HDS1	R
2500544	25.000	27.000	.750	HDS1	R
	W/4 EA .125 LUGS				
2500545	25.000	27.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2500553	25.000	27.000	.813	HDS2	V
2500557	25.000	27.000	.813	HS7	R
2500558	25.000	27.000	.813	HS8	D
	W/HOOK & EYE CONNECTOR				
2500559	25.000	27.000	.916	HS8	D
2500560	25.000	27.000	.875	HDS1	R
2500562	25.000	27.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2500563	25.000	27.000	.875	HDS2	V
2500564	25.000	27.000	.875	HDS2	R
	W/4 EA .125 LUGS				
2500565	25.000	27.000	.875	HDS2	R
2500569	25.000	27.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2500570	25.000	27.000	.906	HDS1	R
2500580	25.000	27.000	1.000	HDS1	R
2500582	25.000	27.000	1.000	HDS2	R
2500587	25.000	27.000	1.000	HS7	R
2500588	25.000	27.000	1.000	HS8	R
2500660	25.000	27.250	.875	HDS1	R
2500680	25.000	27.250	1.000	HDS1	R
2500682	25.000	27.250	1.000	HDS1	R
	W/4 EA .188 LUGS				
2500691	25.000	27.250	1.188	HDS1	R
2500692	25.000	27.250	1.188	HDS1	R
	W/4 EA .188 LUGS				
2500740	25.000	27.375	.875	HDS1	R
2500760	25.000	27.500	.875	HDS1	R
2500762	25.000	27.500	.875	HDS2	R
2500764	25.000	27.500	.875	HDS2	D
	W/4 EA .250 LUGS				
2500769	25.000	27.500	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2500772	25.000	27.500	1.000	HDS2	D
2500780	25.000	27.500	1.000	HDS1	R
2500783	25.000	27.500	1.000	HDS2	R
2500793	25.000	27.500	1.250	HDS1	R
2500920	25.000	26.500	1.125	HDSA1	RL
2500952	25.000	27.000	.875	HDSA2	DL
	W/4 EA .500 ADJ. LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2500970	25.000	27.500	1.000	HDSA1	RL
2500971	25.000	27.500	1.000	HDSB1	RL
2500972	25.000	27.500	1.000	HDSA2	D
2500990	25.000	28.375	.875	HDS1	R
2513017	25.125	26.125	.500	HS7	R
2513330	25.125	26.750	.750	HDS1	R
2518332	25.188	26.875	.750	HDS2	H
2518344	25.188	26.875	.750	HDS2	V
2518346	25.188	26.875	.750	HDS3	V
	W/4 EA .500 ADJ. LUGS				
□2519300	640.00	680.00	20.00	HDS1	V
2519340	25.188	26.875	.750	HDS1	R
2519344	25.188	26.875	.750	HDS2	R
	W/4 EA .188 LUGS				
2519380	25.188	26.938	.750	HDS1	R
2519440	25.188	27.000	.875	HDS1	R
□2519490	640.00	690.00	25.00	HDS1	R
□2519511	640.00	690.00	25.00	HDS7	R
2519557	25.188	27.188	.813	HS7	R
2522557	25.219	27.219	.813	HS7	R
2525250	25.250	26.750	.750	HDS1	R
2525557	25.250	27.250	.813	HS7	R
2525560	25.250	27.250	.875	HDS1	R
2525562	25.250	27.250	.875	HDS2	R
2525588	25.250	27.250	1.000	HS8	R
2525660	25.250	27.500	.875	HDS1	R
2525820	25.250	28.000	.875	HDS1	R
2525844	25.250	28.125	1.500	HDS1	R
2525890	25.250	28.250	1.000	HDS1	R
2525893	25.250	28.250	1.000	HDS2	D
2525903	25.500	28.250	1.500	HDS1	R
2537583	25.375	27.375	1.000	HDS1	V
2537900	25.375	28.500	1.500	HDS1	R
□2547541	647.00	700.00	25.00	HDS7	H
2550250	25.500	27.000	.750	HDS1	R
2550258	25.500	27.000	.750	HS8	R
2550540	25.500	27.500	.750	HDS1	R
2550549	25.500	27.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2550557	25.500	27.500	.813	HS7	R
2550560	25.500	27.500	.875	HDS1	R
2550561	25.500	27.500	.875	HDS1	R
	W/4 EA .125 LUGS				
2550564	25.500	27.500	.875	HDS2	D
	W/4 EA .250 LUGS				
2550565	25.500	27.500	.875	HDS2	R
2550580	25.500	27.500	1.000	HDS1	R
2550584	25.500	27.500	1.000	HDS1	R
	W/4 EA .250 LUGS				
2550585	25.500	27.500	1.000	HDS2	R
2550587	25.500	27.500	1.000	HS7	R
2550588	25.500	27.500	1.000	HS8	V
2550792	25.500	28.000	1.250	HDS1	R
2550900	25.500	28.500	1.125	HDS1	R
2550912	25.500	28.500	1.250	HDSD2	RR
2553257	25.531	27.031	.750	HS7	R
2559017	25.590	26.590	.500	HS7	R
2559257	25.590	27.090	.750	HS7	R
□**2559488**	650.00	700.00	20.00	HS8	R
□**2559502**	650.00	700.00	22.00	HDS2	D
□**2559504**	650.00	700.00	22.00	HDS2	V
2559567	25.591	27.591	.875	HS7	R
□**2559702**	650.00	710.00	25.00	HDS2	R
2562630	25.625	27.750	1.000	HDSA1	RL
2563017	25.625	26.625	.500	HS7	R
2563630	25.625	27.750	1.000	HDS1	R
2563730	25.625	28.000	1.000	HDS1	R
2563800	25.625	28.250	1.000	HDS1	R
2575017	25.750	26.750	.500	HS7	R
2575057	25.750	26.875	.500	HS7	R
2575250	25.750	27.250	.750	HDS1	R
2575252	25.750	27.250	.750	HDS2	R
2575258	25.750	27.250	.750	HS8	R
2575557	25.750	27.750	.813	HS7	R
2575558	23.750	25.750	.813	HS8	R
2575572	25.750	27.750	1.000	HDS2	R
2575588	25.750	27.750	1.000	HS8	R
2575903	25.750	28.755	1.250	HDS1	R
	W/6 EA .250 LUGS				
2575904	25.750	28.755	1.500	HDS1	R
2581113	25.813	27.063	.625	HDS2	R
2588017	25.875	26.875	.500	HS7	R
2588557	25.875	27.875	.813	HS7	R
2588620	25.875	28.000	.875	HDS1	R
2588710	25.875	28.250	.875	HDS1	R
2588800	25.875	28.500	.875	HDS1	R
□2598240	660.00	700.00	18.00	HDS1	R
2598330	25.988	27.625	.750	HDS1	R
2598332	25.988	27.625	.750	HDS2	R
2598342	25.988	27.625	1.000	HDS2	R
□2598670	660.00	724.00	25.00	HDS1	R
2598932	26.000	27.625	1.000	HDSB1	RL
2600017	26.000	27.000	.500	HS7	R
2600330	26.000	27.625	.750	HDS1	R
2600332	26.000	27.625	.750	HDS2	R
2600334	26.000	27.625	.750	HDS2	V
2600339	26.000	27.625	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2600344	26.000	27.620	.750	HDS2	V
2600347	26.000	27.730	.730	HS7	R
2600550	26.000	28.000	.813	HDS1	R
2600557	26.000	28.000	.813	HS7	R
2600560	26.000	28.000	.875	HDS1	R
2600562	26.000	28.000	.875	HDS1	R
	W/4 EA .250 LUGS				
2600563	26.000	28.000	.875	HDS2	R
2600564	26.000	28.000	.875	HDS1	V
2600580	26.000	28.000	1.000	HDS1	R
2600587	26.000	28.000	1.000	HS7	R
2600630	26.000	28.125	1.000	HDS1	R
2600648	26.000	28.125	.916	HS8	R
2600680	26.000	28.250	1.000	HDS1	R
2600760	26.000	28.500	.875	HDS1	R
2600761	26.000	28.500	.875	HDS1	R
	W/4 EA .125 LUGS				
2600770	26.000	28.500	.938	HDS1	R
2600780	26.000	28.500	1.000	HDS1	R
2600903	26.000	29.000	1.500	HDS1	R
2600953	26.000	28.000	.875	HDSA3	D
	W/4 EA .500 ADJ. LUGS				
2612563	26.125	28.125	.875	HDS1	V
2612564	26.125	28.125	.875	HDS2	V
2613250	26.125	27.625	.750	HDS1	R
2613480	26.125	28.000	.875	HDS1	R
2613550	26.125	28.125	.813	HDS1	R
2613551	26.125	28.125	.813	HDS1	R
	W/6 EA .063 LUGS				
2613557	26.125	28.125	.813	HS7	R
2613560	26.125	28.125	.875	HDS1	R
2613562	26.125	28.125	.875	HDS2	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2613620	26.125	28.250	.875	HDS1	R
2613622	26.125	28.250	.875	HDS2	R
2619540	26.188	28.188	.750	HDS1	R
2625557	26.250	28.250	.813	HS7	R
2625780	26.250	28.750	1.000	HDS1	R
2637118	26.375	27.627	.625	HS8	R
□2637218	670.00	710.00	20.00	HDS1	R
	W/4 EA 4.77MM LUGS				
□2637250	670.00	710.00	20.00	†HDS1	R
□2637413	670.00	714.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
2637510	26.375	28.375	1.000	HDS1	R
	W/4 EA .125 LUGS				
2637558	26.378	28.378	.812	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
□2637740	670.00	734.00	22.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
2637942	26.375	28.250	.875	HDSA2	RL
2638250	26.375	27.875	.750	HDS1	R
2638350	26.375	28.188	.750	HDS1	R
2638351	26.375	28.188	.750	HDS1	R
	W/4 EA .125 LUGS				
2638480	26.375	28.250	.875	HDS1	R
2638482	26.375	28.250	.875	HDS2	R
2638557	26.375	28.375	.813	HS7	R
2638580	26.375	28.375	1.000	HDS1	R
2650240	26.500	28.000	.750	HDS7	R
2650241	26.500	28.000	.750	HDS7	R
	W/4 EA .125 LUGS				
2650250	26.500	28.000	.750	HDS1	R
2650253	26.500	28.000	.750	HDS2	D
2650254	26.500	28.000	.750	HDS1	V
2650257	26.500	28.000	.750	HS7	R
2650258	26.500	28.000	.750	HS8	R
2650259	26.500	28.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2650283	26.500	28.000	.750	HDS2	V
2650290	26.500	28.000	1.000	HDS1	R
2650295	26.500	28.000	1.000	HDS1	R
	W/4 EA .250 LUGS				
2650512	26.500	28.500	.875	HDS2	R
2650557	26.500	28.500	.813	HS7	R
2650560	26.500	28.500	.875	HDS1	R
2650660	26.500	28.750	.875	HDS1	R
2650900	26.500	29.500	1.125	HDS1	R
2650902	26.500	29.500	1.500	HDS1	R
2650920	26.500	28.000	1.000	HDSB1	RL
□2661790	676.00	740.00	22.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
2662558	26.625	28.625	.813	HS8	R
2669557	26.688	28.688	.813	HS7	R
2675557	26.750	28.750	.813	HS7	R
2677017	26.771	27.771	.500	HS7	R
□**2677542**	680.00	730.00	20.00	HDS2	R
□2677570	680.00	730.00	25.00	HDS1	V
□**2677572**	680.00	730.00	25.00	HDS2	V
	W/6 EA 12.70MM ADJ. LUGS				
□2677577	680.00	730.00	20.00	HDS1	V
□**2677702**	680.00	740.00	30.00	HDS2	R
2678557	26.781	28.781	.813	HS7	R
2681612	26.813	29.000	.750	HDS2	R
2682557	26.815	28.815	.813	HS7	R
2688557	26.875	28.875	.813	HS7	R
2693612	26.938	29.000	.750	HDS2	R
□**2696192**	685.00	720.00	20.00	HDS2	R

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2700218	27.000	28.500	.625	HS8	R
2700237	27.000	28.500	.625	HS7	R
2700540	27.000	29.000	.750	HDS1	R
2700542	27.000	29.000	.750	HDS2	R
2700549	27.000	29.000	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2700555	27.000	29.000	.813	HS5	R
2700557	27.000	29.000	.813	HS7	R
2700558	27.000	29.000	.813	HS8	R
2700559	27.000	29.000	.813	HS8	D
2700560	27.000	29.000	.875	HDS1	R
2700564	27.000	29.000	.875	HDS2	R
2700568	27.000	29.000	.866	HDS1	R
	W/4 EA 9.50MM LUGS				
2700574	27.000	29.000	.875	HDS2	V
2700580	27.000	29.000	1.000	HDS1	R
2700583	27.000	29.000	1.000	HDS1	V
2700584	27.000	29.000	1.000	HDS2	R
	W/4 EA .250 LUGS				
2700780	27.000	29.500	1.000	HDS1	R
2700783	27.000	29.500	1.000	HDS1	R
	W/4 EA .250 LUGS				
2700790	27.000	29.500	1.250	HDS1	R
2700792	27.000	29.500	1.250	HDS1	R
	W/4 EA .125 LUGS				
2700800	27.000	29.625	1.000	HDS1	R
2700844	27.000	29.813	1.500	HDS1	R
2700870	27.000	30.000	.875	HDS1	R
2700900	27.000	30.000	1.125	HDS1	R
2700901	27.000	30.000	1.125	HDS1	R
	W/6 EA .500 LUGS				
2700902	27.000	30.000	1.500	HDS1	R
2700903	27.000	30.000	1.500	HDS1	R
	W/6 EA .125 LUGS				
2700953	27.000	29.000	1.875	HDSE2	DD
2700990	27.000	30.000	1.625	HDSB1	RL
2713480	27.125	29.000	.875	HDS1	R
2713630	27.125	29.250	1.000	HDS1	R
□2716210	690.00	730.00	20.00	HDS1	R
□**2716288**	690.00	730.00	20.00	HS8	R
2719600	27.188	29.250	.875	HDS1	R
2719700	27.188	29.500	.875	HDS1	R
2725550	27.250	29.250	.813	HDS1	R
2725552	27.250	29.250	.813	HDS1	R
	W/6 EA .125 LUGS				
2725553	27.250	29.250	.813	HDS2	R
2725554	27.250	29.250	.813	HDS2	R
	W/6 EA .125 LUGS				
2725557	27.250	29.250	.813	HS7	R
2725563	27.250	29.250	.875	HDS2	R
2725566	27.250	29.250	.875	HDS1	R
	W/6 EA .625 LUGS				
□2736840	695.00	770.00	30.00	HDS1	R
2738557	27.375	29.375	.813	HS7	R
2740590	27.402	29.500	.750	HDS1	R
2744710	27.440	29.815	.875	HDS1	R
2750117	27.500	28.750	.625	HS7	R
2750218	27.500	29.000	.750	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
2750250	27.500	29.000	.750	HDS1	R
2750257	27.500	29.000	.750	HDS1	V
2750557	27.500	29.500	.813	HS7	R
2750560	27.500	29.500	.875	HDS1	R
2750562	27.500	29.500	.875	HDS1	R
	W/6 EA .250 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2750564	27.500	29.500	.875	HDS2	R
2750565	27.500	29.500	.875	HDS2	R
	W/6 EA .250 LUGS				
2750569	27.500	29.500	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2750574	27.500	29.500	.875	HDS2	V
2750580	27.500	29.500	1.000	HDS1	R
2750760	27.500	30.000	.875	HDS1	R
2750900	27.500	30.688	.813	HDS1	R
□2755250	700.00	740.00	20.00	HDS1	R
□**2755285**	700.00	740.00	20.00	HS5	D
□2755490	700.00	750.00	20.00	HDS1	R
□2755491	700.00	750.00	20.00	HDS1	R
	W/4 EA 4.77MM LUGS				
2755502	27.500	29.520	.984	HDS2	R
□**2755508**	700.00	750.00	20.00	HS8	R
□2755700	700.00	760.00	25.00	HDS1	R
2755962	27.559	29.750	1.370	HDSA2	RL
2763250	27.625	29.125	.750	HDS1	R
2763470	27.625	29.500	.750	HDS1	R
2763540	27.625	29.625	.750	HDS1	R
2763543	27.625	29.625	.750	HDS1	R
	W/4 EA .250 LUGS				
2763730	27.625	30.000	1.000	HDS1	R
2769622	27.688	29.812	.875	HDS2	R
2769915	27.688	29.812	1.250	HDSE2	RR
2775562	27.750	29.812	.875	HDS2	R
2781562	27.812	29.812	.875	HDS2	R
2788500	27.875	29.812	.875	HDS1	R
2788502	27.875	29.812	.875	HDS2	R
2788510	27.875	29.815	.875	HDS1	R
2788512	27.875	29.815	.875	HDS2	D
2788557	27.875	29.875	.813	HS7	R
2788600	27.875	29.815	.875	HDS7	R
2788630	27.875	30.000	1.000	HDS1	R
□2793700	710.00	770.00	25.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□**2795482**	710.00	760.00	22.20	†HDS2	D
	W/4 EA 3.20MM ADJ. LUGS				
□**2795502**	710.00	760.00	25.00	HDS2	D
□2795507	710.00	760.00	20.00	HDS1	V
□**2795512**	710.00	760.00	25.00	HDS2	D
	W/4 EA 4.80MM LUGS				
□**2795542**	710.00	760.00	20.00	HDS2	R
□**2795544**	710.00	760.00	20.00	HDS2	V
2795557	27.953	29.953	.813	HS7	R
2800217	28.000	29.500	.750	HDS1	V
2800240	28.000	29.500	.750	HDS7	R
2800241	28.000	29.500	.750	HDS7	R
	W/4 EA .125 LUGS				
2800250	28.000	29.500	.750	HDS1	R
2800255	28.000	29.500	.750	HDS1	R
	W/4 EA .250 LUGS				
2800257	28.000	29.500	.750	HS7	R
2800272	28.000	29.500	.875	HDS2	R
2800330	28.000	29.625	.750	HDS1	R
2800331	28.000	29.625	.750	HDS2	R
2800332	28.000	29.625	.750	HDS1	R
	W/4 EA .125 LUGS				
2800425	28.000	29.812	.750	HDS1	R
	W/4 EA .250 LUGS				
2800551	28.000	30.000	.813	HS8	D
2800557	28.000	30.000	.813	HS7	R
2800558	28.000	30.000	.813	HS8	R
2800560	28.000	30.000	.875	HDS1	R
2800562	28.000	30.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2800563	28.000	30.000	.875	HDS1	R
	W/6 EA .125 LUGS				
2800564	28.000	30.000	.875	HDS2	D
	W/4 EA .125 LUGS				
2800565	28.000	30.000	.875	HDS2	R
2800566	28.000	30.000	.875	HDS2	R
	W/4 EA .125 LUGS				
2800567	28.000	30.000	.875	HDS1	V
2800573	28.000	30.000	.875	HDS1	V
2800585	28.000	30.000	.875	HDS2	R
	W/6 EA .250 LUGS				
2800700	28.000	30.250	1.250	HDS1	R
2800702	28.000	30.250	1.250	HDS2	R
2800752	28.000	30.500	1.000	HDS2	D
2800760	28.000	30.500	.875	HDS1	R
2800762	28.000	30.500	.875	HDS1	R
	W/6 EA .250 LUGS				
2800764	28.000	30.500	.875	HDS2	R
2800766	28.000	30.500	.875	HDS2	R
	W/6 EA .250 LUGS				
2800769	28.000	30.500	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
2800780	28.000	30.500	1.000	HDS1	R
2800782	28.000	30.500	1.000	HDS2	R
2800800	28.000	30.535	.875	HDS1	R
2800802	28.000	30.535	.875	HDS2	R
2800870	28.000	31.000	.875	HDS1	R
2800872	28.000	31.000	.875	HDS2	R
2800900	28.000	31.000	1.125	HDS1	R
2800902	28.000	31.000	1.500	HDS1	R
2800920	28.000	29.500	.875	HDSC1	RL
2800972	28.000	30.500	1.000	HDSA2	D
2800998	28.000	31.000	1.250	HDSD2	DD
2803998	28.038	31.038	1.000	HDSB2	VL
2813058	28.125	29.250	.500	HS8	R
2813100	28.125	29.250	.625	HDS1	R
2813102	28.125	29.250	.625	HDS2	R
2825557	28.250	30.250	.813	HS7	R
□**2834500**	720.00	770.00	25.00	HDS2	R
□**2834578**	720.00	771.10	21.00	HS8	D
2844800	28.438	31.000	1.125	HDS1	R
2844801	28.438	31.000	1.188	HDS1	R
2850017	28.500	29.500	.500	HS7	R
2850211	28.500	30.500	.875	HDS7	H
2850386	28.500	30.218	.750	HS6	R
2850520	28.500	30.500	.625	HDS1	R
2850527	28.500	30.500	.625	HS7	R
2850528	28.500	30.500	.625	HS8	R
2850529	28.500	30.500	.625	HDS3	D
	W/6 EA .500 ADJ. LUGS				
2850540	28.500	30.500	.750	HDS1	R
2850542	28.500	30.500	.750	HDS2	R
2850543	28.500	30.500	.750	HDS2	V
2850557	28.500	30.500	.813	HS7	R
2850560	28.500	30.500	.875	HDS1	R
2850562	28.500	30.500	.875	HDS1	R
	W/4 EA .250 LUGS				
2850563	28.500	30.500	.875	HDS2	D
2850564	28.500	30.500	.875	HDS1	V
	W/6 EA .250 LUGS				
2850565	28.500	30.500	.875	HDS2	R
2850580	28.500	30.500	1.000	HDS1	R
2850760	28.500	31.000	.875	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
2850765	28.500	31.000	.875	HDS1	R
	W/6 EA .250 LUGS				
2850780	28.500	31.000	1.000	HDS1	R
2850832	28.500	31.250	1.000	HDS2	R
2850903	28.500	31.500	1.500	HDS1	R
2875557	28.750	30.750	.813	HS7	R
2875560	28.750	30.750	.875	HDS1	R
2875561	28.750	30.750	.875	HDS1	R
	W/4 EA .125 LUGS				
2875562	28.750	30.750	.875	HDS2	R
2875563	28.750	30.750	.875	HDS1	R
	W/8 EA .250 LUGS				
2875567	28.750	30.750	.875	HDS1	V
2888557	28.875	30.875	.813	HS7	R
2900218	29.000	30.500	.750	HS8	R
2900250	29.000	30.500	.750	HDS1	R
2900257	29.000	30.500	.750	HS7	R
2900270	29.000	30.500	.875	HDSA1	RL
2900557	29.000	31.000	.813	HS7	R
2900560	29.000	31.000	.875	HDS1	R
2900561	29.000	31.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2900562	29.000	31.000	.875	HDS1	R
	W/4 EA .250 LUGS				
2900563	29.000	31.000	.875	HDS2	R
2900564	29.000	31.000	.875	HDS2	R
	W/4 EA .125 LUGS				
2900565	29.000	31.000	.875	HDS2	R
	W/4 EA .250 LUGS				
2900569	29.000	31.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
2900580	29.000	31.000	1.000	HDS1	R
2900590	29.000	31.000	1.125	HDS1	R
2900760	29.000	31.500	.875	HDS1	R
2900870	29.000	32.000	.875	HDS1	R
2900872	29.000	32.000	.875	HDS1	R
	W/4 EA .125 LUGS				
2900903	29.000	32.000	1.500	HDS1	R
2900954	29.000	31.000	1.750	HDSD1	RR
2900960	29.000	31.500	.875	HDSA1	RL
□2901636	737.00	790.00	15.88	HS6	R
□2913220	740.00	780.00	16.50	HDS1	R
□2913225	740.00	780.00	16.50	HDS1	R
	W/6 EA 3.20MM LUGS				
□2913240	740.00	780.00	16.50	HDS1	V
□2913276	740.00	780.00	16.50	HDS1	V
	W/6 EA 3.20MM LUGS				
□**2913488**	740.00	790.00	15.88	HS8	R
□**2913505**	740.00	790.00	25.00	HDS2	R
	W/4 EA .125 LUGS				
□**2913508**	740.00	790.00	25.00	HS8	R
2913550	29.125	31.125	.813	HDS1	R
2913844	29.125	32.000	1.500	HDS1	R
2913903	29.125	32.125	1.500	HDS1	R
2913904	29.125	32.250	1.500	HDS1	R
2925017	29.250	30.250	.500	HS7	R
2925557	29.250	31.250	.813	HS7	R
2950258	29.500	31.000	.750	HS8	R
2950348	29.500	31.219	.734	HS8	R
2950438	29.500	31.219	.734	HS8	D
	W/HOOK & EYE SPRING CONNECTOR				
2950540	29.500	31.500	.750	HDS1	R
2950549	29.500	31.500	.750	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2950552	29.500	31.500	.875	HDS2	V
2950557	29.500	31.500	.813	HS7	R
2950560	29.500	31.500	.875	HDS1	R
2950564	29.500	31.500	.875	HDS2	D
2950565	29.500	31.500	.875	HDS2	R
	W/4 EA .500 ADJ. LUGS				
2950580	29.500	31.500	.875	HDS1	R
	W/4 EA .500 ADJ. LUGS				
2950758	29.500	32.000	1.250	HDSD7	RR
	OUTER LIP IS SPRINGLESS				
2950760	29.500	32.000	.875	HDS1	R
2950762	29.500	32.000	.875	HDS1	R
	W/8 EA .250 LUGS				
2950765	29.500	32.000	.875	HDS2	R
2950769	29.500	32.000	.875	HDS3	D
	W/4 EA .500 ADJ. LUGS				
2950770	29.500	32.000	.938	HDS1	R
2950772	29.500	32.000	.938	HDS2	R
2950780	29.500	32.000	1.000	HDS1	R
2950783	29.500	32.000	1.000	HDS2	R
2950830	29.500	32.250	1.000	HDS1	R
2950835	29.500	32.250	1.000	HDS2	R
2950836	29.500	32.250	1.000	HDS2	D
2950841	29.500	32.250	1.375	HDS1	R
2950850	29.500	32.250	1.250	HDS1	R
2950870	29.500	32.500	.875	HDS1	R
2950880	29.500	32.500	.938	HDS1	R
2950882	29.500	32.500	.938	HDS2	R
2950903	29.500	32.500	1.500	HDS1	R
□2952287	750.00	790.00	23.00	HDS1	V
□**2952502**	750.00	800.00	25.00	HDS2	R
2952585	29.528	32.047	.984	HDS1	R
□2952700	750.00	810.00	25.00	HDS1	R
2953017	29.527	30.527	.500	HS7	R
□2953100	750.00	780.00	18.00	HDS1	R
□2953740	750.00	814.00	25.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
2956557	29.563	31.563	.813	HS7	R
2962258	29.625	31.125	.770	HS8	R
2963557	29.625	31.625	.813	HS7	R
2963580	29.625	31.625	1.000	HDS1	R
2963680	29.625	32.000	1.000	HDS1	R
2963844	29.625	32.500	1.500	HDS1	R
2963904	29.625	32.750	1.500	HDS1	R
2969557	29.688	31.688	.813	HS7	R
2975258	29.750	31.250	.770	HS8	R
2975558	29.750	31.750	.813	HS8	R
2988557	29.875	31.875	.813	HS7	R
□**2992268**	760.00	800.00	20.60	HS8	R
□2992283	760.00	800.00	20.00	HDS1	V
□2992286	760.00	800.00	20.00	HDS3	V
	W/6 EA 12.70MM ADJ. LUGS				
□**2992498**	760.00	810.00	20.60	HS8	R
□2992500	760.00	810.00	25.00	HDS1	R
□2992510	760.00	810.00	25.00	HDS7	R
□2992570	760.00	810.00	25.00	HDS1	R
	W/6 EA 4.77MM LUGS				
□**2992698**	760.00	820.00	17.50	HS8	R
□2992700	760.00	820.00	25.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□2992770	760.00	824.00	22.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
2999332	29.990	31.613	.750	HDS2	R
3000017	30.000	31.000	.500	HS7	R
3000111	30.000	31.250	.625	HDS2	R
3000118	30.000	31.250	.625	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
3000250	30.000	31.500	.750	HDS1	R
3000251	30.000	31.500	.750	HDS1	R
	W/6 EA .125 LUGS				
3000253	30.000	31.500	.750	HDS1	V
3000257	30.000	31.500	.750	HS7	R
3000280	30.000	31.616	.750	HDS1	R
3000300	30.000	31.600	.775	HDS1	R
3000302	30.000	31.606	.750	HDS1	R
3000303	30.000	31.606	.750	HDS2	R
3000312	30.000	31.625	.625	HDS2	R
3000313	30.000	31.625	.625	HDS2	D
3000330	30.000	31.625	.750	HDS1	R
3000340	30.000	31.630	.750	HDS1	R
3000350	30.000	31.655	.750	HDS1	R
3000518	30.000	32.000	1.000	HS8	R
3000519	30.000	32.000	1.000	HS8	H
3000550	30.000	32.000	.813	HDS1	R
3000552	30.000	32.000	.813	HDS1	R
	W/6 EA .125 LUGS				
3000553	30.000	32.000	.813	HDS1	D
3000555	30.000	32.000	.813	HDS2	D
3000556	30.000	32.000	.813	HS8	R
3000557	30.000	32.000	.813	HS7	R
3000558	30.000	32.000	.813	HS8	D
3000559	30.000	32.000	.813	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3000560	30.000	32.000	.875	HDS1	R
3000562	30.000	32.000	.875	HDS1	D
3000577	30.000	32.000	.916	HS7	R
3000578	30.000	32.000	1.000	HS8	D
3000580	30.000	32.000	1.000	HDS1	R
3000588	30.000	32.000	1.000	HS8	R
3000690	30.000	32.250	1.125	HDS1	R
3000700	30.000	32.250	1.156	HDS1	R
3000702	30.000	32.250	1.156	HDS2	R
3000760	30.000	32.500	.875	HDS1	R
3000761	30.000	32.500	.875	HDS1	V
3000780	30.000	32.500	1.000	HDS1	R
3000820	30.000	32.750	.875	HDS1	R
3000834	30.000	32.750	1.500	HDS1	R
3000870	30.000	33.000	.875	HDS1	R
3000900	30.000	33.000	1.125	HDS1	R
3000995	30.000	33.000	1.750	HDSB1	RL
3013017	30.125	31.125	.500	HS7	R
3025540	30.250	32.250	.750	HDS1	R
3025542	30.250	32.250	.750	HDS2	V
3025561	30.250	32.250	.875	HDS1	R
	W/4 EA .125 LUGS				
3025660	30.250	32.500	.875	HDS1	R
3025661	30.250	32.500	.875	HDS1	R
	W/4 EA .125 LUGS				
3025782	30.250	32.750	1.000	HDS2	V
3031257	30.313	31.813	.750	HS7	R
□3031280	770.00	810.00	20.00	HDS1	V
3031590	30.310	32.314	1.000	HDS1	R
3031600	30.313	32.375	.875	HDS1	R
3031640	30.313	32.500	.875	HDS1	R
3031650	30.313	32.500	1.000	HDS1	R
3031740	30.313	32.750	1.000	HDS1	R
□**3031762**	770.00	834.00	25.00	HDS2	R
3031800	30.313	33.000	1.000	HDS1	R
3031830	30.313	33.250	1.500	HDS1	R
3031840	30.313	33.260	.906	HDS1	R
3031845	30.313	33.260	.906	HDS1	R
	W/8 EA .563 LUGS				
3031846	30.313	33.277	1.500	HDS1	R
□3032840	770.00	845.00	27.79	HDS1	R
3038550	30.375	32.375	.813	HDS1	R
3038557	30.375	32.375	.813	HS7	R
3050511	30.500	32.500	.875	HDS7	H
3050540	30.500	32.500	.750	HDS1	R
3050542	30.500	32.500	.750	HDS2	R
3050544	30.500	32.500	.750	HDS2	V
3050546	30.500	32.500	.750	HDS2	V
	W/8 EA .250 LUGS				
3050549	30.500	32.500	.750	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3050557	30.500	32.500	.813	HS7	R
3050560	30.500	32.500	.875	HDS1	R
3050561	30.500	32.500	.875	HDS1	R
	W/6 EA .063 LUGS				
3050562	30.500	32.500	.875	HDS1	R
	W/8 EA .125 LUGS				
3050563	30.500	32.500	.875	HDS1	R
	W/8 EA .250 LUGS				
3050565	30.500	32.500	.875	HDS2	R
3050582	30.500	32.500	1.000	HDS2	R
3050680	30.500	32.750	1.000	HDS1	R
3050780	30.500	33.000	1.000	HDS1	R
3050785	30.500	33.000	1.000	HDS2	R
3050790	30.500	33.032	1.000	HDS2	R
3050791	30.500	33.000	.750	HDS1	R
3050793	30.500	33.000	.750	HDS2	R
3050799	30.500	33.000	.750	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3050840	30.500	33.492	1.000	HDS1	R
3050870	30.500	33.500	.875	HDS1	R
3050872	30.500	33.500	.875	HDS2	R
3050890	30.500	33.500	1.000	HDS1	R
3050892	30.500	33.500	1.000	HDS2	R
3050903	30.500	33.500	1.500	HDS1	R
3056557	30.563	32.563	.813	HS7	R
3061715	30.615	33.268	1.094	HDS2	R
3061721	30.615	33.268	1.094	HDS7	R
3063257	30.625	32.125	.750	HS7	R
□3070247	780.00	820.00	19.05	HDS1	V
□**3070248**	780.00	820.00	18.00	HS8	R
□**3070252**	780.00	820.00	19.05	HDS2	R
□**3070565**	780.00	830.00	22.00	HS5	R
3075017	30.750	31.750	.500	HS7	R
3075510	30.750	32.742	.875	HDS1	R
3075513	30.750	32.742	.875	HDS1	R
	W/4 EA .375 LUGS				
3090017	30.900	31.900	.500	HS7	R
3100017	31.000	32.000	.500	HS7	R
3100018	31.000	32.000	.500	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
3100250	31.000	32.500	.750	HDS1	R
3100255	31.000	32.500	.750	HDS1	D
3100257	31.000	32.500	.750	HS7	R
3100290	31.000	32.500	1.000	HDS1	R
3100550	31.000	33.000	.813	HDS1	R
3100551	31.000	33.000	.813	HDS1	R
	W/4 EA .063 LUGS				
3100552	31.000	33.000	.813	HDS1	R
	W/6 EA .125 LUGS				
3100557	31.000	33.000	.813	HS7	R
3100560	31.000	33.000	.875	HDS1	R
3100561	31.000	33.000	.875	HDS1	R
	W/4 EA .125 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
3100562	31.000	33.000	.875	HDS2	D
3100563	31.000	33.000	.875	HDS2	R
3100567	31.000	33.000	.875	HS7	R
3100757	31.000	33.500	.875	HDS1	V
3100760	31.000	33.500	.875	HDS1	R
3100778	31.000	33.500	.875	HDS1	R
	W/8 EA .125 LUGS				
3100840	31.000	34.000	.813	HDS1	R
3100849	31.000	34.000	.813	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3100870	31.000	34.000	.875	HDS1	R
3100872	31.000	34.000	.875	HDS2	R
3100890	31.000	34.000	1.000	HDS1	R
3100895	31.000	34.000	1.000	HDS2	R
3100951	31.000	33.000	.875	HDSA1	RL
3100952	31.000	33.000	.875	HDSA2	RL
3100992	31.000	34.000	1.250	HDSD2	RR
□3110340	790.00	834.00	25.00	HDS1	R
□3110780	790.00	850.00	25.00	HDS1	V
□**3110784**	790.00	850.00	25.00	HDS2	V
□**3110786**	790.00	850.00	25.00	HDS2	V
	W/6 EA 12.70MM ADJ. LUGS				
□3110978	790.00	850.00	25.00	HDSA1	RL
3125250	31.250	32.750	.750	HDS1	R
3125252	31.250	32.750	.750	HDS2	R
3125290	31.250	32.750	1.000	HDS1	R
3125540	31.250	33.250	.750	HDS1	R
3125543	31.250	33.250	.750	HDS1	R
	W/6 EA .125 LUGS				
3125544	31.250	33.250	.750	HDS2	R
	W/4 EA .250 LUGS				
3125548	31.250	33.250	.750	HDS2	D
3134558	31.340	33.340	.813	HS8	R
□3149465	800.00	850.00	20.00	HDS1	R
	W/6 EACH 1.57MM LUGS				
3149470	31.496	33.465	.984	HDS7	R
□3149500	800.00	860.00	25.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
3149798	31.491	34.020	.980	HDS2	D
3150017	31.500	32.500	.500	HS7	R
3150210	31.500	33.000	.750	HDS1	R
3150557	31.500	33.500	.813	HS7	R
□**3150578**	800.00	850.00	25.40	HS8	R
3150875	31.500	34.500	.875	HDS1	R
	W/4 EA .250 LUGS				
3162580	31.625	33.625	1.000	HDS1	R
3175557	31.750	33.750	.813	HS7	R
3175560	31.750	33.750	.875	HDS1	R
3175562	31.750	33.750	.875	HDS2	R
3175565	31.750	33.750	.875	HDS1	R
	W/4 EA .125 LUGS				
3175569	31.750	33.750	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3175900	31.750	35.250	.875	HDS1	R
□3189280	810.00	850.00	20.00	HDS1	V
□**3189502**	810.00	860.00	25.00	HDS2	R
□3189557	810.00	860.00	20.65	HS7	R
3190558	31.900	33.900	.813	HS8	D
3200239	32.000	33.500	.750	HS8	D
	W/THREADED SPRING CONNECTOR				
3200540	32.000	34.000	.750	HDS1	R
3200541	32.000	34.000	.750	HDS1	V
3200550	32.000	34.000	.813	HDS1	R
3200557	32.000	34.000	.813	HS7	R
3200560	32.000	34.000	.875	HDS1	R
3200562	32.000	34.000	.875	HDS2	D
3200563	32.000	34.000	.875	HDS2	R
3200564	32.000	34.000	.875	HDS1	R
	W/8 EA .250 LUGS				
3200569	32.000	34.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3200580	32.000	34.000	1.000	HDS1	R
3200680	32.000	34.250	1.000	HDS1	R
3200760	32.000	34.500	.875	HDS1	R
3200782	32.000	34.500	1.000	HDS1	R
	W/6 EA .063 LUGS				
3200790	32.000	34.500	1.250	HDS1	R
3200954	32.000	34.000	.875	HDSA2	V
3212563	32.125	34.125	.875	HDS1	V
3213237	32.125	33.625	.625	HS7	R
3213557	32.125	34.125	.813	HS7	R
3213560	32.125	34.125	.875	HDS1	R
3213562	32.125	34.125	.875	HDS2	D
3213564	32.125	34.125	.875	HDS2	R
	W/6 EA .250 LUGS				
3213569	32.125	34.125	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3213620	32.125	34.250	.875	HDS1	R
3213710	32.125	34.500	.875	HDS1	R
3213740	32.125	34.625	.750	HDS1	R
3213742	32.125	34.625	.750	HDS1	R
	W/6 EA .313 LUGS				
3213760	32.125	34.625	.875	HDS1	R
3219557	32.188	34.188	.813	HS7	R
3225512	32.250	34.250	1.000	HDS2	R
3225557	32.250	34.250	.813	HS7	R
3231600	32.125	34.375	.875	HDS1	R
3231622	32.313	34.500	.875	HDS2	H
3231640	32.313	34.500	.875	HDS1	R
3231642	32.313	34.500	.875	HDS2	R
3231648	32.313	34.500	.906	HS8	R
	W/HOOK & EYE SPRING CONNECTOR				
3231800	32.125	35.000	.875	HDS1	R
3231840	32.125	35.125	.875	HDS1	R
3231844	32.125	35.125	1.500	HDS1	R
3237518	32.375	34.375	1.000	HS8	R
3237519	32.375	34.375	1.000	HS8	H
3238117	32.375	33.625	.625	HS7	R
3238790	32.375	34.875	1.250	HDS1	R
□**3248192**	825.00	860.00	20.00	HDS2	R
3250117	32.500	33.625	.563	HS7	R
3250365	32.500	34.250	.625	HDS2	R
3250410	32.500	34.250	.875	HDS1	R
3250440	32.500	34.250	1.250	HDS1	R
3250550	32.500	34.500	.813	HDS1	R
3250557	32.500	34.500	.813	HS7	R
3250560	32.500	34.500	.875	HDS1	R
3250561	32.500	34.500	.875	HDS1	R
	W/6 EA .063 LUGS				
3250562	32.500	34.500	.875	HDS1	R
	W/4 EA .125 LUGS				
3250566	32.500	34.500	.875	HDS2	R
3250567	32.500	34.500	.875	HDS2	R
	W/4 EA .250 LUGS				
3250569	32.500	34.500	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3250570	32.500	34.500	.938	HDS1	R
3250574	32.500	34.500	.938	HDS2	R
3250577	32.500	34.500	.916	HS7	R
3250588	32.500	34.500	1.000	HS8	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
3250660	32.500	34.750	.875	HDS1	R
3269557	32.688	34.688	.813	HS7	R
3270542	32.700	34.680	.750	HDS2	R
3275250	32.750	34.250	.750	HDS1	R
3275410	32.750	34.500	.875	HDS1	R
3275420	32.750	34.500	1.000	HDS1	R
3275557	32.750	34.750	.813	HS7	R
3275580	32.750	34.750	1.000	HDS1	R
3275592	32.750	34.750	1.250	HDS1	R
3275680	32.750	35.000	1.000	HDS1	R
3275780	32.750	35.250	1.000	HDS1	R
3275802	32.750	35.375	1.000	HDS1	R
3275803	32.750	35.375	1.000	HDS1	R
	W/4 EA .063 LUGS				
3275805	32.750	35.375	.938	HDS1	R
	W/4 EA .063 LUGS				
3275806	32.750	35.375	2.000	HDS1	R
	W/4 EA .063 LUGS				
3275830	32.750	35.500	1.000	HDS1	R
3275890	32.750	35.750	1.000	HDS1	R
3275903	32.750	35.750	1.500	HDS1	R
3295343	32.950	34.688	.750	HDS2	R
3297300	32.972	34.683	.750	HDS1	R
3298342	32.980	34.688	.750	HDS2	R
3300017	33.000	34.000	.500	HS7	R
3300212	33.000	34.500	.750	HDS2	H
3300222	33.000	34.500	.750	HDS2	D
3300237	33.000	34.500	.625	HS7	R
3300250	33.000	34.500	.750	HDS1	R
3300260	33.000	34.502	.750	HDS1	R
3300280	33.000	34.554	.775	HDS1	R
3300290	33.000	34.609	.750	HDS1	R
3300300	33.000	34.613	.750	HDS1	R
3300330	33.000	34.625	.750	HDS1	R
3300331	33.000	34.625	.750	HDS2	R
3300332	33.000	34.688	.750	HDSA2	DL
3300334	33.000	34.625	.750	HDS2	D
3300340	33.000	34.630	.750	HDS1	R
3300342	33.000	34.630	.750	HDS2	R
3300345	33.000	34.630	.750	HDS1	D
3300350	33.000	34.688	.750	HDS1	R
3300351	33.000	34.688	.750	HDS2	R
3300353	33.000	34.688	.750	HDS2	D
3300540	33.000	35.000	.750	HDS1	R
3300547	33.000	35.000	.750	HDS1	V
3300549	33.000	35.000	.750	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3300557	33.000	35.000	.813	HS7	R
3300560	33.000	35.000	.875	HDS1	R
3300561	33.000	35.000	.875	HDS1	R
	W/4 EA .125 LUGS				
3300562	33.000	35.000	.875	HDS2	R
	W/4 EA .125 LUGS				
3300565	33.000	35.000	.875	HDS2	R
3300568	33.000	35.000	.875	HDS3	H
	W/4 EA .500 ADJ. LUGS				
3300611	33.000	35.125	.770	HDS1	R
3300660	33.000	35.250	.875	HDS1	R
3300760	33.000	35.500	.875	HDS1	R
3300765	33.000	35.500	.875	HDS2	R
3300769	33.000	35.500	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3300770	33.000	35.500	.938	HDS1	R
3300772	33.000	35.500	.938	HDS2	R
3300780	33.000	35.500	1.000	HDS1	R
3300782	33.000	35.500	1.000	HDS2	V
3300785	33.000	35.500	1.000	HDS2	R
3300790	33.000	35.500	.750	HDS1	R
3300792	33.000	35.500	.750	HDS2	R
3300800	33.000	35.625	.875	HDS1	R
3300820	33.000	35.750	.875	HDS1	R
3300852	33.000	36.000	1.000	HDS2	V
3300870	33.000	36.000	.875	HDS1	R
3300890	33.000	36.000	1.000	HDS1	R
3300903	33.000	36.000	1.500	HDS1	R
3300920	33.000	34.500	1.250	HDSD1	RR
3300921	33.000	34.500	1.250	HDSE1	RR
3300951	33.000	35.250	.875	HDSA1	RL
3300958	33.000	35.000	1.000	HDSC2	RL
3300990	33.000	36.000	1.000	HDSB2	V
	LIGHT INTERFERENCE DUST-LIP				
□3307546	840.00	892.00	18.00	HS6	R
3325588	33.250	35.250	1.000	HS8	R
□3346700	850.00	910.00	25.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□3346840	850.00	925.00	27.00	HDS1	R
□3346961	850.00	910.00	50.00	HDSE1	RR
3347560	33.469	35.469	.875	†HDS1	R
3347850	33.469	36.409	.906	HDS1	R
3347854	33.469	36.409	.906	HDS1	R
	W/8 EA .219 LUGS				
3347855	33.469	36.409	.906	HDS1	R
	W/8 EA .531 LUGS				
3350557	33.500	35.500	.813	HS7	R
3350560	33.500	35.500	.875	HDS1	R
3350561	33.500	35.500	.875	HDS1	R
	W/6 EA .125 LUGS				
3350562	33.500	35.500	.875	HDS1	R
	W/6 EA .250 LUGS				
3350588	33.500	35.500	1.000	HS8	R
3350620	33.500	35.625	.875	HDS1	R
3350630	33.500	35.625	1.000	HDS1	R
3350660	33.500	35.750	.875	HDS1	R
3350740	33.500	35.995	.938	HDS1	R
3350760	33.500	36.000	.875	HDS1	R
3350762	33.500	36.000	.875	HDS1	R
	W/6 EA .250 LUGS				
3350765	33.500	36.000	.875	HDS2	R
3350766	33.500	36.000	.906	HDS1	R
	W/8 EA .188 LUGS				
3350769	33.500	36.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3350770	33.500	36.000	.938	HDS1	R
3350790	33.500	36.002	.938	HDS1	R
3350791	33.500	36.002	.938	HDS1	R
	W/6 EA .125 LUGS				
3350820	33.500	36.250	.875	HDS1	R
3350824	33.500	36.250	.875	HDS1	R
	W/6 EA .063 LUGS				
3350840	33.500	36.417	.875	HDS1	R
3350844	33.500	36.417	1.500	HDS1	R
3350902	33.500	36.500	1.500	HDS1	R
3350950	33.500	35.500	1.750	HDSE1	RR
□3357743	853.00	917.00	22.10	HDS3	D
	W/6 EA .500 ADJ. LUGS				
□3358743	853.00	917.00	20.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□3358803	853.00	917.00	25.00	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3363560	33.625	35.625	.875	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
3363562	33.625	35.625	.875	HDS1	R
	W/6 EA .125 LUGS				
3363870	33.625	36.625	.875	HDS1	R
3375557	33.750	35.750	.813	HS7	R
3375588	33.750	35.750	1.000	HS8	R
3375950	33.750	35.750	1.000	HDSA1	RL
□3385700	860.00	920.00	25.00	HDS1	R
3388560	33.875	35.875	.875	HDS1	R
3388620	33.875	36.000	.875	HDS1	R
3388780	33.875	36.375	1.000	HDS1	R
3388800	33.875	36.500	.875	HDS1	R
3400017	34.000	35.000	.500	HS7	R
3400534	34.000	36.000	.875	HDS2	R
3400539	34.000	36.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3400550	34.000	36.000	.813	HDS1	R
3400557	34.000	36.000	.813	HS7	R
3400560	34.000	36.000	.875	HDS1	R
3400561	34.000	36.000	.875	HDS1	R
	W/4 EA .250 LUGS				
3400564	34.000	36.000	.875	HDS2	R
3400565	34.000	36.000	.875	HDS2	R
	W/4 EA .250 LUGS				
3400566	34.000	36.000	.875	HDS2	R
	W/4 EA .125 LUGS				
3400580	34.000	36.000	1.000	HDS1	R
3400587	34.000	36.000	1.000	HS7	R
3400690	34.000	36.250	1.125	HDS1	R
3400700	34.000	36.250	1.250	HDS1	R
3400702	34.000	36.250	1.250	HDS2	R
3400760	34.000	36.500	.875	HDS1	R
3400890	34.000	37.000	1.000	HDS1	R
3400903	34.000	37.000	1.500	HDS1	R
3403557	34.032	36.032	.813	HS7	R
□**3405438**	865.00	911.00	18.00	HS8	R
□3413566	867.00	920.00	15.88	HS6	R
★3425455	34.250	36.062	.688	HS4	R
□**3425478**	870.00	920.00	15.88	HS8	R
3425557	34.250	36.250	.813	HS7	R
3425560	34.250	36.250	.875	HDS1	R
3425660	34.250	36.500	.875	HDS1	R
3425760	34.250	36.750	.875	HDS1	R
3425761	34.250	36.750	.875	HDS1	R
	W/6 EA .375 LUGS				
3438790	34.375	36.875	1.250	HDS1	R
3450250	34.500	36.000	.750	HDS1	R
3450252	34.500	36.000	.750	HDS1	R
	W/6 EA .250 LUGS				
3450253	34.500	36.000	.750	HDS2	R
3450255	34.500	36.000	.750	HDS1	R
	W/6 EA .125 LUGS				
3450258	34.500	36.000	.750	HS8	R
3450290	34.500	36.000	1.000	HDS1	R
3450518	34.500	36.500	.875	HDS2	H
3450557	34.500	36.500	.813	HS7	R
3450560	34.500	36.500	.875	HDS1	R
3450563	34.500	36.500	.875	HDS2	D
3450564	34.500	36.500	.875	HDS2	R
	W/6 EA .156 LUGS				
3450565	34.500	36.500	.875	HDS1	R
	W/6 EA .250 LUGS				
3450566	34.500	36.500	.875	†HDS2	V
3450569	34.500	36.500	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3450574	34.500	36.500	1.000	HDS2	V
3450580	34.500	36.500	1.000	HDS1	R
3450582	34.500	36.500	1.000	HDS2	R
3450660	34.500	36.750	.875	HDS1	R
3450760	34.500	37.000	.875	HDS1	R
3450860	34.500	37.500	.750	HDS1	R
3450862	34.500	37.500	.750	HDS2	R
3450950	34.500	36.500	1.000	HDSA1	RL
□**3464702**	880.00	940.00	25.00	HDS2	R
□3464705	880.00	940.00	25.00	HDS3	R
	W/6 EA 12.70MM ADJ. LUGS				
□3464770	880.00	944.00	22.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
□**3464782**	880.01	944.00	25.00	HDS2	R
□3464783	880.00	944.00	25.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□3464787	880.00	944.00	25.00	HDS1	V
3475470	34.750	36.625	.750	HDS2	R
3475560	34.750	36.750	.875	HDS1	R
3475562	34.750	36.750	.875	HDS2	R
3475564	34.750	36.750	.875	HDS1	R
	W/8 EA .375 LUGS				
3475565	34.750	36.750	.875	HDS1	R
	W/8 EA .250 LUGS				
3475660	34.750	37.000	.875	HDS1	R
3475800	34.750	37.375	.875	HDS1	R
3475820	34.750	37.500	.875	HDS1	R
3475903	34.750	37.750	1.500	HDS1	R
3500017	35.000	36.000	.500	HS7	R
3500237	35.000	36.500	.625	HS7	R
3500257	35.000	36.500	.750	HS7	R
3500550	35.000	37.000	.813	HDS1	R
3500557	35.000	37.000	.813	HS7	R
3500560	35.000	37.000	.875	HDS1	R
3500561	35.000	37.000	.875	HDS1	R
	W/4 EA .063 LUGS				
3500562	35.000	37.000	.875	HDS1	R
	W/4 EA .188 LUGS				
3500563	35.000	37.000	.875	HDS2	R
	W/6 EA .500 LUGS				
3500564	35.000	37.000	.875	HDS3	R
	W/4 EA .500 ADJ. LUGS				
3500565	35.000	37.000	.875	HDS2	R
3500566	35.000	37.000	.875	HDS2	R
	W/6 EA .188 LUGS				
3500567	35.000	37.000	.875	HDS1	V
3500568	35.000	37.000	.875	HS8	R
3500569	35.000	37.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3500579	35.000	37.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3500584	35.000	37.000	1.000	HDS1	R
	W/6 EA .125 LUGS				
3500730	35.000	37.375	1.000	HDS1	R
3500740	35.000	37.500	.750	HDS1	R
3500760	35.000	37.500	.875	HDS1	R
3500762	35.000	37.500	.875	HDS2	R
3500765	35.000	37.500	.875	HDS1	R
	W/6 EA .500 LUGS				
3500769	35.000	37.500	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3500770	35.000	37.500	.938	HDS1	R
3500772	35.000	37.500	.938	HDS1	R
	W/6 EA .125 LUGS				
3500773	35.000	37.500	.938	HDS1	R
	W/6 EA .063 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
3500780	35.000	37.500	1.000	HDS1	R
3500820	35.000	37.750	.875	HDS1	R
3500903	35.000	38.000	1.500	HDS1	R
3500952	35.000	37.000	.875	HDSA2	RL
3500958	35.000	37.000	.875	HDSA2	VL
3501952	35.000	37.000	1.000	HDSA2	RL
□**3515138**	893.00	925.00	20.00	HDS2	H
3525558	35.250	37.250	.813	HS8	R
3525560	35.250	37.250	.875	HDS1	R
3525567	35.250	37.250	.875	HDS1	V
3525660	35.250	37.500	.875	HDS1	R
3525850	35.250	38.250	.688	HDS1	R
3525852	35.250	38.250	.688	HDS2	R
3525862	35.250	38.250	.813	HDS2	R
3525900	35.250	38.250	1.125	HDS1	R
3525902	35.250	38.250	1.500	HDS1	R
3537587	35.375	37.375	.875	HDS1	V
3538557	35.375	37.375	.813	HS7	R
3538560	35.375	37.375	.875	HDS1	R
3538580	35.375	37.375	1.000	HDS1	R
3538620	35.375	37.500	.875	HDS1	R
3543257	35.438	36.938	.750	HS7	R
□3543700	900.00	960.00	30.00	HDS1	R
□3543710	900.00	960.00	25.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
3544590	35.438	37.500	1.000	HDS1	R
3548900	35.438	38.583	.906	HDS1	R
3548905	35.438	38.583	.906	HDS1	R
	W/8 EA .563 LUGS				
3550557	35.500	37.500	.813	HS7	R
3550560	35.500	37.500	.875	HDS1	R
3550562	35.500	37.500	.875	HDS1	R
	W/6 EA .125 LUGS				
3550566	35.500	37.500	.875	HDS2	D
	W/6 EA .125 LUGS				
3550569	35.500	37.500	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3550580	35.500	37.500	1.000	HDS1	R
3550680	35.500	37.750	1.000	HDS1	R
3550770	35.500	38.000	1.000	HDS1	V
3550780	35.500	38.000	1.000	HDS1	R
3550794	35.500	38.000	1.000	HDS2	V
3550830	35.500	38.250	1.000	HDS1	R
3550903	35.500	38.500	1.500	HDS1	R
3550974	35.500	38.000	1.250	HDSE2	VV
3575557	35.750	37.750	.813	HS7	R
3575558	35.750	37.750	.813	HS8	R
□3582646	910.00	966.00	17.86	HS6	R
□**3582648**	910.00	966.00	17.86	HS5	R
3582742	35.827	38.076	.703	HDS2	H
□3582770	910.00	974.00	22.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
3583658	35.826	38.076	.703	HDS2	D
3583659	35.827	38.076	.688	HS8	D
3588560	35.875	37.875	.875	HDS1	R
3588620	35.875	38.000	.875	HDS1	R
3600257	36.000	37.500	.750	HS7	R
3600300	36.000	37.620	.750	HDS1	R
3600500	36.000	37.998	.875	HDS1	R
3600501	36.000	37.998	.875	HDS1	R
	W/4 EA .125 LUGS				
3600505	36.000	37.998	.875	HDS1	R
	W/8 EA .469 LUGS				
3600522	36.000	38.228	.875	HDS2	H
3600523	36.000	38.228	.875	HDS3	H
	W/6 EA .500 ADJ. LUGS				
3600557	36.000	38.000	.813	HS7	R
3600558	36.000	38.000	.813	HS8	R
3600560	36.000	38.000	.875	HDS1	R
3600562	36.000	38.000	.875	HDS2	R
3600565	36.000	38.000	.875	HDS2	R
	W/6 EA .250 LUGS				
3600569	36.000	38.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3600572	36.000	38.000	.875	HDS2	D
3600680	36.000	38.250	1.000	HDS1	R
3600760	36.000	38.500	.875	HDS1	R
3600762	36.000	38.500	.875	HDS2	R
3600769	36.000	38.500	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3600780	36.000	38.500	1.000	HDS1	R
3600783	36.000	38.500	1.000	HDS2	R
3600830	36.000	38.750	1.000	HDS1	R
3600903	36.000	39.000	1.500	HDS1	R
3600904	36.000	39.500	1.500	HDS1	R
3600954	36.000	38.000	1.500	HDSE2	RR
□3622690	920.00	980.00	30.00	HDS1	R
□3622747	920.00	984.00	25.00	HDS1	V
□**3622784**	920.00	984.00	25.00	HDS2	V
3625580	36.250	38.250	1.000	†HDS1	R
3625588	36.250	38.250	1.000	HS8	R
3625680	36.250	38.500	1.000	HDS1	R
3625780	36.250	38.750	1.000	HDS1	R
3625830	36.250	39.000	1.000	HDS1	R
□**3641509**	925.00	975.00	22.00	HS8	D
3646588	36.460	38.460	1.000	HS8	R
□**3649572**	927.00	978.00	22.00	HDS2	D
3650250	36.500	38.000	.750	HDS1	R
3650290	36.500	38.000	1.000	HDS1	R
3650297	36.500	38.000	1.000	HS7	R
3650398	36.500	38.250	.813	HS8	R
3650525	36.500	38.500	.625	HS8	V
3650545	36.500	38.500	.750	HDS1	R
	W/8 EA .079 LUGS				
3650557	36.500	38.500	.813	HS7	R
3650560	36.500	38.500	.875	HDS1	R
3650565	36.500	38.500	.875	HDS1	R
	W/12 EA .125 LUGS				
3650588	36.500	38.500	1.000	HS8	R
3650680	36.500	38.750	1.000	HDS1	R
3650750	36.500	39.000	.625	HDS1	R
3650752	36.500	39.000	.625	HDS2	R
3650753	36.500	39.000	.625	HDS2	D
3650780	36.500	39.000	1.000	HDS1	R
3650781	36.500	39.000	1.000	HDS1	R
	W/6 EA .250 LUGS				
□3661546	930.00	982.00	22.23	HS6	R
3663557	36.625	38.625	.813	HS7	R
3675557	36.750	38.750	.813	HS7	R
3675558	36.750	38.750	.813	HS8	R
3675560	36.750	38.750	.875	HDS1	R
3675564	36.750	38.750	.875	HDS1	R
	W/6 EA .125 LUGS				
3675580	36.750	38.750	1.000	HDS1	R
3675587	36.750	38.750	1.000	HS7	R
3675660	36.750	39.000	.875	HDS1	R
3675760	36.750	39.250	.875	HDS1	R
3675764	36.750	39.250	.875	HDS1	R
	W/6 EA .125 LUGS				

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
3675765	36.750	39.250	.875	HDS2	R
3675780	36.750	39.250	1.000	HDS1	R
3688960	36.875	39.000	.875	HDSA1	RL
3700017	37.000	38.000	.500	HS7	R
3700557	37.000	39.000	.813	HS7	R
3700560	37.000	39.000	.875	HDS1	R
3700562	37.000	39.000	.875	HDS1	R
	W/4 EA .375 LUGS				
3700563	37.000	39.000	.875	HDS2	R
3700564	37.000	39.000	.875	HDS2	R
	W/6 EA .375 LUGS				
3700569	37.000	39.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3700576	37.000	39.000	1.000	HS6	R
3700580	37.000	39.000	1.000	HDS1	R
3700588	37.000	39.000	1.000	HS8	R
3700660	37.000	39.250	.875	HDS1	R
□3700703	940.00	1000.00	25.00	HDS3	D
	W/6 EA 12.70MM ADJ. LUGS				
□3700728	940.00	1000.00	25.00	HDS1	R
	W/4 EA 12.70MM ADJ. LUGS				
3700895	37.000	40.000	1.500	HDS1	R
□3701728	940.00	1000.00	25.00	HDS1	D
	W/6 EA 9.50MM ADJ. LUGS				
□3716478	939.00	971.00	15.87	HDS3	H
	W/6 EA 12.70MM ADJ. LUGS				
□**3716488**	939.00	971.00	22.23	HDS2	H
3725560	37.250	39.250	.875	HDS1	R
3725563	37.250	39.250	.875	HDS2	R
3725570	37.250	39.250	.938	HDS1	R
3725580	37.250	39.250	1.000	HDS1	R
3725588	37.250	39.250	1.000	HS8	R
3725660	37.250	39.500	.875	HDS1	R
3738120	37.375	38.625	.688	HDS1	R
3738557	37.375	39.375	.813	HS7	R
□3740100	950.00	980.00	18.00	HDS1	R
□3740560	950.00	1000.00	25.00	HDS1	R
□**3740652**	950.00	1006.00	20.00	HDS2	R
□3740700	950.00	1010.00	25.00	HDS1	R
	W/6 EA 12.70MM ADJ. LUGS				
3744600	37.438	39.500	.875	HDS1	R
3744800	37.438	40.000	.875	HDS1	R
3744904	37.438	40.500	1.500	HDS1	R
3750270	37.500	39.000	.875	HDS1	R
3750272	37.500	39.000	.875	HDS2	R
3750274	37.500	39.000	.875	HDS2	R
	W/6 EA .125 LUGS				
3750276	37.500	39.000	.875	HDS1	R
	W/4 EA .250 LUGS				
3750540	37.500	39.500	.750	HDS1	R
3750542	37.500	39.500	.750	HDS2	R
3750557	37.500	39.500	.813	HS7	R
3750560	37.500	39.500	.875	HDS1	R
3750561	37.500	39.500	.875	HDS1	D
3750562	37.500	39.500	.875	HDS1	R
	W/6 EA .125 LUGS				
3750563	37.500	39.500	.875	HDS2	D
3750564	37.500	39.500	.875	HDS2	R
	W/6 EA .125 LUGS				
3750565	37.500	39.500	.875	HDS2	R
3750572	37.500	39.500	.875	HDS2	V
3750587	37.500	39.500	1.000	HS7	R
3750660	37.500	39.750	.875	HDS1	R
3750830	37.500	40.250	1.000	HDS1	R
3750980	37.500	40.250	1.250	HDSC1	RL
□3779670	960.00	1000.00	25.00	HDS1	D
□3779680	960.00	1020.00	25.00	HDS1	D
□**3779692**	960.00	1020.00	25.00	HDS2	D
	W/8 EA 10.00MM LUGS				
□**3779706**	960.00	1020.00	25.00	HDS2	V
	W/4 EA 4.77MM LUGS				
□**3779784**	960.00	1024.00	25.00	HDS2	V
□3779788	960.00	1020.00	25.00	HDS3	D
	W/6 EA .500" ADJ LUGS				
□3780728	960.00	1020.00	25.00	HDS1	D
	W/4 EA 4.77MM LUGS				
□**3780729**	960.00	1020.00	25.00	HDS2	H
□**3780901**	960.00	1040.00	23.00	HDS2	R
□3780902	960.00	1040.00	23.00	HDS1	R
	W/6 EA 12.70MM LUGS				
□3780904	960.00	1040.00	23.00	HDS1	R
□**3780905**	960.00	1040.00	23.00	HDS2	R
	W/8 EA 5.60MM LUGS				
□**3780908**	960.00	1040.00	23.00	HDS2	V
3781557	37.813	39.813	.813	HS7	R
3781640	37.813	40.000	.875	HDS1	R
3781800	37.813	40.500	1.000	HDS1	R
3781844	37.813	40.750	1.500	HDS1	R
3781900	37.813	40.945	.875	HDS1	R
3781904	37.813	40.954	1.500	HDS1	R
3788580	37.875	39.875	1.000	HDS1	R
3788630	37.875	40.000	1.000	HDS1	R
3788800	37.875	40.500	1.000	HDS1	R
3788844	37.875	40.750	1.500	HDS1	R
3800222	38.000	39.500	.750	HDS2	H
3800252	38.000	39.500	.750	HDS2	D
3800254	38.000	39.500	.750	HDS2	V
3800258	38.000	39.500	.750	HDS2	D
3800288	38.000	39.500	.750	HS8	D
	W/THREADED SPRING CONNECTOR				
3800338	38.000	39.625	.750	HS8	R
3800557	38.000	40.000	.813	HS7	R
3800560	38.000	40.000	.875	HDS1	R
3800563	38.000	40.000	.875	HDS1	R
	W/6 EA .250 LUGS				
3800565	38.000	40.000	.875	HDS2	R
3800566	38.000	40.000	.875	HDS2	R
	W/6 EA .250 LUGS				
3800569	38.000	40.000	.875	HDS3	D
	W/6 EA .500 ADJ. LUGS				
3800760	38.000	40.500	.875	HDS1	R
3800780	38.000	40.500	1.000	HDS1	D
3800784	38.000	40.500	1.000	HDS2	R
3800785	38.000	40.500	1.000	HDS2	R
3800820	38.000	40.750	.875	HDS1	R
3800860	38.000	41.000	.750	HDS1	R
3800862	38.000	41.000	.750	HDS2	R
3800900	38.000	41.000	1.125	HDS1	R
3800902	38.000	41.000	1.188	HDS1	R
	W/6 EA .313 LUGS				
3800903	38.000	41.000	1.500	HDS1	R
3800904	38.000	41.250	1.500	HDS1	R
3800950	38.000	40.000	1.312	HDSE1	RR
3812580	38.125	40.125	1.000	HDS1	R
3825560	38.250	40.250	.875	HDS1	R
3825562	38.250	40.250	.875	HDS2	R
3825660	38.250	40.500	.875	HDS1	R
3825680	38.250	40.500	1.000	HDS1	R
3825750	38.250	40.750	.750	HDS1	R
3825752	38.250	40.750	.750	HDS2	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
3825760	38.250	40.750	.875	HDS1	R
3825761	38.250	40.750	.875	HDS1	R
	W/6 EA .063 LUGS				
3825763	38.258	40.750	.875	HDS1	R
	W/6 EA .125 LUGS				
3825765	38.250	40.750	.875	HDS2	R
3825844	38.250	41.000	1.500	HDS1	R
3825870	38.250	41.250	.875	HDS1	R
3825894	38.250	41.250	1.000	HDS1	R
	W/6 EA .125 LUGS				
3825903	38.250	41.250	1.500	HDS1	R
3850477	38.500	40.375	.750	HS7	R
3850557	38.500	40.500	.813	HS7	R
3850652	38.500	40.750	.750	HDS2	R
3850780	38.500	41.000	1.000	HDS1	R
3850782	38.500	41.000	1.000	HDS2	R
3850895	38.500	41.500	1.500	HDS1	R
3850978	38.500	41.000	1.625	HDSD2	V
3875557	38.750	40.750	.813	HS7	R
3875560	38.750	40.750	.875	HDS1	R
3875562	38.750	40.750	.875	HDS1	R
	W/6 EA .125 LUGS				
3875563	38.750	40.750	.875	HDS2	R
3875564	38.750	40.750	.875	HDS2	R
	W/6 EA .125 LUGS				
3875580	38.750	40.750	1.000	HDS1	R
3875585	38.750	40.750	1.000	HDS2	R
3875660	38.750	41.000	.875	HDS1	R
3875760	38.750	41.250	.875	HDS1	R
3875904	38.750	42.000	1.500	HDS1	R
3875950	38.750	40.750	1.000	HDSA1	RL
3888790	38.875	41.375	1.250	HDS1	R
3894600	38.938	41.000	.875	HDS1	R
3894800	38.938	41.500	.875	HDS1	R
3894904	38.938	42.000	1.500	HDS1	R
□3897543	990.00	1045.00	25.00	HDS3	D
	W/6 EACH 12.70MM ADJ.LUGS				
□3898631	990.00	1045.00	25.00	HDS1	R
3900017	39.000	40.000	.500	HS7	R
3900258	39.000	40.500	.750	HS8	R
3900535	39.000	41.000	.700	HDS1	R
3900540	39.000	41.000	.750	HDS1	R
3900542	39.000	41.000	.750	HDS2	R
3900557	39.000	41.000	.813	HS7	R
3900560	39.000	41.000	.875	HDS1	R
3900561	39.000	41.000	.875	HDS2	R
3900562	39.000	41.000	.875	HDS2	R
3900563	39.000	41.000	.875	HDS2	D
3900564	39.000	41.000	.875	HDS2	R
	W/6 EA .250 LUGS				
3900565	39.000	41.000	.875	HDS1	R
	W/6 EA .250 LUGS				
3900566	39.000	41.000	.875	HDS2	R
	W/6 EA .375 LUGS				
3900572	39.000	41.000	.875	HDS2	D
3900574	39.000	41.000	.875	HDS2	V
3900660	39.000	41.250	.875	HDS1	R
3900760	39.000	41.500	.875	HDS1	R
3900903	39.000	42.000	1.500	HDS1	R
3900905	39.000	42.250	.875	HDS1	R
3900907	39.000	42.250	1.500	HDS1	R
3925257	39.250	40.750	.750	HS7	R
3925557	39.250	41.250	.813	HS7	R
□**3937172**	1000.00	1035.00	20.00	HDS2	R
□**3937565**	1000.00	1050.00	23.00	HDS2	R
	W/6 EA 3.97MM LUGS				
□**3937582**	1000.00	1050.00	23.00	HDS2	R
□**3937595**	1000.00	1050.00	23.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
□3937670	940.00	1000.00	25.00	HDS1	D
□**3937702**	1000.00	1060.00	25.00	HDS2	R
□3937705	1000.00	1060.00	25.00	HDS3	R
	W/6 EA 12.70MM ADJ. LUGS				
3950017	39.500	40.500	.500	HS7	R
3950557	39.500	41.500	.813	HS7	R
3950900	39.500	42.500	1.125	HDS1	R
3950901	39.500	42.500	1.250	HDS1	R
3950902	39.500	42.500	1.250	HDS1	R
	W/6 EA .125 LUGS				
3975500	39.750	41.688	.969	HDS1	R
3975557	39.750	41.750	.813	HS7	R
3975750	39.750	42.250	.813	HDS1	R
3975760	39.750	42.250	.875	HDS1	R
3975764	39.750	42.250	.875	HDS1	R
	W/6 EA .125 LUGS				
3975766	39.750	42.250	.875	HDS1	R
	W/8 EA .063 LUGS				
3997300	39.979	41.500	1.000	HDS1	R
4000257	40.000	41.500	.750	HS7	R
4000290	40.000	41.500	1.000	HDS1	R
4000550	40.000	42.000	.813	HDS1	R
4000557	40.000	42.000	.813	HS7	R
4000559	40.000	42.000	.813	HDS1	V
4000560	40.000	42.000	.875	HDS1	R
4000561	40.000	42.000	.875	HDS1	R
	W/4 EA .125 LUGS				
4000562	40.000	42.000	.875	HDS2	R
4000563	40.000	42.000	.875	HDS1	D
4000564	40.000	42.000	.875	HDS2	R
	W/6 EA .125 LUGS				
4000565	40.000	42.000	.875	HDS2	R
	W/6 EA .250 LUGS				
4000566	40.000	42.000	.875	HDS1	R
	W/8 EA .250 LUGS				
4000569	40.000	42.000	.875	HDS1	R
	W/6 EA .375 LUGS				
4000574	40.000	42.000	.875	HDS2	R
	W/6 EA .500 LUGS				
4000576	40.000	42.000	.875	HDS1	V
4000580	40.000	42.000	1.000	HDS1	R
4000582	40.000	42.000	1.000	HDS2	R
4000583	40.000	42.000	1.000	HDS1	R
	W/6 EA .125 LUGS				
4000584	40.000	42.000	1.000	HDS2	R
	W/6 EA .125 LUGS				
4000585	40.000	42.000	1.000	HDS2	R
	W/6 EA .250 LUGS				
4000586	40.000	42.000	1.000	HDS1	R
	W/6 EA .250 LUGS				
4000590	40.000	42.000	1.375	HDS1	R
4000592	40.000	42.000	1.375	HDS2	R
4000593	40.000	42.000	1.375	HDS1	R
	W/6 EA .250 LUGS				
4000594	40.000	42.000	1.375	HDS2	R
	W/6 EA .250 LUGS				
4000660	40.000	42.250	.875	HDS1	R
4000920	40.000	41.500	1.000	HDSB1	RL
□4016790	1020.00	1084.00	25.00	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□4016792	1020.00	1084.00	25.00	HDS1	R
	W/6 EA 1.60MM LUGS				
4025258	40.250	41.750	.750	HS8	R
4049790	40.495	43.007	1.000	HDS1	R
4050017	40.500	41.500	.500	HS7	R
4050018	40.500	41.500	.500	HS8	R
4050061	40.500	41.750	.750	HDS7	H
4050257	40.500	42.000	.750	HS7	R
4050557	40.500	42.500	.813	HS7	R
4050560	40.500	42.500	.875	HDS1	R
4050561	40.500	42.500	.875	HDS1	R
	W/4 EA .250 LUGS				
4050562	40.500	42.500	.875	HDS1	R
	W/4 EA .375 LUGS				
4050563	40.500	42.500	.875	HDS2	R
4050564	40.500	42.500	.875	HDS1	R
	W/12 EA .125 LUGS				
4050565	40.500	42.500	.875	HDS1	D
4050574	40.500	42.500	.875	HDS2	R
	W/6 EA .375 LUGS				
4050660	40.500	42.750	.875	HDS1	R
4050680	40.500	42.750	1.000	HDS1	R
4050683	40.500	42.750	1.000	HDS1	D
4050760	40.500	43.000	.875	HDS1	R
4050762	40.500	43.000	.875	HDS2	R
4050765	40.500	43.000	.875	HDS1	R
	W/12 EA .250 LUGS				
4050774	40.500	43.000	.875	HDS2	V
4050776	40.500	43.000	.875	HDS2	V
	W/6 EA .250 LUGS				
4075258	40.750	42.250	.750	HS8	D
4075900	40.750	43.750	1.125	HDS1	R
4075902	40.750	43.750	1.438	HDS1	R
4075905	40.750	43.750	1.500	HDS1	R
4100258	41.000	42.500	.750	HS8	R
4100557	41.000	43.000	.813	HS7	R
4100558	41.000	43.000	.813	HS8	R
4125258	41.250	42.750	.750	HS8	R
4125557	41.250	43.250	.750	HS7	R
□4133510	1000.00	1050.00	20.00	HDS1	R
4150258	41.500	43.000	.750	HS8	R
4150558	41.500	43.500	.813	HS8	R
4150560	41.500	43.500	.875	HDS1	R
4150563	41.500	43.500	.875	HDS2	R
4150564	41.500	43.500	.875	HDS2	R
	W/6 EA .250 LUGS				
4150566	41.500	43.500	.875	HDS1	R
	W/8 EA .375 LUGS				
4150575	41.500	43.500	.875	HDS2	R
	W/8 EA .375 LUGS				
□**4153425**	1055.00	1100.00	25.00	HS5	R
□**4153448**	1055.00	1100.00	25.00	HS8	D
□**4154428**	1055.00	1100.00	25.00	HDS2	D
4162530	41.625	43.625	.688	HDS1	R
4162680	41.625	43.875	1.000	HDS1	R
4162685	41.625	43.875	1.000	HDS2	R
4162730	41.625	44.000	1.000	HDS1	R
4162842	41.625	44.500	1.500	HDS1	R
4163557	41.625	43.625	.813	HS7	R
4175258	41.750	43.250	.750	HS8	R
4181640	41.813	44.000	1.000	HDS1	R
4181800	41.813	44.500	1.000	HDS1	R
4181900	41.813	45.000	1.000	HDS1	R
4181904	41.813	45.000	1.500	HDS1	R
4189932	41.875	43.500	1.000	HDSB2	DL
4193557	41.929	43.929	.813	HS7	R
4194300	41.938	43.500	.750	HDS1	R
4194305	41.938	43.500	.750	HDS1	R
	W/6 EA .375 LUGS				
4194440	41.938	43.750	.875	HDS1	R
4200258	42.000	43.500	.750	HS8	R
4200478	42.000	43.912	.750	HS8	R
4200557	42.000	44.000	.813	HS7	R
4200680	42.000	44.250	1.000	HDS1	R
4200690	42.000	44.250	1.000	HDS1	D
4200780	42.000	44.500	1.000	HDS1	R
4206557	42.063	44.063	.813	HS7	R
□4212496	1070.00	1120.00	20.00	HS6	R
4225258	42.250	43.750	.750	HS8	R
4225557	42.250	44.250	.813	HS7	R
4225580	42.250	44.250	1.000	HDS1	R
4250017	42.500	43.500	.500	HS7	R
4250258	42.500	44.000	.750	HS8	R
4250382	42.500	44.250	.750	HDS2	R
4250557	42.500	44.500	.813	HS7	R
4250760	42.500	45.000	.875	HDS1	R
4250762	42.500	45.000	.875	HDS2	R
4250765	42.500	45.000	.875	HDS1	R
	W/12 EA .250 LUGS				
4250766	42.500	45.000	.875	HDS1	V
	W/6 EA .500 ADJ. LUGS				
4250820	42.500	45.250	.875	HDS1	R
4250843	42.500	45.250	1.375	HDS1	R
4250900	42.500	45.250	1.125	HDS1	R
4250901	42.500	45.507	1.250	HDS1	R
4250905	42.500	45.500	1.500	HDS1	R
4275017	42.750	43.750	.500	HS7	R
4275258	42.750	44.250	.750	HS8	R
4291557	42.913	44.913	.813	HS7	R
4300557	43.000	45.000	.813	HS7	R
4300558	43.000	45.000	.813	HS8	R
4300560	43.000	45.000	.875	HDS1	R
4300580	43.000	45.000	1.000	HDS1	R
4300680	43.000	45.250	1.000	HDS1	R
4300760	43.000	45.500	.875	HDS1	R
4300763	43.000	45.500	.875	HDS2	R
4300780	43.000	45.500	1.000	HDS1	R
4313250	43.125	44.625	.750	HDS1	R
4350270	43.500	45.000	.875	HDS1	R
□**4350508**	1105.00	1151.00	17.50	HS8	R
4350540	43.500	45.500	.750	HDS1	R
4350542	43.500	45.500	.750	HDS2	R
4350558	43.500	45.500	.813	HS8	R
4350560	43.500	45.500	.875	HDS1	R
4350562	43.500	45.500	.875	HDS2	V
4350564	43.500	45.500	.875	HDS1	R
	W/6 EA .250 LUGS				
4350565	43.500	45.500	.875	HDS2	R
□4350700	1105.00	1160.00	25.00	HDS1	R
4354557	43.546	45.546	.813	HS7	R
4363932	43.625	45.250	1.000	HDSA1	RL
4375560	43.750	45.750	.875	HDS1	R
4375569	43.750	45.750	.875	HDS2	D
4400257	44.000	45.500	.750	HS7	R
4400557	44.000	46.000	.813	HS7	R
4400562	44.000	46.000	.875	HDS2	R
4400563	44.000	46.000	.875	HDS1	R
	W/8 EA .125 LUGS				
4400580	44.000	46.000	1.000	HDS1	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
4400584	44.000	46.000	1.000	HDS1	R
	W/8 EA .125 LUGS				
4400760	44.000	46.500	.875	HDS1	R
4400761	44.000	46.500	.875	HDS2	R
4400763	44.000	46.500	.875	HDS1	R
	W/6 EA .250 LUGS				
4400766	44.000	46.500	.875	HDS2	R
	W/6 EA .250 LUGS				
4400780	44.000	46.500	1.000	HDS1	R
4400785	44.000	46.500	1.000	HDS3	R
	W/8 EA .500 ADJ. LUGS				
4400792	44.000	46.500	1.000	HDS2	V
4400793	44.000	46.500	1.000	HDS2	V
	W/8 EA .500 ADJ. LUGS				
4400820	44.000	46.750	.875	HDS1	R
4400900	44.000	47.000	1.125	HDS1	R
4400902	44.000	47.000	1.250	HDS1	R
4400905	44.000	47.000	1.250	HDS1	R
	W/8 EA .125 LUGS				
4409500	44.094	46.000	1.000	HDS1	R
□**4409592**	1120.00	1184.00	25.00	HDS2	R
	W/6 EA 12.70MM ADJ. LUGS				
4425258	44.250	45.750	.750	HS8	R
4450258	44.500	46.000	.750	HS8	R
4450270	44.500	46.000	.875	HDS1	R
4450272	44.500	46.000	.875	HDS2	R
4450550	44.500	46.500	.813	HDS1	R
4450557	44.500	46.500	.813	HS7	R
4450760	44.500	47.000	.875	HDS1	R
4450767	44.500	47.000	.875	HDS1	V
4475258	44.750	46.250	.750	HS8	R
□4488287	1140.00	1180.00	20.00	HDS1	V
4500257	45.000	46.500	.750	HS7	R
4500410	45.000	46.750	.875	HDS1	R
4500518	45.000	47.000	.812	HS8	H
4500538	45.000	47.188	.688	HS8	R
4500557	45.000	47.000	.813	HS7	R
4500560	45.000	47.000	.875	HDS1	R
4500567	45.000	47.000	.875	HDS1	V
4500930	45.000	46.627	1.000	HDSB2	RL
4513557	45.125	47.125	.813	HS7	R
4525258	45.250	46.750	.750	HS8	R
4525422	45.250	47.000	1.000	HDS2	R
4525424	45.250	47.000	1.000	HDS2	V
4550235	45.500	47.000	.625	HDS2	R
4550250	45.500	47.000	.750	HDS1	R
4550258	45.500	47.000	.750	HS8	R
4575258	45.750	47.250	.750	HS8	R
4575570	45.750	47.768	.875	HDS1	R
4600222	46.000	47.500	.750	HDS2	D
4600252	46.000	47.500	.750	HDS2	H
4600254	46.000	47.500	.750	HDS2	V
4600258	46.000	47.500	.750	HS8	R
4600259	46.000	47.500	.750	HS8	D
4600420	46.000	47.750	1.000	HDS1	R
4600422	46.000	47.750	1.000	HDS2	R
4600557	46.000	48.000	.813	HS7	R
4600560	46.000	48.000	.875	HDS1	R
4600580	46.000	48.000	1.000	HDS1	R
4600842	46.000	49.000	1.250	HDS2	D
4625258	46.250	47.750	.750	HS8	R
4625557	46.250	48.250	.813	HS7	R
□4645556	1180.00	1230.00	20.00	HS6	R
4650258	46.500	48.000	.750	HS8	R
4650560	46.500	48.500	.875	HDS1	R
4650563	46.500	48.500	.875	HDS1	V
4650690	46.500	48.750	1.125	HDS1	R
4675258	46.750	48.250	.750	HS8	R
4700258	47.000	48.500	.750	HS8	R
4700259	47.000	48.500	.750	HS8	D
4700420	47.000	48.750	1.000	HDS1	R
4700422	47.000	48.750	1.000	HDS2	R
4700480	47.000	48.875	.875	HDS1	R
4700482	47.000	48.875	.875	HDS2	R
4700510	47.000	49.000	.875	HDS7	H
	W/6 EA .375 LUGS				
4700511	47.000	49.000	.875	HDS7	H
4700557	47.000	49.000	.813	HS7	R
4700560	47.000	49.000	.875	HDS1	R
4700562	47.000	49.000	.875	HDS1	R
	W/8 EA .125 LUGS				
4700564	47.000	49.000	.875	HDS2	R
	W/8 EA .125 LUGS				
4700565	47.000	49.000	.875	HDS1	R
	W/6 EA .250 LUGS				
4700566	47.000	49.000	.875	HDS1	V
	W/6 EA .250 LUGS				
4700567	47.000	49.000	.875	HDS1	V
4700574	47.000	49.000	.875	HDS2	V
4700576	47.000	49.000	.875	HDS2	V
	W/8 EA .250 LUGS				
4700583	47.000	49.000	1.000	HDS1	R
	W/6 EA .125 LUGS				
4700584	47.000	49.000	1.000	HDS2	R
	W/6 EA .125 LUGS				
4700760	47.000	49.500	.875	HDS1	R
□**4724762**	1200.00	1264.00	22.20	†HDS2	D
	W/4 EA 3.20MM LUGS				
4725528	47.250	49.250	.625	HS8	R
4738250	47.375	48.875	.750	HDS1	R
4750258	47.500	49.000	.770	HS8	R
4750560	47.500	49.500	.875	HDS1	R
4750562	47.500	49.500	.875	HDS2	R
4750565	47.500	49.500	.875	HDS1	R
	W/8 EA .250 LUGS				
4750590	47.500	49.500	1.500	HDS1	R
4762258	47.625	49.125	.770	HS8	R
4775840	47.750	50.500	1.125	HDS1	R
4775850	47.750	50.500	1.250	HDS1	R
4788557	47.875	49.875	.813	HS7	R
4800252	48.000	49.500	.750	HDS2	D
4800254	48.000	49.500	.750	HDS2	V
4800257	48.000	49.500	.750	HS7	R
4800420	48.000	49.750	1.000	HDS1	R
4800557	48.000	50.000	.813	HS7	R
4800580	48.000	50.000	1.000	HDS1	R
4800582	48.000	50.000	1.000	HDS2	R
□**4803182**	1220.00	1255.00	20.00	HDS2	R
4812487	48.125	50.000	.813	HS7	R
4813440	48.125	50.000	.813	HDS1	R
4825527	48.250	50.250	.875	HDS1	V
4825550	48.250	50.250	.875	HDS1	R
	W/8 EA .250 LUGS				
4825560	48.250	50.250	.875	HDS1	R
4825561	48.250	50.250	.875	HDS1	R
	W/8 EA .500 LUGS				
4825562	48.250	50.250	.875	HDS2	R
	W/ 6 EA .375 LUGS				
4825563	48.250	50.250	.875	HDS2	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
4825564	48.250	50.252	.875	HDS2	D
	W/8 EA .500 LUGS				
4825565	48.250	50.250	.875	HDS1	R
	W/8 EA .125 LUGS				
4825566	48.250	50.250	.875	HDS1	R
	W/8 EA .500 LUGS				
4825570	48.250	50.250	.875	HDS1	D
4825571	48.250	50.250	.875	HDS1	D
	W/8 EA .500 ADJ. LUGS				
4837558	48.375	50.375	.812	HS8	R
4900340	49.000	50.625	.813	HDS1	R
4900420	49.000	50.750	1.000	HDS1	R
4900422	49.000	50.750	1.000	HDS2	R
4900425	49.000	50.750	1.000	HDS1	R
	W/8 EA .125 LUGS				
4900580	49.000	51.000	1.000	HDS1	R
□**4913508**	1248.00	1298.00	20.70	HS8	R
□4921790	1250.00	1314.00	21.54	HDS7	R
	W/12 EA 6.35MM LUGS				
□**4921793**	1250.00	1314.00	25.00	HDS2	R
4950803	49.500	52.240	1.000	HDS2	R
4950805	49.500	52.240	1.000	HDS2	D
4950830	49.500	52.250	1.000	HDS1	R
4950833	49.500	52.250	1.000	HDS2	R
4950835	49.500	52.250	1.000	HDS2	D
4975830	49.750	52.500	1.000	HDS1	R
4975833	49.750	52.500	1.000	HDS2	R
4975834	49.750	52.500	1.000	HDS2	V
4975835	49.750	52.500	1.000	HDS2	D
5000420	50.000	51.750	1.000	HDS1	R
5000558	50.000	52.000	.813	HS8	R
5000560	50.000	52.000	.875	HDS1	R
5000562	50.000	52.000	.875	HDS2	R
5000564	50.000	52.000	.875	HDS2	R
	W/6 EA .250 LUGS				
5012578	50.125	52.125	.845	HS8	R
5100558	51.000	53.000	.812	HS8	R
5125562	51.250	53.250	.875	HDS2	V
5150570	51.500	53.500	1.250	HDS1	R
5150590	51.500	53.500	1.500	HDS1	R
5200017	52.000	53.000	.500	HS7	R
5200558	52.000	54.000	.813	HS8	R
5250760	52.500	55.000	.875	HDS1	R
5250777	52.500	55.000	.875	HDS1	V
5300440	53.000	54.875	.813	HDS1	R
5300441	53.000	54.875	.813	HDS1	R
	W/6 EA .063 LUGS				
5300486	53.000	54.875	.813	HS6	R
5300488	53.000	54.875	.813	HS8	R
5325017	53.250	54.250	.500	HS7	R
5363017	53.625	54.625	.500	HS7	R
□**5393458**	1370.00	1420.00	19.83	HS8	H
□5393510	1370.00	1420.00	20.00	HDS1	R
□**5393512**	1370.00	1420.00	19.05	HDS2	H
5400557	54.000	56.000	.813	HS7	R
5400582	54.000	56.000	1.000	HDS2	R
5425580	54.250	56.250	1.000	HDS1	R
5425583	54.250	56.250	1.000	HDS2	R
□**5433258**	1380.00	1420.00	18.00	HS8	R
5475340	54.750	56.375	.875	HDS1	R
5475345	54.750	56.375	.875	HDS2	D
	W/6 EA .125 LUGS				
5500017	55.000	56.000	.500	HS7	R
5515028	55.150	56.250	.500	HS8	R
5550540	55.500	57.500	.750	HDS1	R
5550542	55.500	57.500	.750	HDS2	R
5600550	56.000	58.000	.813	HDS1	R
5738900	57.375	60.375	1.500	HDS1	R
5750558	57.500	59.500	.813	HS8	R
5751558	57.515	59.515	.813	HS8	R
5788017	57.875	58.875	.500	HS7	R
5788620	57.875	60.000	.938	HDS1	R
5800558	58.000	60.000	.813	HS8	R
5850518	58.500	60.500	.813	HS8	R
5900270	59.000	60.500	.875	HDS1	R
5900474	59.000	60.875	.813	HDS1	R
5900475	59.000	60.875	.813	HDS1	R
	W/6 EA .125 LUGS				
5900560	59.000	61.000	.875	HDS1	R
5975017	59.750	60.750	.500	HS7	R
6000890	60.000	63.000	1.000	HDS1	R
□6023510	1530.00	1580.00	20.00	HDS1	R
6025658	60.250	62.500	.715	HS8	R
6100580	61.000	63.000	1.000	HDS1	R
6100992	61.000	64.000	1.500	HDSE2	RL
□**6102702**	1550.00	1610.00	25.00	HDS2	V
6125017	61.250	62.250	.500	HS7	R
6125582	61.250	63.250	1.000	HDS1	R
6250222	62.500	64.000	.625	HDS2	R
6250270	62.500	64.000	.875	HDS1	R
6250271	62.500	64.000	.719	HS7	R
6250281	62.500	64.000	.875	HDS1	V
6250560	62.500	64.500	.875	HDS1	R
6250752	62.500	64.000	.720	HDS2	R
6259557	62.598	64.598	.813	HS7	R
6300558	63.000	65.000	.813	HS8	R
6337558	63.375	65.375	.813	HS8	R
6400558	64.000	66.000	.813	HS8	R
6560557	65.605	67.605	.813	HS7	R
□**6594478**	1675.00	1725.00	20.00	HS8	R
□**6594558**	1675.00	1725.00	20.62	HS8	D
6700557	67.000	69.000	.813	HS8	R
6800557	68.000	70.000	.812	HS7	R
6900558	69.000	71.000	.813	HS8	R
7000558	70.000	72.000	.813	HS8	R
□**7125478**	1810.00	1860.00	20.00	HS8	R
□**7153558**	1810.00	1860.00	20.62	HS8	D
7250558	72.500	74.500	.813	HS8	R
7275135	72.750	74.000	.719	HS5	R
8000558	80.000	82.000	.813	HS8	R
8050558	80.500	82.500	.813	HS8	R
8100558	81.000	83.000	.813	HS8	R
8775558	87.750	89.750	.813	HS8	R
9475658	94.750	97.000	.688	HS8	R
9700558	97.000	99.000	.813	HS8	R
9862568	98.625	100.625	.813	HS8	R
□MVR1-10	10.00	24.00		MVR1	R
□MVR1-12	12.00	26.00		MVR1	R
□MVR1-15	15.00	30.00		MVR1	R
□MVR2-15	15.00	32.00		MVR2	R
□MVR1-16	16.00	32.00		MVR1	R
□MVR2-17	17.00	34.00		MVR2	R
□MVR1-20	20.00	35.00		MVR1	R
□MVR2-20	20.00	37.00		MVR2	R
□MVR1-25	25.00	40.00		MVR1	R
□MVR2-25	25.00	42.00		MVR2	R
□MVR1-30	30.00	47.00		MVR1	R
□MVR2-30	30.00	48.00		MVR2	R
□MVR1-35	35.00	52.00		MVR1	R
□MVR2-35	35.00	53.00		MVR2	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
□MVR1-40	40.00	57.00		MVR1	R
□MVR2-40	40.00	58.00		MVR2	R
□MVR1-45	45.00	62.00		MVR1	R
□MVR2-45	45.00	63.00		MVR2	R
□MVR1-50	50.00	70.00		MVR1	R
□MVR2-50	50.00	72.00		MVR2	R
□MVR1-55	55.00	75.00		MVR1	R
□MVR2-55	55.00	77.00		MVR2	R
□MVR1-60	60.00	80.00		MVR1	R
□MVR2-60	60.00	82.00		MVR2	R
□MVR1-65	65.00	85.00		MVR1	R
□MVR2-65	65.00	87.00		MVR2	R
□MVR1-70	70.00	90.00		MVR1	R
□MVR2-70	70.00	92.00		MVR2	R
□MVR1-75	75.00	95.00		MVR1	R
□MVR2-75	75.00	97.00		MVR2	R
□MVR1-80	80.00	100.00		MVR1	R
□MVR2-80	80.00	102.00		MVR2	R
□MVR1-85	85.00	105.00		MVR1	R
□MVR2-85	85.00	107.00		MVR2	R
□MVR1-90	90.00	110.00		MVR1	R
□MVR2-90	90.00	112.00		MVR2	R
□MVR1-95	95.00	115.00		MVR1	R
□MVR2-95	95.00	117.00		MVR2	R
□MVR1-100	100.00	120.00		MVR1	R
□MVR2-100	100.00	122.00		MVR2	R
□MVR1-105	105.00	125.00		MVR1	R
HDL-1299-R	6.125	7.625	.687	HDL	R
HDL-1705-R	8.500	9.750	.562	HDL	R
HDL-3001-R	35.496	37.996	.984	HDL	R
HDL-3002-R	32.125	34.125	.750	HDL	R
HDL-3003-R	35.827	38.077	.687	HDL	R
HDL-3004-R	38.000	39.500	.750	HDL	R
HDL-3005-R	17.500	19.250	1.000	HDL	R
HDL-3006-R	46.004	47.500	.750	HDL	R
□**HDL-3007-R**	330.00	370.00	18.00	HDL	R
□**HDL-3009-R**	837.00	889.00	22.22	HDL	R
□**HDL-3010-R**	420.00	460.00	20.00	HDL	R
HDL-3011-R	7.125	8.250	.750	HDL	R
□**HDL-3012-R**	1055.00	1100.00	25.00	HDL	R
□**HDL-3013-R**	200.00	240.00	20.00	HDL	R
HDL-3014-R	10.750	12.750	.625	HDL	R
□**HDL-3015-R**	240.00	280.00	20.00	HDL	R
□**HDL-3016-R**	650.00	714.00	25.00	HDL	R
HDL-3017-R	34.250	36.000	.750	HDL	R
□**HDL-3019-R**	640.00	680.00	20.00	HDL	R
□**HDL-3020-R**	630.00	670.00	20.00	HDL	R
HDL-3021-R	34.500	36.500	1.000	HDL	R
HDL-3022-R	25.500	26.750	.750	HDL	R
HDL-3023-R	32.000	33.500	.750	HDL	R
HDL-3024-R	44.000	46.500	1.000	HDL	R
□**HDL-3025-R**	520.00	560.00	18.00	HDL	R
□**HDL-3026-R**	930.00	980.00	22.22	HDL	R
□**HDL-3027-R**	520.00	570.00	22.00	HDL	R
□**HDL-3028-R**	1350.00	1415.00	25.00	HDL	R
□**HDL-3029-R**	470.00	520.00	22.00	HDL	R
HDL-3030-R	15.250	17.250	.875	HDL	R
HDLA-3031-R	9.000	10.000	.750	HDLA	R
□**HDL-3032-R**	780.00	844.00	25.00	HDL	R
HDL-3033-R	23.500	24.681	.591	HDL	R
□**HDL-3034-R**	840.00	904.00	25.00	HDL	R
□HDLA-3035-R	270.00	310.00	20.00	HDLA	R
□HDLA-3036-R	340.00	380.00	18.00	HDLA	R
□**HDL-3038-R**	400.00	440.00	20.00	HDL	R
□**HDL-3039-R**	220.00	250.00	18.00	HDL	R
HDL-3056-R	34.000	36.500	.750	HDL	R
HDL-3057-R	16.250	18.000	1.000	HDL	R
□**HDL-3059-R**	630.00	690.00	20.00	HDL	R
HDL-3060-R	11.000	13.500	.687	HDL	R
HDL-3061-R	22.441	24.803	.787	HDL	R
□**HDL-3062-R**	470.00	530.00	20.00	HDL	R
HDL-3065-R	35.630	37.598	.866	HDL	R
HDLA-3066-R	8.500	9.750	.750	HDLA	R
HDL-3067-R	15.000	16.500	.750	HDL	R
HDLA-3068-R	18.500	20.500	.812	HDLA	R
□**HDL-3069-R**	220.00	250.00	15.00	HDL	R
□**HDL-3070-R**	1030.00	1070.00	25.00	HDL	R
HDL-3669-R	10.000	12.250	.812	HDL	R
HDL-3750-R	17.000	19.500	.812	HDL	R
HDL-3751-R	17.250	18.750	.687	HDL	R
HDL-3764-R	22.250	24.250	.875	HDL	R
HDL-3791-R	29.500	31.500	1.000	HDL	R
HDL-3835-R	35.000	37.000	.875	HDL	R
HDL-3836-R	35.000	37.500	.875	HDL	R
HDL-3837-R	35.000	38.000	.875	HDL	R
HDL-3858-R	14.875	16.500	.687	HDL	R
HDL-3878-R	28.000	30.500	.875	HDL	R
HDL-3921-R	8.000	9.500	.687	HDL	R
HDL-3933-R	8.375	9.875	.687	HDL	R
HDL-3939-R	8.625	10.125	.687	HDL	R
HDL-3946-R	8.750	10.250	.687	HDL	R
HDL-3954-R	9.000	10.500	.687	HDL	R
HDL-3957-R	9.125	10.625	.687	HDL	R
HDL-3963-R	9.250	10.750	.687	HDL	R
HDL-3981-R	9.500	11.250	.750	HDL	R
HDLA-3981-R	9.500	11.250	.750	HDLA	R
HDL-3984-R	9.500	11.500	.812	HDL	R
HDL-3985-R	9.750	11.250	.687	HDL	R
HDL-3992-R	10.000	11.500	.687	HDL	R
HDL-3997-R	10.000	12.000	.812	HDL	R
HDL-3999-R	10.125	11.625	.687	HDL	R
HDL-4004-R	10.250	11.750	.687	HDL	R
HDL-4011-R	10.500	12.000	.687	HDL	R
HDL-4017-R	10.500	12.500	.812	HDL	R
HDL-4023-R	10.750	12.250	.687	HDL	R
HDL-4028-R	10.875	12.500	.687	HDL	R
HDL-4033-R	10.750	12.500	.875	HDL	R
HDL-4036-R	11.000	13.000	.812	HDL	R
□**HDL-4039-R**	280.00	340.00	20.62	HDL	R
HDL-4052-R	11.375	13.375	.812	HDL	R
HDL-4056-R	12.375	14.000	.687	HDL	R
HDL-4057-R	11.500	13.000	.687	HDL	R
HDL-4063-R	11.500	13.500	.812	HDL	R
HDL-4064-R	11.750	13.250	.687	HDL	R
HDL-4071-R	12.000	14.000	.750	HDL	R
HDL-4072-R	12.000	14.000	.812	HDL	R
HDL-4075-R	12.250	14.250	.812	HDL	R
HDL-4076-R	12.375	13.875	.687	HDL	R
HDL-4079-R	12.500	14.000	.687	HDL	R
HDL-4083-R	12.500	14.500	.812	HDL	R
HDL-4089-R	12.750	14.250	.687	HDL	R
HDL-4093-R	13.000	14.500	.687	HDL	R
HDL-4099-R	13.000	15.000	.812	HDL	R
HDL-4101-R	13.250	14.750	.687	HDL	R
HDL-4118-R	14.250	15.750	.687	HDL	R
HDL-4121-R	13.500	15.000	.687	HDL	R
HDL-4128-R	13.500	15.500	.812	HDL	R
HDL-4128-V	13.500	15.500	.812	HDL	V
HDL-4129-R	13.750	15.750	.812	HDL	R
HDL-4131-R	14.000	15.500	.687	HDL	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
HDL-4134-R	14.000	15.750	.750	HDL	R
HDL-4135-R	14.000	16.000	.812	HDL	R
□HDLA-4135-R	355.60	406.40	20.62	HDLA	R
HDL-4140-R	14.250	16.250	.812	HDL	R
HDL-4142-R	14.500	16.000	.687	HDL	R
HDL-4145-R	14.500	16.500	.812	HDL	R
HDL-4147-R	14.750	16.250	.687	HDL	R
HDL-4151-R	15.000	16.500	.687	HDL	R
HDL-4156-R	15.000	17.000	.812	HDL	R
HDL-4163-R	15.500	17.496	.812	HDL	R
HDL-4163-V	15.500	17.496	.812	HDL	V
HDL-4170-R	15.750	17.250	.687	HDL	R
HDL-4177-R	16.000	17.500	.687	HDL	R
HDLA-4177-R	16.000	17.500	.687	HDLA	R
HDL-4179-R	16.375	17.875	.687	HDL	R
HDL-4180-R	16.000	18.000	.812	HDL	R
HDL-4181-R	16.250	17.750	.687	HDL	R
HDL-4186-R	16.500	18.500	.812	HDL	R
HDL-4187-R	16.500	18.500	.687	HDL	R
HDL-4188-R	17.000	18.500	.687	HDL	R
HDL-4190-R	17.000	19.000	.812	HDL	R
□**HDL-4192-R**	440.00	480.00	20.00	HDL	R
HDL-4194-R	17.500	19.000	.687	HDL	R
HDL-4198-R	17.500	19.500	.687	HDL	R
HDL-4199-R	17.625	19.250	.687	HDL	R
HDL-4204-R	17.875	19.875	.812	HDL	R
HDL-4206-R	18.000	19.500	.687	HDL	R
HDL-4210-R	18.000	20.000	.875	HDL	R
HDL-4213-R	18.375	19.875	.687	HDL	R
HDL-4215-R	18.375	20.000	.750	HDL	R
HDL-4216-R	18.500	20.500	.875	HDL	R
HDL-4218-R	19.000	20.500	.750	HDL	R
HDL-4219-R	19.000	21.000	.875	HDL	R
□**HDL-4220-R**	485.00	535.00	19.00	HDL	R
HDL-4221-R	19.500	21.500	.875	HDL	R
HDL-4228-R	19.750	21.750	.875	HDL	R
□**HDL-4232-R**	500.00	550.00	19.00	HDL	R
HDL-4233-R	19.937	21.687	.625	HDL	R
HDL-4235-R	20.000	21.500	.750	HDL	R
HDL-4236-R	20.000	21.750	.750	HDL	R
HDL-4237-R	20.000	22.000	.875	HDL	R
HDL-4239-R	20.250	21.750	.750	HDL	R
□**HDL-4244-R**	530.00	580.00	20.62	HDL	R
HDL-4246-R	20.500	22.500	.875	HDL	R
HDL-4248-R	20.750	22.750	.875	HDL	R
HDL-4253-R	21.000	23.000	.875	HDL	R
HDL-4254-R	21.250	23.250	.875	HDL	R
HDL-4255-R	21.250	23.000	.750	HDL	R
HDL-4259-R	21.500	23.500	.875	HDL	R
HDL-4263-R	21.625	23.625	.875	HDL	R
HDL-4265-R	21.750	23.750	.875	HDL	R
HDL-4269-R	22.000	23.500	.750	HDL	R
HDL-4270-R	22.000	24.000	.875	HDL	R
HDL-4271-R	22.500	24.000	.750	HDL	R
HDL-4275-R	22.437	24.000	.750	HDL	R
HDL-4279-R	22.500	24.500	.875	HDL	R
HDL-4281-R	22.750	24.750	.875	HDL	R
HDL-4283-R	23.000	24.500	.750	HDL	R
HDL-4284-R	23.000	25.000	.875	HDL	R
HDL-4285-R	23.000	25.500	.875	HDL	R
HDL-4288-R	23.500	25.500	.875	HDL	R
HDL-4291-R	23.562	25.375	.750	HDL	R
HDL-4292-R	23.625	26.000	.875	HDL	R
HDL-4293-R	23.875	26.000	.875	HDL	R
HDL-4294-R	24.000	26.000	.875	HDL	R
HDL-4295-R	24.000	26.000	.812	HDL	R
HDL-4299-R	25.250	27.250	.750	HDL	R
HDL-4300-R	25.500	27.000	.875	HDL	R
HDL-4301-R	24.250	26.250	.875	HDL	R
HDL-4302-R	24.437	26.000	.750	HDL	R
HDL-4305-R	24.500	26.500	.875	HDL	R
HDL-4308-R	25.000	26.500	.750	HDL	R
HDL-4311-R	25.187	26.875	.750	HDL	R
HDL-4313-R	26.500	28.500	.875	HDL	R
HDL-4315-R	27.500	29.000	.750	HDL	R
HDL-4318-R	25.500	27.500	.875	HDL	R
HDL-4325-R	26.000	28.000	.875	HDL	R
HDL-4326-R	33.000	35.250	.875	HDL	R
HDL-4329-R	26.125	27.625	.750	HDL	R
HDL-4330-R	26.125	28.125	.875	HDL	R
HDL-4333-R	27.000	29.000	.875	HDL	R
HDL-4336-R	27.626	29.500	.750	HDL	R
HDL-4339-R	27.500	29.500	.875	HDL	R
HDL-4343-R	28.000	29.500	.750	HDL	R
HDL-4344-R	28.000	30.000	.875	HDL	R
HDL-4346-R	28.500	30.500	.875	HDL	R
HDL-4347-R	29.000	30.500	.750	HDL	R
HDL-4348-R	29.000	31.000	.875	HDL	R
HDL-4352-R	29.500	31.500	.875	HDL	R
HDL-4357-R	30.000	32.000	.875	HDL	R
HDL-4358-R	30.000	32.500	.875	HDL	R
HDL-4365-R	30.500	32.500	.875	HDL	R
HDL-4367-R	31.000	33.000	.875	HDL	R
HDL-4373-R	32.312	34.500	.875	HDL	R
HDL-4377-R	32.500	34.500	.875	HDL	R
HDL-4380-R	32.996	34.685	.787	HDL	R
HDL-4381-R	33.000	34.500	.750	HDL	R
HDL-4382-R	33.000	35.000	.875	HDL	R
HDL-4389-R	33.500	35.500	.875	HDL	R
HDL-4399-R	34.000	36.000	.875	HDL	R
HDL-4405-R	34.500	36.500	.875	HDL	R
HDL-4416-R	35.250	37.250	.875	HDL	R
HDL-4417-R	35.375	37.375	.875	HDL	R
HDL-4421-R	36.000	38.000	.875	HDL	R
HDL-4430-R	36.500	38.500	.875	HDL	R
HDL-4434-R	37.000	39.000	.875	HDL	R
HDL-4436-R	37.250	39.250	.875	HDL	R
HDL-4438-R	37.500	39.500	.875	HDL	R
HDL-4448-R	38.000	40.000	.875	HDL	R
HDL-4454-R	38.250	40.250	.875	HDL	R
HDL-4465-R	39.000	41.000	.875	HDL	R
HDL-4470-R	42.248	44.248	1.000	HDL	R
HDL-4473-R	42.500	45.000	.875	HDL	R
HDL-4475-R	44.000	46.500	.875	HDL	R
HDL-4476-R	15.250	17.250	.812	HDL	R
HDL-4499-R	8.250	10.250	.812	HDL	R
HDL-4533-R	26.500	28.000	.750	HDL	R
HDL-4544-R	33.000	35.500	.875	HDL	R
HDL-4550-R	33.500	36.000	.875	HDL	R
HDL-4553-R	35.500	37.500	.875	HDL	R
HDL-4563-R	44.500	46.000	.750	HDL	R
HDL-4570-R	38.750	41.000	.875	HDL	R
HDL-4610-R	9.375	11.375	.812	HDL	R
HDL-4611-R	11.000	12.500	.687	HDL	R
HDL-4612-R	12.000	13.500	.687	HDL	R
HDL-4613-R	12.250	13.750	.687	HDL	R
HDL-4614-R	12.250	13.750	.875	HDL	R
HDL-4615-R	15.250	16.750	.687	HDL	R
□**HDL-4616-R**	390.00	430.00	16.00	HDL	R
HDL-4617-R	19.250	20.750	.750	HDL	R

★Contact manufacturer for availability
Bold numbers are preferred designs
□ Metric numbers
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

Numerical — complete index

Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code
HDL-4619-R	20.500	22.000	.750	HDL	R
HDL-4621-R	21.750	23.250	.750	HDL	R
HDL-4623-R	24.000	25.500	.750	HDL	R
HDL-4626-R	27.250	29.250	.875	HDL	R
HDL-4628-R	28.750	30.750	.875	HDL	R
□ **HDL-4629-R**	750.00	814.00	25.00	HDL	R
HDL-4632-R	32.000	34.000	.875	HDL	R
HDL-4634-R	33.000	34.650	.787	HDL	R
HDL-4635-R	41.500	43.500	.875	HDL	R
HDL-4637-R	43.500	45.500	.875	HDL	R
HDL-4638-R	43.750	45.750	.875	HDL	R
HDL-4639-R	48.250	50.250	.875	HDL	R
□ **HDL-4640-R**	1105.00	1160.00	22.00	HDL	R
□ **HDL-4979-R**	1636.00	1700.00	22.00	HDL	R
HDL-5033-R	31.250	33.250	.750	HDL	R
HDL-5054-R	17.500	19.250	.687	HDL	R
HDL-5259-R	21.000	22.500	.750	HDL	R
HDL-5312-R	21.000	22.750	.750	HDL	R
HDL-5482-R	59.000	61.000	.875	HDL	R
HDL-5921-R	26.000	27.625	.750	HDL	R
HDL-5989-R	10.125	11.750	.687	HDL	R
HDL-5990-R	14.750	16.500	.687	HDL	R
HDL-5991-R	14.000	15.750	.687	HDL	R
HDL-5992-R	15.312	17.312	.687	HDL	R
HDL-5995-R	16.000	18.500	.812	HDL	R
HDL-5998-R	28.000	31.000	.875	HDL	R
HDL-6239-R	23.750	25.250	1.000	HDL	R
HDL-6480-R	22.437	24.437	.750	HDL	R
□ **HDL-6666-R**	790.00	854.00	25.00	HDL	R
HDL-6747-R	51.248	53.289	.875	HDL	R
HDL-6787-R	33.000	34.625	.750	HDL	R
HDL-6874-R	15.750	17.750	.687	HDL	R
□ **HDL-7393-R**	540.00	590.00	24.98	HDL	R
HDL-7428-R	36.750	39.250	.875	HDL	R
HDL-7538-R	39.750	42.250	.875	HDL	R
HDL-7734-R	13.250	14.875	.687	HDL	R
HDL-7828-R	28.000	29.625	.750	HDL	R
HDL-8453-R	8.500	10.000	.687	HDL	R
HDL-8557-R	63.327	65.748	.787	HDL	R
HDL-8577-R	30.500	33.000	.875	HDL	R
□ **HDL-8594-R**	1380.00	1440.00	25.00	HDL	R
□ **HDL-8622-R**	1550.00	1610.00	25.00	HDL	R
□ **HDL-8624-R**	600.00	640.00	20.00	HDL	R
HDL-8903-R	45.000	46.625	1.000	HDL	R
HDL-9176-R	7.875	9.375	.687	HDL	R
HDL-9984-R	27.000	30.000	.875	HDL	R
HDL-9986-R	15.750	17.165	.687	HDL	R
HDL-9988-R	24.000	26.000	.750	HDL	R
HDL-9990-R	24.437	26.935	1.000	HDL	R
□ **HDL-9992-R**	668.00	706.00	25.40	HDL	R
HDL-9993-R	36.000	38.500	1.000	HDL	R
HDL-9994-R	43.000	45.500	1.000	HDL	R
□ **HDL-9995-R**	565.00	601.00	20.00	HDL	R
□ **HDL-9996-R**	360.00	404.00	17.45	HDL	R
□ **HDL-9997-R**	513.00	543.00	16.00	HDL	R
□ **HDL-9998-R**	990.00	1040.00	25.00	HDL	R

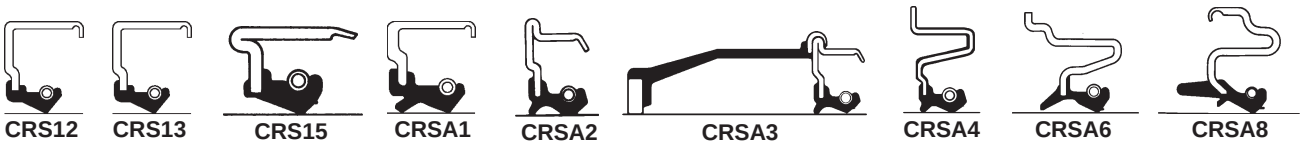
Stock no.	Shaft	Bore	Width of seal	Type and style	Lip code

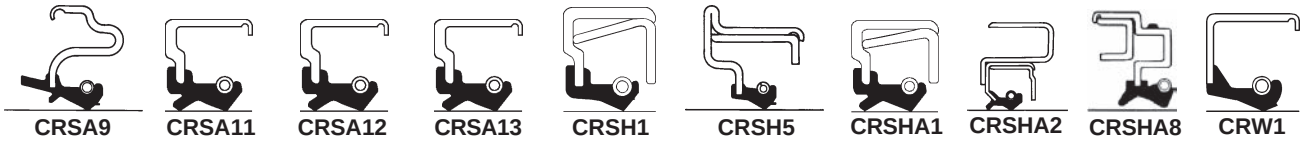
★ Contact manufacturer for availability
Bold numbers are preferred designs

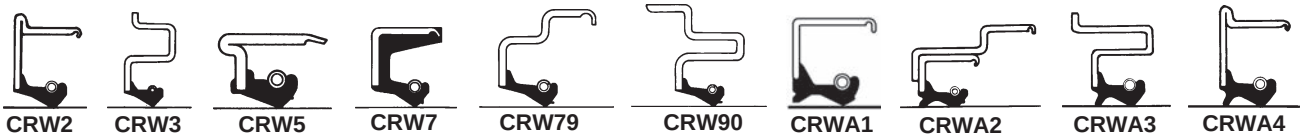
□ Metric numbers

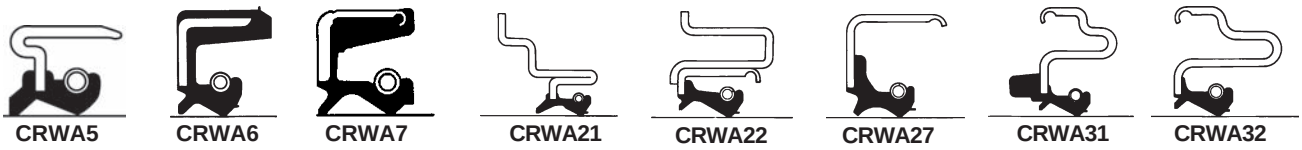
† Includes Bore-Tite on O.D.
▲ WasteWatcher numbers

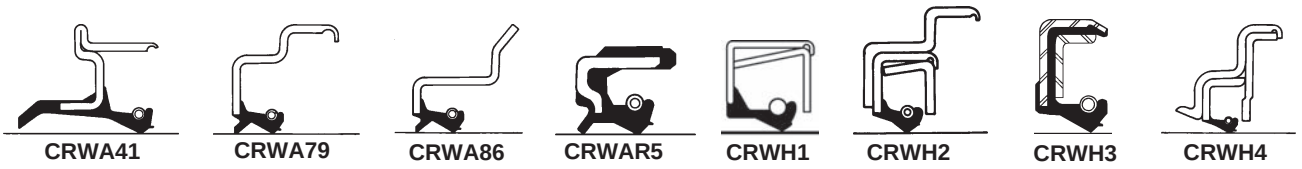
Type and style illustrations

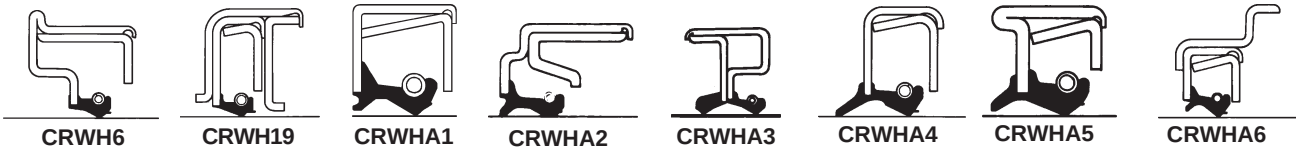


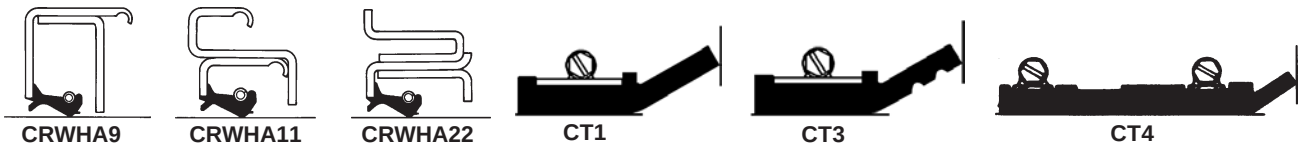


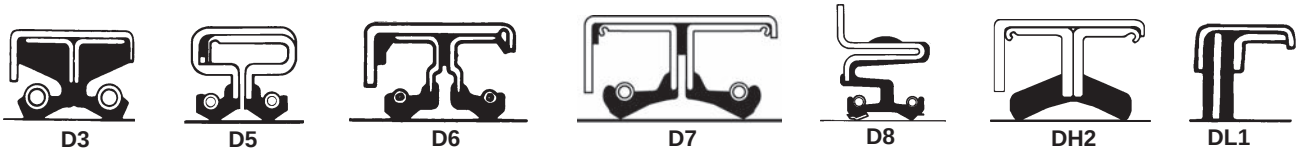












Type and style illustrations

Type and style illustrations

Type and style illustrations

SLA2

SPEEDI-SLEEVE

TL1

TL2

TL4

TL5

TL6

TL7

TL8

VR1

VR2

VR3

VR4

VR5

W1

WS

X3

X4

X9

X12

X13

X14

X15

XH15

23WP

Glossary of seal terms

Bonded Seal: Design feature of a type of radial lip seal. The heel of the sealing element is attached (Bonded) to the seal case by an adhesive during the molding operation.

Bore, Housing: (Bore, Seal) A cylindrical surface which mates with the outside surface of the seal outer case.

Case, Inner: (Shell, Inner) A rigid, cup-shaped component of a seal assembly, which is placed inside the outer seal case. It can function as: reinforcing member, shield, spring retainer, lip-clamping device.

Case, Outer: (Shell, Outer) The outer, cup-shaped, rigid structure of the lip seal assembly. Acts as a protective cover for the head of the sealing element.

Dynamic Run-out: Amount by which a shaft does not rotate around a true center. Also known as shaft eccentricity. Measured in Total Indicated Reading (T.I.R.).

Dynamic, Seal: A seal which has rotating, oscillating, or reciprocating motion acting upon it.

Durometer: An instrument which measures with an indentor point the hardness of rubber by penetration, without puncturing the surface of the rubber.

Elastomer: An elastic rubberlike substance, such as natural or synthetic rubber.

F.P.M.: Feet Per Minute; used as a measure of shaft speed instead of R.P.M. To convert R.P.M. into F.P.M., use formula .262 x R.P.M. x diameter (inches) = F.P.M.

Fluid Side: Side of the seal which in normal use faces toward the fluid being sealed.

Garter Spring: Coiled wire spring with its ends connected. It is used for maintaining a sealing force between the sealing element and a sealing surface.

Machine Lead: Spiral grooves similar to a screw thread on a shaft surface that can result from improper finishing process; may result in early leakage.

Primary Lip: The flexible elastomeric component of a lip seal, which contacts the rotating surface.

R_A: The average of all peaks and valleys from the mean line within cut-off (.010" or .254mm). Ra does not describe the surface profile (texture) and two shafts with the same Ra value can have very different surface characteristic.

R_{PM}: Average peak to mean height.

Run-In: The period of initial operation during which the seal-lip wear rate is greatest and the contact surface is developed.

Run-Out: That run-out to which the seal lip is subjected due to the outside diameter of the shaft not rotating in a true circle. Usually expressed as T.I.R. (Total Indicator Reading).

$R_{Z\ (din)}$: Average peak to valley height.

Scoring: A type of wear in which the working surface of the shaft is grooved.

Seal, Head Section: The portion of a lip seal which is generally defined by the inside and outside lip surfaces and the spring groove.

Seal, Heel Section: The portion of the lip seal which is attached to the seal case.

Seal, Outside Diameter: The external diameter of a lip seal assembly. Usually the outside diameter of the outer seal case.

Seal Width: The over-all axial dimension of the lip-seal assembly. Normally the total width measurement of the outer seal case.

Sealing Element: The normally flexible elastomeric component of a lip-seal assembly which rides against the shaft.

Secondary Lip: A short, non-spring loaded lip which is located at the outside seal face of a radial lip seal. Used to exclude contaminants.

Shaft Diameter: The outside diameter of the shaft at the location where the seal is mounted.

Shaft Finish: The relative roughness, usually expressed in micro inches, of the outside diameter of the shaft. The smaller the number, the smoother the finish.

Shaft Seal: Generally considered to be a lip seal or an oil seal, but a broad definition could include any sealing device mounted on a shaft or sealing a shaft.

Sleeve, Wear: A replaceable metal ring. Generally used in assemblies to eliminate expensive shaft replacement caused by grooving that may occur at the seal-shaft interface.

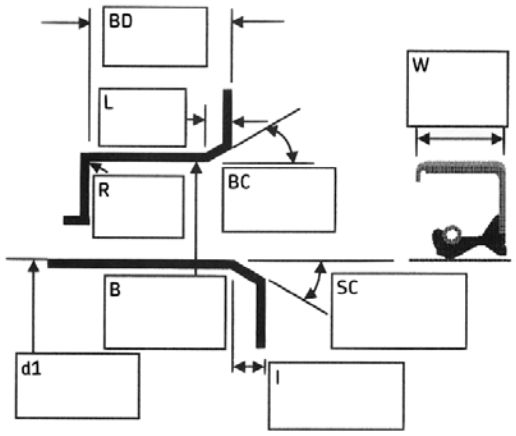
S.T.B.M.: Shaft-to-Bore-Misalignment, the amount by which the shaft is off center, with respect to the bore's center.

General index

Subject	2005 Issue page no.
Abrasion resistance	5A
Adjustable lug	29A, 30A
All rubber split and solid seals	32A
Axial clamp seals; Installation	41A
Axial clamp seal connector torque	41A
Back-up washers (BUW)	51A
Bar code (UPC) label	23A
Bearing Isolator	40A
Belleville washers	42A
Bore-Tite	4A
Bore tolerance chart	25A
Butt-joint (no gap)	41A
Buttons (Lugs/Seal spacers)	29A, 30A
Case material	4A
Compound compatibility chart	6A
Control wire spring connection	32A
Counterface	36A
Cover plates (Seal retainers)	32A
Defender	40A
DRO (Dynamic Runout)	17A, 19A
Dry running	36A
Duralip (Lip code: D)	3A, 6A
Durometer	6A
Eccentricity, shaft	27A
Estimating shaft size	24A
Exclude water	36A, 41A
Felt washers	206
Fixed-width lugs	29A, 30A
Fluorocarbon (PTFE) (Teflon) (Lip code: T)	3A, 38A
Fluoroelastomer (LongLife) (Lip code: V)	3A, 5A
Frictional torque, generates 20% less	20A
Gap; none (Butt-Joint)	41A
Gap; one inch: 1" (25.4mm)	41A
Heat, generates 25-35% less	20A
Hook & eye spring connection	32A, 49A
How to use this catalog	1A
Hydrodynamic pumping action	20A
Installation, axial clamp seals	41A
Installation tips	48A
Lapped mating surfaces (HDDF seals)	42A
LongLife (Fluoroelastomer lip code "V")	3A, 5A
Lugs (Seal spacers)	29A, 30A
Material and compound selection guide	3A, 4A, 6A
Mating ring (HDDF seal)	42A
Mechanical (HDDF) seal	42A
Multiple split seal installation	35A, 49A
Nitrile (Lip code: R)	3A, 6A
One inch gap: 1" (25.4mm)	41A
Operating conditions	16A, 18A, 42A
Polyacrylate (Lip code: P)	3A, 6A
Pressure tolerance	17A, 19A, 21A
Pumping action, hydrodynamic	20A
Purple dot, V-Ring material mark	36A
Quill wiper seals	35A
Recommended operation conditions	16A, 18A
Seal designs	16A, 18A
Seal group operating description	16A, 18A
Sealing element materials substitutions	24A
Sealing element materials	3A, 4A, 6A
Separators, split seals	35A
Shaft size, estimating	24A
Shaft tolerance chart	27A
Shelf life (Material)	15A
Silicone (Lip code: S)	3A, 6A
Sirvon rings, Teflon	55A, 56A
Spacer lugs	27A, 28A
Spark-free I.D.	27A
Speedi-Sleeves (shaft repair sleeves)	43A
Split seals	32A
Spring connections (Threaded, hook & eye)	31A, 32A
Spring connections (Control wire)	31A, 32A
Spring materials	4A
Spring-Kover	29A
Spring Lock	29A, 31A
Square-Bore housings (HDDF seals)	42A
Standard line (Preferred design)	16A, 18A
STBM (Shaft-to-bore misalignment)	17A, 19A
Stock number: known	24A
Stock number: Not known	24A
Stock number: Part numbering system	23A
Substitute lip materials	24A
Surface finish	26A, 27A
Teflon (PTFE) (Fluorocarbon) (Lip code: T)	4A, 38A, 39A
Temperature ranges	6A, 17A, 19A, 21A
TFE (Teflon) (Fluorocarbon) (Lip code: T)	4A
Threaded spring connection	32A, 33A, 49A
TIR (Total indicated reading)	27A, 21A
Torque; axial clamp seal connector	41A
Torque, frictional, generates 20% less	20A, 21A
Troubleshooting	47A
V-Ring designs	36A
V-Ring material color coding	36A
Washers, back-up (BUW)	51A
Washers, Belleville	42A
Washers, felt	206
Wastewatcher	22A
Water, exclude	36A, 41A
Waveseal	20A
Wear sleeve tolerance chart	46A
Zero-interference (Dirt lip)	20A

Typical Application Profile Form

• Critical information	Date
• SKF Distributor Name/Account #	• Dimension: ☐Inch ☐MM
• Location/Corp #	
Contact	
End user company	
End user Address/Contact/Phone	
Application & type of equipment	



d1	**Shaft dia.**
B	**Bore dia.**
BD	**Bore depth**
SC	**Shaft chamfer**
BC	**Bore chamfer**
l	**Shaft chamfer length**
L	**Bore chamfer length**
R	**Corner chamfer (if W > BD)**
W	**Seal width**
X	**Unknown**

Lip material type		Seal type	
Protype date Qty:	Production date Qty:	Installation direction into bore ☐ ☐	Shaft installation direction ☐ ☐

Shaft	Material	Hardness	Roughness	Finish method
Bore	Material	Hardness	Roughness	Finish method

•Motion	Bore rotating ☐	•RPM Normal _____ Max _____		Direction (View from dust lip side) C.W. ☐ C.C.W ☐ Bi-rotational ☐	
	Shaft rotating ☐	Dynamic Runout (DRO) TIR	STBM	End play	Frequency of rotation Continuous ☐ Intermittent ☐ CYC/HR ☐
	Reciprocating ☐	Stroke length	CYC/Min		Additional requirements
	Oscillating ☐	Degrees of arc	CYC/Min		
Medium to be sealed	In	Type	Level ☐ Flooded ☐ Mist Dry ☐		
	Out	Type			
•Temp	☐ F° ☐ C°	Normal _____	Minimum _____	Max _____	
•Press	☐ PSI ☐ kPa ☐ Other	Normal	Max	☐ Contin ☐ Pulsat ☐ Spike	Validation / In process test Spec# _____ ☐ Yes ☐ No Quality requirements Customer spec number

SKF

WARNING: Proper selection of the products listed for sale in this catalog is essential to minimize the risk of any seal, bearing or other product failure. Such failures can result in property damage or severe personal injury to operators of machinery, vehicles or to others. You must carefully evaluate the particular application on or into which you intend to install the products. Products in this catalog require installation by an experienced professional mechanic or qualified maintenance professional.

The product properties and operating parameters described in this catalogue are based upon tests conducted by SKF or reported by others. SKF does not assume any responsibility for errors in the data published in this catalog. The life and performance of the products ultimately depend on a number of factors. These include, for example, selection of product design type, selection of materials for their different properties, handling and installation, operating conditions, including shaft surface or bore conditions, the quantity, quality and chemistry of lubricants and other factors. Severe environments can adversely effect product life or performance. For help in realizing longer SKF product life, and optimal performance for your specific application, contact SKF's Customer Services Department at 1-800-882-0008. You can also submit to our attention the Engineering Work Request form found at the end of this catalogue or visit our web site at http://www.vsm.skf.com.

LIMITED WARRANTY

SKF as the seller of the products contained in this catalog warrants to the first user/purchaser that the products sold by it, when properly installed, will be free from defects in material and workmanship. SKF's sole obligation and liability for any defect found to exist in a product sold by SKF contrary to this warranty, and purchaser's sole and exclusive remedy for such defect, shall be limited to: (A) SKF furnishing without additional charge to purchaser, including transportation, a replacement for any of the products sold by SKF which are found by SKF to be defective contrary to this limited warranty, and (B) in the case of products which cannot be repaired or replaced by SKF, SKF shall credit or refund purchaser the purchase price paid therefore; provided, that SKF is advised in writing of such product non-conformance within thirty (30) days of the date of discovery thereof, and that the non-conforming product is returned f.o.b. to SKF's designated warehouse promptly thereafter, but in any case not later than twelve (12) months from the date of original shipment of the product to purchaser by SKF. In no event shall SKF be obligated under this warranty or otherwise in any way whatsoever for normal wear and tear, or for any products sold by SKF which, after delivery by SKF and in SKF's sole determination, have been subjected to accident, abuse, misapplication, improper or faulty repair or installation, improper or faulty maintenance or lubrication, any alteration or neglect, excessive loading or other excessive operating conditions, or for defects caused by or resulting from purchaser's specifications or designs or otherwise caused by purchaser. **TO THE FURTHEST EXTENT PERMITTED UNDER APPLICABLE LAW, SKF DISCLAIMS LIABILITY, IN TORT OR CONTRACT, IN NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, FOR ANY OTHER REMEDY OR DAMAGE, WHETHER DIRECT OR INDIRECT, INCIDENTAL OR CONSEQUENTIAL WITH RESPECT TO ITS PERFORMANCE HEREUNDER, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE PRODUCTS SOLD OR PROVIDED HEREUNDER BY SKF, AND ITS PROVISION OF ANY RELATED SERVICES. THIS EXPRESS WARRANTY IS TO THE EXCLUSION OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. COSTS INCURRED FOR ROUTINE MAINTENANCE ARE NOT COVERED BY THIS WARRANTY.** Without limiting the generality of the foregoing disclaimer, SKF specifically disclaims liability to purchaser for any loss, cost, or damage incurred as a result of equipment downtime, or loss of use or availability of worksite, lost revenues or lost profits, or losses or liability arising, regardless of whether SKF is on notice of the possibility of such damage or loss and did or could have anticipated same. No other person has been authorized by SKF to undertake or make on behalf of SKF any further representation, warranty or guarantee in addition to or contrary to SKF's warranty made herein or contrary to the limitations and disclaimers provided herein. The exclusive remedies provided in this limited warranty shall not be deemed to have failed of their essential purpose so long as SKF is willing and able to perform to the extent and in the manner prescribed in this warranty.

INFORMATION: Inquiries can be directed to: SKF Customer Services Department, 890 North State Street, Elgin, IL 60123 USA, or call 1-800-882-0008.

LIMITATION ON RETURNS: Any product that is not in conformance with purchaser's description given in its order is returnable for credit or replacement by SKF, provided that SKF is advised in writing by purchaser of such non-conformance within 30 days after the product's delivery to purchaser by SKF, and only after written authorization therefore is given by SKF. Approved returns must be shipped freight prepaid and arrive in good, saleable condition to qualify for credit or replacement.

NOTICE: The SKF part numbering systems for the SKF products are proprietary to SKF. Any improper or unauthorized use of these numbering systems, including adoption or use of any of their part numbers or part number lists, even where the subject of modification or addition, is strictly prohibited and will be prosecuted by SKF as a violation of U.S. and foreign copyright, trademark and unfair competition laws. In addition, use of any SKF trademarks, trade names or packaging schemes, systems, colors or designs is likewise considered a violation of the trademarks, trade names and trade identities rights of SKF USA Inc. and their affiliates. Possible violation of such use should be brought to the attention of SKF: SKF USA Inc., 890 North State Street, Elgin, Illinois 60123 USA, Attn: Catalog Manager.

SKF

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 354 ELGIN, IL

POSTAGE WILL BE PAID BY ADDRESSEE

SKF Sealing Solutions
890 N. State St., Suite 200
Elgin, IL 60123-9857

SKF

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 354 ELGIN, IL

POSTAGE WILL BE PAID BY ADDRESSEE

SKF Sealing Solutions
890 N. State St., Suite 200
Elgin, IL 60123-9857

SKF

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 354 ELGIN, IL

POSTAGE WILL BE PAID BY ADDRESSEE

SKF Sealing Solutions
890 N. State St., Suite 200
Elgin, IL 60123-9857

SKF

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 354 ELGIN, IL

POSTAGE WILL BE PAID BY ADDRESSEE

SKF Sealing Solutions
890 N. State St., Suite 200
Elgin, IL 60123-9857

Catalog Comment Card

- Not For Catalog Requests-

Please use this card to comment on any SKF Publication. Please mark appropriate catalog:

☐ 457010 ☐ 457012 ☐ Other _____

Date of Issue _____ Page No. _____

Comments: _____
(Please type or print clearly)

_____

_____

_____ Reply Requested ☐

INTERNAL USE ONLY
Reply Date

Company Name _____

Address _____

City _____ State _____ Zip _____

Name and Title _____

Phone _____ Date _____

For Catalog Requests, please call 1-800-882-0008

Catalog Comment Card

- Not For Catalog Requests-

Please use this card to comment on any SKF Publication. Please mark appropriate catalog:

☐ 457010 ☐ 457012 ☐ Other _____

Date of Issue _____ Page No. _____

Comments: _____
(Please type or print clearly)

_____

_____

_____ Reply Requested ☐

INTERNAL USE ONLY
Reply Date

Company Name _____

Address _____

City _____ State _____ Zip _____

Name and Title _____

Phone _____ Date _____

For Catalog Requests, please call 1-800-882-0008

Catalog Comment Card

- Not For Catalog Requests-

Please use this card to comment on any SKF Publication. Please mark appropriate catalog:

☐ 457010 ☐ 457012 ☐ Other _____

Date of Issue _____ Page No. _____

Comments: _____
(Please type or print clearly)

_____

_____

_____ Reply Requested ☐

INTERNAL USE ONLY
Reply Date

Company Name _____

Address _____

City _____ State _____ Zip _____

Name and Title _____

Phone _____ Date _____

For Catalog Requests, please call 1-800-882-0008

Catalog Comment Card

- Not For Catalog Requests-

Please use this card to comment on any SKF Publication. Please mark appropriate catalog:

☐ 457010 ☐ 457012 ☐ Other _____

Date of Issue _____ Page No. _____

Comments: _____
(Please type or print clearly)

_____

_____

_____ Reply Requested ☐

INTERNAL USE ONLY
Reply Date

Company Name _____

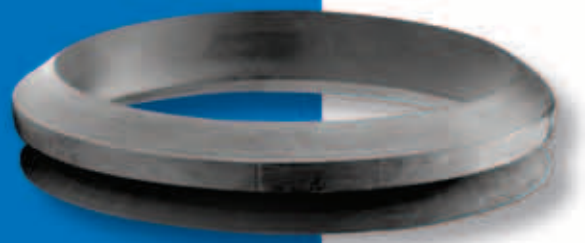
Address _____

City _____ State _____ Zip _____

Name and Title _____

Phone _____ Date _____

For Catalog Requests, please call 1-800-882-0008



SKF
890 North State Street, Suite 200
Elgin, Illinois 60123
1-800-882-0008 (U.S.)
1-866-832-6753 (Canada)
website: www.skf.com

© 2005 SKF Group All Rights Reserved
Printed in the U.S.A. Form No. 457010
(Rev. 09/05)