

CR Seals handbook

Industrial shaft seals





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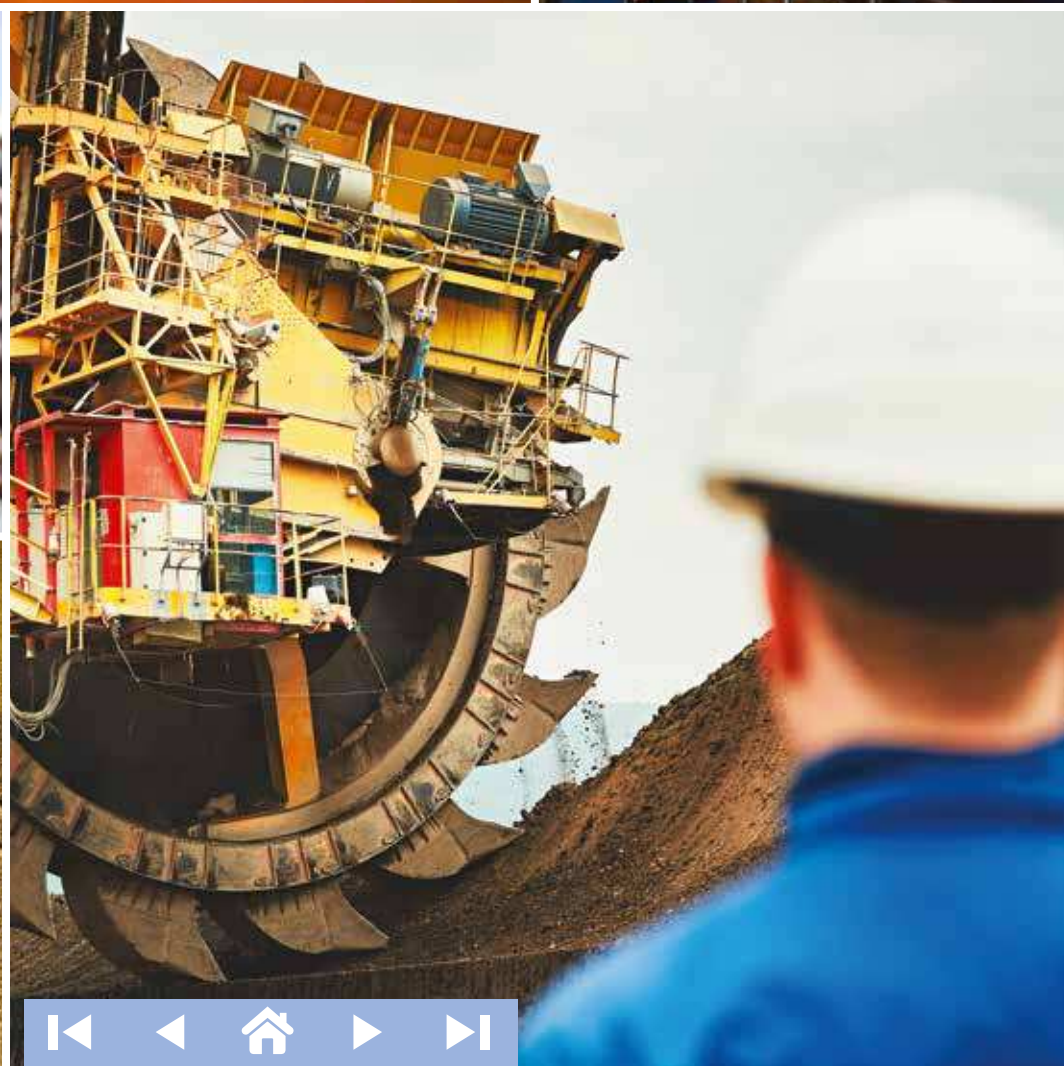
Find the content you need quickly and easily with this linked table of contents, or use the navigational bookmarks to the left.

- Rotary shaft seals
- V-ring seals
- Metal face seals
- Axial clamp seals
- Pressure seals
- Grease seals
- Large Diameter wear sleeves (LDSLVL)
- SKF Speedi-Sleeve wear sleeves

Understand the important terms used in the CR Seals product listings above.

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Foreword

This all-new CR Seals handbook from SKF combines our best ideas and insights from the past and the present. We hope it becomes your first and last source for information on rotary shaft seals.

The most obvious change in the handbook starts with its title. The “CR Seals handbook” references CR – Chicago Rawhide – throughout to describe the SKF industrial shaft seal offering.

Founded in 1878 as Chicago Rawhide, CR Seals has one of the longest histories in the seal industry. For the last 110+ years, CR Seals has been setting performance and service life standards for industrial and automotive shaft seals.

CR Seals has also been part of SKF since 1990, a span during which we’ve developed new materials, manufacturing processes and designs to create some of the most robust seals on the market.

This CR Seals handbook includes a range of practical knowledge and insights about everything from seal installation, storage and handling to complex seal application engineering and troubleshooting concepts.

Along with seal selection guides and full product listings by shaft size, this handbook also highlights key CR Seals types and technologies, including SKF Wave, SKF Edge and SKF Flex seals.


Ultimately, seals are a core SKF technology, as they contribute to our vision of a world of reliable rotation and help us differentiate our position as the undisputed leader of the bearing industry.

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THE BEST FRIEND A BEARING EVER HAD

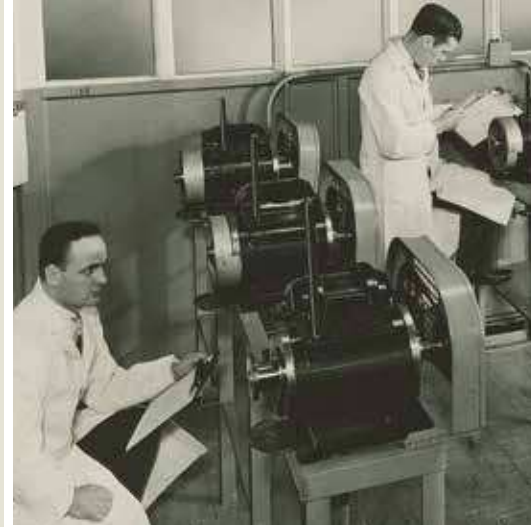


PERFECT
Oil Retainer

Perfect Oil Retainers are the best of their kind. They are made of the finest materials and are built to last. They are the only oil retainers that will keep your bearings in perfect condition for a long time. They are the only oil retainers that will keep your bearings in perfect condition for a long time. They are the only oil retainers that will keep your bearings in perfect condition for a long time.



MUCKYNE TRACTOR COMPANY
Convoyer Engine Transmission equipped
with "Perfect" Dual C Oil Retainers.



SKF sealing history

1878: Chicago Rawhide is founded in Chicago. Products include belting, lacing, ropes and other rawhide leather articles.

1897: Chicago Rawhide introduces leather gears.

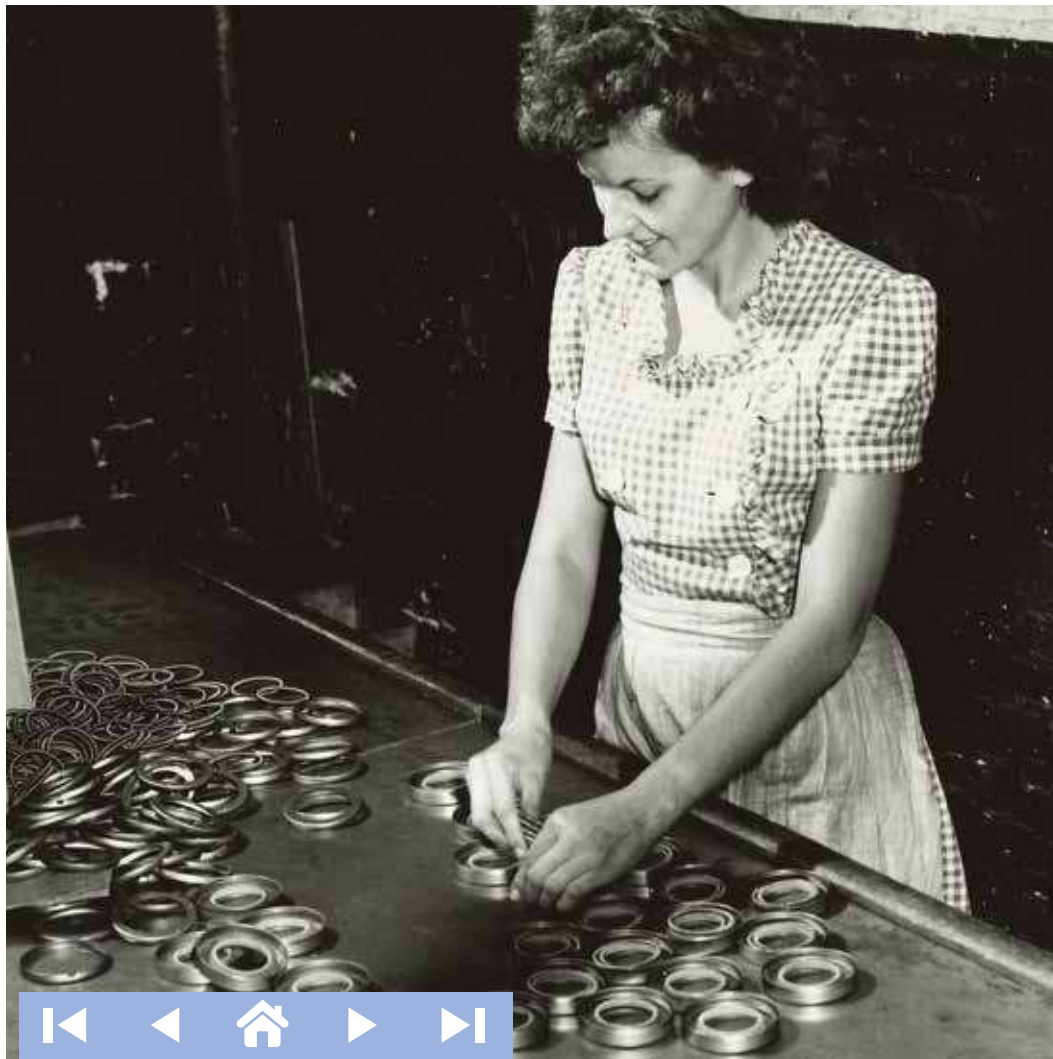
1914: CR leather products first appeared in the Ford Model T.

1928: Chicago Rawhide patents the Perfect Oil Seal made of leather.

1955: Chicago Rawhide begins selling its products to replacement markets.

1971: CR patents the first Wave seal.

1990-2006: SKF acquires Chicago Rawhide, Macrotech Polyseal and Economos and forms a global seal business unit with operations in Europe, Asia and North America. The acquisitions help establish SKF as a sealing technology leader for rotary, hydraulic and fluid handling applications.



A legacy of proven technology at work

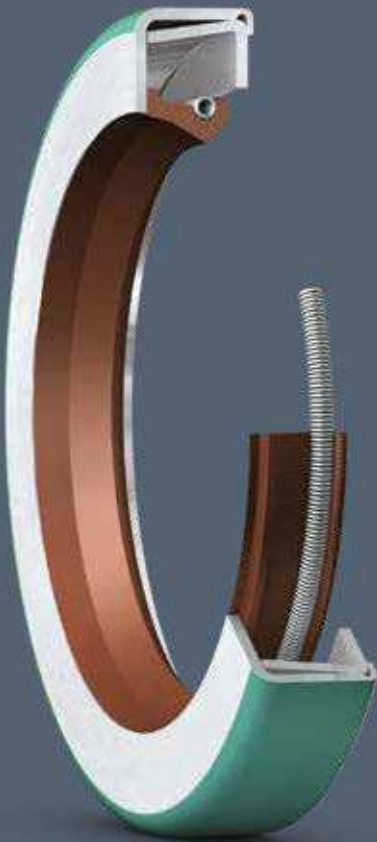
From rawhide leather to advanced polymers

SKF sealing technologies have evolved from some of the most successful and robust industrial sealing solutions ever designed.

Our sealing lineage stretches back to the 1870s, in the Chicago stockyards that gave rise to Chicago Rawhide (CR). In 1928, CR patented its first-ever Perfect Oil Seal. Made of rawhide leather, that seal dominated automotive and industrial equipment designs into the 1940s.

In the 1970s, CR introduced the SKF Wave seal lip design. Widely recognized as one of the most robust standard seal design ever developed, the SKF Wave lip seal has been at work in rotating equipment in every industry for decades.

Today, SKF sealing design and materials continue to lead the industry with global sealing solutions like the SKF Edge seals (HMS5 & HMSA10) and SKF Flex heavy industrial seals, all of which are made from SKF-developed nitrile rubber (NBR) formulations and highly engineered fluorinated (FKM) compounds.



SKF Wave seal





Why SKF for seals?

Because no one knows how they work with bearings better than us.

As a leading bearing manufacturer that also manufactures seals, SKF has a unique perspective on the interplay of the elements in rotating equipment. Thanks to our advanced sealing technologies, designs and development processes, CR Seals outperform the competition on the test bench and in the application. Why risk unplanned downtime and high warranty costs with a sub-par seal? Trust your uptime and your bottom line to the robust reliability of CR Seals from SKF.

Deep seal knowledge, proprietary tools and dedicated testing

Having studied bearing design and performance for over a century, SKF is uniquely qualified to recommend the optimum sealing solution for a given application.

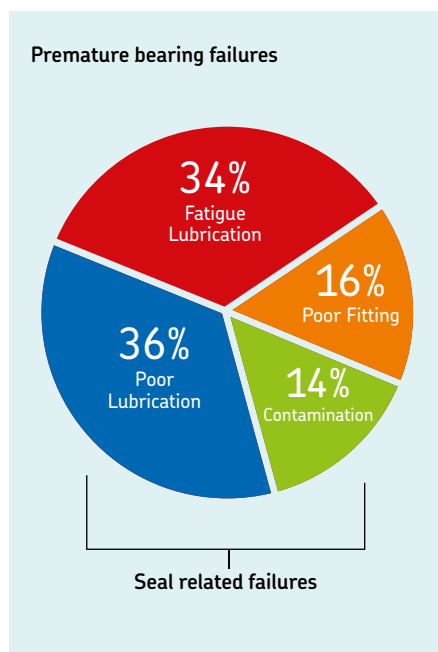
We've developed a deep understanding of how temperatures, speeds, pressures, lubricants, shaft surfaces and other conditions impact seal life and performance. This knowledge, backed by years of R&D in sealing materials, design and tribology in industrial, automotive and aerospace applications, goes into every sealing solution and recommendation we offer.

Our in-house simulation tools include the SKF Seal Designer, which helps us explore the non-linear behavior of sealing materials to help predict sealing performance under various conditions. SKF engineers also apply non-linear Finite Elements Analysis (FEA) to simulate operating conditions by using different seal geometries to identify the critical design areas.



Sven Wingquist, inventor of the double-row self-aligning ball bearing

Once a seal and has been designed and developed, it undergoes an extensive series of performance trials at one of our seal testing labs. SKF operates a global network of dedicated seal testing facilities that perform thousands of analyses annually, measuring seal performance factors such as durability, contaminant exclusion, salt fog corrosion, cold fracture, pump rate, chemical compatibility and more.





The true costs of a poor seal

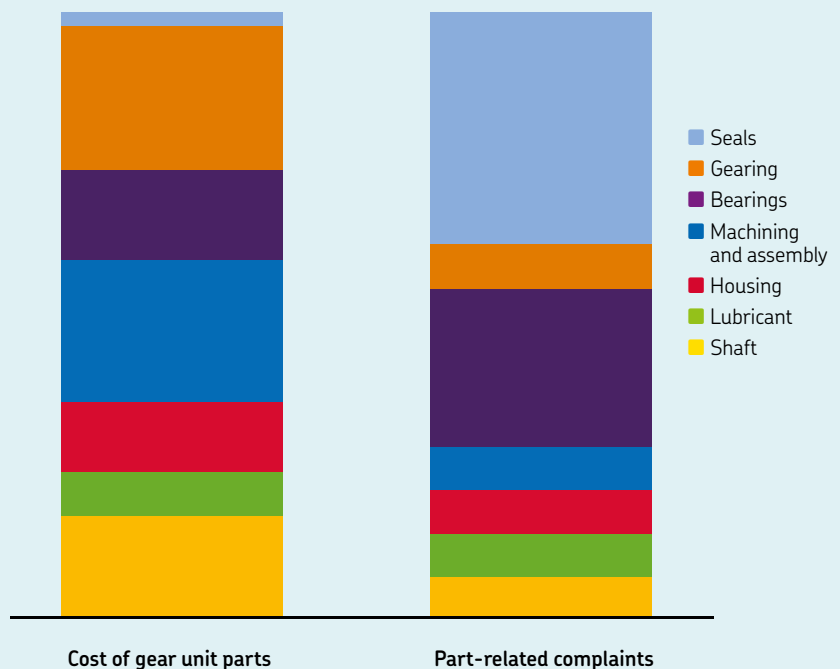
As the chart at right shows, seals account for just a sliver of total gearbox costs. But failing seals are responsible for most customer complaints! What is unrepresented by the chart is the costly downtime and lost business that seal failures also cause.

For OEMs, selecting a cheaper seal component carries big risks in terms of customer satisfaction. Customers that try to save a few dollars with an inferior seal could wind up costing themselves much more later, should the seal fail prematurely.

In either case, is the risk of causing the end-user so much hassle and lost productivity really worth the minimal savings? Instead, install confidence with CR Seals and recommend the world's most robust standard sealing solutions.

Seal costs vs. seal-related issues

Seals account for just a tiny fraction of total gear unit costs, but are responsible for the majority of part-related failures.



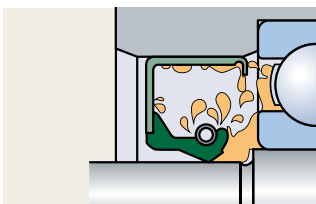


CR Seals

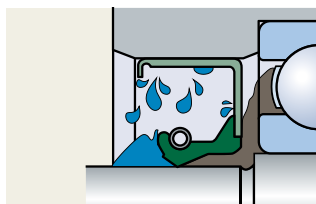
Primary seal functions



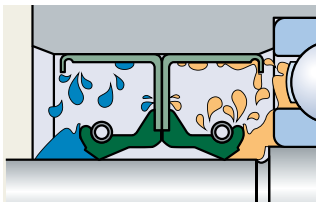
Rotating shafts need a bearing arrangement for smooth, effective operation. In turn, bearing arrangements need a sealing solution for protection and to achieve maximum service life. As it seals the opening between components, a sealing solution must perform one or more primary seal functions:



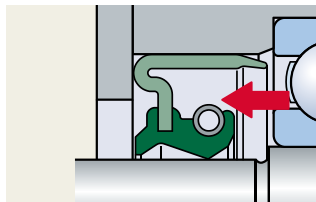
Retain the lubricant



Exclude contaminants



Separate two different media



Seal under pressure

Rotary shaft seals

At work in every major industry, SKF rotary shaft seals support greater uptime in everything from metal mills to wind turbines.

SKF Wave and SKF Edge for oil applications



The classic SKF Wave seals feature lips molded in a sinusoidal wave pattern onto a case with a metal OD. They are known as a trusted, robust solution used in every industry. SKF Edge seals meet ISO and DIN standards and feature a rubber OD, specially designed seal lips and premium compounds that resist chemical attack. Both SKF Wave and SKF Edge seals outperform all competitors in their classification and are one of the most robust seals on the market.

HM seals for grease applications



For decades customers have trusted our HM series grease seals to divert contamination away from critical bearings. HM seals are designed to withstand a grease purge when the lip is pointing toward the air side.

SKF Flex Seals for heavy industrial applications



This range includes heavy-duty metal-cased seals, as well as all rubber seals. SKF Flex seals can be custom made quickly to virtually any shaft and bore size over 4 in. (100 mm).

Cassette seals



SKF Scotseals for oil applications feature a multi-lip seal, an integrated wear sleeve and high-performance elastomeric materials. Our advanced SKF Wave lip technology is used for all SKF Scotseals.





Axial shaft seals

Designed to seal axially against a counterface perpendicular to the shaft or pin, axial shaft seals from SKF include high performance primary seals plus cost-effective V-ring seals.

V-ring seals



V-ring seals from SKF offer an easy-to-install solution for rotating shaft applications, including use as a secondary seal in highly contaminated environments.

Metal faced seals



Originally designed for the low speeds and severe conditions that affect off-road and tracked vehicles, SKF metal face seals have proven equally suitable for applications exposed to sand, soil, mud, water and more.

Axial excluder seals



The CT1 axial seal is a split seal that can be clamped to a housing. The sealing lip runs on a rotating face and excludes contaminants. They can be cut to any size from 6 in. (152 mm) to over 300 in. (7620 mm).

Wear sleeves

Over time, particles trapped underneath a shaft sealing lip form wear grooves on the shaft, leading to seal failure and shaft damage. SKF wear sleeves can help prevent the problem, or correct it without re-machining the shaft.

SKF Speedi-Sleeve – Standard and Gold

SKF Speedi-Sleeve is a thin-walled shaft sleeve up to 8 in. (200 mm) that is pressed into position over the shaft to provide an excellent sealing surface, one that is superior to what can typically be achieved on a shaft.



LDSL4 Wear sleeves



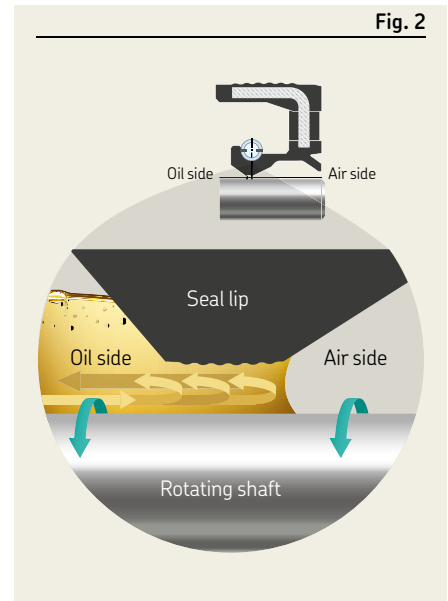
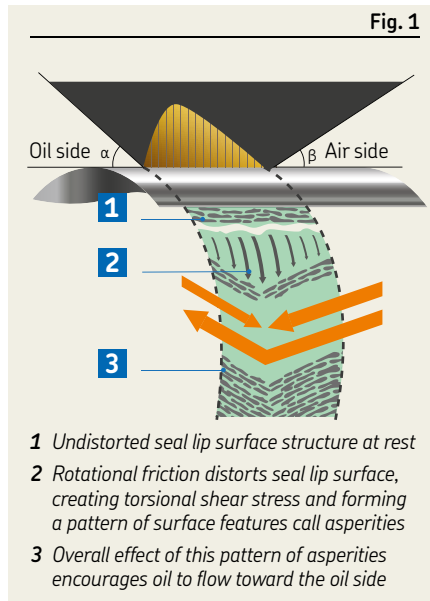
Designed for heavy industrial applications, LDSLV4 wear sleeves accommodate shaft dimensions over 8 in. (200 mm) and are used on original equipment or to repair the sealing surface of worn or damaged shafts.



CR Seals differentiators

Rotary oil seals must pump to protect

To keep contaminants and moisture from damaging a bearing or shaft, a rotary shaft seal must form a barrier between the oil supply and the outside environment. But to perform as effectively as possible, a seal must also be able to pump oil away from the air side and toward the oil side. This “pump rate” depends upon the seal lip design and seal lip material – and CR Seals is a global leader in pump rate.



How pump rate works

As **Figure 1** indicates, the approach angle from the oil side of the seal lip is steeper than the air side. This difference creates a contact pressure curve biased toward the oil side, which affects the management of the thin film of oil between the lip and the shaft. When the shaft is in motion it wears surface features onto the rubber in a specific pattern.

These surface features, or asperities, behave much like the skin on the back of your hand. Undisturbed, the pores and wrinkles on your hand are fairly uniform and undistorted. But place a finger on your skin and tug, the pores and wrinkles nearby will stretch as a reaction to the shear stress and orient themselves toward the direction of the forces.

Similarly, as a shaft rotates and wears the seal lip the surface asperities under the seal lip will form into a pattern that correlates with the pressure curve induced by the seal lip. This deformation is biased toward the oil side, just like the pressure curve from the lip.

As the arrows in **Figure 2** indicate, the rotation of the shaft induces a hydrodynamic pumping mechanism that helps adjacent fluid molecules flow back toward the oil side at a surprising rate.

There are other ways to increase the pump rate of a seal, including adding hydrodynamic features like the SKF Wave or a helical pattern on the lip.

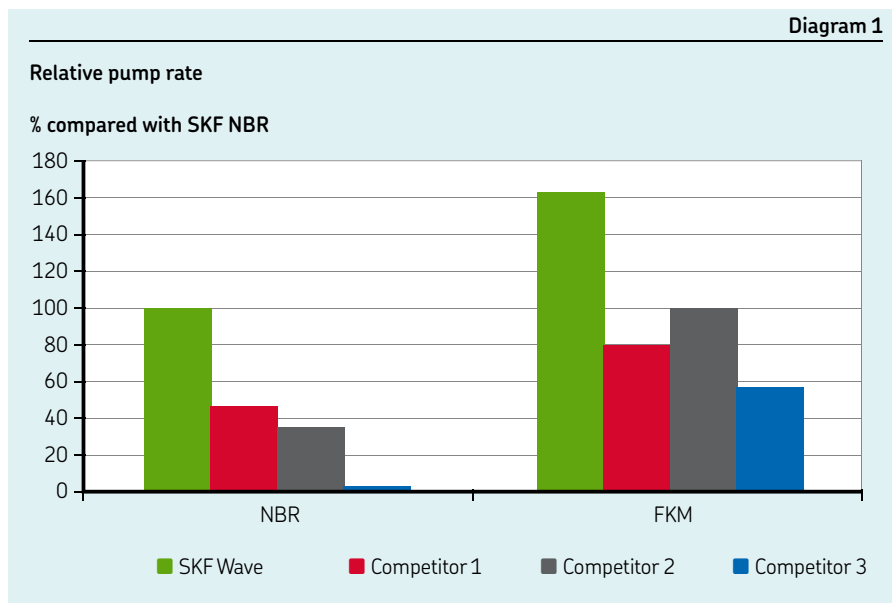




Why pump rate matters

Simply put, the higher the pump rate, the more robust the sealing system. That's because seals with a high pump rate will compensate for sealing system flaws that won't appear in a controlled lab test.

On the test bench, even a seal that pumps poorly still forms a barrier between the oil and air chambers. However, put that same seal in the field, and there are a range of potential sealing system flaws which can lead to failure. By simply keeping the oil on the side where it belongs, seals with a high pump rate will mitigate the effects of several uncontrollable operating parameters.



CR Seals outpump the competition

To test pump rate, a fixed amount of oil is applied to the back side of the seal lip, then timed to see how long it takes for the oil to be pumped to the oil side. As **Diagram 1** shows, SKF Wave seals delivered the highest pump rate of all major seal competitors. SKF Wave seals feature a patented sinusoidal lip design that enables the high pump rate, but even CR Seals with a conventional straight lip outpumped competitive seals. Bottom line? With the world's most robust standard seal designs, CR Seals are more likely to work in any given application than any other standard seal, making them the best starting point for new designs or for problem solving.

robust rō'bæst

*capable of performing without failure
under a wide range of conditions*

High pump rates compensate for:

- Poor shaft surface finish
- Temperature swings
- Misalignment, runout and axial play
- Particle contamination
- Speed and pressure swings
- Shifting fluid viscosity



SKF Wave seals

The most robust standard seals ever made

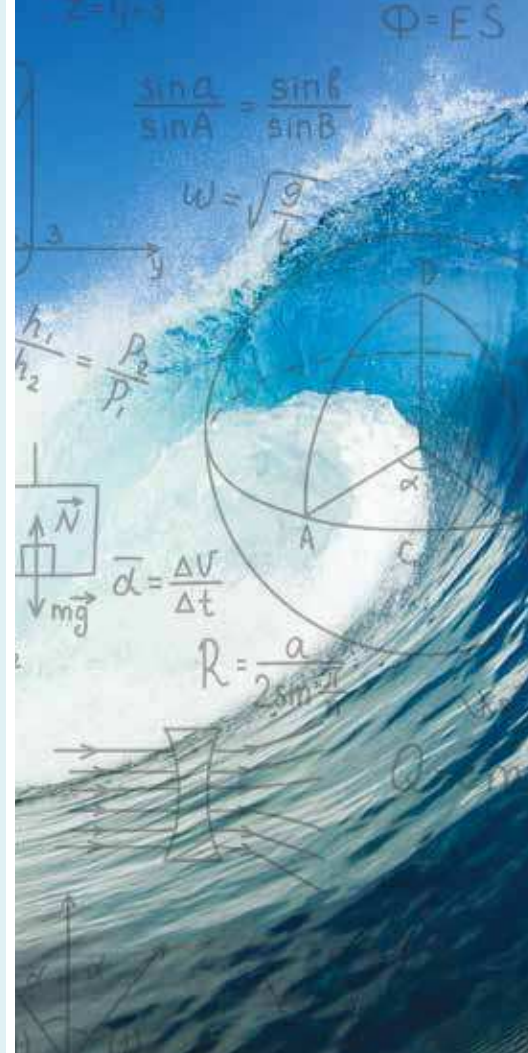
Since the 1970s, the SKF Wave lip design has been protecting rotating equipment in the world's harshest industrial environments. Time-tested in mines, mills, farms and other demanding places of work, SKF metal OD Wave seals feature a sinusoidal seal lip and advanced materials – a combination that helps SKF Wave seals out-pump and outlast any standard oil seal.

SKF Wave seal

- Pumps 2x more than standard seals
- Handles shaft misalignment
- Runs cooler with less drag
- Reduces shaft wear
- Cuts energy consumption

Typical applications

- Gearboxes
- Speed reducers
- Transmissions
- Motors
- Drive systems
- Pumps



UNDER THE LIP,
SKF WAVE SEALS RUN

20°F

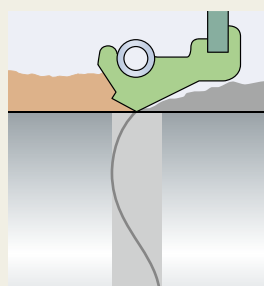
COOLER, REDUCING OIL AND
SEAL DEGRADATION





Figure 1

SKF Wave sealing lip with sinusoidal sealing lip edge



oil side air side

The SKF Wave lip

Industry's highest pump rate

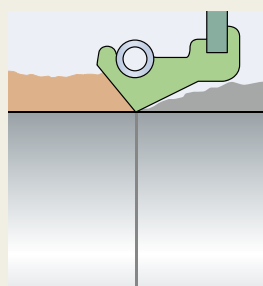
SKF metal OD Wave seals feature patented SKF Wave lip design (→fig. 1). As the shaft rotates beneath the wavy lip, the contact point itself moves back and forth across the shaft in a sinusoidal motion. This induces a hydrodynamic pumping action that pushes oil toward the bearing. The sinusoidal motion also distributes frictional heat over a wider wear band, reducing under lip operating temperature.

Less heat, friction and failure

Compared to conventional straight lip seals, SKF Wave seals generate up to 30% less heat and 20% less friction at the contact point (→ diagrams 1 and 2). Less heat and friction cuts equipment energy use, but it also means fewer heat-related seal failures. The 20% reduction in friction torque corresponds with a 20 °F reduction in lip operating temperature, which could make the difference between success and failure from overheated oil and a “cooked” seal lip.

Figure 2

Standard oil sealing lip with straight edge



oil side air side

Standard oil lips

More friction, less pumping

Unlike an SKF Wave lip seal, the contact point of a straight lip seal does not move back and forth across the shaft. Instead, contact is concentrated into a thin wear band (→ fig. 2), increasing friction and under lip temperature as the shaft turns. Pumping capabilities, if any, depend solely on the lip angles and lip material.

Availability and options

INCH and METRIC sizes

Choose from thousands of SKF metal OD Wave seal sizes and styles – stocked, tooled and available fast.

SKF Bore Tite Coating

SKF metal OD Wave seal lips are available with SKF Bore Tite Coating – a non-hardening, water-based acrylic sealant that helps fill small imperfections in the housing bore.

Heavy duty options

For the heaviest-duty applications, SKF Wave seals are available with an auxiliary dust lip and/or an inner case.

Pressure seals

CRW Wave seals can handle pressures up to 10 psi under normal conditions. For higher pressures up to 50 psi we recommend the CRW5 and CRWA5.

Diagram 1

Temperature rise at sealing lip/counterface contact for conventional and SKF Wave lips as a function of rotational speed for a 76 mm diameter shaft with SAE 30 engine oil

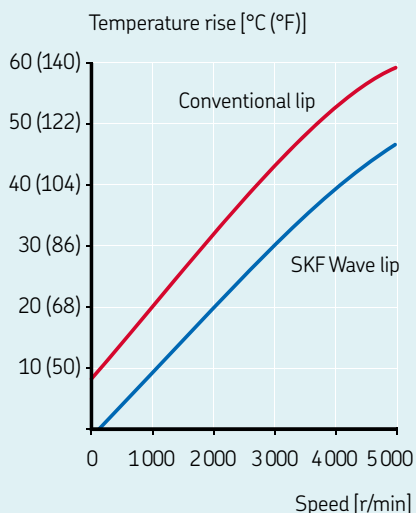
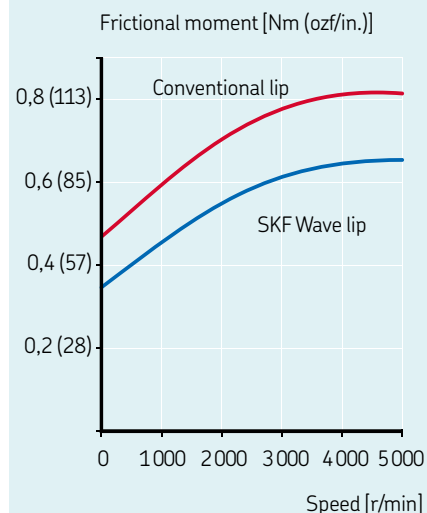


Diagram 2

Frictional moment at sealing lip/counterface contact for conventional and SKF Wave lips as a function of rotational speed for a 76 mm diameter shaft with SAE 30 engine oil



SKF Edge HMS5 and HMSA10

Not all straight lip seals are the same

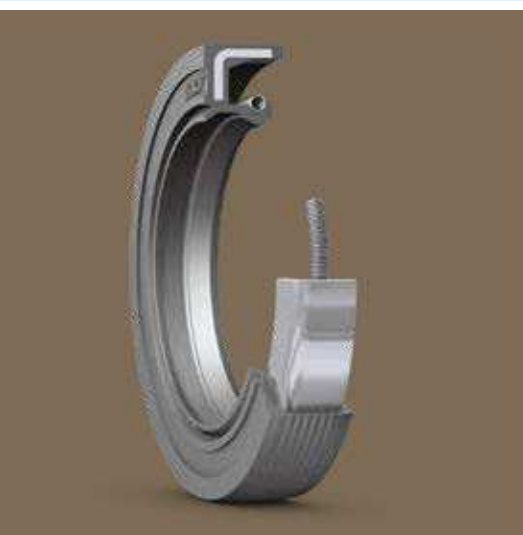
SKF Edge shaft seals HMS5 and HMSA10 deliver a field-tested first line of defense against downtime. An SKF-developed nitrile rubber (NBR) compound and a spring-loaded sealing lip help SKF Edge seals handle aggressive lubricants, thermal expansion, high dynamic runout, shaft-to-bore misalignment or surface roughness. ISO 6194 and DIN 3760-compliant, SKF Edge seals are more than suitable for the toughest industrial applications.

SKF Edge advantages

- Extend system service life
- Rubber OD seals better on bore
- Operate with synthetic oils
- 3x the pump rate of leading competitor
- Handle dynamic runout and shaft-to-bore misalignment

Typical applications

- Gearboxes
- Pumps
- Fans
- Axles
- Construction equipment



We've got you covered with over 2500 parts tooled and available in all 4 configurations.

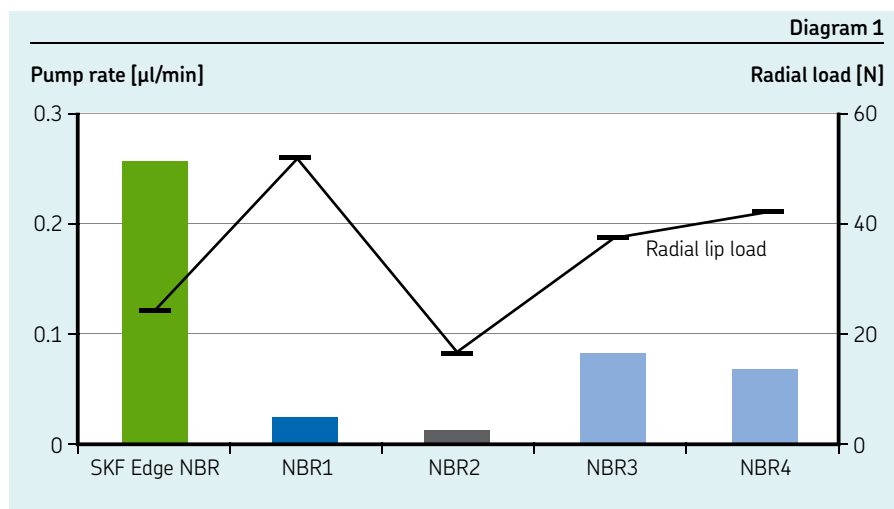




Higher pump rate

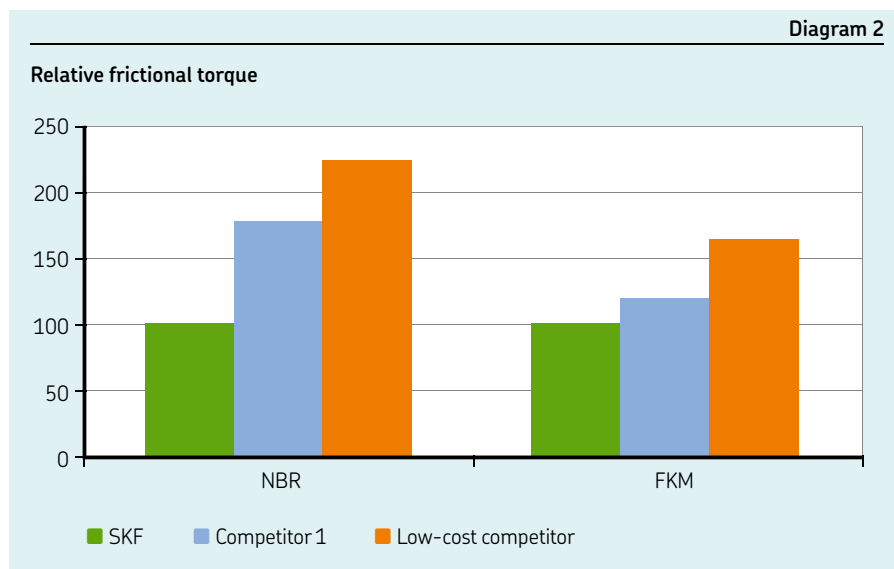
A recent independent study on seal pump rate pitted SKF Edge sealing technology against several industry-leading seal products. Conducted at a major European university, the trial involved a standard test that measures seal pump rate.

Advanced lip design and materials development gave SKF the edge that helped the HMS5 seals outperform the field. The SKF Edge seal pumped at over three times the rate of a leading brand (NBR 3 and 4) and substantially outperformed the others. (→ **diagram 1**)



Lower power consumption

In an SKF study, results showed the SKF HMS5 (RG) seal operates with 40% lower frictional torque on the shaft (→ **diagram 2**). The SKF Edge seal's lower radial lip load in **diagram 1** translates into less frictional torque and power consumption shown in **diagram 2** – good for equipment and operators.



Handles misalignment

In a recent misalignment test against competitive seals, SKF Wave and SKF Edge were the only seals that could follow the shaft without leaking. The test featured a consecutive series of runout and misalignment iterations up to 0.025 in. (0.635 mm) each – all non-SKF seal brands leaked well before the test reached those extremes.

Availability and options

Metric sizes

ISO 6194 and DIN 3760 compliant up to 250 mm (9.842 in.) shaft sizes

Spring

SKF Edge seals made with NBR (RG) material come with a carbon steel garter spring, while seals made with FKM (V) for higher surface speeds and temperatures carry a stainless steel spring. They come primarily in metric sizes and are surprisingly affordable, available and robust.



SKF Flex heavy industrial seals

Made for work and made-to-order

In heavy industries, keeping lubricants in and contaminants out of systems is a serious challenge. SKF Flex heavy industrial seals can handle the harshest application environments, and help speed and simplify installation.

SKF Flex heavy industrial seals

- Highly flexible design options
- Fast and simple installation reduces risk of failure and resulting downtime
- Unlimited size range, so not limited to listed handbook part numbers
- Improved sealing performance
- Configured and produced to your requirements

Typical applications

- Gearboxes
- Hot and cold rolling mills
- Paper mills
- Crushers
- General and specialized machinery
- Construction equipment



TOOLING CHARGES FOR
FLEX SEALS:

\$0

* Some special profiles may require minimal tool cost, but this is a rare exception





Extreme performance flexibility

In heavy industries, extreme sealing performance is just part of the job description. But depending on the application and jobsite, specific sealing challenges can vary greatly. Available in customizable metal-cased, all-rubber, or reinforced all-rubber designs, SKF Flex heavy industrial seals were designed to handle any sealing challenge with as much flexibility as possible.

Full customization and fast delivery

SKF Flex seal orders need never be limited to the part numbers listed in this handbook. Our flexible part numbering system (**page 64**) allows for you to specify virtually any size within the limits of **table 1** on **page 57** and receive parts in two to four weeks with no tooling charges (faster delivery options are available upon request).

Innovative installation options

With seals of this size, maintenance staff must install the shaft into the seal already installed in the housing. The shaft is often misaligned, so installers risk catching the lip and dislodging the spring. In a blind installation, installers cannot tell if the spring has been dislodged. SKF developed Springlock and Springcover to address this specific installation challenge.

Customization options include:

- Auxiliary dust lips to exclude contaminants
- Alternate materials for main and dust lips
- Lugs on HDS or grooves on HSS to allow grease to flow between seals
- Springlock, Springcover, or the HDS7 with no spring at all
- Virtually any shaft/bore/width within limits of **table 1** on **page 57**

flexible

flex' e bul

characterized by a ready capability to adapt to new, different, or changing requirements



The SKF Flex seal family

SKF Flex HDS metal-cased seals

HDS metal-cased seals perform exceptionally well in the heavily contaminated environments of metal rolling mills, the high-speed and high-temperature conditions in paper mills, and for more universal applications such as industrial gearboxes.

SKF Flex HS all-rubber seals

All-rubber HS seals are available either solid or split and have no metal or fabric reinforcements. They are finished oversized relative to the housing bore diameter and depth to enable proper compression and stability.

SKF Flex HSS reinforced all-rubber seals

SKF developed HSS seals to protect large size bearings under the tough operating conditions of wind turbine drive trains, but the seals have proven suitable for many other heavy industry applications.

SKF Speedi-Sleeve wear sleeves

The fastest way to an optimal sealing surface

Once a particle is trapped underneath a shaft sealing lip, it's only a matter of time before the resulting shaft wear renders the seal ineffective. Repairs used to mean the costly, time-consuming proposition of shaft dismounting and re-machining. But SKF Speedi-Sleeve can take a shaft from scored to restored in just minutes – or eliminate the need to finish it in the first place.

SKF Speedi-Sleeve

- Increases productivity and reliability
- Improves sealing performance
- Minimizes downtime for repairs
- Eliminates shaft grinding, metalizing or machining
- Compatible with the original seal size

Typical applications

Virtually any with a rotary shaft seal:

- Industrial gearboxes and transmissions
- Motors, speed reducers, pumps and fans
- Construction and agriculture equipment
- Crushers and conveyors
- Rolling mills and paper mills

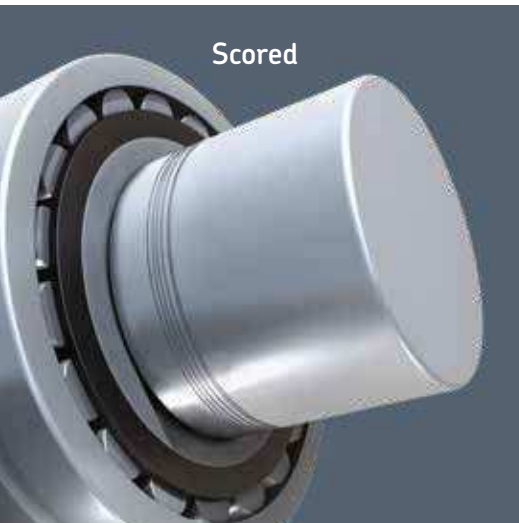
BE BACK UP AND RUNNING
IN AS LITTLE AS

45
minutes

SAVE \$1250 AND

1 week

OF REPAIR TIME





SKF Speedi-Sleeve – Standard and Gold

SKF Speedi-Sleeve is a thin-walled 0.011 in. (0.28 mm) shaft sleeve that presses into position over the shaft. The wear-resistant contact surface minimizes directionality, enabling a seal running surface that's superior to what can usually be achieved on a shaft.

SKF Speedi-Sleeve Gold is designed for highly abrasive applications and features a thin metallic coating on the base stainless steel that adds durability.

SKF Speedi-Sleeve Standard and Gold both fit shaft diameters from 0.472 in. (12 mm) to 7.99 in. (203 mm).

LDSL4 wear sleeves

Designed for heavy industrial applications, large diameter wear sleeves feature a thicker 0.094 in. (2.39 mm) wall and fit shaft dimensions from 8 in. (200 mm) to 45 in. (1 143 mm).

For OEMs

More and more manufacturers are skipping shaft finishing and installing SKF Speedi-Sleeve from the start. Doing so eliminates the need to finish-machine, grind and harden the shaft; rough machining is all that is required. OEMs also get a premium shaft sealing surface with longer wear life, easier maintenance and better overall sealing system performance – all while avoiding machining vendors, vendor requirements and vendor blame for leakage issues.

For distributors

Every year, thousands of shafts are repaired or replaced due to a groove in the sealing surface. Distributors should remind customers that the best way to avoid these costly repairs is to prevent them in the first place with an SKF Speedi-Sleeve. Each time a customer buys a rotary seal, distributors should suggest pairing it with an SKF Speedi-Sleeve to help prevent unplanned downtime, repairs and costs.

For rebuilders

With SKF Speedi-Sleeve, shaft rebuilders can repair worn shafts in just minutes rather than the week or more that reworking a shaft usually requires. Rebuilders also get to avoid the costs and risks that come with re-metallizing or re-machining a worn shaft.

speedi
spe' de

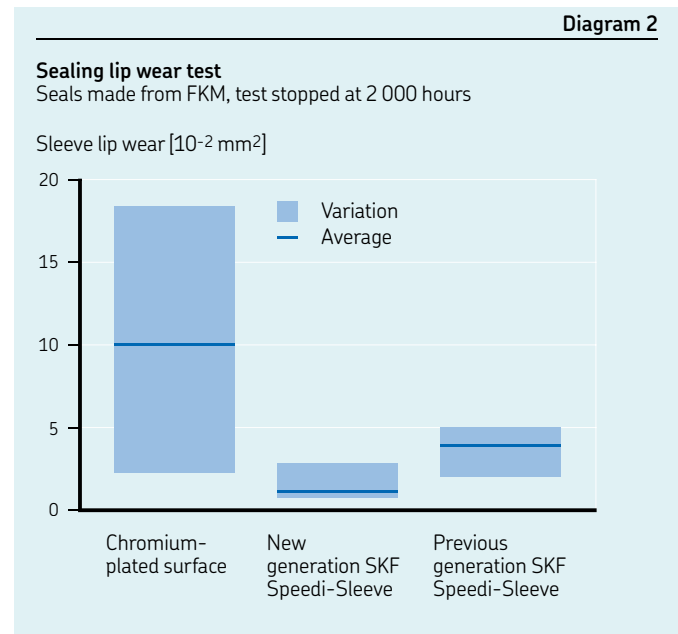
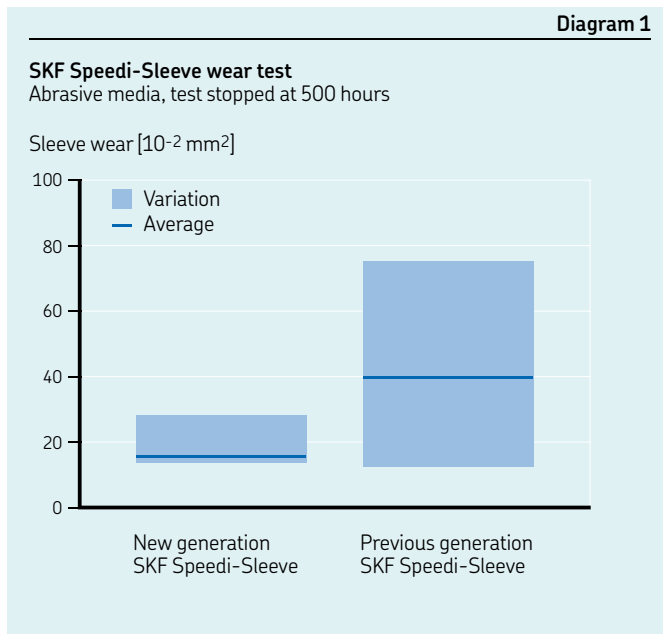
*marked by swiftness of motion
or action*





SKF Speedi-Sleeve wear sleeves

The fastest way to an optimal sealing surface



New generation design and performance

Reflecting our commitment to continuous design improvements, the new generation SKF Speedi-Sleeve feature a proprietary stainless steel material and a manufacturing process that increases strength and ductility. The result is an optimized seal counterface surface that wears less than standard sleeves and increases overall sealing system performance.

Putting SKF Speedi-Sleeve to the test

In an effort to continuously improve our design, SKF has introduced an even better Speedi-Sleeve; a new generation of performance. SKF compared the new generation SKF Speedi-Sleeve with the previous generation in a series of abrasion wear tests. First, both Speedi-Sleeve generations were measured for abrasion resistance after exposure to coarse and fine dust conditions. A second test with both generations measured sealing lip abrasion resistance using SKF Wave seals made from the SKF FKM material SKF Duralife. Operating conditions were the same for each test: temperatures up to 225 °F (110 °C) and linear shaft speeds of up to 1700 ft/min (8,6 m/s).

Less abrasion and wear, more reliability

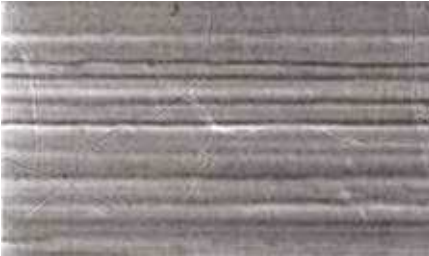
After the 500-hour contamination test (→ **diagram 1**), the latest generation SKF Speedi-Sleeve reduced abrasion by a factor of 1,5 vs. the previous version and was still operating efficiently. In the 2 000 hour life test shown in **diagram 2**, the latest generation SKF Speedi-Sleeve reduced sealing lip wear and the variation in the wear rate by approximately 30% compared to the previous generation and outperformed a chromium-plated surface by a factor of 2.

The new generation SKF Speedi-Sleeve wears less than standard sleeves and increases overall sealing system performance.

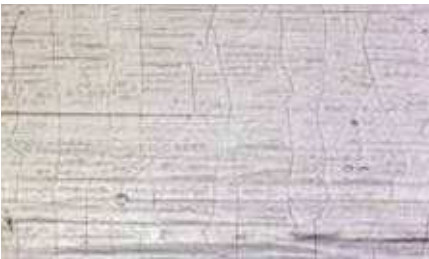




Chromium-plated sleeve A



Chromium-plated sleeve B



New generation SKF Speedi-Sleeve



Chromium isn't all it's cracked up to be

As **diagram 2** shows, chromium-plated shaft repair sleeves cause seals to wear out more quickly than SKF Speedi-Sleeve. Although chromium-plating renders a harder surface than stainless steel, once it is applied to a paper-thin substrate it will invariably crack, as the SEM images reveal. These razor-sharp micro-cracks significantly shorten seal life. SKF found this risk in the 1980s, yet chrome plating is still found in the market and touted for extreme wear resistance. Try SKF Speedi-Sleeve Gold - the proven solution for dirty, abrasive applications.

A closer look at sleeve sealing surfaces

Images from a scanning electron microscope (SEM) show the razor sharp micro-cracks that often form on the chrome-plated surface of a thin sleeve.





SKF Speedi-Sleeve wear sleeves

General installation/removal instructions



SKF Speedi-Sleeve requires proper installation and removal to function optimally. Follow the steps listed to ensure SKF Speedi-Sleeve is installed and removed effectively.

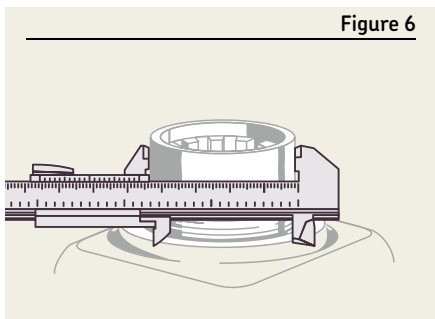
Installing SKF Speedi-Sleeve

- 1 Clean the seal counterface surface on the shaft. File down any burrs or rough spots and DO NOT install the sleeve over keyways, cross holes, splines or similar obstructions.
- 2 Measure shaft diameter on an unworn position where the sleeve will be positioned (→ fig. 6). Measure in three positions and average the readings to make sure the shaft is within recommended specifications. If the average diameter is within the range for a given sleeve size, there is sufficient press fit built into the sleeve to prevent it from sliding or spinning without using an adhesive.
- 3 Determine where the sleeve must be positioned to cover the worn area. Measure to the exact point and mark with a marker directly on the surface. The sleeve must be placed over the worn area, not just bottomed or left flush with the end of the shaft.
- 4 Shallow wear grooves do not require filling. Optionally, a light layer of a non-hardening sealant can be applied to the inside diameter surface of the sleeve. Clean away sealant that migrates to the shaft or sleeve outside diameter surface.
- 5 If the shaft is deeply scored, fill the groove with a powdered metal epoxy-type filler. Install the sleeve before the filler hardens, enabling the sleeve to expel any excess filler. Clean away any remaining filler from the sleeve outside diameter surface.
- 6 **Never use heat to install SKF Speedi-Sleeve.**
- 7 If the flange requires removal after installation, cut it from the outside diameter into the radius in one location. The flange end of the sleeve goes on the shaft first, followed by the installation tool over the sleeve (→ fig. 7).
- 8 Gently tap the center of the installation tool until the sleeve covers the worn shaft surface (→ fig. 8). If the installation tool is too short, a length of pipe or tubing with a squared-off, burr-free end can also be used. Make sure that the inside diameter of the pipe matches that of the installation tool. Use care not to scratch the precision ground sleeve's outside diameter.
- 9 SKF Speedi-Sleeve should always be installed so that the outside edge of the sleeve is seated on the full shaft diameter. It must not rest in or outside the chamfer area as the sharp edge will likely cut the sealing lip during seal installation.
- 10 If the flange was cut for removal, grasp the flange with a pair of long-nosed pliers to pull it away from the sleeve. Twist it into a coil to remove it fully; DO NOT lift the end of the sleeve off the shaft as it will leave a jagged edge. Flange removal must be done with care to avoid damage to the outside diameter of the sleeve.
- 11 After the sleeve is installed, check again for burrs that could damage the seal.
- 12 Lubricate the sleeve with the system medium before installing the seal.
- 13 Proceed with seal installation.





Figure 6



Removing SKF Speedi-Sleeve

SKF Speedi-Sleeve can be removed by applying heat to the sleeve with an electric heat blower. The heat will expand the sleeve enough to let it slide off easily, without damaging the shaft. The sleeve can also be removed without heat by:

- relieving the press-fit tension using a small hammer to peen across the full width of the sleeve
- using a cold chisel to cut through the sleeve
- using a pair of wire cutters starting at or near the flange and applying a twisting motion

Always use care to avoid damaging the shaft surface during any removal procedure. Please note that SKF Speedi-Sleeve cannot be reused.

Figure 7

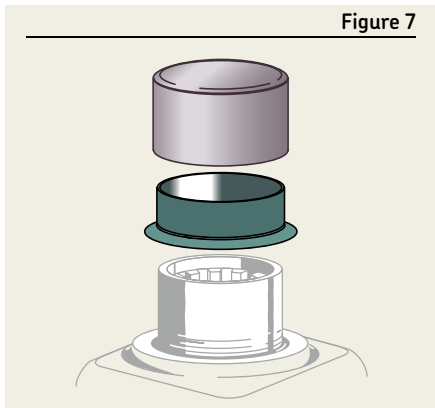
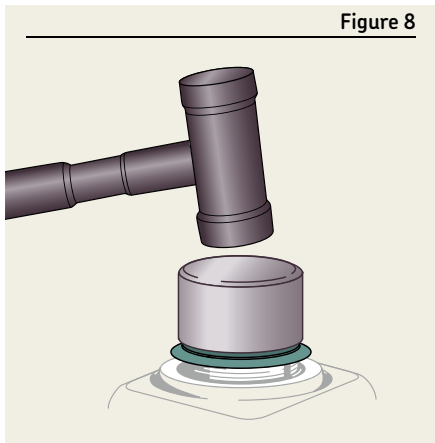


Figure 8



Using LDSLV designs

SKF LDSLV wear sleeves for heavy industrial applications can be used in two ways (→ fig. 9):

- 1 Position the sleeve on the shaft until it covers the damaged part. Use a new seal, designed for a 0.188 in. (4.78 mm) larger shaft diameter.
- 2 Machine the shaft down by 0.188 in. (4.78 mm) in diameter, then install it w/original seal size. The reworked shaft surface for the sleeve should have a surface roughness between Ra 2.5 and 3.2 μm (100 to 125 $\mu\text{in.}$). Suitable for use in systems with sustained temperatures higher than 165 °F (75 °C) and surface speeds in excess of 3,900 ft/min (20 m/s).

Installing LDSLV

SKF wear sleeves for heavy industrial applications are designed for a heated slip-fit installation and must therefore be uniformly heated prior to installation. The sleeve temperature should be approximately 355 °F (180 °C). Under no circumstances should the sleeve be heated to above 390 °F (200 °C).

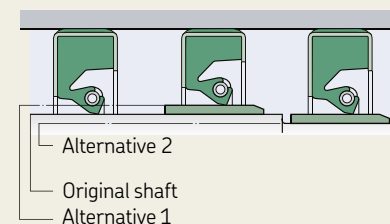
Heating techniques normally used for bearings are suitable, such as induction heaters or heating cabinets. Sleeves should be installed immediately after heating as they cool rapidly and could seize on the shaft before the correct position is achieved. If repositioning is necessary, use a soft-faced hammer and a wooden block. After the sleeve is in the desired position, check the lead-in chamfer for any damage from installation.

Removing LDSLV

The wear sleeves can be removed either by heating them or expanding them by light hammer blows.

Figure 9

Using LDSLV designs





Seal installation:

General industrial applications

Effective sealing demands proper seal installation. To help ensure it for every job, installers should review and follow the general installation checklist below, plus any specific application instructions that apply throughout the rest of this section.



General installation checklist

Check the dimensions

Be sure that shaft and bore diameters match those for the seal selected.

Check the seal

Inspect the seal for damage – a sealing lip that is dirty, cut, or otherwise damaged will leak and the seal should be replaced.

Check the bore

Make sure the leading edge is deburred; use a 15-30 degree chamfer whenever possible as shown in **Fig. 13** on **page 48**.

Check the shaft

Remove surface nicks, burrs and grooves.

Check the shaft end

Remove burrs or sharp edges. If the shaft must enter the seal against the sealing lip, the shaft end should be chamfered.

Check splines and keyways

Look for sharp edges and use an assembly sleeve or cover with tape. If unavailable, round the spline or keyway edges and lubricate with a hard, fibrous grease.

Check direction

Always point the seal lip toward its primary function. In oil applications, the lip should face the oil to retain it. In grease applications, the lip should point away from the grease to seal out fluid and contaminants and allow grease to purge. If there is no contamination and grease retention is key, the lip should point toward the grease.

Pre-lubricate the sealing element

Right before installation, wipe or dip the seal in the lubricant to be retained.

Use the correct installation tool

See Tool Tips for the optimal tool configuration.

Use proper driving force

Use an arbor press if possible; otherwise use a soft-faced hammer to avoid popping the spring out of the seal or damaging the seal case.

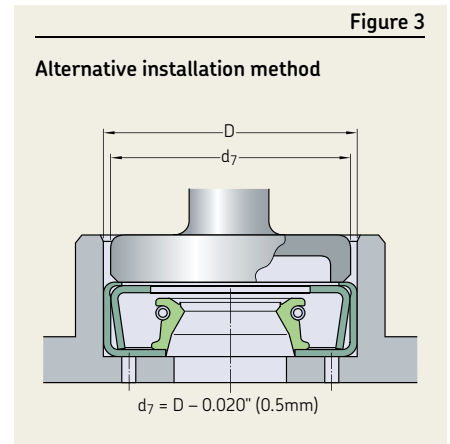
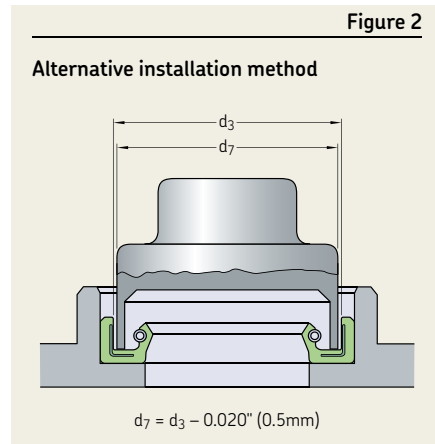
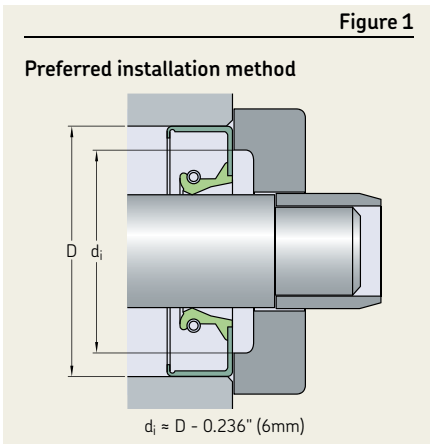
Avoid cocking the seal

Make sure that the seal or tools can bottom out on a perpendicular face without crushing the seal case.

Check for interference

Look for machine parts that could rub against the seal to generate friction and damaging heat.





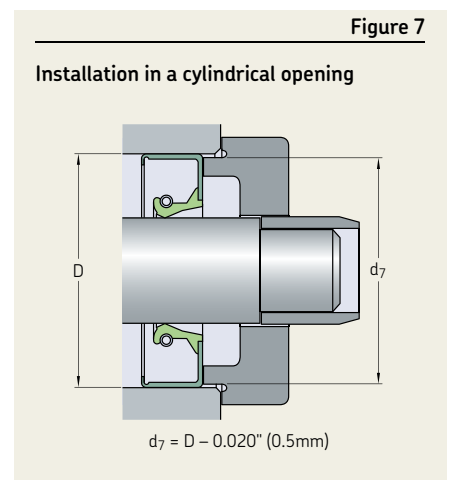
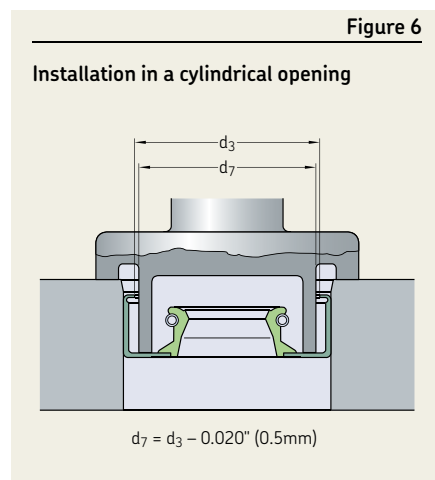
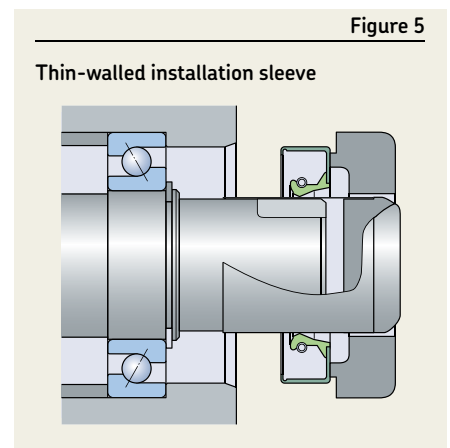
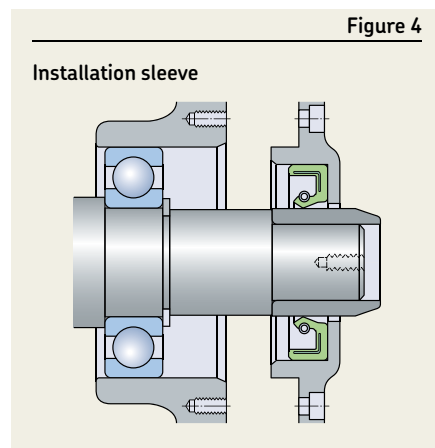
Tool tips

Seals that are designed to sit flush with the housing bore must be installed perpendicular to the housing bore axis. The tool's outside diameter should be larger than the housing bore diameter (→ **fig. 1**).

When pressing seals up against a shoulder or retaining ring, installers should use the tool types shown in **figs. 2 and 3**.

On stepped shafts, where the shoulders do not have the recommended chamfer or rounded transition, an installation sleeve must be used (→ **fig. 4**). If the sealing lip must pass over grooves, threads or gearing, thin-walled installation sleeves (→ **fig. 5**), can help protect the lip from damage.

The tools used to install a seal at a certain distance in a cylindrical opening in a housing are shown in **figs. 6 and 7**. Instructions for designing the tools can be supplied on request.





Seal installation:

SKF Flex heavy industrial applications

Figure 8

Use a dead blow hammer

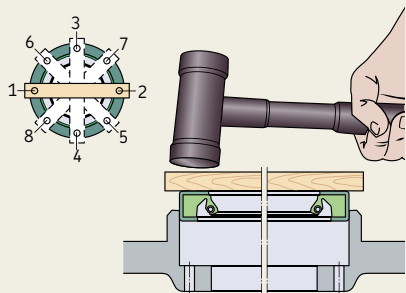
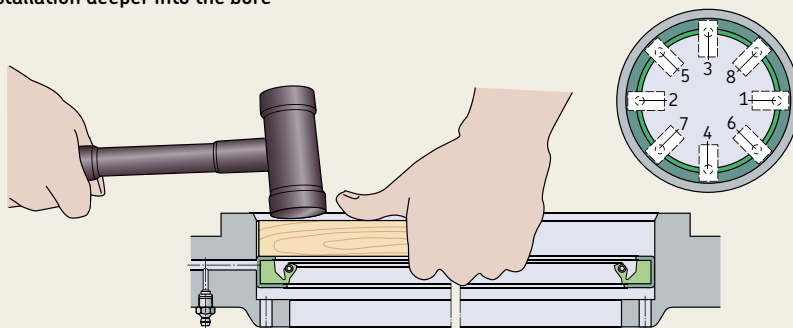


Figure 9

Installation deeper into the bore



Metal-reinforced seals

When installing metal-reinforced seals, first check the shaft and housing bore for proper specifications and condition. Next, coat both the seal and bore lightly with a lubricant, preferably the same one that will lubricate the application. For large diameter seals, a special installation tool may not be practical. In such cases, do not hit the seal or seal case directly; instead, use a wooden block long enough to span the seal's outside diameter.

When using this method, it is important to apply hammer-blows evenly and sequentially to the wood piece around the seal circumference to prevent the seal from tilting or skewing. SKF also recommends the use of a dead blow hammer for full energy transfer with less impact (→ fig. 8).

In some applications, the housing is designed for two seals in tandem, or a seal might have to be recessed further into the bore depth. In those cases, first set the seal flush with the housing using the method described above. Then, use a shorter piece of wood to drive the seal deeper into the bore utilizing a sequential pattern (→ fig. 9).

Seals without metal reinforcement

Be sure that the shaft surface and housing bore are clean and that they meet the specifications listed in Shaft requirements and Housing bore requirements on **pages 46-49**. Special care must be taken to avoid nicks and burrs on the shaft and to make sure that the spring is retained in the spring groove.

HS and HSS seals are installed differently depending on whether their main purpose in a specific application is to retain lubricant or to exclude contaminants (→ fig. 10).

Split seals

Where appropriate, insert the spring in the SKF Springlock groove and position the spring connection, so that it is displaced with regard to the seal joint (→ **A** in fig. 11). This is standard with all HS8 seals. Put the seal in the correct position on the shaft.

Lightly coat both the seal and counter-face surface with a lubricant, preferably the same lubricant that will lubricate the application (**B**).

Join the ends of the garter spring using the spring connector (**C**).

For threaded connectors, back-wind the spring a couple of turns before the ends are brought together and allowed to thread into each other. When using a hook-and-eye connector, draw the ends of the spring together and insert the hook into the eye, taking care not to over-stretch the spring in the process, as this might impair seal performance. When using a control-wire connector, draw the seal ends together and insert the control wire into the center of the spring coil.

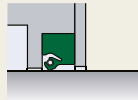




Figure 10

Ways of installing HS seals

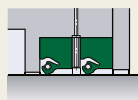
HS seal installed to retain lubricant



HS seal installed to exclude foreign material



HS seals in tandem arrangement for maximum lubricant retention



Position the seal joint on the shaft at the 12 o'clock position and push both ends of the joint into the housing bore (D). Do not push only one joint and then work around the shaft as this will create an excess length, making installation difficult or impossible.

Continue at the 3 and 9 o'clock positions; push the rest of the seal into position (E) and finish simultaneously at the 6 and 12 o'clock positions. For shaft diameters ≥ 47 in. (1200 mm), fix the seal at the 12, 3, 6 and 9 o'clock positions before locating the remaining sections of the seal.

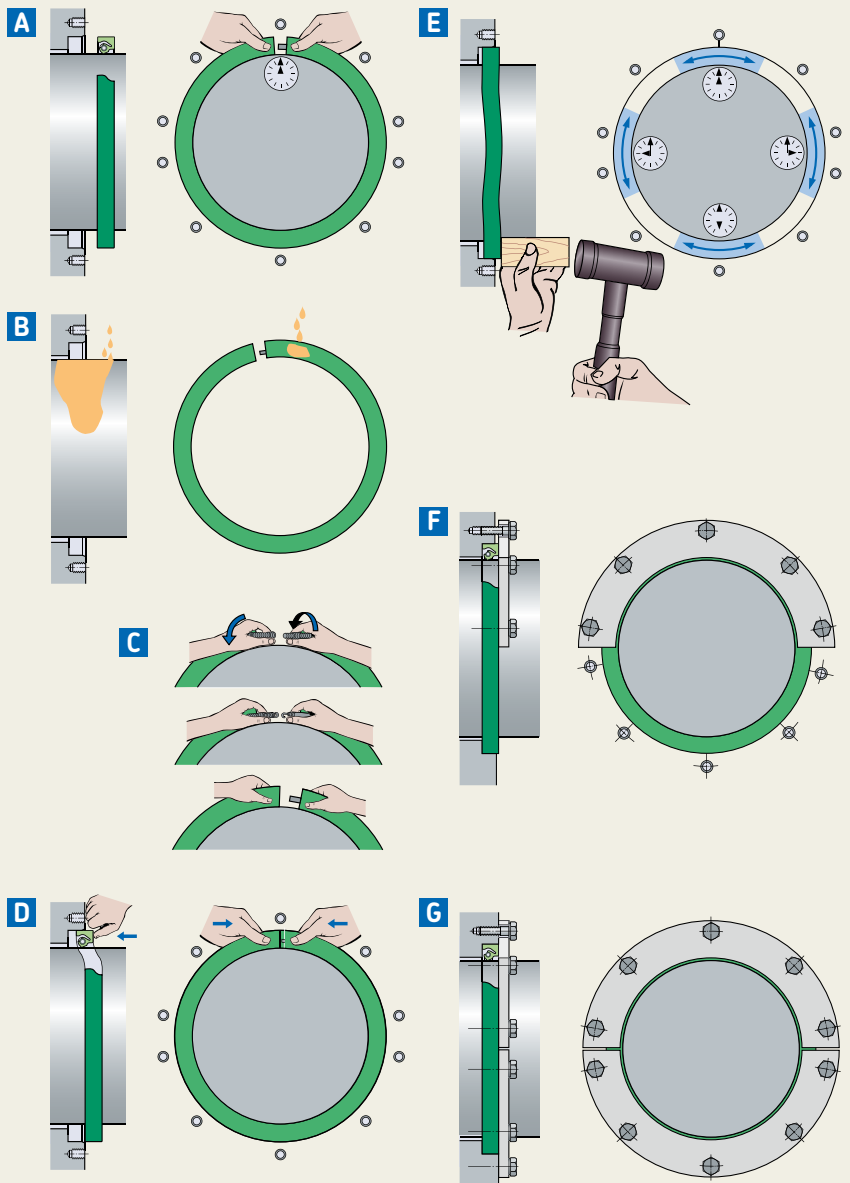
Use a small block of wood to push the seal in the housing bore until it contacts the housing shoulder (E).

Check the seal condition, particularly at the joint, to make sure that it has been positioned properly.

Install the cover plate (see paragraph *Cover plates* on page 28) on the housing face. Tighten the bolts evenly until the end cover abuts the housing face (F and G).

Figure 11

Installing a split seal



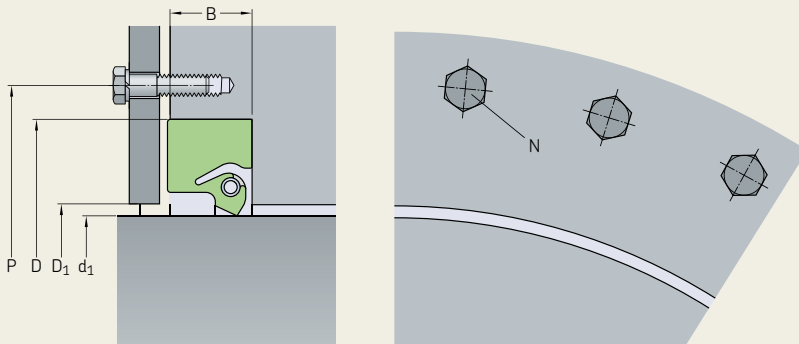


Seal installation:

SKF Flex Heavy industrial applications

Figure 12

Cover plate recommendations



Inside diameter of cover: $D1 \approx d1 + 6 \dots 8$ [mm]
 Pitch circle diameter of screws: $P \approx 1,1 D$ [mm]
 No. of attachment screws: $N \approx 0,02 P$
 Bore depth = Nominal seal width = B

Cover plates

Seals without metal reinforcement, split and solid, are manufactured oversized relative to the housing bore diameter and depth to enable proper compression and stability. A cover plate (→ fig. 12) provides axial compression of the seal and stabilizes it in the housing bore to achieve maximum seal performance. The cover plate must be dimensioned properly to obtain the required fit. It should be thick enough not to bend or distort; generally, a thickness of 0.25 to 0.50 in. (6.35 to 12.7 mm) is sufficient.

The plate should be fastened with bolts, no more than 6 in. (150 mm) 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, SKF

recommends dimensioning the inside diameter of the cover plate so that it is 0.25 to 0.30 in. (6 to 8 mm) greater than the shaft diameter to accommodate shaft-to-bore misalignment and runout (→ fig. 12).

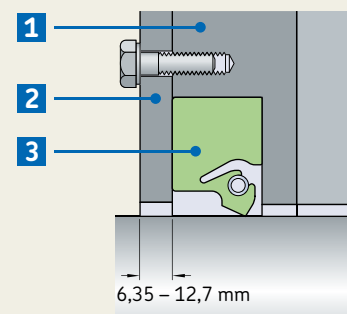
In applications where supplementary sealing is necessary and it is impractical to machine the original housing to provide a seal cavity, a seal cavity can be incorporated into a new plate that is bolted into place as in fig. 13.

Bore depth and seal width

For all rubber HS and HSS seals, the seal width is approximately 0.016 in. to 0.032 in. (0.4 to 0.8 mm) wider than the bore depth B (→ fig. 12). For sizing purposes, the bore depth and nominal seal width are the same. Therefore, when building a part number according to the SKF Flex designation system (page 64), you should put the bore depth (nominal seal width) in the part number.

Figure 13

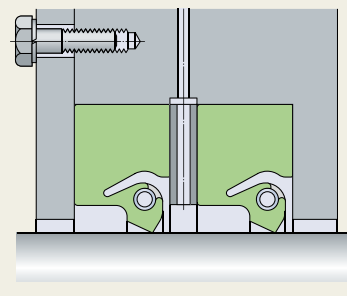
Cover plate



- 1 New seal cavity plate
- 2 Seal-retaining cover plate
- 3 Sealing element

Figure 14

Spacing washer



For example, the “32” in a 700-900-32 HSS8 R calls out a nominal 1/2-inch width, which fits properly in a 1/2-inch bore depth. We make the seal slightly wider than that so the cover plate will close tightly on the seal for stability. This principle only applies to all rubber HS and HSS seals; metal cased seals are made to the target width called out in the part number. For HS seals, the bore depth tolerance should be ± 0.005 in. (0.13 mm) and ± 0.004 in. (0.10 mm) for all-rubber reinforced HSS seals.



Multiple HS seal installations

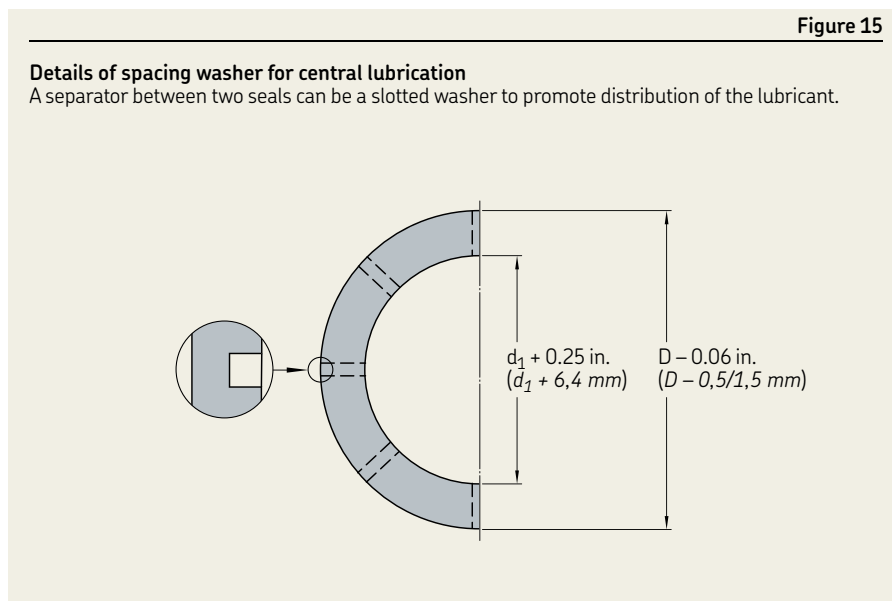
When installing two split all-rubber HS seals in one cavity, the locations of the split joints should be staggered by 30° to 60° to minimize the risk of leakage through the joints. The splits should be located toward the top of the bore. Grease the cavity between the seals to provide lubricant to the outer sealing lip.

When two HS seals, split or solid, are installed in the same housing bore, a spacing washer must be placed between the two seals (→ **fig. 14**). Suitable washer dimensions can be determined based on the shaft and housing bore diameters, d_1 and D , respectively:

washer inside diameter
 $= d_1 + 0.25$ to 0.4 in. (6 to 10 mm)

washer outside diameter
 $= D - 0.02$ to 0.06 in. (0.5 to 1.5 mm)

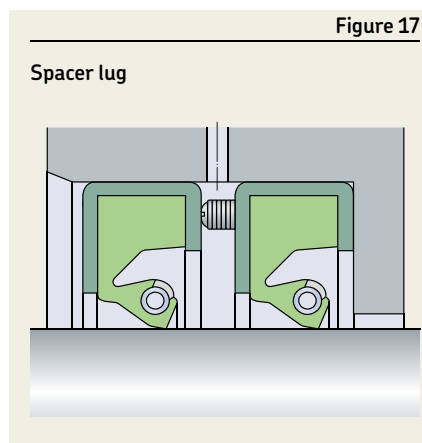
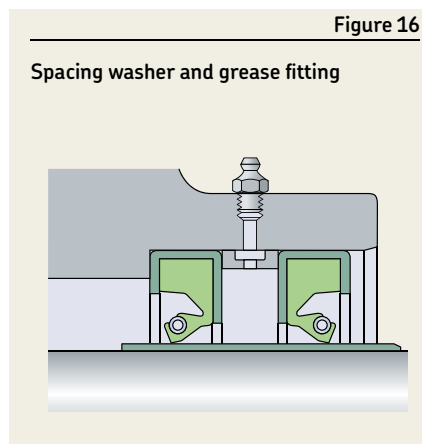
The width of the washer is determined by the application conditions. There should, however, always be sufficient room for lubrication holes to be provided in the circumference, or lubrication grooves in one side face (→ **fig. 15**). These lubrication provisions must enable grease to be supplied from the housing to the sealing lips via a drilled passage or grease fitting (→ **fig. 16**). When determining what washer width is appropriate for the depth of a housing bore, it is necessary to consider the axial displacement required when clamping the seals.



Multiple HDS seal installations

When installing two metal-cased rotary shaft seals in the same housing bore, either in a tandem or back-to-back arrangement, care must be taken that neither of the sealing lips run dry. To reduce the risk of dry running, the space between the seals should be filled with a suitable grease.

SKF also recommends using spacer lugs or a spacing washer between the two seals. The spacing washer should be provided with lubrication holes so that grease can be supplied to the space between the sealing lips via a grease fitting (→ **fig. 16**). No spacing washer is required when using seals that have spacer lugs built into the air side of the metal case (→ **fig. 17**).





Seal installation:

Special considerations for a PTFE lip

PTFE seals

In applications where PTFE seals will be retaining a lubricant or be fully flooded with a fluid, the seals should be installed dry. In applications that run dry or will be starved for lubrication, the sealing lip should be pre-lubricated with a grease appropriate for the temperature conditions of the application.

WARNING: At temperatures above 570 °F (300 °C), all PTFE compounds emit dangerous fumes.

Installation procedure

PTFE lips do not have the same elastic properties as rubber lips, which makes them more susceptible to damage. Therefore, special care must be taken

during installation and handling to prevent damage and help ensure proper operation and function. Shaft features such as keyways and splines, as well as drill holes, ports and sharp-edged shaft steps have the potential to damage PTFE lips. Whenever possible, these obstructions can be covered by using thin-walled installation tools made from plastic or metal.

PTFE lip orientation during installation will determine the installation method. Installation is more difficult when the shaft is installed against the PTFE lip (→ fig. 18, a and c). This type of installation becomes even more complicated when the hardware is difficult to access or visually obstructed and may not be possible if an installation tool cannot be used. In any case, when the shaft is installed against the PTFE lip, SKF rec-

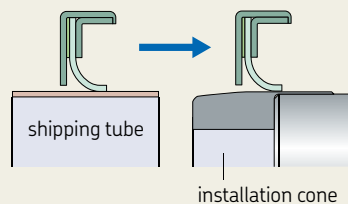
ommends the use of an installation cone or “bullet”. In lieu of installation cones, longer than normal lead-in chamfers on the shaft would be required. However, shaft features that could damage the seal (keyways, etc.) must still be covered, possibly with tape. If the shaft is installed with the PTFE lip, a smooth, burr-free radius or chamfer on the shaft end is all that is required, provided that no damaging shaft features are present as noted above (→ fig. 18, b and d).

Some seals have two PTFE lips facing opposite directions. In this case, installation is always against one of the lips and an installation cone is recommended.

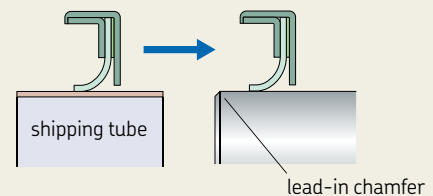
Figure 18

Seals with a PTFE sealing lip

a Installation against the PTFE lip

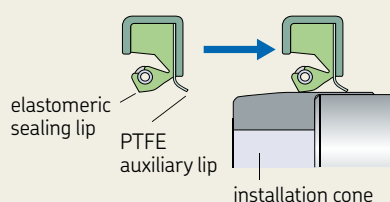


b Installation with the PTFE lip

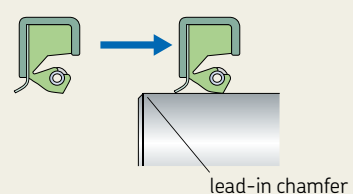


Seals with an elastomeric sealing lip and a PTFE auxiliary lip

c Installation against the PTFE lip



d Installation with the PTFE lip







Seal storage and handling

Making sure CR Seals are always ready to work



Seals, like most products made from natural or synthetic rubber, are susceptible to physical changes. If stored or handled improperly, seals can harden, soften, peel, crack, or become permanently deformed. This often results in an immediate seal failure or a much-shortened lifespan. Protect seal inventories and machine uptime instead – follow these key seal storage and handling tips!

Keep them cool



Excessive heat causes rubber seals to become brittle and crack. Seals should always be stored in a moderately ventilated indoor area with temperatures between 60 °F to 80 °F (15 °C to 25 °C). Seal packages in heated storage rooms should be kept at least three feet away from the heat source. In rooms where a heater with a fan is used, the distance should be greater.

Store seals at

60 °F to 80 °F
(15 °C to 25 °C)

Keep dry, avoid UV light,
ozone and fumes

Keep them dry



High humidity can lead to condensation and corrosion in metal cases and springs. Before seals are unpacked, they should be warmed and kept at a temperature of at least 70 °F (20 °C) in order to prevent exposure to condensation. Seal storage areas should remain between 40 to 70% humidity (outdoor storage without protection should be avoided).

Avoid UV light



Excessive exposure to direct sunlight can cause premature aging and cracking in some seal materials. Exposure to artificial light with a high proportion of UV radiation can also cause damage. Accordingly, windows in the storage area should be filtered with a red or orange coating (never blue). Ordinary light bulbs are preferred for illumination.





Avoid ozone and fumes



Seals should be stored away from ozone-emitting sources such as fluorescent lights, mercury lights, or electric motors. Because combustion fumes and vapors can produce ozone as the result of photochemical processes, all solvents, fuels, lubricants, chemicals, acids, disinfectants, etc. should not be stored in the same room as seals.

Don't leave them hanging



In many facilities, seals hang on maintenance shop walls next to belts and chains. But hanging a seal on a nail or any small surface for more than a few hours will permanently distort the lip, creating a leak path that eventually can lead to seal failure. In general, elastomer products should not be subjected to any tension or compression during storage.

Keep in package until use



A seal should remain in its original packaging until it's time for installation. Once a seal leaves the box, it can be compromised easily by rough handling, contaminants and environmental conditions. SKF seal package labeling conveys key information about the seal inside, so there's no need to open the box. Instead, keep it closed and keep the seal factory-new for installation.

Hands off the sealing lip



Once the box is open, remember to NEVER handle a seal by the lip. Seal lips can be as thin as 0.2 mm, and simply touching or grabbing them can create momentary depressions. Such depressions can bounce back into shape, or they can lead to permanent crimps and tears and ultimately, seal failure. Natural oils in your hands can weaken certain seal materials as well.

Keep them contaminant-free



Never place a seal on a dirty workspace area. The RTV, metal chips, dirt and dust they can pick up will eventually undermine bearing performance. Be particularly careful with a seal that has just been lubricated for installation, as lubricant attracts contaminants like a magnet.

Avoid contact with certain metals



Certain metals, especially copper and manganese, damage elastomer products.

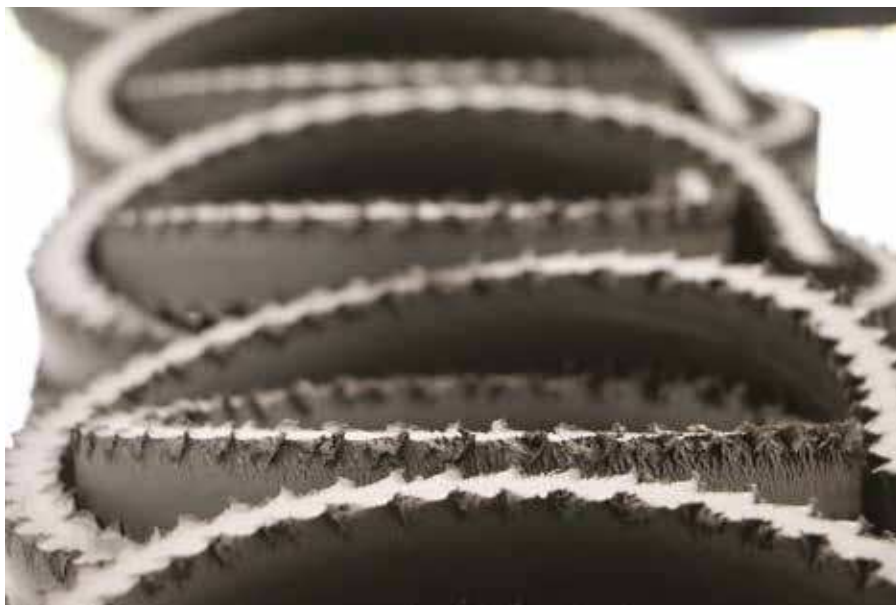
Contact with these metals should therefore be avoided and the seals should be covered with layers of paper or polyethylene to prevent such contact.

SKF seal storage and guidelines meet ISO 2230 and DIN 7716 standards



CR Seals lip materials

Optimized material options for industrial applications



To keep up with ever-changing sealing demands, SKF is constantly developing high-performance sealing solutions from these key material types:

NBR

Acrylonitrile-butadiene rubber (nitrile or Buna N) materials are extremely flexible; many resist mineral oils, greases and more.

XNBR (SKF Duralip)

This SKF-developed carboxylated nitrile rubber combines good technical properties of nitrile rubber with increased wear resistance.

HNBR (SKF Duratemp)

This SKF-developed hydrogenated nitrile rubber can withstand abrasive environments and high temperatures.

FKM (SKF Duralife)

This SKF-developed fluorocarbon rubber compound offers excellent resistance to wear, chemicals, UV light and ozone.

PTFE

Polytetrafluoroethylene compounds withstand aggressive chemicals, high temperatures and pressures and dry running conditions.

Polyacrylate elastomer

Polyacrylate elastomers are more heat-resistant than nitrile rubber or SKF Duralip, and resist aging and ozone.

Wear resistance

Seal wear resistance depends largely on the sealing lip material, although shaft surface finish, lubricant type, circumferential speed, temperature, and pressure differentials all play a role.

Diagram 1 compares relative wear resistance for CR Seals lip materials when the seals are of the same size and operating under identical conditions.

Operating temperatures

At low temperatures, the sealing lip loses its elasticity and becomes hard and brittle. Sealing efficiency decreases and the seal becomes more susceptible to mechanical damage. At high temperatures, the lubricant film often breaks down, resulting in insufficient lubrication – one of the most common causes of premature seal failure.

Diagram 2 presents the permissible operating temperature ranges of key SKF sealing lip materials.





Materials matrix

Material	Abbreviation	SKF trade name	Material code	Operating temperatures °F (°C)	Relative wear resistance	Fluid compatibility	Fluids to avoid
Nitrile Rubber	NBR	-	R or RG	-40 to 210 °F (-40 to 100 °C)	4	Petroleum or silicone-based oils and greases, fuels, vegetable oils, warm water	Brake fluids, ammonia, amines, aliphatic or chlorinated hydrocarbons, phosphate ester fluids, polar solvents (ketones, acetones, MEK)
Carboxylated Nitrile	XNBR	Duralip	D	-40 to 210 °F (-40 to 100 °C)	7		
Hydrogenated Nitrile	HNBR	Duratemp	H	-40 to 302 °F (-40 to 150 °C)	7		
Fluorocarbon Rubber	FKM	Duralife	V	-5 to 390 °F (-20 to 200 °C)	8	Oils, fuels, mineral acids, aliphatics, aromatic hydrocarbons	Esters, ethers, ketones, amines, hot anhydrous hydrofluorides, MEK
Polyacrylate elastomer	ACM	-	P	-40 to 300+ °F (-40 to 150+ °C)	2	Fluids with EP additives, ozone	Water, acids, alkalis. Do not run dry.
Filled Polytetrafluoroethylene	PTFE	-	T	-90 to 480 °F (-70 to 250 °C)	10	Nearly ALL fluids	Rare fluids- fluorine, deithylamine

Diagram 1

Wear resistance when lubricated

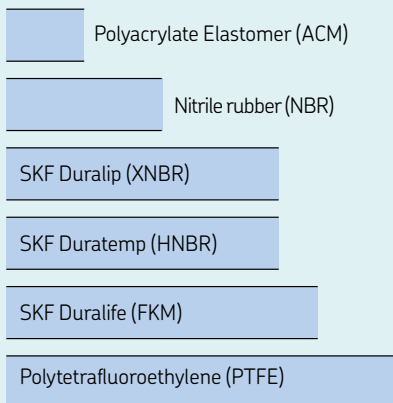
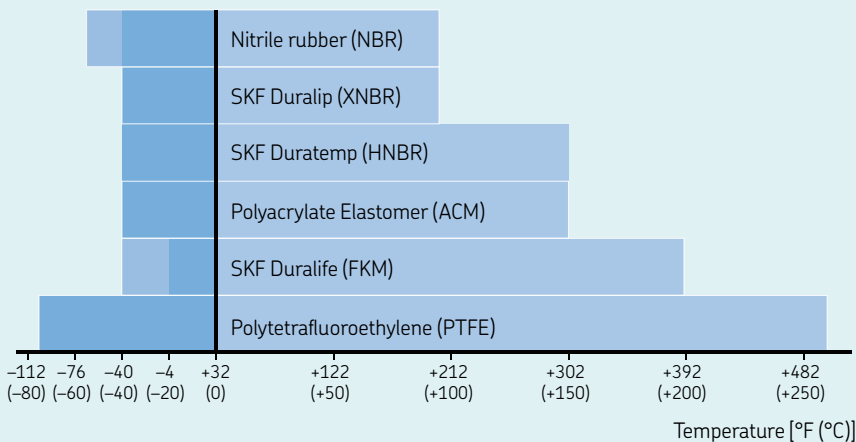


Diagram 2

Permissible operating temperatures





CR Seals lip materials

Optimized material options for industrial applications

Table 1

Chemical and thermal resistance, rotary shaft seal lip materials

Medium to be sealed Permissible operating temperatures (continuous) for SKF rotary shaft seal lip materials

Medium to be sealed	R (NBR)		P (ACM)		V (FKM)	
	°F	°C	°F	°C	°F	°C
Mineral oil based lubricants						
Motor oils	210	100	270	130	340	170
Gear oils	175	80	250	120	300	150
Hypoid gear oils	175	80	250	120	300	150
Automatic transmission fluids (ATF oils)	210	100	270	130	340	170
Greases	195	90		□		□
Hydraulic fluids	195	90	250	120	300	150
Fire-resistant hydraulic fluids						
Oil in water emulsions and aqueous polymer solutions	160	70		■		□
Anhydrous fluids		n		■	300	150
Other media						
Fuel oils EL and L	195	90		□		□
Water	195	90		■	210	100
Alkaline washing solutions	195	90		■	210	100
Permissible temperature range for sealing lip						
min:	-40	-40	-40	-40	-40	-40
max:	+210	+100	+300	+150	+390	+200

■ Lip material not resistant □ Lip material not resistant to some media in this group

Chemical and thermal resistance

Chemical resistance to the medium to be sealed or excluded is the most important factor when selecting an elastomer for a rotary shaft seal. Operating temperature is a close second, however, as heat accelerates aging of the elastomer and increases the reactivity and aggressiveness of the sealed medium.

Guideline values are provided in **Table 1** for the operating temperatures at which SKF seals will remain chemically resistant. The temperature range stated for a group of media means that the sealing

material is resistant when continuously operated within this particular range.

The □ means that, within the group, there are some media that are compatible with the elastomer, but also some that have a detrimental effect on the elastomer. The ■ means that the seal material is not resistant to media belonging to this group.

A seal's chemical resistance is influenced by temperature, pressure and the amount of media present. **Table 2** (page 214 in the *Appendix*) provides information regarding the resistance of SKF sealing lip materials to most sub-

stances encountered in industrial applications.

The information is based on in-house testing plus input from seal end-users and suppliers of the various materials. Unless otherwise stated, the information is valid for media of commercial purity and quality. As seal service life can be influenced by all of the factors noted above, the information contained in **Table 2** should only be considered as a rough guide.





Seal cases and inserts

Metal cases and reinforcements for SKF rotary shaft seals are manufactured standard from deep-drawn carbon sheet steel. The exposed surfaces are treated to protect them from corrosion during normal handling and storage. SKF rotary shaft seals that will be used in corrosive environments can also be designed with a stainless steel case on request.

Garter springs

The garter springs on SKF rotary shaft seals are manufactured standard from cold-drawn steel wire. Exceptions are the metal-cased HDS seals, the all-rubber HS seals, and the HMS5/HMSA10 seals made from fluoro rubber that are designed with stainless steel garter springs.

SKF Bore Tite Coating

Available on most SKF metal-cased seals, SKF Bore Tite Coating is a water-based acrylic sealant used as a coating on the outside diameter of the seal. SKF Bore Tite Coating is pliable with a thickness of 0.0012 to 0.0028 in. (0.03 to 0.08 mm) to compensate for small imperfections in the housing bore surface.

The general guideline in Rubber Manufacturers Association (RMA) is, that if the bore surface texture is greater than 100 $\mu\text{in.}$ (2.5 μm) Ra, a sealant should be used. This sealant can be used at temperatures up to 390 °F (200 °C) and is compatible with most oils, greases, aqueous acids and alkalis, alcohols and glycols. While SKF Bore Tite Coating is not compatible with aromatics, ketones or esters, contact with these substances will have little or no effect if wiped off quickly.

Adhesives and bonding agents

Adhesives and bonding agents are used to achieve static sealing ability and satisfactory bonding between metal and elastomers in seal designs. Both of them can be solvent or water-based depending on the metal and elastomer to be bonded.



CR Seal with green SKF Bore Tite Coating

Engineering

Configurations

Selecting a seal design and material

Choosing the optimum seal design and material depends on the operating conditions of the application, including:

- Temperature
- Speed
- Pressure differential
- Lubricant type
- Vertical or horizontal orientation
- Runout and shaft-to-bore misalignment

Because the influence of one operating condition typically dominates the seal selection process, there are no universal rules for determining the most appropriate seal type or design for a given application. Instead, this section provides general seal selection guidelines by describing how operating conditions affect seal performance and service life.

Retaining grease

Greases have a relatively high viscosity, making them in some ways easy to retain in a bearing arrangement. In many grease-lubricated applications, a non-spring-loaded sealing lip design or a V-ring can retain the grease adequately (→ **fig. 1**).

More demanding applications may require SKF Wave or SKF Edge spring-loaded rotary shaft seals (→ **figs. 2 and 3**). When frequent relubrication is required, the lip of at least one of the seals in the sealing arrangement should be directed toward the air-side so that excess grease can escape via the sealing lip (→ **fig. 3**). Doing so eliminates grease build-up, which can retain heat and limit heat dissipation.

For grease-lubricated applications, SKF recommends calculating the permissible circumferential speed for oil then cutting the result in half.

Figure 1

V-ring

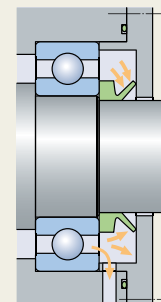


Figure 2

HMS5 seal

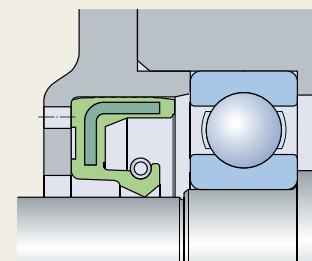


Figure 3

CRW1 seal

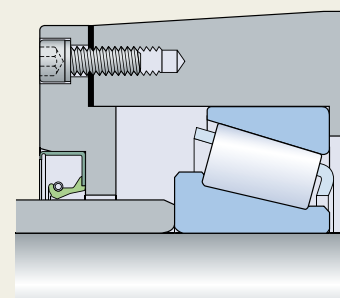




Figure 4

HMS5 seal

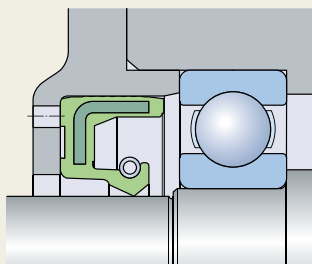


Figure 6

HDDF metal face seal

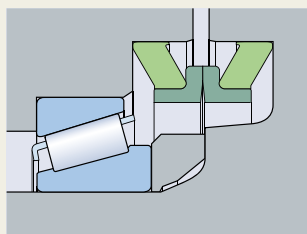


Figure 5

CRW1 seal

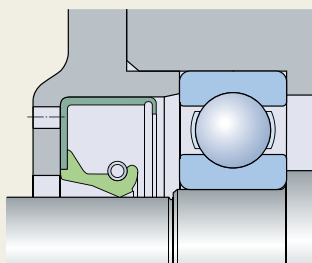
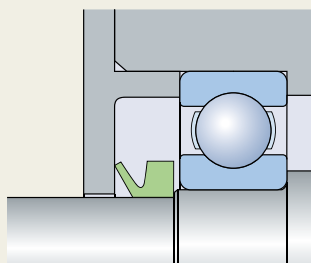


Figure 7

V-ring



Retaining oil

Lubricating oils, particularly relatively low-viscosity oils, are much more difficult to retain than greases. For oil-lubricated applications, SKF Wave or SKF Edge spring-loaded rotary shaft seals (→ **figs. 4** and **5**) are recommended to achieve the necessary radial load and resistance to dynamic runout and shaft-to-bore misalignment.

Another way to increase a seal's pumping ability is to add hydrodynamic features to the sealing lip such as a helical pattern or a sinusoidal wave pattern like the SKF Wave seal.

The rubber outside diameter, like the one found on SKF Edge seals, helps compensate for small imperfections in the housing bore surface and is recommended when the required housing bore surface is questionable.

For extremely harsh operating conditions with relatively low circumferential speeds, metal face seals such as the HDDF seal (→ **fig. 6**) are suitable for retaining oil or grease.

V-rings (→ **fig. 7**) can also be used to retain oil, provided they are installed on the oil side and supported axially on the shaft.



Engineering Configurations

Excluding contaminants

Rotary shaft seals used primarily for contaminant exclusion should be installed with the lip pointing outward. When additional protection is needed, SKF recommends a seal design that incorporates an auxiliary lip, such as HMSA10 or CRWA1 seals.

For tough operating conditions, SKF Wave lip seals (→ **fig. 8**) with hydrodynamic features are recommended. To further enhance sealing efficiency, two single-lip seals can be arranged in tandem (→ **fig. 9**) or a double-lip seal (such as the HDSE1 seal) is suitable (→ **fig. 10**).

V-rings (→ **fig. 11**) are used primarily to exclude contaminants. These seals act as flingers and rotate with the shaft and seal against a surface perpendicular to the shaft. V-rings and axial clamp seals are often used as secondary seals to protect the primary seals from coarse contaminants.

None of these seal arrangements are intended for oil retention.

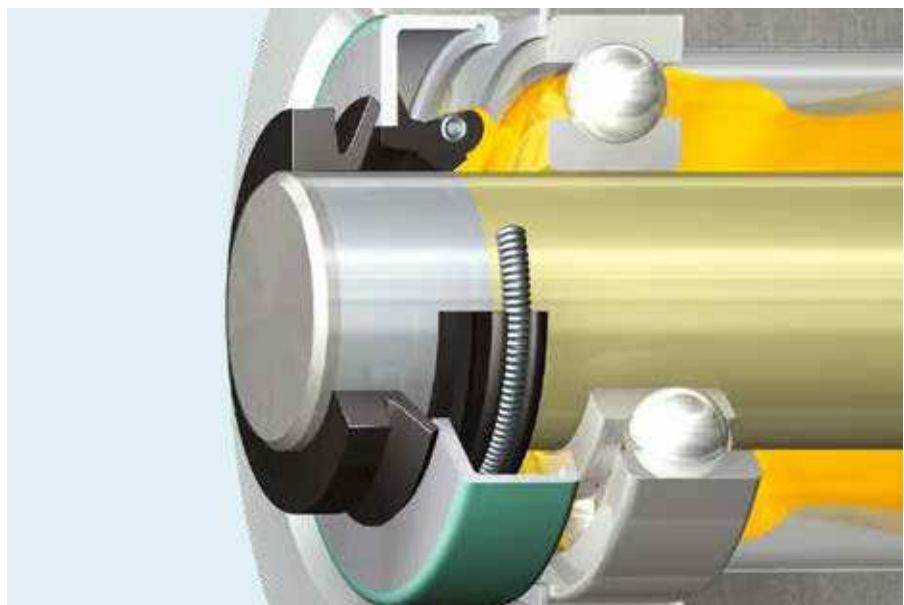
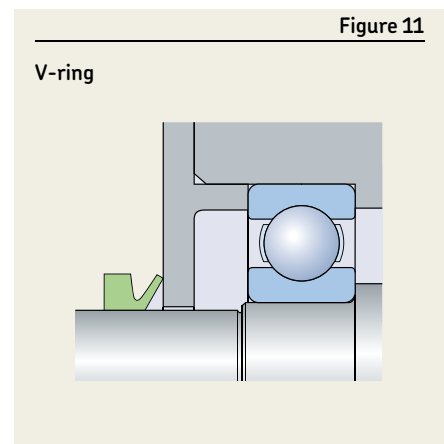
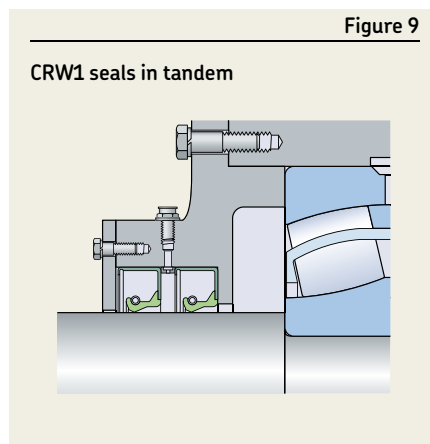
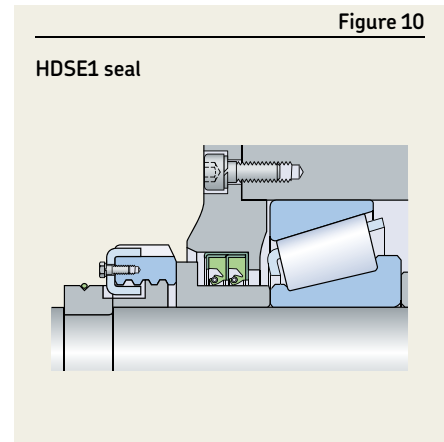
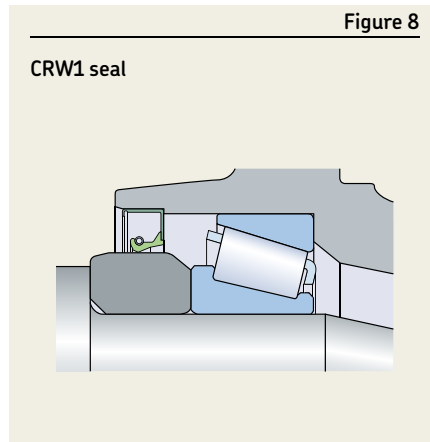




Figure 12

HMSA10 seal

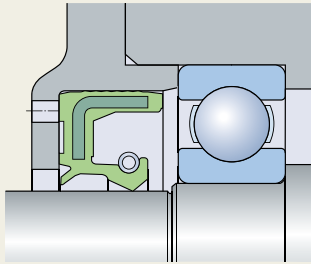
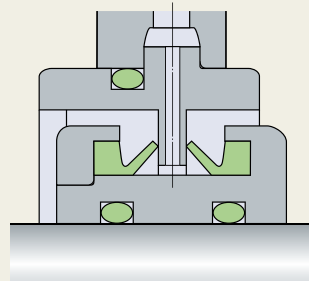


Figure 15

V-ring



Retaining lubricants and excluding contaminants

For many applications, excluding contaminants is just as important as retaining lubricants. Seals with an auxiliary lip, such as HMSA10 seals (→ fig. 12), are appropriate for such applications.

Another option is to use two seals installed in opposite directions (→ figs. 13 and 14) or two opposing V-rings (→ fig. 15) with a spacing washer.

Figure 13

Two seals in opposite direction

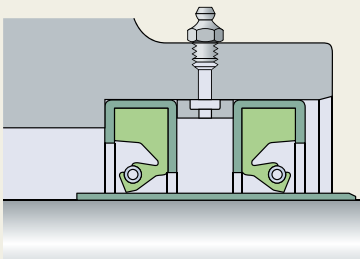
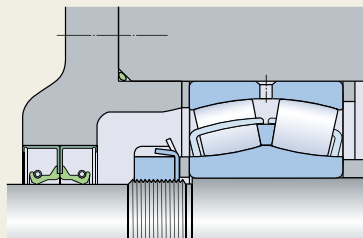


Figure 16

CRW1 seals



For extremely harsh operating conditions, SKF recommends using HDDF metal face seals (→ fig. 6 on page 39), provided that the sliding velocity of the mating surfaces is within the permissible range.

Figure 14

Two seals in opposite direction

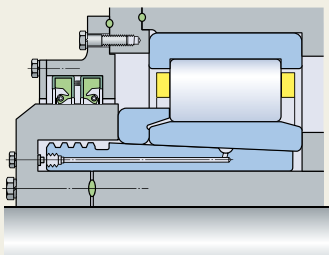
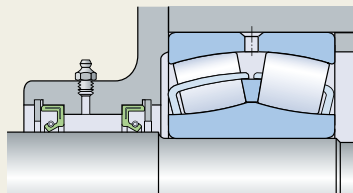


Figure 17

HMS5 seals



Separating two different media

When an application has to keep two liquids from coming into contact with each other, SKF recommends using two separate seals (→ figs. 16 and 17) positioned with their lips facing in opposite directions. For this option the sealing lips must be spring-loaded.





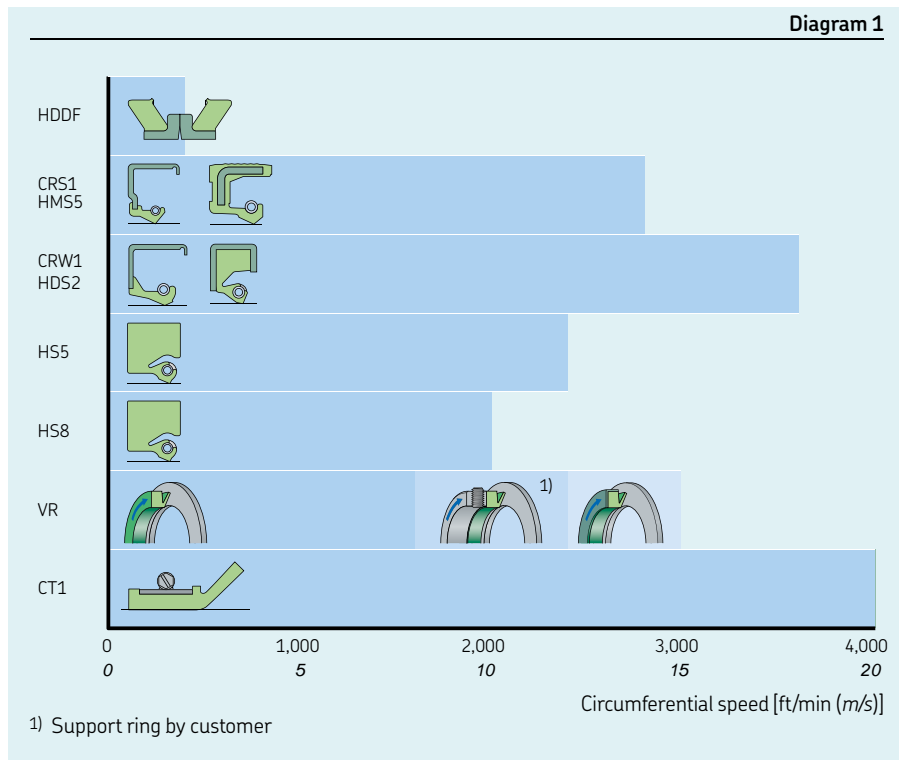
Engineering

Special considerations

Circumferential and rotational speed

The acceptable speed of a seal is determined by its design and sealing lip material, as well as the material and condition of the shaft. All of these factors influence heat generation at the seal counterface. Lubrication of the sealing lip and the characteristics of the lubricant also have a direct influence on heat generation as they impact heat dissipation.

Diagram 1 compares the allowable circumferential speeds for various seal designs assuming normal seal operation, grease or oil retention, and no pressure differential across the seal.



To convert to circumferential speed (CS) use:

Inch:

$$CS \text{ (ft/min)} = \text{shaft diameter (in.)} \times 0.26 \times \text{RPM}$$

Metric:

$$CS \text{ (m/s)} = \frac{\text{shaft diameter (mm)} \times \text{RPM}}{19,100}$$





Sealing under pressure

When a seal is exposed to pressure, the radial load of the sealing lip increases. In turn, this increases the actual sealing lip/shaft contact area, resulting in additional friction and elevated underlip temperatures. **Diagram 2** shows an example of lip distortion of a conventional sealing lip design as sump pressure increases. The ultimate result is reduced seal service life.

Standard seals are rated for no more than 10 psi at 1 000 ft/min (0.07 MPa at 5 m/s), but SKF offers CRW5 and CRWA5 pressure profile seals (\rightarrow **fig. 18**) that can accommodate 50 psi at 1 000 ft/min (0.34 MPa at 5 m/s). Beyond 50 psi (0.34 MPa), SKF offers a line of special order PTFE seals that can accommodate more than 500 psi (3.5 MPa).

When there is a pressure differential across the seal, a shoulder or retaining ring should be used at the low-pressure side of the seal to prevent it from being pushed out of the housing bore (\rightarrow **fig. 19**).

Diagram 2

Seals under pressure

Example of conventional sealing lip distortion as sump pressure increases, resulting in reduced seal service life.

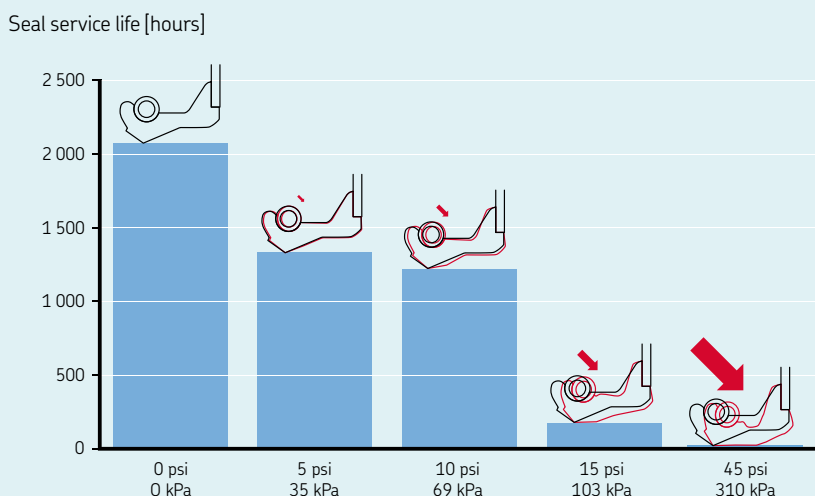
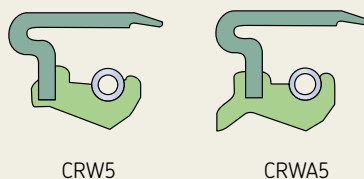


Figure 18

Pressure profile seals

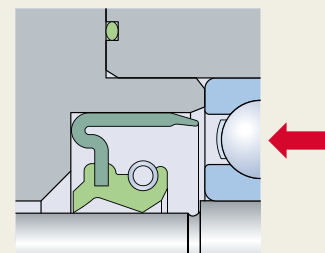


CRW5

CRWA5

Figure 19

CRWA5 seal



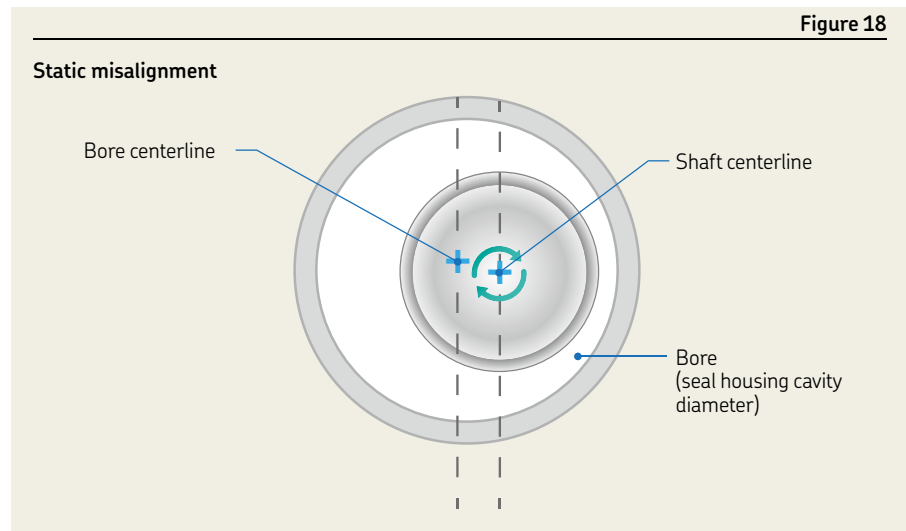
Engineering

Special considerations

Shaft to bore misalignment

As **Figure 18** shows, static misalignment of a shaft (also known as “STBM,” or simply “misalignment”) is the difference between the center lines of the shaft and housing bore.

When a shaft is misaligned, the sealing lip is exposed to irregular forces that cause an enlargement of the contact area between the lip and shaft surface. This in turn unloads the opposite side of the lip, reducing its sealing effect as it moves toward the contact area side.

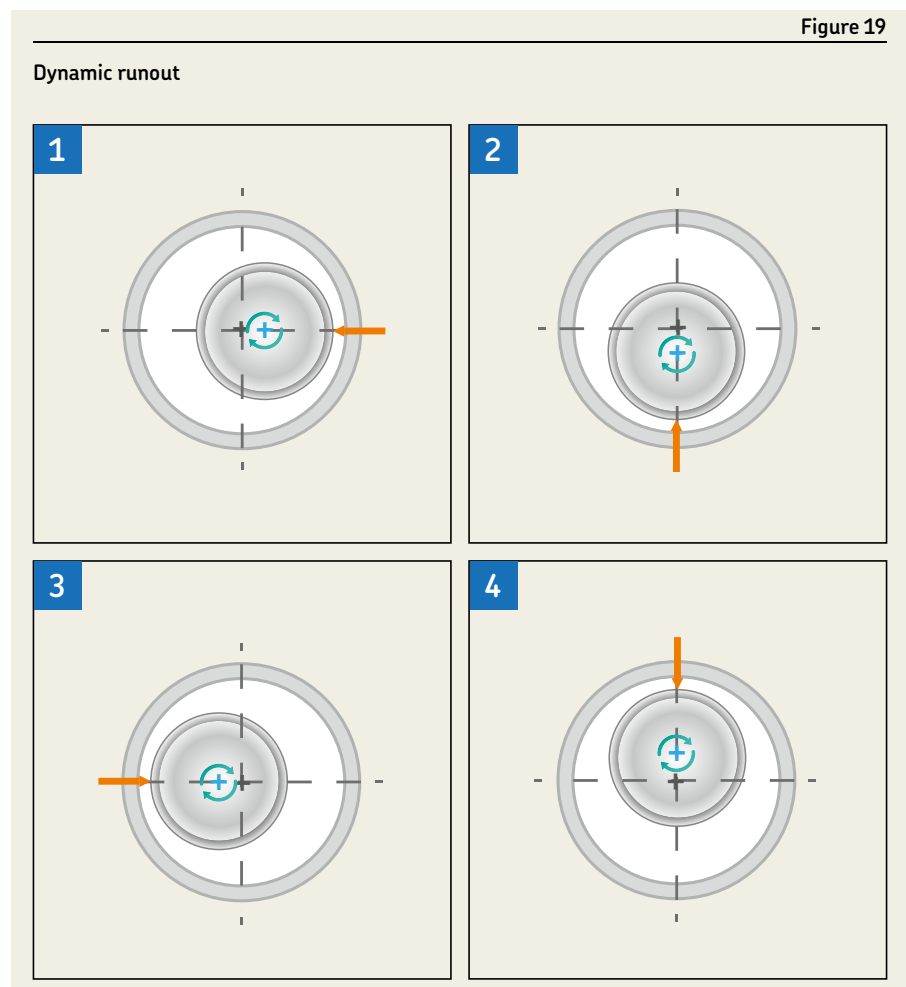


Dynamic runout

Unlike static misalignment, dynamic runout (DRO or just runout) is a function of time. As indicated by panels 1–4 in **Figure 19**, runout occurs when a shaft exhibits dynamic eccentricity, essentially wobbling as it rotates.

As speeds increase, so does the risk that inertia will not allow the sealing lip to follow the shaft surface. If the eccentricity is such that the distance between the sealing lip and shaft becomes larger than what is required to maintain a hydrodynamic lubricant film, the medium to be sealed will escape through the gap.

Accordingly, the seal should be arranged in close proximity to the bearing and bearing operating clearance should be kept to a minimum.







Hardware specifications

Tolerances

The diameter of the shaft d_1 at the counterface should be machined to the tolerances provided in **table 6** for inch size shafts and **table 7** for metric shafts.

Out-of-roundness must be less than 0.0002 in. (0,005 mm) at a maximum of 2 lobes or less than 0.0001 in. (0,0025 mm) at a maximum of 7 lobes.

If components with an interference fit will pass over the counterface during installation, the shaft diameter should be reduced by 0.008 in. (0,2 mm) The seal that was originally chosen can still be used without adversely affecting seal performance.

Table 6

Shaft tolerances - inch

Shaft diameter Nominal d_1 over		Diameter tolerance (RMA 0S-4) Deviation	
in.	incl.	in.	
–	4	±0.003	
4	6	±0.004	
6	10	±0.005	
10		±0.006	

Table 7

Shaft tolerances - metric

Shaft diameter Nominal d_1 over		Diameter tolerance (ISO h11) ¹⁾ Deviation	
mm	incl.	high	low
		µm	
6	10	0	–90
10	18	0	–110
18	30	0	–130
30	50	0	–160
50	80	0	–190
80	120	0	–220
120	180	0	–250
180	250	0	–290
250	315	0	–320
315	400	0	–360
400	500	0	–400
500	630	0	–440
630	800	0	–500
800	1 000	0	–560
1 000	1 250	0	–660
1 250	1 600	0	–780
1 600	2 000	0	–920
2 000	2 500	0	–1 100
2 500	3 150	0	–1 350
3 150	4 000	0	–1 650
4 000	5 000	0	–2 000

¹⁾ For shaft diameters of 3 150 mm and above, refer to DIN 7172.



Shaft surface roughness

The surface roughness values of the counterface for rotary shaft seals, calculated according to methods described in ISO 4288 (DIN 4768), should be kept within the limits specified in RMA OS-1-1 (→ **table 8**).

The lower value for R_a is a minimum value. Using a lower value will adversely affect the lubricant supply to the sealing lip. The temperature rise caused by inadequate lubrication, particularly at high circumferential speeds, can lead to hardening and cracking of the sealing lip, and eventually premature seal failure. If the counterface is too rough, excessive sealing lip wear will occur and seal service life will be shortened. If the value R_{pm} is exceeded, the seal will leak, or excessive sealing lip wear may occur.

The seal counterface surface should be free of any damage, scratches, cracks, rust or burrs and should be properly protected until final installation.

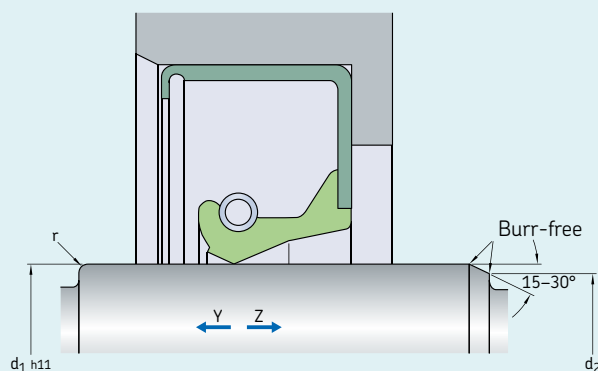
Table 8

Recommended shaft surface roughness values

	ISO		DIN		RMA	
	μin	μm	μin	μm	μin	μm
R_a	8–20	0,2–0,5	8–32	0,2–0,8	8–17	0,2–0,43
R_z	48–120	1,2–3	40–200	1–5	65–115	1,65–2,9
R_{pm}	N/A	N/A	N/A	N/A	20–50	0,5–1,5

Table 9

Lead-in chamfers and radii



Shaft diameter Nominal		Diameter difference ¹⁾		Radii					
d_1 over	incl.	over	incl.	d_1-d_2 min	Seal without auxil- iary lip r min	Seal with auxiliary lip r min			
in.		mm		in.	mm	in.	mm		
–	0.394	–	10	0.059	1,5	0.024	0,6	0.039	1
0.394	0.787	10	20	0.079	2	0.024	0,6	0.039	1
0.787	1.181	20	30	0.098	2,5	0.024	0,6	0.039	1
1.181	1.575	30	40	0.118	3	0.024	0,6	0.039	1
1.575	1.968	40	50	0.138	3,5	0.024	0,6	0.039	1
1.968	2.756	50	70	0.157	4	0.024	0,6	0.039	1
2.756	3.74	70	95	0.177	4,5	0.024	0,6	0.039	1
3.74	5.118	95	130	0.216	5,5	0.039	1	0.079	2
5.118	9.449	130	240	0.276	7	0.039	1	0.079	2
9.449	19.685	240	500	0.433	11	0.079	2	0.118	3
19.685	–	500	–	0.512	13	0.197	5	0.197	5

¹⁾ If the corner is blended rather than chamfered, the blended section should not be smaller than the difference in diameters $d_1 - d_2$.

Hardware specifications

Shaft lead

Depending on the direction of rotation, directionality on the seal counterface may cause a seal to leak. Plunge grinding is the preferred machining method to minimize directionality ($0 \pm 0.05^\circ$) on the seal counterface.

When plunge grinding, avoid applying whole number ratios of the grinding wheel speed to the work piece speed. Instead, run the grinding wheel until it “sparks out” completely and there are no more sparks flying from the wheel to ensure that all the lead is removed. The grinding wheel should be dressed using a cluster head dressing tool and the smallest possible lateral feed, or a profile dressing roll without a lateral feed. The negative influence of directionality in any particular case can only be determined by test running under conditions of alternating rotation.

Lead-in chamfers

To install rotary shaft seals without damaging the sealing lip, SKF recommends chamfering or rounding the shaft ends or shoulders (\rightarrow **table 9**, **page 47**).

If the direction of installation is Z, follow the values ($d1 - d2$) provided in **table 9**. If the direction of installation is Y, the shaft end could be rounded (r) or chamfered ($d1 - d2$).

To install a seal over a shaft shoulder or end that has not been rounded or chamfered, SKF recommends using an installation sleeve.

Housing bore requirements

General

To reduce the risk of seal damage during installation, the housing bore should have a 15 to 30° lead-in chamfer. The chamfer should be free of burrs and the transition radius between the seal seat and shoulder should be in accordance with the recommendations in **table 10** (\rightarrow **page 49**).

In order to facilitate seal removal, holes in the housing shoulder A can be incorporated during the design stage.

Metal-reinforced seals

The depth of a metric housing bore B for metal-cased or metal-inserted seals should be at least 0.012 in. (0,3 mm) larger than the nominal seal width b (\rightarrow **fig. 13**). The corresponding values for an inch housing bore B are 0.016 in. (0,4 mm).

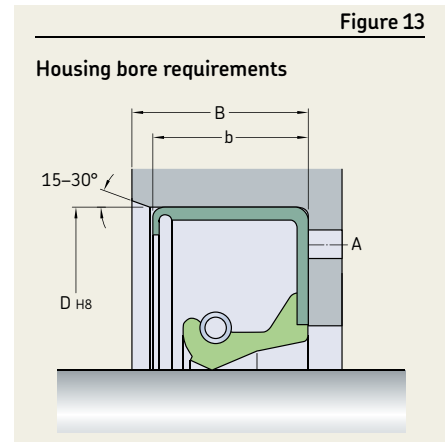
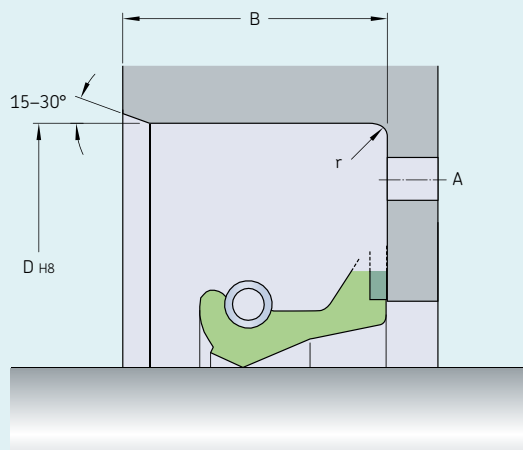




Table 10

Housing bore tolerances



Nominal diameter		Housing bore tolerance deviation	Fillet radii r max	Nominal diameter		Housing bore tolerance (ISO tolerance H8)		Fillet radii r max
over	incl.			over	incl.	high	low	
in.		in.	in.	mm		µm		mm
–	3	±0.001	0.031	–	3	14	0	0,3
3	7	±0.0015	0.031	3	6	18	0	0,3
7	10	±0.002	0.031	6	10	22	0	0,3
10.000 ²⁾	12	±0.002	0.031	10	18	27	0	0,3
12.000 ²⁾	20	±0.003	0.031	18	30	33	0	0,3
20.000 ²⁾	40	±0.004	0.031	30	50	39	0	0,3
40.000 ²⁾	60	±0.006	0.031	50	80	46	0	0,4
				80	120	54	0	0,8
				120	180	63	0	0,8
				180	250	72	0	0,8
				250	315	81	0	0,8
				315	400	89	0	0,8
				400	500	97	0	0,8
				500	630	110	0	0,8
				630	800	125	0	0,8
				800	1 000	140	0	0,8
				1 000	1 250	165	0	0,8
				1 250	1 600	195	0	0,8
				1 600	2 000	230	0	0,8
				2 000	2 500	280	0	0,8
				2 500	3 150	330	0	0,8
				3 150 ¹⁾	4 000	410	0	0,8
				4 000 ¹⁾	5 000	500	0	0,8

1) SKF recommended bore specifications not covered in ISO 286-2

2) SKF recommended bore specifications not covered in RMA OS-4





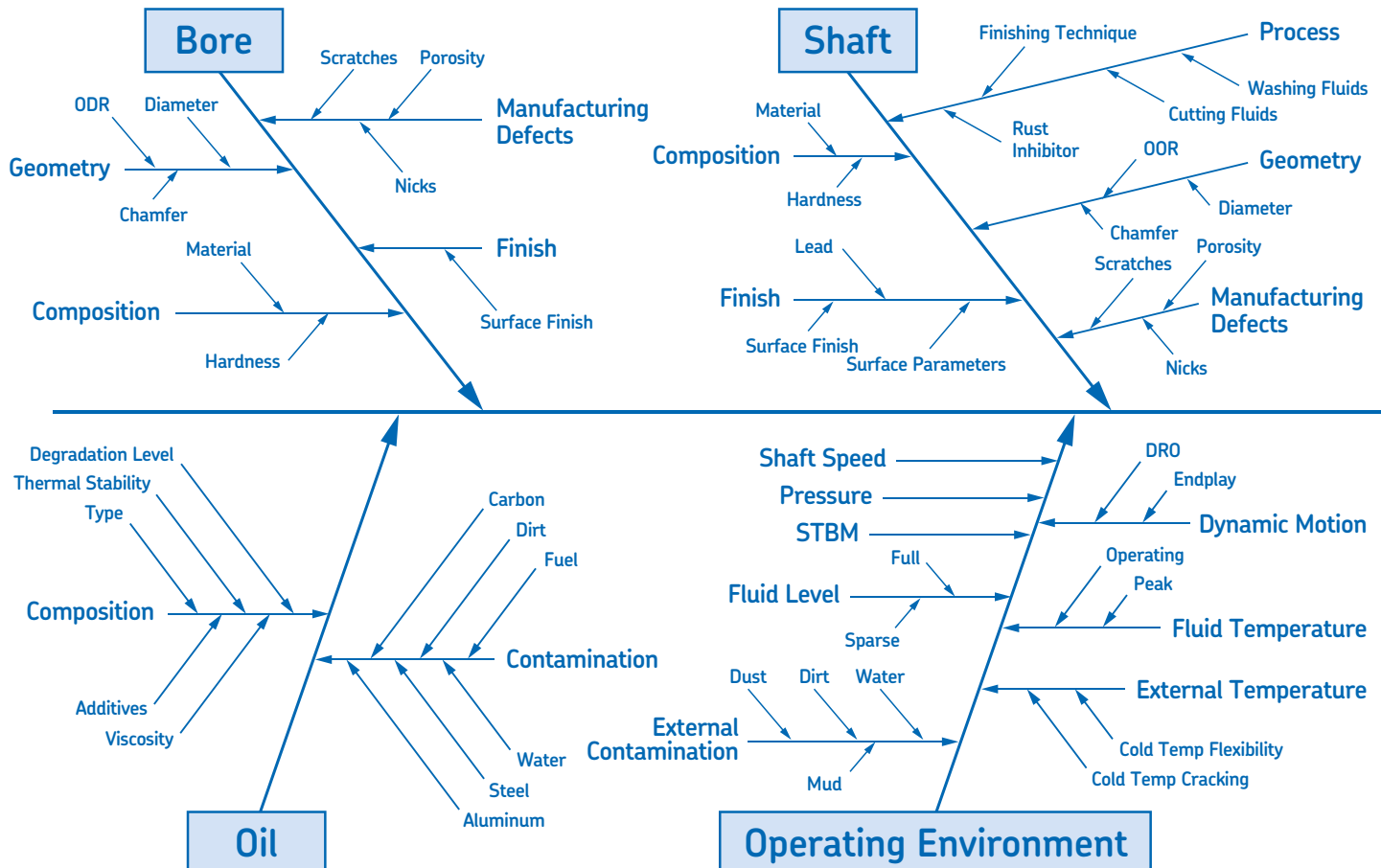
Common seal failure modes

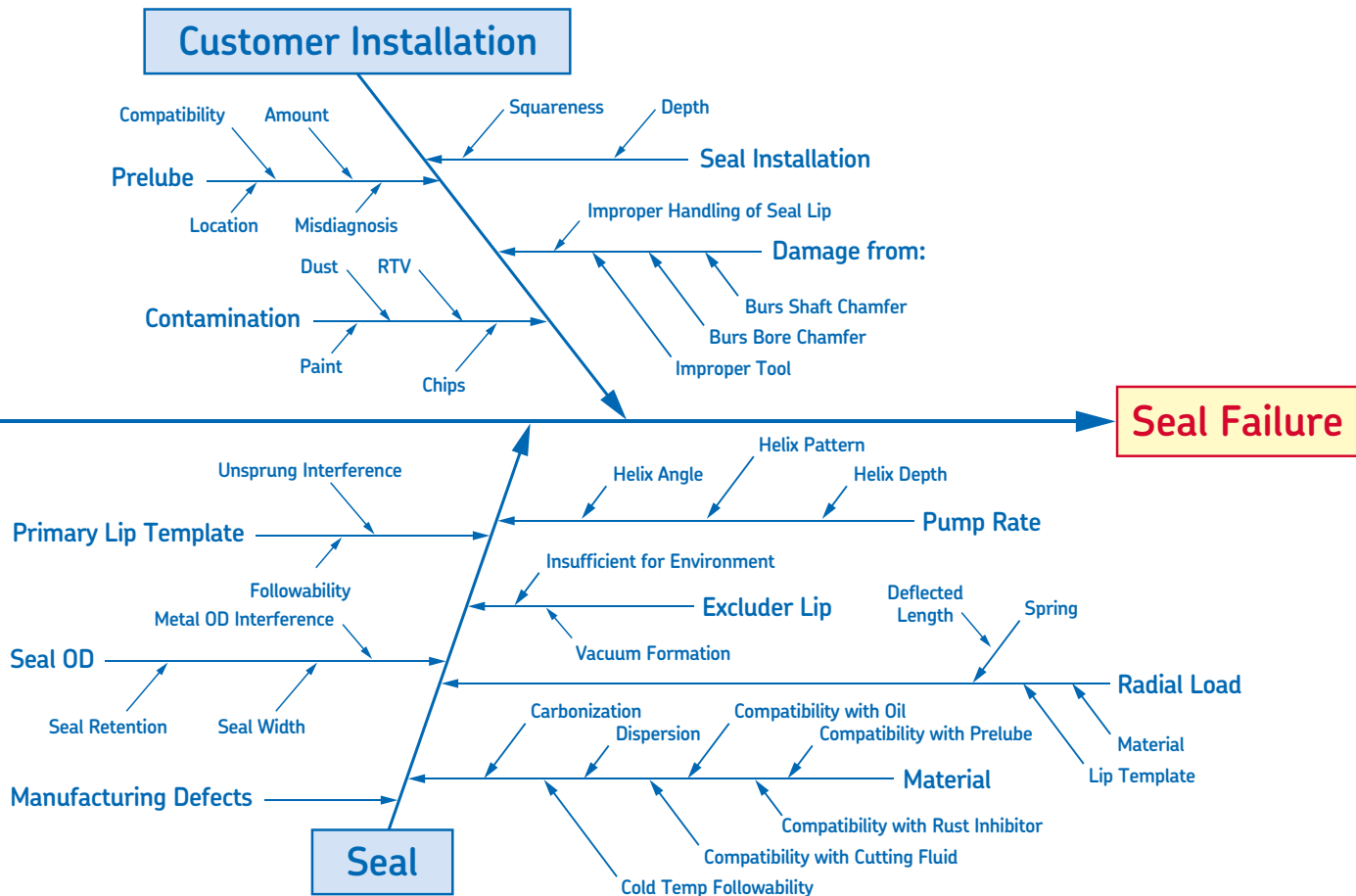
Leaking seals are not inevitable

Attitudes about seal performance are influenced by industry expectations and personal habits. But no matter where you are on the spectrum between vigilance and indifference, understand that there is always a better way. After all, the definition of insanity is doing the same thing and expecting a different result.

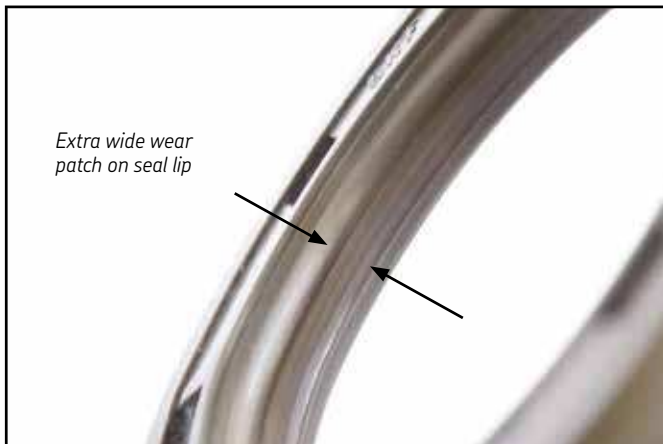
Consider the fishbone

A leaking seal means a defective seal that must be replaced, right? As the fishbone diagram below shows, there are several potential causes of a leaking seal, and only one of the six categories involves a problem with the actual seal. CR Seals is committed to helping you identify the root causes of failure and find a better way. Contact your local SKF application engineer for help with your trouble spots.





Common seal failure modes



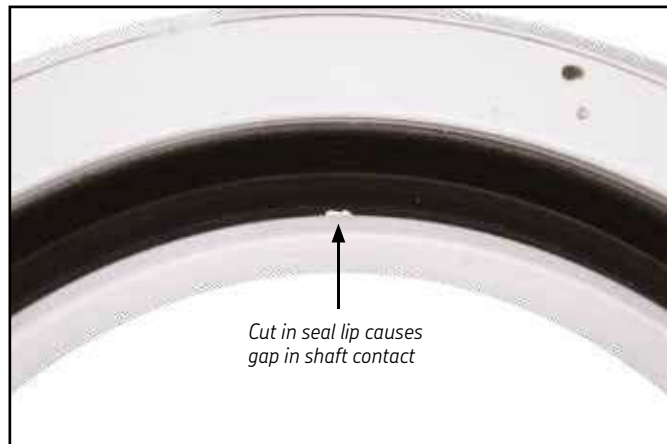
Excessive wear

Possible root causes

- Elevated internal operating pressure
- External contaminant ingress
- Excessive radial load or interference
- Lack of adequate lubrication
- Internal contaminant ingress
- Incorrect material selected for the application
- Seal reached normal end of life
- Shaft running surface too rough

Potential solutions

- Remove contamination
- Switch to high wear seal material or increase lubrication at lip interface
- Follow RMA/ ISO standards for surface finish
- Reduce radial load



Nicks, scratches, or cuts in lip contact area

Possible root causes

- Installation tool or bullet with sharp edge
- Seal installed over defects in shaft
- Seal installed over shaft through hole, keyway, or splines
- Inconsistent manufacturing trimming operation
- Damage caused during packaging or handling

Potential solutions

- Protect lip by covering splines, keyways and holes with chamfered sleeve or tape
- Keep screwdrivers and other sharp tools away from seal lip
- Regularly inspect seal lips before installation



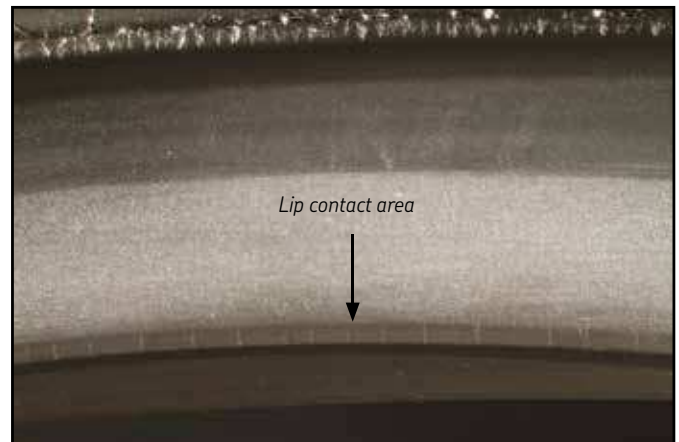
Crosslink carbonization

Possible root causes

- Chemical bond occurs between amines in oil additives and fluorine in FKM compounds
- Penetrates the elastomer and hardens until cracks form
- Generally requires temperatures of 210 °F or higher

Potential solutions

- Switch material to HNBR if under-lip temperatures are below 290 °F
- Switch material to base-resistant FKM for higher temperatures
- Reduce interference or increase lubrication to decrease under-lip temperature



Axial cracking on NBR lip contact area

Possible root causes

- Elevated internal operating pressure
- High shaft speed
- Fluid compatibility
- Excessive under-lip temperature
- Insufficient lubrication at the lip interface

Potential solutions

- Change material to HNBR or FKM
- Increase lubrication
- Reduce radial interference



Common seal failure modes



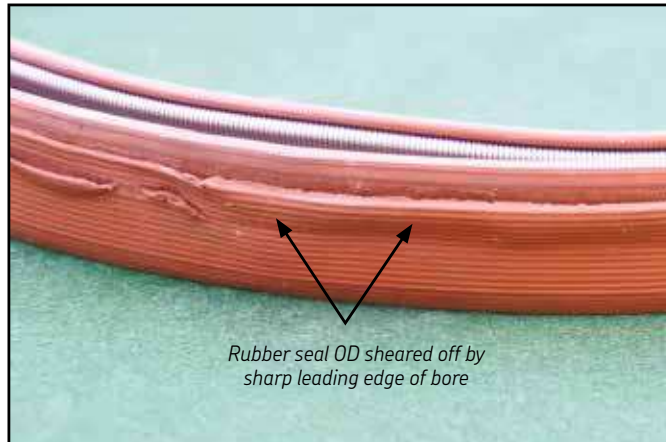
Inverted seal lip

Possible root causes

- Poor assembly procedures
- High internal operating pressure

Potential solutions

- Switch to HDS7 springless design, HDS2 garter spring design with Springcover, or HSS5
- Modify installation tool and/or procedure
- If failure is pressure-induced, use pressure seal



Seal damaged during installation

Possible root causes

- Improper or worn installation tool
- Direct contact with hammer on seal
- Inadequate lead in chamfer on the bore
- Undersized bore

Potential solutions

- Add proper bore chamfer per recommendations and check bore diameter
- Use installation tool designed for the specific installation procedure
- Reevaluate installation procedure





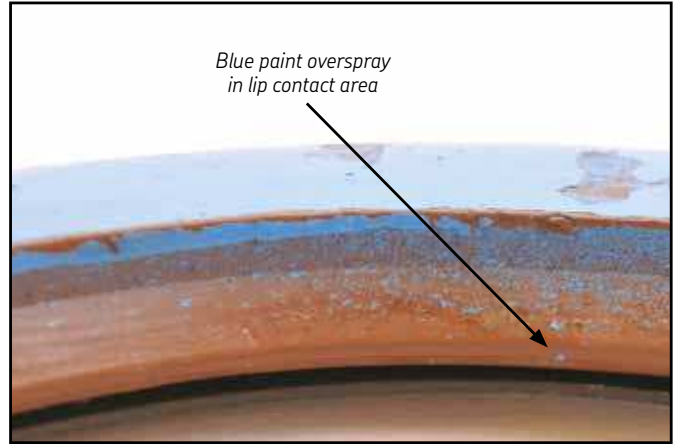
Irregular/damaged shaft surface finish

Possible root causes

- Excessively rough shaft may accelerate lip wear
- Overly smooth shaft may result in early leakage
- Poor shaft grinding process or none at all
- Change in shaft suppliers
- Installation or handling damage prior to assembly
- Contamination ingress
- Shaft hardness too soft for the application
- Hardened outer heat-treat layer too thin

Potential solutions

- Measure surface finish and shaft lead and compare to RMA/ISO standards
- Check for visual damage or irregular surface characteristics
- Reevaluate shaft packaging during handling and transport



Paint overspray on seal lip or contamination

Possible root causes

- Inadequate seal protection during manufacturing paint process
- Loose paint/contaminants get trapped under seal lip
- Seal failure caused by contamination ingress

Potential solutions

- Use proper shielding during painting process
- Pack grease on air side to form a barrier from paint overspray
- Use v-ring on metal seal face to protect lip
- Choose seal with a dust lip to reduce contaminant ingress

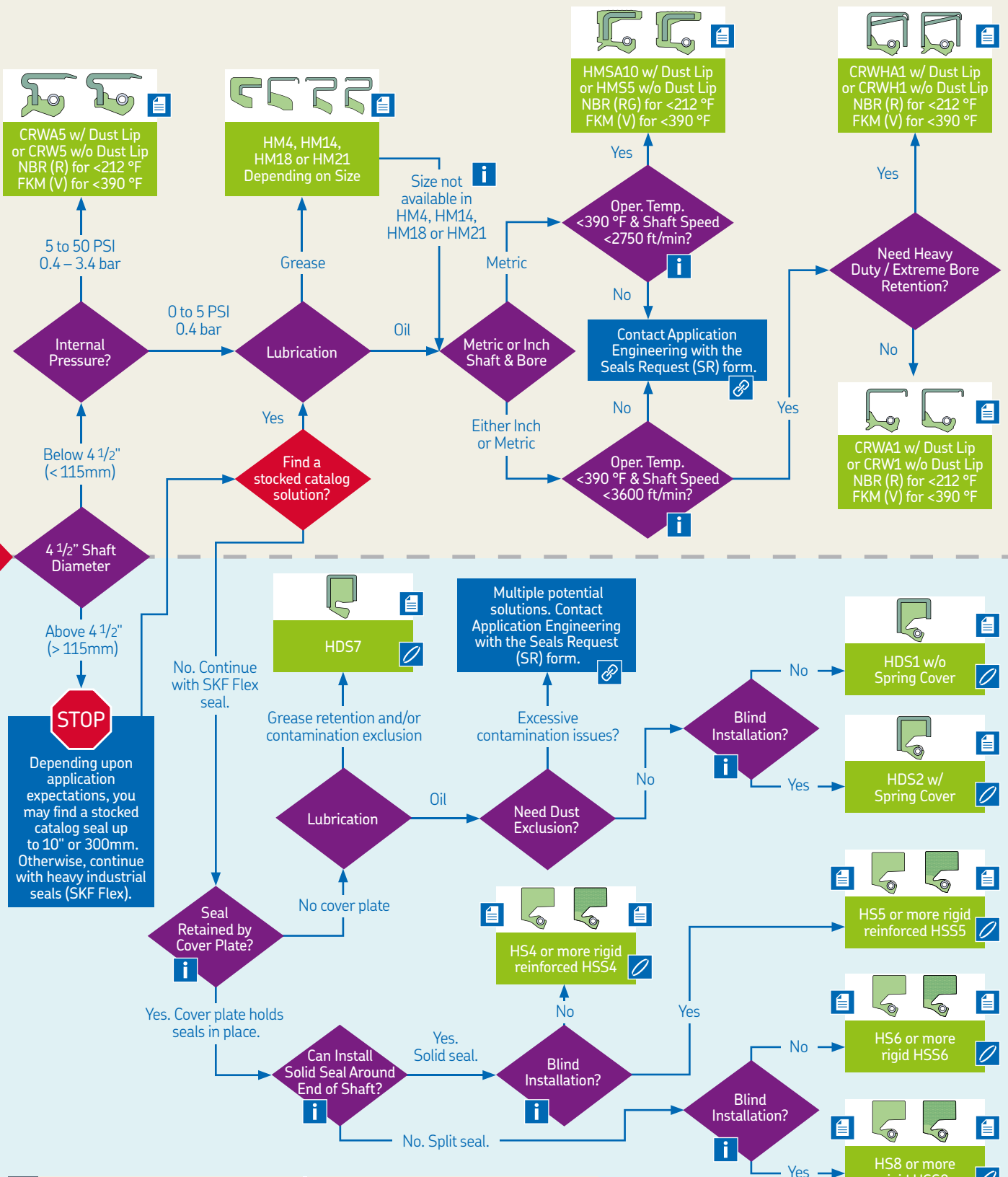


Decision Tree for CR Seals

STOCKED CATALOG SEALS

CUSTOM HEAVY INDUSTRIAL SEALS (SKF Flex)

START HERE



KEY	
SR Form	= Seal Request Form
NBR	= Buna N Nitrile
XNBR	= Carboxylated NBR
HNBR	= Hydrogenated NBR
FKM	= Fluoro Rubber
	Continuous operating temperature:
NBR	-40 to 210 °F (-40 to 100 °C)
XNBR	-40 to 210 °F (-40 to 100 °C)
HNBR	-40 to 300 °F (-40 to 150 °C)
FKM	-40 to 390 °F (-40 to 200 °C)

Can't find the right size or solution? Contact Application Engineering with the Seals Request (SR) form.





Start here to find the seal you need

To optimize seal and equipment performance, proper seal selection is essential. Choosing the right seal for the job is a step-by-step process of elimination that defines seal compatibility based on key operating requirements.

With this all-new edition of the CR Seals handbook, SKF is making the seal selection process as easy as possible.

To find the seal for your application, go to the red “START HERE” triangle in the decision tree at left and take it step-by-step.

Find out even more online

An interactive version of this decision tree with the added functionality of the four links below is available online.

- [🔗 – Seal request form](#)
- [📘 – Information pop-up](#)
- [📄 – Link to catalog page](#)
- [🔍 – Heavy Industrial \(HIS\) part numbering](#)

Just scan the QR code to launch the app:



Table 1

SKF Flex seals size capability chart

		Shaft diameter		Bore diameter		Bore depth		Difference between shaft and bore	
		From	To	From	To	From	To	From	To
HS / HSS / HSSG	inch	6.500	180.000	7.500	181.000	0.500	–	1.000	–
	mm	165.10	4572.00	190.50	4597.40	12.70	–	25.40	–
	inch	4.000	8.750	4.984	10.630	0.438	0.797	0.984	1.880
	mm	101.60	222.25	126.60	270.00	11.13	20.24	25.00	47.75
HDS 1,2 / HDSF 1,2	inch	8.000	180.000	9.181	182.000	0.500	0.797	1.181	2.000
	mm	203.20	4572.00	233.20	4622.80	12.70	20.24	30.00	50.80
	inch	13.000	180.000	14.250	182.520	0.625	1.000	1.250	2.520
	mm	330.20	4572.00	361.95	4636.00	15.88	25.40	31.75	64.00
\ 1,2	inch	4.000	8.750	5.000	10.750	0.500	0.984	1.000	2.000
	mm	101.60	222.25	127.00	273.05	12.70	25.00	25.40	50.80
	inch	8.000	63.319	9.181	64.500	0.591	1.250	1.181	3.000
	mm	203.20	1608.30	233.20	1638.30	15.01	31.75	30.00	76.20
HDS7	inch	4.500	8.750	5.000	10.750	0.500	0.787	1.000	2.000
	mm	114.30	222.25	127.00	273.05	12.70	20.00	25.40	50.80
	inch	8.000	63.319	9.181	64.500	0.591	1.250	1.181	3.000
	mm	203.20	1608.30	233.20	1638.30	15.00	31.75	30.00	76.20
HDSH7	inch	4.000	8.750	5.000	10.750	0.591	0.828	1.000	2.000
	mm	101.60	222.25	127.00	273.05	15.00	21.03	25.40	50.80
	inch	8.000	63.319	9.181	64.500	0.750	1.250	1.181	2.000
	mm	203.20	1608.30	233.20	1638.30	19.05	31.75	30.00	50.80
HDSA 1 / HDSA 2	inch	4.000	8.750	5.000	10.750	0.688	1.188	1.000	2.000
	mm	101.60	222.25	127.00	273.05	17.48	30.18	25.40	50.80
	inch	8.000	46.819	9.181	48.000	0.787	1.500	1.181	3.000
	mm	203.20	1189.20	233.20	1219.20	20.00	38.10	30.00	76.20





Seal capability matrixes











Seals for general industrial applications, selected main designs

RG, R Nitrile rubber (NBR)
 V Fluorocarbon rubber (FKM)
 H Hydrogenated nitrile rubber (HNBR)
 P Polyacrylate elastomer (ACM)

Seal designs

Design

Outside diameter
 Configuration Material code Sealing lip technology Auxiliary lip
 A = Contacting
 B = Non-contacting

Seal designs		Material	Material code	Sealing lip technology	Auxiliary lip		
		Rubber	RG, V	SKF Edge	B (HMSA10)		
HMS5	HMSA10						
		Metal	R, V, P	SKF Wave	N/A		
CRW1	CRWH1						
		Metal	R, V, P	SKF Wave	B		
CRWA1	CRWHA1						
		Metal	R, V	SKF Wave	A (CRWA5)		
CRW5	CRWA5						
		Metal	R, V, P	Std Oil	N/A		
CRS1	CRSH1						
		Metal	R, V, P	Std Oil	A		
CRSA1	CRSHA1						
				Metal	R, V	Grease	N/A
HM14	HM18	HM21	HM1				
				Metal	R	Grease	N/A
TL1	TL6	TL7	TL8				
				Rubber	R	Grease	N/A
X4	X12	X13	X15				
				Metal	R	OD running lip	A
SCOT1							
				Rubber	H	SKF Wave	A
PLUS XL							



**Matrix 1**

Maximum* shaft-to-bore misalignment (STBM)		Maximum* dynamic runout (DRO) TIR		Maximum* pressure differential		Maximum* shaft surface speed	
in.	mm	in.	mm	psi	MPa	ft/min	m/s
0.015	0.38	0.020	0.51	7	0.05	2,755	14
0.025	0.64	0.025	0.64	10	0.07	3,600	18
0.025	0.64	0.025	0.64	10	0.07	3,600	18
0.005	0.13	0.005	0.13	50	0.35	2,000	10
0.015	0.38	0.020	0.51	10	0.07	3,600	18
0.015	0.38	0.020	0.51	10	0.07	3,600	18
0.005	0.13	0.003	0.08	10	0.07	2,000	10
0.015	0.38	0.010	0.25	3	0.02	500	2.54
0.015	0.38	0.010	0.25	3	0.02	500	2.54
0.005	0.13	0.005	0.13	2	0.014	2,000	10
0.005	0.13	0.005	0.13	2	0.014	2,000	10

* Stated maximum parameters apply only when all other parameters are at normal operating conditions.





Seal capability matrixes

SKF Flex seals for heavy industrial applications, selected main designs

Standard design (preferred design)	Other basic designs			Material code	Maximum* pressure differential	Maximum* shaft-to-bore misalignment (STBM)	Maximum* dynamic runout (DRO)TIR	Maximum* shaft surface speed
				–	psi (MPa)	in. (mm)	in. (mm)	ft/min (m/s)
 HDS7	 HDS7L	 HDSF7	 HDSH7	R D H V	0	0.062 (1.6)	0.093 (2.4)	4,900 (25)
 HDS2	 HDS1	 HDSF1	 HDS1L	R D H V	15 (0.1)	0.062 (1.6)	0.093 (2.4)	4,900 (25)
	 HDS2L	 HDSF2	 HDSH2					
 HDSA2	 HDSA1			R D H V	15 (0.1)	0.062 (1.6)	0.093 (2.4)	4,900 (25)
 HS5	 HS4			R D H V	11 (0.07)	0.062 (1.6)	0.093 (2.4)	HS4: 2,950 (15) HS5: 2,560 (13)
 HS8	 HS6	 HS7		R D H V	0	0.062 (1.6)	0.093 (2.4)	HS6: 1,970 (10) HS7: 1,480 (7.5) HS8: 1,970 (10)
 HSS5	 HSS4	 HSS6		R V	5 (0.03)	0.06 (1.5)	0.093 (2.4)	2,950 (15) depending on the operating conditions
	 HSS7	 HSS8						
 HSS5G	 HSS4G	 HSS6G		R V	0	0.06 (1.5)	0.093 (2.4)	2,950 (15) depending on the operating conditions
	 HSS7G	 HSS8G						



**Matrix 2**

Housing type	Retention and exclusion ability
-	-
Open housing (self-retaining)	Highly effective exclusion of water and solid contaminants and excellent retention of grease
Open housing (self-retaining)	Excellent oil or grease retention
Open housing (self-retaining)	Excellent oil or grease retention and exclusion of light to moderate contaminants
Cover plate required (axially compressed seal)	Good oil retention
Cover plate required (axially compressed seal)	HS6, HS8: Good to excellent oil or grease retention HS7: Good (grease retention only)
Cover plate required (axially compressed seal)	Excellent oil retention
Cover plate required (axially compressed seal)	Good to excellent oil retention

* Stated maximum parameters apply only when all other parameters are at normal operating conditions.

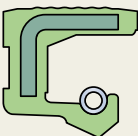
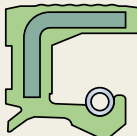

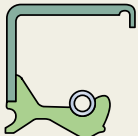


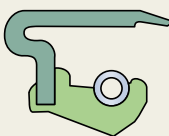
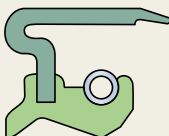
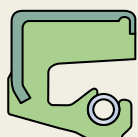
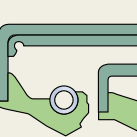


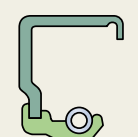
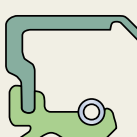
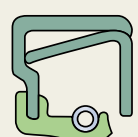
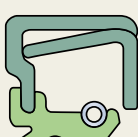
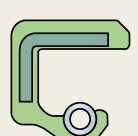
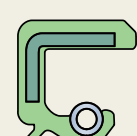





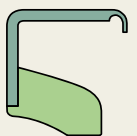

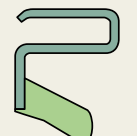

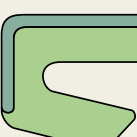
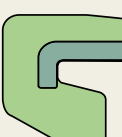
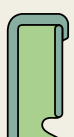
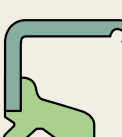
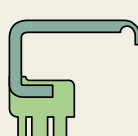
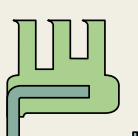
Profile overview

Rotary shaft seals - oil applications



Rotary shaft seals - grease

			
■ HMS 5	■ HMSA10	■ CRW1	■ CRWA1
			
■ CRWH1	■ CRWHA1	■ CRW5	■ CRWA5
			
■ HDW1	■ C8	■ PLUSXL	SCOT 1
			
CRS1	CRSA1	CRSH1	CRSHA1
			
HMS4	HMSA7	HMSA7P2	

■ SKF Edge
■ SKF Wave

	
HM14	HM18
	
HM21	HM1
	
HM3	HM4
	
HD1	HMA1
	
TL7	X15

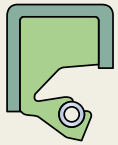
Wear sleeves

	
SKF Speedi-Sleeve	LDSL4

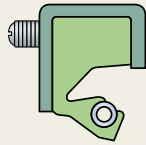




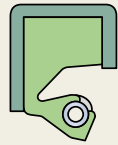
Rotary shaft seals- SKF Flex heavy industrial seals



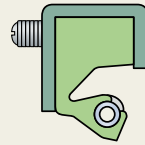
HDS1



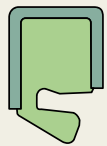
HDS1L



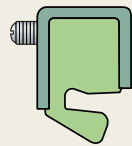
HDS2



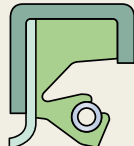
HDS2L



HDS7



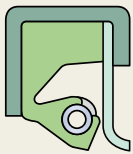
HDS7L



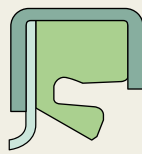
HDSF1



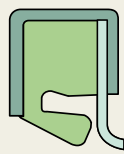
HDSF2



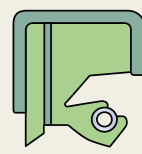
HDSH2



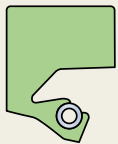
HDSF7



HDSH7



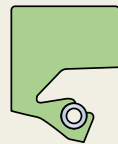
HDSA1



HS4



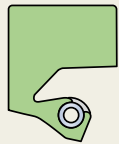
HS5



HS6



HS7



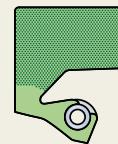
HS8



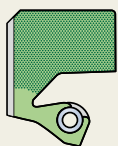
HDSA2



HSS4



HSS5



HSS5G



HSS6

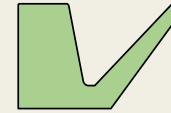


HSS7



HSS8

Axial shaft seals - V-rings



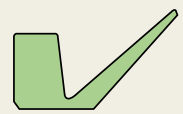
VR1



VR2

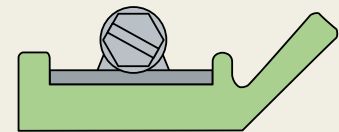


VR3



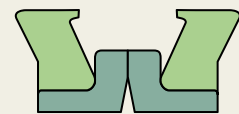
VR4

Axial shaft seals - Excluder seals



CT1

Axial shaft seals - Metal face seals



HDDF





SKF Flex seal designation system

Inch size		Decimal code	
Key	Inch	Key	Inch
00	0	33	0.516
01	0.016	34	0.531
02	0.031	35	0.547
03	0.047	36	0.563
04	0.063	37	0.578
05	0.078	38	0.594
06	0.094	39	0.609
07	0.109	40	0.625
08	0.125	41	0.641
09	0.141	42	0.656
10	0.156	43	0.672
11	0.172	44	0.688
12	0.188	45	0.703
13	0.203	46	0.719
14	0.219	47	0.734
15	0.234	48	0.750
16	0.250	49	0.766
17	0.266	50	0.781
18	0.281	51	0.797
19	0.297	52	0.813
20	0.313	53	0.828
21	0.328	54	0.844
22	0.344	55	0.859
23	0.359	56	0.875
24	0.375	57	0.891
25	0.391	58	0.906
26	0.406	59	0.922
27	0.422	60	0.938
28	0.438	61	0.953
29	0.453	62	0.969
30	0.469	63	0.984
31	0.484	64	1.000
32	0.500		

Rubber seals HS/HSS – Axial cover plate required						
All-rubber: HS		HS4	HS5	HS6	HS7	HS8
Reinforced all-rubber HSS		HSS4	HSS5	HSS6	HSS7	HSS8
Lubrication groove for HSS		HSS4G	HSS5G	HSS6G		HSS8G
Auxiliary lip (dust lip)					HSA7	HSA8
Radial clamp					HSA7C	HSA8C
Solid		✓	✓			
Split				✓	✓	✓
SKF springcover			✓		✓	✓
Threaded spring connection		✓	✓	✓		✓
Hook-and-eye connection (Above 18 in or 455 mm)				✓		✓
Control-wire connection					✓	

Dimension / Designation examples

Shaft (d1)	Decimal Code ¹	Bore (D)	Decimal Code ¹	Bore Depth (B)	Decimal Code ²
12.00"	1200	13.25"	1316	0.75"	48
6.25"	616	7.00"	700	0.50"	32
18.25"	1816	20.25"	2016	1.00"	64
675mm	-	725.2mm	-	28mm	-

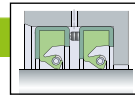
¹ Inch sizes are stated in 1/64th of an inch, as shown in the table on the left.

² "L6" indicates a 6mm lug length from the table on the right.





Metal case seal HDS Open housing



Lip features



HDS1

HDS2
Springcover

HDS7
no spring

Spacer lug on back of seal



HDS1L

HDS2L

HDS7L

Auxiliary lip (dust lip)



HDSA1

HDSA2

-

PTFE or ECOPUR auxiliary lip (dust lip) on back of seal



-

HDSF2

HDSF7

PTFE or ECOPUR auxiliary lip (dust lip) on face of seal



-

HDSH2

HDSH7

Stainless steel case (Optional)



HDS19

HDS29

HDS79

Size

Type

Lip

Lugs specifications

HDS1L / HDS2L / HDS7L

Metric Code L*	Length (mm)	Inch Code L*	Length (in)
L4	4	L08	0.125
L5	5	L10	0.156
L6	6	L12	0.188
L7	7	L16	0.250
L8	8	L20	0.313
L9	9	L24	0.375

Main lip material

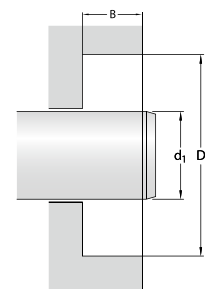
Key	Main lip
R	NBR
H	HNBR
D	XNBR
V	FKM

Auxiliary lip material (if applicable)

Key	Auxiliary lip	Shaft size
D	XNBR	-
T	PTFE	-
U	H-ECOPUR	<600mm
U	G-ECOPUR	>600mm
L	S-ECOPUR	<600mm
L	G-ECOPUR SL	>600mm

Type	Main Lip	Dust Lip	Designation
HDS2	NBR	-	1200 - 1316 - 48 HDS2 R
HSS8G	FKM	-	616 - 700 - 32 HSS8G V
HDSF2L6 ²	HNBR	H-ECOPUR	1816 - 2016 - 64 HDSF2L6 HU
HDSA2	XNBR	XNBR	675 X 725.2 X 28 HDSA2 DD

Separators (- inch, X metric)





CR Seals product listings

Understanding key table elements

Designed to be user-friendly, CR Seals and product listings convey a good deal of information on every line. As you familiarize yourself with the tables, keep these need-to-know basics in mind:

Seal and product sizes

All size listings for all CR Seals products are arranged by ascending shaft diameters, segregated as inch sizes (green bars) and metric sizes (blue bars). All bore and width sizes listed under the green bars are in inches, while all sizes listed under blue bars are in mm.

Bore / width

Once you have selected the right shaft size, you will need to identify the seals with a matching bore size. The recommended tolerance ranges for shaft and bore can be found on **pages 46-49**. While it is important to choose a seal with a close match to shaft and bore, it is less important to choose a seal with a predetermined width. As long as the seal is short enough not to protrude out of the bore, it will work just fine.

Preferred designs

Highlighted in bold in the “Part Number” and “Seal Type” columns, preferred seal design listings represent the highest performing or otherwise best suited sealing solution for a given shaft diameter.

Lip Material

- R = NBR** (nitrile rubber)
- RG = NBR** with advanced oil resistance and pumping ability
- D = XNBR** (carboxylated nitrile)
- H = HNBR** (hydrogenated nitrile)
- V = FKM** (fluorocarbon rubber)
- P = ACM** (polyacrylate elastomer)
- T = PTFE** (polytetrafluoroethylene)

Seal technologies

- W = SKF Wave:** Featuring the patented SKF Wave lip design, these are the most robust standard seals ever made.
- E = SKF Edge:** SKF Edge shaft seals HMS5 and HMSA10 combine an SKF-developed NBR compound with a rubber outside diameter according to ISO/DIN global design standards – primarily available in metric sizes.
- F = SKF Flex:** SKF Flex seals deliver heavy-duty performance in fully customizable sizes and features to fit and perform in the application.
- S = Standard oil seal:** SKF carries some older designs that do not have the modern advancements of the SKF Edge or SKF Wave lips, but may be adequate for some applications. Use these when SKF Edge or SKF Wave seals are not available in the size needed.
- G = Grease seal:** Oil seals can handle oil or grease applications, but grease seals do not have the garter spring needed for oil retention, so they are for grease only. Normally you point the lip away from grease if the main concern is water/dirt ingress, which also allows the grease to purge if needed.

Key features

- ▲ **WasteWatcher:** Indicates that the product is most likely to be in stock at our distributors and our own SKF warehouses. The CR Seals Waste-Watcher program helps distributors optimize seal inventories.
- **Bore-Tite:** Indicates the seal uses SKF Bore-Tite, a green, water-based acrylic sealant used as a coating on the outside diameter of the seal.
- ▣ **SS Case:** Indicates the seal has a stainless steel seal case.
- ◎ **SS Spring:** Indicates the seal has a stainless steel seal lip spring.
- ◆ **Pressure seal up to 50 psi:** Suitable for higher-pressure sealing applications; typical industrial shaft seals can handle only up to 5 or 10 psi.
- ◇ **Cover plate required:** Proper seal installation and operation requires a cover plate, which clamps down axially on an all-rubber seal to hold it in place in many large diameter seal applications.

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Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features						
METRIC (cont.) 0.394 in. Shaft Diameter 10 mm							METRIC (cont.) 0.472 in. Shaft Diameter 12 mm												
30	7	10X30X7 HMSA10 V	HMSA10	V	E	⊙	26	7	12X26X7 CRW1 R	CRW1	R	W							
30	10	10X30X10 HMS4 R	HMS4	R	S		26	8	12X26X8 HMS4 R	HMS4	R	S							
40	7	10X40X7 HMS4 R	HMS4	R	S		28	7	12X28X7 CRW1 P	CRW1	P	W	■						
40	7	10X40X7 HMSA7 R	HMSA7	R	S		28	7	12X28X7 CRW1 R	CRW1	R	W	■						
INCH 0.404 in. Shaft Diameter 10.26 mm							INCH 0.500 in. Shaft Diameter 12.70 mm												
0.620	0.188	4010	HM14	R	G		0.344	99050	SSLEEVE										
0.862	0.250	4012	HM14	R	G		<i>Shaft Ø0.498-0.502" - 'on-shaft' width 0.25" - flange Ø0.61"</i>												
METRIC 0.433 in. Shaft Diameter 11 mm							METRIC 0.512 in. Shaft Diameter 13 mm												
17	4	11X17X4 HMS4 R	HMS4	R	S		26	7	13X26X7 HMS5 RG	HMS5	RG	E							
22	6	11X22X6 HMSA7 V	HMSA7	V	S		26	7	13X26X7 HMS5 V	HMS5	V	E	⊙						
22	7	11X22X7 HMS4 R	HMS4	R	S		26	7	▲13X26X7 HMSA10 RG	HMSA10	RG	E							
26	7	11X26X7 HMS4 R	HMS4	R	S		26	7	13X26X7 HMSA10 V	HMSA10	V	E	⊙						
30	7	11X30X7 HMS4 R	HMS4	R	S		INCH 0.500 in. Shaft Diameter 12.70 mm												
INCH 0.438 in. Shaft Diameter 11.13 mm							INCH 0.500 in. Shaft Diameter 12.70 mm												
0.836	0.188	4231	HM14	R	G		0.344	99050	SSLEEVE										
0.875	0.250	4249	CRW1	P	W	■	<i>Shaft Ø0.498-0.502" - 'on-shaft' width 0.25" - flange Ø0.61"</i>												
0.875	0.250	▲4251	CRW1	R	W		0.688	0.094	4911	HM3	R	G							
0.875	0.375	4261	CRWA1	R	W		0.750	0.125	4912	HM14	R	G	■						
0.999	0.250	4356	CRW1	V	W	■	0.820	0.156	4914	HM14	R	G	■						
0.999	0.250	4340	HM14	R	G		0.843	0.250	4923	HM14	R	G	■						
0.999	0.375	▲4355	CRW1	R	W	■	0.875	0.125	4925	HM14	R	G							
1.124	0.250	▲4390	CRW1	R	W	■	0.875	0.250	4936	CRW1	D	W	■						
0.836	0.188	4623	HM14	P	G		0.875	0.250	▲4931	CRW1	R	W	■						
0.875	0.219	4628	HM14	R	G		0.875	0.250	4932	CRW1	V	W	■						
METRIC 0.472 in. Shaft Diameter 12 mm							METRIC 0.512 in. Shaft Diameter 13 mm												
8.4	99049	SSLEEVE					0.875	0.250	4933	CRWA1	V	W	■						
<i>Shaft Ø11.91-12.01mm - 'on-shaft' width 6mm - flange Ø15.5mm</i>																			
16	3	12X16X3 HM4 R	HM4	R	G		0.875	0.250	4935	CRWA1	V	W	■						
18	3	12X18X3 HM4 R	HM4	R	G		0.875	0.250	4938	HM14	R	G							
18	3	12X18X3 HMS4 R	HMS4	R	S		0.875	0.313	4939	CRWA1	R	W	■						
18	3	12X18X3 HMSA7 R	HMSA7	R	S		0.875	0.313	4940	CRWA5	R	W	■						
19	3	12X19X3 HM4 R	HM4	R	G		0.875	0.313	4941	CRWA5	V	W	■						
19	5	12X19X5 HMS5 RG1	HMS5	RG	E		0.987	0.250	4943	CRW1	R	W	■						
19	5	12X19X5 HMS5 V1	HMS5	V	E	⊙	0.999	0.188	4950	HM14	R	G							
19	5	▲12X19X5 HMSA10 RG1	HMSA10	RG	E		0.999	0.250	4984	CRW1	R	W	■						
19	5	12X19X5 HMSA10 V1	HMSA10	V	E	⊙	0.999	0.250	4980	CRW1	V	W	■						
20	5	12X20X5 CRSA1 R	CRSA1	R	S		0.999	0.250	4982	CRWA1	P	W	■						
20	5	12X20X5 HMS4 R	HMS4	R	S		0.999	0.250	▲4985	CRWA1	R	W	■						
22	4	12X22X4 HM4 R	HM4	R	G		0.999	0.250	4991	CRWA5	V	W	■						
22	5	12X22X5 HMS5 RG	HMS5	RG	E		0.999	0.250	4990	HM14	R	G							
22	5	12X22X5 HMS5 V	HMS5	V	E	⊙	0.999	0.313	4996	CRWA5	R	W	■						
22	5	▲12X22X5 HMSA10 RG	HMSA10	RG	E		1.000	0.375	541625	CRW1	R	W							
22	5	12X22X5 HMSA10 V	HMSA10	V	E	⊙	1.124	0.250	5066	CRW1	V	W	■						
22	6	12X22X6 HMS5 RG	HMS5	RG	E		1.124	0.250	5062	CRWA1	R	W	■						
22	6	12X22X6 HMS5 V	HMS5	V	E	⊙	1.124	0.250	5067	CRWA1	V	W	■						
22	6	12X22X6 HMSA10 RG	HMSA10	RG	E		1.124	0.250	5069	CRWA5	R	W	■						
22	6	12X22X6 HMSA10 V	HMSA10	V	E	⊙	1.124	0.250	5072	CRWA5	V	W	■						
22	6	12X22X6 HMSA72P2 R	HMSA72P2	R	S	◆	1.124	0.250	5085	HM14	R	G							
22	7	12X22X7 CRW1 R	CRW1	R	W	■	1.124	0.256	▲5068	CRW1	R	W	■						
22	7	12X22X7 CRW1 V	CRW1	V	W	■	1.124	0.313	5046	CRW1	P	W	■						
22	7	12X22X7 HMS5 RG	HMS5	RG	E		1.250	0.250	▲5133	CRW1	R	W	■						
22	7	12X22X7 HMS5 V	HMS5	V	E	⊙	1.250	0.250	546966	CRW1	V	W	■						
22	7	12X22X7 HMSA10 RG	HMSA10	RG	E		1.375	0.250	▲5150	CRW1	R	W	■						
22	7	12X22X7 HMSA10 V	HMSA10	V	E	⊙	1.375	0.250	5151	CRW1	V	W	■						
24	6	12X24X6 HMSA7P2 R	HMSA7P2	R	S	◆	METRIC 0.512 in. Shaft Diameter 13 mm												
24	7	12X24X7 HMS5 RG	HMS5	RG	E		26	7	13X26X7 HMS5 RG	HMS5	RG	E							
24	7	12X24X7 HMS5 V	HMS5	V	E	⊙	26	7	13X26X7 HMS5 V	HMS5	V	E	⊙						
24	7	▲12X24X7 HMSA10 RG	HMSA10	RG	E		26	7	▲13X26X7 HMSA10 RG	HMSA10	RG	E							
24	7	12X24X7 HMSA10 V	HMSA10	V	E	⊙	26	7	13X26X7 HMSA10 V	HMSA10	V	E	⊙						
25	4.50	12X25X4.5 HMS4 R	HMS4	R	S		Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs												
25	7	12X25X7 CRW1 R	CRW1	R	W														
25	7	12X25X7 HMS5 RG	HMS5	RG	E														
25	7	12X25X7 HMS5 V	HMS5	V	E	⊙													
25	7	▲12X25X7 HMSA10 RG	HMSA10	RG	E														
25	7	12X25X7 HMSA10 V	HMSA10	V	E	⊙													





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
METRIC (cont.) 0.512 in. Shaft Diameter 13 mm							METRIC (cont.) 0.591 in. Shaft Diameter 15 mm						
28	7	13X28X7 CRS1 R	CRS1	R	S		21	3	15X21X3 HM4 V	HM4	V	G	
28	7	13X28X7 HMS4 R	HMS4	R	S		21	5	5904	HMSA7	P	S	
30	7	13X30X7 HMSA7 R	HMSA7	R	S		23	3	15X23X3 HM4 R	HM4	R	G	
30	8	13X30X8 HMS4 R	HMS4	R	S		24	5	15X24X5 HMS4 R	HMS4	R	S	
INCH 0.531 in. Shaft Diameter 13.49 mm							INCH 0.624 in. Shaft Diameter 15.85 mm						
0.999	0.250	5321	CRWA1	S	W	■	24	5	15X24X5 HMSA7 R	HMSA7	R	S	
INCH 0.546 in. Shaft Diameter 13.87 mm							INCH 0.625 in. Shaft Diameter 15.88 mm						
0.875	0.250	5385	CRW1	P	W		0.406	99062	SSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
1.124	0.313	5334	CRSA1	R	S		0.406	99810	GSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
METRIC 0.551 in. Shaft Diameter 14 mm							INCH 0.625 in. Shaft Diameter 15.88 mm						
9.9	99055	SSLEEVE	Shaft Ø13.89-14mm - 'on-shaft' width 6.35mm - flange Ø19.05mm				0.812	0.094	6105	HM3	R	G	
20	3	14X20X3 HM4 R	HM4	R	G		0.813	0.094	6106	HM3	V	G	
22	3	14X22X3 HM4 R	HM4	R	G		INCH 0.594 in. Shaft Diameter 15.09 mm						
22	4	14X22X4 HMS4 R	HMS4	R	S		1.250	0.313	5950	CRSA1	R	S	
22	4	14X22X4 HMSA7 R	HMSA7	R	S		1.375	0.313	5966	CRSA1	R	S	■
24	6	14X24X6 HMSA7 R	HMSA7	R	S		INCH 0.624 in. Shaft Diameter 15.85 mm						
24	7	14X24X7 HMS5 RG	HMS5	RG	E		1.131	0.188	6243	HM14	R	G	■
24	7	14X24X7 HMS5 V	HMS5	V	E	⊙	INCH 0.625 in. Shaft Diameter 15.88 mm						
24	7	▲14X24X7 HMSA10 RG	HMSA10	RG	E		0.406	99062	SSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
24	7	14X24X7 HMSA10 V	HMSA10	V	E	⊙	0.406	99810	GSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
25	5	14X25X5 HMS5 RG	HMS5	RG	E		INCH 0.594 in. Shaft Diameter 15.09 mm						
25	5	14X25X5 HMS5 V	HMS5	V	E	⊙	1.250	0.313	5950	CRSA1	R	S	
25	5	14X25X5 HMSA10 RG	HMSA10	RG	E		1.375	0.313	5966	CRSA1	R	S	■
25	5	14X25X5 HMSA10 V	HMSA10	V	E	⊙	INCH 0.624 in. Shaft Diameter 15.85 mm						
25	7	14X25X7 HMSA7 P	HMSA7	P	S		1.131	0.188	6243	HM14	R	G	■
26	7	14X26X7 CRW1 V	CRW1	V	W	■	INCH 0.625 in. Shaft Diameter 15.88 mm						
28	6	14X28X6 HMS4 R	HMS4	R	S		0.406	99062	SSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
28	7	14X28X7 HMS5 RG	HMS5	RG	E		0.406	99810	GSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
28	7	14X28X7 HMS5 V	HMS5	V	E	⊙	INCH 0.594 in. Shaft Diameter 15.09 mm						
28	7	▲14X28X7 HMSA10 RG	HMSA10	RG	E		1.250	0.313	5950	CRSA1	R	S	
28	7	14X28X7 HMSA10 V	HMSA10	V	E	⊙	1.375	0.313	5966	CRSA1	R	S	■
28.55	5.16	5399	HM21	R	G	■	INCH 0.624 in. Shaft Diameter 15.85 mm						
30	7	14X30X7 HMS5 RG	HMS5	RG	E		1.131	0.188	6243	HM14	R	G	■
30	7	14X30X7 HMS5 V	HMS5	V	E	⊙	INCH 0.625 in. Shaft Diameter 15.88 mm						
30	7	▲14X30X7 HMSA10 RG	HMSA10	RG	E		0.406	99062	SSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
30	7	14X30X7 HMSA10 V	HMSA10	V	E	⊙	0.406	99810	GSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
35	7	14X35X7 CRW1 R	CRW1	R	W	■	INCH 0.594 in. Shaft Diameter 15.09 mm						
35	7	14X35X7 HMS4 R	HMS4	R	S		1.250	0.313	5950	CRSA1	R	S	
INCH 0.554 in. Shaft Diameter 14.07 mm							INCH 0.624 in. Shaft Diameter 15.85 mm						
0.999	0.250	▲5605	CRW1	R	W	■/⊙	1.375	0.313	5966	CRSA1	R	S	■
INCH 0.563 in. Shaft Diameter 14.30 mm							INCH 0.625 in. Shaft Diameter 15.88 mm						
0.391	99056	SSLEEVE	Shaft Ø0.56-0.564" - 'on-shaft' width 0.25" - flange Ø0.75"				0.812	0.094	6105	HM3	R	G	
0.750	0.094	5500	HM3	R	G		0.813	0.094	6106	HM3	V	G	
0.875	0.188	5523	CRW1	D	W	■	INCH 0.594 in. Shaft Diameter 15.09 mm						
0.875	0.188	5522	HM14	R	G	■	1.250	0.313	5950	CRSA1	R	S	
0.999	0.219	5569	HM14	R	G	■	1.375	0.313	5966	CRSA1	R	S	■
0.999	0.250	5543	CRW1	R	W	■/⊙	INCH 0.624 in. Shaft Diameter 15.85 mm						
0.999	0.250	5542	CRW1	V	W	■	1.131	0.188	6243	HM14	R	G	■
0.999	0.250	5606	CRWA1	R	W	■	INCH 0.625 in. Shaft Diameter 15.88 mm						
0.999	0.256	▲5541	CRW1	R	W	■	0.406	99062	SSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
1.124	0.250	▲5652	CRW1	R	W	■	0.406	99810	GSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
1.124	0.250	5650	CRW1	V	W	■	INCH 0.594 in. Shaft Diameter 15.09 mm						
1.124	0.250	5662	CRWA1	R	W	■	1.250	0.313	5950	CRSA1	R	S	
1.124	0.250	5685	HM14	R	G		1.375	0.313	5966	CRSA1	R	S	■
1.250	0.250	▲5707	CRW1	R	W	■	INCH 0.624 in. Shaft Diameter 15.85 mm						
1.375	0.250	▲5756	CRW1	R	W	■	1.131	0.188	6243	HM14	R	G	■
METRIC 0.591 in. Shaft Diameter 15 mm							INCH 0.625 in. Shaft Diameter 15.88 mm						
9	99059	SSLEEVE	Shaft Ø14.96-15.06mm - 'on-shaft' width 5mm - flange Ø19.05mm				0.406	99062	SSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			
21	3	15X21X3 HM4 R	HM4	R	G		0.406	99810	GSLEEVE	Shaft Ø0.623-0.627" - 'on-shaft' width 0.313" - flange Ø0.75"			

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
METRIC (cont.) 0.669 in. Shaft Diameter 17 mm							METRIC (cont.) 0.709 in. Shaft Diameter 18 mm						
40	7	17X40X7 HMS5 V	HMS5	V	E	⊙	32	7	18X32X7 HMS5 V	HMS5	V	E	⊙
40	7	▲17X40X7 HMSA10 RG	HMSA10	RG	E		32	7	▲18X32X7 HMSA10 RG	HMSA10	RG	E	
40	7	17X40X7 HMSA10 V	HMSA10	V	E	⊙	32	7	18X32X7 HMSA10 V	HMSA10	V	E	⊙
40	10	17X40X10 HMS5 RG	HMS5	RG	E		32	8	18X32X8 HMS4 R	HMS4	R	S	
40	10	17X40X10 HMS5 V	HMS5	V	E	⊙	34	8	7089	CRSA1	P	S	
40	10	17X40X10 HMSA10 RG	HMSA10	RG	E		35	6	18X35X6 HMSA7P2 R	HMSA7P2	R	S	◆
40	10	17X40X10 HMSA10 V	HMSA10	V	E	⊙	35	7	18X35X7 CRW1 R	CRW1	R	W	
47	7	17X47X7 CRW1 R	CRW1	R	W		35	7	18X35X7 HMS5 RG	HMS5	RG	E	
47	7	17X47X7 HMS5 RG	HMS5	RG	E		35	7	18X35X7 HMS5 V	HMS5	V	E	⊙
47	7	17X47X7 HMS5 V	HMS5	V	E	⊙	35	7	▲18X35X7 HMSA10 RG	HMSA10	RG	E	
47	7	▲17X47X7 HMSA10 RG	HMSA10	RG	E		35	7	18X35X7 HMSA10 V	HMSA10	V	E	⊙
47	7	17X47X7 HMSA10 V	HMSA10	V	E	⊙	37	8	18X37X8 HMSA7 R	HMSA7	R	S	
47	8	17X47X8 HMSA7 R	HMSA7	R	S		38	7	18X38X7 HMSA7 R	HMSA7	R	S	
47	10	17X47X10 HMS5 RG	HMS5	RG	E		40	7	18X40X7 CRW1 R	CRW1	R	W	■
47	10	17X47X10 HMS5 V	HMS5	V	E	⊙	40	7	18X40X7 HMS5 RG	HMS5	RG	E	
47	10	17X47X10 HMSA10 RG	HMSA10	RG	E		40	7	18X40X7 HMS5 V	HMS5	V	E	⊙
47	10	17X47X10 HMSA10 V	HMSA10	V	E	⊙	40	7	▲18X40X7 HMSA10 RG	HMSA10	RG	E	
INCH 0.684 in. Shaft Diameter 17.37 mm							INCH 0.736 in. Shaft Diameter 18.70 mm						
0.438	99060	SSLEEVE		Shaft Ø0.682-0.686" - 'on-shaft' width 0.313" - flange Ø0.9"			35	7	7400	HMSA7	R	S	
INCH 0.688 in. Shaft Diameter 17.48 mm							METRIC 0.748 in. Shaft Diameter 19 mm						
0.999	0.188	6720	HM14	R	G	■	27	4	19X27X4 HM4 R	HM4	R	G	
1.124	0.190	6738	CRW1	R	W	■	27	6	19X27X6 HMS4 R	HMS4	R	S	
1.124	0.250	▲6741	CRW1	R	W	■	30	7	19X30X7 HMS5 RG	HMS5	RG	E	
1.124	0.250	6743	CRW1	R	W	■⊙	30	7	19X30X7 HMS5 V	HMS5	V	E	⊙
1.124	0.250	6745	CRW1	V	W	■⊙	30	7	▲19X30X7 HMSA10 RG	HMSA10	RG	E	
1.124	0.250	6759	HM14	R	G	■	30	7	19X30X7 HMSA10 V	HMSA10	V	E	⊙
1.187	0.188	▲6763	CRW1	R	W	■	30	8	19X30X8 HMS5 RG	HMS5	RG	E	
1.187	0.188	6770	CRW1	V	W	■	30	8	19X30X8 HMS5 V	HMS5	V	E	⊙
1.250	0.256	6765	CRWA1	R	W	■	30	8	19X30X8 HMSA10 RG	HMSA10	RG	E	
1.250	0.313	▲6767	CRW1	R	W	■	30	8	19X30X8 HMSA10 V	HMSA10	V	E	⊙
1.250	0.313	6768	CRW1	V	W	■	30	8	19X30X8 HMS5 V	HMS5	V	E	⊙
1.252	0.220	6769	CRWH1	V	W	■	30	8	19X30X8 HMSA10 RG	HMSA10	RG	E	
1.375	0.125	6915	HM14	R	G	■	30	8	19X30X8 HMSA10 V	HMSA10	V	E	⊙
1.375	0.250	6814	CRWA1	R	W	■	32	7	19X32X7 HMS5 RG	HMS5	RG	E	
1.375	0.250	6920	HM14	R	G	■	32	7	19X32X7 HMS5 V	HMS5	V	E	⊙
1.375	0.313	▲6816	CRW1	R	W	■	32	7	▲19X32X7 HMSA10 RG	HMSA10	RG	E	
1.375	0.313	6817	CRW1	V	W	■	32	7	19X32X7 HMSA10 V	HMSA10	V	E	⊙
1.499	0.250	6935	CRW1	R	W	■	35	7	19X35X7 CRW1 R	CRW1	R	W	■
1.624	0.250	▲6990	CRWA1	R	W	■	35	8	19X35X8 HMS4 R	HMS4	R	S	
METRIC 0.709 in. Shaft Diameter 18 mm							INCH 0.750 in. Shaft Diameter 19.05 mm						
11	99082	SSLEEVE		Shaft Ø17.88-17.98mm - 'on-shaft' width 8mm - flange Ø24.43mm			0.438	99076	SSLEEVE		Shaft Ø0.748-0.752" - 'on-shaft' width 0.313" - flange Ø0.945"		
24	3	18X24X3 HM4 R	HM4	R	G		0.438	99811	SSLEEVE		Shaft Ø0.748-0.752" - 'on-shaft' width 0.313" - flange Ø0.945"		
26	4	18X26X4 HMA1 R	HMA1	R	G		1.000	0.125	7408	HM14	D	G	■
28	6	18X28X6 HMS4 R	HMS4	R	S		1.000	0.125	7410	HM14	R	G	
28	7	18X28X7 HMS5 RG	HMS5	RG	E		1.006	0.125	7411	HM14	R	G	■
28	7	18X28X7 HMS5 V	HMS5	V	E	⊙	1.062	0.188	7413	HM14	R	G	
28	7	▲18X28X7 HMSA10 RG	HMSA10	RG	E		1.124	0.156	7415	HM14	R	G	■
28	7	18X28X7 HMSA10 V	HMSA10	V	E	⊙	1.124	0.188	▲7414	CRW1	R	W	■
28	8	18X28X8 HMS4 R	HMS4	R	S		1.124	0.188	7417	CRW1	V	W	■
30	5	18X30X5 CRW1 V	CRW1	V	W								
30	6	18X30X6 HMS5 RG	HMS5	RG	E								
30	6	18X30X6 HMS5 V	HMS5	V	E	⊙							
30	6	18X30X6 HMSA10 RG	HMSA10	RG	E								
30	6	18X30X6 HMSA10 V	HMSA10	V	E	⊙							
30	6	18X30X6 HMSA7P2 R	HMSA7P2	R	S	◆							
30	7	18X30X7 CRW1 R	CRW1	R	W	■							
30	7	18X30X7 CRW1 V	CRW1	V	W	■							
30	7	18X30X7 HMS5 RG	HMS5	RG	E								
30	7	18X30X7 HMS5 V	HMS5	V	E	⊙							
30	7	▲18X30X7 HMSA10 RG	HMSA10	RG	E								
30	7	18X30X7 HMSA10 V	HMSA10	V	E	⊙							
32	7	18X32X7 CRW1 R	CRW1	R	W	■							
32	7	18X32X7 CRW1 V	CRW1	V	W	■							
32	7	18X32X7 HMS5 RG	HMS5	RG	E								

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH (cont.) 0.750 in. Shaft Diameter 19.05 mm							METRIC (cont.) 0.787 in. Shaft Diameter 20 mm						
1.187	0.156	7421	HM14	R	G		26	4	20X26X4 HMSA7 R	HMSA7	R	S	
1.249	0.188	7467	CRW1	V	W	☉	28	4	20X28X4 HM4 R	HM4	R	G	
1.250	0.125	527938	HM1	D	G		28	6	20X28X6 HMS4 R	HMS4	R	S	
1.250	0.125	528762	HM1	R	G	▸	28.55	4.78	7740	CRW1	R	W	■
1.250	0.188	▲ 7439	CRW1	R	W	■	30	5	20X30X5 HMS5 RG	HMS5	RG	E	
1.250	0.188	7478	CRW1	R	W		30	5	20X30X5 HMS5 V	HMS5	V	E	☉
<i>OD IS GROUND</i>													
1.250	0.250	7438	CRW1	R	W	■☉	30	5	20X30X5 HMSA10 RG	HMSA10	RG	E	
<i>W/BRASS CASE & SS SPRING</i>													
1.250	0.250	7440	CRW1	R	W	■	30	5	20X30X5 HMSA10 V	HMSA10	V	E	☉
1.250	0.250	7450	CRW1	V	W	■	30	5	20X30X5 CRS1 R	CRS1	R	S	
1.250	0.250	7455	CRWA1	V	W	■☉	30	7	20X30X7 CRW1 R	CRW1	R	W	■
1.250	0.250	7434	CRWA5	R	W	■◆	30	7	20X30X7 HMS5 RG	HMS5	RG	E	
1.250	0.250	7464	HM14	R	G	■	30	7	20X30X7 HMS5 V	HMS5	V	E	☉
1.250	0.256	▲ 7443	CRWA1	R	W	■	30	7	20X30X7 HMSA10 RG	HMSA10	RG	E	
1.250	0.256	7453	CRWA1	R	W	■	30	7	20X30X7 HMSA10 V	HMSA10	V	E	☉
1.250	0.375	7449	CRWA5	R	W	■◆	30	7	20X30X7 CRS1 V	CRS1	V	S	
1.252	0.188	▲ 7469	CRW1	R	W	■	31	7	20X31X7 CRW1 R	CRW1	R	W	■
1.259	0.250	7477	HM14	R	G	■	32	6	20X32X6 HMS5 RG	HMS5	RG	E	
1.260	0.250	▲ 7473	CRW1	R	W	■	32	6	20X32X6 HMS5 V	HMS5	V	E	☉
1.301	0.250	7481	HM14	R	G	■	32	6	20X32X6 HMSA10 RG	HMSA10	RG	E	
1.312	0.250	▲ 7474	CRW1	R	W	■	32	6	20X32X6 HMSA10 V	HMSA10	V	E	☉
1.312	0.250	7475	CRWA1	R	W	■	32	7	20X32X7 CRS1 V	CRS1	V	S	
1.375	0.250	7512	CRW1	R	W	■	32	7	20X32X7 CRW1 R	CRW1	R	W	■
1.375	0.250	7515	CRW1	V	W	■	32	7	20X32X7 HMS5 RG	HMS5	RG	E	
1.375	0.250	7533	CRWA1	P	W	■	32	7	20X32X7 HMS5 V	HMS5	V	E	☉
1.375	0.250	▲ 7513	CRWA1	R	W	■	32	7	▲ 20X32X7 HMSA10 RG	HMSA10	RG	E	
1.375	0.250	7517	CRWA1	V	W	■	32	7	20X32X7 HMSA10 V	HMSA10	V	E	☉
1.375	0.250	7509	CRWA5	V	W	■◆	32	8	20X32X8 HMS4 R	HMS4	R	S	
1.375	0.250	7537	HM14	P	G		34	7	20X34X7 HMS5 RG	HMS5	RG	E	
1.375	0.250	7536	HM14	R	G	■	34	7	20X34X7 HMS5 V	HMS5	V	E	☉
1.437	0.250	7550	HM14	R	G	■	34	7	20X34X7 HMSA10 RG	HMSA10	RG	E	
1.499	0.250	▲ 7572	CRW1	R	W	■	34	7	20X34X7 HMSA10 V	HMSA10	V	E	☉
1.499	0.250	7567	CRW1	V	W	■	34	7	20X34X7 HMSA7 P	HMSA7	P	S	
1.499	0.250	▲ 7573	CRWA1	R	W	■	35	6	20X35X6 HMS5 RG	HMS5	RG	E	
1.499	0.250	7571	HM14	R	G	■	35	6	20X35X6 HMS5 V	HMS5	V	E	☉
1.575	0.250	▲ 7591	CRW1	R	W	■	35	6	20X35X6 HMSA10 RG	HMSA10	RG	E	
1.624	0.250	7627	CRW1	R	W	■	35	6	20X35X6 HMSA10 V	HMSA10	V	E	☉
1.624	0.250	7623	CRW1	V	W	■☉	35	7	20X35X7 CRW1 R	CRW1	R	W	■
1.624	0.250	▲ 7628	CRWA1	R	W	■	35	7	20X35X7 CRW1 V	CRW1	V	W	■
1.624	0.250	7624	CRWA1	V	W	■☉	35	7	20X35X7 HMS5 RG	HMS5	RG	E	
1.752	0.250	▲ 7636	CRW1	R	W	■	35	7	20X35X7 HMS5 V	HMS5	V	E	☉
1.752	0.250	7638	CRWA1	V	W	■	35	7	▲ 20X35X7 HMSA10 RG	HMSA10	RG	E	
1.828	0.250	7661	CRW1	R	W	■	35	7	20X35X7 HMSA10 V	HMSA10	V	E	☉
1.874	0.250	▲ 7690	CRW1	R	W	■	35	8	20X35X8 HMS5 RG	HMS5	RG	E	
2.047	0.313	▲ 7693	CRW1	R	W	■	35	8	20X35X8 HMS5 V	HMS5	V	E	☉
							35	8	20X35X8 HMSA10 RG	HMSA10	RG	E	
							35	8	20X35X8 HMSA10 V	HMSA10	V	E	☉
INCH 0.760 in. Shaft Diameter 19.30 mm							35	10	20X35X10 HMS5 RG	HMS5	RG	E	
0.438	99081	SSLEEVE					35	10	20X35X10 HMS5 V	HMS5	V	E	☉
							35	10	20X35X10 HMSA10 RG	HMSA10	RG	E	
							35	10	20X35X10 HMSA10 V	HMSA10	V	E	☉
INCH 0.781 in. Shaft Diameter 19.84 mm							36	7	20X36X7 CRW1 R	CRW1	R	W	■
0.438	99080	SSLEEVE					36	7	20X36X7 CRW1 V	CRW1	V	W	■
							36	7	20X36X7 HMS5 RG	HMS5	RG	E	
							36	7	20X36X7 HMS5 V	HMS5	V	E	☉
1.375	0.197	7831	HM14	R	G	■	36	7	▲ 20X36X7 HMSA10 RG	HMSA10	RG	E	
1.375	0.313	▲ 7829	CRW1	R	W	■	36	7	20X36X7 HMSA10 V	HMSA10	V	E	☉
1.375	0.313	7824	CRW1	V	W	■	36	7	538124	CRW1	V	W	■
1.499	0.313	▲ 7849	CRW1	R	W	■	1.438	0.256	20X37X7 CRW1 R	CRW1	R	W	
1.624	0.313	▲ 7872	CRW1	R	W	■	37	7	20X37X7 CRW1 V	CRW1	V	W	■
1.752	0.313	8213	CRSHA1	R	S		37	7	20X37X7 HMS5 RG	HMS5	RG	E	
1.828	0.250	7889	CRW1	P	W	■	37	7	20X37X7 HMS5 V	HMS5	V	E	☉
							37	7	▲ 20X37X7 HMSA10 RG	HMSA10	RG	E	
METRIC 0.787 in. Shaft Diameter 20 mm							37	7	20X37X7 HMSA10 V	HMSA10	V	E	☉
11	99078	SSLEEVE					38	7	20X38X7 CRW1 R	CRW1	R	W	
							38	7	20X38X7 HMS5 RG	HMS5	RG	E	
							38	7	20X38X7 HMS5 V	HMS5	V	E	☉
							38	7	▲ 20X38X7 HMSA10 RG	HMSA10	RG	E	
26	4	20X26X4 HM4 R	HM4	R	G		38	7	20X38X7 HMSA10 V	HMSA10	V	E	☉
26	4	20X26X4 HMS4 R	HMS4	R	S		38	8	20X38X8 HMS4 R	HMS4	R	S	■

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
METRIC (cont.) 0.787 in. Shaft Diameter 20 mm							METRIC (cont.) 0.827 in. Shaft Diameter 21 mm						
40	7	20X40X7 CRW1 R	CRW1	R	W		40	7	21X40X7 HMS5 RG	HMS5	RG	E	
40	7	20X40X7 CRW1 V	CRW1	V	W	■	40	7	21X40X7 HMS5 V	HMS5	V	E	⊙
40	7	20X40X7 HMS5 RG	HMS5	RG	E		40	7	21X40X7 HMSA10 RG	HMSA10	RG	E	
40	7	20X40X7 HMS5 V	HMS5	V	E	⊙	40	7	21X40X7 HMSA10 V	HMSA10	V	E	⊙
40	7	▲ 20X40X7 HMSA10 RG	HMSA10	RG	E		40	8	21X40X8 CRW1 R	CRW1	R	W	■
40	7	20X40X7 HMSA10 V	HMSA10	V	E	⊙	INCH 0.844 in. Shaft Diameter 21.44 mm						
40	10	20X40X10 HMS5 RG	HMS5	RG	E		1.828	0.313	8485	CRSA1	R	S	
40	10	20X40X10 HMS5 V	HMS5	V	E	⊙	INCH 0.859 in. Shaft Diameter 21.82 mm						
40	10	20X40X10 HMSA10 RG	HMSA10	RG	E		0.375	99086	SSLEEVE				
40	10	20X40X10 HMSA10 V	HMSA10	V	E	⊙	<i>Shaft Ø0.857-0.861" - 'on-shaft' width 0.25" - flange Ø1.155"</i>						
42	7	20X42X7 CRW1 R	CRW1	R	W	■	METRIC 0.866 in. Shaft Diameter 22 mm						
42	7	20X42X7 HMS5 RG	HMS5	RG	E		9.1	99084	SSLEEVE				
42	7	20X42X7 HMS5 V	HMS5	V	E	⊙	<i>Shaft Ø21.87-21.97mm - 'on-shaft' width 6.58mm - flange Ø30.18mm</i>						
42	7	▲ 20X42X7 HMSA10 RG	HMSA10	RG	E		12	99085	SSLEEVE				
42	7	20X42X7 HMSA10 V	HMSA10	V	E	⊙	<i>Shaft Ø21.87-21.97mm - 'on-shaft' width 8mm - flange Ø30.18mm</i>						
42	7	20X42X7 CRS1 V	CRS1	V	S		28	4	22X28X4 HM1 R	HM1	R	G	
42	8	20X42X8 HMSA7 R	HMSA7	R	S		30	4	22X30X4 HM4 R	HM4	R	G	
42	10	20X42X10 HMS5 RG	HMS5	RG	E		31	7	22X31X7 CRW1 P	CRW1	P	W	■
42	10	20X42X10 HMS5 V	HMS5	V	E	⊙	32	7	22X32X7 CRW1 R	CRW1	R	W	■
42	10	20X42X10 HMSA10 RG	HMSA10	RG	E		32	7	22X32X7 HMS5 RG	HMS5	RG	E	
42	10	20X42X10 HMSA10 V	HMSA10	V	E	⊙	32	7	22X32X7 HMS5 V	HMS5	V	E	⊙
45	7	20X45X7 HMS5 RG	HMS5	RG	E		32	7	▲ 22X32X7 HMSA10 RG	HMSA10	RG	E	
45	7	20X45X7 HMS5 V	HMS5	V	E	⊙	32	7	22X32X7 HMSA10 V	HMSA10	V	E	⊙
45	7	▲ 20X45X7 HMSA10 RG	HMSA10	RG	E		32	7	22X32X7 HMS4 R	HMS4	R	S	
45	7	20X45X7 HMSA10 V	HMSA10	V	E	⊙	33	7	22X33X7 HMS4 R	HMS4	R	S	
45	12	20X45X12 HMS4 R	HMS4	R	S		35	5	22X35X5 HM14 R	HM14	R	G	
47	7	20X47X7 CRW1 R	CRW1	R	W		35	6	22X35X6 HMS4 R	HMS4	R	S	
47	7	20X47X7 HMS5 RG	HMS5	RG	E		35	7	22X35X7 CRW1 R	CRW1	R	W	
47	7	20X47X7 HMS5 V	HMS5	V	E	⊙	35	7	22X35X7 CRW1 V	CRW1	V	W	■
47	7	▲ 20X47X7 HMSA10 RG	HMSA10	RG	E		35	7	22X35X7 HMS5 RG	HMS5	RG	E	
47	7	20X47X7 HMSA10 V	HMSA10	V	E	⊙	35	7	22X35X7 HMS5 V	HMS5	V	E	⊙
47	10	20X47X10 HMS5 RG	HMS5	RG	E		35	7	▲ 22X35X7 HMSA10 RG	HMSA10	RG	E	
47	10	20X47X10 HMS5 V	HMS5	V	E	⊙	35	7	22X35X7 HMSA10 V	HMSA10	V	E	⊙
47	10	20X47X10 HMSA10 RG	HMSA10	RG	E		35	7	22X35X7 HMS4 R	HMS4	R	S	
47	10	20X47X10 HMSA10 V	HMSA10	V	E	⊙	35	10	22X35X10 HMS4 R	HMS4	R	S	
52	7	20X52X7 CRW1 P	CRW1	P	W		36	7	22X36X7 HMS5 RG	HMS5	RG	E	
52	7	20X52X7 CRW1 R	CRW1	R	W	■	36	7	22X36X7 HMS5 V	HMS5	V	E	⊙
52	7	20X52X7 HMS5 RG	HMS5	RG	E		36	7	▲ 22X36X7 HMSA10 RG	HMSA10	RG	E	
52	7	20X52X7 HMS5 V	HMS5	V	E	⊙	36	7	22X36X7 HMSA10 V	HMSA10	V	E	⊙
52	7	▲ 20X52X7 HMSA10 RG	HMSA10	RG	E		36	7	22X36X7 CRW1 R	CRW1	R	W	
52	7	20X52X7 HMSA10 V	HMSA10	V	E	⊙	36	7	22X36X7 CRW1 V	CRW1	V	W	■
52	8	20X52X8 HMSA7 R	HMSA7	R	S		36	7	22X36X7 HMS5 RG	HMS5	RG	E	
52	10	20X52X10 HMS5 RG	HMS5	RG	E		36	7	22X36X7 HMS5 V	HMS5	V	E	⊙
52	10	20X52X10 HMS5 V	HMS5	V	E	⊙	36	7	▲ 22X36X7 HMSA10 RG	HMSA10	RG	E	
52	10	20X52X10 HMSA10 RG	HMSA10	RG	E		36	7	22X36X7 HMSA10 V	HMSA10	V	E	⊙
52	10	20X52X10 HMSA10 V	HMSA10	V	E	⊙	38	7	22X38X7 CRW1 R	CRW1	R	W	
INCH 0.813 in. Shaft Diameter 20.65 mm							METRIC 0.827 in. Shaft Diameter 21 mm						
0.563	99083	SSLEEVE					35	7	21X35X7 CRW1 R	CRW1	R	W	■
<i>Shaft Ø0.811-0.815" - 'on-shaft' width 0.375" - flange Ø1.188"</i>							35	7	21X35X7 CRW1 V	CRW1	V	W	■
1.063	0.125	8009	HM3	R	G		40	7	22X40X7 HMS5 RG	HMS5	RG	E	
1.187	0.313	8050	CRWA1	V	W	■⊙	40	7	22X40X7 HMS5 V	HMS5	V	E	⊙
1.250	0.188	▲ 8017	CRW1	R	W		40	7	▲ 22X40X7 HMSA10 RG	HMSA10	RG	E	
1.250	0.375	8019	HMS4	R	S		40	7	22X40X7 HMSA10 V	HMSA10	V	E	⊙
1.375	0.234	8080	CRW1	R	W		40	10	22X40X10 HMS5 RG	HMS5	RG	E	
1.375	0.375	▲ 8060	CRW1	R	W	■	40	10	22X40X10 HMS5 V	HMS5	V	E	⊙
1.375	0.375	8053	CRW1	V	W	■	40	10	22X40X10 HMSA10 RG	HMSA10	RG	E	
1.499	0.250	▲ 8088	CRW1	R	W	■	40	10	22X40X10 HMSA10 V	HMSA10	V	E	⊙
1.499	0.256	544245	CRW1	V	W	■	42	7	22X42X7 CRW1 R	CRW1	R	W	■
1.624	0.250	8178	CRW1	V	W	■	42	10	22X42X10 HMS5 RG	HMS5	RG	E	
1.752	0.375	8215	CRW1	R	W	■	42	10	22X42X10 HMS5 V	HMS5	V	E	⊙
METRIC 0.827 in. Shaft Diameter 21 mm							42	10	▲ 22X42X10 HMSA10 RG	HMSA10	RG	E	
35	7	21X35X7 CRW1 R	CRW1	R	W	■	42	10	22X42X10 HMSA10 V	HMSA10	V	E	⊙
35	7	21X35X7 CRW1 V	CRW1	V	W	■	42	11	22X42X11 HMS4 R	HMS4	R	S	
35	7	21X35X7 HMS5 RG	HMS5	RG	E		45	7	22X45X7 HMS5 RG	HMS5	RG	E	
35	7	21X35X7 HMS5 V	HMS5	V	E	⊙	45	7	22X45X7 HMS5 V	HMS5	V	E	⊙
35	7	21X35X7 HMSA10 RG	HMSA10	RG	E		45	7	22X45X7 HMSA10 RG	HMSA10	RG	E	
35	7	21X35X7 HMSA10 V	HMSA10	V	E	⊙	45	7	22X45X7 HMSA10 V	HMSA10	V	E	⊙
							47	7	22X47X7 HMS5 RG	HMS5	RG	E	
							47	7	22X47X7 HMS5 V	HMS5	V	E	⊙
							47	7	▲ 22X47X7 HMSA10 RG	HMSA10	RG	E	

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
METRIC (cont.) 0.866 in. Shaft Diameter 22 mm						
47	7	22X47X7 HMSA10 V	HMSA10	V	E	⊙
47	8	22X47X8 CRW1 R	CRW1	R	W	■
50	8	22X50X8 CRW1 R	CRW1	R	W	■
62	6	22X62X6 HMS5 RG	HMS5	RG	E	■
62	6	22X62X6 HMS5 V	HMS5	V	E	⊙
62	6	22X62X6 HMSA10 RG	HMSA10	RG	E	■
62	6	22X62X6 HMSA10 V	HMSA10	V	E	⊙
62	10	22X62X10 HMS5 RG	HMS5	RG	E	■
62	10	22X62X10 HMS5 V	HMS5	V	E	⊙
62	10	22X62X10 HMSA10 RG	HMSA10	RG	E	■
62	10	22X62X10 HMSA10 V	HMSA10	V	E	⊙

INCH 0.875 in. Shaft Diameter 22.23 mm						
0.438	99087	SSLEEVE				
Shaft Ø0.873-0.877" - 'on-shaft' width 0.313" - flange Ø1.094"						
0.438	99812	GSLEEVE				
Shaft Ø0.873-0.877" - 'on-shaft' width 0.313" - flange Ø1.094"						
1.125	0.125	8620	HM14	R	G	■
1.125	0.125	8619	HM14	V	G	■
1.246	0.188	8625	HM14	R	G	■
1.250	0.188	8624	CRW1	R	W	■
1.250	0.250	8621	CRW1	V	W	■
1.250	0.250	8634	CRWA5	V	W	◆
1.251	0.188	8627	HM14	R	G	■
1.251	0.188	8631	HM3	R	G	▶
1.255	0.188	8632	HM14	R	G	■
1.308	0.250	8649	CRW1	V	W	■
1.308	0.250	8637	HM14	R	G	■
1.312	0.250	8645	HM14	R	G	■
1.375	0.188	8677	HM14	R	G	■
1.375	0.246	8786	CRWA1	R	W	■
1.375	0.250	8646	CRW1	V	W	■
1.375	0.250	8660	CRWA5	R	W	◆
1.375	0.250	8665	CRWA5	V	W	◆
1.375	0.256	8648	CRW1	R	W	■
1.437	0.250	8691	CRW1	R	W	■
1.437	0.250	8690	HM14	R	G	■
1.497	0.313	8694	CRWA5	V	W	◆
1.499	0.250	8700	CRW1	R	W	■
1.499	0.250	8704	CRW1	V	W	■
1.499	0.250	8702	CRWA1	R	W	■
1.499	0.250	8707	CRWA1	V	W	⊙
1.499	0.313	8703	CRW1	R	W	■
1.502	0.313	8748	CRWA1	R	W	■
1.562	0.250	8761	HM14	R	G	■
1.575	0.250	8763	CRW1	R	W	■
1.575	0.250	8772	HM14	R	G	■
1.624	0.250	8796	CRW1	R	W	■
1.624	0.250	8795	CRW1	V	W	■
1.624	0.250	8782	CRWA1	R	W	■
1.624	0.256	534953	CRWA1	V	W	■
1.752	0.250	8821	CRW1	R	W	■
1.828	0.250	8842	CRW1	R	W	■
1.874	0.250	8860	CRW1	R	W	■
2.000	0.250	8870	CRW1	R	W	■
2.050	0.375	8871	CRWH1	V	W	■

METRIC 0.906 in. Shaft Diameter 23 mm						
32	5.50	23X32X5.5 HM1 R	HM1	R	G	■
34	6.50	9006	HMS4	R	S	■
40	7	23X40X7 HMSA7 P	HMSA7	P	S	■
40	8	23X40X8 HMS4 R	HMS4	R	S	■
40	10	23X40X10 HMS5 RG	HMS5	RG	E	■
40	10	23X40X10 HMS5 V	HMS5	V	E	⊙
40	10	23X40X10 HMSA10 RG	HMSA10	RG	E	■
40	10	23X40X10 HMSA10 V	HMSA10	V	E	⊙
42	11	23X42X11 HMS4 R	HMS4	R	S	■

INCH 0.910 in. Shaft Diameter 23.11 mm						
0.438	99091	SSLEEVE				
Shaft Ø0.908-0.912" - 'on-shaft' width 0.313" - flange Ø1.218"						
0.438	99860	GSLEEVE				
Shaft Ø0.908-0.912" - 'on-shaft' width 0.313" - flange Ø1.218"						

INCH 0.938 in. Shaft Diameter 23.83 mm						
1.375	0.250	9244	CRWA1	R	W	■
1.375	0.250	9243	HM14	R	G	■
1.499	0.250	9298	HM14	R	G	■
1.500	0.250	9303	CRW1	R	W	■
1.500	0.250	9304	CRW1	V	W	■
1.624	0.250	9307	CRW1	R	W	■
1.624	0.250	9308	CRW1	V	W	■
1.752	0.250	9347	CRW1	R	W	■
1.828	0.250	9409	CRW1	R	W	■

METRIC 0.945 in. Shaft Diameter 24 mm						
11.1	99092	SSLEEVE				
Shaft Ø23.88-23.98mm - 'on-shaft' width 7.95mm - flange Ø28.7mm						
32	4	24X32X4 HM4 R	HM4	R	G	■
35	7	24X35X7 HMS5 RG	HMS5	RG	E	■
35	7	24X35X7 HMS5 V	HMS5	V	E	⊙
35	7	24X35X7 HMSA10 RG	HMSA10	RG	E	■
35	7	24X35X7 HMSA10 V	HMSA10	V	E	⊙
36	7	24X36X7 CRW1 V	CRW1	V	W	■
37	7	24X37X7 HMS5 RG	HMS5	RG	E	■
37	7	24X37X7 HMS5 V	HMS5	V	E	⊙
37	7	24X37X7 HMSA10 RG	HMSA10	RG	E	■
37	7	24X37X7 HMSA10 V	HMSA10	V	E	⊙
38	7	24X38X7 CRW1 V	CRW1	V	W	■
38	8	24X38X8 HMS4 R	HMS4	R	S	■
40	7	24X40X7 HMS5 RG	HMS5	RG	E	■
40	7	24X40X7 HMS5 V	HMS5	V	E	⊙
40	7	24X40X7 HMSA10 RG	HMSA10	RG	E	■
40	7	24X40X7 HMSA10 V	HMSA10	V	E	⊙
42	8	24X42X8 HMS5 RG	HMS5	RG	E	■
42	8	24X42X8 HMS5 V	HMS5	V	E	⊙
42	8	24X42X8 HMSA10 RG	HMSA10	RG	E	■
42	8	24X42X8 HMSA10 V	HMSA10	V	E	⊙
47	7	24X47X7 HMS5 RG	HMS5	RG	E	■
47	7	24X47X7 HMS5 V	HMS5	V	E	⊙
47	7	24X47X7 HMSA10 RG	HMSA10	RG	E	■
47	7	24X47X7 HMSA10 V	HMSA10	V	E	⊙
47	8	24X47X8 CRW1 R	CRW1	R	W	■
50	10	24X50X10 HMS5 RG	HMS5	RG	E	■
50	10	24X50X10 HMS5 V	HMS5	V	E	⊙
50	10	24X50X10 HMSA10 RG	HMSA10	RG	E	■
50	10	24X50X10 HMSA10 V	HMSA10	V	E	⊙
52	7	24X52X7 HMSA7 R	HMSA7	R	S	■
62	8	534949	CRWA1	V	W	■
62	10	24X62X10 HMS5 RG	HMS5	RG	E	■
62	10	24X62X10 HMS5 V	HMS5	V	E	⊙
62	10	24X62X10 HMSA10 RG	HMSA10	RG	E	■
62	10	24X62X10 HMSA10 V	HMSA10	V	E	⊙

INCH 0.950 in. Shaft Diameter 24.13 mm						
1.358	0.275	9520	CRW1	P	W	■

INCH 0.969 in. Shaft Diameter 24.61 mm						
0.438	99094	SSLEEVE				
Shaft Ø0.966-0.97" - 'on-shaft' width 0.313" - flange Ø1.13"						
0.719	99096	SSLEEVE				
Shaft Ø0.966-0.97" - 'on-shaft' width 0.625" - flange Ø1.13"						
1.406	0.250	9604	CRWA1	P	W	■
1.499	0.313	9613	CRW1	R	W	■
1.499	0.313	9611	CRW1	V	W	■
1.624	0.250	9646	CRW1	R	W	■
1.624	0.250	9647	CRW1	V	W	■
1.686	0.313	9664	CRW1	R	W	■

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
INCH (cont.)							METRIC (cont.)						
0.969 in.		Shaft Diameter		24.61 mm			0.984 in.		Shaft Diameter		25 mm		
1.686	0.313	▲9663	CRWA1	R	W	■	40	8	25X40X8 HMSA10 V	HMSA10	V	E	⊙
1.752	0.250	▲9667	CRW1	R	W	■	40	10	25X40X10 HMS5 RG	HMS5	RG	E	⊙
1.828	0.313	9681	CRW1	R	W	■	40	10	25X40X10 HMS5 V	HMS5	V	E	⊙
2.048	0.375	9688	CRS1	R	S	■	40	10	25X40X10 HMSA10 RG	HMSA10	RG	E	⊙
40	10						40	10	25X40X10 HMSA10 V	HMSA10	V	E	⊙
METRIC							0.984 in.						
0.984 in.		Shaft Diameter		25 mm			0.984 in.		Shaft Diameter		25 mm		
11		99098	SSLEEVE				40.54	6.35	9700	CRWA5	R	W	■◆
Shaft Ø24.94-25.04mm - 'on-shaft' width 7.95mm - flange Ø33.02mm							Shaft Ø24.94-25.04mm - 'on-shaft' width 7.95mm - flange Ø33.02mm						
11		99813	GSLEEVE				42	6	25X42X6 HMS5 RG	HMS5	RG	E	⊙
Shaft Ø24.94-25.04mm - 'on-shaft' width 7.95mm - flange Ø33.02mm							Shaft Ø24.94-25.04mm - 'on-shaft' width 7.95mm - flange Ø33.02mm						
32	4	25X32X4 HM4 R	HM4	R	G		42	6	25X42X6 HMS5 V	HMS5	V	E	⊙
32	4	25X32X4 HMS4 R	HMS4	R	S		42	6	▲25X42X6 HMSA10 RG	HMSA10	RG	E	⊙
32	4	25X32X4 HMSA7 R	HMSA7	R	S		42	6	25X42X6 HMSA10 V	HMSA10	V	E	⊙
32	7	25X32X7 CRSA1 R	CRSA1	R	S		42	6	25X42X7 HMS5 RG	HMS5	RG	E	⊙
33	4	25X33X4 HM4 R	HM4	R	G		42	7	25X42X7 HMS5 V	HMS5	V	E	⊙
33	6	25X33X6 HMS4 R	HMS4	R	S		42	7	25X42X7 HMSA10 RG	HMSA10	RG	E	⊙
34.93	7.95	9888	CRW1	V	W	▶⊙	42	7	25X42X7 HMSA10 V	HMSA10	V	E	⊙
35	4	25X35X4 HM4 R	HM4	R	G		42	8	25X42X8 CRW1 R	CRW1	R	W	■
35	5	25X35X5 CRW1 V	CRW1	V	W	■	42	8	25X42X8 CRW1 V	CRW1	V	W	■
35	6	25X35X6 HMS5 RG	HMS5	RG	E		42	10	25X42X10 HMS5 RG	HMS5	RG	E	⊙
35	6	25X35X6 HMS5 V	HMS5	V	E	⊙	42	10	25X42X10 HMS5 V	HMS5	V	E	⊙
35	6	▲25X35X6 HMSA10 RG	HMSA10	RG	E	⊙	42	10	▲25X42X10 HMSA10 RG	HMSA10	RG	E	⊙
35	6	25X35X6 HMSA10 V	HMSA10	V	E	⊙	42	10	25X42X10 HMSA10 V	HMSA10	V	E	⊙
35	7	25X35X7 CRW1 R	CRW1	R	W	■	44.42	9.53	9803	CRWA1	V	W	▶⊙
35	7	25X35X7 CRW1 V	CRW1	V	W	■	44.50	7.95	9805	CRWA5	V	W	■◆
35	7	25X35X7 HMS5 RG	HMS5	RG	E		45	7	25X45X7 CRW1 R	CRW1	R	W	■
35	7	25X35X7 HMS5 V	HMS5	V	E	⊙	45	7	25X45X7 HMS5 RG	HMS5	RG	E	⊙
35	7	▲25X35X7 HMSA10 RG	HMSA10	RG	E	⊙	45	7	25X45X7 HMS5 V	HMS5	V	E	⊙
35	7	25X35X7 HMSA10 V	HMSA10	V	E	⊙	45	7	▲25X45X7 HMSA10 RG	HMSA10	RG	E	⊙
36	7	25X36X7 CRW1 R	CRW1	R	W	■	45	7	25X45X7 HMSA10 V	HMSA10	V	E	⊙
36	8	25X36X8 HMS5 RG	HMS5	RG	E		45	8	25X45X8 HMS5 RG	HMS5	RG	E	⊙
36	8	25X36X8 HMS5 V	HMS5	V	E	⊙	45	8	25X45X8 HMS5 V	HMS5	V	E	⊙
36	8	▲25X36X8 HMSA10 RG	HMSA10	RG	E	⊙	45	8	25X45X8 HMSA10 RG	HMSA10	RG	E	⊙
36	8	25X36X8 HMSA10 V	HMSA10	V	E	⊙	45	8	25X45X8 HMSA10 V	HMSA10	V	E	⊙
37	5	25X37X5 HMS5 RG	HMS5	RG	E		45	10	25X45X10 HMS5 RG	HMS5	RG	E	⊙
37	5	25X37X5 HMS5 V	HMS5	V	E	⊙	45	10	25X45X10 HMS5 V	HMS5	V	E	⊙
37	5	25X37X5 HMSA10 RG	HMSA10	RG	E	⊙	45	10	25X45X10 HMSA10 RG	HMSA10	RG	E	⊙
37	5	25X37X5 HMSA10 V	HMSA10	V	E	⊙	45	10	25X45X10 HMSA10 V	HMSA10	V	E	⊙
37	6	25X37X6 HMS5 RG	HMS5	RG	E		45	11	25X45X11 HMSA7 R	HMSA7	R	S	
37	6	25X37X6 HMS5 V	HMS5	V	E	⊙	46	7	25X46X7 HMS5 RG	HMS5	RG	E	⊙
37	6	25X37X6 HMSA10 RG	HMSA10	RG	E	⊙	46	7	25X46X7 HMS5 V	HMS5	V	E	⊙
37	6	25X37X6 HMSA10 V	HMSA10	V	E	⊙	46	7	▲25X46X7 HMSA10 RG	HMSA10	RG	E	⊙
37	6	25X37X6 HMSA10 V	HMSA10	V	E	⊙	46	7	25X46X7 HMSA10 V	HMSA10	V	E	⊙
37	7	25X37X7 CRW1 R	CRW1	R	W	■	47	6	25X47X6 CRWA1 V	CRWA1	V	W	▶
37	7	25X37X7 CRW1 V	CRW1	V	W	■	47	6	25X47X6 HMSA72P2 R	HMSA72P2	R	S	◆
37	7	25X37X7 HMS5 RG	HMS5	RG	E		47	6.35	25X47X6.3 CRW1 R	CRW1	R	W	■
37	7	25X37X7 HMS5 V	HMS5	V	E	⊙	47	7	25X47X7 HMS5 RG	HMS5	RG	E	⊙
37	7	▲25X37X7 HMSA10 RG	HMSA10	RG	E	⊙	47	7	25X47X7 HMS5 V	HMS5	V	E	⊙
37	7	25X37X7 HMSA10 V	HMSA10	V	E	⊙	47	7	▲25X47X7 HMSA10 RG	HMSA10	RG	E	⊙
37	8.50	25X37X8.5 HMS4 R	HMS4	R	S		47	7	25X47X7 HMSA10 V	HMSA10	V	E	⊙
38	7	25X38X7 CRW1 R	CRW1	R	W	■	47	10	25X47X10 HMS5 RG	HMS5	RG	E	⊙
38	7	25X38X7 CRW1 V	CRW1	V	W	■	47	10	25X47X10 HMS5 V	HMS5	V	E	⊙
38	7	25X38X7 HMS5 RG	HMS5	RG	E		47	10	25X47X10 HMSA10 RG	HMSA10	RG	E	⊙
38	7	25X38X7 HMS5 V	HMS5	V	E	⊙	47	10	25X47X10 HMSA10 V	HMSA10	V	E	⊙
38	7	▲25X38X7 HMSA10 RG	HMSA10	RG	E	⊙	48	8	25X48X8 CRW1 R	CRW1	R	W	■
38	7	25X38X7 HMSA10 V	HMSA10	V	E	⊙	48	8	25X48X8 CRW1 V	CRW1	V	W	■
38.07	6.35	9686	CRW1	V	W	▶⊙	50	8	25X50X8 CRW1 R	CRW1	R	W	
40	5	25X40X5 HMS5 RG	HMS5	RG	E		50	10	25X50X10 HMS5 RG	HMS5	RG	E	⊙
40	5	25X40X5 HMS5 V	HMS5	V	E	⊙	50	10	25X50X10 HMS5 V	HMS5	V	E	⊙
40	5	25X40X5 HMSA10 RG	HMSA10	RG	E	⊙	50	10	▲25X50X10 HMSA10 RG	HMSA10	RG	E	⊙
40	5	25X40X5 HMSA10 V	HMSA10	V	E	⊙	50	10	25X50X10 HMSA10 V	HMSA10	V	E	⊙
40	7	25X40X7 CRW1 R	CRW1	R	W		50	12	25X50X12 HMS4 R	HMS4	R	S	
40	7	25X40X7 CRW1 R9	CRW1	R	W	▶⊙	52	7	25X52X7 HMS5 RG	HMS5	RG	E	⊙
40	7	25X40X7 CRW1 V	CRW1	V	W	■	52	7	25X52X7 HMS5 V	HMS5	V	E	⊙
40	7	25X40X7 HMS5 RG	HMS5	RG	E		52	7	▲25X52X7 HMSA10 RG	HMSA10	RG	E	⊙
40	7	25X40X7 HMS5 V	HMS5	V	E	⊙	52	7	25X52X7 HMSA10 V	HMSA10	V	E	⊙
40	7	▲25X40X7 HMSA10 RG	HMSA10	RG	E	⊙	52	8	25X52X8 CRW1 R	CRW1	R	W	■
40	7	25X40X7 HMSA10 V	HMSA10	V	E	⊙	52	8	25X52X8 CRW1 V	CRW1	V	W	■
40	8	25X40X8 HMS5 RG	HMS5	RG	E		52	8	25X52X8 HMS5 RG	HMS5	RG	E	⊙
40	8	25X40X8 HMS5 V	HMS5	V	E	⊙	52	8	25X52X8 HMS5 V	HMS5	V	E	⊙
40	8	25X40X8 HMSA10 RG	HMSA10	RG	E	⊙	52	8	25X52X8 HMSA10 RG	HMSA10	RG	E	⊙
40	8	25X40X8 HMSA10 V	HMSA10	V	E	⊙	52	8	25X52X8 HMSA10 V	HMSA10	V	E	⊙

Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
METRIC (cont.)							INCH (cont.)						
0.984 in.		Shaft Diameter		25 mm			1.000 in.		Shaft Diameter		25.40 mm		
52	10	25X52X10 HMS5 RG	HMS5	RG	E	☉	1.752	0.250	9983	CRWA1	V	W	☉
52	10	25X52X10 HMS5 V	HMS5	V	E	☉	1.752	0.250	9995	HM21	R	G	■
52	10	25X52X10 HMSA10 RG	HMSA10	RG	E	☉	1.752	0.313	9967	CRWA5	R	W	◆
52	10	25X52X10 HMSA10 V	HMSA10	V	E	☉	1.780	0.250	530484	HM21	R	G	■
62	7	25X62X7 CRW1 R	CRW1	R	W	■	1.781	0.469	10034	HM14	R	G	■
62	7	25X62X7 CRW1 V	CRW1	V	W	■	1.781	0.469	10035	HM18	R	G	■
62	7	25X62X7 HMS5 RG	HMS5	RG	E	☉	1.828	0.250	▲10049	CRW1	R	W	■
62	7	25X62X7 HMS5 V	HMS5	V	E	☉	1.828	0.250	10058	CRW1	V	W	■
62	7	▲25X62X7 HMSA10 RG	HMSA10	RG	E	☉	1.828	0.250	10050	CRWA1	R	W	☉
62	7	25X62X7 HMSA10 V	HMSA10	V	E	☉	1.851	0.250	▲10071	CRW1	R	W	■
62	8	25X62X8 HMS5 RG	HMS5	RG	E	☉	1.851	0.250	10074	HM14	R	G	■
62	8	25X62X8 HMS5 V	HMS5	V	E	☉	1.874	0.250	▲10075	CRW1	R	W	■
62	8	25X62X8 HMSA10 RG	HMSA10	RG	E	☉	1.938	0.250	▲10104	CRW1	R	W	■
62	8	25X62X8 HMSA10 V	HMSA10	V	E	☉	1.938	0.250	10112	HM14	R	G	■
62	10	25X62X10 HMS5 RG	HMS5	RG	E	☉	1.983	0.250	10111	CRWA1	V	W	■
62	10	25X62X10 HMS5 V	HMS5	V	E	☉	1.983	0.313	▲10114	CRWA1	R	W	■
62	10	25X62X10 HMSA10 RG	HMSA10	RG	E	☉	2.000	0.250	10123	CRW1	R	W	■
62	10	25X62X10 HMSA10 V	HMSA10	V	E	☉	2.000	0.250	10128	CRW1	V	W	■
72	7	25X72X7 HMS5 RG	HMS5	RG	E	☉	2.000	0.250	▲10124	CRWA1	R	W	■
72	7	25X72X7 HMS5 V	HMS5	V	E	☉	2.000	0.250	10127	CRWA1	R	W	☉
72	7	25X72X7 HMSA10 RG	HMSA10	RG	E	☉	2.000	0.250	10129	CRWA1	V	W	■
72	7	25X72X7 HMSA10 V	HMSA10	V	E	☉	2.000	0.250	10152	HM21	R	G	■
							2.000	0.313	10131	CRWA5	R	W	◆
							2.047	0.250	▲10157	CRWA1	R	W	■
							2.062	0.250	▲10158	CRW1	R	W	■
							2.250	0.250	▲10169	CRW1	R	W	■
							2.250	0.250	10185	HM14	R	G	■
INCH							METRIC						
1.000 in.		Shaft Diameter		25.40 mm			1.024 in.		Shaft Diameter		26 mm		
0.438	99868	SSLEEVE					12	99103	SSLEEVE				
Shaft Ø0.998-1.003" - 'on-shaft' width 0.313" - flange Ø1.219"							Shaft Ø25.88-26.01mm - 'on-shaft' width 8mm - flange Ø33.35mm						
0.438	99814	GSLEEVE					34	4	26X34X4 HM4 R	HM4	R	G	
1.250	0.125	9815	HM14	R	G	■	35	7	26X35X7 CRS1 R	CRS1	R	S	
1.312	0.125	9818	HM14	R	G	■	37	7	26X37X7 HMS5 RG	HMS5	RG	E	
1.367	0.313	▲9822	CRW1	R	W	■	37	7	26X37X7 HMS5 V	HMS5	V	E	☉
1.375	0.188	9820	HM14	R	G	■	37	7	▲26X37X7 HMSA10 RG	HMSA10	RG	E	
1.375	0.250	9826	CRW1	P	W	■	37	7	26X37X7 HMSA10 V	HMSA10	V	E	☉
1.375	0.250	9831	CRW1	V	W	■	38	5	26X38X5 HMS5 RG	HMS5	RG	E	
1.375	0.250	9814	CRWA5	R	W	◆	38	5	26X38X5 HMS5 V	HMS5	V	E	☉
1.437	0.250	▲9837	CRW1	R	W	■	38	5	▲26X38X5 HMSA10 RG	HMSA10	RG	E	
1.437	0.250	9833	CRW1	V	W	■	38	5	26X38X5 HMSA10 V	HMSA10	V	E	☉
1.437	0.250	▲9838	CRWA1	R	W	■	38	7	26X38X7 HMS5 RG	HMS5	RG	E	
1.437	0.250	9847	CRWA1	V	W	■	38	7	26X38X7 HMS5 V	HMS5	V	E	☉
1.437	0.250	9835	HM14	R	G	■	38	7	▲26X38X7 HMSA10 RG	HMSA10	RG	E	
1.496	0.390	9850	CRW1	R	W	■	38	7	26X38X7 HMSA10 V	HMSA10	V	E	☉
1.499	0.188	9859	HM14	R	G	■	38	7	26X38X7 HMS5 RG	HMS5	RG	E	
1.499	0.250	9852	CRW1	R	W	☉	38	7	26X38X7 HMS5 V	HMS5	V	E	☉
1.499	0.250	9876	CRW1	R	W	■	38	7	26X38X7 HMSA10 RG	HMSA10	RG	E	
1.499	0.250	9854	CRW1	V	W	■	38	7	26X38X7 HMSA10 V	HMSA10	V	E	☉
1.499	0.250	9855	CRW5	R	W	◆	38	8	26X38X8 HMS4 R	HMS4	R	S	
1.499	0.250	▲9878	CRWA1	R	W	■	40	7	26X40X7 HMSA7 R	HMSA7	R	S	
1.499	0.250	9879	CRWA1	V	W	■	40	8	26X40X8 HMS4 R	HMS4	R	S	
1.499	0.250	9843	CRWA5	R	W	◆	40	8	26X40X8 HMSA7 R	HMSA7	R	S	
1.499	0.250	9858	CRWA5	V	W	◆	42	7	26X42X7 HMS5 RG	HMS5	RG	E	
1.499	0.315	9862	CRWA1	V	W	■	42	7	26X42X7 HMS5 V	HMS5	V	E	☉
1.499	0.374	544167	CRWA5	P	W	◆	42	7	▲26X42X7 HMSA10 RG	HMSA10	RG	E	
1.500	0.250	9863	CRWA5	R	W	◆	42	7	26X42X7 HMSA10 V	HMSA10	V	E	☉
1.500	0.374	25.4X38.1X9.5 HMS4 R	HMS4	R	S		42	8	26X42X8 CRS1 R	CRS1	R	S	
1.510	0.219	9853	HM21	R	G	■	47	7	26X47X7 HMS5 RG	HMS5	RG	E	
1.561	0.250	▲9894	CRW1	R	W	■	47	7	26X47X7 HMS5 V	HMS5	V	E	☉
1.561	0.250	9900	HM14	R	G	■	47	7	▲26X47X7 HMSA10 RG	HMSA10	RG	E	
1.563	0.188	527939	HM1	R	G	■	47	7	26X47X7 HMSA10 V	HMSA10	V	E	☉
1.575	0.250	9903	HM14	R	G	■							
1.575	0.313	▲9907	CRWA1	R	W	■							
1.624	0.250	9934	CRW1	R	W	■							
1.624	0.250	9937	CRW1	V	W	■							
1.624	0.250	▲9935	CRWA1	R	W	■							
1.624	0.250	9939	CRWA1	V	W	■							
1.624	0.250	9932	HM14	R	G	■							
1.686	0.256	▲9960	CRW1	R	W	■							
1.686	0.256	544257	CRW1	V	W	■							
1.752	0.250	9997	CRW1	R	W	■							
1.752	0.250	9982	CRW1	V	W	■							
1.752	0.250	▲9998	CRWA1	R	W	■							
INCH							1.063 in.						
0.438		99106		SSLEEVE			0.438		99815		GSLEEVE		
Shaft Ø1.06-1.065" - 'on-shaft' width 0.313" - flange Ø1.32"							Shaft Ø1.06-1.065" - 'on-shaft' width 0.313" - flange Ø1.32"						
1.499	0.250	▲10515	CRW1	R	W	■							
1.499	0.250	10518	CRW1	V	W	■							
1.512	0.256	532866	CRW1	P	W	■							
1.561	0.250	▲10581	CRW1	R	W	■							
1.577	0.250	▲10583	CRW1	R	W	■							

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	
INCH (cont.) 1.063 in. Shaft Diameter 27.00 mm							METRIC (cont.) 1.102 in. Shaft Diameter 28 mm							
1.624	0.250	▲10598	CRW1	R	W	■	40	8	28X40X8 HMS5 RG	HMS5	RG	E		
1.686	0.250	▲10632	CRW1	R	W	■	40	8	28X40X8 HMS5 V	HMS5	V	E	⊙	
1.752	0.250	▲10653	CRW1	R	W	■	40	8	28X40X8 HMSA10 RG	HMSA10	RG	E		
1.752	0.250	▲10655	CRW1	V	W	■	40	8	28X40X8 HMSA10 V	HMSA10	V	E	⊙	
1.828	0.250	▲10681	CRW1	R	W	■	42	7	28X42X7 CRW1 R	CRW1	R	W		
1.874	0.250	▲10700	CRW1	R	W	■	42	7	28X42X7 CRW1 V	CRW1	V	W	■	
1.979	0.250	▲10728	CRW1	R	W	■	42	7	28X42X7 HMS5 RG	HMS5	RG	E		
1.983	0.250	▲10733	CRW1	R	W	■	42	7	28X42X7 HMS5 V	HMS5	V	E	⊙	
2.000	0.250	▲10740	CRW1	R	W	■	42	7	▲28X42X7 HMSA10 RG	HMSA10	RG	E		
2.062	0.250	▲10766	CRW1	R	W	■	42	7	28X42X7 HMSA10 V	HMSA10	V	E	⊙	
METRIC 1.063 in. Shaft Diameter 27 mm							INCH 1.125 in. Shaft Diameter 28.58 mm							
11.1	99106	SSLEEVE	Shaft Ø26.92-27.05mm - 'on-shaft' width 7.95mm - flange Ø33.53mm					0.438	99112	SSLEEVE	Shaft Ø1.123-1.128" - 'on-shaft' width 0.313" - flange Ø1.5"			
11.1	99815	GSLEEVE	Shaft Ø26.92-27.05mm - 'on-shaft' width 7.95mm - flange Ø33.53mm					0.438	99816	GSLEEVE	Shaft Ø1.123-1.128" - 'on-shaft' width 0.313" - flange Ø1.5"			
37	7	27X37X7 HMS5 RG	HMS5	RG	E		1.375	0.125	11050	HM14	R	G		
37	7	27X37X7 HMS5 V	HMS5	V	E	⊙	1.375	0.125	11052	HM14	V	G	■	
37	7	27X37X7 HMSA10 RG	HMSA10	RG	E		1.438	0.203	11055	HM14	R	G	■	
37	7	27X37X7 HMSA10 V	HMSA10	V	E	⊙	1.499	0.188	▲11061	CRW1	R	W		
38.35	6.50	532952	CRW1	R	W	■	1.499	0.188	11060	HM14	R	G	■	
42	7	▲27X42X7 CRW1 R	CRW1	R	W		1.561	0.250	11066	CRW1	P	W	■	
42	7	27X42X7 CRW1 V	CRW1	V	W	■	1.561	0.250	11071	CRW1	V	W	■	
42	10	27X42X10 HMS5 RG	HMS5	RG	E		1.561	0.256	▲11067	CRW1	R	W	■	
42	10	27X42X10 HMS5 V	HMS5	V	E	⊙	1.562	0.250	11081	HM14	R	G		
42	10	27X42X10 HMSA10 RG	HMSA10	RG	E		1.565	0.250	11082	CRW1	R	W	■	
42	10	27X42X10 HMSA10 V	HMSA10	V	E	⊙	1.575	0.236	▲11086	CRWA1	R	W	■	
43	7	27X43X7 HMS5 RG	HMS5	RG	E		1.624	0.250	11111	CRW1	P	W	■	
43	7	27X43X7 HMS5 V	HMS5	V	E	⊙								
43	7	27X43X7 HMSA10 RG	HMSA10	RG	E									
43	7	27X43X7 HMSA10 V	HMSA10	V	E	⊙								
43	8	27X43X8 CRW1 V	CRW1	V	W									
45	8	27X45X8 CRW1 V	CRW1	V	W	■								
45	8	27X45X8 HMS4 R	HMS4	R	S									
47	7	27X47X7 HMS5 RG	HMS5	RG	E									
47	7	27X47X7 HMS5 V	HMS5	V	E	⊙								
47	7	▲27X47X7 HMSA10 RG	HMSA10	RG	E									
47	7	27X47X7 HMSA10 V	HMSA10	V	E	⊙								
47	10	27X47X10 HMS5 RG	HMS5	RG	E									
47	10	27X47X10 HMS5 V	HMS5	V	E	⊙								
47	10	27X47X10 HMSA10 RG	HMSA10	RG	E									
47	10	27X47X10 HMSA10 V	HMSA10	V	E	⊙								
52	8	27X52X8 CRW1 R	CRW1	R	W									
52	8	27X52X8 CRW1 V	CRW1	V	W	■								
52	10	27X52X10 HMS5 RG	HMS5	RG	E									
52	10	27X52X10 HMS5 V	HMS5	V	E	⊙								
52	10	27X52X10 HMSA10 RG	HMSA10	RG	E									
52	10	27X52X10 HMSA10 V	HMSA10	V	E	⊙								
72	10	28X72X10 HMS5 RG	HMS5	RG	E									
72	10	28X72X10 HMS5 V	HMS5	V	E	⊙								
72	10	28X72X10 HMSA10 RG	HMSA10	RG	E									
72	10	28X72X10 HMSA10 V	HMSA10	V	E	⊙								

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH (cont.) 1.125 in. Shaft Diameter 28.58 mm							METRIC (cont.) 1.181 in. Shaft Diameter 30 mm						
1.624	0.250	11123	CRW1	R	W	■	37	4	30X37X4 HMS4 R	HMS4	R	S	
1.624	0.250	11130	HM21	R	G	■	37	4	30X37X4 HMSA7 R	HMSA7	R	S	
1.624	0.256	11133	CRW1	V	W	■	40	4	30X40X4 HM4 R	HM4	R	G	
1.624	0.256	562487	CRWA1	H	W	■	40	4	30X40X4 HMS4 R	HMS4	R	S	
1.624	0.256	▲11124	CRWA1	R	W	■	40	4	30X40X4 HMSA7 R	HMSA7	R	S	
1.624	0.256	11134	CRWA1	V	W	■	40	7	30X40X7 CRW1 R	CRW1	R	W	■
1.626	0.250	11139	CRWA5	V	W	■◆	40	7	30X40X7 CRW1 V	CRW1	V	W	■
1.750	0.250	11150	HM14	R	G	■	40	7	30X40X7 HMS5 RG	HMS5	RG	E	
1.752	0.250	▲11138	CRW1	R	W	■	40	7	30X40X7 HMS5 V	HMS5	V	E	◎
1.752	0.250	11144	CRW1	V	W	■	40	7	▲30X40X7 HMSA10 RG	HMSA10	RG	E	
1.781	0.250	11161	HM21	R	G	■	40	7	30X40X7 HMSA10 V	HMSA10	V	E	◎
1.781	0.469	11164	HM18	R	G	■	42	6	30X42X6 HMS5 RG	HMS5	RG	E	
1.828	0.250	▲11170	CRW1	R	W	■	42	6	30X42X6 HMS5 V	HMS5	V	E	◎
1.828	0.250	11172	CRW1	V	W	■	42	6	30X42X6 HMSA10 RG	HMSA10	RG	E	
1.828	0.250	11171	CRWA1	R	W	■	42	6	30X42X6 HMSA10 V	HMSA10	V	E	◎
1.828	0.250	11175	CRWA1	V	W	■	42	6	30X42X6 HMSA7P2 R	HMSA7P2	R	S	◆
1.828	0.250	11191	HM21	R	G	■	42	7	30X42X7 CRW1 R	CRW1	R	W	
1.852	0.313	▲11197	CRWH1	R	W	■	42	7	30X42X7 CRW1 V	CRW1	V	W	■
1.852	0.313	11200	CRWHA1	R	W	■	42	7	30X42X7 HMS5 RG	HMS5	RG	E	
1.874	0.250	11224	CRW1	R	W	■	42	7	30X42X7 HMS5 V	HMS5	V	E	◎
1.874	0.250	11225	CRW1	V	W	■	42	7	▲30X42X7 HMSA10 RG	HMSA10	RG	E	
1.874	0.250	▲11223	CRWA1	R	W	■	42	7	30X42X7 HMSA10 V	HMSA10	V	E	◎
1.874	0.250	11218	CRWA1	V	W	■	42	8	30X42X8 HMS5 RG	HMS5	RG	E	
1.938	0.343	11269	HM14	R	G	■	42	8	30X42X8 HMS5 V	HMS5	V	E	◎
1.983	0.250	▲11299	CRW1	R	W	■	42	8	30X42X8 HMSA10 RG	HMSA10	RG	E	
2.000	0.250	11344	CRW1	V	W	■	42	8	30X42X8 HMSA10 V	HMSA10	V	E	◎
2.000	0.250	11334	HM21	R	G	■	44	7	30X44X7 HMS5 RG	HMS5	RG	E	
2.000	0.256	▲11340	CRW1	R	W	■	44	7	30X44X7 HMS5 V	HMS5	V	E	◎
2.000	0.375	11343	CRWA1	R	W	■	44	7	▲30X44X7 HMSA10 RG	HMSA10	RG	E	
2.047	0.250	11352	HM21	R	G	■	44	7	30X44X7 HMSA10 V	HMSA10	V	E	◎
2.047	0.313	▲11353	CRWA1	R	W	■	44	10	30X44X10 HMS4 R	HMS4	R	S	
2.062	0.250	11368	CRWA1	V	W	■	45	5	30X45X5 HMSA7 R	HMSA7	R	S	
2.062	0.313	▲11366	CRW1	R	W	■	45	7	30X45X7 HMS5 RG	HMS5	RG	E	
2.125	0.313	▲11372	CRW1	R	W	■	45	7	30X45X7 HMS5 V	HMS5	V	E	◎
2.250	0.250	▲11378	CRW1	R	W	■	45	7	▲30X45X7 HMSA10 RG	HMSA10	RG	E	
2.441	0.250	▲11392	CRW1	R	W	■	45	7	30X45X7 HMSA10 V	HMSA10	V	E	◎
2.441	0.256	538762	CRWA1	V	W	■	45	8	30X45X8 CRW1 P	CRW1	P	W	■
2.835	0.375	11405	CRSA1	R	S	■	45	8	30X45X8 CRW1 R	CRW1	R	W	■
2.875	0.469	11410	CRSH1	R	S	■	45	8	30X45X8 HMS5 RG	HMS5	RG	E	
							45	8	30X45X8 HMS5 V	HMS5	V	E	◎
							45	8	30X45X8 HMSA10 RG	HMSA10	RG	E	
							45	8	30X45X8 HMSA10 V	HMSA10	V	E	◎
							45	8	30X45X8 CRS1 V	CRS1	V	S	
							46	7	30X46X7 HMS5 RG	HMS5	RG	E	
							46	7	30X46X7 HMS5 V	HMS5	V	E	◎
							46	7	▲30X46X7 HMSA10 RG	HMSA10	RG	E	
							46	7	30X46X7 HMSA10 V	HMSA10	V	E	◎
1.686	0.250	▲11518	CRWA1	R	W	■	47	6	30X47X6 HMS5 RG	HMS5	RG	E	
1.752	0.250	▲11514	CRWA1	R	W	■	47	6	30X47X6 HMS5 V	HMS5	V	E	◎
1.874	0.250	▲11524	CRW1	R	W	■	47	6	30X47X6 HMSA10 RG	HMSA10	RG	E	
1.875	0.375	11536	CRWA1	R	W	■◎	47	6	30X47X6 HMSA10 V	HMSA10	V	E	◎
2.000	0.250	11544	CRW1	R	W	■	47	7	30X47X7 CRW1 R	CRW1	R	W	
2.000	0.250	11550	CRW1	V	W	■	47	7	30X47X7 HMS5 RG	HMS5	RG	E	
2.000	0.250	▲11545	CRWA1	R	W	■	47	7	30X47X7 HMS5 V	HMS5	V	E	◎
2.062	0.313	▲11558	CRW1	R	W	■	47	7	▲30X47X7 HMSA10 RG	HMSA10	RG	E	
2.125	0.438	11566	CRSH1	R	S	■	47	7	30X47X7 HMSA10 V	HMSA10	V	E	◎
							47	8	30X47X8 CRW1 V	CRW1	V	W	
							47	8	30X47X8 HMS5 RG	HMS5	RG	E	
							47	8	30X47X8 HMS5 V	HMS5	V	E	◎
							47	8	30X47X8 HMSA10 RG	HMSA10	RG	E	
2.031	0.500	11553	CRW1	R	W	■	47	8	30X47X8 HMSA10 V	HMSA10	V	E	◎
							47	10	30X47X10 HMS5 RG	HMS5	RG	E	
							47	10	30X47X10 HMS5 V	HMS5	V	E	◎
							47	10	30X47X10 HMSA10 RG	HMSA10	RG	E	
							47	10	30X47X10 HMSA10 V	HMSA10	V	E	◎
							48	8	30X48X8 CRW1 R	CRW1	R	W	■
							48	8	30X48X8 HMS5 RG	HMS5	RG	E	
							48	8	30X48X8 HMS5 V	HMS5	V	E	◎
							48	8	▲30X48X8 HMSA10 RG	HMSA10	RG	E	
							48	8	30X48X8 HMSA10 V	HMSA10	V	E	◎

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	
METRIC (cont.)							INCH (cont.)							
1.181 in. Shaft Diameter 30 mm							1.188 in. Shaft Diameter 30.18 mm							
50	5	30X50X5 HMS5 RG	HMS5	RG	E		1.752	0.250	11736	CRW1	V	W	■	
50	5	30X50X5 HMS5 V	HMS5	V	E	⊙	1.828	0.375	▲ 11740	CRW1	R	W	■	
50	5	30X50X5 HMSA10 RG	HMSA10	RG	E		1.875	0.250	11763	CRW1	P	W	■	
50	5	30X50X5 HMSA10 V	HMSA10	V	E	⊙	1.875	0.375	▲ 11585	CRW1	R	W	■	
50	7	30X50X7 HMS5 RG	HMS5	RG	E		1.983	0.250	11776	CRW1	R	W	■	
50	7	30X50X7 HMS5 V	HMS5	V	E	⊙	1.983	0.250	▲ 11777	CRWA1	R	W	■	
50	7	▲30X50X7 HMSA10 RG	HMSA10	RG	E		1.996	0.250	11782	HD1	R	G		
50	7	30X50X7 HMSA10 V	HMSA10	V	E	⊙	1.996	0.250	11846	HM1	R	G	■	
50	8	30X50X8 CRW1 R	CRW1	R	W		2.000	0.250	▲ 11800	CRW1	R	W	■	
50	8	30X50X8 CRW1 V	CRW1	V	W	■	2.000	0.250	11806	CRW1	V	W	■	
50	8	30X50X8 HMS5 RG	HMS5	RG	E		2.000	0.250	11801	CRWA1	R	W	■	
50	8	30X50X8 HMS5 V	HMS5	V	E	⊙	2.000	0.250	11836	HM1	R	G		
50	8	30X50X8 HMSA10 RG	HMSA10	RG	E		2.062	0.250	11879	CRW1	P	W	■	
50	8	30X50X8 HMSA10 V	HMSA10	V	E	⊙	2.062	0.250	▲ 11878	CRW1	R	W	■	
50	10	30X50X10 HMS5 RG	HMS5	RG	E		2.125	0.313	▲ 11907	CRW1	R	W	■	
50	10	30X50X10 HMS5 V	HMS5	V	E	⊙	2.125	0.313	11908	CRWHA1	R	W	■	
50	10	30X50X10 HMSA10 RG	HMSA10	RG	E		2.165	0.250	▲ 11911	CRW1	R	W	■	
50	10	30X50X10 HMSA10 V	HMSA10	V	E	⊙	2.250	0.256	▲ 11914	CRW1	R	W	■	
52	7	30X52X7 HMS5 RG	HMS5	RG	E		2.250	0.256	534358	CRW1	V	W	■	
52	7	30X52X7 HMS5 V	HMS5	V	E	⊙	2.437	0.250	▲ 11923	CRW1	R	W	■	
52	7	▲30X52X7 HMSA10 RG	HMSA10	RG	E		2.441	0.250	▲ 11930	CRW1	R	W	■	
52	7	30X52X7 HMSA10 V	HMSA10	V	E	⊙								
52	8	30X52X8 CRW1 R	CRW1	R	W									
52	8	30X52X8 HMS5 RG	HMS5	RG	E									
52	8	30X52X8 HMS5 V	HMS5	V	E	⊙								
52	8	30X52X8 HMSA10 RG	HMSA10	RG	E									
52	8	30X52X8 HMSA10 V	HMSA10	V	E	⊙								
52	10	30X52X10 HMS5 RG	HMS5	RG	E									
52	10	30X52X10 HMS5 V	HMS5	V	E	⊙								
52	10	30X52X10 HMSA10 RG	HMSA10	RG	E									
52	10	30X52X10 HMSA10 V	HMSA10	V	E	⊙								
55	7	30X55X7 CRW1 R	CRW1	R	W									
55	7	30X55X7 HMS5 RG	HMS5	RG	E									
55	7	30X55X7 HMS5 V	HMS5	V	E	⊙								
55	7	▲30X55X7 HMSA10 RG	HMSA10	RG	E									
55	7	30X55X7 HMSA10 V	HMSA10	V	E	⊙								
55	10	30X55X10 HMS5 RG	HMS5	RG	E									
55	10	30X55X10 HMS5 V	HMS5	V	E	⊙								
55	10	30X55X10 HMSA10 RG	HMSA10	RG	E									
55	10	30X55X10 HMSA10 V	HMSA10	V	E	⊙								
56	8	30X56X8 CRW1 R	CRW1	R	W									
58	8	30X58X8 CRWA1 R	CRWA1	R	W	■								
60	8	▲30X60X8 CRW1 R	CRW1	R	W	■								
60	10	30X60X10 HMS4 R	HMS4	R	S									
60	10	30X60X10 HMSA7 R	HMSA7	R	S									
62	7	30X62X7 CRW1 R	CRW1	R	W									
62	7	30X62X7 CRW1 V	CRW1	V	W	■								
62	7	30X62X7 HMS5 RG	HMS5	RG	E									
62	7	30X62X7 HMS5 V	HMS5	V	E	⊙								
62	7	▲30X62X7 HMSA10 RG	HMSA10	RG	E									
62	7	30X62X7 HMSA10 V	HMSA10	V	E	⊙								
62	10	30X62X10 HMS5 RG	HMS5	RG	E									
62	10	30X62X10 HMS5 V	HMS5	V	E	⊙								
62	10	30X62X10 HMSA10 RG	HMSA10	RG	E									
62	10	30X62X10 HMSA10 V	HMSA10	V	E	⊙								
72	8	▲30X72X8 CRW1 R	CRW1	R	W	■								
72	10	30X72X10 HMS5 RG	HMS5	RG	E									
72	10	30X72X10 HMS5 V	HMS5	V	E	⊙								
72	10	▲30X72X10 HMSA10 RG	HMSA10	RG	E									
72	10	30X72X10 HMSA10 V	HMSA10	V	E	⊙								
72	12	30X72X12 CRWA1 V	CRWA1	V	W									
INCH							1.220 in. Shaft Diameter 31 mm							
	0.438	99123	SSLEEVE				11	99123	SSLEEVE					
		<i>Shaft Ø0.89-31.01mm - 'on-shaft' width 7.95mm - flange Ø0.397mm</i>												
	42	8	31X42X8 HMS4 V	HMS4	V	S								
	44	6.50	12208	HMS4	R	S								
	50	11.91	12121	HM14	R	G	■							
	50.27	10.31	12124	HM14	R	G	■							
	50.80	11.13	12131	CRSH1	R	S	■							
INCH							1.234 in. Shaft Diameter 31.34 mm							
	2.250	0.250	▲ 12590	CRW1	R	W	■							
INCH							1.240 in. Shaft Diameter 31.50 mm							
	0.438	99141	SSLEEVE											
		<i>Shaft Ø1.237-1.243" - 'on-shaft' width 0.315" - flange Ø1.54"</i>												
INCH							1.250 in. Shaft Diameter 31.75 mm							
	0.438	99125	SSLEEVE											
		<i>Shaft Ø1.247-1.253" - 'on-shaft' width 0.313" - flange Ø1.5"</i>												
	0.438	99817	GSLEEVE											
		<i>Shaft Ø1.247-1.253" - 'on-shaft' width 0.313" - flange Ø1.5"</i>												
	1.500	0.125	12330	HM14	R	G	■							
	1.624	0.250	12325	HM14	R	G	■							
	1.625	0.188	▲ 12329	CRW1	R	W	■							
	1.625	0.188	11096	HM14	R	G	■							
	1.686	0.188	12334	HM14	R	G	■							
	1.687	0.250	▲ 12336	CRW1	R	W	■							
	1.687	0.250	12335	CRW1	V	W	■							
	1.687	0.250	12337	CRWA1	V	W	■							
	1.687	0.313	12350	CRWA1	R	W	■							
	1.687	0.313	12333	CRWA5	R	W	◆							
	1.750	0.250	12360	CRWA5	R	W	◆							
	1.750	0.250	12339	CRWA5	V	W	◆							
	1.752	0.188	12361	HM21	R	G	■							
	1.752	0.250	12363	CRW1	R	W	■							
	1.752	0.250	12340	CRW1	V	W	■							
	1.752	0.250	▲ 12364	CRWA1	R	W	■							
	1.752	0.250	12343	CRWA1	V	W	■							
	1.752	0.250	12369	HM21	R	G	■							
	1.752	0.313	12371	HMS4	R	S								
	1.874	0.250	12382	CRW1	P	W	■							
	1.874	0.250	12384	CRW1	R	W	■							
	1.874	0.250	▲ 12386	CRWA1	R	W	■							
	1.874	0.250	12383	CRWA1	V	W	■							
	1.874	0.250	12379	HM21	R	G	■							
	1.937	0.375	12542	CRWA5	V	W	◆							
	1.938	0.250	▲ 12391	CRW1	R	W	■							

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features		
INCH (cont.)				1.250 in. Shaft Diameter 31.75 mm				METRIC (cont.)				1.260 in. Shaft Diameter 32 mm			
1.955	0.250	12396	CRWA1	R	W	■	45	7	32X45X7 HMSA10 V	HMSA10	V	E	◎		
1.968	0.438	12398	HM14	R	G	■	45	8	32X45X8 CRW1 R	CRW1	R	W	■		
1.968	0.469	12399	HM18	R	G	■	45	8	32X45X8 HMS5 RG	HMS5	RG	E	◎		
1.979	0.250	12407	HM21	R	G	■	45	8	32X45X8 HMS5 V	HMS5	V	E	◎		
1.979	0.406	12404	HM14	R	G	■	45	8	32X45X8 HMSA10 RG	HMSA10	RG	E	◎		
1.979	0.406	12411	HM18	R	G	■	45	8	32X45X8 HMSA10 V	HMSA10	V	E	◎		
1.983	0.250	12427	CRW1	R	W	■	46	8	32X46X8 CRS1 R	CRS1	R	S	■		
1.983	0.250	12432	CRW1	V	W	■	47	6	32X47X6 HMS5 RG	HMS5	RG	E	◎		
1.983	0.250	▲12428	CRWA1	R	W	■	47	6	32X47X6 HMS5 V	HMS5	V	E	◎		
1.983	0.250	12437	HM21	R	G	■	47	6	32X47X6 HMSA10 RG	HMSA10	RG	E	◎		
1.997	0.438	12438	CRWA5	V	W	■◎◆	47	6	32X47X6 HMSA10 V	HMSA10	V	E	◎		
2.000	0.250	12456	CRW1	R	W	■	47	7	32X47X7 HMS5 RG	HMS5	RG	E	◎		
2.000	0.250	12445	CRW1	V	W	■	47	7	32X47X7 HMS5 V	HMS5	V	E	◎		
2.000	0.250	▲12458	CRWA1	R	W	■	47	7	▲32X47X7 HMSA10 RG	HMSA10	RG	E	◎		
2.000	0.250	12446	CRWA1	V	W	■◎	47	7	32X47X7 HMSA10 V	HMSA10	V	E	◎		
2.000	0.250	12481	HM21	R	G	■	47	8	32X47X8 CRW1 R	CRW1	R	W	■		
2.000	0.438	12483	CRW1	P	W	■	47	8	32X47X8 CRW1 V	CRW1	V	W	■		
2.062	0.250	12528	CRWA1	R	W	■	47	8	32X47X8 HMS5 RG	HMS5	RG	E	◎		
2.062	0.250	12531	CRWA1	V	W	■	47	8	32X47X8 HMS5 V	HMS5	V	E	◎		
2.062	0.250	12508	HM21	R	G	■	47	8	32X47X8 HMSA10 RG	HMSA10	RG	E	◎		
2.062	0.433	12533	CRWHA1	V	W	■	47	8	32X47X8 HMSA10 V	HMSA10	V	E	◎		
2.062	0.438	▲12530	CRWH1	R	W	■	47	10	32X47X10 HMS5 RG	HMS5	RG	E	◎		
2.125	0.250	▲12545	CRW1	R	W	■	47	10	32X47X10 HMS5 V	HMS5	V	E	◎		
2.125	0.250	12544	CRW1	V	W	■	47	10	32X47X10 HMSA10 RG	HMSA10	RG	E	◎		
2.125	0.250	12551	CRWA1	R	W	■	47	10	32X47X10 HMSA10 V	HMSA10	V	E	◎		
2.125	0.250	12565	HM21	R	G	■	48	5	32X48X5 HMS4 R	HMS4	R	S	■		
2.125	0.256	534955	CRWA1	V	W	■	48	5	32X48X5 HMSA7 R	HMSA7	R	S	■		
2.250	0.250	▲12577	CRW1	R	W	■	48	7	32X48X7 HMS4 R	HMS4	R	S	■		
2.250	0.250	12582	HM14	R	G	■	48	8	32X48X8 CRW1 R	CRW1	R	W	■		
2.327	0.500	▲12610	CRW1	R	W	■	48	8	32X48X8 CRW1 V	CRW1	V	W	■		
2.328	0.500	12609	CRWA5	R	W	■◎◆	48	8	32X48X8 HMS5 RG	HMS5	RG	E	◎		
2.328	0.500	12611	HM18	R	G	■	48	8	32X48X8 HMS5 V	HMS5	V	E	◎		
2.374	0.313	12613	CRW1	R	W	■	48	8	▲32X48X8 HMSA10 RG	HMSA10	RG	E	◎		
2.374	0.313	▲12614	CRWA1	R	W	■	48	8	32X48X8 HMSA10 V	HMSA10	V	E	◎		
2.374	0.315	12612	CRW1	V	W	■	48	8	12720	HMSA7	P	S	■		
2.437	0.250	▲12621	CRW1	R	W	■	50	8	32X50X8 CRW1 R	CRW1	R	W	■		
2.441	0.250	▲12631	CRW1	R	W	■	50	8	32X50X8 CRW1 V	CRW1	V	W	■		
2.500	0.310	12638	CRW1	V	W	■	50	8	32X50X8 HMS5 RG	HMS5	RG	E	◎		
2.502	0.313	▲12637	CRW1	R	W	■	50	8	32X50X8 HMS5 V	HMS5	V	E	◎		
2.502	0.500	12640	CRWA5	R	W	■◎◆	50	8	▲32X50X8 HMSA10 RG	HMSA10	RG	E	◎		
2.561	0.500	12655	CRSH1	R	S	■	50	8	32X50X8 HMSA10 V	HMSA10	V	E	◎		
2.713	0.469	12660	CRSH1	R	S	■	50	10	32X50X10 HMS5 RG	HMS5	RG	E	◎		
3.156	0.500	12678	CRSH1	R	S	■	50	10	32X50X10 HMS5 V	HMS5	V	E	◎		
							50	10	32X50X10 HMSA10 RG	HMSA10	RG	E	◎		
							50	10	32X50X10 HMSA10 V	HMSA10	V	E	◎		
							52	7	32X52X7 HMS5 RG	HMS5	RG	E	◎		
							52	7	32X52X7 HMS5 V	HMS5	V	E	◎		
							52	7	▲32X52X7 HMSA10 RG	HMSA10	RG	E	◎		
							52	7	32X52X7 HMSA10 V	HMSA10	V	E	◎		
							52	8	32X52X8 CRW1 R	CRW1	R	W	■		
							52	8	32X52X8 CRW1 V	CRW1	V	W	■		
							52	8	32X52X8 HMS5 RG	HMS5	RG	E	◎		
							52	8	32X52X8 HMS5 V	HMS5	V	E	◎		
							52	8	32X52X8 HMSA10 RG	HMSA10	RG	E	◎		
							52	8	32X52X8 HMSA10 V	HMSA10	V	E	◎		
							52	10	32X52X10 HMSA7 R	HMSA7	R	S	■		
							52	11	32X52X11 HMSA7 R	HMSA7	R	S	■		
							54	10	32X54X10 HMSA7 R	HMSA7	R	S	■		
							55	10	32X55X10 HMS5 RG	HMS5	RG	E	◎		
							55	10	32X55X10 HMS5 V	HMS5	V	E	◎		
							55	10	▲32X55X10 HMSA10 RG	HMSA10	RG	E	◎		
							55	10	32X55X10 HMSA10 V	HMSA10	V	E	◎		
							56	8	32X56X8 CRW1 R	CRW1	R	W	■		
							56	10	32X56X10 HMS4 R	HMS4	R	S	■		
							58	8	32X58X8 HMS4 R	HMS4	R	S	■		
							58	8	32X58X8 HMSA7 R	HMSA7	R	S	■		
							60	8	32X60X8 HMSA7 R	HMSA7	R	S	■		
							62	10	32X62X10 HMS5 RG	HMS5	RG	E	◎		
							62	10	32X62X10 HMS5 V	HMS5	V	E	◎		
							62	10	▲32X62X10 HMSA10 RG	HMSA10	RG	E	◎		

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
METRIC (cont.) 1.260 in. Shaft Diameter 32 mm							METRIC (cont.) 1.339 in. Shaft Diameter 34 mm						
62	10	32X62X10 HMSA10 V	HMSA10	V	E	⊙	56	8	34X56X8 CRW1 R	CRW1	R	W	■
72	7	32X72X7 HMS5 RG	HMS5	RG	E		56	8	34X56X8 CRW1 V	CRW1	V	W	■
72	7	32X72X7 HMS5 V	HMS5	V	E	⊙	62	8	▲ 34X62X8 CRW1 R	CRW1	R	W	■
72	7	32X72X7 HMSA10 RG	HMSA10	RG	E		62	10	34X62X10 HMS5 RG	HMS5	RG	E	
72	7	32X72X7 HMSA10 V	HMSA10	V	E	⊙	62	10	34X62X10 HMS5 V	HMS5	V	E	⊙
62	10	34X62X10 HMSA10 RG	HMSA10	RG	E		62	10	34X62X10 HMSA10 V	HMSA10	V	E	⊙
62	10	34X62X10 HMSA10 V	HMSA10	V	E	⊙	62	10	34X62X10 HMSA10 V	HMSA10	V	E	⊙
METRIC 1.299 in. Shaft Diameter 33 mm							INCH 1.344 in. Shaft Diameter 34.14 mm						
18	99121		SSLEEVE				2.106	0.313	13421	CRW1 R W ■			
<i>Shaft Ø32.84-32.99mm - 'on-shaft' width 15.011mm - flange Ø40.488mm</i>							2.125	0.313	▲13437	CRW1 R W ■			
45	7	33X45X7 HMS5 RG	HMS5	RG	E		INCH 1.362 in. Shaft Diameter 34.59 mm						
45	7	33X45X7 HMS5 V	HMS5	V	E	⊙	2.191	0.250	13500	CRS1 P S			
45	7	▲ 33X45X7 HMSA10 RG	HMSA10	RG	E		INCH 1.365 in. Shaft Diameter 34.67 mm						
45	7	33X45X7 HMSA10 V	HMSA10	V	E	⊙	1.956	0.438	▲13985	CRW1 R W ■			
50	6	33X50X6 HMS5 RG	HMS5	RG	E		2.081	0.313	▲13598	CRW1 R W ■			
50	6	33X50X6 HMS5 V	HMS5	V	E	⊙	2.261	0.313	▲13700	CRW1 R W ■			
50	6	▲ 33X50X6 HMSA10 RG	HMSA10	RG	E		INCH 1.375 in. Shaft Diameter 34.93 mm						
50	6	33X50X6 HMSA10 V	HMSA10	V	E	⊙	0.438	99133		SSLEEVE			
50	12	12900	HMSA7	R	S		<i>Shaft Ø1.371-1.377" - 'on-shaft' width 0.313" - flange Ø1.638"</i>						
51.92	12.50	12907	CRWA1	R	W	■	0.625	99138		SSLEEVE			
INCH 1.301 in. Shaft Diameter 33.05 mm							<i>Shaft Ø1.371-1.377" - 'on-shaft' width 0.5" - flange Ø1.638"</i>						
2.000	0.438	12905	CRSA1	P	S		0.625	99819		GSLEEVE			
INCH 1.313 in. Shaft Diameter 33.35 mm							<i>Shaft Ø1.371-1.377" - 'on-shaft' width 0.5" - flange Ø1.638"</i>						
0.374	99129		SSLEEVE				1.750	0.197	13529	HM14 R G			
<i>Shaft Ø1.308-1.314" - 'on-shaft' width 0.25" - flange Ø1.6"</i>							1.750	0.197	13509	HM14 V G ■			
0.625	99131		SSLEEVE				1.750	0.250	▲13514	CRW1 R W ■ ⊙			
<i>Shaft Ø1.31-1.316" - 'on-shaft' width 0.5" - flange Ø1.594"</i>							1.828	0.250	13510	CRWA1 V W ■			
1.828	0.375	13021	CRW1	P	W	■	1.828	0.313	▲13537	CRW1 R W ■			
1.874	0.375	13027	CRSA1	R	S	■	1.835	0.250	▲13536	CRW1 R W ■			
2.000	0.313	13037	CRSA1	R	S		1.873	0.313	13511	CRWA1 V W ■			
2.062	0.313	13050	CRW1	R	W	■	1.874	0.188	13543	HM14 R G			
2.062	0.313	13054	CRW1	V	W	■	1.874	0.250	13512	CRW1 P W ■			
2.062	0.313	▲13052	CRWA1	R	W	■	1.874	0.250	13545	HM14 P G ■			
2.062	0.315	534950	CRWA1	V	W	■	1.874	0.250	13548	HM14 R G ■			
2.106	0.375	13084	CRSA1	R	S	■	1.874	0.256	547586	CRW1 H W ■			
2.125	0.313	▲13092	CRW1	R	W	■	1.874	0.256	▲13534	CRW1 R W ■			
2.250	0.313	▲13112	CRW1	R	W	■	1.874	0.256	13538	CRW1 V W ■			
2.282	0.250	13157	CRWA1	R	W	■	1.874	0.313	13535	CRWA1 R W ■			
2.031	0.313	13415	CRW1	R	W	■	1.938	0.250	▲13552	CRWA1 R W ■			
2.061	0.313	▲13350	CRW1	R	W	■	1.938	0.250	13556	HM14 R G ■			
2.227	0.313	▲13418	CRW1	R	W	■	1.955	0.433	13527	CRWA1 P W ■			
METRIC 1.339 in. Shaft Diameter 34 mm							1.983	0.313	13557	CRW1 P W ■			
15.9	99134		SSLEEVE				2.000	0.250	13573	HM21 R G ■			
<i>Shaft Ø33.86-34.01mm - 'on-shaft' width 12.7mm - flange Ø41.28mm</i>							2.000	0.313	13568	CRW1 R W ■			
44	8	34X44X8 HMS5 RG	HMS5	RG	E		2.000	0.313	13579	CRW1 V W ■			
44	8	34X44X8 HMS5 V	HMS5	V	E	⊙	2.000	0.313	13562	CRWA1 P W ■			
44	8	▲ 34X44X8 HMSA10 RG	HMSA10	RG	E		2.000	0.313	▲13569	CRWA1 R W ■			
44	8	34X44X8 HMSA10 V	HMSA10	V	E	⊙	2.000	0.313	13581	CRWA1 V W ■			
45	8	34X45X8 HMSA7 R	HMSA7	R	S		2.000	0.313	13571	CRWH1 R W ■			
46	8	34X46X8 HMSA7 R	HMSA7	R	S		2.047	0.276	534952	CRWA1 V W ■			
48	8	34X48X8 CRW1 R	CRW1	R	W	■	2.062	0.313	▲13585	CRW1 R W ■			
48	8	34X48X8 CRW1 V	CRW1	V	W	■	2.062	0.313	13582	CRW1 V W ■			
48	8	34X48X8 HMS5 RG	HMS5	RG	E		2.062	0.313	13588	CRWA1 P W ■			
48	8	34X48X8 HMS5 V	HMS5	V	E	⊙	2.063	0.375	13596	HMS4 R S			
48	8	34X48X8 HMSA10 RG	HMSA10	RG	E		2.106	0.250	13612	HM21 R G ■			
48	8	34X48X8 HMSA10 V	HMSA10	V	E	⊙	2.106	0.313	13614	CRW1 P W ■			
50	7	34X50X7 HMS4 R	HMS4	R	S		2.106	0.313	▲13602	CRWA1 R W ■			
52	8	34X52X8 HMS5 RG	HMS5	RG	E		2.125	0.250	13662	HM21 R G ■			
52	8	34X52X8 HMS5 V	HMS5	V	E	⊙	2.125	0.313	▲13649	CRW1 R W ■			
52	8	▲ 34X52X8 HMSA10 RG	HMSA10	RG	E		2.125	0.313	13663	CRW1 V W ■			
52	8	34X52X8 HMSA10 V	HMSA10	V	E	⊙	2.125	0.313	13651	CRWA1 R W ■			
53	8	13435	HMSA7	R	S		2.125	0.313	13661	CRWA1 V W ■			
54	9	34X54X9 HMSA7 R	HMSA7	R	S		2.250	0.250	▲13698	CRWA1 R W ■			
54	11	34X54X11 CRS1 R	CRS1	R	S		2.250	0.250	13689	HM14 R G ■			
55	8	34X55X8 CRW1 R	CRW1	R	W	■	2.250	0.313	13869	CRW1 P W ■			
55	9	34X55X9 HMSA7 R	HMSA7	R	S								

Key features: ▲ WasteWatcher ■ Bore-Tite ▸ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features						
2.250	0.313	13671	CRW1	R	W	■	50	7	35X50X7 HMSA10 RG	HMSA10	RG	E							
INCH (cont.)				1.375 in. Shaft Diameter				METRIC (cont.)				1.378 in. Shaft Diameter							
2.250	0.313	13688	CRW1	V	W	■	50	7	35X50X7 HMSA10 V	HMSA10	V	E	⊙						
2.250	0.313	13676	CRWA1	R	W	■	50	8	35X50X8 CRW1 R	CRW1	R	W	■						
2.250	0.313	13691	CRWA1	V	W	■	50	8	35X50X8 CRW1 V	CRW1	V	W	■						
2.282	0.250	13710	HM14	R	G	■	50	8	35X50X8 HMS5 RG	HMS5	RG	E							
2.328	0.406	13711	HM18	R	G	■	50	8	35X50X8 HMS5 V	HMS5	V	E	⊙						
2.374	0.250	13758	HM21	R	G	■	50	8	35X50X8 HMSA10 RG	HMSA10	RG	E							
2.374	0.313	13738	CRW1	R	W	■	50	8	35X50X8 HMSA10 V	HMSA10	V	E	⊙						
2.374	0.313	13734	CRW1	V	W	■	50	10	35X50X10 HMS5 RG	HMS5	RG	E							
2.374	0.313	13739	CRWA1	R	W	■	50	10	35X50X10 HMS5 V	HMS5	V	E	⊙						
2.437	0.250	13797	CRW1	R	W	■	50	10	35X50X10 HMSA10 RG	HMSA10	RG	E							
2.437	0.250	13796	HM21	R	G	■	50	10	35X50X10 HMSA10 V	HMSA10	V	E	⊙						
2.502	0.250	13862	HM21	R	G	■	51	6	13760	HMS4	P	S							
2.502	0.313	13865	CRW1	R	W	■	52	6	35X52X6 HMSA72P2 R	HMSA72P2	R	S	◆						
2.502	0.313	13867	CRW1	V	W	■	52	6	35X52X6 HMSA7P2 V	HMSA7P2	V	S	◆						
2.562	0.375	13875	CRW1	R	W	■	52	7	35X52X7 HMS5 RG	HMS5	RG	E							
2.562	0.375	13876	CRWA1	R	W	■	52	7	35X52X7 HMS5 V	HMS5	V	E	⊙						
2.562	0.375	13878	CRWA1	V	W	■	52	7	35X52X7 HMSA10 RG	HMSA10	RG	E							
2.623	0.313	13882	CRWA1	V	W	■	52	7	35X52X7 HMSA10 V	HMSA10	V	E	⊙						
2.686	0.500	13892	CRW1	R	W	■	52	8	35X52X8 CRW1 R	CRW1	R	W	■						
2.715	0.315	543910	CRWA1	R	W	■	52	8	35X52X8 CRWA1 P	CRWA1	P	W	■						
2.716	0.313	13900	CRW1	R	W	■	52	8	35X52X8 CRWA1 R	CRWA1	R	W							
2.750	0.500	13906	CRSH1	R	S	■	52	8	35X52X8 HMS5 RG	HMS5	RG	E							
2.812	0.375	13912	CRWHA1	R	W	■	52	8	35X52X8 HMS5 V	HMS5	V	E	⊙						
2.875	0.313	13929	CRWA1	P	W	■	52	8	35X52X8 HMSA10 RG	HMSA10	RG	E							
3.000	0.500	13937	CRSHA1	R	S	■	52	8	35X52X8 HMSA10 V	HMSA10	V	E	⊙						
3.125	0.500	13936	CRSH1	R	S	■	52	9	35X52X9 HMS4 R	HMS4	R	S							
3.350	0.469	13934	CRSH1	R	S	■	52	10	35X52X10 HMS5 RG	HMS5	RG	E							
							52	10	35X52X10 HMS5 V	HMS5	V	E	⊙						
METRIC				1.378 in. Shaft Diameter				35 mm											
16		99139	SSLEEVE				52	10	35X52X10 HMSA10 RG	HMSA10	RG	E							
													54	7	35X54X7 CRW1 R	CRW1	R	W	■
													54	7	35X54X7 CRW1 V	CRW1	V	W	■
													54	8	35X54X8 CRW1 V	CRW1	V	W	
													55	7	35X55X7 HMS5 RG	HMS5	RG	E	
													55	7	35X55X7 HMS5 V	HMS5	V	E	⊙
													55	7	35X55X7 HMSA10 RG	HMSA10	RG	E	
													55	7	35X55X7 HMSA10 V	HMSA10	V	E	⊙
													55	8	35X55X8 CRW1 R	CRW1	R	W	■
													55	8	35X55X8 CRW1 V	CRW1	V	W	
													55	8	35X55X8 HMS5 RG	HMS5	RG	E	
													55	8	35X55X8 HMS5 V	HMS5	V	E	⊙
													55	8	35X55X8 HMSA10 RG	HMSA10	RG	E	
													55	8	35X55X8 HMSA10 V	HMSA10	V	E	⊙
													55	10	35X55X10 HMS5 RG	HMS5	RG	E	
													55	10	35X55X10 HMS5 V	HMS5	V	E	⊙
													55	10	35X55X10 HMSA10 RG	HMSA10	RG	E	
													55	10	35X55X10 HMSA10 V	HMSA10	V	E	⊙
													55	11	35X55X11 HMSA7 R	HMSA7	R	S	
													56	8	35X56X8 CRW1 R	CRW1	R	W	■
													56	8	35X56X8 CRW1 V	CRW1	V	W	■
													56	10	35X56X10 HMS5 RG	HMS5	RG	E	
													56	10	35X56X10 HMS5 V	HMS5	V	E	⊙
													56	10	35X56X10 HMSA10 RG	HMSA10	RG	E	
													56	10	35X56X10 HMSA10 V	HMSA10	V	E	⊙
													58	10	35X58X10 HMS5 RG	HMS5	RG	E	
													58	10	35X58X10 HMS5 V	HMS5	V	E	⊙
													58	10	35X58X10 HMSA10 RG	HMSA10	RG	E	
													58	10	35X58X10 HMSA10 V	HMSA10	V	E	⊙
													60	10	35X60X10 HMS5 RG	HMS5	RG	E	
													60	10	35X60X10 HMS5 V	HMS5	V	E	⊙
													60	10	35X60X10 HMSA10 RG	HMSA10	RG	E	
													60	10	35X60X10 HMSA10 V	HMSA10	V	E	⊙
													60	14	35X60X14 HMSA7 R	HMSA7	R	S	
													62	7	35X62X7 HMS5 RG	HMS5	RG	E	
													62	7	35X62X7 HMS5 V	HMS5	V	E	⊙
													62	7	35X62X7 HMSA10 RG	HMSA10	RG	E	
													62	7	35X62X7 HMSA10 V	HMSA10	V	E	⊙
													62	7.20	35X62X7.2 HMS5 RG	HMS5	RG	E	
													62	7.20	35X62X7.2 HMS5 V	HMS5	V	E	⊙

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
62	7.20	35X62X7.2 HMSA10 RG	HMSA10	RG	E		52	8	36X52X8 CRW1 R	CRW1	R	W	■
METRIC (cont.) 1.378 in. Shaft Diameter 35 mm							METRIC (cont.) 1.417 in. Shaft Diameter 36 mm						
62	7.20	35X62X7.2 HMSA10 V	HMSA10	V	E	⊙	52	8	36X52X8 CRW1 V	CRW1	V	W	■
62	7.95	13810	CRW1	R	W	■	54	8	36X54X8 CRW1 R	CRW1	R	W	■
62	7.95	13812	CRWA1	R	W	■	54	8	36X54X8 CRW1 V	CRW1	V	W	■
62	8	35X62X8 CRW1 R	CRW1	R	W	■	54	8	36X54X8 HMS4 R	HMS4	R	S	
62	8	35X62X8 CRW1 V	CRW1	V	W	■	56	10	36X56X10 HMS4 R	HMS4	R	S	
62	8	35X62X8 HMS5 RG	HMS5	RG	E		58	8	36X58X8 CRW1 R	CRW1	R	W	■
62	8	35X62X8 HMS5 V	HMS5	V	E	⊙	58	10	36X58X10 HMS5 RG	HMS5	RG	E	
62	8	35X62X8 HMSA10 RG	HMSA10	RG	E		58	10	36X58X10 HMS5 V	HMS5	V	E	⊙
62	8	35X62X8 HMSA10 V	HMSA10	V	E	⊙	58	10	▲ 36X58X10 HMSA10 RG	HMSA10	RG	E	
62	10	35X62X10 HMS5 RG	HMS5	RG	E		58	10	36X58X10 HMSA10 V	HMSA10	V	E	⊙
62	10	35X62X10 HMS5 V	HMS5	V	E	⊙	58	12	36X58X12 HMS4 R	HMS4	R	S	
62	10	35X62X10 HMSA10 RG	HMSA10	RG	E		60	8	36X60X8 CRW1 R	CRW1	R	W	■
62	10	35X62X10 HMSA10 V	HMSA10	V	E	⊙	60	8	36X60X8 CRW1 V	CRW1	V	W	■
64	8	35X64X8 CRW1 R	CRW1	R	W	■	62	7	36X62X7 HMS5 RG	HMS5	RG	E	
65	8	35X65X8 CRW1 R	CRW1	R	W	■	62	7	36X62X7 HMS5 V	HMS5	V	E	⊙
65	10	35X65X10 HMS4 R	HMS4	R	S		62	7	▲ 36X62X7 HMSA10 RG	HMSA10	RG	E	
68	8	35X68X8 CRW1 R	CRW1	R	W	■	62	7	36X62X7 HMSA10 V	HMSA10	V	E	⊙
68	8	35X68X8 CRW1 V	CRW1	V	W	■	62	8	36X62X8 CRW1 R	CRW1	R	W	■
68	10	35X68X10 HMS4 R	HMS4	R	S		65	8	36X65X8 CRW1 R	CRW1	R	W	■
72	7	35X72X7 HMS5 RG	HMS5	RG	E		66.45	7.95	14092	CRW1	R	W	■
72	7	35X72X7 HMS5 V	HMS5	V	E	⊙	68	8	36X68X8 CRW1 R	CRW1	R	W	■
72	7	▲ 35X72X7 HMSA10 RG	HMSA10	RG	E		68	10	36X68X10 HMS4 R	HMS4	R	S	
72	7	35X72X7 HMSA10 V	HMSA10	V	E	⊙	INCH 1.435 in. Shaft Diameter 36.45 mm						
72	7.95	13920	CRW1	R	W	■	0.688	99143	SSLEEVE				
72	7.95	13925	CRWA1	P	W	■	Shaft Ø1.432-1.438" - 'on-shaft' width 0.563" - flange Ø1.781"						
72	7.95	13918	CRWA1	R	W	■	0.688	99821	GSLEEVE				
72	7.95	13926	CRWA1	V	W	⊙	Shaft Ø1.432-1.438" - 'on-shaft' width 0.563" - flange Ø1.781"						
72	8	35X72X8 CRW1 R	CRW1	R	W	■	INCH 1.438 in. Shaft Diameter 36.53 mm						
72	8	35X72X8 CRW1 V	CRW1	V	W	■	0.500	99144	SSLEEVE				
72	10	35X72X10 HMS5 RG	HMS5	RG	E		Shaft Ø1.435-1.441" - 'on-shaft' width 0.375" - flange Ø1.781"						
72	10	35X72X10 HMS5 V	HMS5	V	E	⊙	2.000	0.125	14209	HM4	R	G	
72	10	35X72X10 HMSA10 RG	HMSA10	RG	E		2.062	0.313	14212	CRW1	V	W	
72	10	35X72X10 HMSA10 V	HMSA10	V	E	⊙	2.062	0.313	▲ 14214	CRWA1	R	W	■
72	12	35X72X12 HMS5 RG	HMS5	RG	E		2.125	0.313	▲ 14223	CRW1	R	W	■
72	12	35X72X12 HMS5 V	HMS5	V	E	⊙	2.125	0.313	14225	CRWA1	V	W	■
72	12	35X72X12 HMSA10 RG	HMSA10	RG	E		2.250	0.250	14257	HM14	R	G	■
72	12	35X72X12 HMSA10 V	HMSA10	V	E	⊙	2.250	0.313	14262	CRW1	R	W	■
78	8	35X78X8 CRW1 R	CRW1	R	W	■	2.250	0.313	14260	CRW1	V	W	■
80	8	▲ 35X80X8 CRW1 R	CRW1	R	W	■	2.250	0.313	▲ 14247	CRWA1	R	W	■
80	12	35X80X12 HMS5 RG	HMS5	RG	E		2.250	0.313	14259	CRWA1	V	W	■
80	12	35X80X12 HMS5 V	HMS5	V	E	⊙	2.374	0.313	▲ 14282	CRW1	R	W	■
80	12	▲ 35X80X12 HMSA10 RG	HMSA10	RG	E		2.374	0.313	14285	CRWA1	R	W	■
80	12	35X80X12 HMSA10 V	HMSA10	V	E	⊙	2.437	0.250	14359	HM21	R	G	■
INCH 1.399 in. Shaft Diameter 35.53 mm							METRIC 1.457 in. Shaft Diameter 37 mm						
1.964	0.235	▲ 538565	CRW1	R	W		47	4	37X47X4 HM4 R	HM4	R	G	
INCH 1.414 in. Shaft Diameter 35.92 mm							47	4	37X47X4 HMS4 R	HMS4	R	S	
2.250	0.250	14035	CRSA1	R	S	■	47	4	37X47X4 HMSA7 R	HMSA7	R	S	
METRIC 1.417 in. Shaft Diameter 36 mm							50	6	37X50X6 HMS5 RG	HMS5	RG	E	
17	99146	SSLEEVE					50	6	37X50X6 HMS5 V	HMS5	V	E	⊙
Shaft Ø35.84-35.99mm - 'on-shaft' width 13mm - flange Ø45.24mm							50	6	▲ 37X50X6 HMSA10 RG	HMSA10	RG	E	
44	5	36X44X5 HMSA7 R	HMSA7	R	S		50	6	37X50X6 HMSA10 V	HMSA10	V	E	⊙
47	7	36X47X7 HMS5 RG	HMS5	RG	E		50	6	37X50X6 HMSA7 P	HMSA7	P	S	
47	7	36X47X7 HMS5 V	HMS5	V	E	⊙	52	8	37X52X8 HMS4 R	HMS4	R	S	
47	7	▲ 36X47X7 HMSA10 RG	HMSA10	RG	E		INCH 1.469 in. Shaft Diameter 37.31 mm						
47	7	36X47X7 HMSA10 V	HMSA10	V	E	⊙	2.374	0.375	14641	CRSA1	R	S	
50	7	36X50X7 CRW1 R	CRW1	R	W	■	INCH 1.484 in. Shaft Diameter 37.69 mm						
50	7	36X50X7 HMS5 RG	HMS5	RG	E		2.254	0.313	▲ 14907	CRW1	R	W	■
50	7	36X50X7 HMS5 V	HMS5	V	E	⊙							
50	7	▲ 36X50X7 HMSA10 RG	HMSA10	RG	E								
50	7	36X50X7 HMSA10 V	HMSA10	V	E	⊙							
50	8	36X50X8 CRW1 R	CRW1	R	W	■							
52	7	36X52X7 HMS5 RG	HMS5	RG	E								
52	7	36X52X7 HMS5 V	HMS5	V	E	⊙							
52	7	▲ 36X52X7 HMSA10 RG	HMSA10	RG	E								
52	7	36X52X7 HMSA10 V	HMSA10	V	E	⊙							

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
METRIC (cont.)		1.575 in.	Shaft Diameter		40 mm		METRIC (cont.)		1.575 in.	Shaft Diameter		40 mm	
52	8	40X52X8 HMSA10 V	HMSA10	V	E	⊙	62	8	40X62X8 HMSA10 V	HMSA10	V	E	⊙
52.88	6.35	15510	CRW1	R	W	■	62	10	40X62X10 HMS5 RG	HMS5	RG	E	■
54	7	▲40X54X7 CRW1 R	CRW1	R	W	■	62	10	40X62X10 HMS5 V	HMS5	V	E	⊙
54	10	15881	HMSA7	P	S		62	10	40X62X10 HMSA10 RG	HMSA10	RG	E	■
55	7	40X55X7 HMS5 RG	HMS5	RG	E	■	62	10	40X62X10 HMSA10 V	HMSA10	V	E	⊙
55	7	40X55X7 HMS5 V	HMS5	V	E	⊙	62	11.50	40X62X11.5 HMS4 R	HMS4	R	S	
55	7	▲40X55X7 HMSA10 RG	HMSA10	RG	E	■	62.51	11	15558	HMSA7	R	S	
55	7	40X55X7 HMSA10 V	HMSA10	V	E	⊙	65	8	40X65X8 CRW1 R	CRW1	R	W	■
55	8	40X55X8 CRW1 R	CRW1	R	W	■	65	10	40X65X10 HMS5 RG	HMS5	RG	E	■
55	8	40X55X8 CRW1 V	CRW1	V	W	■	65	10	40X65X10 HMS5 V	HMS5	V	E	⊙
55	8	40X55X8 HMS5 RG	HMS5	RG	E	■	65	10	▲40X65X10 HMSA10 RG	HMSA10	RG	E	■
55	8	40X55X8 HMS5 V	HMS5	V	E	⊙	65	10	40X65X10 HMSA10 V	HMSA10	V	E	⊙
55	8	40X55X8 HMSA10 RG	HMSA10	RG	E	■	65	12	40X65X12 HMS5 RG	HMS5	RG	E	■
55	8	40X55X8 HMSA10 V	HMSA10	V	E	⊙	65	12	40X65X12 HMS5 V	HMS5	V	E	⊙
56	7	40X56X7 CRW1 V	CRW1	V	W	■	65	12	40X65X12 HMSA10 RG	HMSA10	RG	E	■
56	8	40X56X8 CRW1 R	CRW1	R	W	■	65	12	40X65X12 HMSA10 V	HMSA10	V	E	⊙
56	8	40X56X8 HMS5 RG	HMS5	RG	E	■	68	8	40X68X8 CRW1 R	CRW1	R	W	■
56	8	40X56X8 HMS5 V	HMS5	V	E	⊙	68	8	40X68X8 HMS5 RG	HMS5	RG	E	■
56	8	▲40X56X8 HMSA10 RG	HMSA10	RG	E	■	68	8	40X68X8 HMS5 V	HMS5	V	E	⊙
56	8	40X56X8 HMSA10 V	HMSA10	V	E	⊙	68	8	▲40X68X8 HMSA10 RG	HMSA10	RG	E	■
57	8	▲40X57X8 CRW1 R	CRW1	R	W	■	68	8	40X68X8 HMSA10 V	HMSA10	V	E	⊙
58	6	15736	HMSA7	P	S		68	10	40X68X10 HMS5 RG	HMS5	RG	E	■
58	7	40X58X7 HMS5 RG	HMS5	RG	E	■	68	10	40X68X10 HMS5 V	HMS5	V	E	⊙
58	7	40X58X7 HMS5 V	HMS5	V	E	⊙	68	10	40X68X10 HMSA10 RG	HMSA10	RG	E	■
58	7	▲40X58X7 HMSA10 RG	HMSA10	RG	E	■	68	10	40X68X10 HMSA10 V	HMSA10	V	E	⊙
58	7	40X58X7 HMSA10 V	HMSA10	V	E	⊙	70	8	40X70X8 CRW1 R	CRW1	R	W	■
58	8	40X58X8 CRW1 R	CRW1	R	W	■	70	8	40X70X8 HMS5 RG	HMS5	RG	E	■
58	8	40X58X8 CRW1 V	CRW1	V	W	■	70	8	40X70X8 HMS5 V	HMS5	V	E	⊙
58	8	40X58X8 HMS5 RG	HMS5	RG	E	■	70	8	▲40X70X8 HMSA10 RG	HMSA10	RG	E	■
58	8	40X58X8 HMS5 V	HMS5	V	E	⊙	70	8	40X70X8 HMSA10 V	HMSA10	V	E	⊙
58	8	40X58X8 HMSA10 RG	HMSA10	RG	E	■	72	7	40X72X7 HMS5 RG	HMS5	RG	E	■
58	8	40X58X8 HMSA10 V	HMSA10	V	E	⊙	72	7	40X72X7 HMS5 V	HMS5	V	E	⊙
58	9	40X58X9 HMSA7 R	HMSA7	R	S		72	7	▲40X72X7 HMSA10 RG	HMSA10	RG	E	■
58	10	40X58X10 HMS5 RG	HMS5	RG	E	■	72	7	40X72X7 HMSA10 V	HMSA10	V	E	⊙
58	10	40X58X10 HMS5 V	HMS5	V	E	⊙	72	8	40X72X8 CRW1 R	CRW1	R	W	■
58	10	40X58X10 HMSA10 RG	HMSA10	RG	E	■	72	10	40X72X10 HMS5 RG	HMS5	RG	E	■
58	10	40X58X10 HMSA10 V	HMSA10	V	E	⊙	72	10	40X72X10 HMS5 V	HMS5	V	E	⊙
59	8	40X59X8 HMS5 RG	HMS5	RG	E	■	72	10	40X72X10 HMSA10 RG	HMSA10	RG	E	■
59	8	40X59X8 HMS5 V	HMS5	V	E	⊙	72	10	40X72X10 HMSA10 V	HMSA10	V	E	⊙
59	8	40X59X8 HMSA10 RG	HMSA10	RG	E	■	74	8	40X74X8 CRW1 R	CRW1	R	W	■
59	8	40X59X8 HMSA10 V	HMSA10	V	E	⊙	75	8	40X75X8 CRW1 V	CRW1	V	W	■
60	8	40X60X8 CRW1 R	CRW1	R	W	■	78	10	40X78X10 HMSA7 R	HMSA7	R	S	
60	8	40X60X8 CRW1 V	CRW1	V	W	■	80	7	40X80X7 HMS5 RG	HMS5	RG	E	■
60	8	40X60X8 HMS5 RG	HMS5	RG	E	■	80	7	40X80X7 HMS5 V	HMS5	V	E	⊙
60	8	40X60X8 HMS5 V	HMS5	V	E	⊙	80	7	▲40X80X7 HMSA10 RG	HMSA10	RG	E	■
60	8	▲40X60X8 HMSA10 RG	HMSA10	RG	E	■	80	7	40X80X7 HMSA10 V	HMSA10	V	E	⊙
60	8	40X60X8 HMSA10 V	HMSA10	V	E	⊙	80	8	40X80X8 CRW1 R	CRW1	R	W	■
60	10	40X60X10 HMS5 RG	HMS5	RG	E	■	80	8	40X80X8 HMS5 RG	HMS5	RG	E	■
60	10	40X60X10 HMS5 V	HMS5	V	E	⊙	80	8	40X80X8 HMS5 V	HMS5	V	E	⊙
60	10	40X60X10 HMSA10 RG	HMSA10	RG	E	■	80	8	40X80X8 HMSA10 RG	HMSA10	RG	E	■
60	10	40X60X10 HMSA10 V	HMSA10	V	E	⊙	80	8	40X80X8 HMSA10 V	HMSA10	V	E	⊙
60	10	40X60X10 CRSA1 R	CRSA1	R	S		80	10	40X80X10 HMS5 RG	HMS5	RG	E	■
60	12	40X60X12 HMS4 R	HMS4	R	S		80	10	40X80X10 HMS5 V	HMS5	V	E	⊙
61.16	7.95	15557	CRWHA1	R	W	■	80	10	40X80X10 HMSA10 RG	HMSA10	RG	E	■
62	6	40X62X6 HMS5 RG	HMS5	RG	E	■	80	10	40X80X10 HMSA10 V	HMSA10	V	E	⊙
62	6	40X62X6 HMS5 V	HMS5	V	E	⊙	80	12	40X80X12 HMS5 RG	HMS5	RG	E	■
62	6	40X62X6 HMSA10 RG	HMSA10	RG	E	■	80	12	40X80X12 HMS5 V	HMS5	V	E	⊙
62	6	40X62X6 HMSA10 V	HMSA10	V	E	⊙	80	12	40X80X12 HMSA10 RG	HMSA10	RG	E	■
62	6	40X62X6 HMSA7P2 R	HMSA7P2	R	S	◆	80	12	40X80X12 HMSA10 V	HMSA10	V	E	⊙
62	7	40X62X7 HMS5 RG	HMS5	RG	E	■	90	8	40X90X8 CRW1 R	CRW1	R	W	■
62	7	40X62X7 HMS5 V	HMS5	V	E	⊙	90	10	40X90X10 HMS5 RG	HMS5	RG	E	■
62	7	▲40X62X7 HMSA10 RG	HMSA10	RG	E	■	90	10	40X90X10 HMS5 V	HMS5	V	E	⊙
62	7	40X62X7 HMSA10 V	HMSA10	V	E	⊙	90	10	▲40X90X10 HMSA10 RG	HMSA10	RG	E	■
62	8	40X62X8 CRW1 R	CRW1	R	W	■	90	10	40X90X10 HMSA10 V	HMSA10	V	E	⊙
62	8	40X62X8 CRW1 V	CRW1	V	W	■	90	12	40X90X12 HMS5 RG	HMS5	RG	E	■
62	8	40X62X8 HMS5 RG	HMS5	RG	E	■	90	12	40X90X12 HMS5 V	HMS5	V	E	⊙
62	8	40X62X8 HMS5 V	HMS5	V	E	⊙	90	12	40X90X12 HMSA10 RG	HMSA10	RG	E	■
62	8	40X62X8 HMSA10 RG	HMSA10	RG	E	■	90	12	40X90X12 HMSA10 V	HMSA10	V	E	⊙

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH 1.594 in. Shaft Diameter 40.49 mm							INCH (cont.) 1.625 in. Shaft Diameter 41.28 mm						
2.125	0.313	15915	CRW1	P	W	■	2.441	0.313	▲ 16180	CRW1	R	W	■
2.437	0.313	15940	CRW1	P	W	■	2.441	0.313	16201	CRWA1	R	W	■
2.437	0.313	▲ 15955	CRW1	R	W	■	2.441	0.640	16204	C8	R	W	■
2.502	0.313	▲ 15960	CRW1	R	W	■	2.502	0.250	16270	HM21	R	G	■
2.623	0.313	15968	CRW1	R	W	■	2.502	0.313	16245	CRW1	R	W	■
2.758	0.313	▲ 15975	CRW1	R	W	■	2.502	0.313	16247	CRWA1	P	W	■
INCH 1.605 in. Shaft Diameter 40.77 mm							2.502						
0.641	99160	SSLEEVE					2.502	0.313	▲ 16246	CRWA1	R	W	■
Shaft Ø1.602-1.608" - 'on-shaft' width 0.5" - flange Ø1.938"							2.502						
INCH 1.594 in. Shaft Diameter 40.49 mm							INCH 1.645 in. Shaft Diameter 41.78 mm						
1.906	0.250	16430	HM3	R	G		2.656	0.400	16500	CRSA1	P	S	■
METRIC 1.614 in. Shaft Diameter 41 mm							METRIC 1.654 in. Shaft Diameter 42 mm						
15.9	99163	SSLEEVE					14.5	99166	SSLEEVE				
Shaft Ø40.84-41mm - 'on-shaft' width 12.7mm - flange Ø49.23mm							Shaft Ø41.83-41.99mm - 'on-shaft' width 11.3mm - flange Ø53.01mm						
53	7	41X53X7 CRW1 R	CRW1	R	W	■	17.5	99169	SSLEEVE				
55	8	41X55X8 CRW1 R	CRW1	R	W	■	Shaft Ø41.83-41.99mm - 'on-shaft' width 14.3mm - flange Ø53.01mm						
56	7	41X56X7 HMS5 RG	HMS5	RG	E		50	4	42X50X4 HMS4 R	HMS4	R	S	
56	7	41X56X7 HMS5 V	HMS5	V	E	◎	50	4	42X50X4 HMSA7 R	HMSA7	R	S	
56	7	41X56X7 HMSA10 RG	HMSA10	RG	E		52	4	42X52X4 HM4 R	HM4	R	G	
56	7	41X56X7 HMSA10 V	HMSA10	V	E	◎	53	7	42X53X7 HMS5 RG	HMS5	RG	E	
62	8	41X62X8 CRW1 R	CRW1	R	W	■	53	7	42X53X7 HMS5 V	HMS5	V	E	◎
INCH 1.618 in. Shaft Diameter 41.10 mm							53						
2.254	0.235	533803	CRW1	R	W		53	7	42X53X7 HMSA10 RG	HMSA10	RG	E	
2.531	0.438	▲ 16449	CRWA1	R	W	■	53	7	42X53X7 HMSA10 V	HMSA10	V	E	◎
INCH 1.619 in. Shaft Diameter 41.12 mm							55						
2.000	0.250	▲ 16046	CRW1	R	W	■	55	6	42X55X6 HM1 R	HM1	R	G	
2.000	0.250	16039	CRW1	V	W	■	55	7	42X55X7 HMS5 RG	HMS5	RG	E	
INCH 1.625 in. Shaft Diameter 41.28 mm							55						
0.438	99161	SSLEEVE					55	7	42X55X7 HMS5 V	HMS5	V	E	◎
Shaft Ø1.622-1.628" - 'on-shaft' width 0.313" - flange Ø1.875"							55						
0.688	99162	SSLEEVE					55	7	▲ 42X55X7 HMSA10 RG	HMSA10	RG	E	
Shaft Ø1.622-1.628" - 'on-shaft' width 0.563" - flange Ø1.875"							55						
0.688	99826	SSLEEVE					55	7	42X55X7 HMSA10 V	HMSA10	V	E	◎
Shaft Ø1.622-1.628" - 'on-shaft' width 0.563" - flange Ø1.875"							55						
2.116	0.313	▲ 16047	CRWA1	R	W	■	55	8	42X55X8 CRW1 R	CRW1	R	W	■
2.125	0.250	▲ 16054	CRW1	R	W	■	55	8	42X55X8 CRW1 V	CRW1	V	W	■
2.125	0.250	16048	CRW1	V	W	■◎	55	8	42X55X8 HMS5 RG	HMS5	RG	E	
2.125	0.250	16055	HM14	R	G	■	55	8	42X55X8 HMS5 V	HMS5	V	E	◎
2.248	0.313	▲ 16062	CRWA1	R	W	■	55	8	42X55X8 HMSA10 RG	HMSA10	RG	E	
2.250	0.250	16065	HM21	R	G	■	55	8	42X55X8 HMSA10 V	HMSA10	V	E	◎
2.250	0.313	541478	CRW1	R	W	■	55	8	42X55X8 CRW1 R	CRW1	R	W	■
2.250	0.313	16078	CRW1	V	W	◎	55	8	42X55X8 CRW1 V	CRW1	V	W	■
2.250	0.375	16049	CRW1	P	W	■	55	8	42X55X8 HMS5 RG	HMS5	RG	E	
2.282	0.313	16083	CRW1	R	W	■	55	8	42X55X8 HMS5 V	HMS5	V	E	◎
2.328	0.438	16069	HM18	R	G	■	55	8	42X55X8 HMSA10 RG	HMSA10	RG	E	
2.371	0.500	538037	CRWA1	V	W	■	55	8	42X55X8 HMSA10 V	HMSA10	V	E	◎
2.374	0.250	16094	CRW1	R	W	■	55	9	42X55X9 HMSA7 R	HMSA7	R	S	
2.374	0.250	16092	HM21	R	G	■	56	7	42X56X7 CRW1 V	CRW1	V	W	■
2.374	0.313	16084	CRW1	R	W	■	56	7	42X56X7 HMS5 RG	HMS5	RG	E	
2.374	0.313	16077	CRW1	V	W	■	56	7	42X56X7 HMS5 V	HMS5	V	E	◎
2.374	0.313	16091	CRWA1	P	W	■	56	7	▲ 42X56X7 HMSA10 RG	HMSA10	RG	E	
2.374	0.313	▲ 16085	CRWA1	R	W	■	56	7	42X56X7 HMSA10 V	HMSA10	V	E	◎
2.374	0.313	16072	CRWH1	R	W	■	56	8	42X56X8 CRW1 R	CRW1	R	W	■
2.374	0.500	16079	CRWH1	R	W	■	56.20	6	16506	HMA1	R	G	
2.375	0.250	16095	HM14	R	G	■	58	7	42X58X7 HMA1 R	HMA1	R	G	
2.437	0.250	16168	HM21	R	G	■	58	7	42X58X7 HMS4 R	HMS4	R	S	
2.437	0.313	▲ 16113	CRW1	R	W	■	58	8	42X58X8 CRW1 R	CRW1	R	W	■
2.437	0.313	16119	CRW1	V	W	■	58	8	42X58X8 CRW1 V	CRW1	V	W	■
2.437	0.313	16128	CRWA1	R	W	■	58	10	42X58X10 HMS4 R	HMS4	R	S	
2.437	0.313	16120	CRWA1	V	W	■	60	7	42X60X7 HMS5 RG	HMS5	RG	E	
2.437	0.315	531031	CRW1	P	W	■	60	7	42X60X7 HMS5 V	HMS5	V	E	◎
2.437	0.374	16121	HMSA7	R	S								

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ◎ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
METRIC (cont.) 1.654 in. Shaft Diameter 42 mm							INCH (cont.) 1.688 in. Shaft Diameter 42.88 mm						
60	7	▲ 42X60X7 HMSA10 RG	HMSA10	RG	E		2.328	0.500	16667	HM18	R	G	
60	7	42X60X7 HMSA10 V	HMSA10	V	E	◎	2.374	0.313	16669	CRSA1	R	S	
60	8	42X60X8 CRW1 R	CRW1	R	W	■	2.437	0.250	16692	CRW1	S	W	
60	8	42X60X8 CRW1 V	CRW1	V	W	■	2.437	0.313	▲ 16679	CRW1	R	W	■
60	10	42X60X10 HMS4 R	HMS4	R	S		2.437	0.313	16680	CRWA1	R	W	■
62	7	42X62X7 HMS5 RG	HMS5	RG	E		2.437	0.469	16696	CRW1	S	W	■
62	7	42X62X7 HMS5 V	HMS5	V	E	◎	2.502	0.281	16743	HM21	R	G	■
62	7	42X62X7 HMSA10 RG	HMSA10	RG	E		2.502	0.313	▲ 16719	CRW1	R	W	■
62	7	42X62X7 HMSA10 V	HMSA10	V	E	◎	2.551	0.470	16735	HMSA7	R	S	
62	8	42X62X8 CRW1 R	CRW1	R	W	■	2.562	0.250	16754	HM21	R	G	■
62	8	42X62X8 CRW1 V	CRW1	V	W	■	2.605	0.250	16757	HM14	R	G	■
62	8	42X62X8 HMS5 RG	HMS5	RG	E		2.623	0.313	▲ 16814	CRWA1	R	W	■
62	8	42X62X8 HMS5 V	HMS5	V	E	◎	2.623	0.375	16811	HM21	R	G	■
62	8	▲ 42X62X8 HMSA10 RG	HMSA10	RG	E		2.623	0.500	16816	CRW1	R	W	■
62	8	42X62X8 HMSA10 V	HMSA10	V	E	◎	2.623	0.500	16817	CRWA1	V	W	■
62	10	42X62X10 HMS5 RG	HMS5	RG	E		2.686	0.313	▲ 16842	CRW1	R	W	■
62	10	42X62X10 HMS5 V	HMS5	V	E	◎	2.716	0.313	16854	CRW1	R	W	■
62	10	42X62X10 HMSA10 RG	HMSA10	RG	E		2.750	0.313	▲ 16900	CRW1	R	W	■
62	10	42X62X10 HMSA10 V	HMSA10	V	E	◎	2.750	0.375	16903	CRWA1	R	W	■
64	6	42X64X6 HMA1 R	HMA1	R	G		2.835	0.469	16960	CRSA1	R	S	
65	8	42X65X8 CRW1 R	CRW1	R	W	■	2.875	0.315	▲ 16999	CRW1	R	W	■
65	8	42X65X8 CRW1 V	CRW1	V	W	■	3.061	0.375	17035	CRW1	R	W	■
65	10	42X65X10 HMS5 RG	HMS5	RG	E		3.125	0.375	17038	CRWA1	R	W	■
65	10	42X65X10 HMS5 V	HMS5	V	E	◎							
65	10	▲ 42X65X10 HMSA10 RG	HMSA10	RG	E		METRIC 1.693 in. Shaft Diameter 43 mm						
65	10	42X65X10 HMSA10 V	HMSA10	V	E	◎	15.9	99182	SSLEEVE	<i>Shaft Ø42.85-43mm - 'on-shaft' width 12.7mm - flange Ø48.41mm</i>			
65	12	42X65X12 HMS5 RG	HMS5	RG	E		54	7.50	43X54X7.5 CRSA1 R	CRSA1	R	S	
65	12	42X65X12 HMS5 V	HMS5	V	E	◎	57	8	▲ 43X57X8 CRW1 R	CRW1	R	W	■
65	12	42X65X12 HMSA10 RG	HMSA10	RG	E		60	8	43X60X8 CRW1 R	CRW1	R	W	■
65	12	42X65X12 HMSA10 V	HMSA10	V	E	◎	60	10	43X60X10 HMS4 R	HMS4	R	S	
66	10	42X66X10 HMS5 RG	HMS5	RG	E		60	10	43X60X10 HMSA7 R	HMSA7	R	S	
66	10	42X66X10 HMS5 V	HMS5	V	E	◎	62	8	43X62X8 HMS5 RG	HMS5	RG	E	
66	10	42X66X10 HMSA10 RG	HMSA10	RG	E		62	8	43X62X8 HMS5 V	HMS5	V	E	◎
66	10	42X66X10 HMSA10 V	HMSA10	V	E	◎	62	8	▲ 43X62X8 HMSA10 RG	HMSA10	RG	E	
66	10	42X66X10 HMSA7 P	HMSA7	P	S		62	8	43X62X8 HMSA10 V	HMSA10	V	E	◎
66.62	9.53	16545	CRWA1	P	W	■	62	8	43X62X8 HMSA7 P	HMSA7	P	S	
67	10	42X67X10 HMS5 RG	HMS5	RG	E					INCH 1.704 in. Shaft Diameter 43.28 mm			
67	10	42X67X10 HMS5 V	HMS5	V	E	◎	3.034	0.500	▲ 17100	CRWA1	R	W	■
67	10	▲ 42X67X10 HMSA10 RG	HMSA10	RG	E		INCH 1.718 in. Shaft Diameter 43.64 mm						
67	10	42X67X10 HMSA10 V	HMSA10	V	E	◎	0.688	99171	SSLEEVE	<i>Shaft Ø1.715-1.721" - 'on-shaft' width 0.563" - flange Ø2.031"</i>			
67	10	42X67X10 HMSA7 P	HMSA7	P	S					INCH 1.719 in. Shaft Diameter 43.66 mm			
68	10	42X68X10 HMS4 R	HMS4	R	S		2.561	0.315	▲ 17144	CRWA1	R	W	■
70	10	42X70X10 HMSA7 R	HMSA7	R	S		2.562	0.500	17146	HM18	R	G	■
72	8	42X72X8 CRW1 R	CRW1	R	W	■	2.623	0.500	17136	CRSH1	R	S	■
72	8	42X72X8 CRW1 V	CRW1	V	W	■	METRIC 1.732 in. Shaft Diameter 44 mm						
72	8	42X72X8 HMS5 RG	HMS5	RG	E		60	8	▲ 44X60X8 CRW1 R	CRW1	R	W	■
72	8	42X72X8 HMS5 V	HMS5	V	E	◎	60	8	44X60X8 CRW1 V	CRW1	V	W	
72	8	▲ 42X72X8 HMSA10 RG	HMSA10	RG	E		60	10	44X60X10 HMS5 RG	HMS5	RG	E	
72	8	42X72X8 HMSA10 V	HMSA10	V	E	◎	60	10	44X60X10 HMS5 V	HMS5	V	E	◎
72	10	42X72X10 HMS5 RG	HMS5	RG	E		60	10	▲ 44X60X10 HMSA10 RG	HMSA10	RG	E	
72	10	42X72X10 HMS5 V	HMS5	V	E	◎	60	10	44X60X10 HMSA10 V	HMSA10	V	E	◎
72	10	42X72X10 HMSA10 RG	HMSA10	RG	E		62	8	▲ 44X62X8 CRW1 R	CRW1	R	W	■
72	10	42X72X10 HMSA10 V	HMSA10	V	E	◎	62	10	44X62X10 HMS5 RG	HMS5	RG	E	
80	10	42X80X10 HMS4 R	HMS4	R	S		62	10	44X62X10 HMS5 V	HMS5	V	E	◎
							62	10	▲ 44X62X10 HMSA10 RG	HMSA10	RG	E	
							62	10	44X62X10 HMSA10 V	HMSA10	V	E	◎
							62.20	6.35	17131	HM21	R	G	■
							65	8	44X65X8 CRW1 R	CRW1	R	W	■
							65	10	44X65X10 HMS5 RG	HMS5	RG	E	
							65	10	44X65X10 HMS5 V	HMS5	V	E	◎
							65	10	▲ 44X65X10 HMSA10 RG	HMSA10	RG	E	
							65	10	44X65X10 HMSA10 V	HMSA10	V	E	◎

Seal tech:

W = SKF Wave

E = SKF Edge

F = SKF Flex

S = standard oil

G = grease

Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH 1.844 in. Shaft Diameter 46.84 mm							INCH (cont.) 1.875 in. Shaft Diameter 47.63 mm						
2.402	0.234	18408	HMA1	R	G	■	2.830	0.391	550185	HMS4	R	S	■
2.502	0.375	18412	CRSA1	R	S	■	2.875	0.250	18750	HM21	R	G	■
2.623	0.313	18425	CRW1	R	W	■	2.875	0.313	▲18733	CRW1	R	W	■
2.750	0.313	18444	CRW1	P	W	■	2.875	0.313	18732	CRW1	V	W	■
METRIC 1.850 in. Shaft Diameter 47 mm							METRIC 1.890 in. Shaft Diameter 48 mm						
60	7	47X60X7 CRW1 R	CRW1	R	W	■	17	99189	SSLEEVE				
62	8	47X62X8 CRW1 R	CRW1	R	W	■	<i>Shaft Ø47.93-48.08mm - 'on-shaft' width 14mm - flange Ø56.01mm</i>						
65	10	47X65X10 HMS5 RG	HMS5	RG	E	■	58	4	48X58X4 HM4 R	HM4	R	G	■
65	10	47X65X10 HMS5 V	HMS5	V	E	◎	62	6	18864	HMA1	R	G	■
65	10	▲47X65X10 HMSA10 RG	HMSA10	RG	E	■	62	8	48X62X8 CRW1 P	CRW1	P	W	■
65	10	47X65X10 HMSA10 V	HMSA10	V	E	◎	62	8	48X62X8 CRW1 R	CRW1	R	W	■
70	10	47X70X10 HMS5 RG	HMS5	RG	E	■	62	8	48X62X8 HMS5 RG	HMS5	RG	E	■
70	10	47X70X10 HMS5 V	HMS5	V	E	◎	62	8	48X62X8 HMS5 V	HMS5	V	E	◎
70	10	▲47X70X10 HMSA10 RG	HMSA10	RG	E	■	62	8	▲48X62X8 HMSA10 RG	HMSA10	RG	E	■
70	10	47X70X10 HMSA10 V	HMSA10	V	E	◎	62	8	48X62X8 HMSA10 V	HMSA10	V	E	◎
72	8	47X72X8 CRW1 R	CRW1	R	W	■	65	8	48X65X8 CRW1 R	CRW1	R	W	■
90	10	47X90X10 HMS5 RG	HMS5	RG	E	■	65	8	48X65X8 CRW1 V	CRW1	V	W	■
90	10	47X90X10 HMS5 V	HMS5	V	E	◎	65	10	48X65X10 HMS5 RG	HMS5	RG	E	■
90	10	47X90X10 HMSA10 RG	HMSA10	RG	E	■	65	10	48X65X10 HMS5 V	HMS5	V	E	◎
90	10	47X90X10 HMSA10 V	HMSA10	V	E	◎	65	10	▲48X65X10 HMSA10 RG	HMSA10	RG	E	■
INCH 1.860 in. Shaft Diameter 47.24 mm							METRIC 1.890 in. Shaft Diameter 48 mm						
0.688	99185	SSLEEVE					66.65	8	18895	HMS4	S	S	■
<i>Shaft Ø1.857-1.863" - 'on-shaft' width 0.563" - flange Ø2.156"</i>							17 99189 SSLEEVE						
INCH 1.869 in. Shaft Diameter 47.47 mm							<i>Shaft Ø47.93-48.08mm - 'on-shaft' width 14mm - flange Ø56.01mm</i>						
1.025	99186	SSLEEVE					68	8	48X68X8 CRW1 R	CRW1	R	W	■
<i>Shaft Ø1.866-1.872" - 'on-shaft' width 0.889" - flange Ø2.188"</i>							68	10	48X68X10 HMS5 RG	HMS5	RG	E	■
2.518	0.315	18492	CRWA1	P	W	■	68	10	48X68X10 HMS5 V	HMS5	V	E	◎
INCH 1.875 in. Shaft Diameter 47.63 mm							68	10	▲48X68X10 HMSA10 RG	HMSA10	RG	E	■
0.295	99190	SSLEEVE					68	10	48X68X10 HMSA10 V	HMSA10	V	E	◎
<i>Shaft Ø1.872-1.878" - 'on-shaft' width 0.175" - flange Ø2.203"</i>							70	8	48X70X8 CRW1 R	CRW1	R	W	■
0.415	99188	SSLEEVE					70	8	48X70X8 CRW1 V	CRW1	V	W	■
<i>Shaft Ø1.872-1.878" - 'on-shaft' width 0.295" - flange Ø2.203"</i>							70	10	48X70X10 HMS5 RG	HMS5	RG	E	■
0.516	99184	SSLEEVE					70	10	48X70X10 HMS5 V	HMS5	V	E	◎
<i>Shaft Ø1.872-1.878" - 'on-shaft' width 0.375" - flange Ø2.203"</i>							70	10	▲48X70X10 HMSA10 RG	HMSA10	RG	E	■
0.688	99187	SSLEEVE					70	10	48X70X10 HMSA10 V	HMSA10	V	E	◎
<i>Shaft Ø1.872-1.878" - 'on-shaft' width 0.563" - flange Ø2.203"</i>							72	7	48X72X7 HMS5 RG	HMS5	RG	E	■
0.688	99832	GSLEEVE					72	7	48X72X7 HMS5 V	HMS5	V	E	◎
<i>Shaft Ø1.872-1.878" - 'on-shaft' width 0.563" - flange Ø2.203"</i>							72	7	48X72X7 HMSA10 RG	HMSA10	RG	E	■
2.398	0.256	▲18549	CRW1	R	W	■	72	7	48X72X7 HMSA10 V	HMSA10	V	E	◎
2.401	0.275	18543	HM14	R	G	■	72	8	48X72X8 CRW1 R	CRW1	R	W	■
2.441	0.315	534957	CRWA1	V	W	■	72	8	48X72X8 CRW1 V	CRW1	V	W	■
2.471	0.313	▲18545	CRWA1	R	W	■	72	8	48X72X8 HMS5 RG	HMS5	RG	E	■
2.500	0.313	18555	CRW1	P	W	■	72	8	48X72X8 HMS5 V	HMS5	V	E	◎
2.502	0.250	18558	HM21	R	G	■	72	8	▲48X72X8 HMSA10 RG	HMSA10	RG	E	■
2.502	0.313	▲18565	CRW1	R	W	■	72	8	48X72X8 HMSA10 V	HMSA10	V	E	◎
2.562	0.313	18562	CRW1	P	W	■	72	10	48X72X10 HMS5 RG	HMS5	RG	E	■
2.562	0.313	18546	CRWA1	V	W	■	72	10	48X72X10 HMS5 V	HMS5	V	E	◎
2.623	0.250	18591	HM21	R	G	■	72	10	▲48X72X10 HMSA10 RG	HMSA10	RG	E	■
2.623	0.313	18580	CRW1	R	W	■	72	10	48X72X10 HMSA10 V	HMSA10	V	E	◎
2.623	0.313	18582	CRW1	V	W	■	74	10	48X74X10 HMSA7 R	HMSA7	R	S	■
2.623	0.313	▲18581	CRWA1	R	W	■	80	8	48X80X8 CRW1 R	CRW1	R	W	■
2.623	0.313	18584	CRWA1	V	W	■	90	10	48X90X10 HMS5 RG	HMS5	RG	E	■
2.623	0.374	18592	CRW1	S	W	■	90	10	48X90X10 HMS5 V	HMS5	V	E	◎
2.628	0.328	18603	HM14	R	G	■							
2.686	0.313	▲18626	CRW1	R	W	■							
2.721	0.266	18640	HM14	R	G	■							
2.750	0.250	18659	HM21	R	G	■							
2.750	0.313	18666	CRW1	P	W	■							
2.750	0.313	▲18657	CRW1	R	W	■							
2.750	0.313	18652	CRW1	V	W	■							
2.750	0.313	▲18658	CRWA1	R	W	■							
2.758	0.313	18671	CRW1	P	W	■							
2.780	0.250	18704	HM21	R	G	■							
2.782	0.438	18693	CRWH1	R	W	■							
2.782	0.438	▲18695	CRWHA1	R	W	■							

Key features: ▲WasteWatcher ■ Bore-Tite ▸ SS Case ◎ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required



Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH 1.969 in. Shaft Diameter 50.01 mm							INCH (cont.) 2.000 in. Shaft Diameter 50.80 mm						
2.960	0.250	19660	HD1	R	G		2.716	0.375	▲19786	CRWA1	R	W	■
METRIC 1.969 in. Shaft Diameter 50 mm							METRIC 2.008 in. Shaft Diameter 51 mm						
80	8	50X80X8 CRW1 R	CRW1	R	W	■	65	7	51X65X7 CRWA1 R	CRWA1	R	W	■
80	8	50X80X8 CRW1 V	CRW1	V	W	■	66	6.50	20001	HMS4	P	S	
80	8	50X80X8 HMS5 RG	HMS5	RG	E		METRIC 2.047 in. Shaft Diameter 52 mm						
80	8	50X80X8 HMS5 V	HMS5	V	E	◎	15.9	99878	SSLEEVE				
80	8	▲50X80X8 HMSA10 RG	HMSA10	RG	E		Shaft Ø51.82-51.97mm - 'on-shaft' width 12.7mm - flange Ø62.71mm						
80	8	50X80X8 HMSA10 V	HMSA10	V	E	◎	62	7	52X62X7 HMSA7 R	HMSA7	R	S	
80	10	50X80X10 HMS5 RG	HMS5	RG	E		63	8	52X63X8 HMS5 RG	HMS5	RG	E	
80	10	50X80X10 HMS5 V	HMS5	V	E	◎	63	8	52X63X8 HMS5 V	HMS5	V	E	◎
80	10	50X80X10 HMSA10 RG	HMSA10	RG	E		63	8	52X63X8 HMSA10 RG	HMSA10	RG	E	
80	10	50X80X10 HMSA10 V	HMSA10	V	E	◎	63	8	52X63X8 HMSA10 V	HMSA10	V	E	◎
82	8	50X82X8 CRWA1 R	CRWA1	R	W	■	63	8	52X63X8 HMSA7 P	HMSA7	P	S	
85	8	50X85X8 CRW1 R	CRW1	R	W	■	65	8	20420	CRW1	R	W	■
85	10	50X85X10 HMS5 RG	HMS5	RG	E		65	8	52X65X8 HMS5 RG	HMS5	RG	E	
85	10	50X85X10 HMS5 V	HMS5	V	E	◎							
85	10	▲50X85X10 HMSA10 RG	HMSA10	RG	E								
85	10	50X85X10 HMSA10 V	HMSA10	V	E	◎							
90	8	50X90X8 CRW1 R	CRW1	R	W	■							
90	8	50X90X8 CRW1 V	CRW1	V	W	■							
90	8	50X90X8 HMS5 RG	HMS5	RG	E								
90	8	50X90X8 HMS5 V	HMS5	V	E	◎							
90	8	▲50X90X8 HMSA10 RG	HMSA10	RG	E								
90	8	50X90X8 HMSA10 V	HMSA10	V	E	◎							
90	10	50X90X10 HMS5 RG	HMS5	RG	E								
90	10	50X90X10 HMS5 V	HMS5	V	E	◎							
90	10	50X90X10 HMSA10 RG	HMSA10	RG	E								
90	10	50X90X10 HMSA10 V	HMSA10	V	E	◎							
100	10	50X100X10 HMS5 RG	HMS5	RG	E								
100	10	50X100X10 HMS5 V	HMS5	V	E	◎							
100	10	50X100X10 HMSA10 RG	HMSA10	RG	E								
100	10	50X100X10 HMSA10 V	HMSA10	V	E	◎							
110	10	50X110X10 HMS5 RG	HMS5	RG	E								
110	10	50X110X10 HMS5 V	HMS5	V	E	◎							
110	10	50X110X10 HMSA10 RG	HMSA10	RG	E								
110	10	50X110X10 HMSA10 V	HMSA10	V	E	◎							
INCH 1.980 in. Shaft Diameter 50.29 mm													
0.704	99198	SSLEEVE		Shaft Ø1.977-1.983" - 'on-shaft' width 0.563" - flange Ø2.313"									
INCH 2.000 in. Shaft Diameter 50.80 mm													
0.688	99199	SSLEEVE		Shaft Ø1.997-2.003" - 'on-shaft' width 0.563" - flange Ø2.406"									
0.688	99834	GSLEEVE		Shaft Ø1.997-2.003" - 'on-shaft' width 0.563" - flange Ø2.406"									
1.000	99200	SSLEEVE		Shaft Ø1.997-2.003" - 'on-shaft' width 0.875" - flange Ø2.406"									
1.000	99835	GSLEEVE		Shaft Ø1.997-2.003" - 'on-shaft' width 0.875" - flange Ø2.406"									
2.371	0.250	19737	HM14	R	G	■							
2.375	0.188	19733	HM14	R	G								
2.500	0.250	19748	HM1	R	G								
2.502	0.250	19754	HM14	R	G	■							
2.502	0.313	19745	CRW1	P	W	■							
2.562	0.234	19753	HM14	R	G	■							
2.565	0.500	19757	HM14	R	G	■							
2.623	0.250	19763	HM21	R	G	■							
2.623	0.250	19746	HM21	V	G	■							
2.623	0.313	19760	CRW1	R	W	■							
2.623	0.313	▲19762	CRWA1	R	W	■							
2.623	0.313	19777	CRWA1	V	W	■							
2.623	0.313	19782	CRWA1	V	W	■◎							
2.627	0.234	19768	HM14	R	G	■							
2.635	0.234	19770	HM14	R	G	■							
2.686	0.250	19783	HM21	R	G	■							
2.686	0.375	▲19778	CRW1	R	W	■							
2.716	0.375	19785	CRW1	R	W	■							

Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ◎ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Main table with columns: Bore, Width, Part Number, Seal Type, Lip Mat'l, Seal Tech, Features. Includes sub-sections for METRIC (cont.) 2.165 in., INCH 2.188 in., METRIC 2.205 in., INCH 2.230 in., INCH 2.240 in., METRIC 2.244 in.

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	
INCH (cont.) 2.625 in. Shaft Diameter 66.68 mm							INCH (cont.) 2.750 in. Shaft Diameter 69.85 mm							
4.003	0.375	▲26354	CRWA1	R	W	■	3.500	0.375	▲27269	CRWA1	R	W	■	
4.003	0.438	26356	CRWH1	R	W	■	3.500	0.375	27272	CRWA1	V	W	■	
4.370	0.438	▲26359	CRWHA1	R	W	■	3.500	0.438	27280	CRWH1	R	W	■	
4.438	0.438	▲26368	CRWH1	R	W	■	3.538	0.438	▲27284	CRWH1	R	W	■	
INCH 2.628 in. Shaft Diameter 66.75 mm							INCH (cont.) 2.750 in. Shaft Diameter 69.85 mm							
0.938	99262	SSLEEVE					3.543	0.433	27293	CRWH1	V	W	■	
Shaft Ø2.625-2.632" - 'on-shaft' width 0.781" - flange Ø3.047"							3.543	0.438	27292	CRWH1	P	W	■	
0.938	99842	GSLEEVE					3.543	0.438	27295	CRWHA1	P	W	■	
Shaft Ø2.625-2.632" - 'on-shaft' width 0.781" - flange Ø3.047"							3.623	0.438	▲27334	CRWH1	R	W	■	
							3.623	0.438	27324	CRWH1	V	W	■	
							3.751	0.250	27394	HM21	R	G	■	
							3.751	0.438	27361	CRW1	R	W	■	
							3.751	0.438	27377	CRWA1	P	W	■	
							3.751	0.438	27362	CRWA1	R	W	■	
							3.751	0.438	27368	CRWH1	R	W	■	
							3.751	0.438	27365	CRWH1	V	W	■	
							3.751	0.438	▲27370	CRWHA1	R	W	■	
							3.765	0.438	▲27426	CRWH1	R	W	■	
							3.779	0.762	27438	SCOT1	R	S	■	
							3.876	0.433	27452	CRWHA1	P	W	■	
							3.876	0.438	27467	CRWA1	R	W	■	
							3.876	0.438	▲27470	CRWH1	R	W	■	
							3.876	0.438	27471	CRWHA1	R	W	■	
							3.936	0.438	▲27525	CRWH1	R	W	■	
							3.937	0.438	27526	CRWA1	P	W	■	
							4.003	0.375	27539	CRWA1	V	W	■	
							4.003	0.438	▲27541	CRWH1	R	W	■	
							4.003	0.438	27565	CRWHA1	P	W	■	
							4.125	0.438	27576	CRS1	P	S	■	
							4.125	0.563	27577	CRSA1	R	S	■	
							4.249	0.438	▲27600	CRWH1	R	W	■	
							4.249	0.438	27601	CRWHA1	P	W	■	
							4.331	0.500	▲27625	CRWHA1	R	W	■	
							METRIC 2.756 in. Shaft Diameter 70 mm							
							14.3	99272	SSLEEVE					
							Shaft Ø69.85-70.03mm - 'on-shaft' width 10.31mm - flange Ø79.38mm							
							23.8	99275	SSLEEVE					
							Shaft Ø69.85-70.03mm - 'on-shaft' width 19.84mm - flange Ø79.38mm							
							23.8	99844	GSLEEVE					
							Shaft Ø69.85-70.03mm - 'on-shaft' width 19.84mm - flange Ø79.38mm							
							24	99276	SSLEEVE					
							Shaft Ø69.93-70.1mm - 'on-shaft' width 19.99mm - flange Ø79.38mm							
							31.75	99269	SSLEEVE					
							Shaft Ø69.85-70.03mm - 'on-shaft' width 28.58mm - flange Ø79.38mm							
							85	7	70X85X7 HMS4 R	HMS4	R	S		
							85	7	70X85X7 HMSA7 R	HMSA7	R	S		
							85	8	70X85X8 CRW1 R	CRW1	R	W	■	
							85	8	70X85X8 HMS5 RG	HMS5	RG	E		
							85	8	70X85X8 HMS5 V	HMS5	V	E	⊙	
							85	8	▲70X85X8 HMSA10 RG	HMSA10	RG	E		
							85	8	70X85X8 HMSA10 V	HMSA10	V	E	⊙	
							88	8	▲70X88X8 CRW1 R	CRW1	R	W	■	
							88	8	70X88X8 CRW1 V	CRW1	V	W	■	
							88	12	70X88X12 HMS4 R	HMS4	R	S		
							90	7	70X90X7 HMS5 RG1	HMS5	RG	E		
							90	7	70X90X7 HMS5 V1	HMS5	V	E	⊙	
							90	7	70X90X7 HMSA10 RG1	HMSA10	RG	E		
							90	7	70X90X7 HMSA10 V1	HMSA10	V	E	⊙	
							90	7	70X90X7 HMSA7P2 R	HMSA7P2	R	S	◆	
							90	8	70X90X8 CRW1 R	CRW1	R	W	■	
							90	10	70X90X10 CRW1 H	CRW1	H	W	■	
							90	10	70X90X10 CRW1 V	CRW1	V	W	■	
							90	10	70X90X10 CRWHA1 P	CRWHA1	P	W	■	
							90	10	70X90X10 HMS5 RG	HMS5	RG	E		
							90	10	70X90X10 HMS5 V	HMS5	V	E	⊙	
							90	10	▲70X90X10 HMSA10 RG	HMSA10	RG	E		
							90	10	70X90X10 HMSA10 V	HMSA10	V	E	⊙	
							90	12	70X90X12 HMS5 RG	HMS5	RG	E		
							90	12	70X90X12 HMS5 V	HMS5	V	E	⊙	
							90	12	70X90X12 HMSA10 RG	HMSA10	RG	E		

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
METRIC (cont.)						
3.150 in. Shaft Diameter 80 mm						
140	13	80X140X13 HMS5 V	HMS5	V	E	⊙
140	13	80X140X13 HMSA10 RG	HMSA10	RG	E	
140	13	80X140X13 HMSA10 V	HMSA10	V	E	⊙
170	13	80X170X13 HMS5 RG	HMS5	RG	E	
170	13	80X170X13 HMS5 V	HMS5	V	E	⊙
170	13	80X170X13 HMSA10 RG	HMSA10	RG	E	
170	13	80X170X13 HMSA10 V	HMSA10	V	E	⊙

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH						
3.188 in. Shaft Diameter 80.98 mm						
4.249	0.438	▲31758	CRWH1	R	W	■
4.376	0.438	▲31825	CRWH1	R	W	■
4.501	0.438	▲31855	CRWH1	R	W	■
4.626	0.438	▲31870	CRWH1	R	W	■
4.999	0.438	▲31955	CRWH1	R	W	■

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
METRIC						
3.228 in. Shaft Diameter 82 mm						
21.5		99328	SSLEEVE			
<i>Shaft Ø81.92-82.09mm - 'on-shaft' width 16.76mm - flange Ø91.06mm</i>						
105	12	82X105X12 HMS4 R	HMS4	R	S	
110	12	82X110X12 HMS4 R	HMS4	R	S	
110	12	82X110X12 HMSA7 R	HMSA7	R	S	
120	12	82X120X12 HMS5 RG	HMS5	RG	E	
120	12	82X120X12 HMS5 V	HMS5	V	E	⊙
120	12	82X120X12 HMSA10 RG	HMSA10	RG	E	
120	12	82X120X12 HMSA10 V	HMSA10	V	E	⊙
120	13	82X120X13 HMS5 RG	HMS5	RG	E	
120	13	82X120X13 HMS5 V	HMS5	V	E	⊙
120	13	82X120X13 HMSA10 RG	HMSA10	RG	E	
120	13	82X120X13 HMSA10 V	HMSA10	V	E	⊙
160	12	82X160X12 HMS5 RG	HMS5	RG	E	
160	12	82X160X12 HMS5 V	HMS5	V	E	⊙
160	12	82X160X12 HMSA10 RG	HMSA10	RG	E	
160	12	82X160X12 HMSA10 V	HMSA10	V	E	⊙
160	15	82X160X15 HMS5 RG	HMS5	RG	E	
160	15	82X160X15 HMS5 V	HMS5	V	E	⊙
160	15	82X160X15 HMSA10 RG	HMSA10	RG	E	
160	15	82X160X15 HMSA10 V	HMSA10	V	E	⊙

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH						
3.250 in. Shaft Diameter 82.55 mm						
0.719		99324	SSLEEVE			
<i>Shaft Ø3.25-3.257" - 'on-shaft' width 0.595" - flange Ø3.575"</i>						
0.719		99850	GSLEEVE			
<i>Shaft Ø3.25-3.257" - 'on-shaft' width 0.595" - flange Ø3.575"</i>						
0.875		99326	SSLEEVE			
<i>Shaft Ø3.25-3.257" - 'on-shaft' width 0.688" - flange Ø3.585"</i>						
1.000		99322	SSLEEVE			
<i>Shaft Ø3.247-3.254" - 'on-shaft' width 0.813" - flange Ø3.594"</i>						
1.000		99325	SSLEEVE			
<i>Shaft Ø3.25-3.257" - 'on-shaft' width 0.813" - flange Ø3.585"</i>						
1.000		99851	GSLEEVE			
<i>Shaft Ø3.25-3.257" - 'on-shaft' width 0.813" - flange Ø3.585"</i>						
3.750	0.250	32325	HMA1	R	G	■
3.876	0.375	32330	CRW1	P	W	■
4.003	0.375	▲32344	CRW1	R	W	■
4.003	0.375	32347	CRWA1	P	W	■
4.125	0.563	32362	CRSH1	R	S	■
4.249	0.375	32393	CRW1	R	W	■
4.249	0.375	▲32395	CRWA1	R	W	■
4.249	0.375	32392	CRWA1	V	W	■
4.249	0.438	32380	CRWH1	P	W	■
4.249	0.438	32396	CRWH1	R	W	■
4.249	0.438	32403	CRWH1	V	W	■
4.249	0.438	32385	CRWHA1	P	W	■
4.249	0.438	32397	CRWHA1	R	W	■
4.376	0.438	▲32424	CRWH1	R	W	■
4.500	0.438	32448	CRWA1	P	W	■
4.501	0.250	32510	HM21	R	G	■
4.501	0.375	32477	CRW1	R	W	■
4.501	0.438	32501	CRWH1	R	W	■

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH (cont.)						
3.250 in. Shaft Diameter 82.55 mm						
4.501	0.438	▲32502	CRWHA1	R	W	■
4.501	0.672	32470	SCOT1	R	S	■
4.626	0.433	32514	CRWHA1	R	W	■
4.626	0.438	▲32540	CRWH1	R	W	■
4.718	0.438	32555	CRWH1	R	W	■
4.751	0.438	▲32560	CRWH1	R	W	■
4.999	0.438	▲32582	CRWH1	R	W	■
4.999	0.438	32583	CRWHA1	R	W	■

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH						
3.298 in. Shaft Diameter 83.77 mm						
4.125	0.563	32815	CRSA1	R	S	■

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH						
3.310 in. Shaft Diameter 84.07 mm						
1.000		99331	SSLEEVE			
<i>Shaft Ø3.307-3.314" - 'on-shaft' width 0.813" - flange Ø3.688"</i>						

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH						
3.313 in. Shaft Diameter 84.15 mm						
4.125	0.438	▲33033	CRWH1	R	W	■
4.249	0.438	▲33073	CRWH1	R	W	■
4.500	0.438	▲33136	CRWH1	R	W	■
4.999	0.438	▲33306	CRWH1	R	W	■

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
INCH						
3.313 in. Shaft Diameter 84.15 mm						
0.827		99332	SSLEEVE			
<i>Shaft Ø3.337-3.344" - 'on-shaft' width 0.669" - flange Ø3.7"</i>						
0.984		99333	SSLEEVE			
<i>Shaft Ø3.337-3.344" - 'on-shaft' width 0.827" - flange Ø3.7"</i>						
0.984		99872	GSLEEVE			
<i>Shaft Ø3.337-3.344" - 'on-shaft' width 0.827" - flange Ø3.7"</i>						

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
METRIC						
3.346 in. Shaft Diameter 85 mm						
12.7		99334	SSLEEVE			
<i>Shaft Ø84.79-84.96mm - 'on-shaft' width 10.13mm - flange Ø90.93mm</i>						
100	9	85X100X9 HMS5 RG	HMS5	RG	E	
100	9	85X100X9 HMS5 V	HMS5	V	E	⊙
100	9	▲85X100X9 HMSA10 RG	HMSA10	RG	E	
100	9	85X100X9 HMSA10 V	HMSA10	V	E	⊙
100	9	85X100X9 CRS1 R	CRS1	R	S	
100	10	85X100X10 HMS5 RG	HMS5	RG	E	
100	10	85X100X10 HMS5 V	HMS5	V	E	⊙
100	10	85X100X10 HMSA10 RG	HMSA10	RG	E	
100	10	85X100X10 HMSA10 V	HMSA10	V	E	⊙
105	10	▲85X105X10 CRW1 R	CRW1	R	W	■
105	10	85X105X10 CRW1 V	CRW1	V	W	■
105	12	85X105X12 HMS5 RG	HMS5	RG	E	
105	12	85X105X12 HMS5 V	HMS5	V	E	⊙
105	12	▲85X105X12 HMSA10 RG	HMSA10	RG	E	
105	12	85X105X12 HMSA10 V	HMSA10	V	E	⊙
105	13	85X105X13 HMSA7 R	HMSA7	R	S	
110	10	▲85X110X10 CRW1 R	CRW1	R	W	■
110	10	85X110X10 CRWA1 V	CRWA1	V	W	■
110	12	85X110X12 HMS5 RG	HMS5	RG	E	
110	12	85X110X12 HMS5 V	HMS5	V	E	⊙
110	12	▲85X110X12 HMSA10 RG	HMSA10	RG	E	
110	12	85X110X12 HMSA10 V	HMSA10	V	E	⊙
115	12	85X115X12 HMS5 RG	HMS5	RG	E	
115	12	85X115X12 HMS5 V	HMS5	V	E	⊙
115	12	▲85X115X12 HMSA10 RG	HMSA10	RG	E	
115	12	85X115X12 HMSA10 V	HMSA10	V	E	⊙
120	12	85X120X12 CRW1 R	CRW1	R	W	■
120	12	85X120X12 HMS5 RG	HMS5	RG	E	
120	12	85X120X12 HMS5 V	HMS5	V	E	⊙
120	12	▲85X120X12 HMSA10 RG	HMSA10	RG	E	
120	12	85X120X12 HMSA10 V	HMSA10	V	E	⊙
130	10	85X130X10 HMS5 RG	HMS5	RG	E	
130	10	85X130X10 HMS5 V	HMS5	V	E	⊙
130	10	▲85X130X10 HMSA10 RG	HMSA10	RG	E	
130	10	85X130X10 HMSA10 V	HMSA10	V	E	⊙

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease **Bold part numbers are preferred designs**





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	
METRIC (cont.)							INCH							
	3.346 in.	Shaft Diameter		85 mm				3.500 in.	Shaft Diameter		88.90 mm			
130	12	85X130X12 CRW1 R	CRW1	R	W	■	0.813	99346	SSLEEVE					
Shaft Ø3.373-3.38" - 'on-shaft' width 0.375" - flange Ø3.688"							Shaft Ø3.497-3.504" - 'on-shaft' width 0.625" - flange Ø3.844"							
130	12	85X130X12 HMS5 RG	HMS5	RG	E		4.000	0.300	34835	HM1	R	G		
130	12	85X130X12 HMS5 V	HMS5	V	E	⊙	4.003	0.250	34840	HM14	R	G	■	
130	12	85X130X12 HMSA10 RG	HMSA10	RG	E		4.125	0.250	34848	HM14	R	G		
130	12	85X130X12 HMSA10 V	HMSA10	V	E	⊙	4.125	0.250	546770	HM14	V	G	■	
140	12	85X140X12 HMS5 RG	HMS5	RG	E		4.249	0.438	34857	CRWHA1	V	W	■	
140	12	85X140X12 HMS5 V	HMS5	V	E	⊙	4.376	0.375	▲ 34860	CRW1	R	W	■	
140	12	85X140X12 HMSA10 RG	HMSA10	RG	E		4.376	0.375	34861	CRWA1	R	W	■	
140	12	85X140X12 HMSA10 V	HMSA10	V	E	⊙	4.376	0.375	34866	CRWA1	V	W	■	
150	12	85X150X12 HMS5 RG	HMS5	RG	E		4.376	0.433	34867	CRWH1	R	W	■	
150	12	85X150X12 HMS5 V	HMS5	V	E	⊙	4.376	0.433	34869	CRWHA1	V	W	■	
150	12	▲ 85X150X12 HMSA10 RG	HMSA10	RG	E		4.376	0.438	34868	CRWHA1	R	W	■	
150	12	85X150X12 HMSA10 V	HMSA10	V	E	⊙	4.501	0.250	34967	HM21	R	G		
INCH							INCH							
	3.375 in.	Shaft Diameter		85.73 mm				3.375 in.	Shaft Diameter		85.73 mm			
	0.500	99338	SSLEEVE					4.501	0.375	▲ 34887	CRWA1	R	W	■
Shaft Ø3.373-3.38" - 'on-shaft' width 0.375" - flange Ø3.688"							Shaft Ø3.373-3.38" - 'on-shaft' width 0.813" - flange Ø3.695"							
	1.000	99337	SSLEEVE					4.501	0.375	34883	CRWA1	V	W	■
	3.948	0.375	33628	HMSA7	P	S		4.501	0.433	536389	CRWHA1	V	W	■
	4.125	0.375	▲ 33645	CRW1	R	W	■	4.501	0.438	34888	CRWH1	R	W	■
	4.125	0.375	34647	CRWA1	V	W	■	4.501	0.438	34892	CRWH1	V	W	■
	4.249	0.438	▲ 33665	CRWHA1	R	W	■	4.501	0.438	34891	CRWHA1	P	W	■
	4.280	0.406	33654	CRWA1	S	W	■	4.501	0.438	34899	CRWHA1	R	W	■
	4.376	0.375	33700	CRW1	R	W	■	4.547	0.862	34975	SCOT1	R	S	■
	4.376	0.375	▲ 33701	CRWA1	R	W	■	4.547	0.900	34971	PLUSXL	H	W	
	4.376	0.375	33699	CRWA1	V	W	■	4.626	0.438	▲ 34985	CRWH1	R	W	■
	4.376	0.438	33711	CRWH1	R	W	■	4.626	0.986	35000	SCOT1	R	S	■
	4.376	0.438	33712	CRWHA1	R	W	■	4.750	0.706	34994	PLUSXL	H	W	
	4.501	0.438	33733	CRWA1	V	W	■	4.751	0.250	35042	HM21	R	G	■
	4.501	0.438	▲ 33735	CRWH1	R	W	■	4.751	0.375	35040	CRWA1	P	W	■
	4.626	0.438	▲ 33772	CRWH1	R	W	■	4.751	0.375	35039	CRWA1	V	W	■
	4.626	0.438	33773	CRWHA1	R	W	■	4.751	0.438	35012	CRWH1	R	W	■
	4.626	0.438	33775	CRWHA1	V	W	■	4.751	0.438	▲ 35020	CRWHA1	R	W	■
	4.686	0.438	▲ 33807	CRWH1	R	W	■	4.751	0.625	35029	CRWH1	R	W	■
	4.999	0.438	▲ 33837	CRWH1	R	W	■	4.842	0.903	35058	PLUSXL	H	W	
	5.251	0.438	33866	CRWHA1	R	W	■	4.842	0.904	35066	SCOT1	R	S	■
INCH							INCH							
	3.438 in.	Shaft Diameter		87.33 mm				3.503 in.	Shaft Diameter		88.98 mm			
	0.906	99339	SSLEEVE					0.500	99347	SSLEEVE				
Shaft Ø3.435-3.442" - 'on-shaft' width 0.781" - flange Ø3.844"							Shaft Ø3.5-3.507" - 'on-shaft' width 0.313" - flange Ø3.825"							
	4.249	0.375	▲ 34256	CRW1	R	W	■	1.000	99350	SSLEEVE				
	4.501	0.375	34279	CRWA1	R	W	■	Shaft Ø3.5-3.507" - 'on-shaft' width 0.813" - flange Ø3.844"						
	4.501	0.438	34282	CRWH1	R	W	■		1.000	99852	GSLEEVE			
	4.501	0.438	34283	CRWHA1	R	W	■	Shaft Ø3.5-3.507" - 'on-shaft' width 0.813" - flange Ø3.844"						
	4.626	0.438	▲ 34336	CRWH1	R	W	■							
	4.626	0.438	34338	CRWHA1	R	W	■							
	4.751	0.438	34379	CRWA1	R	W	■							
	4.756	0.438	▲ 34383	CRWH1	R	W	■							
	4.757	0.700	34384	PLUSXL	H	W								
	4.757	0.859	34387	SCOT1	R	S	■							
	4.876	0.438	▲ 34398	CRWH1	R	W	■							
	4.999	0.438	▲ 34407	CRWH1	R	W	■							
	4.999	0.438	34408	CRWHA1	R	W	■							
INCH							METRIC							
	3.441 in.	Shaft Diameter		87.40 mm				3.543 in.	Shaft Diameter		90 mm			
	4.196	0.711	34395	HMA1	R	G		13.7	99352	SSLEEVE				
METRIC							METRIC							
	3.465 in.	Shaft Diameter		88 mm				16.9	99353	SSLEEVE				
	34.27	99481	SSLEEVE					Shaft Ø89.92-90.09mm - 'on-shaft' width 11.13mm - flange Ø101.6mm						
	Shaft Ø87.91-87.99mm - 'on-shaft' width 29.2mm - flange Ø95.3mm							23	99351	SSLEEVE				
	110	12	88X110X12 HMS4 R	HMS4	R	S		Shaft Ø89.92-90.09mm - 'on-shaft' width 13.36mm - flange Ø101.6mm						
INCH							METRIC							
	3.480 in.	Shaft Diameter		88.39 mm				28	99354	SSLEEVE				
	0.906	99340	SSLEEVE					Shaft Ø89.92-90.09mm - 'on-shaft' width 18.03mm - flange Ø101.6mm						
Shaft Ø3.477-3.484" - 'on-shaft' width 0.781" - flange Ø3.835"								110	7.50	90X110X7.5 HMS5 V1	HMS5	V	E	⊙
							110	7.50	90X110X7.50 HMSA7P2 R	HMSA7P2	R	S	◆	
							110	8	90X110X8 HMS4 R	HMS4	R	S		
							110	10	90X110X10 HMS5 RG	HMS5	RG	E		
							110	10	90X110X10 HMS5 V	HMS5	V	E	⊙	

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
METRIC (cont.) 3.543 in. Shaft Diameter 90 mm						
110	10	90X110X10 HMSA10 RG	HMSA10	RG	E	
110	10	90X110X10 HMSA10 V	HMSA10	V	E	⊙
110	12	90X110X12 CRW1 R	CRW1	R	W	■
110	12	90X110X12 CRW1 V	CRW1	V	W	■
110	12	90X110X12 HMS5 RG	HMS5	RG	E	
110	12	90X110X12 HMS5 V	HMS5	V	E	⊙
110	12	▲ 90X110X12 HMSA10 RG	HMSA10	RG	E	
110	12	90X110X12 HMSA10 V	HMSA10	V	E	⊙
115	12	90X115X12 CRWA1 R	CRWA1	R	W	■
115	12	90X115X12 HMS5 RG	HMS5	RG	E	
115	12	90X115X12 HMS5 V	HMS5	V	E	⊙
115	12	▲ 90X115X12 HMSA10 RG	HMSA10	RG	E	
115	12	90X115X12 HMSA10 V	HMSA10	V	E	⊙
120	12	90X120X12 CRW1 R	CRW1	R	W	■
120	12	90X120X12 CRW1 V	CRW1	V	W	■
120	12	90X120X12 HMS5 RG	HMS5	RG	E	
120	12	90X120X12 HMS5 V	HMS5	V	E	⊙
120	12	▲ 90X120X12 HMSA10 RG	HMSA10	RG	E	
120	12	90X120X12 HMSA10 V	HMSA10	V	E	⊙
120	13	90X120X13 HMS4 R	HMS4	R	S	
125	12	90X125X12 CRW1 R	CRW1	R	W	■
125	12	90X125X12 CRW1 V	CRW1	V	W	■
125	13	90X125X13 HMS4 R	HMS4	R	S	
125	13	90X125X13 HMSA7 R	HMSA7	R	S	
130	12	90X130X12 CRW1 R	CRW1	R	W	■
140	12	▲ 90X140X12 CRWA1 R	CRWA1	R	W	■
140	13	90X140X13 HMS5 RG	HMS5	RG	E	
140	13	90X140X13 HMS5 V	HMS5	V	E	⊙
140	13	90X140X13 HMSA10 RG	HMSA10	RG	E	
140	13	90X140X13 HMSA10 V	HMSA10	V	E	⊙

INCH	3.563 in.	Shaft Diameter	90.50 mm
	1.000	99356	SSLEEVE
	Shaft Ø3.56-3.567" - 'on-shaft' width 0.813" - flange Ø3.9"		
4.501	0.438	▲ 35556	CRWH1 R W ■
4.626	0.438	35593	CRWH1 R W ■
4.751	0.438	35649	CRWH1 R W ■
4.876	0.438	▲ 35676	CRWH1 R W ■
4.999	0.438	▲ 35716	CRWH1 R W ■

METRIC	3.622 in.	Shaft Diameter	92 mm
	25.4	99360	SSLEEVE
	Shaft Ø91.9-92.08mm - 'on-shaft' width 20.65mm - flange Ø102.39mm		
120	12	92X120X12 HMSA10 RG	HMSA10 RG E
120	12	92X120X12 HMSA10 V	HMSA10 V E ⊙
120	13	92X120X13 HMS4 R	HMS4 R S
120	14	92X120X14 HMS4 R	HMS4 R S

INCH	3.625 in.	Shaft Diameter	92.08 mm
	0.625	99363	SSLEEVE
	Shaft Ø3.623-3.63" - 'on-shaft' width 0.5" - flange Ø4.025"		
	1.000	99362	SSLEEVE
	Shaft Ø3.623-3.63" - 'on-shaft' width 0.813" - flange Ø4.031"		
4.376	0.375	▲ 36155	CRWA1 R W ■
4.376	0.375	36153	CRWA1 V W ■
4.376	0.375	36158	CRWH1 P W ■
4.376	0.375	36157	CRWH1 R W ■
4.501	0.375	▲ 36166	CRW1 R W ■
4.626	0.375	▲ 36177	CRW1 R W ■
4.626	0.375	36179	CRWA1 V W ■
4.626	0.438	36185	CRWH1 R W ■
4.626	0.438	36186	CRWHA1 R W ■
4.751	0.438	▲ 36220	CRWH1 R W ■
4.751	0.500	36234	CRWA1 S W ■⊙
4.813	0.906	36285	SCOT1 R S ■
4.876	0.375	36337	CRW1 R W ■
4.876	0.433	538466	CRWHA1 V W ■
4.876	0.438	▲ 36314	CRWH1 R W ■
4.876	0.750	36340	C8 R W

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
INCH (cont.) 3.625 in. Shaft Diameter 92.08 mm						
4.999	0.375	36361	CRWA1	R	W	■
4.999	0.375	36359	CRWA1	V	W	■
4.999	0.438	▲ 36363	CRWH1	R	W	■
4.999	0.438	36364	CRWHA1	R	W	■
5.251	0.375	▲ 36382	CRWA1	R	W	■
5.375	0.438	36391	CRWHA1	R	W	■

INCH	3.688 in.	Shaft Diameter	93.68 mm
	0.438	99368	SSLEEVE
	Shaft Ø3.684-3.691" - 'on-shaft' width 0.313" - flange Ø4.031"		
	0.938	99365	SSLEEVE
	Shaft Ø3.685-3.692" - 'on-shaft' width 0.813" - flange Ø4.025"		
4.501	0.438	▲ 36740	CRWHA1 R W ■
4.751	0.438	▲ 36770	CRWH1 R W ■
4.999	0.438	▲ 36880	CRWH1 R W ■
5.126	0.438	36895	CRWA1 R W ■
5.626	0.438	36910	CRWA1 R W ■

INCH	3.730 in.	Shaft Diameter	94.74 mm
	0.594	99359	SSLEEVE
	Shaft Ø3.727-3.734" - 'on-shaft' width 0.469" - flange Ø4.016"		
	0.906	99366	SSLEEVE
	Shaft Ø3.727-3.734" - 'on-shaft' width 0.781" - flange Ø4.025"		

METRIC	3.740 in.	Shaft Diameter	95 mm
	12.7	99374	SSLEEVE
	Shaft Ø95-95.17mm - 'on-shaft' width 8.74mm - flange Ø102.39mm		
	15.1	99364	SSLEEVE
	Shaft Ø95-95.17mm - 'on-shaft' width 11.91mm - flange Ø102.49mm		
	24	99369	SSLEEVE
	Shaft Ø94.92-95.1mm - 'on-shaft' width 21.01mm - flange Ø102.24mm		
110	9	95X110X9 HMS4 R	HMS4 R S
110	9	95X110X9 HMSA7 R	HMSA7 R S
110	10	95X110X10 CRW1 R	CRW1 R W ■
110	10	95X110X10 HMS5 RG	HMS5 RG E
110	10	95X110X10 HMS5 V	HMS5 V E ⊙
110	10	▲ 95X110X10 HMSA10 RG	HMSA10 RG E
110	10	95X110X10 HMSA10 V	HMSA10 V E ⊙
110	12	95X110X12 HMS5 RG	HMS5 RG E
110	12	95X110X12 HMS5 V	HMS5 V E ⊙
110	12	95X110X12 HMSA10 RG	HMSA10 RG E
110	12	95X110X12 HMSA10 V	HMSA10 V E ⊙
115	12	95X115X12 CRW1 R	CRW1 R W ■
115	12	95X115X12 CRW1 V	CRW1 V W ■
115	12	95X115X12 HMS5 RG	HMS5 RG E
115	12	95X115X12 HMS5 V	HMS5 V E ⊙
115	12	▲ 95X115X12 HMSA10 RG	HMSA10 RG E
115	12	95X115X12 HMSA10 V	HMSA10 V E ⊙
120	12	95X120X12 CRW1 R	CRW1 R W ■
120	12	95X120X12 CRW1 V	CRW1 V W ■
120	12	95X120X12 CRWA1 V	CRWA1 V W ■
120	12	95X120X12 HMS5 RG	HMS5 RG E
120	12	95X120X12 HMS5 V	HMS5 V E ⊙
120	12	▲ 95X120X12 HMSA10 RG	HMSA10 RG E
120	12	95X120X12 HMSA10 V	HMSA10 V E ⊙
120	13	95X120X13 HMSA7 R	HMSA7 R S
125	12	95X125X12 CRW1 R	CRW1 R W ■
125	12	95X125X12 HMS5 RG	HMS5 RG E
125	12	95X125X12 HMS5 V	HMS5 V E ⊙
125	12	▲ 95X125X12 HMSA10 RG	HMSA10 RG E
125	12	95X125X12 HMSA10 V	HMSA10 V E ⊙
130	12	▲ 95X130X12 CRW1 R	CRW1 R W ■
130	12	95X130X12 CRW1 V	CRW1 V W ■
130	12	95X130X12 HMS4 R	HMS4 R S
130	15	95X130X15 HMSA7 R	HMSA7 R S
140	12	95X140X12 HMS5 RG	HMS5 RG E
140	12	95X140X12 HMS5 V	HMS5 V E ⊙
140	12	95X140X12 HMSA10 RG	HMSA10 RG E
140	12	95X140X12 HMSA10 V	HMSA10 V E ⊙

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures						
METRIC (cont.) 3.740 in. Shaft Diameter 95 mm																			
145	10	95X145X10 HMS5 RG	HMS5	RG	E		4.876	0.438	38673	CRWHA1	R	W	■						
145	10	95X145X10 HMS5 V	HMS5	V	E	⊙	4.876	0.500	▲38669	CRWH1	R	W	■						
145	10	95X145X10 HMSA10 RG	HMSA10	RG	E		4.876	0.500	38678	CRWHA1	V	W	■						
145	10	95X145X10 HMSA10 V	HMSA10	V	E	⊙	4.999	0.375	38691	CRW1	R	W	■						
145	12	95X145X12 HMS5 RG	HMS5	RG	E		4.999	0.375	▲38692	CRWA1	R	W	■						
145	12	95X145X12 HMS5 V	HMS5	V	E	⊙	4.999	0.375	38694	CRWA1	V	W	■						
145	12	95X145X12 HMSA10 RG	HMSA10	RG	E		5.126	0.438	38713	CRWHA1	R	W	■						
145	12	95X145X12 HMSA10 V	HMSA10	V	E	⊙	5.126	0.438	▲38703	CRWH1	R	W	■						
145	13	95X145X13 HMS5 RG	HMS5	RG	E		5.126	0.438	38702	CRWHA1	V	W	■						
145	13	95X145X13 HMS5 V	HMS5	V	E	⊙	5.129	0.844	38709	SCOT1	R	S	■						
145	13	95X145X13 HMSA10 RG	HMSA10	RG	E		5.251	0.438	38730	CRWH1	R	W	■						
145	13	95X145X13 HMSA10 V	HMSA10	V	E	⊙	5.251	0.438	38739	CRWHA1	P	W	■						
170	13	95X170X13 HMS5 RG	HMS5	RG	E		5.251	0.438	▲38731	CRWHA1	R	W	■						
170	13	95X170X13 HMS5 V	HMS5	V	E	⊙	5.376	0.438	▲38745	CRWH1	R	W	■						
170	13	95X170X13 HMSA10 RG	HMSA10	RG	E		5.501	0.500	38749	CRSHA1	R	S	■						
170	13	95X170X13 HMSA10 V	HMSA10	V	E	⊙	5.501	0.938	38750	SCOT1	R	S	■						
INCH 3.750 in. Shaft Diameter 95.25 mm																			
	0.500	99367	SSLEEVE										5.626	0.433	38758	CRWHA1	R	W	■
	Shaft 0.3.75-3.757" - 'on-shaft' width 0.344" - flange 04.025"												5.690	0.500	▲38774	CRWH1	R	W	■
	0.688	99376	SSLEEVE										5.691	0.892	38780	PLUS XL	H	W	
	Shaft 0.3.746-3.753" - 'on-shaft' width 0.563" - flange 04.025"												5.691	0.892	38776	PLUS XL	H	W	
	0.875	99372	SSLEEVE										5.751	0.563	38810	CRSH1	R	S	
	Shaft 0.3.75-3.757" - 'on-shaft' width 0.688" - flange 04.02"												6.000	0.625	38845	CRSA1	R	S	
	0.875	99853	GSLEEVE										METRIC 3.937 in. Shaft Diameter 100 mm						
	Shaft 0.3.75-3.757" - 'on-shaft' width 0.688" - flange 04.02"												115	9	100X115X9 HMS4 R	HMS4	R	S	
4.376	0.250	37320	HM14	R	G	■	120	7	100X120X7 HMS5 V1	HMS5	V	E	⊙						
4.376	0.250	37325	HM14	V	G	■	120	10	100X120X10 HMS5 RG	HMS5	RG	E	■						
4.501	0.375	37327	CRW1	R	W	■	120	10	100X120X10 HMS5 V	HMS5	V	E	⊙						
4.501	0.375	37328	CRW1	V	W	■	120	10	100X120X10 HMSA10 RG	HMSA10	RG	E	■						
4.501	0.469	37330	CRWHA1	P	W	■	120	10	100X120X10 HMSA10 V	HMSA10	V	E	⊙						
4.502	0.469	37332	CRWHA1	V	W	■	120	12	100X120X12 CRW1 R	CRW1	R	W	■						
4.718	0.484	521257	HS6	R	F	◇	120	12	100X120X12 CRW1 V	CRW1	V	W	■						
4.751	0.375	37387	CRW1	P	W	■	120	12	100X120X12 HMS5 RG	HMS5	RG	E	■						
4.751	0.375	37387	CRW1	R	W	■	120	12	100X120X12 HMS5 V	HMS5	V	E	⊙						
4.751	0.375	37388	CRW1	R	W	■	120	12	▲100X120X12 HMSA10 RG	HMSA10	RG	E	■						
4.751	0.375	▲37389	CRWA1	R	W	■	120	12	100X120X12 HMSA10 R	HMSA10	V	E	⊙						
4.751	0.438	37390	CRWA1	P	W	■	120	12	100X120X12 CRSH1 R	CRSH1	R	S	■						
4.751	0.438	37396	CRWH1	R	W	■	125	12	100X125X12 CRW1 R	CRW1	R	W	■						
4.751	0.438	37405	CRWH1	V	W	■	125	12	100X125X12 CRW1 V	CRW1	V	W	■						
4.751	0.438	37403	CRWHA1	P	W	■	125	12	100X125X12 HMS5 RG	HMS5	RG	E	■						
4.751	0.438	37395	CRWHA1	S	W	■	125	12	100X125X12 HMS5 V	HMS5	V	E	⊙						
4.876	0.438	▲37433	CRWH1	R	W	■	125	12	▲100X125X12 HMSA10 RG	HMSA10	RG	E	■						
4.999	0.375	37525	CRW1	R	W	■	125	12	100X125X12 HMSA10 V	HMSA10	V	E	⊙						
4.999	0.375	37524	CRW1	V	W	■	125	13	100X125X13 HMS4 R	HMS4	R	S	■						
4.999	0.375	37526	CRWA1	R	W	■	130	12	100X130X12 CRW1 R	CRW1	R	W	■						
4.999	0.438	37532	CRWH1	R	W	■	130	12	100X130X12 HMS5 RG	HMS5	RG	E	■						
4.999	0.438	▲37533	CRWHA1	R	W	■	130	12	100X130X12 HMS5 V	HMS5	V	E	⊙						
5.251	0.438	▲37574	CRWH1	R	W	■	130	12	▲100X130X12 HMSA10 RG	HMSA10	RG	E	■						
5.251	0.438	37577	CRWH1	V	W	■⊙	130	12	100X130X12 HMSA10 V	HMSA10	V	E	⊙						
INCH 3.813 in. Shaft Diameter 96.85 mm																			
4.501	0.250	38040	HD1	R	G	■	135	12	100X135X12 CRWA1 R	CRWA1	R	W	■						
4.501	0.250	38041	HD1	V	G	■	140	12	100X140X12 HMS5 RG	HMS5	RG	E	■						
4.999	0.469	38160	CRSH1	R	S		140	12	100X140X12 HMS5 V	HMS5	V	E	⊙						
5.251	0.469	38220	CRSH1	R	S		140	12	▲100X140X12 HMSA10 RG	HMSA10	RG	E	■						
METRIC 3.858 in. Shaft Diameter 98 mm																			
120	12	98X120X12 CRW1 V	CRW1	V	W	■	140	12	100X140X12 HMSA10 R	HMSA10	V	E	⊙						
120	13	98X120X13 HMS4 R	HMS4	R	S		145	12	100X145X12 HMS5 RG	HMS5	RG	E	■						
INCH 3.875 in. Shaft Diameter 98.43 mm																			
	1.000	99386	SSLEEVE										145	12	100X145X12 HMS5 V	HMS5	V	E	⊙
	Shaft 0.3.868-3.875" - 'on-shaft' width 0.813" - flange 04.185"												145	12	100X145X12 HMSA10 RG	HMSA10	RG	E	■
	1.000	99387	SSLEEVE										145	12	100X145X12 HMSA10 V	HMSA10	V	E	⊙
	Shaft 0.3.873-3.88" - 'on-shaft' width 0.813" - flange 04.219"												150	12	100X150X12 HMS5 RG	HMS5	RG	E	■
4.751	0.375	38646	CRW1	R	W	■/⊙	150	12	100X150X12 HMS5 V	HMS5	V	E	⊙						
4.751	0.375	38647	CRWA1	R	W	■	150	12	▲100X150X12 HMSA10 RG	HMSA10	RG	E	■						
4.751	0.375	38649	CRWA1	V	W	■	150	12	100X150X12 HMSA10 V	HMSA10	V	E	⊙						
4.751	0.438	▲38653	CRWH1	R	W	■	150	13	100X150X13 HMS5 RG	HMS5	RG	E	■						
							150	13	100X150X13 HMS5 V	HMS5	V	E	⊙						
							150	13	100X150X13 HMSA10 RG	HMSA10	RG	E	■						
							150	13	100X150X13 HMSA10 V	HMSA10	V	E	⊙						
							160	14	100X160X14 HMS5 RG	HMS5	RG	E	■						
							160	14	100X160X14 HMS5 V	HMS5	V	E	⊙						
							160	14	100X160X14 HMSA10 RG	HMSA10	RG	E	■						

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required



Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
METRIC (cont.) 3.937 in. Shaft Diameter 100 mm						
160	14	100X160X14 HMSA10 V	HMSA10	V	E	⊙
180	12	100X180X12 HMS5 RG	HMS5	RG	E	
180	12	100X180X12 HMS5 V	HMS5	V	E	⊙
180	12	100X180X12 HMSA10 RG	HMSA10	RG	E	
180	12	100X180X12 HMSA10 V	HMSA10	V	E	⊙
190	15	100X190X15 HMS5 RG	HMS5	RG	E	
190	15	100X190X15 HMS5 V	HMS5	V	E	⊙
190	15	100X190X15 HMSA10 RG	HMSA10	RG	E	
190	15	100X190X15 HMSA10 V	HMSA10	V	E	⊙
INCH 3.938 in. Shaft Diameter 100.03 mm						
1.000	99393		SSLEEVE			
<i>Shaft Ø3.935-3.942" - 'on-shaft' width 0.813" - flange Ø4.313"</i>						
1.000	99854		GSLEEVE			
<i>Shaft Ø3.935-3.942" - 'on-shaft' width 0.813" - flange Ø4.313"</i>						
4.876	0.438	▲39245	CRWH1	R	W	■
4.906	0.484	511853	HS6	R	F	◇
4.938	0.484	511658	HS6	R	F	◇
4.999	0.438	▲39275	CRWH1	R	W	■
4.999	0.438	39277	CRWH1	R	W	■
4.999	0.438	39276	CRWH1	V	W	■
5.126	0.472	39304	CRWHA1	V	W	■
5.251	0.438	▲39320	CRWH1	R	W	■
5.374	1.016	39380	SCOT1	R	S	■
5.375	0.438	▲39350	CRWH1	R	W	■
5.501	0.438	▲39423	CRWH1	R	W	■
5.501	0.938	39420	SCOT1	R	S	■
INCH 4.000 in. Shaft Diameter 101.60 mm						
0.625	99401		SSLEEVE			
<i>Shaft Ø3.998-4.006" - 'on-shaft' width 0.5" - flange Ø4.375"</i>						
0.725	99395		SSLEEVE			
<i>Shaft Ø3.998-4.006" - 'on-shaft' width 0.6" - flange Ø4.375"</i>						
0.775	99400		SSLEEVE			
<i>Shaft Ø3.998-4.006" - 'on-shaft' width 0.65" - flange Ø4.375"</i>						
1.000	99399		SSLEEVE			
<i>Shaft Ø3.998-4.006" - 'on-shaft' width 0.813" - flange Ø4.375"</i>						
1.000	99855		GSLEEVE			
<i>Shaft Ø3.998-4.006" - 'on-shaft' width 0.813" - flange Ø4.375"</i>						
4.501	0.250	39835	HM14	R	G	■
4.876	0.250	39860	HM21	R	G	■
4.876	0.438	▲39851	CRW1	R	W	■
4.999	0.250	39961	HM21	R	G	■
4.999	0.375	39895	CRW1	P	W	■
4.999	0.375	39922	CRW1	R	W	■
4.999	0.375	▲39923	CRWA1	R	W	■
4.999	0.375	39921	CRWA1	V	W	■
4.999	0.438	39933	CRWH1	R	W	■
4.999	0.438	39935	CRWH1	S	W	■
4.999	0.438	39932	CRWH1	V	W	■
4.999	0.438	39930	CRWHA1	P	W	■
4.999	0.438	39934	CRWHA1	R	W	■
5.000	0.500	597347	HS8	R	F	◇
5.122	0.953	39979	PLUS XL	H	W	
5.126	0.438	▲39975	CRWH1	R	W	■
5.126	1.047	39988	SCOT1	R	S	■
5.251	0.438	40000	CRWA1	R	W	■
5.251	0.438	▲39997	CRWH1	R	W	■
5.251	0.438	39996	CRWH1	V	W	■
5.310	0.500	▲40020	CRWHA1	R	W	■
5.376	0.438	▲40036	CRWH1	R	W	■
5.501	0.438	▲40049	CRWH1	R	W	■
5.626	0.375	▲40077	CRWA1	R	W	■
5.626	0.438	40078	CRWH1	R	W	■
5.751	0.438	▲40108	CRWH1	R	W	■
5.754	0.995	40129	PLUS XL	H	W	
5.754	1.079	40136	SCOT1	R	S	■
6.001	0.500	▲40138	CRWH1	R	W	■
6.250	0.500	▲40158	CRWH1	R	W	■

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
METRIC 4.016 in. Shaft Diameter 102 mm						
130	13	102X130X13 HMS4 R	HMS4	R	S	
METRIC 4.094 in. Shaft Diameter 104 mm						
24	99409		SSLEEVE			
<i>Shaft Ø103.89-104.09mm - 'on-shaft' width 19.99mm - flange Ø112.73mm</i>						
INCH 4.125 in. Shaft Diameter 104.78 mm						
1.000	99412		SSLEEVE			
<i>Shaft Ø4.122-4.13" - 'on-shaft' width 0.813" - flange Ø4.47"</i>						
4.999	0.438	▲41125	CRWH1	R	W	■
4.999	0.438	41126	CRWH1	V	W	■
5.126	0.438	▲41170	CRWH1	R	W	■
5.126	0.438	41171	CRWH1	V	W	■
5.251	0.438	▲41185	CRWH1	R	W	■
5.251	0.438	41186	CRWH1	V	W	■
5.501	0.438	▲41265	CRWH1	R	W	■
5.751	0.438	▲41287	CRWH1	R	W	■
6.001	0.438	▲41305	CRWH1	R	W	■
6.001	0.438	41307	CRWH1	V	W	■
METRIC 4.134 in. Shaft Diameter 105 mm						
23.2	99413		SSLEEVE			
<i>Shaft Ø104.9-105.11mm - 'on-shaft' width 19.99mm - flange Ø113.54mm</i>						
125	12	105X125X12 CRS1 R	CRS1	R	S	
125	13	105X125X13 HMS4 R	HMS4	R	S	
125	13	105X125X13 HMSA7 R	HMSA7	R	S	
127	11.10	105X127X11.1 CRWH1 R	CRWH1	R	W	■
130	7.50	105X130X7.5 HMSA7P2 R	HMSA7P2	R	S	◆
130	12	105X130X12 CRW1 R	CRW1	R	W	■
130	12	105X130X12 CRW1 V	CRW1	V	W	■
130	12	105X130X12 HMS5 RG	HMS5	RG	E	
130	12	105X130X12 HMS5 V	HMS5	V	E	⊙
130	12	▲105X130X12 HMSA10 RG	HMSA10	RG	E	
130	12	105X130X12 HMSA10 V	HMSA10	V	E	⊙
135	12	105X135X12 CRWA1 R	CRWA1	R	W	■
135	12	105X135X12 HMS5 RG	HMS5	RG	E	
135	12	105X135X12 HMS5 V	HMS5	V	E	⊙
135	12	105X135X12 HMSA10 RG	HMSA10	RG	E	
135	12	105X135X12 HMSA10 V	HMSA10	V	E	⊙
135	14	105X135X14 HMSA7 R	HMSA7	R	S	
140	12	105X140X12 CRWA1 R	CRWA1	R	W	■
140	12	105X140X12 HMS5 RG	HMS5	RG	E	
140	12	105X140X12 HMS5 V	HMS5	V	E	⊙
140	12	▲105X140X12 HMSA10 RG	HMSA10	RG	E	
140	12	105X140X12 HMSA10 V	HMSA10	V	E	⊙
160	12	105X160X12 CRW1 R	CRW1	R	W	■
INCH 4.187 in. Shaft Diameter 106.35 mm						
1.000	99418		SSLEEVE			
<i>Shaft Ø4.183-4.191" - 'on-shaft' width 0.813" - flange Ø4.5"</i>						
INCH 4.187 in. Shaft Diameter 106.35 mm						
4.999	0.469	41751	CRSHA1	R	S	
5.251	0.469	41761	CRSH1	R	S	
5.751	0.500	41833	CRSHA1	R	S	
METRIC 4.213 in. Shaft Diameter 107 mm						
123	11	107X123X11 CRSA1 R	CRSA1	R	S	
INCH 4.230 in. Shaft Diameter 107.44 mm						
0.906	99423		SSLEEVE			
<i>Shaft Ø4.226-4.234" - 'on-shaft' width 0.781" - flange Ø4.61"</i>						
INCH 4.250 in. Shaft Diameter 107.95 mm						
1.000	99424		SSLEEVE			
<i>Shaft Ø4.248-4.256" - 'on-shaft' width 0.813" - flange Ø4.61"</i>						

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease **Bold part numbers are preferred designs**





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features							
4.813	0.313	42340	HM14	R	G		145	15	110X145X15 HMSA7 R	HMSA7	R	S								
INCH (cont.) 4.250 in. Shaft Diameter 107.95 mm							METRIC (cont.) 4.331 in. Shaft Diameter 110 mm													
5.126	0.250	42380	HM21	R	G	■	150	12	110X150X12 HMS5 RG	HMS5	RG	E								
5.250	0.438	416-516-28 HS8 R	HS8	R	F	◇	150	12	110X150X12 HMS5 V	HMS5	V	E	◎							
5.251	0.250	42470	HM21	R	G	■	150	12	110X150X12 HMSA10 RG	HMSA10	RG	E								
5.251	0.374	42504	CRWA1	V	W	■	150	12	110X150X12 HMSA10 V	HMSA10	V	E	◎							
5.251	0.375	42422	CRW1	S	W	■	160	12	110X160X12 CRWH1 R	CRWH1	R	W	■							
5.251	0.375	42419	CRWA1	R	W	■	170	15	110X170X15 HMS5 RG	HMS5	RG	E								
5.251	0.438	42426	CRWH1	R	W	■	170	15	110X170X15 HMS5 V	HMS5	V	E	◎							
5.251	0.438	42433	CRWH1	V	W	■	170	15	110X170X15 HMSA10 RG	HMSA10	RG	E								
5.251	0.438	42427	CRWHA1	R	W	■	170	15	110X170X15 HMSA10 V	HMSA10	V	E	◎							
5.373	0.438	42474	CRWA1	V	W	■	200	13	110X200X13 HMS5 RG	HMS5	RG	E								
5.376	0.438	42475	CRWH1	R	W	■	200	13	110X200X13 HMS5 V	HMS5	V	E	◎							
5.501	0.438	42528	CRWH1	R	W	■	200	13	110X200X13 HMSA10 RG	HMSA10	RG	E								
5.501	0.750	42540	C8	R	W	■	200	13	110X200X13 HMSA10 V	HMSA10	V	E	◎							
5.501	0.938	42550	SCOT1	R	S	■	INCH 4.375 in. Shaft Diameter 111.13 mm													
5.626	0.438	42557	CRWA1	R	W	■	1.000	99437	SSLEEVE	Shaft Ø4.37-4.378" - 'on-shaft' width 0.813" - flange Ø4.75"										
5.751	0.438	42573	CRWH1	R	W	■	5.376	0.438	43650	CRWH1	R	W	■							
5.876	0.500	42592	CRWH1	V	W	◎	5.501	0.438	43691	CRWH1	R	W	■							
6.001	0.500	42616	CRWH1	R	W	■	5.751	0.438	43751	CRWH1	R	W	■							
6.009	0.971	42627	PLUS XL	H	W		5.751	0.995	43754	PLUS XL	H	W								
6.009	0.984	42623	SCOT1	R	S	■	5.751	1.016	43752	SCOT1	R	S	■							
6.126	0.500	42635	CRWH1	R	W	■	5.900	1.000	43764	PLUS XL	H	W								
6.250	0.500	42644	CRWH1	R	W	■	5.900	1.000	43761	PLUS XL	H	W								
6.254	1.245	42673	PLUS XL	H	W		6.001	0.500	43771	CRWH1	R	W	■							
6.254	1.250	42672	SCOT1	R	S	■	6.063	0.500	541974	CRWH1	R	W	■							
METRIC 4.252 in. Shaft Diameter 108 mm							METRIC 4.409 in. Shaft Diameter 112 mm													
140	15	108X140X15 HMS5 RG	HMS5	RG	E		22.5	99438	SSLEEVE	Shaft Ø111.79-111.99mm - 'on-shaft' width 19.05mm - flange Ø120.65mm										
140	15	108X140X15 HMS5 V	HMS5	V	E	◎	INCH 4.438 in. Shaft Diameter 112.73 mm													
140	15	108X140X15 HMSA10 RG	HMSA10	RG	E		1.142	99439	SSLEEVE	Shaft Ø4.434-4.442" - 'on-shaft' width 1" - flange Ø4.813"										
140	15	108X140X15 HMSA10 V	HMSA10	V	E	◎	5.501	0.500	44275	CRWH1	R	W	■							
170	15	108X170X15 HMS5 RG	HMS5	RG	E		5.501	0.500	44276	CRWH1	V	W	■							
170	15	108X170X15 HMS5 V	HMS5	V	E	◎	5.751	0.500	44295	CRWH1	R	W	■							
170	15	108X170X15 HMSA10 RG	HMSA10	RG	E		5.891	0.484	428-557-31 HS8 R	HS8	R	F	◇							
170	15	108X170X15 HMSA10 V	HMSA10	V	E	◎	5.891	0.500	428-557-32 HS8 R	HS8	R	F	◇							
INCH 4.313 in. Shaft Diameter 109.55 mm							METRIC 4.449 in. Shaft Diameter 113 mm													
5.501	0.433	43072	CRWHA1	P	W	■	140	13	113X140X13 CRSH1 R	CRSH1	R	S								
5.501	0.438	43073	CRWHA1	R	W	■	INCH 4.477 in. Shaft Diameter 113.72 mm													
5.751	0.500	43231	CRSH1	R	S		6.250	0.500	44630	CRWH1	R	W	■							
METRIC 4.331 in. Shaft Diameter 110 mm							METRIC 4.488 in. Shaft Diameter 114 mm													
15	99434	SSLEEVE	Shaft Ø109.78-109.98mm - 'on-shaft' width 11.38mm - flange Ø124.99mm				140	13	114X140X13 HMSA7 R	HMSA7	R	S								
16.5	99435	SSLEEVE	Shaft Ø109.91-110.11mm - 'on-shaft' width 12.93mm - flange Ø124.99mm				INCH 4.500 in. Shaft Diameter 114.30 mm													
130	10	43306	HMSA7	V	S		1.000	99450	SSLEEVE	Shaft Ø4.496-4.504" - 'on-shaft' width 0.813" - flange Ø4.9"										
130	12	110X130X12 CRW1 R	CRW1	R	W	■	1.000	99856	GSLEEVE	Shaft Ø4.496-4.504" - 'on-shaft' width 0.813" - flange Ø4.9"										
130	12	110X130X12 CRW1 V	CRW1	V	W	■	5.251	0.438	44913	CRWH1	R	W	■							
130	12	110X130X12 HMS5 RG	HMS5	RG	E		5.251	0.438	44917	CRWHA1	V	W	■							
130	12	110X130X12 HMS5 V	HMS5	V	E	◎	5.375	0.984	44922	SCOT1	R	S	■							
130	12	110X130X12 HMSA10 RG	HMSA10	RG	E		5.376	0.438	44920	CRWH1	R	W	■							
130	12	110X130X12 HMSA10 V	HMSA10	V	E	◎	5.376	0.438	44926	CRWHA1	V	W	■							
130	13	110X130X13 HMS5 RG	HMS5	RG	E		5.500	0.500	512466	HS6	R	F	◇							
130	13	110X130X13 HMS5 V	HMS5	V	E	◎	5.501	0.250	45025	HM14	R	G								
130	13	110X130X13 HMSA10 RG	HMSA10	RG	E		5.501	0.375	44959	CRW1	R	W	■							
130	13	110X130X13 HMSA10 V	HMSA10	V	E	◎	5.501	0.375	44960	CRWA1	R	W	■							
135	12	110X135X12 CRW1 V	CRW1	V	W															
135	12	110X135X12 HMS4 R	HMS4	R	S															
140	12	110X140X12 CRW1 R	CRW1	R	W															
140	12	110X140X12 CRW1 V	CRW1	V	W	■														
140	12	110X140X12 HMS5 RG	HMS5	RG	E															
140	12	110X140X12 HMS5 V	HMS5	V	E	◎														
140	12	110X140X12 HMSA10 RG	HMSA10	RG	E															
140	12	110X140X12 HMSA10 V	HMSA10	V	E	◎														
142.88	12	566635	HDS2	H	F															
142.90	12	43345	CRWHA1	V	W	■														
142.90	12	566562	HS5	V	F	◇														
145	12	110X145X12 CRW1 R	CRW1	R	W	■														

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ◎ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.





Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
5.501	0.435	44980	CRWH1	V	W	■②	1.000	99468	SSLEEVE				
5.501	0.438	44967	CRWH1	R	W	■	<i>Shaft 04.685-4.693" - 'on-shaft' width 0.813" - flange 05.063"</i>						
INCH (cont.) 4.500 in. Shaft Diameter 114.30 mm				INCH (cont.) 4.688 in. Shaft Diameter 119.08 mm									
5.501	0.438	44973	CRWH1	V	W	■	5.751	0.250	46851	HD1	R	G	■
5.501	0.438	44968	CRWHA1	R	W	■	5.751	0.250	46852	HD1	V	G	■
5.626	0.438	45032	CRWH1	R	W	■	5.751	0.512	46800	CRWH1	R	W	■
5.626	0.438	45033	CRWHA1	V	W	■	5.751	0.512	46770	CRWH1	S	W	■
5.751	0.375	45064	CRWA1	V	W	■	6.001	0.266	46920	HD1	P	G	■
5.751	0.438	45069	CRWH1	R	W	■	6.250	0.500	46950	CRWH1	R	W	■
5.751	0.438	45070	CRWHA1	R	W	■							
5.751	0.767	45093	PLUS XL	H	W		METRIC 4.724 in. Shaft Diameter 120 mm						
5.751	1.016	45099	SCOT1	R	S	■	11	99471	SSLEEVE				
5.876	1.009	45095	PLUS XL	H	W		<i>Shaft 0119.89-120.09mm - 'on-shaft' width 8mm - flange 0129.79mm</i>						
6.001	0.500	45110	CRWH1	R	W	■	25	99473	SSLEEVE				
6.001	0.500	45111	CRWHA1	R	W	■	<i>Shaft 0119.89-120.09mm - 'on-shaft' width 19.99mm - flange 0129.79mm</i>						
6.001	0.500	45112	CRWHA1	V	W	■	140	7	120X140X7	HMS5	RG	E	
6.126	0.563	45140	CRWH1	R	W	■	140	7.50	120X140X7.5	HMS5	V	E	②
6.250	0.500	45150	CRWH1	R	W	■	140	12	120X140X12	CRWA1	R	W	■
6.254	1.047	45160	SCOT1	R	S	■	140	12	120X140X12	CRWA1	R	W	■
METRIC 4.528 in. Shaft Diameter 115 mm							140	12	120X140X12	HMS5	RG	E	
23.8	99452	SSLEEVE					140	12	120X140X12	HMS5	V	E	②
<i>Shaft 0114.88-115.09mm - 'on-shaft' width 20.65mm - flange 0127mm</i>							140	12	120X140X12	HMS5	V	E	②
135	12	115X135X12	CRW1	R	W		140	12	120X140X12	HMS5	RG	E	
140	11	115X140X11	HS8	R	F	◇	140	12	120X140X12	HMS5	V	E	②
140	12	115X140X12	CRW1	R	W	■	140	12	120X140X12	HMS5	RG	E	
140	12	115X140X12	CRW1	V	W	■	140	12	120X140X12	HMS5	V	E	②
140	12	115X140X12	HMS5	RG	E		140	12	120X140X12	HMSA10	RG	E	
140	12	115X140X12	HMS5	V	E	②	140	12	120X140X12	HMSA10	RG	E	
140	12	115X140X12	HMSA10	RG	E		140	12	120X140X12	HMSA10	V	E	②
140	12	115X140X12	HMSA10	V	E	②	140	12	120X140X12	HMSA10	RG	E	
145	12	115X145X12	CRW1	R	W	■	140	13	120X140X13	HMS5	RG	E	
145	12	115X145X12	HMS5	RG	E		140	13	120X140X13	HMS5	V	E	②
145	12	115X145X12	HMS5	V	E	②	140	13	120X140X13	HMSA10	RG	E	
145	12	115X145X12	HMSA10	RG	E		140	13	120X140X13	HMSA10	RG	E	
145	12	115X145X12	HMSA10	V	E	②	140	13	120X140X13	HMSA10	V	E	②
145	12	115X145X12	HMSA10	RG	E		140	13	120X140X13	HMSA10	V	E	②
145	12	115X145X12	HMSA10	V	E	②	145	12	120X145X12	CRW1	R	W	■
145	14	115X145X14	HMSA7	R	S		145	12	120X145X12	HMS4	R	S	
150	12	115X150X12	CRW1	R	W	■	150	12	120X150X12	CRW1	R	W	■
150	12	115X150X12	HMS5	RG	E		150	12	120X150X12	HMS5	RG	E	
150	12	115X150X12	HMS5	V	E	②	150	12	120X150X12	HMS5	V	E	②
150	12	115X150X12	HMSA10	RG	E		150	12	120X150X12	HMS5	RG	E	
150	12	115X150X12	HMSA10	V	E	②	150	12	120X150X12	HMS5	V	E	②
160	12	115X160X12	CRW1	R	W		150	12	120X150X12	HMSA10	RG	E	
INCH 4.563 in. Shaft Diameter 115.90 mm							150	12	120X150X12	HMSA10	V	E	②
5.751	0.500	45550	CRSHA1	R	S		150	12	120X150X12	HMSA10	V	E	②
6.250	0.500	45560	CRSH1	R	S		150	15	120X150X15	HMS5	RG	E	
INCH 4.625 in. Shaft Diameter 117.48 mm							150	15	120X150X15	HMS5	V	E	②
0.625	99465	SSLEEVE					150	15	120X150X15	HMSA10	RG	E	
<i>Shaft 04.621-4.629" - 'on-shaft' width 0.438" - flange 05"</i>							150	15	120X150X15	HMSA10	V	E	②
1.250	99463	SSLEEVE					150	15	120X150X15	HMSA10	RG	E	
<i>Shaft 04.621-4.629" - 'on-shaft' width 1" - flange 05.063"</i>							150	15	120X150X15	HMSA10	V	E	②
5.626	0.500	46144	CRWH1	R	W	■	180	12	120X180X12	HMS5	RG	E	
5.626	0.500	46155	CRWH1	V	W	■	180	12	120X180X12	HMS5	V	E	②
5.751	0.500	46200	CRWH1	R	W	■	180	12	120X180X12	HMSA10	RG	E	
5.751	0.500	46208	CRWH1	S	W	■	180	12	120X180X12	HMSA10	RG	E	
6.001	0.500	46285	CRWH1	R	W	■	180	12	120X180X12	HMSA10	V	E	②
6.001	0.912	46300	PLUS XL	H	W		180	15	120X180X15	HMS5	RG	E	
6.001	1.063	46305	SCOT1	R	S	■	180	15	120X180X15	HMS5	V	E	②
6.250	0.500	46324	CRWH1	R	W	■	180	15	120X180X15	HMSA10	RG	E	
METRIC 4.646 in. Shaft Diameter 118 mm							180	15	120X180X15	HMSA10	RG	E	
150	12	118X150X12	HMS5	RG	E		180	15	120X180X15	HMSA10	V	E	②
150	12	118X150X12	HMS5	V	E	②	180	15	120X180X15	HMSA10	RG	E	
150	12	118X150X12	HMSA10	RG	E		180	15	120X180X15	HMSA10	V	E	②
150	12	118X150X12	HMSA10	V	E	②	180	15	120X180X15	HMSA10	RG	E	
INCH 4.688 in. Shaft Diameter 119.08 mm							200	14	120X200X14	HMS5	RG	E	
							200	14	120X200X14	HMS5	V	E	②
							200	14	120X200X14	HMSA10	RG	E	
							200	14	120X200X14	HMSA10	V	E	②
							200	14	120X200X14	HMSA10	RG	E	
							215	12	120X215X12	HMS5	RG	E	
							215	12	120X215X12	HMS5	V	E	②
							215	12	120X215X12	HMSA10	RG	E	
							215	12	120X215X12	HMSA10	V	E	②
METRIC 4.750 in. Shaft Diameter 120.65 mm													
							0.750	99475	SSLEEVE				
							<i>Shaft 04.746-4.754" - 'on-shaft' width 0.5" - flange 05"</i>						
							5.375	0.313	47378	HM14	R	G	■
							5.749	0.438	47375	CRW1	P	W	■
							5.750	0.500	448-548-32	HS5	V	F	◇
							5.751	0.500	47383	CRW1	R	W	■
							5.751	0.500	47379	CRW1	V	W	■

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
5.751	0.500	47382	CRWA1	V	W	⊙	6.250	0.500	▲ 49301	CRWH1	R	W	■
EXTENDED DUST LIP W/WAVE MOLDED IN													
5.751	0.500	47394	CRWH1	R	W	■	METRIC 4.961 in. Shaft Diameter 126 mm						
INCH (cont.) 4.750 in. Shaft Diameter 120.65 mm							147 11 126X147X11 CRSA1 R CRSA1 R S						
5.751	0.500	▲ 47395	CRWHA1	R	W	■	INCH 5.000 in. Shaft Diameter 127.00 mm						
5.875	0.500	▲ 47441	CRWH1	R	W	■	0.681 99501 SSLEEVE						
6.001	0.500	47481	CRW1	V	W	■	Shaft Ø4.998-5.007" - 'on-shaft' width 0.54" - flange Ø5.4"						
6.001	0.500	47474	CRWH1	R	W	■	0.875 99498 SSLEEVE						
6.001	0.500	▲ 47475	CRWHA1	R	W	■	Shaft Ø4.998-5.007" - 'on-shaft' width 0.688" - flange Ø5.4"						
6.250	0.500	▲ 47583	CRWH1	R	W	■	0.875 99857 GSLEEVE						
6.250	0.500	47586	CRWHA1	V	W	■	Shaft Ø4.998-5.007" - 'on-shaft' width 0.688" - flange Ø5.4"						
INCH 4.766 in. Shaft Diameter 121.06 mm							1.000 99499 SSLEEVE						
6.001	1.063	47691	SCOT1	R	S	■	Shaft Ø4.998-5.007" - 'on-shaft' width 0.813" - flange Ø5.39"						
6.254	1.047	48000	SCOT1	R	S	■	1.000 99858 GSLEEVE						
6.311	1.125	47697	SCOT1	R	S	■	Shaft Ø4.998-5.007" - 'on-shaft' width 0.813" - flange Ø5.508"						
METRIC 4.803 in. Shaft Diameter 122 mm							6.000 0.500 500-600-32 HS5 V HS5 V F ◇						
Shaft Ø121.89-122.1mm - 'on-shaft' width 19.99mm - flange Ø131.5mm							6.001 0.500 ▲ 49928 CRWH1 R W ■						
INCH 4.813 in. Shaft Diameter 122.25 mm							6.001 0.500 49929 CRWHA1 R W ■						
5.751	0.563	48060	CRWH1	P	W	■	6.001 0.500 49927 CRWHA1 V W ■						
5.751	0.563	48062	CRWH1	V	W	■	6.125 0.500 49951 HDW1 R W ■						
INCH 4.875 in. Shaft Diameter 123.83 mm							6.126 0.500 49960 CRW1 V W ■						
0.750 99487 SSLEEVE							6.250 0.250 50070 HM21 R G ■						
Shaft Ø4.871-4.879" - 'on-shaft' width 0.625" - flange Ø5.25"							6.250 0.500 49984 CRW1 R W ■						
5.501	0.250	48650	HM14	R	G		6.250 0.500 49985 CRWA1 R W ■						
6.001	0.500	▲ 48693	CRWH1	R	W	■	6.250 0.500 49990 CRWH1 P W ■						
6.001	0.500	48692	CRWH1	V	W	■	6.250 0.500 49966 CRWH1 R W ■						
6.001	0.500	48689	CRWHA1	R	W	■	6.250 0.500 49991 CRWH1 V W ■						
6.001	0.875	48690	SCOT1	R	S	■	6.250 0.500 ▲ 49998 CRWHA1 R W ■						
6.126	0.500	▲ 48726	CRWH1	R	W	■	6.250 0.500 500-616-32 HS8 R HS8 R F ◇						
6.250	0.500	▲ 48769	CRWH1	R	W	■	6.375 0.500 ▲ 50130 CRWH1 R W ■						
6.250	0.500	48772	CRWH1	V	W	■	6.375 0.500 50138 CRWHA1 R W ■						
6.250	0.500	48768	CRWHA1	R	W	■	6.500 0.500 ▲ 50148 CRWH1 R W ■						
METRIC 4.921 in. Shaft Diameter 125 mm							6.500 0.500 50151 CRWH1 V W ■						
14 99057 SSLEEVE							6.750 0.500 50168 CRWH1 R W ■						
Shaft Ø124.87-125.4mm - 'on-shaft' width 11mm - flange Ø137.16mm							6.750 0.500 ▲ 50172 CRWHA1 R W ■						
14 99490 SSLEEVE							7.000 0.500 50185 CRSHA1 R S						
Shaft Ø124.89-125.1mm - 'on-shaft' width 10mm - flange Ø137.16mm							7.125 0.500 50186 HDW1 R W ■						
32 99492 SSLEEVE							7.500 0.500 50195 CRSHA1 R S						
Shaft Ø124.89-125.1mm - 'on-shaft' width 26.01mm - flange Ø137.16mm													
146	14	125X146X14 CRSA1 P	CRSA1	P	S		METRIC 5.039 in. Shaft Diameter 128 mm						
150	12	125X150X12 CRW1 R	CRW1	R	W	■	34.27 99482 SSLEEVE						
150	12	125X150X12 CRW1 V	CRW1	V	W	■	Shaft Ø127.79-128.01mm - 'on-shaft' width 29.2mm - flange Ø135.3mm						
150	12	125X150X12 HMS5 RG	HMS5	RG	E		150 15 128X150X15 HMS4 R HMS4 R S ■						
150	12	125X150X12 HMS5 V	HMS5	V	E	⊙	INCH 5.063 in. Shaft Diameter 128.60 mm						
150	12	▲ 125X150X12 HMSA10 RG	HMSA10	RG	E	⊙	6.125 0.500 50620 HDW1 R W ■						
150	12	125X150X12 HMSA10 V	HMSA10	V	E	⊙	6.126 0.500 50618 CRWH1 R W ■						
155	14	125X155X14 HMSA7 R	HMSA7	R	S		6.375 0.500 ▲ 50650 CRWH1 R W ■						
160	12	125X160X12 CRW1 R	CRW1	R	W	■	METRIC 5.118 in. Shaft Diameter 130 mm						
160	12	125X160X12 HMS4 R	HMS4	R	S		23.8 99494 SSLEEVE						
160	15	125X160X15 HMS5 RG	HMS5	RG	E		Shaft Ø129.79-130.02mm - 'on-shaft' width 19.05mm - flange Ø139.52mm						
160	15	125X160X15 HMS5 V	HMS5	V	E	⊙	150 10 130X150X10 CRSA1 R CRSA1 R S						
160	15	125X160X15 HMSA10 RG	HMSA10	RG	E	⊙	150 14 130X150X14 CRSA1 R CRSA1 R S						
160	15	125X160X15 HMSA10 V	HMSA10	V	E	⊙	155 10 130X155X10 CRSH1 R CRSH1 R S						
161.93	12.70	49274	CRWHA1	V	W	■	160 12 130X160X12 CRW1 R CRW1 R W ■						
170	15	125X170X15 HMSA7 R	HMSA7	R	S		160 12 130X160X12 CRW1 V CRW1 V W ■						
200	15	125X200X15 HMS5 RG	HMS5	RG	E		160 12 130X160X12 HMS5 RG HMS5 RG E						
200	15	125X200X15 HMS5 V	HMS5	V	E	⊙	160 12 130X160X12 HMS5 V HMS5 V E ⊙						
200	15	125X200X15 HMSA10 RG	HMSA10	RG	E	⊙	160 12 ▲ 130X160X12 HMSA10 RG HMSA10 RG E						
200	15	125X200X15 HMSA10 V	HMSA10	V	E	⊙	160 12 130X160X12 HMSA10 V HMSA10 V E ⊙						
INCH 4.938 in. Shaft Diameter 125.43 mm							160 12 130X160X13 CRSA1 R CRSA1 R S						
6.001	0.500	▲ 49251	CRWH1	R	W	■	160 15 130X160X15 HMS5 RG HMS5 RG E						
							160 15 130X160X15 HMS5 V HMS5 V E ⊙						
							160 15 130X160X15 HMSA10 RG HMSA10 RG E						
							160 15 130X160X15 HMSA10 V HMSA10 V E ⊙						
							170 12 130X170X12 CRW1 R CRW1 R W						
							170 12 130X170X12 HMS5 RG HMS5 RG E						
							170 12 130X170X12 HMS5 V HMS5 V E ⊙						

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
170	12	▲ 130X170X12 HMSA10 RG	HMSA10	RG	E	
170	12	130X170X12 HMSA10 V	HMSA10	V	E	⊙
170	15	130X170X15 HMS4 R	HMS4	R	S	
170	16	130X170X16 HS8 V	HS8	V	F	◇
180	12	130X180X12 HMS5 RG	HMS5	RG	E	
METRIC (cont.)		5.118 in.	Shaft Diameter	130 mm		
180	12	130X180X12 HMS5 V	HMS5	V	E	⊙
180	12	130X180X12 HMSA10 RG	HMSA10	RG	E	
180	12	130X180X12 HMSA10 V	HMSA10	V	E	⊙
190	12	130X190X12 HMS5 RG	HMS5	RG	E	
190	12	130X190X12 HMS5 V	HMS5	V	E	⊙
190	12	130X190X12 HMSA10 RG	HMSA10	RG	E	
190	12	130X190X12 HMSA10 V	HMSA10	V	E	⊙
200	15	130X200X15 HMS5 RG	HMS5	RG	E	
200	15	130X200X15 HMS5 V	HMS5	V	E	⊙
200	15	130X200X15 HMSA10 RG	HMSA10	RG	E	
200	15	130X200X15 HMSA10 V	HMSA10	V	E	⊙
230	14	130X230X14 HMS5 RG	HMS5	RG	E	
230	14	130X230X14 HMS5 V	HMS5	V	E	⊙
230	14	130X230X14 HMSA10 RG	HMSA10	RG	E	
230	14	130X230X14 HMSA10 V	HMSA10	V	E	⊙
INCH		5.125 in.	Shaft Diameter	130.18 mm		
0.996	99491	SSLEEVE				
Shaft Ø5.117-5.126" - 'on-shaft' width 0.866" - flange Ø5.493"						
1.000	99513	SSLEEVE				
Shaft Ø5.12-5.129" - 'on-shaft' width 0.813" - flange Ø5.5"						
6.125	0.500	508-608-32 HS8 R	HS8	R	F	◇
6.125	0.671	508-608-43 HDSH2 HT	HDSH2	HT	F	
6.126	0.500	▲51247	CRW1	R	W	■
6.126	0.500	51243	CRW1	V	W	■
6.126	0.500	51240	CRWHA1	R	W	■
6.250	0.500	51253	CRWA1	V	W	■
6.250	0.500	▲51252	CRWHA1	R	W	■
6.375	0.500	▲51248	CRWH1	R	W	■
6.375	0.500	51255	CRWH1	V	W	■
6.500	0.500	51276	CRSHA1	R	S	
6.625	0.500	51277	HDW1	R	W	■
7.000	0.500	533929	HDW1	R	W	
INCH		5.188 in.	Shaft Diameter	131.78 mm		
6.250	0.500	51800	HDW1	R	W	■
6.501	0.625	51852	CRWH1	V	W	■
INCH		5.250 in.	Shaft Diameter	133.35 mm		
1.000	99525	SSLEEVE				
Shaft Ø5.246-5.255" - 'on-shaft' width 0.813" - flange Ø5.56"						
6.001	0.375	▲52440	CRW1	R	W	■
6.001	0.500	52443	CRWH1	V	W	■
6.250	0.250	52475	HM4	R	G	
6.250	0.500	▲52445	CRWH1	R	W	■
6.250	0.500	52447	CRWH1	V	W	■
6.375	0.500	▲52492	CRWHA1	R	W	■
6.375	0.500	52498	CRWHA1	V	W	■
6.420	0.625	531291	HS8	R	F	◇
6.500	0.500	▲52488	CRWH1	R	W	■
6.500	0.500	52489	CRWH1	V	W	■
6.750	0.500	▲52648	CRWH1	R	W	■
6.750	0.500	52649	CRWH1	V	W	■
6.750	0.500	52651	HDW1	R	W	■
7.125	0.500	52655	HDW1	R	W	■
INCH		5.313 in.	Shaft Diameter	134.95 mm		
6.375	0.500	53100	HDW1	R	W	■
6.500	0.500	53151	CRSHA1	R	S	
6.500	0.671	520-632-43 HDSH2 HT	HDSH2	HT	F	
METRIC		5.315 in.	Shaft Diameter	135 mm		
25.4	99533	SSLEEVE				

Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures
<i>Shaft Ø134.8-135.03mm - 'on-shaft' width 20.5mm - flange Ø145.67mm</i>						
160	12	135X160X12 HMS4 R	HMS4	R	S	
160	13	135X160X13 HMS4 R	HMS4	R	S	
160	13	135X160X13 HMSA7 R	HMSA7	R	S	
160	15	135X160X15 HMS4 R	HMS4	R	S	
METRIC (cont.)		5.315 in.	Shaft Diameter	135 mm		
161	13	135X161X13 HS4 H	HS4	H	F	◇
165	12	135X165X12 HMS5 RG	HMS5	RG	E	
165	12	135X165X12 HMS5 V	HMS5	V	E	⊙
165	12	135X165X12 HMSA10 RG	HMSA10	RG	E	
165	12	135X165X12 HMSA10 V	HMSA10	V	E	⊙
165	14	135X165X14 HMSA7 R	HMSA7	R	S	
170	12	135X170X12 HMS5 RG	HMS5	RG	E	
170	12	135X170X12 HMS5 V	HMS5	V	E	⊙
170	12	▲135X170X12 HMSA10 RG	HMSA10	RG	E	
170	12	135X170X12 HMSA10 V	HMSA10	V	E	⊙
170	15	135X170X15 CRSH1 R	CRSH1	R	S	
INCH		5.375 in.	Shaft Diameter	136.53 mm		
1.000	99537	SSLEEVE				
<i>Shaft Ø5.371-5.38" - 'on-shaft' width 0.813" - flange Ø5.875"</i>						
6.374	0.500	53688	CRSHA1	R	S	■
6.499	0.563	53692	CRSH1	R	S	
6.625	0.500	▲53701	CRWH1	R	W	■
6.625	0.500	53702	CRWH1	V	W	■
6.750	0.500	▲53775	CRWH1	R	W	■
6.750	0.500	545452	CRWH1	R	W	⊙
6.750	0.500	53771	CRWH1	V	W	■
METRIC		5.433 in.	Shaft Diameter	138 mm		
152	12	138X152X12 CRSA1 R	CRSA1	R	S	
INCH		5.438 in.	Shaft Diameter	138.13 mm		
1.688	99548	SSLEEVE				
<i>Shaft Ø5.434-5.443" - 'on-shaft' width 1.5" - flange Ø5.75"</i>						
6.625	0.500	54300	HDW1	R	W	■
6.688	0.625	521726	HS6	R	F	◇
INCH		5.476 in.	Shaft Diameter	139.09 mm		
0.750	99547	SSLEEVE				
<i>Shaft Ø5.472-5.481" - 'on-shaft' width 0.563" - flange Ø5.9"</i>						
INCH		5.500 in.	Shaft Diameter	139.70 mm		
0.705	99550	SSLEEVE				
<i>Shaft Ø5.498-5.507" - 'on-shaft' width 0.518" - flange Ø5.938"</i>						
1.000	99549	SSLEEVE				
<i>Shaft Ø5.498-5.507" - 'on-shaft' width 0.813" - flange Ø5.938"</i>						
1.000	99859	GSLEEVE				
<i>Shaft Ø5.498-5.507" - 'on-shaft' width 0.813" - flange Ø5.938"</i>						
6.250	0.500	▲54925	CRWA1	R	W	■
6.500	0.500	54936	CRWH1	P	W	■
6.500	0.500	▲54931	CRWH1	R	W	■
6.500	0.500	54934	CRWH1	V	W	■
6.500	0.500	597548	HS8	V	F	◇
6.626	0.563	54949	CRSHA1	R	S	
6.750	0.500	54959	CRW1	R	W	■
6.750	0.500	54960	CRWA1	R	W	■
6.750	0.500	▲54972	CRWH1	R	W	■
6.750	0.500	54974	CRWH1	V	W	■
6.750	0.500	54971	CRWHA1	R	W	■
6.750	0.500	532-648-32 HS8 R	HS8	R	F	◇
6.750	0.625	556435	HS8	R	F	◇
6.750	0.750	595055	HS7	R	F	◇
6.876	0.563	55157	CRSHA1	R	S	
METRIC		5.512 in.	Shaft Diameter	140 mm		
25.4	99552	SSLEEVE				
<i>Shaft Ø139.9-140.13mm - 'on-shaft' width 20.5mm - flange Ø151mm</i>						
160	12	140X160X12 CRW1 R	CRW1	R	W	

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease **Bold part numbers are preferred designs**





Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Features
160	12	140X160X12 HMS5 RG	HMS5	RG	E		180	12	▲145X180X12 HMSA10 RG	HMSA10	RG	E	
160	12	140X160X12 HMS5 V	HMS5	V	E	⊙	180	12	145X180X12 HMSA10 V	HMSA10	V	E	⊙
160	12	▲140X160X12 HMSA10 RG	HMSA10	RG	E		180	15	145X180X15 HDS2 H	HDS2	H	F	F
160	12	140X160X12 HMSA10 V	HMSA10	V	E	⊙	180	15	145X180X15 HDS2 R	HDS2	R	F	F
170	12	140X170X12 CRW1 R	CRW1	R	W	■	180	20	145X180X20 HDSH2 HT	HDSH2	HT	F	F
METRIC (cont.) 5.512 in. Shaft Diameter 140 mm							METRIC (cont.) 5.709 in. Shaft Diameter 145 mm						
170	12	140X170X12 CRW1 V	CRW1	V	W		190	16	145X190X16 HMS5 V	HMS5	V	E	⊙
170	12	140X170X12 HMS5 RG	HMS5	RG	E		190	16	145X190X16 HMSA10 RG	HMSA10	RG	E	⊙
170	12	140X170X12 HMS5 V	HMS5	V	E	⊙	190	16	145X190X16 HMSA10 V	HMSA10	V	E	⊙
170	12	▲140X170X12 HMSA10 RG	HMSA10	RG	E		230	17	145X230X17 HMS5 RG	HMS5	RG	E	⊙
170	12	140X170X12 HMSA10 V	HMSA10	V	E	⊙	230	17	145X230X17 HMS5 V	HMS5	V	E	⊙
170	12	140X170X12 HSS5 R	HSS5	R	F	◇	230	17	145X230X17 HMSA10 RG	HMSA10	RG	E	
170	15	140X170X15 HDS7 H	HDS7	H	F		230	17	145X230X17 HMSA10 V	HMSA10	V	E	⊙
170	15	140X170X15 HMS5 RG	HMS5	RG	E		INCH 5.730 in. Shaft Diameter 145.54 mm						
170	15	140X170X15 HMS5 V	HMS5	V	E	⊙	0.750	99562	SSLEEVE				
170	15	140X170X15 HMSA10 RG	HMSA10	RG	E		Shaft Ø5.726-5.735" - 'on-shaft' width 0.563" - flange Ø6.1"						
170	15	140X170X15 HMSA10 V	HMSA10	V	E	⊙	INCH 5.750 in. Shaft Diameter 146.05 mm						
170	15	140X170X15 HSS5 R	HSS5	R	F	◇	1.000	99575	SSLEEVE				
170	15	140X170X15 HS8 V	HS8	V	F	◇	Shaft Ø5.746-5.755" - 'on-shaft' width 0.813" - flange Ø6.18"						
180	12	140X180X12 HMS5 RG	HMS5	RG	E		6.375	0.250	57502	HMA1	R	G	
180	12	140X180X12 HMS5 V	HMS5	V	E	⊙	6.625	0.500	57506	CRW1	V	W	■
180	12	▲140X180X12 HMSA10 RG	HMSA10	RG	E		6.625	0.500	▲57505	CRWH1	R	W	■
180	12	140X180X12 HMSA10 V	HMSA10	V	E	⊙	6.750	0.500	▲57510	CRWH1	R	W	■
180	15	140X180X15 HMS5 RG	HMS5	RG	E		6.750	0.500	57522	CRWH1	V	W	■
180	15	140X180X15 HMS5 V	HMS5	V	E	⊙	6.751	0.500	▲57509	CRWHA1	R	W	■
180	15	140X180X15 HMSA10 RG	HMSA10	RG	E		6.876	0.563	57519	CRSHA1	R	S	
180	15	140X180X15 HMSA10 V	HMSA10	V	E	⊙	7.000	0.500	▲57521	CRWH1	R	W	■
180	16	140X180X16 HS8 R	HS8	R	F	◇	7.000	0.500	57523	CRWH1	V	W	■
180	16	140X180X16 HS8 V	HS8	V	F	◇	7.000	0.500	57531	CRWHA1	R	W	■
180	17	140X180X17 HDSH2 HT	HDSH2	HT	F		7.126	0.563	57578	CRSHA1	R	S	
230	15	140X230X15 HMS5 RG	HMS5	RG	E		7.502	0.563	57584	CRSHA1	R	S	
230	15	140X230X15 HMS5 V	HMS5	V	E	⊙	METRIC 5.827 in. Shaft Diameter 148 mm						
230	15	140X230X15 HMSA10 RG	HMSA10	RG	E		170	15	148X170X15 HMS5 RG	HMS5	RG	E	
230	15	140X230X15 HMSA10 V	HMSA10	V	E	⊙	170	15	148X170X15 HMS5 V	HMS5	V	E	⊙
250	15	140X250X15 HMS5 RG	HMS5	RG	E		170	15	148X170X15 HMSA10 RG	HMSA10	RG	E	
250	15	140X250X15 HMS5 V	HMS5	V	E	⊙	170	15	148X170X15 HMSA10 V	HMSA10	V	E	⊙
250	15	140X250X15 HMSA10 RG	HMSA10	RG	E		METRIC 5.866 in. Shaft Diameter 149 mm						
250	15	140X250X15 HMSA10 V	HMSA10	V	E	⊙	180	13	149X180X13 HS8 R	HS8	R	F	◇
INCH 5.625 in. Shaft Diameter 142.88 mm							INCH 5.875 in. Shaft Diameter 149.23 mm						
1.000	99560	SSLEEVE					1.250	99587	SSLEEVE				
Shaft Ø5.621-5.63" - 'on-shaft' width 0.875" - flange Ø6.188"							Shaft Ø5.871-5.88" - 'on-shaft' width 1" - flange Ø6.188"						
6.625	0.500	▲56101	CRWH1	R	W	■	1.250	99862	GSLEEVE				
6.625	0.500	56102	CRWH1	V	W	■	Shaft Ø5.871-5.88" - 'on-shaft' width 1" - flange Ø6.188"						
6.875	0.500	▲56136	CRWH1	R	W	■	6.875	0.500	58709	HDW1	R	W	■⊙
6.875	0.500	56137	CRWH1	V	W	■	7.000	0.500	58710	HDW1	R	W	■
7.125	0.500	▲56160	CRWHA1	R	W	■	7.125	0.500	▲58716	CRWH1	R	W	■
METRIC 5.630 in. Shaft Diameter 143 mm							METRIC 5.875 in. Shaft Diameter 149.23 mm						
181	12.70	143X181X12.7 CRWHA1 R	CRWHA1	R	W		7.125	0.500	58717	CRWH1	V	W	■
METRIC 5.669 in. Shaft Diameter 144 mm							7.125	0.500	58741	CRWHA1	R	W	■
160	12	144X160X12 HMSA7 R	HMSA7	R	S		7.125	0.500	534576	CRWHA1	V	W	■
METRIC 5.709 in. Shaft Diameter 145 mm							7.500	0.500	▲58760	CRWH1	R	W	■
22.2	99571	SSLEEVE					METRIC 5.906 in. Shaft Diameter 150 mm						
Shaft Ø144.75-144.98mm - 'on-shaft' width 19.05mm - flange Ø154.94mm							Shaft Ø149.76-149.99mm - 'on-shaft' width 26.01mm - flange Ø159mm						
164	14	145X164X14 CRS1 R	CRSA1	R	S		30	99595	SSLEEVE				
170	12	145X170X12 HMSA7 R	HMSA7	R	S		Shaft Ø149.76-149.99mm - 'on-shaft' width 26.01mm - flange Ø159mm						
170	15	145X170X15 HMS4 R	HMS4	R	S	■	170	12	150X170X12 HMS5 RG	HMS5	RG	E	
175	14	145X175X14 CRS1 R	CRS1	R	S	■	170	12	150X170X12 HMS5 V	HMS5	V	E	⊙
175	14	145X175X14 HMSA7 R	HMSA7	R	S		170	12	150X170X12 HMSA10 RG	HMSA10	RG	E	
175	14	145X175X14 HS8 R	HS8	R	F	◇	170	12	150X170X12 HMSA10 V	HMSA10	V	E	⊙
175	15	145X175X15 HMS5 RG	HMS5	RG	E		170	15	150X170X15 CRS1 R	CRSH1	R	S	
175	15	145X175X15 HMS5 V	HMS5	V	E	⊙	180	8.50	150X180X8.5 HMSA72P2R	HMSA72P2	R	S	◆
175	15	▲145X175X15 HMSA10 RG	HMSA10	RG	E		180	12	150X180X12 HMS5 RG	HMS5	RG	E	
175	15	145X175X15 HMSA10 V	HMSA10	V	E	⊙	180	12	150X180X12 HMS5 V	HMS5	V	E	⊙
180	12	145X180X12 HMS5 RG	HMS5	RG	E		180	12	▲150X180X12 HMSA10 RG	HMSA10	RG	E	
180	12	145X180X12 HMS5 V	HMS5	V	E	⊙							

Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.





Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures						
METRIC (cont.)							INCH (cont.)												
5.906 in. Shaft Diameter			150 mm				6.125 in. Shaft Diameter			155.58 mm									
180	15	150X180X15 HMSA10 RG	HMSA10	RG	E		7.295	0.641	592808-00	HS8	R	F	◇						
180	15	150X180X15 HMSA10 V	HMSA10	V	E	◎	7.375	0.500	61235	HDW1	R	W	■						
180	15	150X180X15 HS8 V	HS8	V	F	◇	7.375	0.625	608-724-40 HS8 V	HS8	R	F	◇						
180	16	150X180X16 HDSF2 VT9	HDSF2	VT	F	►	7.502	0.563	61248	CRSHA1	R	S							
180	16	150X180X16 HS8 R	HS8	R	F	◇	7.625	0.625	61256	CRWH1	P	W							
195	16	150X195X16 HDSF7 VT	HDSF7	VT	F		7.625	0.625	▲ 61255	CRWH1	R	W							
200	12	150X200X12 HMS5 RG	HMS5	RG	E		7.625	0.625	608-740-40 HS8 R	HS8	R	F	◇						
200	12	150X200X12 HMS5 V	HMS5	V	E	◎	INCH												
200	12	150X200X12 HMSA10 RG	HMSA10	RG	E		6.188 in. Shaft Diameter				157.18 mm								
200	12	150X200X12 HMSA10 V	HMSA10	V	E	◎	7.187	0.500	557557	HS8	R	F	◇						
225	15	150X225X15 HMS5 RG	HMS5	RG	E		7.500	0.563	61740	CRSH1	P	S							
225	15	150X225X15 HMS5 V	HMS5	V	E	◎	INCH												
225	15	150X225X15 HMSA10 RG	HMSA10	RG	E		6.203 in. Shaft Diameter				157.56 mm								
225	15	150X225X15 HMSA10 V	HMSA10	V	E	◎	1.063	99620	SSLEEVE	<i>Shaft Ø6.198-6.208" - 'on-shaft' width 0.813" - flange Ø6.625"</i>									
INCH							INCH												
5.938 in. Shaft Diameter			150.83 mm				6.250 in. Shaft Diameter			158.75 mm									
1.125	99596	SSLEEVE	<i>Shaft Ø5.934-5.943" - 'on-shaft' width 1" - flange Ø6.375"</i>				1.250	99625	SSLEEVE	<i>Shaft Ø6.245-6.255" - 'on-shaft' width 1.031" - flange Ø6.625"</i>									
7.000	0.500	59300	HDW1	R	W	■	7.250	0.500	62480	HDW1	R	W	■						
METRIC							METRIC												
5.945 in. Shaft Diameter			151 mm				6.299 in. Shaft Diameter			160 mm									
183	13	151X183X13 HS8 R	HS8	R	F	◇	31.8	99630	SSLEEVE	<i>Shaft Ø159.74-159.99mm - 'on-shaft' width 25.4mm - flange Ø171.45mm</i>									
INCH							INCH												
6.000 in. Shaft Diameter			152.40 mm				6.375 in. Shaft Diameter			161.93 mm									
1.250	99599	SSLEEVE	<i>Shaft Ø5.995-6.005" - 'on-shaft' width 1" - flange Ø6.375"</i>				7.375	0.625	▲ 63700	CRWH1	R	W	■						
6.750	0.500	60000	CRW1	V	W	■	7.375	0.672	624-724-43 HDSH2 HT	HDSH2	HT	F							
6.750	0.500	59999	CRWA1	V	W	■	7.500	0.500	63717	HDW1	R	W	■						
7.000	0.500	593094	HS8	R	F	◇	7.875	0.563	▲ 63734	CRWH1	R	W	■						
7.000	0.500	600-700-32 HS8 R	HS8	R	F	◇	7.875	0.625	63733	CRWH1	R	W							
7.002	0.500	60006	CRSHA1	R	S	■	INCH												
7.008	0.500	556530	HS8	R	F	◇	6.438 in. Shaft Diameter				163.53 mm								
7.126	0.500	▲ 60012	CRWHA1	R	W	■	7.500	0.500	64330	HDW1	R	W	■						
7.126	0.500	60013	CRWHA1	V	W	■	7.688	0.625	596043	HS5	R	F	◇						
7.250	0.500	60009	HDW1	R	W	■	7.688	0.625	521727	HS6	R	F	◇						
7.250	0.625	592986	HS8	R	F	◇	7.688	0.625	594760	HS7	R	F	◇						
7.500	0.250	60075	HM4	R	G		7.688	0.625	596362	HS8	R	F	◇						
7.500	0.500	60016	CRWA1	R	W	■	METRIC												
7.500	0.500	▲ 60028	CRWHA1	R	W	■	6.496 in. Shaft Diameter			165 mm									
7.500	0.500	60026	CRWHA1	V	W	■	190	13	165X190X13 HMS4 R	HMS4	R	S							
7.500	0.535	60037	HS8	R	F	◇	190	15	165X190X15 HMS5 RG	HMS5	RG	E							
7.750	0.625	597623	HDS1	R	F														
METRIC							METRIC												
6.063 in. Shaft Diameter			154 mm				6.375 in. Shaft Diameter			161.93 mm									
30	99605	SSLEEVE	<i>Shaft Ø153.87-154.13mm - 'on-shaft' width 26.01mm - flange Ø161.93mm</i>				7.375	0.625	▲ 63700	CRWH1	R	W	■						
172	14	60620	CRSA1	R	S		7.375	0.672	624-724-43 HDSH2 HT	HDSH2	HT	F							
175	13	154X175X13 CRSA1 R	CRSA1	R	S		7.500	0.500	63717	HDW1	R	W	■						
195.50	12.70	60650	HDW1	R	W	■	7.875	0.563	▲ 63734	CRWH1	R	W	■						
METRIC							METRIC												
6.102 in. Shaft Diameter			155 mm				6.438 in. Shaft Diameter			163.53 mm									
30	99606	SSLEEVE	<i>Shaft Ø154.74-154.99mm - 'on-shaft' width 26.01mm - flange Ø167.01mm</i>				7.500	0.500	64330	HDW1	R	W	■						
180	15	155X180X15 HMS5 RG	HMS5	RG	E		7.688	0.625	596043	HS5	R	F	◇						
180	15	155X180X15 HMS5 V	HMS5	V	E	◎	7.688	0.625	521727	HS6	R	F	◇						
180	15	▲155X180X15 HMSA10 RG	HMSA10	RG	E		7.688	0.625	594760	HS7	R	F	◇						
180	15	155X180X15 HMSA10 V	HMSA10	V	E	◎	7.688	0.625	596362	HS8	R	F	◇						
190	13	155X190X13 HMS5 RG	HMS5	RG	E		INCH												
190	13	155X190X13 HMS5 V	HMS5	V	E	◎	6.438 in. Shaft Diameter				163.53 mm								
190	13	155X190X13 HMSA10 RG	HMSA10	RG	E		7.500	0.500	64330	HDW1	R	W	■						
190	13	155X190X13 HMSA10 V	HMSA10	V	E	◎	7.688	0.625	596043	HS5	R	F	◇						
190	15	155X190X15 HMS4 R	HMS4	R	S		7.688	0.625	521727	HS6	R	F	◇						
195	16	155X195X16 HDS7 R	HDS7	R	F		7.688	0.625	594760	HS7	R	F	◇						
INCH							METRIC												
6.125 in. Shaft Diameter			155.58 mm				6.496 in. Shaft Diameter			165 mm									
7.125	0.500	61215	HDW1	R	W	■	190	13	165X190X13 HMS4 R	HMS4	R	S							
7.125	0.625	▲ 61210	CRWH1	R	W		190	15	165X190X15 HMS5 RG	HMS5	RG	E							
7.250	0.500	61230	HDW1	R	W	■													

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease **Bold part numbers are preferred designs**





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures							
190	15	165X190X15 HMS5 V	HMS5	V	E	⊙														
METRIC (cont.)		6.496 in.	Shaft Diameter	165 mm			INCH		6.875 in.	Shaft Diameter	174.63 mm									
190	15	▲165X190X15 HMSA10 RG	HMSA10	RG	E		8.125	0.625	595206	HS8	R	F	◇							
190	15	165X190X15 HMSA10 V	HMSA10	V	E	⊙	8.250	0.500	68730	HDW1	R	W	■							
230	15	165X230X15 HMS5 RG	HMS5	RG	E		8.375	0.500	▲68745	CRWH1	R	W								
230	15	165X230X15 HMS5 V	HMS5	V	E	⊙	8.500	0.500	68760	HDW1	R	W	■							
230	15	165X230X15 HMSA10 RG	HMSA10	RG	E		METRIC						6.890 in.	Shaft Diameter	175 mm					
230	15	165X230X15 HMSA10 V	HMSA10	V	E	⊙	32	99687		SSLEEVE										
Shaft Ø174.75-175.01mm - 'on-shaft' width 27.99mm - flange Ø187mm																				
INCH		6.500 in.	Shaft Diameter	165.10 mm			200	15	175X200X15 HMS5 RG	HMS5	RG	E								
	1.250	99650	SSLEEVE			200	15	175X200X15 HMS5 V	HMS5	V	E	⊙								
Shaft Ø6.495-6.505" - 'on-shaft' width 1" - flange Ø7"																				
7.420	0.500	531145	HS8	R	F	◇	200	15	175X200X15 HMSA10 RG	HMSA10	RG	E								
7.500	0.500	64993	CRWA1	R	W	■	200	15	175X200X15 HMSA10 V	HMSA10	V	E	⊙							
7.500	0.500	▲64994	CRWH1	R	W		205	15	175X205X15 HDS2 R	HDS2	R	F	▴							
7.500	0.500	64998	CRWH1	V	W	■	205	15	175X205X15 HDS2 V	HDS2	V	F								
7.500	0.500	632-732-32 HSS8 R	HSS8	R	F	◇	205	15	175X205X15 HMS4 R	HMS4	R	S								
7.500	0.500	557679	HS8	V	F	◇	INCH						6.938 in.	Shaft Diameter	176.23 mm					
7.500	0.625	527301	HS7	R	F	◇	9.000	0.625	596556	HDS1	V	F								
7.750	0.625	556449	HDS1	R	F		INCH						7.000 in.	Shaft Diameter	176.80 mm					
7.750	0.625	592748	HS8	R	F	◇	1.250	99700		SSLEEVE										
8.000	0.500	65021	CRW1	R	W	■	Shaft Ø6.995-7.006" - 'on-shaft' width 1" - flange Ø7.475"													
8.000	0.500	▲65037	CRWHA1	R	W		8.000	0.500	70008	HS8	D	F	◇							
8.000	0.870	544260	CRWA1	V	W	■	8.000	0.500	597451	HS8	R	F	◇							
METRIC						6.614 in.	Shaft Diameter	168 mm		8.000	0.500	595093	HS8	V	F	◇				
194	13	594536	HS8	D	F	◇	8.000	0.630	▲70016	CRWH1	R	W	■							
200	15	168X200X15 CRSH1 R	CRSH1	R	S		8.250	0.625	▲70028	CRWH1	R	W								
INCH						6.625 in.	Shaft Diameter	168.28 mm		8.250	0.625	594744	HDS1	R	F					
7.625	0.500	597544	HS8	R	F	◇	8.250	0.625	700-816-40 HDS2 V	HDS2	V	F								
7.750	0.500	66219	HDW1	R	W	■	8.250	0.625	597500	HS8	R	F	◇							
7.875	0.500	66222	HDW1	R	W	■	8.375	0.625	70034	CRSHA1	R	S								
8.000	0.500	66230	HDW1	R	W	■	8.452	0.609	597483	HS8	R	F	◇							
8.125	0.500	▲66241	CRWH1	R	W		8.500	0.500	70080	CRWA1	R	W	■							
8.125	0.968	526484	HDSA2	RD	F		8.500	0.500	531502	HS6	R	F	◇							
METRIC						6.693 in.	Shaft Diameter	170 mm		8.500	0.625	70052	CRWH1	R	W	■				
38	99640		SSLEEVE			8.500	0.625	▲70053	CRWHA1	R	W	■								
Shaft Ø169.75-170mm - 'on-shaft' width 31.75mm - flange Ø182.58mm																				
190	15	170X190X15 CRSH1 R	CRSH1	R	S		8.500	0.625	70054	CRWHA1	V	W	■							
200	15	170X200X15 HDS2 R	HDS2	R	F		8.500	0.625	70055	HDS1	V	F								
200	15	170X200X15 HDS2 V	HDS2	V	F		8.500	0.625	595267	HDS2	R	F								
200	15	170X200X15 HDS7 R	HDS7	R	F		8.500	0.625	526648	HS8	R	F	◇							
200	15	170X200X15 HMS5 RG	HMS5	RG	E		8.500	0.750	594846	HS6	R	F	◇							
200	15	170X200X15 HMS5 V	HMS5	V	E	⊙	METRIC						7.008 in.	Shaft Diameter	178 mm					
200	15	▲170X200X15 HMSA10 RG	HMSA10	RG	E		210	14	178X210X14 HSS4G H	HSS4G	H	F	◇							
200	15	170X200X15 HMSA10 V	HMSA10	V	E	⊙	INCH						7.025 in.	Shaft Diameter	178.44 mm					
200	15	170X200X15 HS8 R	HS8	R	F	◇	8.500	0.625	596076	HDS2	V	F								
200	15	170X200X15 HS8 V	HS8	V	F	◇	METRIC						7.087 in.	Shaft Diameter	180 mm					
200	16	170X200X16 HS8 V	HS8	V	F	◇	38	99721		SSLEEVE										
205	16	170X205X16 HDS7 D	HDS7	D	F		Shaft Ø179.76-180.04mm - 'on-shaft' width 32.99mm - flange Ø190.5mm													
210	15	170X210X15 HMSA7 R	HMSA7	R	S		200	12	180X200X12 CRS1 R	CRS1	R	S								
210	16	170X210X16 HDS1 R	HDS1	R	F		200	15	180X200X15 HMS5 RG	HMS5	RG	E								
210	16	170X210X16 HDS2 R	HDS2	R	F		200	15	180X200X15 HMS5 V	HMS5	V	E	⊙							
210	16	170X210X16 HDS2 V	HDS2	V	F		200	15	180X200X15 HMSA10 RG	HMSA10	RG	E								
INCH						6.750 in.	Shaft Diameter	171.15 mm		200	15	180X200X15 HMSA10 V	HMSA10	V	E	⊙				
	1.063	99675	SSLEEVE			205	12	180X205X12 HS8 R	HS8	R	F	◇								
Shaft Ø6.745-6.755" - 'on-shaft' width 0.813" - flange Ø7.125"																				
7.750	0.500	67510	HDW1	R	W	■	210	15	180X210X15 HDS2 H	HDS2	H	F								
7.750	0.625	595389	HDS1	R	F		210	15	180X210X15 HDS7 H	HDS7	H	F								
7.750	0.625	67512	HDS1	V	F		210	15	180X210X15 HMS5 RG	HMS5	RG	E								
8.000	0.500	▲67515	CRWH1	R	W	■	210	15	180X210X15 HMS5 V	HMS5	V	E	⊙							
8.000	0.625	592519	HS8	R	F	◇	210	15	▲180X210X15 HMSA10 RG	HMSA10	RG	E								
8.000	0.625	595014	HS8	V	F	◇	210	15	180X210X15 HMSA10 V	HMSA10	V	E	⊙							
8.250	0.500	▲67533	CRWH1	R	W		210	15	180X210X15 HS8 V	HS8	V	F	◇							
8.250	0.750	594890	HS8	R	F	◇	210	20	180X210X20 HDSH7 HT	HDSH7	HT	F								
8.750	0.500	67600	HDW1	R	W	■	215	15	180X215X15 HMS5 RG	HMS5	RG	E								

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Key features: ▲ WasteWatcher ■ Bore-Tite ▴ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
215	15	180X215X15 HMS5 V	HMS5	V	E	⊙
215	15	180X215X15 HMSA10 RG	HMSA10	RG	E	
METRIC (cont.) 7.087 in. Shaft Diameter 180 mm						
215	15	180X215X15 HMSA10 V	HMSA10	V	E	⊙
215	16	180X215X16 CRS1 R	CRS1	R	S	
220	15	180X220X15 HDS2 V	HDS2	V	F	
220	16	180X220X16 HDS1 V	HDS1	V	F	
220	16	180X220X16 HDS2 R	HDS2	R	F	
220	16	180X220X16 HDS7 H	HDS7	H	F	
220	16	180X220X16 HS8 V	HS8	V	F	◇
220	20	180X220X20 HDSH7 HT	HDSH7	HT	F	
222	16	180X222X16 HDS7 R	HDS7	R	F	
222	16	180X222X16 HS7 R	HS7	R	F	◇
INCH 7.125 in. Shaft Diameter 180.98 mm						
8.045	0.500	531292	HS8	R	F	◇
8.125	0.500	595761	HS5	R	F	◇
8.125	0.591	597407	HDS7	R	F	
8.250	0.500	71220	HDW1	R	W	■
8.500	0.625	597457	HDS2	R	F	
8.625	0.625	71245	CRWH1	R	W	
INCH 7.188 in. Shaft Diameter 182.58 mm						
8.640	0.625	596128	HDS2	R	F	
8.640	0.625	595643	HS5	R	F	◇
8.640	0.625	595323	HS7	R	F	◇
INCH 7.250 in. Shaft Diameter 184.15 mm						
1.500 99725 SSLEEVE Shaft 07.244-7.255" - 'on-shaft' width 1.25" - flange 07.76"						
8.250	0.500	528377	HS7	R	F	◇
8.250	0.500	595012	HS8	R	F	◇
8.250	0.625	72515	CRW1	R	W	
8.250	0.625	716-816-40 HDS2 R	HDS2	R	F	
8.500	0.625	556439	HDS1	R	F	
8.640	0.625	558184	HDS2	V	F	
8.750	0.625	72539	CRWHA1	R	W	■
8.750	0.625	557653	HDS1	H	F	■
8.750	0.625	72543	HDS1	V	F	
8.750	0.625	595348	HDS2	R	F	
8.750	0.625	72510	HDS2	V	F	
8.750	0.625	596436	HS8	R	F	◇
8.750	0.750	72542	CRWH1	P	W	
8.750	0.875	72594	HDSA2	VD	F	
9.055	0.625	72570	CRWHA1	R	W	■
METRIC 7.283 in. Shaft Diameter 185 mm						
38 99726 SSLEEVE Shaft 0184.73-185.01mm - 'on-shaft' width 32mm - flange 0197.1mm						
210	13	185X210X13 HMS5 RG	HMS5	RG	E	
210	13	185X210X13 HMS5 V	HMS5	V	E	⊙
210	13	185X210X13 HMSA10 RG	HMSA10	RG	E	
210	13	185X210X13 HMSA10 V	HMSA10	V	E	⊙
220	13	185X220X13 HS8 R	HS8	R	F	◇
224.79	15.88	72805	HDS2	R	F	
225	16	185X225X16 HDS1 V	HDS1	V	F	
METRIC 7.323 in. Shaft Diameter 186 mm						
226	16	186X226X16 HS8 R	HS8	R	F	◇
INCH 7.375 in. Shaft Diameter 187.33 mm						
8.375	0.500	73720	HDW1	R	W	■
8.500	0.500	73730	HDW1	R	W	■
8.625	0.787	557432	HDSH2	VT	F	
8.875	0.625	73745	CRWH1	R	W	
METRIC 7.402 in. Shaft Diameter 188 mm						
215	16	188X215X16 CRWH1 R	CRWH1	R	W	■

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH 7.438 in. Shaft Diameter 188.93 mm						
8.438	0.500	597452	HS8	R	F	◇
8.438	0.500	594508	HS8	V	F	◇
METRIC 7.441 in. Shaft Diameter 189 mm						
215	16	189X215X16 HS8 V	HS8	V	F	◇
INCH 7.449 in. Shaft Diameter 189.20 mm						
1.000 99745 SSLEEVE Shaft 07.444-7.455" - 'on-shaft' width 0.813" - flange 07.86"						
METRIC 7.480 in. Shaft Diameter 190 mm						
215	16	190X215X16 HSS5 V	HSS5	V	F	◇
215	16	190X215X16 CRSH1 R	CRSH1	R	S	
220	12	190X220X12 HMS5 RG1	HMS5	RG	E	
220	12	190X220X12 HMS5 V1	HMS5	V	E	⊙
220	12	▲ 190X220X12 HMSA10 RG1	HMSA10	RG	E	
220	12	190X220X12 HMSA10 V1	HMSA10	V	E	⊙
220	13	190X220X13 HS8 R	HS8	R	F	◇
220	15	190X220X15 HDS1 V	HDS1	V	F	
220	15	190X220X15 HDS7 D	HDS7	D	F	
220	15	190X220X15 HDS7 H	HDS7	H	F	
220	15	190X220X15 HMS5 RG	HMS5	RG	E	
220	15	190X220X15 HMS5 V	HMS5	V	E	⊙
220	15	▲ 190X220X15 HMSA10 RG	HMSA10	RG	E	
220	15	190X220X15 HMSA10 V	HMSA10	V	E	⊙
220	15	190X220X15 HS8 R	HS8	R	F	◇
220	15	190X220X15 HS8 V	HS8	V	F	◇
220	16	190X220X16 HS8 R	HS8	R	F	◇
225	15	190X225X15 HMS5 RG	HMS5	RG	E	
225	15	190X225X15 HMS5 V	HMS5	V	E	⊙
225	15	190X225X15 HMSA10 RG	HMSA10	RG	E	
225	15	190X225X15 HMSA10 V	HMSA10	V	E	⊙
225	16	190X225X16 HDS1 R	HDS1	R	F	
230	16	190X230X16 HS8 R	HS8	R	F	◇
INCH 7.500 in. Shaft Diameter 190.50 mm						
1.000 99750 SSLEEVE Shaft 07.495-7.506" - 'on-shaft' width 0.813" - flange 07.875"						
8.500	0.500	590714	HS7	R	F	◇
8.500	0.625	▲ 75030	CRWH1	R	W	
8.500	0.625	75038	HS8	R	F	◇
8.594	0.500	511814	HS6	R	F	◇
8.750	0.500	75046	HDW1	R	W	■
8.750	0.625	75048	HDS1	V	F	
8.750	0.625	595822	HS5	D	F	◇
8.750	0.625	594018	HS8	R	F	◇
9.000	0.625	▲ 75050	CRWH1	R	W	■
9.000	0.625	75052	CRWHA1	P	W	■
9.000	0.625	75053	HDS1	V	F	
9.000	0.625	732-900-40 HDSH7 HT	HDSH7	HT	F	
9.000	0.750	75054	HDS2	V	F	
9.000	0.968	526485	HDSA2	RD	F	
9.000	0.968	595912	HDSA2	VD	F	
9.125	0.625	732-908-40 HDSH7 HT	HDSH7	HT	F	
9.250	0.500	75069	HDW1	R	W	■
9.250	0.625	75067	HDS1	V	F	
9.250	0.625	732-916-40 HDSH7 HT	HDSH7	HT	F	
INCH 7.625 in. Shaft Diameter 193.68 mm						
8.625	0.563	▲ 76215	CRWH1	R	W	
8.875	0.500	76225	HDW1	R	W	■
8.875	0.625	595207	HS8	R	F	◇
9.000	0.625	597467	HS8	R	F	◇
9.125	0.625	▲ 76255	CRWH1	R	W	
METRIC 7.677 in. Shaft Diameter 195 mm						
230	15	195X230X15 CRSH1 R	CRSH1	R	S	
250	22	195X250X22 HDS7 R	HDS7	R	F	

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs

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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC (cont.) 7.677 in. Shaft Diameter 195 mm						
250	22	195X250X22 HDSH7 RT	HDSH7	RT	F	
INCH 7.750 in. Shaft Diameter 196.85 mm						
	1.313	99775	SSLEEVE			
	<i>Shaft Ø7.745-7.756" - 'on-shaft' width 1" - flange Ø8.27"</i>					
8.750	0.500	77506	HDW1	R	W	■
8.750	0.500	529601	HS8	R	F	◇
8.750	0.625	595813	HS5	D	F	◇
9.000	0.625	77531	HDS1	R	F	
9.000	0.625	597568	HDS1	V	F	
9.000	0.625	530608	HS8	R	F	◇
9.250	0.625	▲77540	CRWH1	R	W	
9.250	0.625	77539	HDS1	V	F	
9.250	0.625	595146	HDS2	D	F	
9.375	0.625	557937	HDS2	R	F	
9.375	0.625	557936	HDS2	V	F	
INCH 7.800 in. Shaft Diameter 198.12 mm						
9.750	0.625	556586	HDS2	R	F	
METRIC 7.835 in. Shaft Diameter 199 mm						
240	20	199X240X20 HDS2 R	HDS2	R	F	
INCH 7.835 in. Shaft Diameter 199.01 mm						
9.500	0.625	596080	HDS2	V	F	
METRIC 7.835 in. Shaft Diameter 200 mm						
	38.1	99787	SSLEEVE			
	<i>Shaft Ø199.87-200.15mm - 'on-shaft' width 34.52mm - flange Ø212.73mm</i>					
230	13	200X230X13 HMSA72P2 R	HMSA72P2	R	S	◆
230	14	200X230X14 HDS2 V	HDS2	V	F	
230	15	200X230X15 HDS1 V	HDS1	V	F	
230	15	200X230X15 HDS2 V	HDS2	V	F	
230	15	200X230X15 HDS7 H	HDS7	H	F	
230	15	200X230X15 HDS7 R	HDS7	R	F	
230	15	200X230X15 HDS7 V	HDS7	V	F	
230	15	200X230X15 HMS5 RG	HMS5	RG	E	
230	15	200X230X15 HMS5 V	HMS5	V	E	◎
230	15	▲200X230X15 HMSA10 RG	HMSA10	RG	E	
230	15	200X230X15 HMSA10 V	HMSA10	V	E	◎
230	15	557309	HS8	R	F	◇
230	15	200X230X15 HS8 R	HS8	R	F	◇
230	15	200X230X15 HS8 V	HS8	V	F	◇
230	15.90	200X230X15.9 HDS1 R	HDS1	R	F	
230	16	200X230X16 HDS2 D	HDS2	D	F	
	<i>W/LIGHT LOAD SPRING</i>					
230	16	200X230X16 HDSF2 VT9	HDSF2	VT	F	▶
230	16	200X230X16 HS6 V	HS6	V	F	◇
235	15	200X235X15 HMSA7 R	HMSA7	R	S	
235	16	200X235X16 HDS7 R	HDS7	R	F	
235	18	200X235X18 HS7 R	HS7	R	F	◇
235	18	200X235X18 HS8 R	HS8	R	F	◇
238	19	200X238X19 HDS1 V	HDS1	V	F	
238	19	200X238X19 HS6 R	HS6	R	F	◇
240	15	200X240X15 HMS5 RG	HMS5	RG	E	
240	15	200X240X15 HMS5 V	HMS5	V	E	◎
240	15	▲200X240X15 HMSA10 RG	HMSA10	RG	E	
240	15	200X240X15 HMSA10 V	HMSA10	V	E	◎
240	16	200X240X16 HDS1 H	HDS1	H	F	
240	16	200X240X16 HDS1 V	HDS1	V	F	
240	16	200X240X16 HDS2 R	HDS2	R	F	
240	17.50	200X240X17.5 HDS2 V	HDS2	V	F	
240	17.50	200X240X17.5 HDS7 V	HDS7	V	F	
240	18	200X240X18 HDS2 R	HDS2	R	F	
240	20	200X240X20 HDS2 R	HDS2	R	F	
240	20	200X240X20 HS8 V	HS8	V	F	◇
255	22	200X255X22 HDS2 R	HDS2	R	F	

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
310	18	200X310X18 HMS5 RG	HMS5	RG	E	
METRIC (cont.) 7.835 in. Shaft Diameter 200 mm						
310	18	200X310X18 HMS5 V	HMS5	V	E	◎
310	18	200X310X18 HMSA10 RG	HMSA10	RG	E	
310	18	200X310X18 HMSA10 V	HMSA10	V	E	◎
INCH 7.875 in. Shaft Diameter 200.03 mm						
	1.500	99787	SSLEEVE			
	<i>Shaft Ø7.869-7.88" - 'on-shaft' width 1.359" - flange Ø8.375"</i>					
8.875	0.500	78710	HDW1	R	W	■
9.125	0.625	593329	HS8	R	F	◇
9.250	1.000	▲78725	CRWHA1	R	W	
9.375	0.625	▲78738	CRWH1	R	W	
9.375	0.625	595145	HDS2	D	F	
9.375	0.687	557976	HDS2	V	F	
9.375	0.687	557977	HDS7	V	F	
9.500	0.625	596079	HDS2	V	F	
10.234	0.625	78790	HDS2	R	F	
INCH 7.938 in. Shaft Diameter 201.63 mm						
	1.250	99799	SSLEEVE			
	<i>Shaft Ø7.933-7.944" - 'on-shaft' width 1" - flange Ø8.375"</i>					
8.750	0.344	79302	HM14	R	G	
9.125	0.500	79620	HDW1	R	W	■
9.125	0.500	557986	HS8	R	F	◇
9.438	0.609	526853	HS6	R	F	◇
9.500	0.625	596207	HDS2	R	F	
9.500	0.625	596078	HDS2	V	F	
INCH 8.000 in. Shaft Diameter 203.20 mm						
	1.250	99800	SSLEEVE			
	<i>Shaft Ø7.995-8.006" - 'on-shaft' width 1" - flange Ø8.375"</i>					
9.000	0.500	595022	HS8	V	F	◇
9.000	0.625	▲79960	CRWH1	R	W	
9.000	0.625	79961	CRWHA1	R	W	
9.000	0.625	597534	HDS7	R	F	
9.000	0.625	800-900-40 HSS8 R	HSS8	R	F	◇
9.000	0.625	594935	HS8	V	F	◇
9.250	0.625	▲79997	CRWH1	R	W	
9.250	0.625	79998	CRWHA1	R	W	■
9.250	0.625	77996	HDS1	V	F	
9.250	0.625	593781	HDS2	R	F	
9.250	0.625	592376	HS8	R	F	◇
9.250	0.625	531395	HS8	V	F	◇
9.375	0.750	595732	HDS1	R	F	
9.500	0.625	▲80010	CRWH1	R	W	■
9.500	0.625	596567	HDS7	H	F	
9.500	0.625	595404	HS5	R	F	◇
9.500	0.687	80009	HDS2	V	F	
9.750	0.750	80030	HDS1	V	F	
10.000	0.625	▲80038	CRWHA1	R	W	
10.000	0.688	590725	HDS1	R	F	
10.000	0.688	595888	HS8	R	F	◇
10.000	0.750	593446	HDS2	R	F	
10.000	0.750	590726	HDS2L08	R	F	
10.000	0.750	590326	HS7	R	F	◇
10.000	0.875	592493	HDS2	D	F	
10.000	0.906	526489	HDSA2	RD	F	
10.000	0.986	526488	HDSA2	RD	F	
10.000	1.000	80088	HDS1	R	F	
10.000	1.000	80091	HDS1	V	F	
10.000	1.125	592075	HDSA2	RD	F	
10.000	1.250	592336	HDSA1	RD	F	
10.002	1.000	590733	HDSA1	RD	F	
10.125	1.250	80092	HDSA1	RD	F	
METRIC 8.071 in. Shaft Diameter 205 mm						
250	16	205X250X16 HDS1 V	HDS1	V	F	

Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ◎ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

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Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.) 9.000 in. Shaft Diameter 228.60 mm							INCH 9.250 in. Shaft Diameter 234.95 mm						
10.500	0.750	595718	HDS2L16	R	F		0.688	0.625	590762	HDS1	R	F	
10.500	0.875	597343	HDSA1	RD	F		1.000	0.750	590763	HDS1	R	F	
10.674	0.703	592779	HS8	R	F	◇	10.250	0.500	556536	HS8	R	F	◇
10.750	0.750	590774	HDS1	R	F		10.250	0.625	597799	HDS1	R	F	◇
11.000	0.625	▲ 90036	CRWH1	R	W		10.438	0.875	92591	HDSA1	RD	F	
11.000	0.625	90065	HDS1	V	F		10.500	0.625	596466	HDS2	V	F	
11.000	0.625	593362	HS8	R	F	◇	10.500	0.625	916-1032-40 HDS2L32 H	HDS2L32H	H	F	
11.000	0.750	90063	HDS1	R	F		10.500	0.625	591881	HS7	R	F	◇
11.000	0.750	90066	HDS1	V	F		10.500	0.625	593366	HS8	R	F	◇
11.000	0.750	590787	HDS2	R	F		10.500	0.750	592741	HDS2	R	F	
11.000	0.750	90067	HDS2	V	F		10.750	0.656	92534	HDS1	R	F	
11.000	0.750	556483	HDS7	R	F		10.750	0.688	590775	HDS1	R	F	
11.000	0.750	556484	HDSF7	RT	F		10.750	0.688	591973	HDS1L08	R	F	
11.000	0.875	590788	HDS2	D	F		10.750	0.750	590093	HDS1	R	F	
11.000	1.000	90064	HDS1	R	F		10.750	0.750	592348	HDS2	D	F	
11.054	0.750	592714	HDS1	R	F		10.750	0.750	597861	HS8	R	F	◇
							11.000	1.375	592452	HDSA1	RD	F	
							11.250	0.625	▲ 92536	CRWHA1	R	W	■
							11.250	0.625	92543	HDS1	V	F	
							11.250	0.625	593467	HDS2	R	F	
							11.250	0.625	916-1116-40 HS7 R	HS7	R	F	◇
							11.250	0.750	590797	HDS1	R	F	
							11.250	0.750	592858	HS8	R	F	◇
							11.250	0.813	92544	HDS2	V	F	
							11.250	1.000	590798	HDS1	R	F	
							11.375	0.875	590472	HDS1	R	F	
							12.750	0.625	92570	CRWHA1	R	W	
							12.750	1.250	▲ 92574	CRWHA1	R	W	
METRIC 9.016 in. Shaft Diameter 229 mm							METRIC 9.252 in. Shaft Diameter 235 mm						
270	17	229X270X17 HDS7 R	HDS7	R	F		270	16	235X270X16 HDS2 R	HDS2	R	F	
INCH 9.048 in. Shaft Diameter 229.82 mm							270	16	235X270X16 HDS2 V	HDS2	V	F	
10.630	0.625	90056	HDS2	V	F		270	16	235X270X16 HDS7 H	HDS7	H	F	
METRIC 9.055 in. Shaft Diameter 230 mm							275	20	235X275X20 HDS1 R	HDS1	R	F	
260	15	230X260X15 HDS1 R	HDS1	R	F								
260	15	230X260X15 HDS2 V	HDS2	V	F								
260	15	230X260X15 HDS7 R	HDS7	R	F								
260	15	230X260X15 HMS5 RG	HMS5	RG	E								
260	15	230X260X15 HMS5 V	HMS5	V	E	◎							
260	15	▲ 230X260X15 HMSA10 RG	HMSA10	RG	E								
260	15	230X260X15 HMSA10 V	HMSA10	V	E	◎							
260	15	230X260X15 HS8 D	HS8	D	F	◇							
260	15	230X260X15 HS8 R	HS8	R	F	◇							
260	15	230X260X15 HS8 V	HS8	V	F	◇							
260	15.88	230X260X15.88 HDS1 V	HDS1	V	F								
260	16	230X260X16 HDS1 R	HDS1	R	F								
260	18	230X260X18 HS8 R	HS8	R	F	◇							
260	20	230X260X20 HS8 V	HS8	V	F	◇							
265	16	230X265X16 HSS5 V	HSS5	V	F	◇							
269	22	230X269X22 HS5 R	HS5	R	F	◇							
269.77	16	592683	HDS1	R	F								
270	16	230X270X16 HDS1 R	HDS1	R	F								
270	16	230X270X16 HDS2 V	HDS2	V	F								
270	16	230X270X16 HSS6 H	HSS6	H	F	◇							
270	20	230X270X20 HS8 R	HS8	R	F	◇							
280	16	230X280X16 HDS2 R	HDS2	R	F								
285	23	230X285X23 HDS1 R	HDS1	R	F								
285	23	230X285X23 HDS2 R	HDS2	R	F								
INCH 9.125 in. Shaft Diameter 231.78 mm							INCH 9.361 in. Shaft Diameter 237.77 mm						
10.375	0.625	592653	HDS1	R	F		10.751	0.750	566136	HDS1	H	F	
10.625	0.688	590270	HDS1	R	F								
10.625	0.750	590442	HDS1	R	F								
10.750	0.750	91256	HDS1	R	F								
11.000	0.750	590567	HDS1	R	F								
11.125	0.688	590174	HDS1	R	F								
11.125	0.812	91202	HDS2	R	F								
11.125	0.812	597472	HDS7	R	F								
11.125	0.812	597473	HDS7L32	R	F								
11.125	0.813	592345	HDS1	R	F								
11.125	0.813	529753	HDS2	R	F								
11.125	1.000	590609	HDS1	R	F								
INCH 9.188 in. Shaft Diameter 233.38 mm							INCH 9.438 in. Shaft Diameter 239.73 mm						
10.375	0.750	590747	HDS2	D	F		10.500	0.625	594528	HS7	R	F	◇
10.500	0.750	597735	HS8	R	F	◇	10.635	0.750	593894	HDS1	R	F	◇
							10.688	0.625	592126	HS7	R	F	◇
							11.250	0.625	593129	HDS1	R	F	
							11.500	0.875	590284	HDS1	R	F	
METRIC 9.449 in. Shaft Diameter 240 mm							METRIC 9.449 in. Shaft Diameter 240 mm						
270	12.70	240X270X12.7 HS5 H	HS5	H	F	◇	270	12.70	240X270X12.7 HS8 H	HS8	H	F	◇
270	15	240X270X15 HDS2 V	HDS2	V	F		270	15	240X270X15 HMS5 RG	HMS5	RG	E	
270	15	240X270X15 HMS5 V	HMS5	V	E	◎	270	15	240X270X15 HMS5 V	HMS5	V	E	◎
270	15	▲ 240X270X15 HMSA10 RG	HMSA10	RG	E	◎	270	15	240X270X15 HMSA10 V	HMSA10	V	E	◎
270	15	240X270X15 HMSA10 V	HMSA10	V	E	◎							

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC (cont.)							INCH (cont.)						
9.449 in. Shaft Diameter 240 mm							9.500 in. Shaft Diameter 241.30 mm						
270	15	240X270X15 HS8 R	HS8	R	F	◇	11.500	0.875	95071	HDS2	R	F	
270	15	240X270X15 HS8 V	HS8	V	F	◇	11.500	0.938	590816	HDS1	R	F	
270	16	240X270X16 HDS1 R	HDS1	R	F		11.500	0.938	590817	HDS2	R	F	
270	16	240X270X16 HDS1 V	HDS1	V	F		11.500	0.938	590819	HDS2L16	R	F	
270	16	240X270X16 HDS2 D	HDS2	D	F		11.500	1.000	590820	HDS1	R	F	
270	16	240X270X16 HDS2 R	HDS2	R	F		11.500	1.000	595431	HS8	R	F	◇
270	16	240X270X16 HDS7 R	HDS7	R	F		11.500	1.250	593667	HDSA2	DD	F	
270	16	240X270X16 HDS7 V	HDS7	V	F		11.500	1.250	590375	HDSA2	RD	F	
270	18	240X270X18 HDS1 V	HDS1	V	F								
275	15	240X275X15 HS8 R	HS8	R	F	◇	INCH 9.563 in. Shaft Diameter 242.90 mm						
275	16	240X275X16 HDS1 R	HDS1	R	F		10.563	0.500	594146	HS8	D	F	◇
275	16	240X275X16 HDS2 D	HDS2	D	F		10.563	0.500	592623	HS8	R	F	◇
275	16	240X275X16 HMSA7V	HMSA7	V	S		10.875	0.625	590782	HDS1	R	F	
275	18	240X275X18 HDS2 R	HDS2	R	F		INCH 9.620 in. Shaft Diameter 244.35 mm						
275	18	240X275X18 HSS4 H	HSS4	H	F	◇	10.875	0.625	590015	HDS1	R	F	
275	18	240X275X18 HSS8 H	HSS8	H	F	◇	12.750	1.250	96290	HDSA1	RD	F	
279	22	240X279X22 HS5 R	HS5	R	F	◇	INCH 9.625 in. Shaft Diameter 244.48 mm						
280	14	240X280X14 HS5 V	HS5	V	F	◇	10.875	0.750	590783	HDS1	R	F	
280	14	240X280X14 HS8 V	HS8	V	F	◇	10.875	0.750	592420	HDS2	R	F	
280	16	240X280X16 HDS1 V	HDS1	V	F		10.875	0.875	590784	HDS1	R	F	
280	16	240X280X16 HDS2 D	HDS2	D	F		11.625	0.625	96245	CRWH1	R	W	
280	16	240X280X16 HDS2 R	HDS2	R	F		11.625	0.813	96231	HDS2	V	F	
280	16	240X280X16 HSS5 H	HSS5	H	F	◇	11.625	1.000	96230	HDS2	V	F	
280	16	240X280X16 HS6 V	HS6	V	F	◇	METRIC 9.646 in. Shaft Diameter 245 mm						
280	18	240X280X18 HDS7 H	HDS7	H	F		275	15	245X275X15 HMS5 RG	HMS5	RG	E	
280	18	240X280X18 HS8 H	HS8	H	F	◇	275	15	245X275X15 HMS5 V	HMS5	V	E	⊙
280	19	240X280X19 HDS2 V	HDS2	V	F		275	15	245X275X15 HMSA10 RG	HMSA10	RG	E	
280	19	240X280X19 HDS7 R	HDS7	R	F		275	15	245X275X15 HMSA10 V	HMSA10	V	E	⊙
280	19	240X280X19 HS8 V	HS8	V	F	◇	INCH 9.688 in. Shaft Diameter 246.08 mm						
280	20	240X280X20 HDS2 R	HDS2	R	F		10.875	0.625	594080	HDS1	R	F	
280	20	240X280X20 HS7 R	HS7	R	F	◇	11.000	0.688	557503	HDS2	R	F	
290	16	240X290X16 HDS1 R	HDS1	R	F		11.500	1.000	96880	HDS2	V	F	
290	20	240X290X20 HDS1 R	HDS1	R	F		INCH 9.750 in. Shaft Diameter 247.65 mm						
299.80	25	590839	HDS1	R	F		10.750	0.500	595530	HS6	R	F	◇
300	25	240X300X25 HDS1 R	HDS1	R	F		10.750	0.500	592988	HS7	R	F	◇
INCH 9.500 in. Shaft Diameter 241.30 mm							10.750	0.638	530058	HS8	R	F	◇
10.500	0.438	95048	CRW1	R	W	■	11.000	0.625	97526	HDS1	R	F	
10.500	0.500	95000	HS8	D	F	◇	11.000	0.625	97528	HDS1	V	F	
10.500	0.500	593398	HS8	R	F	◇	11.000	0.625	97528	HDS1	V	F	
<i>WI/HOOK & EYE SPRING CONNECTOR</i>							11.000	0.625	593611	HDS2	R	F	
10.500	0.500	592607	HS8	R	F	◇	11.000	0.625	97529	HDS2	V	F	
10.750	0.000	95052	HM21	R	G		11.000	0.625	593492	HDS2L24	R	F	
10.750	0.625	590776	HDS1	R	F		11.000	0.625	596561	HDS7	R	F	■
10.750	0.625	595922	HDS2	D	F		11.000	0.625	590785	HS7	R	F	◇
10.750	0.625	95045	HDS2	R	F		11.000	0.625	593382	HS8	R	F	◇
10.750	0.625	95044	HDS2	V	F		11.000	0.750	590133	HDS1	R	F	
10.750	0.625	592209	HS7	R	F	◇	11.000	0.875	593053	HDSA1	RD	F	
10.750	0.625	593376	HS8	R	F	◇	11.125	0.630	97542	CRWH1	R	W	
11.000	0.625	590653	HDS1	R	F		11.125	0.750	590795	HDS1	R	F	
11.000	0.625	590792	HDS1L08	R	F		11.125	0.750	592501	HDS2	R	F	
11.000	0.625	592693	HDS2	R	F		11.250	0.625	97545	CRWH1	R	W	
11.000	0.625	596566	HDS7	H	F		11.250	0.625	590655	HDS1	R	F	
11.000	0.625	531331	HS8	R	F	◇	11.250	0.625	593385	HS7	R	F	◇
11.000	0.688	95042	HDS1	V	F		11.250	0.625	593386	HS8	R	F	◇
11.000	0.750	95047	HDS1	R	F		11.250	0.750	590800	HDS1	R	F	
11.000	0.844	526476	HDSA2	RD	F		11.250	0.750	593177	HS7	R	F	◇
11.000	0.844	529861	HDSA2	VD	F		11.250	0.750	597582	HS8	R	F	◇
11.125	0.625	590070	HDS1	R	F		11.250	0.875	595514	HDSA2	DD	F	
11.250	0.625	591932	HDS1	R	F		11.750	0.625	97550	CRWH1	R	W	
11.500	0.625	95062	CRW1	R	W	■	11.750	0.625	97549	HDS1	V	F	
11.500	0.625	526302	HDS1	R	F		11.750	0.750	590832	HDS1	R	F	
11.500	0.625	593666	HDS2	D	F		11.750	1.000	97548	HDS1	R	F	
11.500	0.625	932-1132-40 HSS5 V	HSS5	V	F	◇	11.750	1.000	97551	HDS2	V	F	
11.500	0.625	597507	HS8	R	F	◇	11.750	1.000	595568	HDSA1	DD	F	
11.500	0.750	590813	HDS1	R	F								
11.500	0.813	95068	HDS1	V	F								
11.500	0.813	594470	HDS2	V	F								
11.500	0.813	932-1132-52 HDS2 H	HDS2	H	F								
11.500	0.813	556490	HS8	R	F	◇							

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
METRIC 9.843 in. Shaft Diameter 250 mm							INCH (cont.) 10.000 in. Shaft Diameter 254.00 mm						
279.91	15	597901	HS4	R	F	◇	11.250	0.625	1000114	HDS2	V	F	
280	15	250X280X15 HDS2 R	HDS2	R	F		11.250	0.625	1000115	HDS2L08	R	F	
280	15	250X280X15 HDS7 H	HDS7	H	F		11.250	0.625	1000126	HDS2L08	V	F	
280	15	250X280X15 HDS7 R	HDS7	R	F		11.250	0.625	1000-1116-40 HDS2L32 H	HDS2L32	H	F	
280	15	250X280X15 HMS5 RG	HMS5	RG	E		11.250	0.625	1000129	HDS7	R	F	
280	15	250X280X15 HMS5 V	HMS5	V	E	◎	11.250	0.625	1000117	HS7	R	F	◇
280	15	250X280X15 HMSA10 RG	HMSA10	RG	E		11.250	0.625	1000128	HS8	D	F	◇
280	15	250X280X15 HMSA10 V	HMSA10	V	E	◎	11.250	0.625	1000118	HS8	R	F	◇
280	15	566035	HSS5	V	F	◇	11.250	0.630	100044	CRWHA1	R	W	
280	15	250X280X15 HSS5 V	HSS5	V	F	◇	11.250	0.750	1000130	HDS1	R	F	
280	15	250X280X15 HS8 R	HS8	R	F	◇	11.250	0.844	526487	HDSA2	RD	F	
280	15	250X280X15 HS8 V	HS8	V	F	◇	11.250	0.875	1000910	HDSA1	RD	F	
280	16	250X280X16 HDS1 D	HDS1	D	F		11.250	0.875	1000914	HDSA2	VD	F	
280	16	250X280X16 HDS1 V	HDS1	V	F		11.370	0.750	1000183	HDS2	V	F	
280	16	250X280X16 HDS2 D	HDS2	D	F		11.375	0.591	557681	HDS7	V	F	
280	16	250X280X16 HDS2 R	HDS2	R	F		11.375	0.625	556994	HDS7	R	F	
280	16	250X280X16 HDS7 R	HDS7	R	F		11.500	0.625	1000230	HDS1	R	F	
280	16	250X280X16 HDS7 V	HDS7	V	F		11.500	0.625	1000233	HDS1	V	F	
280	16	250X280X16 HDSF2 VT	HDSF2	VT	F		11.500	0.625	1000232	HDS2	R	F	
280	20	250X280X20 HDSH2 VT	HDSH2	VT	F		11.500	0.625	1000237	HS7	R	F	◇
280	20	250X280X20 HDSH7 HT	HDSH7	HT	F		11.500	0.625	1000238	HS8	R	F	◇
285	15	250X285X15 HMS5 RG	HMS5	RG	E		11.500	0.630	556924	HS5	R	F	◇
285	15	250X285X15 HMS5 V	HMS5	V	E	◎	11.500	0.688	1000240	HDS1	R	F	
285	15	250X285X15 HMSA10 RG	HMSA10	RG	E		11.500	0.688	1000243	HDS2	V	F	
285	15	250X285X15 HMSA10 V	HMSA10	V	E	◎	11.500	0.688	597824	HDS7	R	F	
285	16	250X285X16 HDS2 D	HDS2	D	F		11.500	0.750	1000250	HDS1	R	F	
285	16	250X285X16 HDS2 R	HDS2	R	F		11.500	0.750	1000257	HS7	R	F	◇
289.79	15.88	98444	HDS2	R	F		11.500	0.750	1000258	HS8	R	F	◇
290	15	250X290X15 HS8 R	HS8	R	F	◇	11.500	1.250	1000920	HDSA1	RD	F	
290	16	250X290X16 HDS1 R	HDS1	R	F		11.750	0.625	1000360	HDS1	R	F	
290	16	250X290X16 HDS1 V	HDS1	V	F		11.750	0.625	557570	HDS1	V	F	
290	16	250X290X16 HDS7 H	HDS7	H	F		11.750	0.750	1000380	HDS1	R	F	
290	16	250X290X16 HDS7 R	HDS7	R	F		11.750	1.000	1000420	HDS1	R	F	
290	18	250X290X18 HS8 R	HS8	R	F	◇	11.938	0.750	597636	HS8	R	F	◇
310	25	250X310X25 HDS1 R	HDS1	R	F		12.000	0.625	100075	CRWA1	R	W	■
310	25	250X310X25 HDSA2 VD	HDSA2	VD	F		12.000	0.625	100051	CRWH1	R	W	
INCH 9.875 in. Shaft Diameter 250.83 mm							METRIC 10.039 in. Shaft Diameter 255 mm						
11.375	0.750	590363	HDS1	R	F		12.000	0.625	1000520	HDS1	R	F	
11.375	0.750	592763	HDS2	R	F		12.000	0.625	1000527	HS7	R	F	◇
11.375	0.750	594364	HDS2L32	R	F		12.000	0.625	1000025	HS7	V	F	◇
11.500	0.750	592727	HDS1	R	F		12.000	0.625	1000528	HS8	R	F	◇
11.875	0.688	590841	HDS1	R	F		12.000	0.625	596414	HS8	V	F	◇
11.875	0.875	590842	HDS1	R	F		12.000	0.688	1000530	HDS1	R	F	
INCH 9.938 in. Shaft Diameter 252.43 mm							METRIC 10.1039 in. Shaft Diameter 255 mm						
11.438	0.750	592731	HS8	R	F	◇	290	16	255X290X16 HDS2 D	HDS2	D	F	
11.438	0.750	558284	HS8	V	F	◇	315	25	255X315X25 HDS2 R	HDS2	R	F	
11.938	0.875	590444	HDS1	R	F		12.000	0.750	1000540	HDS1L32	R	F	
12.000	0.625	557435	HS7	R	F	◇	12.000	0.750	1000542	HDS2	R	F	
12.000	0.750	592463	HDS1	D	F		12.000	0.750	1000523	HDS2	V	F	
12.000	1.000	590351	HDS1	R	F		12.000	0.875	1000950	HDSA1	RD	F	
12.000	1.000	529752	HDS2	R	F		12.000	0.875	1000568	HS8	D	F	◇
12.125	1.000	592816	HDS1	R	F		12.000	1.000	1000580	HDS1	R	F	
INCH 9.998 in. Shaft Diameter 253.95 mm							METRIC 10.125 in. Shaft Diameter 257.18 mm						
11.998	1.250	597412	HDS7	R	F		11.625	0.688	1013240	HDS1	R	F	
INCH 10.000 in. Shaft Diameter 254.00 mm							METRIC 10.125 in. Shaft Diameter 257.18 mm						
10.920	0.500	593630	HS8	R	F	◇	11.625	0.688	1013242	HDS2	R	F	
11.000	0.375	100042	HMS4	R	S		11.625	0.688	1008-1140-44 HDSA2 RD	HDSA2	VV	F	
11.000	0.500	1000-1100-32 HS5 R	HS5	R	F	◇	11.625	0.750	1013250	HDS1	R	F	
11.000	0.500	1000017	HS7	R	F	◇	11.625	0.750	1013257	HS7	R	F	◇
11.000	0.500	592968	HS8	V	F	◇	11.625	0.906	525623	HDSA2	RD	F	
11.000	0.562	1000018	HS8	R	F	◇	11.625	0.906	596458	HDSA2	VD	F	
11.250	0.563	597545	HS8	H	F	◇	<i>W/LIGHT LOAD SPRING</i>						
11.250	0.625	1000110	HDS1	R	F		11.630	0.900	531038	HDSA2	VD	F	
11.250	0.625	1000313	HDS1	V	F		<i>W/LIGHT LOAD SPRING</i>						
11.250	0.625	1000111	HDS2	R	F								

 Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease **Bold part numbers are preferred designs**




Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	
INCH (cont.) 10.125 in. Shaft Diameter 257.18 mm							INCH (cont.) 10.250 in. Shaft Diameter 260.35 mm							
11.750	0.688	1013320	HDS1	R	F		11.750	0.750	1025252	HDS2	R	F		
12.000	0.750	1013470	HDS1	R	F		12.000	0.750	1025380	HDS1	R	F		
12.000	1.000	1013490	HDS1	R	F		12.017	0.750	1025435	HS5	R	F	◇	
INCH 10.188 in. Shaft Diameter 258.78 mm							INCH 10.375 in. Shaft Diameter 263.53 mm							
11.188	0.500	1019018	HS8	R	F	◇	12.250	0.625	▲102540	CRWH1	R	W		
11.438	0.625	1019110	HDS1	R	F		12.250	0.625	1025520	HDS1	R	F		
INCH 10.220 in. Shaft Diameter 259.59 mm							INCH 10.420 in. Shaft Diameter 264.67 mm							
11.750	0.750	1022300	HDS1	R	F		11.826	0.766	594127	HS8	R	F	◇	
METRIC 10.236 in. Shaft Diameter 260 mm							INCH 10.422 in. Shaft Diameter 264.72 mm							
285	12.70	260X285X12.7	HS8 R	HS8	R	F	◇	11.625	0.625	1027-1140-40	HDS7 R	HDS7	R	F
290	15.8	566431	HDS2	H	F		METRIC 10.433 in. Shaft Diameter 265 mm							
290	16	260X290X16	HDS1 H	HDS1	H	F	300	15	265X300X15	HDS1 R	HDS1	R	F	
290	16	260X290X16	HDS2 D	HDS2	D	F	305	18	265X305X18	HDS1 R	HDS1	R	F	
290	16	260X290X16	HDS2 H	HDS2	H	F	310	16	265X310X16	HDS1 R	HDS1	R	F	
290	16	260X290X16	HDS2 R	HDS2	R	F	INCH 10.438 in. Shaft Diameter 265.13 mm							
290	16	260X290X16	HDS2 V	HDS2	V	F	11.679	0.875	1044140	HDS1	R	F		
290	16	260X290X16	HDS7 R	HDS7	R	F	11.688	0.875	1043148	HS8	R	F	◇	
290	16	260X290X16	HDS7 V	HDS7	V	F	12.438	0.875	1044560	HDS1	R	F		
290	16	260X290X16	HDSF2 VT	HDSF2	VT	F	12.500	1.000	1044600	HDS1	R	F		
290	16	260X290X16	HDSF7 VT	HDSF7	VT	F	METRIC 10.472 in. Shaft Diameter 266 mm							
290	16	260X290X16	HSS4 H	HSS4	H	F	310	20	266X310X20	HS8 R	HS8	R	F	◇
290	16	260X290X16	HSS8 H	HSS8	H	F	◇	INCH 10.495 in. Shaft Diameter 266.57 mm						
290	16	260X290X16	HS8 R	HS8	R	F	◇	11.500	0.625	550968-60	HDS1	H	F	
290	16	260X290X16	HS8 V	HS8	V	F	◇	INCH 10.500 in. Shaft Diameter 266.70 mm						
290	19	260X290X19	HDS2 V	HDS2	V	F	11.400	0.650	593472	HS8	R	F	◇	
292	15.88	1023132	HDS2	H	F		11.500	0.500	1050017	HS7	R	F	◇	
300	15	260X300X15	HDS1 V	HDS1	V	F	11.500	0.500	1050014	HS8	R	F	◇	
300	15	260X300X15	HDS2 R	HDS2	R	F	11.500	0.500	594200	HS8	V	F	◇	
300	15	260X300X15	HS8 R	HS8	R	F	◇	11.500	0.625	1050038	HS8	R	F	◇
300	16	260X300X16	HDS1 V	HDS1	V	F		11.750	0.625	▲105010	CRWH1	R	W	
300	16	593594-00	HDS2	R	F		11.750	0.625	1050110	HDS1	R	F		
300	16	260X300X16	HDS2 R	HDS2	R	F		11.750	0.625	1050113	HDS1	V	F	
300	16	260X300X16	HDS2 V	HDS2	V	F		11.750	0.625	1050112	HDS2	R	F	
300	16	260X300X16	HDS2L6 R	HDS2L6	R	F		11.750	0.625	1050117	HS7	R	F	◇
300	16	260X300X16	HDS7 R	HDS7	R	F		11.750	0.625	1050127	HS7	V	F	◇
300	16	260X300X16	HS8 V	HS8	V	F	◇	11.750	0.625	1050118	HS8	R	F	◇
300	18	260X300X18	HS8 V	HS8	V	F	◇	11.750	0.625	1050108	HS8	V	F	◇
300	20	260X300X20	HDS1 R	HDS1	R	F		12.000	0.625	1050230	HDS1	R	F	
300	20	260X300X20	HDS1 V	HDS1	V	F		12.000	0.625	1050238	HS8	R	F	◇
300	20	260X300X20	HDS2 D	HDS2	D	F		12.000	0.688	1050240	HDS1	R	F	
300	20	260X300X20	HDS2 R	HDS2	R	F		12.000	0.688	1050243	HDS2	R	F	
300	20	260X300X20	HDS2 V	HDS2	V	F		12.000	0.688	1050242	HDS2	V	F	
300	20	260X300X20	CRS1 R	CRS1	R	S		12.000	0.688	1050211	HDS7	H	F	
300	20	260X300X20	HS5 V	HS5	V	F	■◇	INCH 10.250 in. Shaft Diameter 260.35 mm						
300	20	260X300X20	HS8 R	HS8	R	F	◇	11.250	0.563	102520	CRWH1	R	W	
300	20	260X300X20	HS8 V	HS8	V	F	◇	11.250	0.625	1025017	HS7	R	F	◇
304	20	260X304X20	HDS2 R	HDS2	R	F		11.250	0.625	1025018	HS8	V	F	◇
304	20	260X304X20	HS4 R	HS4	R	F	◇	11.500	0.625	1025112	HDS2	D	F	
305	22	260X305X22	HDS2 R	HDS2	R	F		11.500	0.625	1025117	HS7	R	F	◇
305	22	260X305X22	HDS7 R	HDS7	R	F		11.500	0.625	1025118	HS8	R	F	◇
319.80	25	1024690	HDS1	R	F		11.750	0.625	1025527	HS7	R	F	◇	
320	25	260X320X25	HDS1 V	HDS1	V	F	■	11.750	0.688	1025240	HDS1	R	F	
320	25	260X320X25	HDS2 R	HDS2	R	F		11.750	0.688	1025244	HDS2	V	F	
320	25	260X320X25	HDSA2 RD	HDSA2	RD	F		11.750	0.750	1025250	HDS1	R	F	

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH (cont.) 10.500 in. Shaft Diameter 266.70 mm						
12.000	0.688	1050229	HDS7L32	H	F	
12.000	0.750	1050250	HDS1	R	F	
12.000	0.750	1050543	HDS1	V	F	
12.000	0.750	1050254	HDS2	D	F	
12.000	0.750	1050252	HDS2	R	F	
12.000	0.750	1050251	HDS2	V	F	
12.000	0.750	1050253	HDS2L12	R	F	
12.000	0.750	1050257	HS7	R	F	◊
12.000	0.750	1050258	HS8	R	F	◊
12.125	0.625	1050312	HDS2	D	F	
12.125	0.750	1050330	HDS1	R	F	
12.250	0.750	1050380	HDS1	R	F	
12.500	0.625	▲105051	CRWH1	R	W	
12.500	0.625	1050520	HDS1	R	F	
12.500	0.625	1050523	HDS2	R	F	
12.500	0.625	1050524	HDS2	V	F	
12.500	0.625	1050528	HS8	R	F	◊
12.500	0.750	1050540	HDS1	R	F	
12.500	0.750	1050542	HDS2	R	F	
12.500	0.750	1050544	HDS2	V	F	
12.500	0.750	1032-1232-48	HDS7L12 R	HDS7L12	R	F
12.500	0.750	1050538	HS8	D	F	◊
12.500	0.813	1050550	HDS1	R	F	
12.500	1.000	1050578	HDS1	D	F	
12.500	1.000	1050580	HDS1	R	F	
12.500	1.000	1050582	HDS2	R	F	
12.500	1.000	1050966	HDSF1	VT	F	
12.500	1.000	1050958	HDSA1	RD	F	
12.625	1.000	1050630	HDS1	R	F	
METRIC 10.512 in. Shaft Diameter 267 mm						
308	19	267X308X19	HDS7 R	HDS7	R	F
308	20	267X308X20	HDS7 R	HDS7	R	F
INCH 10.625 in. Shaft Diameter 269.88 mm						
11.812	0.625	1063100	HDS1	R	F	
11.875	0.625	1063117	HS7	R	F	◊
12.031	0.766	531141	HS8	R	F	◊
12.125	0.750	1063250	HDS1	R	F	
12.250	0.750	1063330	HDS1	R	F	
12.375	0.750	1063380	HDS1	R	F	
13.000	0.750	1063710	HDS1	R	F	
13.000	0.750	1063712	HDS2	R	F	
METRIC 10.630 in. Shaft Diameter 270 mm						
300	15	270X300X15	HDS1 V	HDS1	V	F
300	15	270X300X15	HS8 R	HS8	R	F
310	16	270X310X16	HDS1 R	HDS1	R	F
310	16	270X310X16	HDS1 V	HDS1	V	F
310	16	270X310X16	HDS2 R	HDS2	R	F
310	16	270X310X16	HDS2 V	HDS2	V	F
310	16	270X310X16	HDS7 H	HDS7	H	F
310	16	270X310X16	HDSF2 VT	HDSF2	VT	F
310	20	270X310X20	HDS2 R	HDS2	R	F
310	20	270X310X20	HDS2 V	HDS2	V	F
310	20	270X310X20	HDSH2 VT	HDSH2	VT	F
310	20	270X310X20	HDSH7 HT	HDSH7	HT	F
311.25	16	1063310	HDS1	R	F	
314	19	270X314X19	HSS8 V	HSS8	V	F
314	20	270X314X20	HDS1 R	HDS1	R	F
314	20	270X314X20	HDS2 R	HDS2	R	F
320	16	270X320X16	HDS2 V	HDS2	V	F
330	18	270X330X18	HDS1 R	HDS1	R	F
330	25	270X330X25	HDS2 V	HDS2	V	F
335	18	270X335X18	HDS1 R	HDS1	R	F
INCH 10.688 in. Shaft Diameter 271.48 mm						
12.500	0.625	1068456	HDS1	V	F	
12.500	0.625	1044-1232-40	HDS7 V	HDS7	V	F

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH (cont.) 10.688 in. Shaft Diameter 271.48 mm						
13.000	0.688	1068693	HDS2	V	F	
INCH 10.710 in. Shaft Diameter 272.03 mm						
12.511	0.625	1071448	HS8	R	F	◊
INCH 10.750 in. Shaft Diameter 273.05 mm						
11.750	0.500	1075018	HS8	R	F	◊
11.750	0.591	1075020	HDS7	R	F	
12.000	0.625	1075110	HDS1	R	F	
12.000	0.625	1075112	HDS2	R	F	
12.000	0.625	1075114	HDS2	V	F	
12.000	0.625	1075115	HDS2L08	R	F	
12.000	0.625	1075117	HS7	R	F	◊
12.000	0.625	557972	HS8	D	F	◊
12.000	0.625	1075118	HS8	R	F	◊
12.000	0.625	1075128	HS8	V	F	◊
12.250	0.609	508645	HS6	R	F	◊
12.250	0.625	565617	HDS1	R	F	
<i>SPECIAL CASE FOR VRING SURFACE</i>						
12.250	0.625	1075230	HDS1	R	F	
12.250	0.625	1075237	HS7	R	F	◊
12.250	0.625	1075238	HS8	R	F	◊
12.250	0.750	1075250	HDS1	R	F	
12.250	0.813	1075920	HDSA1	RD	F	
12.500	0.625	1075360	HDS1	R	F	
12.500	0.625	1075367	HDS1	V	F	
12.500	0.625	1075475	HDS2	H	F	
12.500	0.625	1048-1232-40	HDS2 V	HDS2	RD	F
12.500	0.625	1075365	HDS2L08	R	F	
12.500	0.625	1075366	HDS2L08	V	F	
12.500	0.844	526461	HDSA2	RD	F	
12.500	0.844	1075948	HDSA2	VD	F	
12.500	0.875	527611	HDSA2	RD	F	
12.500	0.875	529857	HDSA2	VD	F	
<i>W/LIGHT LOAD SPRING</i>						
12.500	0.906	526472	HDSA2	RD	F	
12.625	0.750	1075470	HDS1	R	F	
12.750	0.625	▲107551	CRWH1	R	W	
12.750	0.625	1075520	HDS1	R	F	
12.750	0.625	1075524	HDS2	V	F	
12.750	0.625	596171	HDS7	R	F	
12.750	0.688	1075539	HDS1	H	F	
12.750	0.750	527312	HDS1	V	F	
12.750	0.812	566239	HDSF1	RT	F	◎
12.750	0.813	1075550	HDS1	R	F	
12.750	0.813	1075559	HDS7	R	F	
12.750	1.000	1075580	HDS1	R	F	
12.750	1.000	1075582	HDS2	R	F	
12.750	1.000	1075584	HDS2	V	F	
13.000	0.875	1075660	HDS1	R	F	
METRIC 10.827 in. Shaft Diameter 275 mm						
310	16	1082150	HDS1	V	F	
310	16	275X310X16	HDS1 R	HDS1	R	F
319	18	275X319X18	HDS2 R1	HDS2	R	F
320	15	275X320X15	HDS2 R	HDS2	R	F
INCH 10.875 in. Shaft Diameter 276.23 mm						
12.125	0.625	1088118	HS8	R	F	◊
12.375	0.750	1088257	HS7	R	F	◊
12.875	0.578	527099	HS6	R	F	◊
INCH 10.938 in. Shaft Diameter 277.83 mm						
12.188	0.625	1094110	HDS1	R	F	
12.750	0.625	1093440	HDS1	R	F	
12.750	0.625	557836	HDS2	V	F	
METRIC 10.827 in. Shaft Diameter 275 mm						
312	16	278X312X16	HS8 R	HS8	R	F

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features		Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features							
METRIC 10.827 in. Shaft Diameter 275 mm								METRIC (cont.) 11.024 in. Shaft Diameter 280 mm													
310	16	279X310X16 HS8 R	HS8	R	F	◊		320	16	280X320X16 HSS5 R	HSS5	R	F	◊							
310	16	279X310X16 HS8 V	HS8	V	F	◊		320	17	280X320X17 HDS2 D1	HDS2	D	F	◊							
INCH 11.000 in. Shaft Diameter 279.40 mm								INCH 11.063 in. Shaft Diameter 281.00 mm													
12.000	0.500	1100017	HS7	R	F	◊		12.250	0.750	1105201	HDS1	R	F								
12.000	0.500	1100018	HS8	H	F	◊		13.188	0.875	1106620	HDS1	R	F								
12.000	0.625	1100027	HS7	R	F	◊		INCH 11.125 in. Shaft Diameter 282.58 mm													
12.000	0.638	529777	HS8	R	F	◊		12.125	0.500	1112018	HS8	R	F	◊							
12.181	0.591	1100048	HS8	R	F	◊		12.375	0.625	1113118	HS8	R	F	◊							
12.250	0.625	▲ 110030	CRWHA1	R	W			13.000	1.000	1113490	HDS1	R	F								
12.250	0.625	1100110	HDS1	R	F			13.250	0.875	1113620	HDS1	R	F								
12.250	0.625	1100113	HDS2	D	F			INCH 11.125 in. Shaft Diameter 282.58 mm													
12.250	0.625	1100112	HDS2	R	F			12.983	0.875	1117078	HS8	V	F	◊							
12.250	0.625	1100104	HDS2	V	F			INCH 11.188 in. Shaft Diameter 284.18 mm													
12.250	0.625	1100115	HDS2L08	R	F			12.500	0.625	1118122	HDS2	R	F								
12.250	0.625	1100120	HDS7	R	F			12.500	0.687	1118149	HDS2L10	H	F								
12.250	0.625	1100117	HS7	R	F	◊		12.500	0.687	1118139	HDS7	H	F								
12.250	0.625	1100118	HS8	R	F	◊		12.500	0.750	1118130	HDS1	R	F								
12.500	0.625	1100230	HDS1	R	F	◊		13.000	0.750	1112-1300-48	HDS2 R	HDS2	R	F							
12.500	0.625	1100220	HDS1L32	R	F			METRIC 11.220 in. Shaft Diameter 285 mm													
12.500	0.625	1100-1232-40	HDS2 R	HDS2	R	F		310	13	285X310X13 HS5 V	HS5	V	F	◊							
12.500	0.625	558082	HDS7	R	F			310	16	285X310X16 HDS2 V	HDS2	V	F								
12.500	0.625	1100237	HS7	R	F	◊		320	16	285X320X16 HDS2 R	HDS2	R	F								
12.500	0.625	1100238	HS8	R	F	◊		324	20	285X324X20 HDS2 H	HDS2	H	F								
12.500	0.687	1100282	HDS2	H	F			325	16	285X325X16 HDS1 R	HDS1	R	F								
12.500	0.687	1100269	HDS2	V	F			325	16	285X325X16 HSS5 V	HSS5	V	F	◊							
12.500	0.687	1100249	HDS7	H	F			329	20	285X329X20 HSS5 R	HSS5	R	F	◊							
12.500	0.750	1100250	HDS1	R	F			INCH 11.188 in. Shaft Diameter 284.18 mm													
12.500	0.750	1100152	HS6	R	F	◊		12.188	0.638	529193	HS8	R	F	◊							
12.500	0.750	1100257	HS7	R	F	◊		12.250	0.500	1125028	HS8	R	F	◊							
12.500	0.750	1100258	HS8	R	F	◊		12.250	0.625	1125027	HS7	R	F	◊							
12.500	0.875	1100270	HDS1	R	F			12.500	0.625	1125110	HDS1	R	F								
12.500	1.250	1100918	HDSA1	RD	F			12.500	0.625	1125113	HDS1	V	F								
13.000	0.625	▲ 110051	CRWH1	R	W			METRIC 11.024 in. Shaft Diameter 280 mm													
13.000	0.625	1100520	HDS1	R	F			309.80	16	1102082	HDS2	D	F								
13.000	0.625	1100523	HDS2	V	F			310	15	280X310X15 HS8 R	HS8	R	F	◊							
13.000	0.625	1100527	HS7	R	F	◊		310	15	280X310X15 HS8 V	HS8	V	F	◊							
13.000	0.625	1100528	HS8	R	F	◊		310	16	280X310X16 HDS1 R	HDS1	R	F								
13.000	0.750	1100540	HDS1	R	F			310	16	280X310X16 HDS1 V	HDS1	V	F								
13.000	0.750	1100538	HS8	R	F	◊		310	16	280X310X16 HDS2 D	HDS2	D	F								
13.000	0.812	1100555	HDS2L32	R	F			310	16	280X310X16 HDS2 R	HDS2	R	F								
13.000	0.813	1100553	HDS2	R	F			310	16	280X310X16 HDS2 V	HDS2	V	F								
13.000	0.813	1100519	HDS7	R	F			310	16	280X310X16 HDS7 H	HDS7	H	F								
13.000	0.813	1100510	HDS7L32	R	F			310	16	280X310X16 HDS7 R	HDS7	R	F								
13.000	0.813	1100557	HS7	R	F	◊		310	16	280X310X16 HMS4 R	HMS4	R	S								
13.000	0.844	1100-1300-54	HDSA2 VD	HDSA2	VD	F		310	16	280X310X16 HS8 R	HS8	R	F	◊							
13.000	0.875	1100950	HDSA1	RD	F			310	16	280X310X16 HS8 V	HS8	V	F	◊							
13.000	1.000	1100580	HDS1	R	F			320	16	280X320X16 HDS1 R	HDS1	R	F								
13.000	1.000	1100585	HDS2	R	F			320	16	280X320X16 HDS2 R	HDS2	R	F								
13.000	1.250	1100952	HDSA1	RD	F			320	16	280X320X16 HDS2 V	HDS2	V	F								
13.125	0.875	1100620	HDS1	R	F																

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Bore Width Part Number Seal Type Lip Mat'l Lip Tech Features

Table with columns: INCH (cont.), 11.188 in., Shaft Diameter, 284.18 mm. Rows include part numbers like 1125111, 1125230, 1125219, etc.

Table with columns: INCH, 11.313 in., Shaft Diameter, 287.35 mm. Row includes part number 1131340.

Table with columns: INCH, 11.375 in., Shaft Diameter, 288.93 mm. Rows include part numbers like 1138017, 1138250, 1138252, etc.

Table with columns: METRIC, 11.417 in., Shaft Diameter, 290 mm. Rows include part numbers like 290X320X18 HDS2 R, 592915, etc.

Table with columns: INCH, 11.438 in., Shaft Diameter, 290.53 mm. Row includes part number 1144300.

Table with columns: METRIC, 11.496 in., Shaft Diameter, 292 mm. Rows include part numbers 292X336X20 HSS4 R, 292X336X20 HSS6 R.

Table with columns: INCH, 11.500 in., Shaft Diameter, 292.10 mm. Rows include part numbers like 595181, 1150019, 1150018, etc.

Bore Width Part Number Seal Type Lip Mat'l Lip Tech Features

Table with columns: INCH (cont.), 11.500 in., Shaft Diameter, 292.10 mm. Rows include part numbers like 1150170, 115021, 1150114, etc.

Table with columns: METRIC, 11.614 in., Shaft Diameter, 295 mm. Rows include part numbers like 295X325X15 HDS1 R, 295X330X16 HDS2 R, etc.

Table with columns: INCH, 11.625 in., Shaft Diameter, 295.28 mm. Rows include part numbers like 1162112, 1163244, 1162216, etc.

Table with columns: INCH, 11.688 in., Shaft Diameter, 296.88 mm. Rows include part numbers like 1169110, 1168099, 1169235.

Table with columns: INCH, 11.750 in., Shaft Diameter, 298.45 mm. Rows include part numbers like 1175118, 1175190, 1175237, etc.

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.) 11.750 in. Shaft Diameter 298.45 mm							INCH (cont.) 11.813 in. Shaft Diameter 300.05 mm						
13.250	0.750	1175255	HDS2L08	V	F		13.250	1.000	1181195	HDS1	R	F	
13.250	0.750	1175257	HS7	R	F	◇	13.313	0.750	1181257	HS7	R	F	◇
13.250	0.750	1175258	HS8	V	F	◇	13.812	0.875	1181560	HDS1	R	F	
13.250	0.875	527709	HDSA2	RD	F		14.000	0.750	1180614	HDS2L16	R	F	
13.250	0.875	1175924	HDSA2	VD	F		14.000	0.875	1181640	HDS1	R	F	
13.250	0.906	526779	HDSA2	RD	F		INCH 11.875 in. Shaft Diameter 301.63 mm						
13.252	0.750	1175300	HDS1	R	F		13.125	0.625	1188118	HS8	R	F	◇
13.500	0.750	1175439	HS8	R	F	◇	INCH 11.938 in. Shaft Diameter 303.23 mm						
13.750	0.875	1175560	HDS1	R	F		13.938	0.625	1194527	HS7	R	F	◇
13.750	0.875	1175565	HDS2L08	R	F		INCH 12.000 in. Shaft Diameter 304.80 mm						
13.750	1.000	1175580	HDS1	R	F		13.000	0.350	511200	HD1	D	G	
13.750	1.000	1175583	HDS1	V	F		13.000	0.500	1200015	HS5	R	F	◇
13.750	1.000	1175582	HDS2	R	F		13.000	0.500	1200017	HS7	R	F	◇
13.750	1.093	526462	HDSA2	RD	F		13.000	0.500	1200028	HS8	D	F	◇
14.000	1.000	1175680	HDS1	R	F		13.000	0.500	1200018	HS8	R	F	◇
METRIC 11.811 in. Shaft Diameter 300 mm							13.250	0.500	1200128	HS8	R	F	◇
330	15	300X330X15 HS5 R	HS5	R	F	◇	13.250	0.625	1200110	HDS1	R	F	
330	15	300X330X15 HS6 R	HS6	R	F	◇	13.250	0.625	594306	HS5	R	F	◇
332	16	300X332X16 HDS2 R	HDS2	R	F		13.250	0.625	1200117	HS7	R	F	◇
332	16	300X332X16 HDS2 V	HDS2	V	F		13.250	0.625	1200114	HS8	H	F	◇
335	18	300X335X18 HDS2 R	HDS2	R	F		13.250	0.625	1200118	HS8	R	F	◇
338.09	19.05	1181252	HDS2	R	F		13.250	1.000	1200150	HDS1	R	F	
338.10	19.05	1181218	HS8	R	F	◇	13.250	1.000	1200100	HDS1	V	F	
339.80	18	1181300	HDS1	R	F		13.327	0.650	1200148	HS8	R	F	◇
340	15.88	300X340X15.88 HS8 R	HS8	R	F	◇	13.386	0.787	1199169	HDS2	V	F	
340	16	300X340X16 HDS1 R	HDS1	R	F		13.500	0.625	1200230	HDS1	R	F	
340	16	300X340X16 HDS1 V	HDS1	V	F		13.500	0.625	1200233	HDS1	V	F	
340	16	300X340X16 HDS2 V	HDS2	V	F		13.500	0.625	1200231	HDS2	R	F	
340	16	300X340X16 HSS5 H	HSS5	H	F	◇	13.500	0.625	1200235	HDS2L08	R	F	
340	16	300X340X16 HMS4 R	HMS4	R	S		13.500	0.625	1213210	HDS7	R	F	
340	16	300X340X16 HMSA7 R	HMSA7	R	S		13.500	0.625	1213211	HDS7L20	R	F	
340	18	300X340X18 HDS1 D	HDS1	D	F		13.500	0.625	1200237	HS7	R	F	◇
340	18	300X340X18 HDS1 V	HDS1	V	F		13.500	0.625	1200238	HS8	R	F	◇
340	18	300X340X18 HDS2 R	HDS2	R	F		13.500	0.688	1200240	HDS1	R	F	
340	18	300X340X18 HDS2 V	HDS2	V	F		13.500	0.750	1200250	HDS1	R	F	
340	18	300X340X18 HDS7 R	HDS7	R	F		13.500	0.750	1200255	HDS2	R	F	
340	18	300X340X18 HMS4 R	HMS4	R	S		13.500	0.750	1200259	HS7	V	F	◇
340	18	300X340X18 HS8 R	HS8	R	F	◇	13.500	0.750	1200258	HS8	R	F	◇
340	18	300X340X18 HS8 V	HS8	V	F	◇	13.500	0.787	1200928	HDSH2	RT	F	▶
340	20	300X340X20 HDS1 D	HDS1	D	F		13.500	0.863	528564	HS8	R	F	◇
340	20	300X340X20 HDS1 R	HDS1	R	F		13.500	0.875	1200920	HDSA1	RD	F	
340	20	300X340X20 HDS1 V	HDS1	V	F		13.625	0.688	1200300	HDS1	D	F	
340	20	300X340X20 HDS2 R	HDS2	R	F		13.625	0.688	1200320	HDS1	R	F	
340	20	300X340X20 HDS2 V	HDS2	V	F		13.625	0.750	1200330	HDS1	R	F	
340	20	300X340X20 HDS7 R	HDS7	R	F		13.630	0.750	1200335	HS5	R	F	◇
340	20	300X340X20 HSS5 H	HSS5	H	F	◇	13.750	0.750	1200380	HDS1	R	F	
340	20	300X340X20 HS5 V	HS5	V	F	◇	13.938	0.688	1200500	HDS7	R	F	
340	20	1181258	HS8	R	F	◇	14.000	0.625	120060	CRW1	R	W	
340	20	300X340X20 HS8 R	HS8	R	F	◇	14.000	0.625	1200520	HDS1	R	F	
340	20	300X340X20 HS8 V	HS8	V	F	◇	14.000	0.625	1200523	HDS1	V	F	
344	16	300X344X16 HDS2 V	HDS2	V	F		14.000	0.625	1200522	HDS2	V	F	
344	16	300X344X16 HDS7 V1	HDS7	V	F		14.000	0.625	1200524	HS8	R	F	◇
344	20	300X344X20 HDS2 V	HDS2	V	F		14.000	0.688	1200530	HDS1	R	F	
344	20	300X344X20 HDS7 R	HDS7	R	F		14.000	0.688	1200533	HDS1	V	F	
344	20	300X344X20 HS8 V	HS8	V	F	◇	14.000	0.750	1200540	HDS1	R	F	
345	22	300X345X22 HDS1 R	HDS1	R	F		14.000	0.750	1200541	HDS2	R	F	
345	22	300X345X22 HS7 R	HS7	R	F	◇	14.000	0.750	1200545	HDS2L08	R	F	
345	25	300X345X25 HDSF1 HT	HDSF1	HT	F		14.000	0.750	1200508	HS8	H	F	◇
350	24	300X350X24 HDS2 R	HDS2	R	F		14.000	0.812	1200521	HDS7	R	F	
350	25	1181500	HDS1	R	F		14.000	0.812	1200959	HDSH7	HT	F	
350	25	300X350X25 HDS1 R	HDS1	R	F		14.000	0.813	1200550	HDS1	R	F	
360	20	300X360X20 HDSF2 VT	HDSF2	VT	F		14.000	0.813	1200553	HDS2	R	F	
360	25	300X360X25 HDS2 R	HDS2	R	F		14.000	0.813	1200558	HS8	R	F	◇
360	25	300X360X25 HDS2 V	HDS2	V	F		14.000	0.844	526463	HDSA2	RD	F	
360	25	300X360X25 HDSA2 VD	HDSA2	VD	F		14.000	0.844	1200962	HDSA2	VD	F	
INCH 11.813 in. Shaft Diameter 300.05 mm							14.000	0.875	1200560	HDS1	R	F	
13.219	0.766	59340000	HS8	R	F	■◇							

Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.)			12.000 in.	Shaft Diameter		304.80 mm
14.000	1.000	1200580	HDS1	R	F	
14.000	1.000	1200593	HDS1	V	F	
14.000	1.000	1200585	HDS2	R	F	
14.000	1.000	1200955	HDSA2	RD	F	
14.250	0.875	1200660	HDS1	R	F	
14.250	1.000	1200680	HDS1	R	F	
14.750	0.875	1200820	HDS1	R	F	

INCH						
			12.125 in.	Shaft Diameter		307.98 mm
13.125	0.500	1212018	HS8	R	F	◇
13.375	0.625	1212128	HS8	H	F	◇
13.375	0.625	1213118	HS8	R	F	◇
13.875	0.750	1213382	HDS2	R	F	
14.000	0.875	1213480	HDS1	R	F	
14.000	1.000	1213490	HDS1	R	F	

INCH						
			12.188 in.	Shaft Diameter		309.58 mm
14.000	0.625	1218430	HDS2	D	F	

METRIC						
			12.205 in.	Shaft Diameter		310 mm
340	15	310X340X15 HS8 R	HS8	R	F	◇
340	15	310X340X15 HS8 V	HS8	V	F	◇
340	20	310X340X20 HDS2 V	HDS2	V	F	
340	20	310X340X20 HS8 R	HS8	R	F	◇
350	16	310X350X16 HS8 R	HS8	R	F	◇
350	18	310X350X18 HDS1 R	HDS1	R	F	
350	18	310X350X18 HDS2 V	HDS2	V	F	
350	18	310X350X18 HDS7 R	HDS7	R	F	
350	18	310X350X18 HS8 R	HS8	R	F	◇
350	20	310X350X20 HDS2 D	HDS2	D	F	
350	20	310X350X20 HDS7 R	HDS7	R	F	
350	20	310X350X20 HS8 D	HS8	D	F	◇
354	20	310X354X20 HS5 R	HS5	R	F	◇
355	24	310X355X24 HS8 V	HS8	V	F	◇
370	25	310X370X25 HDS1 R1	HDS1	R	F	
370	25	310X370X25 HDS2 D	HDS2	D	F	
370	25	310X370X25 HDS2 R	HDS2	R	F	
370	25	310X370X25 HDS2 V	HDS2	V	F	

INCH						
			12.250 in.	Shaft Diameter		311.15 mm
13.375	0.625	▲ 122555	CRWH1	R	W	
13.500	0.625	1225118	HS8	R	F	◇
13.750	0.625	1225230	HDS1	R	F	
13.750	0.625	1225232	HDS2	V	F	
13.750	0.625	1225221	HDS7L08	D	F	
13.750	0.625	1225238	HS8	R	F	◇
13.750	0.688	1225240	HDS1	R	F	
13.750	0.688	1225247	HDS1	V	F	
13.750	0.688	1225282	HDS2	D	F	
13.750	0.688	1225245	HDS2L08	R	F	
13.750	0.750	1225250	HDS1	R	F	
13.750	0.750	1225252	HDS2	R	F	
13.750	0.750	1225259	HDS7	D	F	
13.750	0.750	1225257	HS7	R	F	◇
13.750	0.812	1225212	HDS2	H	F	
13.750	0.844	526912	HDSA2	RD	F	
13.813	0.625	▲ 122580	CRW1	R	W	
13.813	0.625	1225283	HDS2	V	F	
14.000	0.688	1225379	HDS7	R	F	
14.250	0.640	1225523	HDS2	D	F	
14.250	0.640	1225525	HDS2	R	F	
14.250	0.665	1225495	HDS2	R	F	
14.250	0.750	1225542	HDS2	R	F	■
14.250	0.750	1225549	HDS7	R	F	
14.250	0.812	1225370	HDS7	R	F	
14.250	0.813	1225550	HDS1	R	F	
14.250	0.813	1225554	HDS2	V	F	
14.250	0.813	1225557	HS7	R	F	◇
14.250	0.813	1225528	HS8	R	F	◇

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.)			12.250 in.	Shaft Diameter		311.15 mm
14.250	1.000	1225580	HDS1	R	F	
14.250	1.250	1225600	HDS1	R	F	
14.250	1.250	1225589	HDS7	R	F	
14.250	1.250	1225588	HDSA2	RD	F	
14.500	0.875	1225660	HDS1	R	F	

INCH						
			12.283 in.	Shaft Diameter		311.99 mm
13.750	0.688	1228172	HDS2	D	F	

METRIC						
			12.362 in.	Shaft Diameter		314 mm
355	20	314X355X20 HSS5 R	HSS5	R	F	◇

INCH						
			12.373 in.	Shaft Diameter		314.27 mm
13.875	0.688	1238242	HDS2	D	F	

INCH						
			12.375 in.	Shaft Diameter		314.33 mm
13.875	0.625	1238237	HS7	R	F	◇
13.875	0.688	1238240	HDS1	R	F	
13.875	0.750	1238250	HDS1	R	F	
13.875	0.750	1238257	HS7	R	F	◇

METRIC						
			12.402 in.	Shaft Diameter		315 mm
345	20	315X345X20 HS8 R	HS8	R	F	◇
355	16	315X355X16 HDS1 V	HDS1	V	F	
355	16	315X355X16 HS4 V	HS4	V	F	◇
355	16	315X355X16 HS5 V	HS5	V	F	◇
355	18	315X355X18 HDS1 R	HDS1	R	F	
355	18	315X355X18 HDS1 V	HDS1	V	F	
355	18	315X355X18 HDS7 H	HDS7	H	F	
355.60	16	315X355.6X16 HDS1 R	HDS1	R	F	
365	20	315X365X20 HDS1 R	HDS1	R	F	
365	20	315X365X20 HDSF2 VT	HDSF2	VT	F	
365	20	315X365X20 HDSH2 VT	HDSH2	VT	F	

INCH						
			12.438 in.	Shaft Diameter		315.93 mm
14.438	0.787	1243528	HS8	R	F	◇

INCH						
			12.438 in.	Shaft Diameter		315.93 mm
13.400	0.650	594243	HS8	R	F	◇
13.500	0.500	1250018	HS8	R	F	◇
13.750	0.625	1250110	HDS1	R	F	
13.750	0.625	1250113	HDS1	V	F	
13.750	0.625	1250115	HDS2	V	F	
13.750	0.625	1250118	HS8	R	F	◇
13.750	0.750	1250130	HDS1	R	F	
13.750	0.906	1250912	HDSA2	RD	F	
13.906	0.766	531152	HS8	R	F	◇
14.000	0.625	1250230	HDS1	R	F	
14.000	0.625	1250238	HS8	R	F	◇
14.000	0.688	1250240	HDS1	R	F	
14.000	0.688	1250242	HDS2	R	F	
14.000	0.688	1250239	HDS7	R	F	
14.000	0.688	1250268	HS8	D	F	◇
14.000	0.750	1250250	HDS1	R	F	
14.000	0.750	1250252	HDS2	R	F	
14.000	0.750	1250257	HS7	R	F	◇
14.000	0.750	1250258	HS8	R	F	◇
14.000	0.813	1250260	HDS1	R	F	
14.000	0.906	526490	HDSA2	RD	F	
14.000	0.906	1250924	HDSA2	VD	F	
14.000	1.000	1258283	HDS2	V	F	
14.000	1.000	1250289	HDS7	R	F	
14.250	0.875	1250350	HDS1	V	F	
14.500	0.750	1250540	HDS1	R	F	
14.500	0.750	593499	HDS2	R	F	
14.500	0.750	1250542	HDS2	R	F	
14.500	0.750	1250528	HS8	H	F	◇
14.500	0.813	1250550	HDS1	R	F	

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures		
INCH (cont.) 12.438 in. Shaft Diameter				315.93 mm				INCH (cont.) 12.625 in. Shaft Diameter				320.68 mm			
14.500	0.813	1250554	HDS2	V	F		14.625	1.000	1263580	HDS1	R	F			
14.500	0.875	1250565	HDS1L24	R	F		14.750	0.875	1263620	HDS1	R	F			
14.500	1.000	526655	HDS1	R	F		15.000	0.875	1263710	HDS1	R	F			
14.500	1.000	1250580	HDS1	R	F										
14.500	1.000	1250582	HDS2	R	F										
14.500	1.000	1250578	HS8	R	F	◇	INCH	12.688 in.	Shaft Diameter	322.28 mm					
14.500	1.250	1250950	HDSA1	RD	F		13.688	0.500	1268018	HS8	R	F	◇		
14.625	1.000	1250630	HDS1	R	F		14.250	0.750	1269290	HDS1	R	F			
14.750	1.000	1250680	HDS1	R	F		14.500	0.813	1268948	HDSF2	VT	F			
15.000	0.813	1250750	HDS1	R	F		14.500	0.813	1268958	HDSH2	VT	F			
							14.750	1.000	1269600	HDS1	R	F			
METRIC 12.520 in. Shaft Diameter				318 mm				INCH 12.750 in. Shaft Diameter				323.85 mm			
348	19	318X348X19 HDS1 R	HDS1	R	F		13.625	0.563	127540	HMSA7	R	S			
360	20	318X360X20 HDS2 R	HDS2	R	F		14.250	0.625	1275219	HDS7	H	F			
							14.250	0.625	1275238	HS8	R	F	◇		
							14.250	0.688	1275240	HDS1	R	F			
							14.250	0.688	1275242	HDS2	R	F			
							14.250	0.688	1275243	HDS2	V	F			
							14.250	0.688	1275256	HDS2L32	V	F			
							14.250	0.750	1275250	HDS1	R	F			
							14.250	0.750	1275252	HDS2	R	F			
							14.250	0.750	1275255	HS7	V	F	◇		
							14.250	0.750	592887	HS8	R	F	◇		
							14.375	0.750	1275338	HS8	R	F	◇		
							14.500	0.688	1275373	HDS2	V	F			
							14.500	0.787	1248-1432-50 HDSH7 RT	HDSH7	RT	F			
							14.750	0.875	1275560	HDS1	R	F			
							14.750	1.000	1275580	HDS1	R	F			
							14.750	1.000	1275582	HDS2	R	F			
							15.000	0.875	1275660	HDS1	R	F			
INCH 12.565 in. Shaft Diameter				319.15 mm				METRIC 12.795 in. Shaft Diameter				325 mm			
14.063	0.750	1256250	HDS1	R	F		360	20	325X360X20 HDS2 R	HDS2	R	F			
							365	16	325X365X16 HDS1 R	HDS1	R	F			
							365	16	325X365X16 HDS2 R	HDS2	R	F			
							365	20	325X365X20 HDSH7 HT	HDSH7	HT	F			
							368	20	325X368X20 HS5 R	HS5	R	F	◇		
							369	20	325X369X20 HS7 R	HS7	R	F	◇		
							375	25	325X375X25 HDS2 H	HDS2	H	F			
							375	25	325X375X25 HDS2 R	HDS2	R	F			
METRIC 12.598 in. Shaft Diameter				320 mm				INCH 12.875 in. Shaft Diameter				327.03 mm			
350	16	320X350X16 HDS1 R	HDS1	R	F		14.500	0.688	1288322	HDS2	R	F			
350	18	320X350X18 HDS1 R	HDS1	R	F		14.500	0.688	1287338	HS8	R	F	◇		
350	18	320X350X18 HDS2 H	HDS2	H	F		14.750	1.000	1288490	HDS1	R	F			
350	18	320X350X18 HDS7 R	HDS7	R	F		15.000	0.875	1288800	HDS1	R	F			
355	16	320X355X16 HDS1 R	HDS1	R	F		14.250	0.688	1293159	HDS2L32	D	F			
358	19	320X358X19 HDS1 R	HDS1	R	F										
360	16	320X360X16 HDS1 R	HDS1	R	F										
360	16	320X360X16 HDS2 V	HDS2	V	F										
360	18	320X360X18 HDS1 H	HDS1	H	F										
360	18	320X360X18 HDS1 R	HDS1	R	F										
360	18	320X360X18 HDS2 H1	HDS2	H	F										
360	18	320X360X18 HDS2 R	HDS2	R	F										
360	18	320X360X18 HDS2 V	HDS2	V	F										
360	18	320X360X18 HDS7 D	HDS7	D	F										
360	18	320X360X18 HSS5 H	HSS5	H	F	◇									
360	18	320X360X18 HSS6 H	HSS6	H	F	◇									
360	18	320X360X18 HSS8 H	HSS8	H	F	◇									
360	20	320X360X20 HDS1 R	HDS1	R	F										
360	20	320X360X20 HDS1 V	HDS1	V	F										
360	20	320X360X20 HDS2 V	HDS2	V	F										
360	20	320X360X20 HDS7 R	HDS7	R	F										
360	20	320X360X20 HDSF2 VT	HDSF2	VT	F										
360	20	320X360X20 HDSH2 VT	HDSH2	VT	F										
360	20	320X360X20 HDSH7 HT	HDSH7	HT	F										
360	20	320X360X20 HSS5 H	HSS5	H	F	◇									
360	20	320X360X20 HSS8 H	HSS8	H	F	◇									
360	20	320X360X20 HS5 R	HS5	R	F	◇									
360	20	320X360X20 HS8 H	HS8	H	F	◇									
360	20	320X360X20 HS8 R	HS8	R	F	◇									
360	20	320X360X20 HS8 V	HS8	V	F	◇									
360	22	320X360X22 HDS1 H	HDS1	H	F										
360	22	320X360X22 HSS6 H	HSS6	H	F	◇									
360	22	320X360X22 HDSA2 VD	HDSA2	VD	F										
360	25	320X360X25 HDS1 R	HDS1	R	F										
360	25	320X360X25 HDS2 V	HDS2	V	F										
364	20	320X364X20 HDS2 D	HDS2	D	F										
364	20	320X364X20 HDS2 R1	HDS2	R	F										
364	20	320X364X20 HDS2 V	HDS2	V	F										
364	20	320X364X20 HS8 R	HS8	R	F	◇									
380	25	320X380X25 HDS1 R	HDS1	R	F										
380	25	320X380X25 HDS2 R	HDS2	R	F										
380	28	320X380X28 HDS7 R	HDS7	R	F										
380	28	320X380X28 HDSA2 RD	HDSA2	RD	F										
INCH 12.625 in. Shaft Diameter				320.68 mm				METRIC 12.992 in. Shaft Diameter				330 mm			
14.125	0.625	1263238	HS8	R	F	◇	370	15	330X370X15 HS8 R	HS8	R	F	◇		
14.125	0.750	1263252	HDS2	D	F		370	16	330X370X16 HDS2 R	HDS2	R	F			
14.125	0.750	1263237	HS7	R	F	◇	370	18	330X370X18 HDS1 R	HDS1	R	F			
14.250	0.750	1263330	HDS1	R	F		370	18	330X370X18 HDS1 R9	HDS1	R	F	▶		
14.250	0.750	520179	HDS1L12	R	F	■	370	18	330X370X18 HDS2 D	HDS2	D	F			
							370	18	330X370X18 HDS2 R	HDS2	R	F			
							370	18	330X370X18 HDS2 V	HDS2	V	F			
							370	18	330X370X18 HS5 V	HS5	V	F	◇		
							370	18	330X370X18 HS8 R	HS8	R	F	◇		
							370	20	330X370X20 HDS1 R	HDS1	R	F			
							370	20	330X370X20 HDS1 V	HDS1	V	F			
							370	20	330X370X20 HDS2 V	HDS2	V	F			
							370	20	330X370X20 HDS2L4 R	HDS2L4	R	F			
							370	20	330X370X20 HDSF2 VT1	HDSF2	VT	F			
							370	20	330X370X20 HDSH2 VT	HDSH2	VT	F			
							370	20	330X370X20 HS8 R	HS8	R	F	◇		
							370	21	330X370X21 HDSF1 HT	HDSF1	HT	F			
							370	25	330X370X25 HDS2 R	HDS2	R	F			
							374	17	330X374X17 HDS7L3 H	HDS7L3	H	F			

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Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC (cont.) 12.992 in. Shaft Diameter 330 mm							INCH 13.250 in. Shaft Diameter 336.55 mm						
374	19	330X374X19 HDS2 V	HDS2	V	F		14.500	0.625	1316-1432-40 HDS2 R	HDS2	R	F	
374	20	330X374X20 HDS2 V	HDS2	V	F		14.500	0.625	1325148	HS8	R	F	◇
380	19	330X380X19 HS8 D	HS8	D	F	◇	14.750	0.625	1325230	HDS1	R	F	
380	20	330X380X20 HDS2 R9	HDS2	R	F	▶	14.750	0.625	1325235	HDS1	V	F	
380	20	330X380X20 HSS8 H	HSS8	H	F	◇	14.750	0.625	1325232	HDS2	D	F	
380	20	330X380X20 HS8 R	HS8	R	F	◇	14.750	0.625	1325237	HS7	R	F	◇
380	22	330X380X22 HS8 H	HS8	H	F	◇	14.750	0.625	1325228	HS8	R	F	◇
384	18	330X384X18 HDS2 R	HDS2	R	F		14.750	0.688	1325240	HDS1	R	F	
390	28	330X390X28 HDS2 D	HDS2	D	F		14.750	0.688	1325242	HDS2	R	F	
390	28	330X390X28 HDS2 R	HDS2	R	F		14.750	0.688	1325243	HDS2	V	F	
							14.750	0.688	1325244	HDS2L08	R	F	
							14.750	0.750	1325250	HDS1	R	F	
							14.750	0.750	1325252	HDS2	R	F	
							14.750	0.906	526464	HDSA2	RD	F	
							14.750	0.906	531604	HDSA2	VD	F	
							14.750	0.906	1325928	HDSA2	VD	F	
							14.875	0.688	1325300	HDS1	R	F	
							14.875	0.750	1325330	HDS1	R	F	
							14.875	0.938	1325340	HDS1	R	F	
							14.875	1.000	1325932	HDSA2	DD	F	
							15.000	0.750	1325380	HDS1	R	F	
							15.250	0.750	1325540	HDS1	R	F	
							15.250	0.750	528356	HDS2	R	F	
							15.250	0.750	1325569	HDS7	R	F	
							15.250	0.750	1325518	HS8	D	F	◇
							15.250	1.000	1325580	HDS1	R	F	
							15.250	1.125	1325590	HDS1	R	F	
							15.250	1.250	1325600	HDS1	R	F	
							15.375	1.000	1325630	HDS1	R	F	
							15.500	0.875	1325660	HDS1	R	F	
							15.750	0.812	566405	HDSF1	RT	F	
							14.874	0.750	1331300	HDS1	R	F	
							14.875	0.625	1337168	HDS7	V	F	
							14.375	0.500	1338017	HS7	R	F	◇
							14.875	0.625	1338238	HS8	R	F	◇
							14.875	0.750	1338250	HDS1	R	F	
							15.000	0.750	1338330	HDS1	R	F	
							15.750	0.875	1338710	HDS1	R	F	
							15.750	0.875	1337712	HDS2L16	R	F	
							METRIC 13.386 in. Shaft Diameter 340 mm						
							370	16	340X370X16 HDS2 V	HDS2	V	F	
							372	16	340X372X16 HDS1 R	HDS1	R	F	
							372	16	340X372X16 HDS2 V	HDS2	V	F	
							372	16	340X372X16 HDS7 R	HDS7	R	F	
							380	16	340X380X16 HDS2 V	HDS2	V	F	
							380	16	340X380X16 HS5 R	HS5	R	F	◇
							380	18	340X380X18 HDS1 R	HDS1	R	F	
							380	18	340X380X18 HDS1 V	HDS1	V	F	
							380	18	340X380X18 HDS2 D	HDS2	D	F	
							380	18	340X380X18 HDS2 R	HDS2	R	F	
							380	18	340X380X18 HDS2 V	HDS2	V	F	
							380	18	340X380X18 HS8 R	HS8	R	F	◇
							380	18	340X380X18 HS8 V	HS8	V	F	◇
							380	20	340X380X20 HDS1 R	HDS1	R	F	
							380	20	340X380X20 HDS2 H	HDS2	H	F	
							380	20	340X380X20 HDS2 R	HDS2	R	F	
							380	20	340X380X20 HDS2 V	HDS2	V	F	
							380	20	340X380X20 HDS7 R	HDS7	R	F	
							380	20	340X380X20 HDSF2 VT	HDSF2	VT	F	
							380	20	340X380X20 HDSH2 VT1	HDSH2	VT	F	
							380	20	340X380X20 HS8 R	HS8	R	F	◇
							380	20	340X380X20 HS8 V	HS8	V	F	◇
							380	22	340X380X22 HDSA2 HD	HDSA2	HD	F	
							380	22	340X380X22 HDSA2 VD	HDSA2	VD	F	
							384	20	340X384X20 HDS1 R	HDS1	R	F	
							384	20	340X384X20 HS8 R	HS8	R	F	◇
							385	20	340X385X20 HDS1 R	HDS1	R	F	
							390	25.40	340X390X25.4 HDS1 R	HDS1	R	F	
							399.80	25	1339690	HDS1	R	F	
							METRIC 13.189 in. Shaft Diameter 335 mm						
							375	18	335X375X18 HDS1 R	HDS1	R	F	
							375	18	335X375X18 HDS2 V	HDS2	V	F	

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
METRIC (cont.) 13.386 in. Shaft Diameter 340 mm							INCH (cont.) 13.750 in. Shaft Diameter 349.25 mm						
400	25	340X400X25 HSS4 H	HSS4	H	F	◇	15.000	0.750	1375130	HDS1	R	F	
400	28	340X400X28 HDS2 R	HDS2	R	F		15.000	0.750	1375133	HDS2L08	R	F	
INCH 13.500 in. Shaft Diameter 342.90 mm							METRIC 13.780 in. Shaft Diameter 350 mm						
14.500	0.500	1350018	HS8	R	F	◇	380	16	350X380X16 HDS1 R	HDS1	R	F	
14.750	0.625	1350112	HDS2	R	F		380	16	350X380X16 HDS2 R	HDS2	R	F	
14.919	0.700	1350188	HS8	R	F	◇	380	16	350X380X16 HDS2 V	HDS2	V	F	
15.000	0.625	1350230	HDS1	R	F		390	18	350X390X18 HDS1 D	HDS1	D	F	
15.000	0.625	1350233	HDS2	D	F		390	18	350X390X18 HDS2 D	HDS2	D	F	
15.000	0.625	1350232	HDS2L08	D	F		390	18	350X390X18 HDS2 V	HDS2	V	F	
15.000	0.625	1350219	HDS7	R	F		390	18	350X390X18 HS8 R	HS8	R	F	◇
15.000	0.625	1350235	HS5	D	F	◇	390	20	350X390X20 HSS5 R	HSS5	R	F	◇
15.000	0.625	1350238	HS8	R	F	◇	394	20	350X394X20 HDS7 R	HDS7	R	F	
15.000	0.625	1332-1500-40 HS8 D	HS8	D	F	◇	394	20	350X394X20 HDSF2 VT9	HDSF2	VT	F	
15.000	0.688	1350240	HDS1	R	F		400	17	350X400X17 HDS1 R	HDS1	R	F	
15.000	0.688	1350245	HDS1	V	F		400	17	350X400X17 HS8 R	HS8	R	F	◇
15.000	0.750	1350250	HDS1	R	F		400	25	350X400X25 HDS2 H	HDS2	H	F	
15.000	0.750	1350252	HDS2	R	F		400	25	350X400X25 HDS2 R1	HDS2	R	F	
15.000	0.750	1350212	HDS2	V	F		400	25	350X400X25 HS6 V	HS6	V	F	◇
15.000	0.750	1350259	HS8	D	F	◇	400	25.40	350X400X25.4 HS5 R	HS5	R	F	◇
15.000	0.750	1350258	HS8	R	F	◇	INCH 13.813 in. Shaft Diameter 350.85 mm						
15.125	0.750	1350330	HDS1	R	F		15.750	0.750	594138-00	HS8	R	F	◇
15.250	0.750	1350380	HDS1	R	F		16.000	1.000	1381600	HDS1	R	F	
15.438	0.875	1350510	HDS1	R	F		INCH 13.875 in. Shaft Diameter 352.43 mm						
15.500	0.750	1350540	HDS1	R	F		15.375	0.625	1387238	HS8	R	F	◇
15.500	0.750	1350542	HDS2	R	F		15.375	0.750	1388257	HS7	R	F	◇
15.500	0.750	1350538	HS8	R	F	◇	15.440	0.750	1388300	HDS1	R	F	
15.500	0.812	1350520	HDS7	R	F		15.440	0.750	1384246	HS8	R	F	◇
15.500	0.812	1350959	HDSH7	HT	F		INCH 13.938 in. Shaft Diameter 354.03 mm						
15.500	0.813	1350550	HDS1	R	F		15.438	0.625	1394230	HDS1	R	F	
15.500	0.813	1350555	HDS1	V	F		15.438	0.750	1394250	HDS1	R	F	
15.500	0.813	1350552	HDS2	R	F		16.000	0.875	1394600	HDS1	R	F	
15.500	0.813	1350564	HDS2	V	F		METRIC 13.976 in. Shaft Diameter 355 mm						
15.500	0.813	1350969	HDSF2	VT	F		393	18	355X393X18 HDS1 R	HDS1	R	F	
15.500	0.813	1350950	HDSH7	HT	F		INCH 13.985 in. Shaft Diameter 355.22 mm						
15.500	0.813	1350557	HS7	R	F	◇	15.500	0.625	526447	HS4	R	F	◇
15.500	0.813	594222	HS8	R	F	◇	INCH 14.000 in. Shaft Diameter 355.60 mm						
15.500	0.875	1350560	HDS1	R	F		15.000	0.500	1400018	HS8	R	F	◇
15.500	0.875	1350954	HDSA2	RD	F		15.000	0.625	594326	HS8	V	F	◇
15.500	1.000	1350580	HDS1	R	F		15.500	0.625	1400230	HDS1	R	F	
15.500	1.000	1350583	HDS1	V	F		15.500	0.625	1400232	HDS2	R	F	
15.500	1.000	1350532	HDS2	R	F		INCH 13.730 in. Shaft Diameter 348.74 mm						
15.500	1.000	1332-1532-64 HDSA2 RD	HDSA2	RD	F		15.730	0.750	1373519	HDS1	V	F	
15.500	1.000	1350587	HS7	R	F	◇	INCH 13.750 in. Shaft Diameter 349.25 mm						
15.752	1.000	1350690	HDS1	R	F		15.000	0.750	565618	HDS1	R	F	
METRIC 13.504 in. Shaft Diameter 343 mm							<i>SPECIAL CASE FOR VRING SURFACE</i>						
381	21	343X381X21 HS8 R	HS8	R	F	◇							
INCH 13.611 in. Shaft Diameter 345.72 mm													
15.499	0.750	556079-60	HDS1	H	F								
INCH 13.625 in. Shaft Diameter 346.08 mm													
15.125	0.625	1363238	HS8	R	F	◇							
15.125	0.625	1362248	HS8	V	F	◇							
15.625	0.813	1363557	HS7	R	F	◇							
16.000	1.000	1362718	HS8	R	F	◇							
16.125	1.250	1363790	HDS1	R	F								
INCH 13.688 in. Shaft Diameter 347.68 mm													
15.188	1.000	1369290	HDS1	R	F								
INCH 13.730 in. Shaft Diameter 348.74 mm													

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Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures		
INCH (cont.)				14.000 in. Shaft Diameter			355.60 mm								
15.500	0.625	1400234	HDS2	V	F		400	18	360X400X18 HDS1 V	HDS1	V	F			
15.500	0.625	1400235	HDS2L08	R	F		400	18	360X400X18 HSS6 H	HSS6	H	F	◇		
15.500	0.625	1400227	HS7	D	F	◇	400	18	360X400X18 HSS8 H	HSS8	H	F	◇		
15.500	0.625	1400237	HS7	R	F	◇	400	18	360X400X18 HS8 V	HS8	V	F	◇		
15.500	0.625	1400238	HS8	R	F	◇	400	20	360X400X20 HDS1 H	HDS1	H	F			
15.500	0.688	1400240	HDS1	R	F		400	20	360X400X20 HDS1 R	HDS1	R	F			
15.500	0.688	1400010	HDS1	V	F		400	20	360X400X20 HDS1 V	HDS1	V	F			
15.500	0.688	1400210	HDS7	R	F		400	20	360X400X20 HDS2 R	HDS2	R	F			
15.500	0.750	1400250	HDS1	R	F		400	20	360X400X20 HDS2 R1	HDS2	R	F			
15.500	0.750	1400253	HDS1	V	F		400	20	360X400X20 HDSH2 VT1	HDSH2	VT	F	■		
15.500	0.750	1400257	HS7	R	F	◇	400	20	360X400X20 HSS8 H	HSS8	H	F	◇		
15.500	0.750	1400258	HS8	R	F	◇	400	20	360X400X20 HS7 R	HS7	R	F	◇		
15.500	0.750	594261	HS8	V	F	◇	400	22	360X400X22 HSS6 H	HSS6	H	F	◇		
15.500	0.906	526780	HDSA2	RD	F		400	25	360X400X25 HDS2 R	HDS2	R	F			
15.500	0.906	1400927	HDSA2	VD	F		400	25	360X400X25 HDSA1 VD	HDSA1	VD	F			
15.500	0.906	1400-1532-58	HDSA2 VD	HDSA2	VD	F	404	20	360X404X20 HDS7 R	HDS7	R	F			
15.500	1.000	1400925	HDSA1	RD	F		405	25	360X405X25 HS8 H	HS8	H	F	◇		
15.500	1.000	1400248	HS8	R	F	◇	420	25	360X420X25 HDS1 R	HDS1	R	F			
15.562	0.750	1400300	HDS1	R	F										
15.625	0.625	1400314	HDS1	V	F										
15.750	0.687	1400362	HDS2	R	F										
15.750	0.688	1400370	HDS1	R	F										
15.750	0.750	1400380	HDS1	R	F										
15.750	0.750	1400382	HDS2	R	F										
15.750	0.750	1400383	HDS2	V	F										
15.750	0.750	1400384	HDS2L08	R	F										
15.750	0.875	1400410	HDS1	R	F										
16.000	0.625	1400514	HS4	R	F	◇									
16.000	0.625	1400528	HS8	R	F	◇									
16.000	0.750	1400540	HDS1	R	F										
16.000	0.750	1400543	HDS1	V	F										
16.000	0.750	1400545	HDS2L08	R	F										
16.000	0.812	1400508	HS8	H	F	◇									
16.000	0.813	1400550	HDS1	R	F										
16.000	0.813	1400554	HDS1	V	F										
16.000	0.813	1400553	HDS2	R	F										
16.000	0.813	1400557	HS7	R	F	◇									
16.000	0.969	526467	HDSA2	RD	F										
16.000	1.000	1400580	HDS1	R	F										
16.000	1.000	1400582	HDS2	D	F										
16.000	1.000	1400585	HDS2	R	F										
16.000	1.000	1400-1600-64	HDS7 R	HDS7	R	F									
16.000	1.000	1400957	HDSF1	VT	F										
16.000	1.000	1400958	HDSA1	RD	F										
16.000	1.000	1400587	HS7	R	F	◇									
16.000	1.000	1400588	HS8	R	F	◇									
16.000	1.375	1400950	HDSA1	RD	F										
16.250	1.000	1400680	HDS1	R	F										
16.250	1.000	1400683	HDS1	V	F										
16.250	1.000	1400669	HDS7	V	F										
16.250	1.000	1400969	HDSA1	VD	F										
16.250	1.000	1400965	HDSA2	RD	F										
16.250	1.000	528307	HDSA2	VD	F										
16.500	1.000	1400780	HDS1	R	F										
INCH				14.125 in. Shaft Diameter			358.78 mm								
15.625	0.750	1413257	HS7	R	F	◇									
16.745	0.875	1413805	HDS2	D	F										
METRIC				14.173 in. Shaft Diameter			360 mm								
390	15.88	360X390X15.9	HS7 R	HS7	R	F	◇								
390	15.90	360X390X15.9	HDS2 R	HDS2	R	F									
390	18	360X390X18	HS5 H	HS5	H	F	◇								
392	20	360X392X20	HDS1 R	HDS1	R	F									
398.09	19.05	1417257	HS7	R	F	◇									
398.09	19.05	1417258	HS8	R	F	◇									
400	17	360X400X17	HDS2 R	HDS2	R	F									
400	17	360X400X17	HDS2 R1	HDS2	R	F									
400	18	360X400X18	HDS1 R	HDS1	R	F									
METRIC (cont.)				14.173 in. Shaft Diameter			360 mm								
400	18	360X400X18 HDS1 V	HDS1	V	F		400	18	360X400X18 HSS6 H	HSS6	H	F	◇		
400	18	360X400X18 HSS6 H	HSS6	H	F	◇	400	18	360X400X18 HSS8 H	HSS8	H	F	◇		
400	18	360X400X18 HSS8 H	HSS8	H	F	◇	400	18	360X400X18 HS8 V	HS8	V	F	◇		
400	20	360X400X20 HDS1 H	HDS1	H	F		400	20	360X400X20 HDS1 H	HDS1	H	F			
400	20	360X400X20 HDS1 R	HDS1	R	F		400	20	360X400X20 HDS1 R	HDS1	R	F			
400	20	360X400X20 HDS1 V	HDS1	V	F		400	20	360X400X20 HDS1 V	HDS1	V	F			
400	20	360X400X20 HDS2 R	HDS2	R	F		400	20	360X400X20 HDS2 R	HDS2	R	F			
400	20	360X400X20 HDS2 R1	HDS2	R	F		400	20	360X400X20 HDS2 R1	HDS2	R	F			
400	20	360X400X20 HDSH2 VT1	HDSH2	VT	F	■	400	20	360X400X20 HDSH2 VT1	HDSH2	VT	F	■		
400	20	360X400X20 HSS8 H	HSS8	H	F	◇	400	20	360X400X20 HSS8 H	HSS8	H	F	◇		
400	20	360X400X20 HS7 R	HS7	R	F	◇	400	20	360X400X20 HS7 R	HS7	R	F	◇		
400	22	360X400X22 HSS6 H	HSS6	H	F	◇	400	22	360X400X22 HSS6 H	HSS6	H	F	◇		
400	25	360X400X25 HDS2 R	HDS2	R	F		400	25	360X400X25 HDS2 R	HDS2	R	F			
400	25	360X400X25 HDSA1 VD	HDSA1	VD	F		400	25	360X400X25 HDSA1 VD	HDSA1	VD	F			
404	20	360X404X20 HDS7 R	HDS7	R	F		404	20	360X404X20 HDS7 R	HDS7	R	F			
405	25	360X405X25 HS8 H	HS8	H	F	◇	405	25	360X405X25 HS8 H	HS8	H	F	◇		
420	25	360X420X25 HDS1 R	HDS1	R	F		420	25	360X420X25 HDS1 R	HDS1	R	F			
INCH				14.188 in. Shaft Diameter			360.38 mm								
15.500	0.688	1418120	HDS1	D	F		15.500	0.688	1418120	HDS1	D	F			
15.750	0.750	1419300	HDS1	R	F		15.750	0.750	1419300	HDS1	R	F			
15.750	0.750	1418268	HS8	R	F	◇	15.750	0.750	1418268	HS8	R	F	◇		
16.500	0.875	1419700	HDS1	R	F		16.500	0.875	1419700	HDS1	R	F			
INCH				14.250 in. Shaft Diameter			361.95 mm								
15.750	0.750	1425248	HDS1	H	F		15.750	0.750	1425248	HDS1	H	F			
15.750	0.750	1425250	HDS1	R	F		15.750	0.750	1425250	HDS1	R	F			
15.750	0.750	1425252	HDS2	R	F		15.750	0.750	1425252	HDS2	R	F			
15.750	0.750	1425257	HS7	R	F	◇	15.750	0.750	1425257	HS7	R	F	◇		
15.750	0.750	1425258	HS8	R	F	◇	15.750	0.750	1425258	HS8	R	F	◇		
16.000	0.875	1425410	HDS1	R	F		16.000	0.875	1425410	HDS1	R	F			
16.250	0.813	1425550	HDS1	R	F		16.250	0.813	1425550	HDS1	R	F			
16.250	0.813	1425552	HDS2	R	F		16.250	0.813	1425552	HDS2	R	F			
16.250	0.813	1425557	HS7	R	F	◇	16.250	0.813	1425557	HS7	R	F	◇		
16.250	0.875	1425560	HDS1	R	F		16.250	0.875	1425560	HDS1	R	F			
16.250	1.000	1425580	HDS1	R	F		16.250	1.000	1425580	HDS1	R	F			
16.250	1.000	1425585	HDS2	R	F		16.250	1.000	1425585	HDS2	R	F			
16.250	1.000	1425950	HDSA1	RD	F		16.250	1.000	1425950	HDSA1	RD	F			
16.250	1.000	1425587	HS7	R	F	◇	16.250	1.000	1425587	HS7	R	F	◇		
METRIC				14.252 in. Shaft Diameter			362 mm								
402	18	362X402X18	HS8 R	HS8	R	F	◇	402	18	362X402X18	HS8 R	HS8	R	F	◇
INCH				14.325 in. Shaft Diameter			363.86 mm								
16.000	0.688	1432343	HDS2	D	F		16.000	0.688	1432343	HDS2	D	F			
INCH				14.350 in. Shaft Diameter			364.49 mm								
15.748	0.787	1435172	HDS2	R	F		15.748	0.787	1435172	HDS2	R	F			
METRIC				14.370 in. Shaft Diameter			365 mm								
400	17	365X400X17 HDS1 R	HDS1	R	F		400	17	365X400X17 HDS1 R	HDS1	R	F			
405	18	365X405X18 HDS2 R	HDS2	R	F		405	18	365X405X18 HDS2 R	HDS2	R	F			
405	18	365X405X18 HS8 R	HS8	R	F	◇	405	18	365X405X18 HS8 R	HS8	R	F	◇		
405	18	365X405X18 HS8 V	HS8	V	F	◇	405	18	365X405X18 HS8 V	HS8	V	F	◇		
INCH				14.375 in. Shaft Diameter			365.13 mm								
15.875	0.750	1438258	HS8	R	F	◇	15.875	0.750	1438258	HS8	R	F	◇		
16.000	0.688	1438320	HDS1	R	F		16.000	0.688	1438320	HDS1	R	F			
16.000	0.688	1438321	HDS2	D	F		16.000	0.688	1438321	HDS2	D	F			
16.000	0.688	1438322	HDS2	R	F		16.000	0.688	1438322	HDS2	R	F			
16.000	0.688	1424-1600-44	HS5 R	HS5	R	F	◇	16.000	0.688	1424-1600-44	HS5 R	HS5			



Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH 14.500 in. Shaft Diameter 368.30 mm							INCH (cont.) 14.750 in. Shaft Diameter 374.65 mm						
15.500	0.500	1450018	HS7	R	F	◇	16.250	0.906	526466	HDSA2	RD	F	
15.750	0.750	1450140	HDS1	R	F	■	16.250	0.906	529859	HDSA2	VD	F	
15.922	0.516	513154	HS6	R	F	◇	<i>W/LIGHT LOAD SPRING</i>						
16.000	0.625	1450228	HS8	V	F	◇	16.252	0.750	1475302	HDS2	R	F	
16.000	0.688	1450240	HDS1	R	F		16.500	0.688	1475372	HDS2	R	F	
16.000	0.688	1450757	HDS1	V	F		16.500	0.688	1475383	HDS2	V	F	
16.000	0.688	1450242	HDS2	R	F		16.500	0.688	1475374	HDS2L24	R	F	
16.000	0.688	1432-1600-44 HDS2 V	HDS2	V	F		16.500	0.688	1475377	HS7	R	F	◇
16.000	0.688	1450244	HDS2L08	R	F		16.500	0.688	1475378	HS8	R	F	◇
16.000	0.688	1450220	HDS7	R	F		16.500	0.875	1475411	HDS2	R	F	
16.000	0.750	1450250	HDS1	R	F	■	16.500	1.000	1475420	HDS1	R	F	
16.000	0.750	1450252	HDS2	R	F		17.250	0.875	1475760	HDS1	R	F	
16.000	0.750	1450257	HS7	R	F	◇	METRIC 14.764 in. Shaft Diameter 375 mm						
16.000	0.750	1450268	HS8	R	F	◇	420	18	375X420X18 HDS1 R	HDS1	R	F	
16.000	0.906	526482	HDSA2	RD	F		420	18	375X420X18 HDS1 V	HDS1	V	F	
16.000	1.000	1450290	HDS1	R	F		INCH 14.875 in. Shaft Diameter 377.83 mm						
16.250	0.625	1450360	HDS1	R	F		16.375	0.750	1488252	HDS2	R	F	
16.250	1.000	1450420	HDS1	R	F		16.500	0.750	1488330	HDS1	R	F	
16.500	0.750	1450540	HDS1	R	F		16.500	0.750	1487337	HDS1	V	F	
16.500	0.750	1450542	HDS2	R	F		16.500	0.750	1488332	HDS2	R	F	
16.500	0.813	1450550	HDS1	R	F		16.750	0.875	1488480	HDS1	R	F	
16.500	0.813	1450553	HDS2	D	F		16.875	0.813	1488557	HS7	R	F	◇
16.500	0.813	1450559	HDS7	R	F		16.875	1.000	1488587	HS7	R	F	◇
16.500	1.000	1450580	HDS1	R	F		INCH 14.906 in. Shaft Diameter 378.61 mm						
16.500	1.000	1450583	HDS1	V	F		17.000	0.875	1491600	HDS1	R	F	
16.750	0.875	1450660	HDS1	R	F		17.000	0.875	1491603	HDS2	R	F	
INCH 14.563 in. Shaft Diameter 369.90 mm							INCH 14.938 in. Shaft Diameter 379.43 mm						
16.000	0.625	1456200	HDS1	R	F		16.438	0.750	1494257	HS7	R	F	◇
16.000	0.625	593612	HS8	R	F	◇	16.500	0.688	1493258	HS8	R	F	◇
METRIC 14.567 in. Shaft Diameter 370 mm							METRIC 14.961 in. Shaft Diameter 380 mm						
410	15	370X410X15 HDS2 R	HDS2	R	F		418	19	380X418X19 HS7 R	HS7	R	F	◇
410	16	370X410X16 HDS1 R	HDS1	R	F		418	19	380X418X19 HS8 R	HS8	R	F	◇
410	16	370X410X16 HDS2 R	HDS2	R	F		420	16	380X420X16 HDS1 R	HDS1	R	F	
410	16	370X410X16 HS6 V	HS6	V	F	◇	420	18	380X420X18 HDS2 V	HDS2	V	F	
410	18	370X410X18 HDS1 R	HDS1	R	F		420	20	380X420X20 HDS1 R	HDS1	R	F	
414	9.50	1456368	HS8	H	F	◇	420	20	380X420X20 HDS2 D	HDS2	D	F	
414	13	370X414X13 HS8 H	HS8	H	F	◇	420	20	380X420X20 HDS2 R	HDS2	R	F	
414	16	370X414X16 HDS7 R	HDS7	R	F		420	20	380X420X20 HDS2 V	HDS2	V	F	
420	25	370X420X25 HDS1 R	HDS1	R	F		420	20	380X420X20 HS7 R	HS7	R	F	◇
INCH 14.625 in. Shaft Diameter 371.48 mm							INCH 15.000 in. Shaft Diameter 381.00 mm						
15.625	0.500	1462018	HS8	R	F	◇	16.000	0.500	1500017	HS7	R	F	◇
16.125	0.750	1463250	HDS1	R	F		16.000	0.500	1500018	HS8	R	F	◇
16.125	0.750	1463252	HDS2	R	F		16.500	0.688	565619	HDS1	R	F	
16.125	0.750	1463257	HS7	R	F	◇	<i>SPECIAL CASE FOR VRING SURFACE</i>						
16.250	0.750	1462330	HDS1	V	F		16.500	0.688	1500240	HDS1	R	F	
16.500	0.875	1463480	HDS1	R	F		16.500	0.688	1500244	HDS2	D	F	
16.625	0.875	1463565	HDS2	R	F		16.500	0.688	1500245	HDS2	R	F	
17.000	0.875	1463710	HDS1	R	F		16.500	0.688	1500243	HDS2	V	F	
INCH 14.688 in. Shaft Diameter 373.08 mm							INCH 15.000 in. Shaft Diameter 381.00 mm						
16.000	0.688	1468129	HDS2	D	F		16.500	0.688	529889	HS8	R	F	◇
16.188	0.625	1469230	HDS1	R	F		16.500	0.734	511156	HS6	R	F	◇
INCH 14.750 in. Shaft Diameter 374.65 mm							INCH 15.000 in. Shaft Diameter 381.00 mm						
16.250	0.625	1475230	HDS1	R	F		16.500	0.750	1500252	HDS1	D	F	
16.250	0.625	1475238	HS8	R	F	◇							
16.250	0.688	1475240	HDS1	R	F								
16.250	0.688	1475244	HDS1L08	V	F								
16.250	0.688	1475243	HDS2	D	F								
16.250	0.688	596214	HDS7	R	F								
16.250	0.750	1475252	HDS2	R	F								
16.250	0.750	1475253	HDS2	V	F								
16.250	0.750	1475257	HS7	R	F	◇							
16.250	0.750	1475258	HS8	R	F	◇							
16.250	0.750	1475218	HS8	V	F	◇							

Key features: ▲ WasteWatcher ■ Bore-Tite ▸ SS Case ◎ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.





Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH (cont.) 15.000 in. Shaft Diameter 381.00 mm						
16.500	0.750	1500250	HDS1	R	F	
16.500	0.750	1500253	HDS1	V	F	
16.500	0.750	1500222	HDS2	R	F	
16.500	0.750	1500254	HDS2	V	F	
16.500	0.750	1500257	HS7	R	F	◇
16.500	0.750	1500258	HS8	R	F	◇
16.500	1.000	1500292	HDS2	R	F	
16.750	0.750	1500380	HDS1	R	F	
16.750	0.875	1500410	HDS1	R	F	
16.882	0.855	593462	HS8	R	F	◇
17.000	0.625	1500528	HS8	R	F	◇
17.000	0.709	1500520	HDS2	R	F	
17.000	0.750	1500540	HDS1	R	F	
17.000	0.750	1500543	HDS2	R	F	
17.000	0.812	1500510	HDS7	R	F	
17.000	0.812	1500959	HDSH7	HT	F	
17.000	0.813	1500550	HDS1	R	F	
17.000	0.813	1500552	HDS2	R	F	
17.000	0.813	1500553	HDS2	V	F	
17.000	0.813	1500557	HS7	R	F	◇
17.000	0.813	1500558	HS8	R	F	◇
17.000	0.875	1500560	HDS1	R	F	
17.000	0.875	1500564	HDS1	V	F	
17.000	0.875	1500563	HDS2	R	F	
17.000	1.000	1500580	HDS1	R	F	
17.000	1.250	1500950	HDSA1	RD	F	
17.500	0.875	1500760	HDS1	R	F	
17.500	0.938	1500770	HDS1	R	F	
17.500	0.938	1500772	HDS2	R	F	
17.500	1.000	1500780	HDS1	R	F	
17.500	1.000	1500973	HDSA1	RD	F	
17.500	1.250	1500800	HDS1	R	F	

INCH 15.100 in. Shaft Diameter 383.54 mm
17.100 1.000 1510522 HDS1 V F

INCH 15.125 in. Shaft Diameter 384.18 mm
16.750 0.750 1513330 HDS1 R F

METRIC 15.157 in. Shaft Diameter 385 mm
421 16 385X421X16 HDS2 R HDS2 R F
432 15 385X432X15 HDS2 D HDS2 D F

INCH 15.188 in. Shaft Diameter 385.78 mm
16.813 0.750 1512-1652-48 HDS1 V HDS1 V F
16.813 0.750 1512-1652-48 HDS7 H HDS7 H F

INCH 15.250 in. Shaft Diameter 387.35 mm
16.625 0.500 1525158 HS8 R F ◇
16.625 0.531 1525288 HS8 D F ◇
16.625 0.550 1525178 HS8 V F ◇
16.625 0.593 1525168 HS8 R F ◇
16.750 0.688 1525228 HDS1 H F
16.750 0.688 1525240 HDS1 R F
16.750 0.688 1525242 HDS2 R F
16.750 0.750 1525250 HDS1 R F
16.750 0.750 1525252 HDS2 R F
16.750 0.750 1525253 HDS2 V F
16.750 0.750 1525257 HS7 R F ◇
16.750 0.875 1525278 HS8 R F ◇
16.754 0.750 1525220 HDS1 R F
17.250 0.625 1525525 HDS2L32 R F
17.250 0.625 1525511 HDS7 R F
17.250 0.750 1525542 HDS2 R F
17.250 0.750 1525528 HDS7 R F
17.250 0.813 1525550 HDS1 R F
17.250 0.813 1525554 HDS2 R F
17.250 0.813 1525557 HS7 R F ◇

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH 15.313 in. Shaft Diameter 388.95 mm						
17.313	0.688	1531534	HDS1L08	R	F	
17.313	0.750	1531541	HDS1L08	R	F	

METRIC 15.354 in. Shaft Diameter 390 mm						
430	16	390X430X16 HDS1 R	HDS1	R	F	
430	16	390X430X16 HDS2 R	HDS2	R	F	
430	18	390X430X18 HDS2 R	HDS2	R	F	
430	18	390X430X18 HDS2 V	HDS2	V	F	
430	19	390X430X19 HS8V	HS8	V	F	◇
430	19.05	1535264	HS4	R	F	◇
430	20	390X430X20 HDS2 D	HDS2	D	F	
430	20	390X430X20 HDS2 V	HDS2	V	F	
430	20	390X430X20 HSS5 R	HSS5	R	F	◇
434	18	390X434X18 HDS1 R	HDS1	R	F	
434	20	390X434X20 HDS2 R	HDS2	R	F	
434	20	390X434X20 HS5 R	HS5	R	F	◇
434	20	390X434X20 HS5V	HS5	V	F	◇
434	20	390X434X20 HS8 R	HS8	R	F	◇
434	22	390X434X22 HDSA2 VD	HDSA2	VD	F	
450	25	390X450X25 HDS1 R	HDS1	R	F	

INCH 15.375 in. Shaft Diameter 390.53 mm						
16.875	0.750	1538257	HS7	R	F	◇
17.250	0.750	1538470	HDS1	R	F	
17.375	0.813	1538550	HDS1	R	F	
17.375	0.813	1538552	HDS2	R	F	

METRIC 15.433 in. Shaft Diameter 392 mm						
432	18	392X432X18 HS8 R	HS8	R	F	◇

INCH 15.438 in. Shaft Diameter 392.13 mm						
16.938	0.750	1544219	HS8	D	F	◇

METRIC 15.472 in. Shaft Diameter 393 mm						
444.55	18	1547530	HDS1	R	F	

INCH 15.500 in. Shaft Diameter 393.70 mm						
16.500	0.500	1550028	HS8	D	F	◇
16.500	0.500	1550018	HS8	R	F	◇
16.875	0.625	1550160	HDS1	R	F	
16.875	0.625	1550162	HDS2	R	F	
16.875	0.625	1550163	HDS2	V	F	
17.000	0.750	1550250	HDS1	R	F	
17.000	0.750	1550252	HDS1L08	R	F	
17.000	0.750	1550254	HDS1L12	V	F	
17.000	0.750	1550284	HDS2	V	F	
17.000	0.750	1550255	HDS2L08	R	F	
17.000	0.750	1550257	HS7	R	F	◇
17.000	0.750	594103	HS7	V	F	◇
17.000	0.750	1550258	HS8	R	F	◇
17.382	0.871	592900	HS8	R	F	◇
17.500	0.750	1550540	HDS1	R	F	
17.500	0.750	1550542	HDS2	R	F	
17.500	0.813	1550550	HDS1	R	F	
17.500	0.813	1550554	HDS1	V	F	
17.500	0.813	1550553	HDS2	R	F	
17.500	0.813	1550565	HDS2L16	R	F	
17.500	0.813	1550575	HDS2L24	R	F	
17.500	0.813	1550559	HDS7	R	F	
17.500	0.813	1550551	HDS7L16	R	F	
17.500	0.813	1550557	HS7	R	F	◇
17.500	0.875	1550560	HDS1	R	F	
17.500	1.000	1550580	HDS1	R	F	
17.500	1.000	1550587	HS7	R	F	◇
17.500	1.000	1550528	HS8	R	F	◇
17.500	1.031	526475	HDSA2	RD	F	
17.500	1.031	529858	HDSA2	VD	F	
17.750	0.875	1550660	HDS1	R	F	

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.)		15.500 in. Shaft Diameter		393.70 mm			INCH		15.938 in. Shaft Diameter		404.83 mm		
18.000	1.000	1550792	HDS2	D	F		17.313	0.625	1594160	HDS1	R	F	
18.000	1.000	1550782	HDS2	R	F								
METRIC		15.551 in. Shaft Diameter		395 mm			INCH		16.000 in. Shaft Diameter		406.40 mm		
430	18	395X430X18 HDS2 H	HDS2	H	F		17.000	0.350	511202	HD1	D	G	
430	18	395X430X18 HDS2 R2	HDS2	R	F		17.000	0.500	1600018	HS8	R	F	◊
430	20	395X430X20 HDSF2 VT	HDSF2	VT	F		17.500	0.625	1600211	HDS7	H	F	
							17.500	0.625	1600238	HS8	R	F	◊
							17.500	0.688	1600240	HDS1	R	F	
							17.500	0.688	1600283	HDS1	V	F	
							17.500	0.688	1600244	HDS2	D	F	
							17.500	0.688	1600242	HDS2	R	F	
							17.500	0.734	510871	HS6	R	F	◊
							17.500	0.750	1600250	HDS1	R	F	
							17.500	0.750	1600255	HDS2	R	F	
							17.500	0.750	1600-1732-48 HDS2 H	HDS2	H	F	
							17.500	0.750	1600257	HS7	R	F	◊
							17.500	0.750	1600258	HS8	R	F	◊
							17.500	0.787	1600928	HDSH2	RT	F	▶
							17.500	0.875	1600926	HDSA2	RD	F	
							17.500	1.000	1600290	HDS1	R	F	
							17.500	1.000	1600293	HDS1	V	F	
							17.988	0.812	1600229	HDS7L24	D	F	■
							18.000	0.750	1600548	HDS1	R	F	
							18.000	0.750	1600549	HDS2	R	F	
							18.000	0.750	1600540	HDS7	R	F	
							18.000	0.750	596267	HDS7L20	R	F	
							18.000	0.750	1600578	HS8	R	F	◊
							18.000	0.750	1600518	HS8	V	F	◊
							18.000	0.812	1600561	HDS7L08	R	F	
							18.000	0.813	1600550	HDS1	R	F	
							18.000	0.813	1600554	HDS1L12	R	F	
							18.000	0.813	1600555	HDS2	R	F	
							18.000	0.813	1600574	HDS2	V	F	
							18.000	0.813	1600556	HDS2L16	R	F	
							18.000	0.813	1600519	HDS7	H	F	
							18.000	0.813	1600529	HDS7	R	F	
							18.000	0.813	1600520	HDS7L16	H	F	
							18.000	0.813	1600528	HDS7L16	R	F	
							18.000	0.813	1600558	HS8	R	F	◊
							18.000	0.875	1600560	HDS1	R	F	
							18.000	0.875	1600-1800-56 HDSF2 HT	HDSF2	HT	F	
							18.000	0.875	1600526	HS6	H	F	◊
							18.000	0.875	1600538	HS8	D	F	◊
							18.000	0.938	1600567	HS7	R	F	◊
							18.000	1.000	1600580	HDS1	R	F	
							18.000	1.000	1600583	HDS1	V	F	
							18.000	1.000	1600585	HDS2	R	F	
							18.000	1.000	1600-1800-64 HDS7 R	HDS7	R	F	
							18.000	1.000	1600955	HDSA2	RD	F	
							18.000	1.000	1600587	HS7	R	F	◊
							18.000	1.250	1600950	HDSA1	RD	F	
							18.250	0.750	1600650	HDS1	R	F	
							18.250	0.875	1600660	HDS1	R	F	
							18.500	0.811	1600750	HDS1	R	F	
METRIC		16.142 in. Shaft Diameter		410 mm			METRIC		16.142 in. Shaft Diameter		410 mm		
450	17.50	410X450X17.5 HDS1 V	HDS1	V	F		450	20	410X450X20 HDS2 R	HDS2	R	F	
450	20	410X450X20 HDS2 R	HDS2	R	F		454	20	410X454X20 HS5 R	HS5	R	F	◊
460	22	410X460X22 HDS2 R	HDS2	R	F		460	25	410X460X25 HS6 V	HS6	V	F	◊
460	25	410X460X25 HS6 V	HS6	V	F		470	16	410X470X16 HS8 R	HS8	R	F	◊
470	16	410X470X16 HS8 R	HS8	R	F		470	25	410X470X25 HDS1 R	HDS1	R	F	
470	25	410X470X25 HDS1 R	HDS1	R	F		470	25	410X470X25 HDS1 R1	HDS1	R	F	
INCH		16.188 in. Shaft Diameter		411.18 mm			INCH		16.188 in. Shaft Diameter		411.18 mm		
18.000	0.750	1618458	HS8	V	F	◊							

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Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ☉ SS Spring ◆ Pressure seal up to 50 psi ◊ Cover plate required





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH				16.250 in. Shaft Diameter 412.75 mm		
17.750	0.500	1625248	HS8	R	F	◇
17.750	0.625	1625230	HDS1	R	F	
17.750	0.625	1625237	HS7	R	F	◇
17.750	0.688	1625240	HDS1	R	F	
17.750	0.688	1625242	HDS1L08	R	F	
17.750	0.688	1625243	HDS2	R	F	
17.750	0.688	1625210	HDS7	R	F	
17.750	0.688	1625249	HDS7L16	R	F	
17.750	0.750	1625250	HDS1	R	F	
17.750	0.750	1625258	HS8	R	F	◇
18.000	0.625	1625362	HDS2	R	F	
18.000	0.625	1625364	HDS2L04	R	F	
18.000	0.750	1625380	HDS1	R	F	
18.000	0.750	1625383	HDS1	V	F	
18.000	0.844	526483	HDSA2	RD	F	
18.000	0.844	530060	HDSA2	VD	F	
W/LIGHT LOAD SPRING						
18.000	1.000	1625420	HDS1	R	F	
18.000	1.000	593024	HS8	R	F	◇

METRIC				16.339 in. Shaft Diameter 415 mm		
465	20	415X465X20	HDS2 R	HDS2	R	F

INCH				16.375 in. Shaft Diameter 415.93 mm		
17.562	1.000	1637901	HDSA1	RD	F	
18.375	1.000	1638580	HDS1	R	F	

METRIC				16.457 in. Shaft Diameter 418 mm		
455	16	418X455X16	HDS2 R	HDS2	R	F

INCH				16.500 in. Shaft Diameter 419.10 mm		
17.750	0.625	1650132	HDS1	R	F	
17.750	0.750	1650130	HDS1	R	F	
17.750	0.750	1650138	HS8	R	F	◇
18.000	0.625	1656199	HDS7	V	F	
18.000	0.750	1650250	HDS1	R	F	
18.000	0.750	1650252	HDS2	R	F	
18.000	0.750	1650202	HDS2	V	F	
18.000	0.750	1650255	HDS2L24	R	F	
18.000	0.750	1650280	HDS7	R	F	
18.000	0.750	1650258	HS8	R	F	◇
18.000	0.847	527496	HS8	R	F	◇
18.000	1.000	1650290	HDS1	R	F	
18.250	0.750	1650380	HDS1	R	F	
18.250	0.787	1632-1816-50	HDSH7 RT	HDSH7	RT	F
18.250	0.813	1650390	HDS1	R	F	
18.500	0.750	1650540	HDS1	R	F	
18.500	0.813	1650550	HDS1	R	F	
18.500	0.813	1650573	HDS1	V	F	
18.500	0.813	1650553	HDS2	R	F	
18.500	0.813	1650552	HDS2	V	F	
18.500	0.813	1632-1832-52	HDS2 H	HDS2	H	F
18.500	0.813	1650555	HDS2L16	R	F	
18.500	0.813	1632-1832-52	HDS7 H	HDS7	H	F
18.500	0.813	1650557	HS7	R	F	◇
18.500	1.000	1650580	HDS1	R	F	
18.500	1.000	1650579	HS8	D	F	◇
19.000	0.750	1650770	HDS1	R	F	
19.000	0.874	1650769	HDS2L32	D	F	
19.000	0.875	1650660	HDS1	R	F	
19.000	1.000	1650780	HDS1	R	F	

METRIC				16.535 in. Shaft Diameter 420 mm		
460	20	420X460X20	HDS1 R	HDS1	R	F
460	20	420X460X20	HDS1 V	HDS1	V	F
460	20	1653282	HDS2	D	F	
460	20	420X460X20	HDS2 R	HDS2	R	F
460	20	420X460X20	HDS2 V	HDS2	V	F

METRIC (cont.)				16.535 in. Shaft Diameter 420 mm		
460	20	420X460X20	HDS7 R	HDS7	R	F
460	20	420X460X20	HS7 R	HS7	R	F ◇
464	20	420X464X20	HDS2 R	HDS2	R	F
470	22	420X470X22	HDS1 R1	HDS1	R	F
480	25	420X480X25	HDS1 R	HDS1	R	F
480	25	420X480X25	HDS2 V	HDS2	V	F
480	25	420X480X25	HDSH2 VT1	HDSH2	VT	F
480	28	420X480X28	HDS1 R	HDS1	R	F

METRIC				16.732 in. Shaft Diameter 425 mm		
465	20	425X465X20	HDSF2 VT1	HDSF2	VT	F
465	20	425X465X20	HDSH2 VT	HDSH2	VT	F

INCH				16.750 in. Shaft Diameter 425.45 mm		
18.156	0.766	593425	HS8	R	F	◇
18.250	0.688	1675240	HDS1	R	F	
18.250	0.688	1675242	HDS2	R	F	
18.250	0.750	1675257	HS7	R	F	◇
18.250	0.750	1675258	HS8	R	F	◇
18.500	0.875	1675410	HDS1	R	F	
18.625	1.000	1648-1840-64	HS8 R	HS8	R	F ◇
18.626	0.813	596027	HS8	R	F	◇
18.632	0.855	530546	HS8	R	F	◇
18.750	0.875	1675510	HDS2	R	F	
19.250	1.000	526650	HDS1	R	F	

INCH				16.875 in. Shaft Diameter 428.63 mm		
18.375	0.500	1688217	HS7	R	F	◇
18.875	0.813	1688557	HS7	R	F	◇

METRIC				16.929 in. Shaft Diameter 430 mm		
470	20	430X470X20	HDS7 R1	HDS7	R	F
480	16	430X480X16	HDS1 R	HDS1	R	F
480	16	430X480X16	HDS2 R	HDS2	R	F
480	18	430X480X18	HDS2 R	HDS2	R	F
480	22	430X480X22	HDS1 V	HDS1	V	F
480	25	430X480X25	HDS2 R	HDS2	R	F
480	25	430X480X25	HDS2 V	HDS2	V	F
490	25	430X490X25	HDS1 R	HDS1	R	F

INCH				16.938 in. Shaft Diameter 430.23 mm		
19.291	0.906	1694725	HDS2L04	R	F	

INCH				17.000 in. Shaft Diameter 431.80 mm		
18.250	0.625	1700110	HDS1	R	F	
18.500	0.625	1700232	HDS2	R	F	
18.500	0.625	1700202	HDS2	V	F	
18.500	0.625	1700280	HDS7	R	F	
18.500	0.625	1700237	HS7	R	F	◇
18.500	0.625	1700238	HS8	R	F	◇
18.500	0.625	1700228	HS8	V	F	◇
18.500	0.688	1700240	HDS1	R	F	
18.500	0.688	1700283	HDS1	V	F	
18.500	0.688	1700242	HDS1L08	R	F	
18.500	0.688	1700245	HDS2	R	F	
18.500	0.688	1700243	HDS2	V	F	
18.500	0.688	1700220	HDS7	R	F	
18.500	0.750	1700250	HDS1	R	F	
18.500	0.750	1700253	HDS1	V	F	
18.500	0.750	1700251	HDS2	D	F	
18.500	0.750	1700212	HDS2L32	V	F	
18.500	0.750	1700257	HS7	R	F	◇
19.000	0.625	1700528	HDS2	D	F	
19.000	0.750	1700540	HDS1	R	F	
19.000	0.750	1700541	HDS2	R	F	
19.000	0.813	1700550	HDS1	R	F	
19.000	0.813	1700553	HDS1	V	F	
19.000	0.813	1700552	HDS2	R	F	

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea-tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea-tures	
INCH (cont.) 17.000 in. Shaft Diameter 431.80 mm							INCH (cont.) 17.500 in. Shaft Diameter 444.50 mm							
19.000	0.813	1700573	HDS2	V	F		19.500	0.750	1750529	HDS7	H	F		
19.000	0.813	1700579	HDS7	R	F		19.500	0.875	1750528	HS8	R	F	◆	
19.000	0.813	1700576	HS6	D	F	◆	19.500	1.000	1750580	HDS1	R	F		
19.000	0.813	1700557	HS7	R	F	◆	19.500	1.000	1750587	HS7	R	F	◆	
19.000	0.813	1700558	HS8	R	F	◆	19.750	0.812	1750662	HDS2	R	F		
19.000	0.875	1700560	HDS1	R	F		19.750	0.813	1750667	HS7	R	F	◆	
19.000	0.906	1700565	HDS2L04	D	F		20.000	1.000	1750780	HDS1	R	F		
19.000	1.000	1700585	HDS1	D	F									
19.000	1.000	1700580	HDS1	R	F									
19.000	1.000	1700584	HDS2	D	F		METRIC 17.520 in. Shaft Diameter 445 mm							
19.000	1.250	1700950	HDSA1	RD	F		485	20	445X485X20	HDS1 R	HDS1	R	F	
19.250	1.000	1700680	HDS1	R	F		485	20	445X485X20	HDS7 R1	HDS7	R	F	
METRIC 17.126 in. Shaft Diameter 435 mm							INCH 17.531 in. Shaft Diameter 445.29 mm							
475	20	435X475X20	HDS1 R	HDS1	R	F	19.125	0.719	1753230	HDS1	V	F		
485	22	435X485X22	HSS5 R	HSS5	R	F	◆	INCH 17.625 in. Shaft Diameter 447.68 mm						
INCH 17.250 in. Shaft Diameter 438.15 mm							INCH 17.625 in. Shaft Diameter 447.68 mm							
18.750	0.625	1725230	HDS1	R	F	■	19.125	0.750	1763250	HDS1	R	F		
18.750	0.750	1725250	HDS1	R	F		19.125	0.750	1763217	HDS1	V	F		
18.750	0.750	1725255	HDS2	R	F		19.250	0.688	1763320	HDS1	R	F		
18.750	0.750	1725257	HS7	R	F	◆	19.250	0.688	1762332	HDS2	R	F		
18.750	0.750	1725258	HS8	R	F	◆	19.375	0.750	1763380	HDS1	R	F		
19.250	0.875	1725560	HDS1	R	F		19.375	0.875	1763412	HDS2	R	F		
19.250	0.938	1725570	HDS1	R	F		19.625	0.813	1763550	HDS1	R	F		
19.250	1.000	1725580	HDS1	R	F									
19.250	1.000	1725587	HS7	R	F	◆	METRIC 17.638 in. Shaft Diameter 448 mm							
19.500	0.875	1725660	HDS1	R	F		480	16	448X480X16	HDS2 R	HDS2	R	F	
METRIC 17.323 in. Shaft Diameter 440 mm							METRIC 17.717 in. Shaft Diameter 450 mm							
470	20	440X470X20	HDS1 R	HDS1	R	F	490	20	450X490X20	HDS1 R	HDS1	R	F	
472	16	440X472X16	HS8 R	HS8	R	F	500	20	450X500X20	HDS1 R	HDS1	R	F	
480	20	440X480X20	HDS1 R	HDS1	R	F	500	24	450X500X24	HDS1 V	HDS1	V	F	
480	20	440X480X20	HDS1 V	HDS1	V	F	500	25	450X500X25	HS8 R	HS8	R	F	◆
480	20	440X480X20	HDS7 R	HDS7	R	F	510	25	450X510X25	HDS2 R1	HDS2	R	F	
480	20	440X480X20	HS4 R	HS4	R	F	510	25	450X510X25	HDS7 R	HDS7	R	F	
480	20	440X480X20	HS8 R	HS8	R	F								
480	20	440X480X20	HS8 R	HS8	R	F								
480	20	440X480X20	HS8 V	HS8	V	F								
490	20	440X490X20	HDS1 R	HDS1	R	F	INCH 17.750 in. Shaft Diameter 450.85 mm							
490	20	440X490X20	HS8 R	HS8	R	F	18.750	0.500	1775017	HS7	R	F	◆	
							19.250	0.750	1775257	HS7	R	F	◆	
							19.750	0.750	1775540	HDS1	R	F		
							19.750	0.813	1775550	HDS1	R	F		
							19.750	0.813	1775557	HS7	R	F	◆	
							19.750	0.813	1775518	HS8	R	F	◆	
							19.750	1.000	1775580	HDS1	R	F		
INCH 17.375 in. Shaft Diameter 441.33 mm							INCH 17.818 in. Shaft Diameter 452.58 mm							
18.875	0.750	1737219	HDS7	R	F		19.750	0.750	1781502	HDS2	R	F		
INCH 17.438 in. Shaft Diameter 442.93 mm							INCH 17.874 in. Shaft Diameter 454.00 mm							
18.750	0.750	1743182	HDS2	R	F		19.874	0.702	1787519	HDS7L08	R	F		
							19.874	0.844	1787520	HDS7	R	F		
INCH 17.500 in. Shaft Diameter 444.50 mm							INCH 17.875 in. Shaft Diameter 454.03 mm							
18.500	0.500	1750017	HS7	R	F	◆	19.500	0.688	1788322	HDS2	D	F		
18.898	0.709	1750172	HDSF2	VU	F		19.875	0.750	1788540	HDS1	R	F		
19.000	0.625	1750230	HDS1	R	F		19.875	0.750	1787540	HDS7	R	F		
19.000	0.688	1750240	HDS1	R	F		19.875	0.813	1788550	HDS1	R	F		
19.000	0.688	1750245	HDS2	R	F		19.875	0.813	1788552	HDS2	R	F		
19.000	0.688	1750244	HDS2	V	F									
19.000	0.688	1750221	HDS7	R	F		INCH 17.938 in. Shaft Diameter 455.63 mm							
19.000	0.750	1750251	HDS1	D	F		19.750	1.000	1793442	HDS2	R	F		
19.000	0.750	1750250	HDS1	R	F									
19.000	0.750	1750254	HDS2	V	F		INCH 18.000 in. Shaft Diameter 457.20 mm							
19.000	0.750	1750259	HS8	D	F	◆	19.000	0.500	1800018	HS8	R	F	◆	
19.250	0.625	1750368	HS8	R	F	◆	19.375	0.625	593507	HS8	R	F	◆	
19.250	0.688	1750370	HDS1	R	F		19.500	0.625	1800242	HDS2	V	F		
19.250	0.688	1750372	HDS2	R	F		19.500	0.687	1800224	HDS2	V	F		
19.250	1.000	1750420	HDS1	R	F									
19.291	0.906	1750422	HDS2	R	F									
19.500	0.688	1750530	HDS1	R	F									
19.500	0.688	1750533	HDS2	D	F									
19.500	0.688	1750534	HDS2L08	R	F									
19.500	0.688	1750538	HS8	R	F	◆								

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Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea-tures
INCH (cont.) 18.000 in. Shaft Diameter 457.20 mm						
19.500	0.688	1800240	HDS1	R	F	
19.500	0.688	1800246	HDS2	D	F	
19.500	0.688	1800245	HDS2	R	F	
19.500	0.688	1800-1932-44 HDS7 H	HDS7	H	F	
19.500	0.688	1800218	HS8	R	F	◇
19.500	0.750	1800250	HDS1	R	F	
19.500	0.750	1800-1932-48 HDS2 H	HDS2	H	F	
19.500	0.750	1800257	HS7	R	F	◇
19.500	0.750	1800258	HS8	R	F	◇
19.750	0.750	1800382	HDS2	R	F	
19.750	0.750	1800387	HS7	R	F	◇
20.000	0.625	1800520	HDS2	R	F	
20.000	0.750	1800540	HDS1	R	F	
20.000	0.750	1800542	HDS2	D	F	
20.000	0.813	1800557	HS7	R	F	◇
20.000	0.813	1800559	HS8	D	F	◇
20.000	0.813	1800558	HS8	R	F	◇
20.000	0.875	1800560	HDS1	R	F	
20.000	0.875	1800563	HDS2	R	F	
20.000	0.875	1800573	HDS2	V	F	
20.000	1.000	1800580	HDS1	R	F	
20.000	1.000	1800587	HS7	R	F	◇
20.000	1.250	1800591	HDS1	R	F	
20.250	1.000	1800680	HDS1	R	F	
20.250	1.000	1800683	HDS1	V	F	
20.250	1.000	1800653	HDS7	V	F	
20.250	1.000	1800969	HDSA1	VD	F	
20.250	1.000	1800965	HDSA2	RD	F	
20.250	1.000	528308	HDSA2	VD	F	
20.276	1.000	1800688	HS8	R	F	◇
21.000	0.688	1800850	HDS1	R	F	
INCH 18.063 in. Shaft Diameter 458.80 mm						
19.875	0.750	1804-1956-48 HDS1 R	HDS1	R	F	
METRIC 18.110 in. Shaft Diameter 460 mm						
500	20	460X500X20 HDS1 R	HDS1	R	F	
500	20	460X500X20 HDS1 V	HDS1	V	F	
504	20	460X504X20 HDS1 R	HDS1	R	F	
510	20.62	460X510X21 HDS2 R	HDS2	R	F	
510	21	460X510X21 HDS1 H	HDS1	H	F	
510	22	460X510X22 HDSF2 VT	HDSF2	VT	F	
510	22	460X510X22 HDSH2 VT1	HDSH2	VT	F	
510	22	460X510X22 HS8 R	HS8	R	F	◇
510.92	20.65	1811550	HDS1	R	F	
520	25	460X520X25 HDS2 R	HDS2	R	F	
INCH 18.120 in. Shaft Diameter 460.25 mm						
20.500	1.000	1813720	HDS1	R	F	
INCH 18.175 in. Shaft Diameter 461.65 mm						
19.500	0.750	1817138	HS8	R	F	◇
INCH 18.250 in. Shaft Diameter 463.55 mm						
19.750	0.750	1825250	HDS1	R	F	
19.750	0.750	1825252	HDS2	R	F	
19.750	0.750	1825258	HS8	R	F	◇
20.000	0.750	1825379	HDS7	H	F	
20.250	0.813	1825557	HS7	R	F	◇
INCH 18.313 in. Shaft Diameter 465.15 mm						
19.492	0.750	1831070	HDS1	R	F	
INCH 18.375 in. Shaft Diameter 466.73 mm						
19.875	0.688	1838240	HDS1	R	F	
19.875	0.688	1838241	HDS2	R	F	
19.875	0.688	1824-1956-44 HDS2 H	HDS2	H	F	
19.875	0.688	1838245	HDS2L08	R	F	

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea-tures
INCH (cont.) 18.375 in. Shaft Diameter 466.73 mm						
19.875	0.688	1824-1956-44 HDS7 H	HDS7	H	F	
19.938	0.625	1838300	HDS1	R	F	
20.000	0.750	1838330	HDS1	R	F	
METRIC 18.386 in. Shaft Diameter 467 mm						
510	20	467X510X20 HDS2 V	HDS2	V	F	
METRIC 18.425 in. Shaft Diameter 468 mm						
530	20	468X530X20 HS8 R	HS8	R	F	◇
INCH 18.500 in. Shaft Diameter 469.90 mm						
20.000	0.750	1850250	HDS1	R	F	
20.000	0.750	1850257	HS7	R	F	◇
20.000	0.750	1850248	HS8	D	F	◇
20.500	0.750	1850540	HDS1	R	F	
20.500	0.750	1850542	HDS2	R	F	
20.500	0.813	1850552	HDS2	R	F	
20.500	0.813	1850554	HDS2	V	F	
20.500	0.813	1850520	HDS7	R	F	
20.500	0.813	1832-2032-52 HSS8 R	HSS8	R	F	◇
20.500	0.813	1832-2032-52 HS7 R	HS7	R	F	◇
20.500	0.813	1832-2032-52 HS8 R	HS8	R	F	◇
20.500	0.875	1850560	HDS1	R	F	
20.500	0.875	1850561	HDS2	R	F	
20.500	0.875	1850553	HDS2	V	F	
20.500	0.906	1850522	HDS2	R	F	
20.500	0.906	1850576	HDS2L16	R	F	
20.500	0.968	526468	HDSA2	RD	F	
20.500	0.968	1850952	HDSA2	VD	F	
20.500	1.000	1850580	HDS1	R	F	
20.500	1.000	1850587	HS7	R	F	◇
METRIC 18.504 in. Shaft Diameter 470 mm						
510	20	470X510X20 HDS1 R	HDS1	R	F	
510	20	470X510X20 HDS2 V	HDS2	V	F	
520	20	470X520X20 HDS1 R	HDS1	R	F	
520	20	470X520X20 HDS2 V	HDS2	V	F	
520	20.70	470X520X20.7 HS4 R	HS4	R	F	◇
530	25	470X530X25 HDS2 R	HDS2	R	F	
530	25	470X530X25 HDS7 R	HDS7	R	F	
530	26	470X530X26 HDS2 R	HDS2	R	F	
530	28	470X530X28 HDS7 R	HDS7	R	F	
505	17	475X505X17 HDSA1 RR	HDSA1	RR	F	
INCH 18.750 in. Shaft Diameter 476.25 mm						
19.750	0.500	1875017	HS7	R	F	◇
20.250	0.750	1875250	HDS1	R	F	
20.250	0.750	1875253	HDS2	R	F	
20.375	0.863	530250	HS8	R	F	◇
20.500	0.750	1875380	HDS1	R	F	
20.625	0.812	1875366	HS6	H	F	◇
20.632	0.855	593443	HS8	R	F	◇
20.750	0.750	1875540	HDS1	R	F	
20.750	0.813	1875553	HDS2	R	F	
20.750	0.916	527355	HS6	R	F	◇
INCH 18.875 in. Shaft Diameter 479.43 mm						
20.625	0.875	1888391	HDS1	R	F	
METRIC 18.898 in. Shaft Diameter 480 mm						
514	15	480X514X15 HS8 H	HS8	H	F	◇
520	20	480X520X20 HDS1 D	HDS1	D	F	
520	20	480X520X20 HDS1 R	HDS1	R	F	
520	20	480X520X20 HDS2 V	HDS2	V	F	
520	20	480X520X20 HDS7 D	HDS7	D	F	
520	20	480X520X20 HS8 R	HS8	R	F	◇
520	22	480X520X22 HDSA2 VD	HDSA2	VD	F	
530	20	480X530X20 HS8 R	HS8	R	F	◇

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures							
METRIC (cont.)							INCH (cont.)													
18.898 in. Shaft Diameter 480 mm							19.500 in. Shaft Diameter 495.30 mm													
530	22	480X530X22 HDS1 R	HDS1	R	F		21.500	0.750	1950540	HDS1	R	F								
530	25	480X530X25 HDS2 R	HDS2	R	F		21.500	0.750	1950542	HDS2	R	F								
530	25	480X530X25 HS5 R	HS5	R	F	◇	21.500	0.750	1932-2132-48 HDS2L24 R	HDS2L24	R	F								
540	20	480X540X20 HDS2 R	HDS2	R	F		21.500	0.750	1950211	HDS7	R	F								
540	25	480X540X25 HDS2 R	HDS2	R	F		21.500	0.813	1950557	HS7	R	F	◇							
							21.500	0.813	1950518	HS8	R	F	◇							
INCH							INCH													
19.000 in. Shaft Diameter 482.60 mm							19.625 in. Shaft Diameter 498.48 mm													
20.500	0.688	1900242	HDS2L08	H	F		21.625	0.813	1963550	HDS1	R	F								
20.500	0.750	1900250	HDS1	R	F		METRIC													
20.500	0.750	1900254	HDS2	R	F		19.685 in. Shaft Diameter 500 mm													
20.500	0.750	1900260	HDS2	V	F		540	16	500X540X16 HDS7 V	HDS7	V	F								
20.500	0.750	1900-2032-48 HDS2 H	HDS2	H	F		540	17	500X540X17 HDS2 V	HDS2	V	F								
20.500	0.750	1900255	HDS2L08	R	F		540	20	500X540X20 HDS1 R	HDS1	R	F								
20.500	0.750	1900251	HDS2L24	R	F		540	20	500X540X20 HDS1 V	HDS1	V	F								
20.500	0.750	1900249	HDS7	H	F		540	20	500X540X20 HDS1 V9	HDS1	V	F	▶							
20.500	0.750	1900211	HDS7	R	F		540	20	500X540X20 HDS2 V	HDS2	V	F								
20.500	0.750	1900-2032-48 HDS7 H	HDS7	H	F		540	20	500X540X20 HSS5 H	HSS5	H	F	◇							
20.500	0.750	1900239	HDS7K	R	F		540	20	500X540X20 HSS8 H	HSS8	H	F	◇							
20.500	0.750	1900257	HS7	R	F	◇	540	20	500X540X20 HSS8 R	HSS8	R	F	◇							
20.500	0.750	1900258	HS8	R	F	◇	540	20	500X540X20 HSS8 V	HSS8	V	F	◇							
20.500	0.875	1900274	HDS2	D	F		540	20	500X540X20 HDSA1 RD	HDSA1	RD	F								
20.500	0.875	1900275	HDS2L08	D	F		540	20	500X540X20 HS8 R	HS8	R	F	◇							
20.750	0.813	1900398	HS8	H	F	◇	550	18	500X550X18 HDS1 D	HDS1	D	F								
21.000	0.709	1900520	HDS2	R	F		550	18	500X550X18 HDS2 D	HDS2	D	F								
21.000	0.750	1900540	HDS1	R	F		550	18	500X550X18 HDS2 R	HDS2	R	F								
21.000	0.750	1900529	HDS1L16	R	F		550	18	500X550X18 HS8 V	HS8	V	F	◇							
21.000	0.750	1900548	HS8	R	F	◇	550	22	500X550X22 HSS5 R	HSS5	R	F	◇							
21.000	0.813	1900557	HS7	R	F	◇	550	25	500X550X25 HDS2 V1	HDS2	V	F								
21.000	0.813	1900-2100-52 HS8 H	HS8	H	F	◇	550	25	500X550X25 HDS7 R	HDS7	R	F								
21.000	0.870	1900954	HDSF2	VT	F		550	25	500X550X25 HDSF2 VT1	HDSF2	VT	F								
21.000	0.875	1900560	HDS1	R	F		550	25	500X550X25 HDSH2 VT	HDSH2	VT	F								
21.000	0.875	1900563	HDS2	R	F		560	25	1968710	HDS1	R	F								
21.000	0.875	1900562	HDS2	V	F		560	25	500X560X25 HDS2 R	HDS2	R	F								
21.000	0.875	1900566	HDS2L08	V	F		INCH													
21.000	1.000	1900580	HDS1	R	F		19.750 in. Shaft Diameter 501.65 mm													
21.000	1.000	1900512	HDS2	R	F		21.125	0.875	1975150	HDS1	R	F								
21.250	0.875	1900660	HDS1	R	F		21.500	1.000	1975420	HDS1	R	F								
21.500	0.750	1900740	HDS1	R	F		21.632	0.855	592838	HS8	R	F	◇							
21.500	0.750	1900741	HDS2	R	F		21.750	0.625	1975528	HS8	R	F	◇							
METRIC							METRIC													
19.485 in. Shaft Diameter 485 mm							19.882 in. Shaft Diameter 505 mm													
535	22	485X535X22 HDS1 R	HDS1	R	F		555	20.62	505X555X21 HDS2 R	HDS2	R	F								
INCH							INCH													
19.125 in. Shaft Diameter 485.78 mm							19.938 in. Shaft Diameter 506.43 mm													
21.125	0.813	1913557	HS7	R	F	◇	21.688	0.625	1994360	HDS1	R	F								
INCH							INCH													
19.250 in. Shaft Diameter 488.95 mm							20.000 in. Shaft Diameter 508.00 mm													
20.750	0.625	596180	HDS7	R	F		21.000	0.500	2000017	HS7	R	F	◇							
20.750	0.750	1925250	HDS1	R	F		21.500	0.625	2000230	HDS1	R	F								
20.750	0.750	1925252	HDS2	R	F		21.500	0.625	2000238	HS8	R	F	◇							
20.750	0.875	1925920	HDSA1	RD	F		21.500	0.750	2000250	HDS1	R	F								
21.000	0.750	1925380	HDS1	R	F		21.500	0.750	2000253	HDS1L08	R	F								
21.250	0.938	1925570	HDS1	R	F		21.500	0.750	2000232	HDS2	R	F								
21.250	1.000	1925580	HDS1	R	F		21.500	0.750	2000262	HDS2	V	F								
METRIC							INCH													
19.291 in. Shaft Diameter 490 mm							19.500 in. Shaft Diameter 495.30 mm													
530	20	490X530X20 HDS1 R	HDS1	R	F		21.000	0.750	565621	HDS1	R	F								
530	20	490X530X20 HDS1 V	HDS1	V	F		21.000	0.750	1950250	HDS1	R	F								
530	20.50	490X530X20.5 HS5 D	HS5	D	F	◇	21.000	0.750	528379	HDS2	R	F								
540	25	490X540X25 HS8 R	HS8	R	F	◇	Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case © SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required													

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.



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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.)						
20.000 in.		Shaft Diameter		508.00 mm		
21.500	0.875	593789	HDSA1	VD	F	
21.500	0.875	2000920	HDSA1	VL	F	
21.750	0.750	2000380	HDS1	R	F	
22.000	0.625	2000520	HDS1	R	F	
22.000	0.625	2000512	HDS2	R	F	
22.000	0.625	2000522	HDS2	V	F	
22.000	0.813	2000557	HS7	R	F	◇
22.000	0.813	2000558	HS8	R	F	◇
22.000	0.875	2000560	HDS1	R	F	
22.000	0.875	2000565	HDS2	R	F	
22.000	0.875	2000568	HS8	R	F	◇
22.000	0.906	2000570	HDS1	R	F	
22.000	1.000	2000580	HDS1	R	F	
22.000	1.000	2000582	HDS1L16	R	F	
22.000	1.000	2000585	HDS2	R	F	
22.000	1.000	2000587	HS7	R	F	◇
22.000	1.250	2000592	HDS2	R	F	
22.125	0.916	2000649	HS8	D	F	◇
22.125	0.916	2000648	HS8	R	F	◇
22.125	0.916	2000638	HS8	V	F	◇
22.250	0.874	2000660	HDS1	R	F	
22.625	0.750	2000803	HDS2	R	F	

METRIC	20.079 in.	Shaft Diameter	510 mm
550	20	510X550X20 HS8 V	HS8 V F ◇
560	25	510X560X25 HDS1 D	HDS1 D F
560	25	510X560X25 HDS1 R	HDS1 R F
560	25	510X560X25 HDS1 V	HDS1 V F
560	25	510X560X25 HDS2 D	HDS2 D F
560	25	510X560X25 HDSF2 VT	HDSF2 VT F
560	25	510X560X25 HDSH2 VT1	HDSH2 VT F

METRIC	20.118 in.	Shaft Diameter	511 mm
561	22	511X561X22 HDSA2 VD	HDSA2 VD F

METRIC	20.197 in.	Shaft Diameter	513 mm
543	16	513X543X16 HDS2 R	HDS2 R F

INCH	20.250 in.	Shaft Diameter	514.35 mm
21.750	0.625	2025230	HDS2 R F
21.750	0.750	2025250	HDS1 R F
21.750	0.750	2025252	HDS2 R F
22.132	0.855	531448	HS8 R F ◇
22.250	0.625	2025528	HS8 R F ◇
22.250	0.875	2025562	HDS2 R F
22.500	0.875	2025665	HDS2L32 R F

METRIC	20.276 in.	Shaft Diameter	515 mm
555	20	515X555X20 HDS2 R	HDS2 R F
555	20	515X555X20 HDS7 R	HDS7 R F
555	20	515X555X20 HS5 R	HS5 R F ◇
555	20	515X555X20 HS8 R	HS8 R F ◇

METRIC	20.433 in.	Shaft Diameter	519 mm
560	25	519X560X25 HS5 D	HS5 D F ◇

INCH	20.438 in.	Shaft Diameter	519.13 mm
22.500	0.750	2044602	HDS2 R F

METRIC	20.472 in.	Shaft Diameter	520 mm
560	18	520X560X18 HS5 R	HS5 R F ◇
560	20	520X560X20 HDS1 R	HDS1 R F
560	20	520X560X20 HDS1 V	HDS1 V F
560	20	520X560X20 HDS2 V	HDS2 V F
560	20	520X560X20 HS8 R	HS8 R F ◇
560	20	520X560X20 HS8 V	HS8 V F ◇
570	18	520X570X18 HDS1 R	HDS1 R F

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC (cont.)						
20.472 in.		Shaft Diameter		520 mm		
570	22	520X570X22 HDS7 R	HDS7	R	F	
570	24	520X570X24 HS5 R	HS5	R	F	◇
570	25	520X570X25 HS8 R	HS8	R	F	◇
580	20	520X580X20 HDS1 R	HDS1	R	F	
580	20	520X580X20 HDS2 R	HDS2	R	F	
580	25	520X580X25 HDS2 R	HDS2	R	F	

INCH	20.500 in.	Shaft Diameter	520.70 mm
22.000	0.750	2050250	HDS1 R F
22.000	0.750	2050252	HDS2 R F
22.000	0.750	2050254	HDS2 V F
22.000	0.750	2032-2200-48 HDS2 H	HDS2 H F
22.000	0.750	2050212	HDS2L12 R F
22.000	0.750	2050258	HS8 R F ◇
22.500	0.625	2050520	HDS1 R F
22.500	0.750	2050542	HDS2 R F
22.500	0.812	2050558	HS8 R F ◇
22.500	0.813	2050553	HDS2 V F
22.500	0.875	2050560	HDS1 R F
22.500	0.875	2050563	HDS2 R F
22.500	0.875	2050568	HS8 R F ◇
22.500	1.250	531620	HDSA2 RD F

INCH	20.625 in.	Shaft Diameter	523.88 mm
22.625	0.813	2063557	HS7 R F ◇

METRIC	20.669 in.	Shaft Diameter	525 mm
575	22	525X575X22 HS7 R	HS7 R F ◇

INCH	20.750 in.	Shaft Diameter	527.05 mm
22.250	0.864	528352	HS8 R F ◇
22.750	0.625	2075238	HS8 R F ◇
22.750	0.750	2075540	HDS1 R F
22.750	0.875	2075560	HDS1 R F
22.750	0.875	2075562	HDS2 D F
22.750	0.875	2075563	HDS2 R F
22.750	0.875	2075569	HDS7 D F
22.750	1.000	2075580	HDS1 R F
22.750	1.250	2075950	HDSA1 RD F
23.000	0.875	2075660	HDS1 R F
23.000	0.875	520295	HDS1 R F
23.000	0.875	2075662	HDS1L12 R F

INCH	20.813 in.	Shaft Diameter	528.65 mm
22.390	0.578	2081418	HS8 R F ◇

METRIC	20.866 in.	Shaft Diameter	530 mm
575	20	530X575X20 HS5 R	HS5 R F ◇
576	21	530X576X21 HS8 R	HS8 R F ◇
580	20	530X580X20 HDS1 R	HDS1 R F
580	20	530X580X20 HDS1 V	HDS1 V F
580	20	530X580X20 HDS7 D	HDS7 D F
580	20	530X580X20 HS5 V	HS5 V F ◇
580	20	530X580X20 HS8 R	HS8 R F ◇
580	22	530X580X22 HDS1 R	HDS1 R F
580	22	530X580X22 HDS1 V	HDS1 V F
580	22	530X580X22 HDS7 R	HDS7 R F
580	22	530X580X22 HDS7 V	HDS7 V F
580	22	530X580X22 HS8 R	HS8 R F ◇
580	25	530X580X25 HDS1 R	HDS1 R F
580	25	530X580X25 HS5 R	HS5 R F ◇
580	25	530X580X25 HS8 R	HS8 R F ◇
590	30	530X590X30 HDS2 V	HDS2 V F

INCH	20.875 in.	Shaft Diameter	530.23 mm
22.875	0.750	2088540	HDS1 R F
23.000	0.750	2088610	HDS1 R F
23.228	0.906	2088702	HDS1 R F

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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH 21.000 in. Shaft Diameter 533.40 mm							INCH 21.625 in. Shaft Diameter 549.28 mm						
22.500	0.750	2100250	HDS1	R	F		23.625	0.813	2163557	HS7	R	F	◇
22.500	0.750	2100-2232-48 HDS2 R	HDS2	R	F		23.625	1.000	2163580	HDS1	R	F	
22.500	0.750	2100257	HS7	R	F	◇							
22.580	0.578	2100228	HS8	R	F	◇							
22.750	0.813	2100390	HDS1	R	F								
22.882	0.855	593509	HS8	R	F	◇							
23.000	0.625	2100522	HDS2	R	F								
23.000	0.625	2100528	HS8	R	F	◇							
23.000	0.750	2100545	HDS2	R	F								
23.000	0.750	2100544	HDS2L08	R	F								
23.000	0.750	2100518	HS8	R	F	◇							
23.000	0.787	2100958	HDSH2	RT	F	▶							
23.000	0.813	526719	HS4	R	F	◇							
23.000	0.813	2100557	HS7	R	F	◇							
23.000	0.813	2100517	HS7	V	F	◇							
23.000	0.875	2100564	HDS2	R	F								
23.000	0.875	2100562	HDS2L08	R	F								
23.000	0.875	2100575	HDS2L32	R	F								
23.250	0.875	2100660	HDS1	R	F								
23.500	1.000	2100780	HDS1	R	F								
23.500	1.250	2100800	HDS1	R	F								
INCH 21.125 in. Shaft Diameter 536.58 mm							INCH 21.745 in. Shaft Diameter 552.32 mm						
23.125	1.000	2112570	HDS1	V	F		23.747	1.000	2174520	HDS7	R	F	
INCH 21.250 in. Shaft Diameter 539.75 mm							INCH 21.750 in. Shaft Diameter 552.45 mm						
22.750	0.750	2125257	HS7	R	F	◇	23.250	0.625	2175230	HDS1	R	F	
23.000	0.750	2125380	HDS1	R	F		23.250	0.625	2175232	HDS2	R	F	
23.250	0.625	2125520	HDS1	R	F		23.250	0.625	593520	HS5	R	F	◇
23.250	0.750	2125540	HDS1	R	F		23.250	0.750	2175252	HDS2	R	F	
23.250	0.875	2125560	HDS1	R	F		23.750	0.750	2175542	HDS2	R	F	
23.250	0.875	2125563	HDS2	R	F		23.750	0.750	2175545	HDS2L32	R	F	
23.250	0.875	2125564	HDS2	V	F		23.750	0.875	2175569	HDS7	R	F	
							23.750	1.100	595188	HDSA2	DD	F	
							23.750	1.100	593486	HDSA2	RD	F	
							24.000	0.875	2175660	HDS1	R	F	
							24.000	0.875	2175664	HDS2L08	R	F	
METRIC 21.260 in. Shaft Diameter 540 mm							INCH 22.000 in. Shaft Diameter 558.80 mm						
580	20	540X580X20 HDS1 R	HDS1	R	F	◇	23.000	0.500	2200017	HS7	R	F	◇
584	20	540X584X20 HS4 R	HS4	R	F	◇	23.500	0.625	2200230	HDS1	R	F	
590	20	540X590X20 HDS1 R	HDS1	R	F		23.500	0.750	2200250	HDS1	R	F	
590	20	540X590X20 HDS2 D	HDS2	D	F		23.500	0.750	2200252	HDS2	R	F	
590	20	540X590X20 HDS2 V	HDS2	V	F		23.500	0.750	2200213	HDS2	V	F	
590	22	540X590X22 HDS1 R	HDS1	R	F		23.500	0.750	2200249	HDS7	H	F	
590	25	540X590X25 HDS2 V1	HDS2	V	F		23.500	0.750	2200-2332-48 HDS7 R	HDS7	R	F	
590	25	540X590X25 HDSF2 VT1	HDSF2	VT	F		23.500	0.875	2200920	HDSA1	RD	F	
590	25	540X590X25 HDSH2 VT	HDSH2	VT	F		23.732	0.866	2200402	HDS2	R	F	
							23.750	0.813	2200393	HDS1	D	F	
							23.750	0.813	2200390	HDS1	R	F	
							24.000	0.625	2200529	HS8	D	F	◇
							24.000	0.750	2200542	HDS2	R	F	
							24.000	0.812	2200555	HS8	V	F	◇
							24.000	0.813	2200550	HDS1	R	F	
							24.000	0.813	2200557	HS7	R	F	◇
							24.000	0.813	2200558	HS8	D	F	◇
							24.000	0.875	2200560	HDS1	R	F	
							24.000	0.875	2200564	HDS2	D	F	
							24.000	0.875	2200565	HDS2	R	F	
							24.000	0.875	2200566	HDS2L16	R	F	
							24.000	0.875	2200-2400-56 HDS7 R	HDS7	R	F	
							24.000	0.875	2200569	HDS7L16	R	F	
							24.000	0.875	2200955	HDSA2	RL	F	
							24.000	0.875	2200568	HS8	D	F	◇
							24.000	1.000	2200580	HDS1	R	F	
							24.000	1.000	2200585	HDS1L08	R	F	
							24.000	1.250	526339	HDS1	D	F	
							24.000	1.250	2200590	HDS1	R	F	
							24.250	1.000	2200680	HDS1	R	F	
INCH 21.500 in. Shaft Diameter 546.10 mm							METRIC 22.047 in. Shaft Diameter 560 mm						
23.000	0.625	2150238	HS8	R	F	◇	604	20	560X604X20 HDS7 R	HDS7	R	F	
23.250	0.750	2150380	HDS1	R	F		610	20	560X610X20 HDS1 R	HDS1	R	F	
23.250	0.750	529065	HDS2	R	F		610	20	560X610X20 HDS1 V	HDS1	V	F	
23.250	0.750	2150384	HDS2	V	F		610	20	560X610X20 HDS2 V	HDS2	V	F	
23.382	0.855	592950	HS8	R	F	◇	610	20	560X610X20 HDS7 R	HDS7	R	F	
23.500	0.625	2150520	HDS1	R	F		610	22	560X610X22 HDS7 R	HDS7	R	F	
23.500	0.750	2150542	HDS2	R	F		620	25	560X620X25 HDS2 V	HDS2	V	F	
23.500	0.800	2150574	HDS2	V	F								
23.500	0.813	2150550	HDS1	R	F								
23.500	0.813	2150538	HDS7	H	F								
23.500	0.813	2150528	HDS7	R	F								
23.500	0.813	2150519	HDS7L6	R	F								
23.500	0.813	2150557	HS7	R	F	◇							
23.500	0.875	2150562	HDS2	V	F								
23.500	1.000	2150580	HDS1	R	F								
24.000	1.250	2150800	HDS1	R	F								

Key features: ▲ WasteWatcher ■ Bore-Tite ▶ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC (cont.) 22.047 in. Shaft Diameter 560 mm						
620	25	560X620X25 HDSA2 VD1	HDSA2	V	F	
620	29.34	560X620X29.34 HDS7 R	HDS7	R	F	
INCH 22.125 in. Shaft Diameter 561.98 mm						
23.375	0.750	2212076	HS6	R	F	◇
23.375	0.750	2212118	HS8	R	F	◇
24.000	1.000	2213490	HDS1	R	F	
INCH 22.250 in. Shaft Diameter 565.15 mm						
23.500	0.625	2255149	HDS7	D	F	
23.500	0.787	2225139	HDS7	D	F	
23.750	0.625	2225230	HDS1	R	F	
24.000	0.750	2225380	HDS1	R	F	
24.250	0.875	2225562	HDS2	R	F	
24.250	0.875	2225565	HDS2L16	R	F	
24.250	1.000	2225588	HS8	R	F	◇
24.500	0.875	2225660	HDS1	R	F	
INCH 22.375 in. Shaft Diameter 568.33 mm						
24.368	0.875	2237710	HDS2	R	F	
24.375	0.750	2238540	HDS1	R	F	
24.375	0.750	2237515	HDS1L08	R	F	
INCH 22.438 in. Shaft Diameter 569.93 mm						
24.000	0.750	2243303	HDS1	V	F	
24.250	0.750	2244440	HDS1	R	F	
METRIC 22.441 in. Shaft Diameter 570 mm						
604	15	570X604X15 HS8 H	HS8	H	F	◇
610	20	570X610X20 HDS1 R	HDS1	R	F	
620	22	570X620X22 HDS2 R	HDS2	R	F	
620	22	570X620X22 HDS2 R1	HDS2	R	F	
620	22	570X620X22 HDS7 R	HDS7	R	F	
620	22	570X620X22 HDS7L4 R	HDS7L4	R	F	
INCH 22.500 in. Shaft Diameter 571.50 mm						
24.500	0.750	2250540	HDS1	R	F	
24.500	0.813	2250557	HS7	R	F	◇
24.500	0.875	2250560	HDS1	R	F	
24.500	0.875	2250552	HDS2	V	F	
24.500	0.875	2250958	HDSH7	VT	F	
24.750	0.875	2250660	HDS1	R	F	
INCH 22.638 in. Shaft Diameter 575.01 mm						
24.638	0.750	2263548	HS8	D	F	◇
INCH 22.750 in. Shaft Diameter 577.85 mm						
24.750	0.813	2275557	HS7	R	F	◇
24.750	0.813	2275558	HS8	R	F	◇
24.750	0.875	2275562	HDS2	R	F	
25.000	0.875	2275820	HDS1	R	F	
METRIC 22.756 in. Shaft Diameter 578 mm						
640	30	578X640X30 HDS1 R	HDS1	R	F	
INCH 22.814 in. Shaft Diameter 579.48 mm						
24.814	0.813	2281558	HS8	R	F	◇
METRIC 22.835 in. Shaft Diameter 580 mm						
615	20	580X615X20 HS8 R	HS8	R	F	◇
620	20	580X620X20 HDS2 D	HDS2	D	F	
630	18	580X630X18 HDS1 R	HDS1	R	F	
630	22	580X630X22 HSS5G R	HSS5G	R	F	◇
630	22	580X630X22 HDSA2 RD	HDSA2	RD	F	
630	22.60	2283029	HDS2	R	F	
630	25	580X630X25 HDS1 R	HDS1	R	F	

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC (cont.) 22.835 in. Shaft Diameter 580 mm						
630	25	580X630X25 HDS7 D	HDS7	D	F	
630	25	580X630X25 HS8 V	HS8	V	F	◇
640	16	580X640X16 HS8 R	HS8	R	F	◇
640	30	580X640X30 HDSA2 RD	HDSA2	RD	F	
650	25	580X650X25 HDS2 V	HDS2	V	F	
INCH 23.000 in. Shaft Diameter 584.20 mm						
24.500	0.750	2300250	HDS1	R	F	
24.500	0.750	2300220	HDS1L32	R	F	
24.500	0.750	2300252	HDS2	R	F	
24.500	0.750	2300214	HDS2	V	F	
24.500	0.750	2300254	HDS2L08	R	F	
24.500	0.750	2300-2432-48 HDS7 H	HDS7	H	F	
24.500	0.750	2300257	HS7	R	F	◇
24.500	0.750	2300258	HS8	R	F	◇
24.750	0.750	2300380	HDS1	R	F	
24.750	0.750	2300383	HDS2	D	F	
24.750	0.750	2300382	HDS2	R	F	
24.750	0.750	2300384	HDS2	V	F	
24.750	0.750	2300358	HS8	R	F	◇
25.000	0.750	2300540	HDS1	R	F	
25.000	0.750	2300532	HDS2	R	F	◀◎
25.000	0.813	2300559	HS8	D	F	◇
25.000	0.813	2300558	HS8	R	F	◇
25.000	0.875	2300560	HDS1	R	F	
25.000	0.875	2300561	HDS2	R	F	
25.000	0.938	2300570	HDS1	R	F	
25.000	1.000	2300580	HDS1	R	F	
25.000	1.000	2300952	HDSA2	RD	F	
25.250	0.875	2300660	HDS1	R	F	
25.375	0.875	2300710	HDS1	R	F	
25.375	0.875	2300717	HDS1	V	F	
25.500	0.875	2350567	HDS1	V	F	
25.500	1.250	2300800	HDS1	R	F	
METRIC 23.031 in. Shaft Diameter 585 mm						
620	20	585X620X20 HDS2 R	HDS2	R	F	
INCH 23.208 in. Shaft Diameter 589.48 mm						
25.208	0.813	2320558	HS8	R	F	◇
METRIC 23.228 in. Shaft Diameter 590 mm						
630	20	590X630X20 HDS1 R	HDS1	R	F	
630	20	590X630X20 HDS1 R1	HDS1	R	F	
630	20	590X630X20 HDS7 D	HDS7	D	F	
639.80	20.65	528562	HS8	V	F	◇
640	22	590X640X22 HDS2 R	HDS2	R	F	
640	25	590X640X25 HS8 R	HS8	R	F	◇
INCH 23.250 in. Shaft Diameter 590.55 mm						
25.000	0.750	2325380	HDS1	R	F	
25.250	0.750	2325540	HDS1	R	F	
25.250	0.750	528505	HDS2	R	F	
25.250	0.813	2325550	HDS1	R	F	
INCH 23.375 in. Shaft Diameter 593.73 mm						
25.375	0.813	2338557	HS7	R	F	◇
INCH 23.500 in. Shaft Diameter 596.90 mm						
25.000	0.625	2350238	HS8	R	F	◇
25.250	0.750	2350380	HDS1	R	F	
25.250	0.750	2350382	HDS2	R	F	
25.250	0.750	2350652	HDS2	V	F	
25.500	0.813	2350557	HS7	R	F	◇
25.500	0.875	2350560	HDS1	R	F	
25.500	0.875	2350570	HDS1	V	F	
25.500	0.875	2350562	HDS1L16	R	F	
25.500	1.000	2350580	HDS1	R	F	

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease **Bold part numbers are preferred designs**

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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features							
INCH (cont.) 23.500 in. Shaft Diameter 596.90 mm							METRIC 24.213 in. Shaft Diameter 615 mm													
25.750	1.000	2350768	HS8	R	F	◇	645	20	615X645X20 HS8 R	HS8	R	F	◇							
INCH 23.563 in. Shaft Diameter 598.50 mm							INCH 24.250 in. Shaft Diameter 615.95 mm													
25.250	0.750	2356340	HDS1	R	F		26.000	1.000	2425419	HDS7	H	F								
METRIC 23.622 in. Shaft Diameter 600 mm							METRIC 24.409 in. Shaft Diameter 620 mm													
640	18	600X640X18 HSS4 R	HSS4	R	F	◇	660	20	620X660X20 HDS1 R1	HDS1	R	F								
640	20	600X640X20 HDS1 R	HDS1	R	F		670	22	620X670X22 HDS2 R	HDS2	R	F								
640	20	600X640X20 HDS1 V	HDS1	V	F		670	22	620X670X22 HDS2 V	HDS2	V	F								
640	20	600X640X20 HDS2 V	HDS2	V	F		670	22	620X670X22 HDS7 R1	HDS7	R	F								
640	20	600X640X20 HDSF2 RT	HDSF2	RT	F		684	25	620X684X25 HDS7 R	HDS7	R	F								
640	20	600X640X20 HS8 R	HS8	R	F	◇	INCH 24.438 in. Shaft Diameter 620.73 mm													
640	25	600X640X25 HDS2 V1	HDS2	V	F		26.000	0.750	2444300	HDS1	R	F								
640	25	600X640X25 HDSF2 VT	HDSF2	VT	F		26.438	0.625	2444520	HDS1	R	F								
650	22	600X650X22 HDS2 R	HDS2	R	F		26.438	0.750	2444540	HDS1	R	F								
650	22	600X650X22 HDS7 R	HDS7	R	F		26.438	0.750	2444541	HDS1L04	R	F								
650	25	600X650X25 HDS1 R	HDS1	R	F		26.438	0.750	2444542	HDS2	R	F								
650	25	600X650X25 HDS1 V	HDS1	V	F		26.438	0.813	2444550	HDS1	R	F								
650	25	600X650X25 HDS2 V	HDS2	V	F		INCH 24.500 in. Shaft Diameter 622.30 mm													
INCH 23.625 in. Shaft Diameter 600.08 mm							INCH 24.500 in. Shaft Diameter 622.30 mm													
25.375	0.812	2362418	HDS2	D	F		25.500	0.500	2450017	HS7	R	F	◇							
25.625	0.813	2363557	HS7	R	F	◇	25.500	0.500	2450018	HS8	R	F	◇							
26.000	0.875	2363710	HDS1	R	F		25.625	0.625	2450068	HS8	R	F	◇							
INCH 23.750 in. Shaft Diameter 603.25 mm							METRIC 24.606 in. Shaft Diameter 625 mm													
25.750	0.813	2575558	HS8	R	F	◇	675.80	19	625X675.80X19 HS8 D	HS8	D	F	◇							
26.750	1.500	2375902	HDS1	R	F		676	19	625X676X19 HS8 D	HS8	D	F	◇							
INCH 23.875 in. Shaft Diameter 606.43 mm							INCH 24.750 in. Shaft Diameter 628.65 mm													
26.000	0.875	2388620	HDS1	R	F		26.750	0.625	2475520	HDS1	R	F								
26.000	0.875	2387962	HDSA2	RD	F		26.750	0.916	527356	HS6	R	F	◇							
26.000	0.875	2387967	HDSA2	VD	F		METRIC 24.803 in. Shaft Diameter 630 mm													
INCH 24.000 in. Shaft Diameter 609.60 mm							METRIC 24.803 in. Shaft Diameter 630 mm													
25.500	0.750	565622	HDS1	R	F		670	20	630X670X20 HDS1 R	HDS1	R	F								
<i>SPECIAL CASE FOR VRING SURFACE</i>							670	20	630X670X20 HDS1 V	HDS1	V	F								
25.500	0.750	2400250	HDS1	R	F		670	20	630X670X20 HDS2 R	HDS2	R	F								
25.500	0.750	2400239	HDS2	V	F		670	20	630X670X20 HS8 R	HS8	R	F	◇							
25.500	0.750	2400255	HDS2L16	R	F		670	20	630X670X20 HS8 V	HS8	V	F	◇							
25.500	0.750	558075	HDS7	R	F		674	20	630X674X20 HDS1 R	HDS1	R	F	■							
25.500	0.750	593519	HS5	R	F	◇	680	25	630X680X25 HDS2 R	HDS2	R	F								
25.500	0.750	2400258	HS8	R	F	◇	INCH 25.000 in. Shaft Diameter 635.00 mm													
26.000	0.813	2400557	HS7	R	F	◇	26.500	0.750	2500250	HDS1	R	F								
26.000	0.813	2400558	HS8	R	F	◇	26.500	0.750	2500217	HDS1	V	F								
26.000	0.875	2400560	HDS1	R	F		26.500	0.750	2500251	HDS1L08	R	F								
26.000	0.875	2400529	HDS2	D	F		26.500	0.750	2500253	HDS2	R	F								
26.000	0.875	2400559	HDS2	R	F		26.500	0.750	2500210	HDS7	R	F								
26.000	0.875	2400577	HDS2	V	F		26.500	0.750	2500247	HS7	D	F	◇							
26.000	0.875	2400519	HS8	D	F	◇	26.500	0.750	2500257	HS7	R	F	◇							
26.000	0.875	2400528	HS8	V	F	◇	26.500	0.750	594375	HS8	D	F	◇							
26.000	1.000	2400588	HS8	R	F	◇	26.500	0.750	2500258	HS8	R	F	◇							
26.000	1.000	2400-2600-64 HS8 D	HS8	D	F	◇	26.988	0.906	2500478	HS8	V	F	◇							
26.250	0.750	2400657	HS7	R	F	◇	METRIC 24.016 in. Shaft Diameter 610 mm													
26.250	1.000	2400680	HDS1	R	F		654	20	610X654X20 HDS2 V	HDS2	V	F	■							
26.250	1.000	2400682	HDS1L16	R	F		660	20	610X660X20 HDS2 R	HDS2	R	F								
26.250	1.000	2400685	HDS2	R	F		660	25	610X660X25 HDS7 R	HDS7	R	F								
26.250	1.000	2400684	HDS2L16	R	F															
26.500	1.000	2400784	HDS2	R	F															
26.500	1.000	2400767	HS7	D	F	◇														
26.500	1.000	2400747	HS7	V	F	◇														

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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures	
INCH (cont.) 25.000 in. Shaft Diameter 635.00 mm							INCH 26.000 in. Shaft Diameter 660.40 mm							
27.000	0.813	2500558	HS8	D	F	◇	27.000	0.500	2600017	HS7	R	F	◇	
27.000	0.875	2500560	HDS1	R	F		27.500	0.750	2600218	HS8	D	F	◇	
27.000	0.875	2500563	HDS2	V	F		27.625	0.750	2600330	HDS1	R	F		
27.000	0.875	2500564	HDS2L08	R	F		27.625	0.750	2600332	HDS2	R	F		
27.000	0.875	593183	HS5	R	F	◇	27.625	0.750	2600334	HDS2	V	F		
27.000	0.916	2500559	HS8	D	F	◇	27.984	0.953	510900	HS6	R	F	◇	
27.000	1.000	2500580	HDS1	R	F		28.000	0.813	2600550	HDS1	R	F		
27.000	1.000	2500587	HS7	R	F	◇	28.000	0.813	2600557	HS7	R	F	◇	
27.000	1.000	2500588	HS8	R	F	◇	28.000	0.874	2600563	HDS2	R	F		
27.000	1.100	593484	HDSA2	RD	F		28.000	1.000	2600580	HDS1	R	F		
27.250	1.000	2500680	HDS1	R	F		28.000	1.000	2600587	HS7	R	F	◇	
27.500	1.000	2500780	HDS1	R	F		28.000	1.000	2600518	HS8	V	F	◇	
							28.125	0.916	2600648	HS8	R	F	◇	
							28.500	0.875	2600760	HDS1	R	F		
							28.500	0.875	2600761	HDS1L08	R	F		
INCH 25.125 in. Shaft Diameter 638.18 mm							INCH 26.125 in. Shaft Diameter 663.58 mm							
26.750	0.750	2513330	HDS1	R	F		27.625	0.750	2613250	HDS1	R	F		
26.750	0.750	528503	HDS2	R	F		28.125	0.875	2613560	HDS1	R	F		
INCH 25.188 in. Shaft Diameter 639.78 mm							INCH 26.188 in. Shaft Diameter 665.18 mm							
26.875	0.750	2518344	HDS2	V	F		27.625	0.750	2612-2740-48	HDS1 R	HDS1	R	F	
METRIC 25.197 in. Shaft Diameter 640 mm							INCH 26.250 in. Shaft Diameter 666.75 mm							
680	20	640X680X20	HDS1 V	HDS1	V	F	28.125	0.875	2612564	HDS2	V	F		
690	25	640X690X25	HDS1 R	HDS1	R	F	28.125	0.875	2608-2808-56	HDS2 H	HDS2	H	F	
							28.125	0.875	2608-2808-56	HDS7 H	HDS7	H	F	
INCH 25.250 in. Shaft Diameter 641.35 mm							INCH 26.375 in. Shaft Diameter 669.93 mm							
26.750	0.750	2525250	HDS1	R	F		27.627	0.625	2637118	HS8	R	F	◇	
27.250	0.875	2525562	HDS2	R	F		28.250	0.875	2638480	HDS1	R	F		
27.250	1.000	2525588	HS8	R	F	◇	28.375	0.813	2638557	HS7	R	F	◇	
27.500	0.875	2525660	HDS1	R	F									
INCH 25.375 in. Shaft Diameter 644.53 mm							METRIC 26.378 in. Shaft Diameter 670 mm							
27.375	1.000	2537583	HDS1	V	F		710	20	670X710X20	HDS1 R	HDS1	R	F	
							710	20	670X710X20	HDS1 R1	HDS1	R	F	■
INCH 25.500 in. Shaft Diameter 647.70 mm							INCH 26.500 in. Shaft Diameter 673.10 mm							
27.000	0.750	2550250	HDS1	R	F		28.000	0.750	2650250	HDS1	R	F		
27.500	0.750	2532-2732-48	HSS8 H	HSS8	H	F	28.000	0.750	2650253	HDS2	D	F		
27.500	0.813	2550557	HS7	R	F	◇	28.000	0.750	2650212	HDS2	R	F		
27.500	0.875	2550560	HDS1	R	F		28.000	0.750	2650283	HDS2	V	F		
27.500	0.875	2550565	HDS2	R	F		28.000	0.750	2650240	HDS7	R	F		
27.500	1.000	2550580	HDS1	R	F		28.000	0.750	2650241	HDS7L08	R	F		
27.500	1.000	2550585	HDS2	R	F		28.000	0.750	2650257	HS7	R	F	◇	
							28.000	0.750	2650238	HS8	D	F	◇	
							28.000	0.750	2650258	HS8	R	F	◇	
							28.000	0.750	2632-2800-48	HS8 V	HS8	V	F	■◇
							28.500	0.813	2650557	HS7	R	F	◇	
							28.500	0.875	2650560	HDS1	R	F		
							28.500	0.875	2650538	HS8	R	F	◇	
							28.500	0.875	2632-2832-56	HS8 V	HS8	V	F	◇
							28.750	0.875	2650660	HDS1	R	F		
INCH 25.750 in. Shaft Diameter 654.05 mm							METRIC 26.772 in. Shaft Diameter 680 mm							
26.750	0.500	2575017	HS7	R	F	◇	730	20	680X730X20	HDS1 V	HDS1	V	F	
26.875	0.500	2575057	HS7	R	F	◇	730	22	680X730X22	HDSA1 VD	HDSA1	VD	F	
26.875	0.500	528623	HS8	R	F	◇	740	30	680X740X30	HDS2 R	HDS2	R	F	
27.250	0.750	2575250	HDS1	R	F		744	25	680X744X25	HS8 R	HS8	R	F	◇
METRIC 25.984 in. Shaft Diameter 660 mm							INCH 26.875 in. Shaft Diameter 682.63 mm							
690	18	660X690X18	HDS1 R	HDS1	R	F	28.875	0.813	2688557	HS7	R	F	◇	
700	18	660X700X18	HDS1 R	HDS1	R	F								
700	18	660X700X18	HS5 R	HS5	R	F								
700	18	660X700X18	HS8 R	HS8	R	F								
700	20	660X700X20	HSS5 H	HSS5	H	F								
700	20	660X700X20	HSS8 H	HSS8	H	F								
700	25	660X700X25	HDS2 V	HDS2	V	F								
704	20	660X704X20	HSS5 V	HSS5	V	F								
720	22	660X720X22	HDS1 R	HDS1	R	F								
724	25	660X724X25	HDS1 R	HDS1	R	F								

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH 26.938 in. Shaft Diameter 684.23 mm							INCH 28.000 in. Shaft Diameter 711.20 mm						
29.000	0.750	2693612	HDS2	R	F		29.500	0.750	2800250	HDS1	R	F	
METRIC 26.696 in. Shaft Diameter 685 mm							METRIC 28.150 in. Shaft Diameter 715 mm						
720	20	685X720X20	HDS2 R	HDS2	R	F	779	25	715X779X25	HDS7 D	HDS7	D	F
INCH 27.000 in. Shaft Diameter 685.80 mm							INCH 28.038 in. Shaft Diameter 712.17 mm						
28.500	0.625	2700218	HS8	R	F	◇	31.038	1.000	596103	HDSA2	VL	F	
29.000	0.750	2700540	HDS1	R	F		METRIC 28.346 in. Shaft Diameter 720 mm						
29.000	0.750	2700542	HDS2	R	F		770	25	720X770X25	HDS2 R	HDS2	R	F
29.000	0.750	558079	HDS7	R	F		770	25	720X770X25	HS8 D	HS8	D	F
29.000	0.813	2700559	HS8	D	F	◇	784	23	720X784X23	HDS7 R	HDS7	R	F
29.000	0.813	2700558	HS8	R	F	◇	784	23	720X784X23	HDS7 R1	HDS7	R	F
29.000	0.866	2700568	HDS1L24	R	F		INCH 28.500 in. Shaft Diameter 712.17 mm						
29.000	0.875	2700564	HDS2	R	F		30.500	0.625	2850520	HDS1	R	F	
29.000	0.875	2700574	HDS2	V	F		30.500	0.750	2850540	HDS1	R	F	
29.000	0.875	59794976	HDS7	R	F		30.500	0.875	2850564	HDS1L16	V	F	
29.000	0.875	2700529	HDS7	V	F		30.500	0.875	2850565	HDS2	R	F	
29.000	1.000	2700583	HDS1	V	F		30.500	0.875	2850211	HDS7	H	F	
29.500	0.875	2700519	HDS7	R	F		31.000	0.875	2850760	HDS1	R	F	
29.500	1.000	2700780	HDS1	R	F		METRIC 28.543 in. Shaft Diameter 725 mm						
METRIC 27.165 in. Shaft Diameter 690 mm							METRIC 28.740 in. Shaft Diameter 730 mm						
730	20	690X730X20	HDS1 R	HDS1	R	F	794	25	730X794X25	HDS2 V	HDS2	V	F
INCH 27.250 in. Shaft Diameter 692.15 mm							INCH 28.750 in. Shaft Diameter 730.25 mm						
29.250	0.813	2725550	HDS1	R	F		30.750	0.813	2875557	HS7	R	F	◇
29.250	0.875	2725563	HDS2	R	F		30.750	0.875	2875560	HDS1	R	F	
INCH 27.500 in. Shaft Diameter 698.50 mm							INCH 28.937 in. Shaft Diameter 735.00 mm						
28.750	0.625	2750117	HS7	R	F	◇	31.437	0.984	2893729	HDS7	V	F	■
29.000	0.750	2750250	HDS1	R	F		METRIC 28.937 in. Shaft Diameter 735 mm						
29.000	0.750	2750218	HS8	R	F	◇	799	25	735X799X25	HDS7 H	HDS7	H	F
29.500	0.875	2750564	HDS2	R	F		INCH 28.938 in. Shaft Diameter 735.03 mm						
29.500	0.875	2750565	HDS2L16	R	F		31.437	0.984	2893769	HDS7	D	F	
29.500	0.875	2750510	HDS7	R	F		INCH 29.000 in. Shaft Diameter 736.60 mm						
29.500	0.875	2750600	HDS7L16	R	F		30.500	0.750	2900250	HDS1	R	F	
29.520	0.984	2755502	HDS2	R	F		30.500	0.875	2900270	HDSA1	RL	F	
METRIC 27.559 in. Shaft Diameter 700 mm							METRIC 28.937 in. Shaft Diameter 735 mm						
740	20	700X740X20	HDS1 R	HDS1	R	F							
740	20	700X740X20	HS5 D	HS5	D	F	◇						
750	20	700X750X20	HDS1 R	HDS1	R	F							
750	25	700X750X25	HDS2 V	HDS2	V	F							
750	25	700X750X25	HDSF2 VT	HDSF2	VT	F							
750	25	700X750X25	HDSH2 VT	HDSH2	VT	F							
755.65	34.92	2755962	HDSA2	RL	F								
INCH 27.625 in. Shaft Diameter 701.68 mm							INCH 29.938 in. Shaft Diameter 736.60 mm						
29.125	0.750	2763250	HDS1	R	F		30.500	0.750	2900250	HDS1	R	F	
29.625	0.750	2763540	HDS1	R	F		30.500	0.875	2900270	HDSA1	RL	F	
INCH 27.875 in. Shaft Diameter 708.03 mm							INCH 31.000 in. Shaft Diameter 736.60 mm						
29.812	0.875	2788500	HDS1	R	F		31.000	0.813	2900557	HS7	R	F	◇
29.815	0.875	2788600	HDS7	R	F		31.000	0.875	2900560	HDS1	R	F	
29.875	0.813	2788557	HS7	R	F	◇	31.000	0.875	2900563	HDS2	R	F	
METRIC 27.953 in. Shaft Diameter 710 mm							INCH 31.000 in. Shaft Diameter 736.60 mm						
750	23	710X750X23	HDS2 V1	HDS2	V	F							
760	20	710X760X20	HDS1 V	HDS1	V	F							
760	20	710X760X20	HDS2 R	HDS2	R	F							
760	20	710X760X20	HDS2 V	HDS2	V	F							
760	20	710X760X20	HSS5 H	HSS5	H	F	◇						
760	20	710X760X20	HSS8 H	HSS8	H	F	◇						
760	25	710X760X25	HDS2 D	HDS2	D	F							
760	25	710X760X24.9	HDS2 D	HDS2	D	F							
760	25	710X760X25	HS5 D	HS5	D	F	◇						
774	22	710X774X22	HDS2L4 R	HDS2L4	R	F							

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC 29.134 in. Shaft Diameter 740 mm						
780	16.50	740X780X16.5 HDS1 R	HDS1	R	F	◇
780	18	740X780X18 HS5 R	HS5	R	F	◇
780	18	740X780X18 HS8 R	HS8	R	F	◇
790	25	740X790X25 HDS2 R	HDS2	R	F	
INCH 29.500 in. Shaft Diameter 749.30 mm						
31.219	0.734	2950438	HS8	D	F	◇
31.500	0.750	2950540	HDS1	R	F	
31.500	0.813	2950528	HS8	R	F	◇
31.500	0.875	2950560	HDS1	R	F	
31.500	0.875	2950564	HDS2	D	F	
31.500	0.875	2950552	HDS2	V	F	
31.500	1.000	2950525	HS5	R	F	◇
32.000	0.875	2950760	HDS1	R	F	
32.000	0.875	2950765	HDS2	R	F	
32.000	0.938	2950770	HDS1	R	F	
32.000	1.000	2950783	HDS2	R	F	
METRIC 29.528 in. Shaft Diameter 750 mm						
780	18	750X780X18 HDS1 R	HDS1	R	F	
780	18	750X780X18 HDS1 V	HDS1	V	F	
790	23	750X790X23 HDS1 V	HDS1	V	F	
800	25	750X800X25 HDS1 R	HDS1	R	F	
800	25	750X800X25 HDS2 R	HDS2	R	F	
810	22	750X810X22 HDSF2 RT	HDSF2	RT	F	
810	25	750X810X25 HDS1 R	HDS1	R	F	
810	25	750X810X25 HS4 R	HS4	R	F	◇
814	25	750X814X25 HDS2 R	HDS2	R	F	
INCH 30.000 in. Shaft Diameter 762.00 mm						
31.125	0.500	3000115	HS5	V	F	◇
31.125	0.500	3000678	HS8	V	F	◇
31.250	0.625	3000118	HS8	R	F	◇
31.500	0.750	3000250	HDS1	R	F	
31.606	0.750	3000303	HDS2	R	F	
32.000	0.813	3000550	HDS1	R	F	
32.000	0.813	3000552	HDS1L08	R	F	
32.000	0.813	3000557	HS7	R	F	◇
32.000	0.875	3000560	HDS1	R	F	
32.000	0.875	3000529	HDS2	R	F	
32.000	1.000	3000578	HS8	D	F	◇
32.000	1.000	3000519	HS8	H	F	◇
32.000	1.000	3000518	HS8	R	F	◇
32.500	0.875	3000760	HDS1	R	F	
INCH 30.250 in. Shaft Diameter 768.35 mm						
32.250	0.750	3025540	HDS1	R	F	
32.250	0.750	3025542	HDS2	V	F	
32.500	0.875	3025660	HDS1	R	F	
32.500	0.875	3025661	HDS1L08	R	F	
INCH 30.313 in. Shaft Diameter 769.95 mm						
32.375	0.875	3031600	HDS1	R	F	
33.250	1.500	3031830	HDS1	R	F	
METRIC 30.315 in. Shaft Diameter 770 mm						
810	20	770X810X20 HDS1 V	HDS1	V	F	
845	27.80	770X845X27.8 HDS1 R	HDS1	R	F	
INCH 30.375 in. Shaft Diameter 771.53 mm						
32.375	0.813	3038550	HDS1	R	F	
32.375	0.813	3038557	HS7	R	F	◇
INCH 30.500 in. Shaft Diameter 774.70 mm						
32.500	0.750	3050542	HDS2	R	F	
32.500	0.875	3050560	HDS1	R	F	
32.500	0.875	3050563	HDS1L16	R	F	

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.) 30.500 in. Shaft Diameter 774.70 mm						
32.500	0.875	3050565	HDS2	R	F	
32.500	0.875	3050514	HDS2	V	F	
32.500	0.875	3050566	HDS2L16	V	F	
32.500	0.875	3050511	HDS7	H	F	
32.750	1.000	3050680	HDS1	R	F	
33.000	1.000	3050780	HDS1	R	F	
33.000	1.000	3050785	HDS2	R	F	
33.000	1.000	3050759	HDS7	R	F	
33.500	1.000	3050892	HDS2	R	F	
METRIC 30.709 in. Shaft Diameter 780 mm						
820	18	780X820X18 HS8 R	HS8	R	F	◇
830	22	780X830X22 HS5 R	HS5	R	F	◇
INCH 30.750 in. Shaft Diameter 781.05 mm						
32.742	0.875	522612	HDS1L12	R	F	■
32.750	0.916	530106	HS8	R	F	◇
INCH 31.000 in. Shaft Diameter 787.40 mm						
32.500	0.750	522342	HDS1	D	F	
32.500	1.000	3100290	HDS1	R	F	
33.000	0.813	3100550	HDS1	R	F	
33.000	0.875	3100560	HDS1	R	F	
33.000	0.875	3100561	HDS1L08	R	F	
33.000	0.875	3100562	HDS2	D	F	
33.000	0.875	3100563	HDS2	R	F	
33.000	0.875	3100-3300-56 HDS2 H	HDS2	H	F	
33.000	0.875	3100511	HDS7L08	D	F	
33.000	0.875	3100567	HS7	R	F	◇
33.000	0.885	3100525	HSS5	V	F	◇
33.188	0.953	513184	HS6	R	F	◇
34.000	0.875	3100870	HDS1	R	F	
34.000	1.000	3100895	HDS2	R	F	
METRIC 31.102 in. Shaft Diameter 790 mm						
830	23	790X830X23 HDS1 V	HDS1	V	F	
834	25	790X834X25 HDS1 R	HDS1	R	F	
840	20	790X840X20 HS8 R	HS8	R	F	◇
850	25	790X850X25 HDS2 V	HDS2	V	F	
INCH 31.250 in. Shaft Diameter 793.75 mm						
33.250	0.750	3125540	HDS1	R	F	
33.250	0.750	3125544	HDS2L16	R	F	
METRIC 31.496 in. Shaft Diameter 800 mm						
840	18	800X840X18 HSS8 V	HSS8	V	F	◇
840	20	800X840X20 HDS1 R	HDS1	R	F	
860	25	800X860X25 HDS1 R	HDS1	R	F	
864	25	800X864X25 HDS1 R	HDS1	R	F	
864	25	800X864X25 HSS8 H	HSS8	H	F	◇
INCH 31.500 in. Shaft Diameter 800.10 mm						
33.000	0.750	3150210	HDS1	R	F	
33.500	1.000	3150525	HS5	R	F	◇
INCH 31.750 in. Shaft Diameter 806.45 mm						
33.750	0.875	3175560	HDS1	R	F	
33.750	0.875	3175522	HDS2	H	F	
33.750	0.875	3175562	HDS2	R	F	
33.750	0.875	3175549	HDS2	V	F	
33.750	0.875	3175529	HDS7	H	F	
METRIC 31.890 in. Shaft Diameter 810 mm						
850	20	810X850X20 HDS1 V	HDS1	V	F	
860	25	810X860X25 HDS2 R	HDS2	R	F	
874	25	810X874X25 HS5 R	HS5	R	F	◇

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease **Bold part numbers are preferred designs**





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features	
INCH 31.938 in. Shaft Diameter 811.23 mm							INCH 33.250 in. Shaft Diameter 844.55 mm							
33.750	0.875	3193442	HDS2	V	F		35.250	0.750	529947	HS8	D	F	◇	
33.750	0.875	3193429	HDS2L10	H	F		METRIC 33.465 in. Shaft Diameter 850 mm							
33.750	0.875	3193449	HDS7	H	F		890	20	850X890X20	HSS5 H	HSS5	H	F	◇
INCH 32.000 in. Shaft Diameter 812.80 mm							900	22	850X900X22	HS8 R	HS8	R	F	◇
34.000	0.750	3200540	HDS1	R	F		925	25	850X925X25	HDS2 R	HDS2	R	F	
34.000	0.750	3200541	HDS1	V	F		925	27	850X925X27	HDS1 R	HDS1	R	F	
34.000	0.875	3200560	HDS1	R	F		INCH 33.500 in. Shaft Diameter 850.90 mm							
34.000	0.875	3200564	HDS1L16	R	F		35.500	0.813	3350557	HS7	R	F	◇	
34.000	0.875	3200562	HDS2	D	F		35.500	0.875	3350560	HDS1	R	F		
34.000	0.875	3200563	HDS2	R	F		36.000	0.875	3350760	HDS1	R	F		
34.000	1.000	3200580	HDS1	R	F		36.000	0.875	3350762	HDS1L16	R	F		
34.500	0.875	3200760	HDS1	R	F		36.417	0.875	3350840	HDS1	R	F		
INCH 32.125 in. Shaft Diameter 815.98 mm							METRIC 33.858 in. Shaft Diameter 860 mm							
34.125	0.875	3212563	HDS1	V	F		920	25	860X920X25	HDS1 R	HDS1	R	F	
34.125	0.875	3213564	HDS2L16	R	F		INCH 34.000 in. Shaft Diameter 863.60 mm							
METRIC 32.283 in. Shaft Diameter 820 mm							36.000	0.813	3400550	HDS1	R	F		
860	18	820X860X18	HSS8 V	HSS8	V	F	◇	36.000	0.813	3400557	HS7	R	F	◇
884	25	820X884X25	HS8 V	HS8	V	F	◇	36.000	0.875	3400560	HDS1	R	F	
INCH 32.313 in. Shaft Diameter 820.75 mm							36.000	0.875	3400534	HDS2	R	F		
34.500	0.875	3231642	HDS2	R	F		36.000	0.875	3400565	HDS2L16	R	F		
34.500	0.906	3231648	HS8	R	F	◇	36.500	0.875	3400760	HDS1	R	F		
INCH 32.375 in. Shaft Diameter 822.33 mm							INCH 34.250 in. Shaft Diameter 869.95 mm							
34.375	1.000	3237519	HS8	H	F	◇	36.250	0.875	3425560	HDS1	R	F		
34.375	1.000	3237518	HS8	R	F	◇	36.750	0.875	3425761	HDS1L24	R	F		
METRIC 32.283 in. Shaft Diameter 820 mm							INCH 34.500 in. Shaft Diameter 876.30 mm							
860	20	825X860X20	HDS2 R	HDS2	R	F	36.000	0.750	3450250	HDS1	R	F		
INCH 32.500 in. Shaft Diameter 825.50 mm							36.000	0.750	3450253	HDS2	R	F		
33.625	0.500	3250078	HS8	V	F	◇	36.500	0.870	3450576	HDS2	V	F		
33.625	0.563	3250117	HS7	R	F	◇	36.500	0.875	3450560	HDS1	R	F		
34.449	0.787	3250692	HDS2	V	F	▾	36.500	0.875	3450563	HDS2	D	F		
34.500	0.813	3250550	HDS1	R	F		36.500	0.875	3450518	HDS2	H	F		
34.500	0.875	3250560	HDS1	R	F		36.500	0.875	3450589	HDS7	R	F		
34.500	0.875	3250561	HDS1L04	R	F		36.500	1.000	3450582	HDS2	R	F		
34.500	0.875	3250566	HDS2	R	F		36.500	1.000	3450574	HDS2	V	F		
34.500	0.875	3250518	HS8	R	F	◇	36.500	1.000	3450558	HS8	R	F	◇	
34.500	0.916	3250577	HS7	R	F	◇	METRIC 34.646 in. Shaft Diameter 880 mm							
34.500	0.938	3250570	HDS1	R	F		944	22	880X944X22	HDS1 R	HDS1	R	F	
34.500	0.938	3250574	HDS2	R	F		944	25	880X944X25	HDS1 V	HDS1	V	F	
34.500	1.000	3250588	HS8	R	F	◇	INCH 34.750 in. Shaft Diameter 882.65 mm							
34.921	0.787	3250592	HDS2	V	F	▾	36.750	0.875	3475560	HDS1	R	F		
INCH 33.000 in. Shaft Diameter 838.20 mm							36.750	0.875	3475562	HDS2	R	F		
34.500	0.750	3300250	HDS1	R	F		INCH 34.955 in. Shaft Diameter 887.86 mm							
34.625	0.750	3300330	HDS1	R	F		37.000	0.874	567229	HDS2	R	F		
34.630	0.750	3300342	HDS2	R	F		INCH 35.000 in. Shaft Diameter 889.00 mm							
34.688	0.750	3300351	HDS2	R	F		36.000	0.500	3500017	HS7	R	F	◇	
35.000	0.874	3300515	HSS5	R	F	◇	37.000	0.813	3500550	HDS1	R	F		
35.000	0.875	3300560	HDS1	R	F		37.000	0.874	3500565	HDS2	R	F		
35.000	0.875	3300565	HDS2	R	F		37.000	0.875	3500560	HDS1	R	F		
35.000	0.875	3300562	HDS2L08	R	F		INCH 35.250 in. Shaft Diameter 895.35 mm							
35.000	0.875	3300518	HS8	R	F	◇	37.250	0.875	3525567	HDS1	V	F		
35.250	0.875	3300660	HDS1	R	F		38.250	0.813	3525862	HDS2	R	F		
35.500	0.750	3300792	HDS2	R	F		INCH 35.375 in. Shaft Diameter 898.53 mm							
35.500	0.875	3300760	HDS1	R	F		37.375	0.875	3538560	HDS1	R	F		
35.500	0.938	3300772	HDS2	R	F		METRIC 33.071 in. Shaft Diameter 840 mm							
36.000	1.000	3300890	HDS1	R	F		880	23	840X880X23	HDS2 V	HDS2	V	F	
36.000	1.000	596104	HDSA2	VD	F		904	25	840X904X25	HDS2 R	HDS2	R	F	

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Key features: ▲ WasteWatcher ■ Bore-Tite ▽ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required





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Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC 35.433 in. Shaft Diameter 900 mm						
950	25	900X950X25 HDS2 R1	HDS2	R	F	
INCH 35.500 in. Shaft Diameter 901.70 mm						
37.500	0.875	3550560	HDS1	R	F	
38.000	1.000	3550780	HDS1	R	F	
INCH 35.750 in. Shaft Diameter 908.05 mm						
37.750	0.813	3575558	HS8	R	F	◊
METRIC 35.827 in. Shaft Diameter 910 mm						
966	17.90	910X966X17.9 HS5 R	HS5	R	F	◊
INCH 36.000 in. Shaft Diameter 914.40 mm						
38.000	0.813	3600557	HS7	R	F	◊
38.000	0.813	3600558	HS8	R	F	◊
38.000	0.875	3600560	HDS1	R	F	
38.000	0.875	3600562	HDS2	R	F	
38.000	0.875	3600565	HDS2L16	R	F	
38.000	0.875	3600589	HDS7	R	F	
38.000	0.875	3600518	HS8	D	F	◊
38.109	0.953	512289	HS6	R	F	◊
38.500	0.875	3600762	HDS2	R	F	
METRIC 36.220 in. Shaft Diameter 920 mm						
958	19	920X958X19 HDS1 R	HDS1	R	F	
980	25	920X980X25 HDS2 R	HDS2	R	F	
980	30	920X980X30 HDS1 R	HDS1	R	F	
984	25	920X984X25 HDS1 V	HDS1	V	F	
984	25	920X984X25 HDS2 V	HDS2	V	F	
INCH 36.500 in. Shaft Diameter 927.10 mm						
38.500	0.875	3650560	HDS1	R	F	
39.000	0.625	3650752	HDS2	R	F	
INCH 36.750 in. Shaft Diameter 933.45 mm						
38.750	0.813	3675558	HS8	R	F	◊
38.750	0.916	527460	HS6	R	F	◊
INCH 37.000 in. Shaft Diameter 939.80 mm						
39.000	0.875	3700560	HDS1	R	F	
39.000	0.875	3700563	HDS2	R	F	
39.000	0.875	3700564	HDS2L24	R	F	
39.000	0.875	3700579	HDS7	R	F	
39.000	0.875	3700574	HDS7L24	R	F	
39.250	0.875	3700660	HDS1	R	F	
INCH 37.250 in. Shaft Diameter 946.15 mm						
39.250	0.875	3725563	HDS2	R	F	
INCH 37.375 in. Shaft Diameter 949.33 mm						
39.375	0.813	3738557	HS7	R	F	◊
METRIC 37.402 in. Shaft Diameter 950 mm						
980	18	950X980X18 HDS1 R	HDS1	R	F	
1014	25	950X1014X25 HS8 R	HS8	R	F	◊
INCH 37.500 in. Shaft Diameter 952.50 mm						
39.000	0.875	3750272	HDS2	R	F	
39.000	0.875	3750274	HDS2L08	R	F	
39.500	0.750	3750542	HDS2	R	F	
39.500	0.875	3750561	HDS1	D	F	
39.500	0.875	3750560	HDS1	R	F	
39.500	0.875	3750563	HDS2	D	F	
39.500	0.875	3750565	HDS2	R	F	
40.000	1.000	3732-4000-64 HDS2 V	HDS2	V	F	
40.250	1.000	3750830	HDS1	R	F	

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
METRIC 37.795 in. Shaft Diameter 960 mm						
1000	20	960X1000X20 HDS1 R	HDS1	R	F	
1000	25	960X1000X25 HDS1 D	HDS1	D	F	
1020	25	960X1020X25 HDS1 D1	HDS1	D	F	
1020	25	960X1020X25 HDS2 D	HDS2	D	F	
1020	25	960X1020X25 HDS2 D3	HDS2	D	F	
1020	25	960X1020X25 HDS2 H	HDS2	H	F	
1020	25	960X1020X25 HDS2 V	HDS2	V	F	
1040	23	960X1040X23 HDS1 R	HDS1	R	F	
INCH 38.000 in. Shaft Diameter 965.20 mm						
39.500	0.750	3800254	HDS2	V	F	
39.500	0.750	3800288	HS8	D	F	◊
39.625	0.750	3800338	HS8	R	F	◊
40.000	0.813	3800557	HS7	R	F	◊
40.000	0.813	3800-4000-52 HS7 V	HS7	V	F	◊
40.000	0.875	3800560	HDS1	R	F	
40.000	0.875	3800565	HDS2	R	F	
40.000	0.875	3800566	HDS2L16	R	F	
40.000	0.875	596088	HDS7	R	F	
40.000	0.875	596089	HDS7L16	R	F	
METRIC 38.189 in. Shaft Diameter 970 mm						
1020	22	970X1020X22 HSS5 H	HSS5	H	F	◊
INCH 38.250 in. Shaft Diameter 971.55 mm						
40.750	0.875	3825761	HDS1L04	R	F	
40.750	0.875	3825552	HDS2L04	R	F	
INCH 38.500 in. Shaft Diameter 977.90 mm						
40.375	0.750	529772	HS8	R	F	◊
40.500	0.813	3850557	HS7	R	F	◊
41.000	1.000	3850782	HDS2	R	F	
INCH 38.750 in. Shaft Diameter 984.25 mm						
40.750	0.813	3875557	HS7	R	F	◊
40.750	0.875	3875563	HDS2	R	F	
METRIC 38.976 in. Shaft Diameter 990 mm						
1040	25	990X1040X25 HDS2L5 R	HDS2L5	R	F	
1045	25	990X1045X25 HDS1 R	HDS1	R	F	
INCH 39.000 in. Shaft Diameter 990.60 mm						
41.000	0.750	3900540	HDS1	R	F	
41.000	0.750	3900542	HDS2	R	F	
41.000	0.875	3900562	HDS2	R	F	
41.000	0.875	3900574	HDS2	V	F	
41.000	0.875	3900564	HDS2L16	R	F	
41.000	0.875	3900549	HDS7	R	F	
41.250	0.875	3900660	HDS1	R	F	
METRIC 39.370 in. Shaft Diameter 1000 mm						
1035	20	1000X1035X20 HDS2 R	HDS2	R	F	
1050	20	1000X1050X20 HDS1 R	HDS1	R	F	
1050	23	1000X1050X23 HDS2 H	HDS2	H	F	
1050	23	1000X1050X23 HDS2 R	HDS2	R	F	■
1050	23	1000X1050X23 HDS2 R1	HDS2	R	F	
1050	25	1000X1050X25 HS5 R	HS5	R	F	◊
1064	25	1000X1064X25 HDS1 R	HDS1	R	F	
INCH 39.750 in. Shaft Diameter 1009.65 mm						
41.688	0.969	3975500	HDS1	R	F	
42.250	0.875	3975760	HDS1	R	F	
INCH 40.000 in. Shaft Diameter 1016.00 mm						
41.500	1.000	4000290	HDS1	R	F	
41.500	1.000	4000920	HDSA1	RL	F	
42.000	0.813	4000557	HS7	R	F	◊

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
INCH (cont.) 40.000 in. Shaft Diameter 1016.00 mm						
42.000	0.875	4000560	HDS1	R	F	
42.000	0.875	4000576	HDS1	V	F	
42.000	0.875	4000561	HDS1L08	R	F	
42.000	0.875	4000562	HDS2	R	F	
42.000	0.875	4000-4200-56	HDS7 R	HDS7	R	F
42.000	1.100	593485	HDSA2	RD	F	
42.144	1.000	558188	HS7C	R	F	◇
METRIC 40.157 in. Shaft Diameter 1020 mm						
1070	20	1020X1070X20	HS4 H	HS4	H	F ■◇
1070	20	1020X1070X20	HS6 H	HS6	H	F ◇
1070	25	1020X1070X25	HS4 R	HS4	R	F ◇
1084	25	1020X1084X25	HDS1 R	HDS1	R	F
1084	25	1020X1084X25	HSS4 H	HSS4	H	F ◇
1084	25	1020X1084X25	HSS5 H	HSS5	H	F ◇
INCH 40.250 in. Shaft Diameter 1022.35 mm						
41.750	0.750	4025258	HS8	R	F	◇
METRIC 40.394 in. Shaft Diameter 1026 mm						
1066	20	1026X1066X20	HDS2 V	HDS2	V	F
1076	25	1026X1076X25	HDS2 V	HDS2	V	F
INCH 40.500 in. Shaft Diameter 1028.70 mm						
41.500	0.500	4050018	HS8	R	F	◇
41.750	0.750	4050061	HDS7	H	F	
42.500	0.875	4050560	HDS1	R	F	
43.000	0.875	4050774	HDS2	V	F	
43.000	0.875	4050776	HDS2L16	V	F	
INCH 41.308 in. Shaft Diameter 1049.22 mm						
43.836	1.000	566240	HS8	R	F	◇
METRIC 41.496 in. Shaft Diameter 1054 mm						
1105	20	1054X1105X20	HDS2 D	HDS2	D	F
INCH 41.500 in. Shaft Diameter 1054.10 mm						
43.500	0.875	4150563	HDS2	R	F	
43.566	0.825	597393	HS8C	R	F	◇
43.566	0.938	4150548	HS8	R	F	◇
43.858	0.938	558035	HSA8	D	F	◇
METRIC 41.535 in. Shaft Diameter 1055 mm						
1100	25	1055X1100X25	HDS1 R	HDS1	R	F
METRIC 41.732 in. Shaft Diameter 1060 mm						
1100	20	1060X1100X20	HDS2 V	HDS2	V	F
1100	20	1060X1100X20	HDSF2 HT	HDSF2	HT	F
1100	20	1060X1100X20	HDSH2 HT	HDSH2	HT	F
1124	25	1060X1124X25	HSS4 V	HSS4	V	F ◇
INCH 41.813 in. Shaft Diameter 1062.05 mm						
45.000	1.000	4181900	HDS1	R	F	
INCH 41.875 in. Shaft Diameter 1063.63 mm						
43.500	1.000	4187312	HDS2	R	F	
INCH 42.000 in. Shaft Diameter 1066.80 mm						
43.500	0.750	4200258	HS8	R	F	◇
43.566	0.825	557831	HS8C	R	F	◇
43.625	0.813	4200338	HS8	H	F	◇
44.000	0.813	4200-4400-52	HS8 H	HS8	H	F ◇
44.000	0.825	558142	HS8C	R	F	◇
44.144	1.000	558238	HS7C	R	F	◇

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Features
METRIC 42.126 in. Shaft Diameter 1070 mm						
1120	20	1070X1120X20	HS6 R	HS6	R	F ◇
1125	25	1070X1125X25	HDS1 R	HDS1	R	F
1140	25	1070X1140X25	HDS1 V	HDS1	V	F
1140	25	1070X1140X25	HDS2 V	HDS2	V	F
INCH 42.250 in. Shaft Diameter 1073.15 mm						
44.250	1.000	4225580	HDS1	R	F	
INCH 42.500 in. Shaft Diameter 1079.50 mm						
44.250	0.750	4250382	HDS2	R	F	
45.000	0.875	4250766	HDS1L32	V	F	
45.000	0.875	4250762	HDS2	R	F	
METRIC 42.520 in. Shaft Diameter 1080 mm						
1130	20	1080X1130X20	HDS1 R	HDS1	R	F
INCH 43.000 in. Shaft Diameter 1092.20 mm						
45.000	0.813	4300558	HS8	R	F	◇
45.000	1.000	4300580	HDS1	R	F	
45.500	0.875	4300763	HDS2	R	F	
INCH 43.500 in. Shaft Diameter 1104.90 mm						
45.500	0.875	4350560	HDS1	R	F	
45.500	0.875	593047	HDS1L08	R	F	
45.500	0.875	4350565	HDS2	R	F	
METRIC 43.504 in. Shaft Diameter 1105 mm						
1160	25	1105X1160X25	HDS1 R	HDS1	R	F
1169	25	1105X1169X25	HSS5 V	HSS5	V	F ◇
INCH 44.000 in. Shaft Diameter 1117.60 mm						
46.000	0.813	4400557	HS7	R	F	◇
46.000	0.875	4400562	HDS2	R	F	
46.500	0.875	4400760	HDS1	R	F	
47.000	1.125	4400900	HDS1	R	F	
INCH 44.500 in. Shaft Diameter 1130.30 mm						
46.500	0.813	4450550	HDS1	R	F	
47.000	0.875	4450760	HDS1	R	F	
47.000	0.875	4450767	HDS1	V	F	
METRIC 44.882 in. Shaft Diameter 1140 mm						
1180	20	1140X1180X20	HDS1 V	HDS1	V	F
1210	25	1140X1210X25	HDS1 V	HDS1	V	F
1210	25	1140X1210X25	HDS2 V	HDS2	V	F
INCH 45.000 in. Shaft Diameter 1143.00 mm						
47.000	0.875	4500560	HDS1	R	F	
47.000	0.875	4500567	HDS1	V	F	
47.188	0.688	4500538	HS8	R	F	◇
INCH 45.250 in. Shaft Diameter 1149.35 mm						
47.000	1.000	4525422	HDS2	R	F	
METRIC 45.669 in. Shaft Diameter 1160 mm						
1220	28	1160X1220X28	HDSA2 VD	HDSA2	VD	F
INCH 45.750 in. Shaft Diameter 1162.05 mm						
47.768	0.875	4575570	HDS1	R	F	
INCH 45.994 in. Shaft Diameter 1168.25 mm						
48.250	1.000	566611	HDS1	V	F	
INCH 46.000 in. Shaft Diameter 1168.40 mm						
47.500	0.950	558091	HSA8	D	F	◇

Key features: ▲ WasteWatcher ■ Bore-Tite ▸ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

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Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.) 46.000 in. Shaft Diameter 1168.40 mm						
47.750	1.000	4600422	HDS2	R	F	
47.984	0.953	513112	HS6	R	F	◇
48.000	1.000	4600580	HDS1	R	F	
48.250	1.000	4600-4816-64	HDS1 R	HDS1	R	F
INCH 46.125 in. Shaft Diameter 1171.58 mm						
48.125	1.000	566594	HDSF2	H	F	
INCH 46.250 in. Shaft Diameter 1174.75 mm						
47.750	0.750	4625258	HS8	R	F	◇
METRIC 46.457 in. Shaft Diameter 1180 mm						
1230	20	1180X1230X20	HS6 R	HS6	R	F
METRIC 46.614 in. Shaft Diameter 1184 mm						
1248	25	1184X1248X25	HS8 H	HS8	H	F
INCH 47.000 in. Shaft Diameter 1193.80 mm						
49.000	0.875	4700560	HDS1	R	F	
49.000	0.875	4700567	HDS1	V	F	
49.000	0.875	4700565	HDS1L16	R	F	
49.000	0.875	4700566	HDS1L16	V	F	
49.000	0.875	4700511	HDS7	H	F	
49.000	0.875	595972	HDS7L08	R	F	
METRIC 47.244 in. Shaft Diameter 1200 mm						
1250	22	1200X1250X22	HS5 R	HS5	R	F
1264	22.20	1200X1264X22.2	HDS2 D	HDS2	D	F
1264	22.20	1200X1264X22.2	HDS2 R	HDS2	R	F
INCH 47.750 in. Shaft Diameter 1212.85 mm						
50.500	1.250	4775850	HDS1	R	F	
INCH 48.000 in. Shaft Diameter 1219.20 mm						
49.500	0.750	4800254	HDS2	V	F	
50.000	1.000	4800580	HDS1	R	F	
METRIC 48.031 in. Shaft Diameter 1220 mm						
1255	20	1220X1255X20	HDS2 R	HDS2	R	F
INCH 48.250 in. Shaft Diameter 1225.55 mm						
50.250	0.875	4825560	HDS1	R	F	
50.250	0.875	4825527	HDS1	V	F	
50.250	0.875	4825561	HDS1L32	R	F	
50.250	0.875	4825563	HDS2	R	F	
50.250	0.875	4825562	HDS2L24	R	F	
50.250	0.875	4816-5016-56	HDS7 R	HDS7	R	F
50.250	0.875	4825518	HS8	D	F	◇
METRIC 49.213 in. Shaft Diameter 1250 mm						
1314	21.50	1250X1314X21.5	HDS7 R1	HDS7	R	F
1314	21.54	4921799	HDS7	R	F	
INCH 49.500 in. Shaft Diameter 1257.30 mm						
52.250	1.000	4950830	HDS1	R	F	
52.250	1.000	4950833	HDS2	R	F	
METRIC 49.606 in. Shaft Diameter 1260 mm						
1300	18	1260X1300X18	HDS1 R	HDS1	R	F
INCH 49.750 in. Shaft Diameter 1263.65 mm						
52.500	1.000	4975833	HDS2	R	F	
INCH 50.000 in. Shaft Diameter 1270.00 mm						
51.750	1.000	5000420	HDS1	R	F	

Bore	Width	Part Number	Seal Type	Lip Mat'l	Lip Tech	Fea- tures
INCH (cont.) 50.000 in. Shaft Diameter 1270.00 mm						
52.000	0.813	5000558	HS8	R	F	◇
52.000	0.875	5000560	HDS1	R	F	
METRIC 50.000 in. Shaft Diameter 1270 mm						
1320	25	1270X1320X25	HDS1 R	HDS1	R	F
1320	25	1270X1320X25	HS5 R	HS5	R	F
METRIC 50.394 in. Shaft Diameter 1280 mm						
1340	25	1280X1340X25	HSS5 H	HSS5	H	F
INCH 51.000 in. Shaft Diameter 1295.40 mm						
53.000	0.812	5100558	HS8	R	F	◇
53.000	0.813	592880	HDS1	R	F	
METRIC 51.969 in. Shaft Diameter 1320 mm						
1380	29	1320X1380X29	HDS2 V	HDS2	V	F
INCH 52.000 in. Shaft Diameter 1320.80 mm						
54.000	0.813	5200558	HS8	R	F	◇
INCH 52.250 in. Shaft Diameter 1327.15 mm						
54.145	0.825	597559	HS8	R	F	◇
54.250	1.000	566595	HDSF2	H	F	
INCH 52.500 in. Shaft Diameter 1333.50 mm						
55.000	0.875	5250760	HDS1	R	F	
INCH 53.000 in. Shaft Diameter 1346.20 mm						
54.875	0.813	5300488	HS8	R	F	◇
METRIC 53.543 in. Shaft Diameter 1360 mm						
1400	18	1360X1400X18	HS8 V	HS8	V	F
METRIC 53.937 in. Shaft Diameter 1370 mm						
1420	19.05	1370X1420X19.05	HDS2 H	HDS2	H	F
1420	20	1370X1420X20	HDS1 R	HDS1	R	F
INCH 54.000 in. Shaft Diameter 1371.60 mm						
56.000	0.813	5400557	HS7	R	F	◇
56.000	1.000	566681	HDSF2	P	F	
INCH 54.250 in. Shaft Diameter 1377.95 mm						
56.250	1.000	5425583	HDS2	R	F	
METRIC 54.331 in. Shaft Diameter 1380 mm						
1420	18	1380X1420X18	HS8 R	HS8	R	F
1420	18	1380X1420X18	HS8 V	HS8	V	F
1445	25	1380X1445X25	HS5 V	HS5	V	F
INCH 54.750 in. Shaft Diameter 1390.65 mm						
56.374	0.874	5475340	HDS1	R	F	
INCH 55.500 in. Shaft Diameter 1409.70 mm						
57.500	0.750	5550540	HDS1	R	F	
INCH 57.500 in. Shaft Diameter 1460.50 mm						
59.500	0.813	5750558	HS8	R	F	◇
INCH 57.875 in. Shaft Diameter 1470.03 mm						
60.000	0.938	5787611	HDS7	R	F	
60.000	0.938	5787610	HDS7L08	R	F	
INCH 58.000 in. Shaft Diameter 1473.20 mm						
60.000	0.813	5800558	HS8	R	F	◇

Seal tech: W = SKF Wave E = SKF Edge F = SKF Flex S = standard oil G = grease Bold part numbers are preferred designs





Bore	Width	Part Number	Seal Type	Lip Seal Type	Lip Mat'l	Lip Tech	Features
INCH 58.500 in. Shaft Diameter 1485.90 mm							
60.500	0.813	5850518	HS8	R	F		◇
INCH 59.500 in. Shaft Diameter 1511.30 mm							
61.500	0.750	5950547	HDS2	V	F		
61.500	0.750	5950546	HDS2L32	V	F		
INCH 59.750 in. Shaft Diameter 1517.65 mm							
60.750	0.500	5975017	HS7	R	F		◇
METRIC 60.236 in. Shaft Diameter 1530 mm							
1580	20	1530X1580X20	HDS1 R	HDS1	R	F	
METRIC 60.630 in. Shaft Diameter 1540 mm							
1580	20	1540X1580X20	HS8V	HS8	V	F	◇
METRIC 61.024 in. Shaft Diameter 1550 mm							
1610	25	1550X1610X25	HDS2	HDS2	V	F	
INCH 61.250 in. Shaft Diameter 1555.75 mm							
63.250	1.000	6125579	HDS7	R	F		
63.250	1.000	6125570	HDS7L08	R	F		
METRIC 62.205 in. Shaft Diameter 1580 mm							
1644	25	1580X1644X25	HS8 H	HS8	H	F	◇
1644	25	1580X1644X25	HS8 R	HS8	R	F	◇
INCH 62.250 in. Shaft Diameter 1581.15 mm							
64.000	0.625	6225372	HDS2	R	F		
INCH 62.500 in. Shaft Diameter 1587.50 mm							
64.000	0.625	6250222	HDS2	R	F		
64.000	0.875	6250281	HDS1	V	F		
64.000	0.875	6250277	HDS2	V	F		
64.000	0.875	6250276	HDS2L32	V	F		
INCH 63.000 in. Shaft Diameter 1600.20 mm							
65.000	0.813	6300558	HS8	R	F		◇
INCH 63.250 in. Shaft Diameter 1606.55 mm							
65.434	0.953	527121	HS6	R	F		◇
METRIC 63.386 in. Shaft Diameter 1610 mm							
1670	25	1610X1670X25	HSS5 H	HSS5	H	F	◇
METRIC 64.961 in. Shaft Diameter 1650 mm							
1700	20	1650X1700X20	HS8V	HS8	V	F	◇
METRIC 65.354 in. Shaft Diameter 1660 mm							
1708	17.50	1660X1708X17.5	HS8 R	HS8	R	F	◇
METRIC 65.945 in. Shaft Diameter 1675 mm							
1725	21	1675X1725X21	HS8 D	HS8	D	F	◇
INCH 66.141 in. Shaft Diameter 1679.98 mm							
68.142	0.815	500047	HS8	R	F		◇
METRIC 66.142 in. Shaft Diameter 1680 mm							
1730	20.70	557934	HS8	R	F		◇
INCH 67.000 in. Shaft Diameter 1701.80 mm							
69.000	0.813	6700557	HS8	R	F		◇
69.125	0.718	558389	HS8	R	F		◇
INCH 69.000 in. Shaft Diameter 1752.60 mm							
71.000	0.813	6900558	HS8	R	F		◇

Bore	Width	Part Number	Seal Type	Lip Seal Type	Lip Mat'l	Lip Tech	Features
METRIC 69.291 in. Shaft Diameter 1760 mm							
1824	25.30	1760X1824X25.3	HS5 R	HS5	R	F	◇
1824	25.30	1760X1824X25.30	HS8 R	HS8	R	F	◇
INCH 70.000 in. Shaft Diameter 1778.00 mm							
72.000	0.813	592953	HS5	R	F		◇
72.000	0.813	593534	HS6	R	F		◇
72.000	0.813	7000558	HS8	R	F		◇
72.000	0.813	530228	HS8	V	F		◇
INCH 70.500 in. Shaft Diameter 1790.70 mm							
72.000	0.500	7032-7200-32	HS8 R	HS8	R	F	◇
METRIC 71.260 in. Shaft Diameter 1810 mm							
1860	21	1810X1860X21	HS8 D	HS8	D	F	◇
INCH 72.500 in. Shaft Diameter 1841.50 mm							
74.500	0.813	7250558	HS8	R	F		◇
INCH 73.171 in. Shaft Diameter 1858.54 mm							
75.671	0.925	556395	HS8	H	F		◇
INCH 75.000 in. Shaft Diameter 1905.00 mm							
77.000	0.815	7500518	HS8	R	F		◇
METRIC 75.118 in. Shaft Diameter 1908 mm							
1958	21	1908X1958X21	HSA8 D	HSA8	D	F	◇
METRIC 75.197 in. Shaft Diameter 1910 mm							
1974	25	1910X1974X25	HS5 R	HS5	R	F	◇
INCH 76.000 in. Shaft Diameter 1930.40 mm							
78.000	0.813	594316	HS8	R	F		◇
INCH 80.000 in. Shaft Diameter 2032.00 mm							
82.000	0.813	8000528	HS8	D	F		◇
INCH 80.500 in. Shaft Diameter 2044.70 mm							
82.500	0.813	8050558	HS8	R	F		◇
INCH 81.000 in. Shaft Diameter 2057.40 mm							
83.000	0.813	8100558	HS8	R	F		◇
METRIC 81.890 in. Shaft Diameter 2080 mm							
2144	25	2080X2144X25	HS4 H	HS4	H	F	◇
METRIC 84.252 in. Shaft Diameter 2140 mm							
2204	25	2140X2204X25	HSS5 H	HSS5	H	F	◇
METRIC 91.339 in. Shaft Diameter 2320 mm							
2384	25	2320X2384X25	HS8 R	HS8	R	F	◇
INCH 93.750 in. Shaft Diameter 2381.25 mm							
95.750	1.000	556975	HS8	R	F		◇
INCH 121.500 in. Shaft Diameter 3086.10 mm							
123.000	0.750	556981	HS8	R	F		◇
METRIC 124.803 in. Shaft Diameter 3170 mm							
3234	25	3170X3234X25	HSS8 H	HSS8	H	F	◇
METRIC 140.630 in. Shaft Diameter 3572 mm							
3636	25	3572X3636X25	HSS8 H	HSS8	H	F	◇

Key features: ▲ WasteWatcher ■ Bore-Tite ▸ SS Case ⊙ SS Spring ◆ Pressure seal up to 50 psi ◇ Cover plate required

Don't see the size you need? SKF Flex seals are available fast in customized sizes and materials with NO tooling charges.





V-ring seals

Suitable for an extremely wide range of applications, V-ring seals keep contaminants out of many bearing types. Often they are used as secondary seals to help protect primary seals in highly contaminated environments.

Form and function

V-rings are installed on shafts and their thin, tapered lip seals against a bore perpendicular to the shaft (→ fig. 1a).

V-rings have an interference fit on the shaft, rotate with it and act as flingers (→ fig. 1b).

Angular misalignment of the shaft relative to the bore can be tolerated (→ fig. 1c). V-rings provide reliable sealing even if the shaft is out-of-round or rotates eccentrically (→ fig. 1d). The amount by which the shaft can be displaced axially is governed by the permissible displacement of the V-ring relative to the bore.

Flexible installation and operation

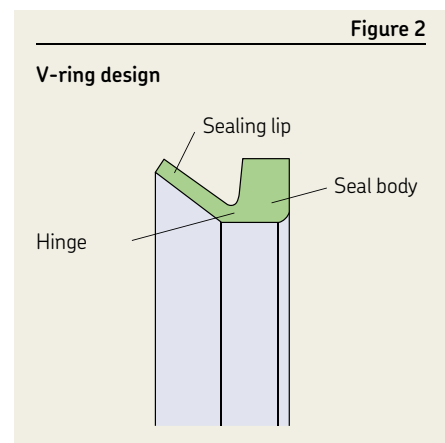
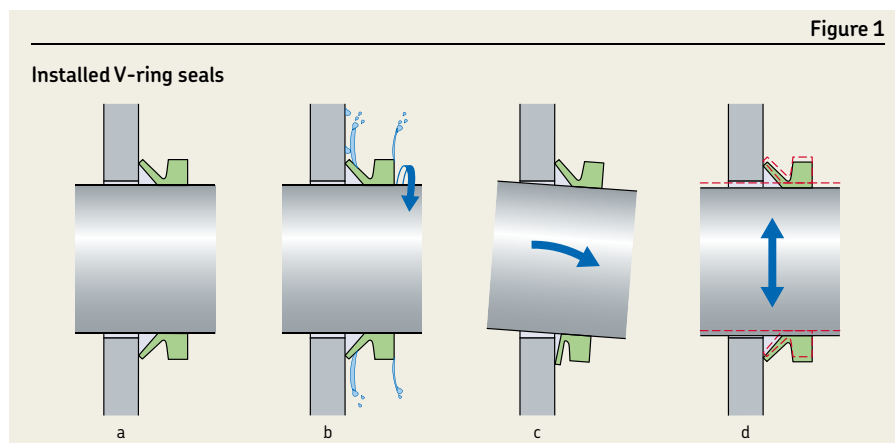
V-rings are made entirely of elastomers without fabric or metal reinforcement. Combining a flexible seal body, a conical-shaped sealing lip and an integral, resilient “hinge” (→ fig. 2), v-rings can be stretched and, depending on size, easily pushed and installed over other components like flanges, pulleys or even housings.

Inherent tension from the seal body holds the lip in place as it rotates with the shaft and seals axially against a stationary housing bore. This can be the end face of a bearing, a washer, stamping, bearing housing, or even the metal case of a rotary shaft seal.

The flexible lip and hinge provide adequate sealing even in applications with considerable endplay and shaft misalignment. Thanks to centrifugal force, the contact pressure of the lip decreases as speed increases, resulting in lower heat and friction losses and ultimately, improved wear resistance and extended service life.

Materials

V-rings are normally made of nitrile rubber that features good chemical resistance, resistance to wear and can be used in applications with temperatures ranging from -40 to $+210$ °F (-40 to $+100$ °C). For applications exposed to higher temperatures and/or aggressive media, V-rings made of fluoro rubber are available. Permissible operating conditions for V-rings made of nitrile or fluoro rubber are listed in **Table 1**.





Standard designs and size range

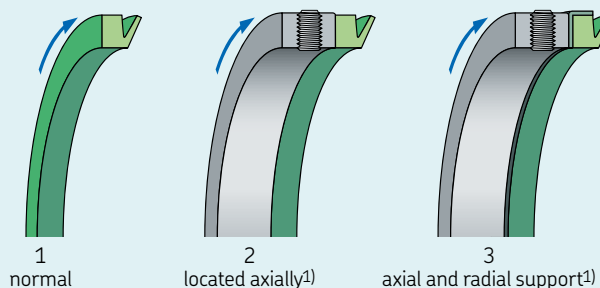
V-ring seals from SKF are available in five basic designs:

- VA/VR1 has a standard cross section and straight back sideface. Our most commonly used V-ring, VA/VR1 typically protects bearing arrangements in gearboxes, electric motors and drives.
- VS/VR2 has a standard low cross section, tapered back face and wide body; commonly used in agricultural and automotive applications.
- VL/VR3 feature a very compact axial cross section; this seal is commonly used in confined spaces to enhance labyrinth seals.
- VE/VR4 function as secondary seals for heavy-duty applications where the primary seal needs protection from water and/or solid contaminants. With the largest cross section of any V-ring, VE/VR4 permits the largest axial displacements. Available in diameters from 11.811 to 79.134 in (300 to 2,010 mm).

V-rings from SKF are available for the shaft diameter ranges listed in **Table 2**. In addition, special sizes and designs, including split versions, can be made to order. Contact your SKF sales representative for sizes outside the standard range.

Table 1

Permissible operating conditions



Operating conditions	Guideline values for V-rings of	
	nitrile rubber	fluoro rubber
Temperature, °F (°C)	-40 to +210 (-40 to +100) R	
Circumferential speed, ft/min (m/s)		
normal (1)	1,575 (up to 8)	1,280 (up to 6.5)
located axially (2)	1,575 to 2,360 (8 to 12)	1,280 to 1,970 (6.5 to 10)
axial and radial support (3)	2,360 (>12)	1,970 (>10)
Pressure acting on seal, psi (MPa)		
static sealing or very low speed operation	4.35 (up to 0.03)	4.35 (up to 0.03)

* Support ring by customer

Table 2

Standard V-ring designs and size ranges

Design, globally outside North America	VA	VS	VL	VE
Design, North America	VR1	VR2	VR3	VR4
–	in. (mm)			
min.	0.106 2.7	0.177 4.5	4.134 105	11.811 300
max.	79.257 2,020	8.268 210	79.724 2,025	79.134 2,010



V-ring seals

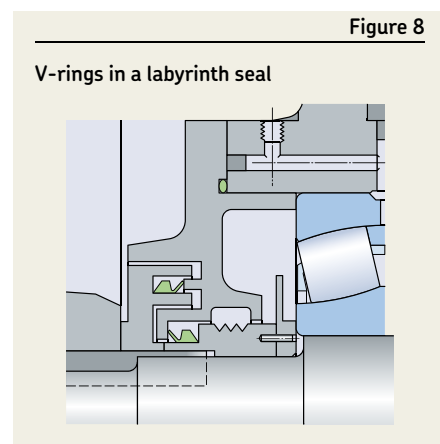
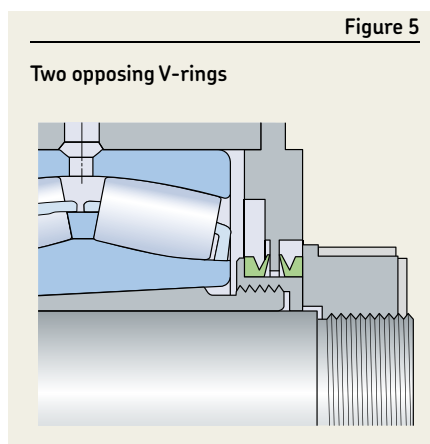
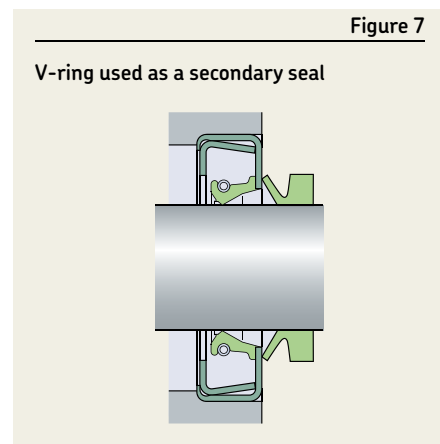
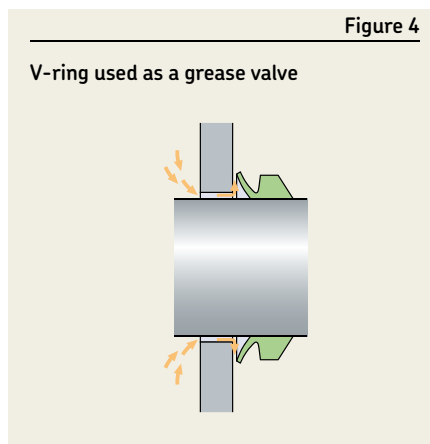
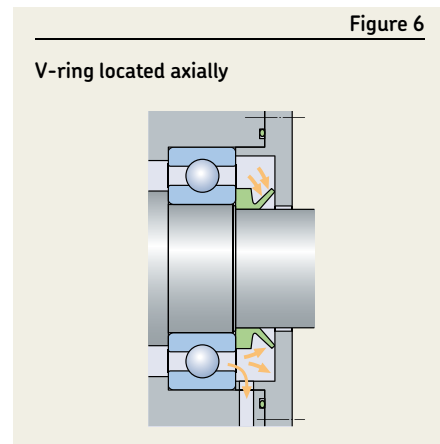
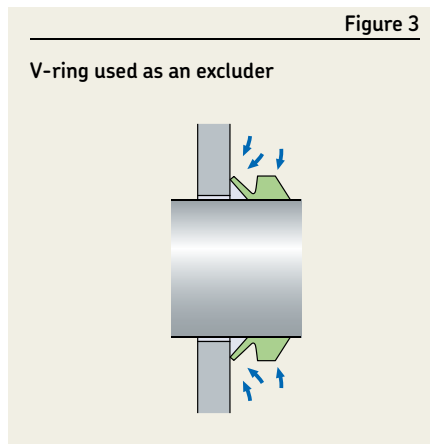
Applications

V-rings are suitable for both grease and oil lubricated applications. For sealing grease-lubricated bearing arrangements and protecting against contaminants, V-ring should be arranged outside the housing cover or housing wall. Dust, water spray and other contaminants can be excluded in this position (→ **fig. 3**).

The V-ring can also act as a grease valve, where used grease or excess new grease can escape between the housing bore and the sealing lip (→ **fig. 4**). The installation of two opposing V-rings can be used in applications where lubricant retention and contaminant exclusion are of equal importance (→ **fig. 5**). If V-rings are used to retain oil, they should always be located axially on the shaft on the lubricant side (→ **fig. 6**). V-rings should not be submerged in the application medium.

Secondary applications

V-rings are often used as secondary seals (→ **fig. 7**) when it is necessary to protect the sealing lip and housing bore of the primary seal against contaminants or corrosion. V-rings will also enhance the sealing efficiency of labyrinth seals (→ **fig. 8**).





Sliding velocities

V-rings can operate under the conditions listed in Table 1. At speeds of 2,900 to 3,900 ft/min (15 to 20 m/s), the sealing lip lifts from the counterface and the V-ring only acts as a gap-type seal.

Coaxiality and runout

The total tolerance for the deviation from coaxiality and runout should not exceed the guideline values provided in Table 3.

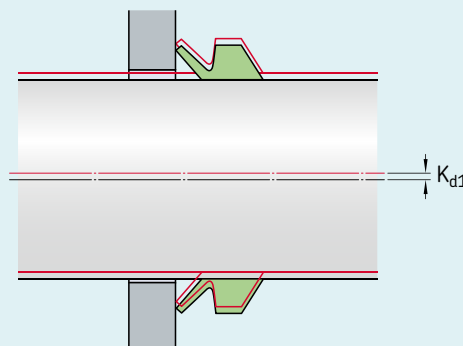
Misalignment

V-rings can tolerate misalignment between the shaft and housing, or deviations from the perpendicularity between the shaft and housing bore. **Diagram 1** provides values for the maximum permissible angular misalignment; these values apply to the V-ring designs VA/VR1 and VS/VR2, provided they are supported axially on the shaft.

The permissible misalignment values for the compact VL/VR3 seals are significantly lower than those for the VA/VR1 and VS/VR2 designs. In applications where V-rings are not supported axially on the shaft, the maximum values from **Diagram 1** should be reduced.

Table 3

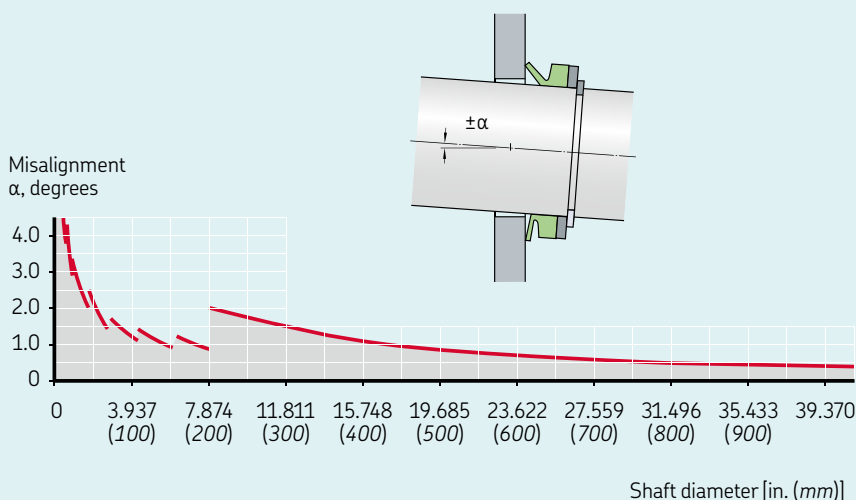
Coaxiality and runout tolerances



Shaft diameter				Total tolerance	
nominal				for coaxiality deviation and runout	
d ₁				K _{d1}	
over	incl.	over	incl.	max	
in.		mm		in	mm
V-rings, VA/VR1 and VS/VR2 designs					
	0.374		9.5	0.016	0.4
0.374	0.768	9.5	19.5	0.024	0.6
0.768	1.496	19.5	38	0.034	0.9
1.496	2.677	38	68	0.043	1.1
2.677	4.134	68	105	0.055	1.4
4.134	6.102	105	155	0.063	1.6
6.102	8.628	155	210	0.075	1.9
8.628	79.527	210	2 020	0.142	3.6
V-rings, VL/VR3 designs					
5.315	24.803	135	630	0.059	1.5
V-rings, VE/VR4 designs					
17.716	79.134	450	2 010	0.236	6

Diagram 1

Maximum permissible misalignment for V-rings of the VA/VR1 and VS/VR2 designs





V-ring seals

Bore finish and treatment

A fine-turned housing bore is adequate for V-rings. Appropriate surface roughness values vary depending on the circumferential speed (→ **Table 4**). SKF recommends buffing all turned surfaces with an emery cloth to remove any sharp peaks caused during the turning operation. The surface finish should be measured at approximately 90° to the path of the groove to obtain a true reading of the surface.

When used with grease, oil or dry lubricants, V-rings do not require any special housing bore treatments. Mild steel bores exposed to water or other corrosives should be protected with zinc- or chromium-plating, or be treated with an anti-corrosive spray.

Additional bore requirements

- Aluminium surfaces should be free of scratch marks.
- Surface hardness should be > 100 HB in abrasive applications.
- Die cast aluminum can be used in the as-cast condition.
- Steel and cast iron surfaces should be free from lead and sharp tool marks.
- Cold rolled steel stampings can be used without machining.
- Plastic counterface materials are generally not acceptable due to poor heat dissipation.
- Stainless steel should not be used in dry running applications unless the speed is below 200 ft/min (1 m/s).

Shaft requirements

To help prevent damage to the V-ring during installation, shafts must be free from sharp edges, nicks and burrs. V-rings rotate with the shaft and only require a moderate surface roughness value, which should not exceed 252 µin (*Ra* 6,3 µm). When sealing fluids or exposed to fine, solid contaminants, the V-ring requires a surface roughness value of maximum 128 µin (*Ra* 3,2 µm). A V-ring is stretched when installed and fits all shaft diameters within the ranges listed in the product tables.

Installing V-rings

V-rings are elastic and can be stretched and pushed over other components (→ **fig. 9**). When installation involves several V-rings, a simple tool (→ **fig. 10**) can be used to push the seals to their position at a predetermined distance from the counterface. V-rings can also be cut and rejoined in the field.

General installation guidelines

- Clean the V-ring, housing bore and shaft.
- Make sure that the shaft is dry and free from grease or oil
- Lubricate the V-ring lip with a thin film of grease or silicone oil.
- In applications that demand minimal friction, coat the housing bore with a low-friction agent (do not apply grease to the lip).
- Check that the V-ring is installed with a uniform stretch around the shaft.

Table 4

Recommended counterface surface finish

Circumferential speed		Surface finish	
ft/min	m/s	Ra µin.	Ra µm
> 1,969	> 10	16–32	0.4–0.8
984–1,969	5–10	32–64	0.8–1.6
199–984	1–5	64–80	1.6–2.0
< 199	< 1	80–100	2.0–2.5

The surface finish must not be lower than R_a 2 µin. (0,05 µm).

Figure 9

Installing a V-ring

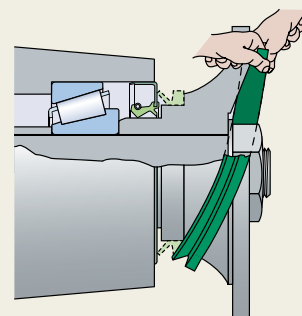
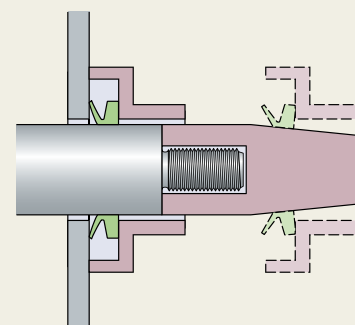
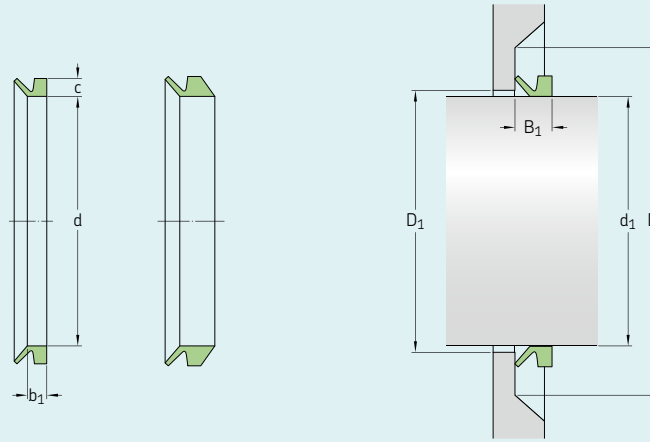


Figure 10

Installation tool



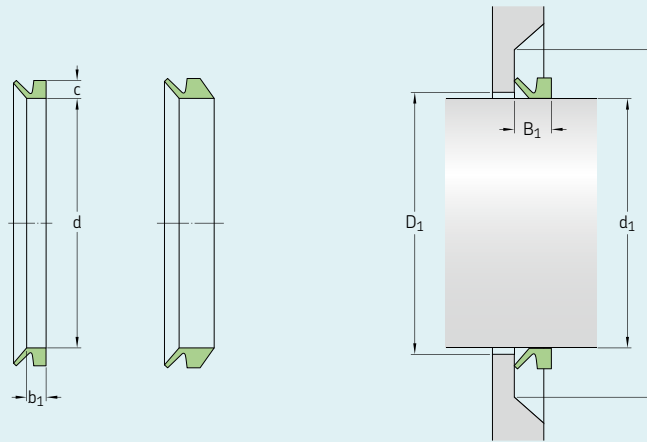




Inch

SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
400030	VR1	R	0.106	0.138	0.098	0.098±.012	d1 + 0.039	d1 + 0.157	0.083	0.059
400034	VR1	V	0.106	0.138	0.098	0.098±.012	d1 + 0.039	d1 + 0.157	0.083	0.059
400040	VR1	R	0.138	0.177	0.126	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400044	VR1	V	0.138	0.177	0.126	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400050	VR1	R	0.177	0.217	0.157	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400054	VR1	V	0.177	0.217	0.157	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400051	VR2	R	0.177	0.217	0.157	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400055	VR2	V	0.177	0.217	0.157	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400060	VR1	R	0.217	0.256	0.197	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400064	VR1	V	0.217	0.256	0.197	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400061	VR2	R	0.217	0.256	0.197	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400065	VR2	V	0.217	0.256	0.197	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400070	VR1	R	0.256	0.315	0.236	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400074	VR1	V	0.256	0.315	0.236	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400071	VR2	R	0.256	0.315	0.236	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400075	VR2	V	0.256	0.315	0.236	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400080	VR1	R	0.315	0.374	0.276	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400084	VR1	V	0.315	0.374	0.276	0.118±.016	d1 + 0.039	d1 + 0.236	0.094	0.079
400081	VR2	R	0.315	0.374	0.276	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400085	VR2	V	0.315	0.374	0.276	0.177±.016	d1 + 0.039	d1 + 0.236	0.154	0.079
400100	VR1	R	0.374	0.453	0.354	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400104	VR1	V	0.374	0.453	0.354	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400101	VR2	R	0.374	0.453	0.354	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400105	VR2	V	0.374	0.453	0.354	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400120	VR1	R	0.453	0.492	0.413	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400124	VR1	V	0.453	0.492	0.413	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400121	VR2	R	0.453	0.531	0.413	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400125	VR2	V	0.453	0.531	0.413	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400130	VR1	R	0.492	0.531	0.461	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400134	VR1	V	0.492	0.531	0.461	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400140	VR1	R	0.531	0.610	0.492	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400144	VR1	V	0.531	0.610	0.492	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400141	VR2	R	0.531	0.610	0.492	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400145	VR2	V	0.531	0.610	0.492	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400160	VR1	R	0.610	0.689	0.551	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400164	VR1	V	0.610	0.689	0.551	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400161	VR2	R	0.610	0.689	0.551	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400165	VR2	V	0.610	0.689	0.551	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400180	VR1	R	0.689	0.748	0.630	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400184	VR1	V	0.689	0.748	0.630	0.177±.024	d1 + 0.039	d1 + 0.354	0.134	0.118
400181	VR2	R	0.689	0.748	0.630	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400185	VR2	V	0.689	0.748	0.630	0.264±.024	d1 + 0.039	d1 + 0.354	0.220	0.118
400200	VR1	R	0.748	0.827	0.709	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400204	VR1	V	0.748	0.827	0.709	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400201	VR2	R	0.748	0.827	0.709	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400205	VR2	V	0.748	0.827	0.709	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400220	VR1	R	0.827	0.945	0.787	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400224	VR1	V	0.827	0.945	0.787	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157

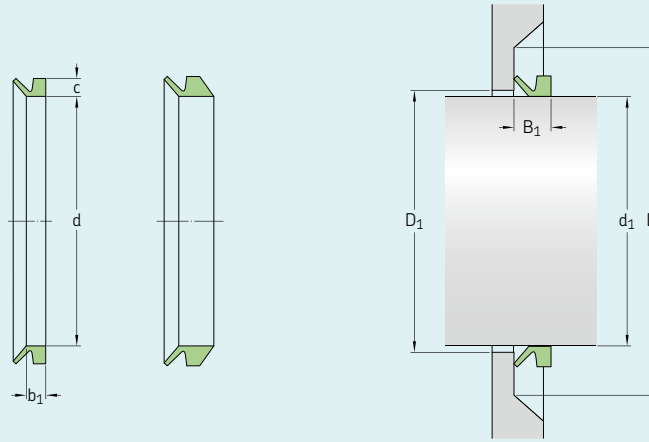




Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
2.7	3.5	2.5	2.5±0.3	d1 + 1	d1 + 4	2.1	1.5	400030
2.7	3.5	2.5	2.5±0.3	d1 + 1	d1 + 4	2.1	1.5	400034
3.5	4.5	3.2	3±0.4	d1 + 1	d1 + 6	2.4	2	400040
3.5	4.5	3.2	3±0.4	d1 + 1	d1 + 6	2.4	2	400044
4.5	5.5	4	3±0.4	d1 + 1	d1 + 6	2.4	2	400050
4.5	5.5	4	3±0.4	d1 + 1	d1 + 6	2.4	2	400054
4.5	5.5	4	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400051
4.5	5.5	4	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400055
5.5	6.5	5	3±0.4	d1 + 1	d1 + 6	2.4	2	400060
5.5	6.5	5	3±0.4	d1 + 1	d1 + 6	2.4	2	400064
5.5	6.5	5	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400061
5.5	6.5	5	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400065
6.5	8	6	3±0.4	d1 + 1	d1 + 6	2.4	2	400070
6.5	8	6	3±0.4	d1 + 1	d1 + 6	2.4	2	400074
6.5	8	6	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400071
6.5	8	6	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400075
8	9.5	7	3±0.4	d1 + 1	d1 + 6	2.4	2	400080
8	9.5	7	3±0.4	d1 + 1	d1 + 6	2.4	2	400084
8	9.5	7	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400081
8	9.5	7	4.5±0.4	d1 + 1	d1 + 6	3.9	2	400085
9.5	11.5	9	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400100
9.5	11.5	9	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400104
9.5	11.5	9	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400101
9.5	11.5	9	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400105
11.5	12.5	10.5	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400120
11.5	12.5	10.5	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400124
11.5	13.5	10.5	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400121
11.5	13.5	10.5	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400125
12.5	13.5	11.7	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400130
12.5	13.5	11.7	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400134
13.5	15.5	12.5	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400140
13.5	15.5	12.5	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400144
13.5	15.5	12.5	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400141
13.5	15.5	12.5	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400145
15.5	17.5	14	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400160
15.5	17.5	14	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400164
15.5	17.5	14	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400161
15.5	17.5	14	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400165
17.5	19	16	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400180
17.5	19	16	4.5±0.6	d1 + 1	d1 + 9	3.4	3	400184
17.5	19	16	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400181
17.5	19	16	6.7±0.6	d1 + 1	d1 + 9	5.6	3	400185
19	21	18	6±0.8	d1 + 2	d1 + 12	4.7	4	400200
19	21	18	6±0.8	d1 + 2	d1 + 12	4.7	4	400204
19	21	18	9±0.8	d1 + 2	d1 + 12	7.9	4	400201
19	21	18	9±0.8	d1 + 2	d1 + 12	7.9	4	400205
21	24	20	6±0.8	d1 + 2	d1 + 12	4.7	4	400220
21	24	20	6±0.8	d1 + 2	d1 + 12	4.7	4	400224

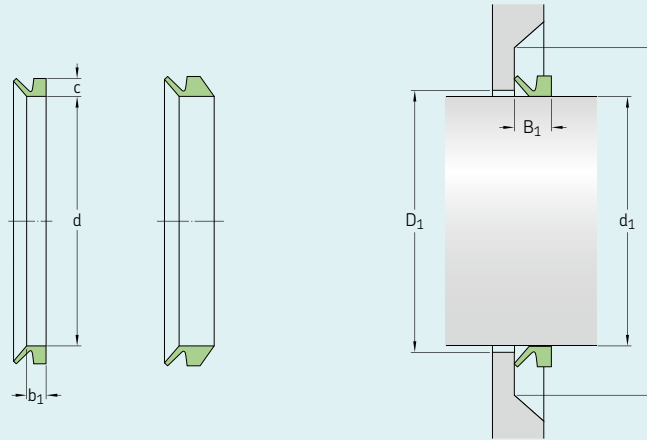




Inch

SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
400221	VR2	R	0.827	0.945	0.787	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400225	VR2	V	0.827	0.945	0.787	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400250	VR1	R	0.945	1.063	0.866	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400254	VR1	V	0.945	1.063	0.866	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400251	VR2	R	0.945	1.063	0.866	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400255	VR2	V	0.945	1.063	0.866	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400280	VR1	R	1.063	1.142	0.984	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400284	VR1	V	1.063	1.142	0.984	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400281	VR2	R	1.063	1.142	0.984	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400285	VR2	V	1.063	1.142	0.984	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400300	VR1	R	1.142	1.220	1.063	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400304	VR1	V	1.142	1.220	1.063	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400301	VR2	R	1.142	1.220	1.063	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400305	VR2	V	1.142	1.220	1.063	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400320	VR1	R	1.220	1.299	1.142	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400324	VR1	V	1.220	1.299	1.142	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400321	VR2	R	1.220	1.299	1.142	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400325	VR2	V	1.220	1.299	1.142	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400350	VR1	R	1.299	1.417	1.220	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400354	VR1	V	1.299	1.417	1.220	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400351	VR2	R	1.299	1.417	1.220	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400355	VR2	V	1.299	1.417	1.220	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400380	VR1	R	1.417	1.496	1.339	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400384	VR1	V	1.417	1.496	1.339	0.236±.031	d1 + 0.079	d1 + 0.472	0.185	0.157
400381	VR2	R	1.417	1.496	1.339	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400385	VR2	V	1.417	1.496	1.339	0.354±.031	d1 + 0.079	d1 + 0.472	0.311	0.157
400400	VR1	R	1.496	1.693	1.417	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400404	VR1	V	1.496	1.693	1.417	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400401	VR2	R	1.496	1.693	1.417	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400405	VR2	V	1.496	1.693	1.417	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400450	VR1	R	1.693	1.890	1.575	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400454	VR1	V	1.693	1.890	1.575	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400451	VR2	R	1.693	1.890	1.575	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400455	VR2	V	1.693	1.890	1.575	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400500	VR1	R	1.890	2.087	1.772	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400504	VR1	V	1.890	2.087	1.772	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400501	VR2	R	1.890	2.087	1.772	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400505	VR2	V	1.890	2.087	1.772	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400550	VR1	R	2.087	2.283	1.929	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400554	VR1	V	2.087	2.283	1.929	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400551	VR2	R	2.087	2.283	1.929	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400555	VR2	V	2.087	2.283	1.929	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400600	VR1	R	2.283	2.480	2.126	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400604	VR1	V	2.283	2.480	2.126	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400601	VR2	R	2.283	2.480	2.126	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400605	VR2	V	2.283	2.480	2.126	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400650	VR1	R	2.480	2.677	2.283	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197
400654	VR1	V	2.480	2.677	2.283	0.276±.039	d1 + 0.079	d1 + 0.591	0.217	0.197

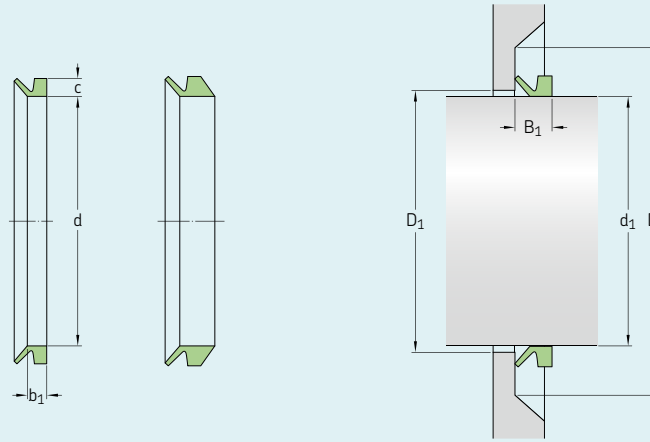




Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
21	24	20	9±0.8	d1 + 2	d1 + 12	7.9	4	400221
21	24	20	9±0.8	d1 + 2	d1 + 12	7.9	4	400225
24	27	22	6±0.8	d1 + 2	d1 + 12	4.7	4	400250
24	27	22	6±0.8	d1 + 2	d1 + 12	4.7	4	400254
24	27	22	9±0.8	d1 + 2	d1 + 12	7.9	4	400251
24	27	22	9±0.8	d1 + 2	d1 + 12	7.9	4	400255
27	29	25	6±0.8	d1 + 2	d1 + 12	4.7	4	400280
27	29	25	6±0.8	d1 + 2	d1 + 12	4.7	4	400284
27	29	25	9±0.8	d1 + 2	d1 + 12	7.9	4	400281
27	29	25	9±0.8	d1 + 2	d1 + 12	7.9	4	400285
29	31	27	6±0.8	d1 + 2	d1 + 12	4.7	4	400300
29	31	27	6±0.8	d1 + 2	d1 + 12	4.7	4	400304
29	31	27	9±0.8	d1 + 2	d1 + 12	7.9	4	400301
29	31	27	9±0.8	d1 + 2	d1 + 12	7.9	4	400305
31	33	29	6±0.8	d1 + 2	d1 + 12	4.7	4	400320
31	33	29	6±0.8	d1 + 2	d1 + 12	4.7	4	400324
31	33	29	9±0.8	d1 + 2	d1 + 12	7.9	4	400321
31	33	29	9±0.8	d1 + 2	d1 + 12	7.9	4	400325
33	36	31	6±0.8	d1 + 2	d1 + 12	4.7	4	400350
33	36	31	6±0.8	d1 + 2	d1 + 12	4.7	4	400354
33	36	31	9±0.8	d1 + 2	d1 + 12	7.9	4	400351
33	36	31	9±0.8	d1 + 2	d1 + 12	7.9	4	400355
36	38	34	6±0.8	d1 + 2	d1 + 12	4.7	4	400380
36	38	34	6±0.8	d1 + 2	d1 + 12	4.7	4	400384
36	38	34	9±0.8	d1 + 2	d1 + 12	7.9	4	400381
36	38	34	9±0.8	d1 + 2	d1 + 12	7.9	4	400385
38	43	36	7±1	d1 + 2	d1 + 15	5.5	5	400400
38	43	36	7±1	d1 + 2	d1 + 15	5.5	5	400404
38	43	36	11±1	d1 + 2	d1 + 15	9.5	5	400401
38	43	36	11±1	d1 + 2	d1 + 15	9.5	5	400405
43	48	40	7±1	d1 + 2	d1 + 15	5.5	5	400450
43	48	40	7±1	d1 + 2	d1 + 15	5.5	5	400454
43	48	40	11±1	d1 + 2	d1 + 15	9.5	5	400451
43	48	40	11±1	d1 + 2	d1 + 15	9.5	5	400455
48	53	45	7±1	d1 + 2	d1 + 15	5.5	5	400500
48	53	45	7±1	d1 + 2	d1 + 15	5.5	5	400504
48	53	45	11±1	d1 + 2	d1 + 15	9.5	5	400501
48	53	45	11±1	d1 + 2	d1 + 15	9.5	5	400505
53	58	49	7±1	d1 + 2	d1 + 15	5.5	5	400550
53	58	49	7±1	d1 + 2	d1 + 15	5.5	5	400554
53	58	49	11±1	d1 + 2	d1 + 15	9.5	5	400551
53	58	49	11±1	d1 + 2	d1 + 15	9.5	5	400555
58	63	54	7±1	d1 + 2	d1 + 15	5.5	5	400600
58	63	54	7±1	d1 + 2	d1 + 15	5.5	5	400604
58	63	54	11±1	d1 + 2	d1 + 15	9.5	5	400601
58	63	54	11±1	d1 + 2	d1 + 15	9.5	5	400605
63	68	58	7±1	d1 + 2	d1 + 15	5.5	5	400650
63	68	58	7±1	d1 + 2	d1 + 15	5.5	5	400654

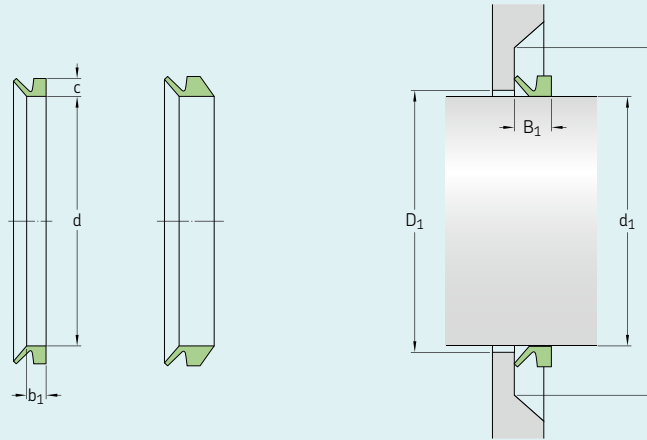




Inch

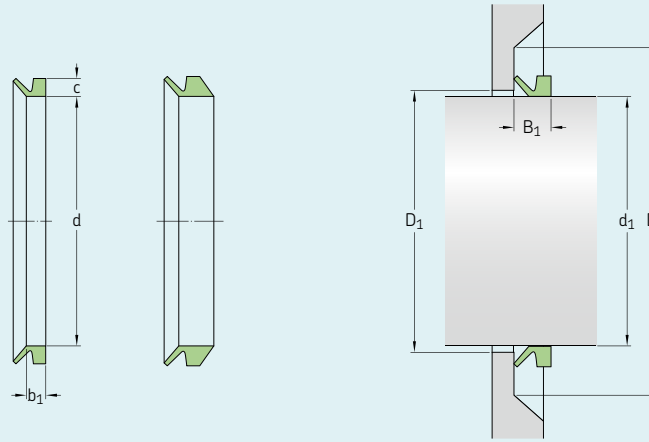
SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
400651	VR2	R	2.480	2.677	2.283	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400655	VR2	V	2.480	2.677	2.283	0.433±.039	d1 + 0.079	d1 + 0.591	0.374	0.197
400700	VR1	R	2.677	2.874	2.480	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400704	VR1	V	2.677	2.874	2.480	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400701	VR2	R	2.677	2.874	2.480	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400705	VR2	V	2.677	2.874	2.480	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400750	VR1	R	2.874	3.071	2.638	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400754	VR2	V	2.874	3.071	2.638	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400751	VR2	R	2.874	3.071	2.638	0.531±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400755	VR2	V	2.874	3.071	2.638	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400800	VR1	R	3.071	3.268	2.835	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400804	VR1	V	3.071	3.268	2.835	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400801	VR2	R	3.071	3.268	2.835	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400805	VR2	V	3.071	3.268	2.835	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400850	VR1	R	3.268	3.465	2.992	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400854	VR1	V	3.268	3.465	2.992	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400851	VR2	R	3.268	3.465	2.992	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400855	VR2	V	3.268	3.465	2.992	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400900	VR1	R	3.465	3.661	3.189	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400904	VR1	V	3.465	3.661	3.189	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400901	VR2	R	3.465	3.661	3.189	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400905	VR2	V	3.465	3.661	3.189	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400950	VR1	R	3.661	3.858	3.346	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400954	VR1	V	3.661	3.858	3.346	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
400951	VR2	R	3.661	3.858	3.346	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
400955	VR2	V	3.661	3.858	3.346	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
401000	VR1	R	3.858	4.134	3.543	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
401004	VR1	V	3.858	4.134	3.543	0.354±.047	d1 + 0.118	d1 + 0.709	0.268	0.236
401001	VR2	R	3.858	4.134	3.543	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
401005	VR2	V	3.858	4.134	3.543	0.531±.047	d1 + 0.118	d1 + 0.709	0.445	0.236
401102	VR3	R	4.134	4.528	3.898	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401106	VR3	V	4.134	4.528	3.898	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401100	VR1	R	4.134	4.528	3.898	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401104	VR1	V	4.134	4.528	3.898	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401101	VR2	R	4.134	4.528	3.898	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401105	VR2	V	4.134	4.528	3.898	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401202	VR3	R	4.528	4.921	4.252	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401206	VR3	V	4.528	4.921	4.252	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401200	VR1	R	4.528	4.921	4.252	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401204	VR1	V	4.528	4.921	4.252	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401201	VR2	R	4.528	4.921	4.252	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401205	VR2	V	4.528	4.921	4.252	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401302	VR3	R	4.921	5.315	4.606	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401306	VR3	V	4.921	5.315	4.606	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401300	VR1	R	4.921	5.315	4.606	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401304	VR1	V	4.921	5.315	4.606	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401301	VR2	R	4.921	5.315	4.606	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401305	VR2	V	4.921	5.315	4.606	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276





Metric (mm)

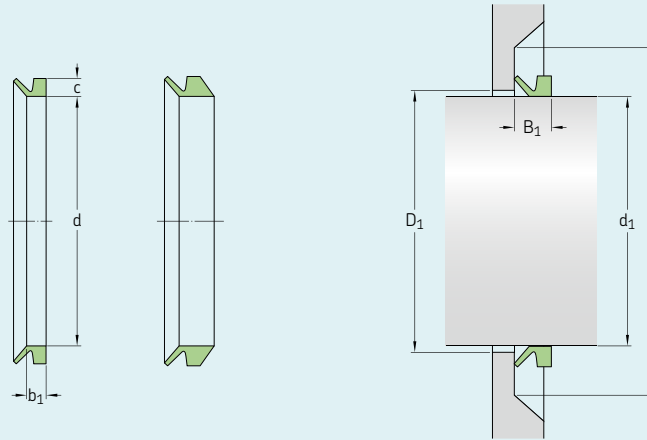
Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
63	68	58	11±1	d1 + 2	d1 + 15	9.5	5	400651
63	68	58	11±1	d1 + 2	d1 + 15	9.5	5	400655
68	73	63	9±1.2	d1 + 3	d1 + 18	6.8	6	400700
68	73	63	9±1.2	d1 + 3	d1 + 18	6.8	6	400704
68	73	63	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400701
68	73	63	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400705
73	78	67	9±1.2	d1 + 3	d1 + 18	6.8	6	400750
73	78	67	9±1.2	d1 + 3	d1 + 18	6.8	6	400754
73	78	67	13.5±1.2	d1 + 3	d1 + 18	6.8	6	400751
73	78	67	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400755
78	83	72	9±1.2	d1 + 3	d1 + 18	6.8	6	400800
78	83	72	9±1.2	d1 + 3	d1 + 18	6.8	6	400804
78	83	72	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400801
78	83	72	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400805
83	88	76	9±1.2	d1 + 3	d1 + 18	6.8	6	400850
83	88	76	9±1.2	d1 + 3	d1 + 18	6.8	6	400854
83	88	76	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400851
83	88	76	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400855
88	93	81	9±1.2	d1 + 3	d1 + 18	6.8	6	400900
88	93	81	9±1.2	d1 + 3	d1 + 18	6.8	6	400904
88	93	81	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400901
88	93	81	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400905
93	98	85	9±1.2	d1 + 3	d1 + 18	6.8	6	400950
93	98	85	9±1.2	d1 + 3	d1 + 18	6.8	6	400954
93	98	85	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400951
93	98	85	13.5±1.2	d1 + 3	d1 + 18	11.3	6	400955
98	105	90	9±1.2	d1 + 3	d1 + 18	6.8	6	401000
98	105	90	9±1.2	d1 + 3	d1 + 18	6.8	6	401004
98	105	90	13.5±1.2	d1 + 3	d1 + 18	11.3	6	401001
98	105	90	13.5±1.2	d1 + 3	d1 + 18	11.3	6	401005
105	115	99	8±1.5	d1 + 5	d1 + 20	6	6.5	401102
105	115	99	8±1.5	d1 + 5	d1 + 20	6	6.5	401106
105	115	99	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401100
105	115	99	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401104
105	115	99	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401101
105	115	99	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401105
115	125	108	8±1.5	d1 + 5	d1 + 20	6	6.5	401202
115	125	108	8±1.5	d1 + 5	d1 + 20	6	6.5	401206
115	125	108	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401200
115	125	108	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401204
115	125	108	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401201
115	125	108	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401205
125	135	117	8±1.5	d1 + 5	d1 + 20	6	6.5	401302
125	135	117	8±1.5	d1 + 5	d1 + 20	6	6.5	401306
125	135	117	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401300
125	135	117	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401304
125	135	117	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401301
125	135	117	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401305



Inch

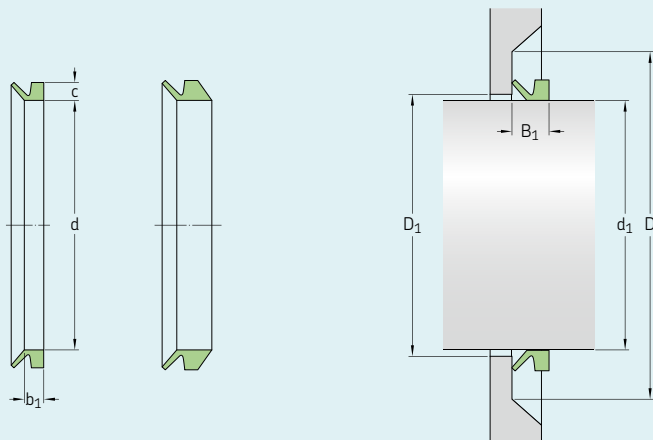
SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
401402	VR3	R	5.315	5.709	4.961	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401406	VR3	V	5.315	5.709	4.961	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401400	VR1	R	5.315	5.709	4.961	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401404	VR1	V	5.315	5.709	4.961	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401401	VR2	R	5.315	5.709	4.961	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401405	VR2	V	5.315	5.709	4.961	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401502	VR3	R	5.709	6.102	5.315	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401506	VR3	V	5.709	6.102	5.315	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401500	VR1	R	5.709	6.102	5.315	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401504	VR1	V	5.709	6.102	5.315	0.413±.059	d1 + 0.157	d1 + 0.827	0.311	0.276
401501	VR2	R	5.709	6.102	5.315	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401505	VR2	V	5.709	6.102	5.315	0.610±.059	d1 + 0.157	d1 + 0.827	0.516	0.276
401602	VR3	R	6.102	6.496	5.669	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401606	VR3	V	6.102	6.496	5.669	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401600	VR1	R	6.102	6.496	5.669	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401604	VR1	V	6.102	6.496	5.669	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401601	VR2	R	6.102	6.496	5.669	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401605	VR2	V	6.102	6.496	5.669	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401702	VR3	R	6.496	6.890	6.024	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401706	VR3	V	6.496	6.890	6.024	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401700	VR1	R	6.496	6.890	6.024	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401704	VR1	V	6.496	6.890	6.024	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401701	VR2	R	6.496	6.890	6.024	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401705	VR2	V	6.496	6.890	6.024	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401802	VR3	R	6.890	7.283	6.378	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401806	VR3	V	6.890	7.283	6.378	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401800	VR1	R	6.890	7.283	6.378	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401804	VR1	V	6.890	7.283	6.378	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401801	VR2	R	6.890	7.283	6.378	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401805	VR2	V	6.890	7.283	6.378	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401902	VR3	R	7.283	7.677	6.732	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401906	VR3	V	7.283	7.677	6.732	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401900	VR1	R	7.283	7.677	6.732	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401904	VR1	V	7.283	7.677	6.732	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401901	VR2	R	7.283	7.677	6.732	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401905	VR2	V	7.283	7.677	6.732	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
402002	VR3	R	7.677	8.268	7.165	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
402006	VR3	V	7.677	8.268	7.165	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
401990	VR1	R	7.677	8.268	7.087	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401994	VR1	V	7.677	8.268	7.087	0.472±.071	d1 + 0.157	d1 + 0.945	0.354	0.315
401991	VR2	R	7.677	8.268	7.087	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
401995	VR2	V	7.677	8.268	7.087	0.709±.071	d1 + 0.157	d1 + 0.945	0.591	0.315
402000	VR1	R	7.677	8.268	7.087	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
402004	VR1	V	7.677	8.268	7.087	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
402202	VR3	R	8.268	9.173	7.795	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
402206	VR3	V	8.268	9.173	7.795	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
402200	VR1	R	8.268	9.252	7.795	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
402204	VR1	V	8.268	9.252	7.795	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591





Metric (mm)

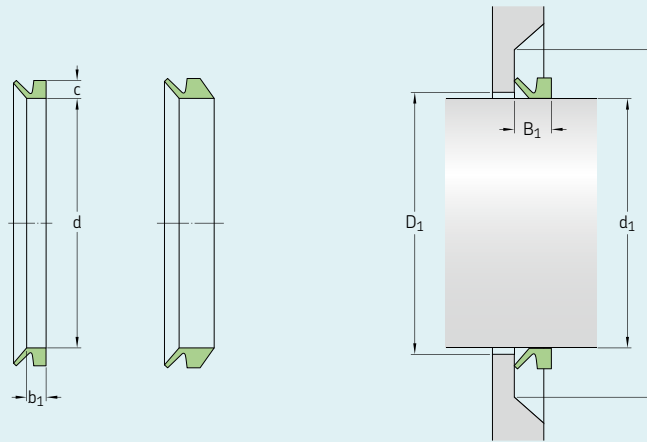
Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
135	145	126	8±1.5	d1 + 5	d1 + 20	6	6.5	401402
135	145	126	8±1.5	d1 + 5	d1 + 20	6	6.5	401406
135	145	126	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401400
135	145	126	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401404
135	145	126	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401401
135	145	126	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401405
145	155	135	8±1.5	d1 + 5	d1 + 20	6	6.5	401502
145	155	135	8±1.5	d1 + 5	d1 + 20	6	6.5	401506
145	155	135	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401500
145	155	135	10.5±1.5	d1 + 4	d1 + 21	7.9	7	401504
145	155	135	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401501
145	155	135	15.5±1.5	d1 + 4	d1 + 21	13.1	7	401505
155	165	144	8±1.5	d1 + 5	d1 + 20	6	6.5	401602
155	165	144	8±1.5	d1 + 5	d1 + 20	6	6.5	401606
155	165	144	12±1.8	d1 + 4	d1 + 24	9	8	401600
155	165	144	12±1.8	d1 + 4	d1 + 24	9	8	401604
155	165	144	18±1.8	d1 + 4	d1 + 24	15	8	401601
155	165	144	18±1.8	d1 + 4	d1 + 24	15	8	401605
165	175	153	8±1.5	d1 + 5	d1 + 20	6	6.5	401702
165	175	153	8±1.5	d1 + 5	d1 + 20	6	6.5	401706
165	175	153	12±1.8	d1 + 4	d1 + 24	9	8	401700
165	175	153	12±1.8	d1 + 4	d1 + 24	9	8	401704
165	175	153	18±1.8	d1 + 4	d1 + 24	15	8	401701
165	175	153	18±1.8	d1 + 4	d1 + 24	15	8	401705
175	185	162	8±1.5	d1 + 5	d1 + 20	6	6.5	401802
175	185	162	8±1.5	d1 + 5	d1 + 20	6	6.5	401806
175	185	162	12±1.8	d1 + 4	d1 + 24	9	8	401800
175	185	162	12±1.8	d1 + 4	d1 + 24	9	8	401804
175	185	162	18±1.8	d1 + 4	d1 + 24	15	8	401801
175	185	162	18±1.8	d1 + 4	d1 + 24	15	8	401805
185	195	171	8±1.5	d1 + 5	d1 + 20	6	6.5	401902
185	195	171	8±1.5	d1 + 5	d1 + 20	6	6.5	401906
185	195	171	12±1.8	d1 + 4	d1 + 24	9	8	401900
185	195	171	12±1.8	d1 + 4	d1 + 24	9	8	401904
185	195	171	18±1.8	d1 + 4	d1 + 24	15	8	401901
185	195	171	18±1.8	d1 + 4	d1 + 24	15	8	401905
195	210	182	8±1.5	d1 + 5	d1 + 20	6	6.5	402002
195	210	182	8±1.5	d1 + 5	d1 + 20	6	6.5	402006
195	210	180	12±1.8	d1 + 4	d1 + 24	9	8	401990
195	210	180	12±1.8	d1 + 4	d1 + 24	9	8	401994
195	210	180	18±1.8	d1 + 4	d1 + 24	15	8	401991
195	210	180	18±1.8	d1 + 4	d1 + 24	15	8	401995
195	210	180	20±4	d1 + 10	d1 + 45	14.3	15	402000
195	210	180	20±4	d1 + 10	d1 + 45	14.3	15	402004
210	233	198	8±1.5	d1 + 5	d1 + 20	6	6.5	402202
210	233	198	8±1.5	d1 + 5	d1 + 20	6	6.5	402206
210	235	198	20±4	d1 + 10	d1 + 45	14.3	15	402200
210	235	198	20±4	d1 + 10	d1 + 45	14.3	15	402204



Inch

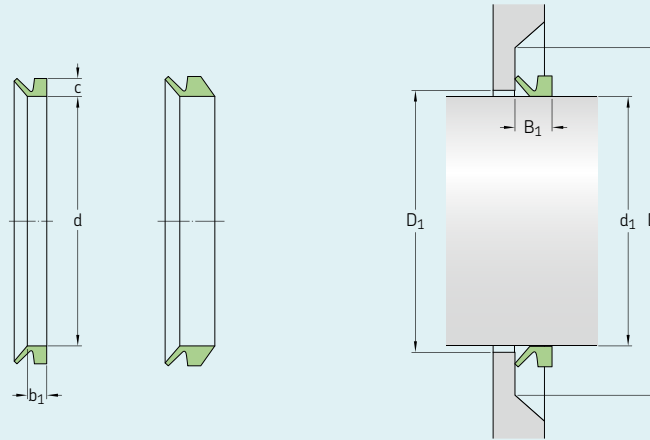
SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
402502	VR3	R	9.173	10.236	8.858	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
402506	VR3	V	9.173	10.236	8.858	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
402500	VR1	R	9.252	10.433	8.858	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
402504	VR1	V	9.252	10.433	8.858	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
402752	VR3	R	10.236	11.220	9.724	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
402756	VR3	V	10.236	11.220	9.724	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
402750	VR1	R	10.433	11.417	9.724	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
402754	VR1	V	10.433	11.417	9.724	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403002	VR3	R	11.220	12.205	10.630	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403006	VR3	V	11.220	12.205	10.630	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403000	VR1	R	11.417	12.205	10.630	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403004	VR1	V	11.417	12.205	10.630	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403003	VR4	R	11.811	12.008	11.575	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403053	VR4	R	12.008	12.205	11.772	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403252	VR3	R	12.205	13.189	11.496	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403256	VR3	V	12.205	13.189	11.496	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403250	VR1	R	12.205	13.189	11.496	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403254	VR1	V	12.205	13.189	11.496	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403103	VR4	R	12.205	12.402	11.969	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403153	VR4	R	12.402	12.598	12.165	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403203	VR4	R	12.598	12.795	12.362	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403253	VR4	R	12.795	12.992	12.559	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403303	VR4	R	12.992	13.189	12.717	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403502	VR3	R	13.189	14.370	12.402	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403506	VR3	V	13.189	14.370	12.402	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403500	VR1	R	13.189	14.370	12.402	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403504	VR1	V	13.189	14.370	12.402	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403353	VR4	R	13.189	13.386	12.913	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403403	VR4	R	13.386	13.583	13.110	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403453	VR4	R	13.583	13.780	13.307	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403503	VR4	R	13.780	13.976	13.504	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403553	VR4	R	13.976	14.173	13.661	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403603	VR4	R	14.173	14.370	13.858	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403752	VR3	R	14.370	15.157	13.268	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403756	VR3	V	14.370	15.157	13.268	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403750	VR1	R	14.370	15.354	13.268	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403754	VR1	V	14.370	15.354	13.268	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403653	VR4	R	14.370	14.567	14.055	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403703	VR4	R	14.567	14.764	14.252	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403753	VR4	R	14.764	14.961	14.449	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403803	VR4	R	14.961	15.157	14.606	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404002	VR3	R	15.157	16.142	14.173	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
404006	VR3	V	15.157	16.142	14.173	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
403853	VR4	R	15.157	15.354	14.803	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404000	VR1	R	15.354	16.929	14.173	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
404004	VR1	V	15.354	16.929	14.173	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
403903	VR4	R	15.354	15.551	15.000	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
403953	VR4	R	15.551	15.748	15.197	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181





Metric (mm)

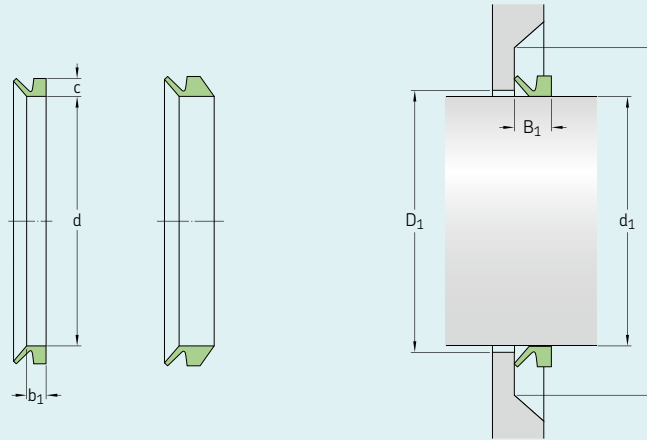
Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
233	260	225	8±1.5	d1 + 5	d1 + 20	6	6.5	402502
233	260	225	8±1.5	d1 + 5	d1 + 20	6	6.5	402506
235	265	225	20±4	d1 + 10	d1 + 45	14.3	15	402500
235	265	225	20±4	d1 + 10	d1 + 45	14.3	15	402504
260	285	247	8±1.5	d1 + 5	d1 + 20	6	6.5	402752
260	285	247	8±1.5	d1 + 5	d1 + 20	6	6.5	402756
265	290	247	20±4	d1 + 10	d1 + 45	14.3	15	402750
265	290	247	20±4	d1 + 10	d1 + 45	14.3	15	402754
285	310	270	8±1.5	d1 + 5	d1 + 20	6	6.5	403002
285	310	270	8±1.5	d1 + 5	d1 + 20	6	6.5	403006
290	310	270	20±4	d1 + 10	d1 + 45	14.3	15	403000
290	310	270	20±4	d1 + 10	d1 + 45	14.3	15	403004
300	305	294	50±12	d1 + 24	d1 + 115	32.5	30	403003
305	310	299	50±12	d1 + 24	d1 + 115	32.5	30	403053
310	335	292	8±1.5	d1 + 5	d1 + 20	6	6.5	403252
310	335	292	8±1.5	d1 + 5	d1 + 20	6	6.5	403256
310	335	292	20±4	d1 + 10	d1 + 45	14.3	15	403250
310	335	292	20±4	d1 + 10	d1 + 45	14.3	15	403254
310	315	304	50±12	d1 + 24	d1 + 115	32.5	30	403103
315	320	309	50±12	d1 + 24	d1 + 115	32.5	30	403153
320	325	314	50±12	d1 + 24	d1 + 115	32.5	30	403203
325	330	319	50±12	d1 + 24	d1 + 115	32.5	30	403253
330	335	323	50±12	d1 + 24	d1 + 115	32.5	30	403303
335	365	315	8±1.5	d1 + 5	d1 + 20	6	6.5	403502
335	365	315	8±1.5	d1 + 5	d1 + 20	6	6.5	403506
335	365	315	20±4	d1 + 10	d1 + 45	14.3	15	403500
335	365	315	20±4	d1 + 10	d1 + 45	14.3	15	403504
335	340	328	50±12	d1 + 24	d1 + 115	32.5	30	403353
340	345	333	50±12	d1 + 24	d1 + 115	32.5	30	403403
345	350	338	50±12	d1 + 24	d1 + 115	32.5	30	403453
350	355	343	50±12	d1 + 24	d1 + 115	32.5	30	403503
355	360	347	50±12	d1 + 24	d1 + 115	32.5	30	403553
360	365	352	50±12	d1 + 24	d1 + 115	32.5	30	403603
365	385	337	8±1.5	d1 + 5	d1 + 20	6	6.5	403752
365	385	337	8±1.5	d1 + 5	d1 + 20	6	6.5	403756
365	390	337	20±4	d1 + 10	d1 + 45	14.3	15	403750
365	390	337	20±4	d1 + 10	d1 + 45	14.3	15	403754
365	370	357	50±12	d1 + 24	d1 + 115	32.5	30	403653
370	375	362	50±12	d1 + 24	d1 + 115	32.5	30	403703
375	380	367	50±12	d1 + 24	d1 + 115	32.5	30	403753
380	385	371	50±12	d1 + 24	d1 + 115	32.5	30	403803
385	410	360	8±1.5	d1 + 5	d1 + 20	6	6.5	404002
385	410	360	8±1.5	d1 + 5	d1 + 20	6	6.5	404006
385	390	376	50±12	d1 + 24	d1 + 115	32.5	30	403853
390	430	360	20±4	d1 + 10	d1 + 45	14.3	15	404000
390	430	360	20±4	d1 + 10	d1 + 45	14.3	15	404004
390	395	381	50±12	d1 + 24	d1 + 115	32.5	30	403903
395	400	386	50±12	d1 + 24	d1 + 115	32.5	30	403953



Inch

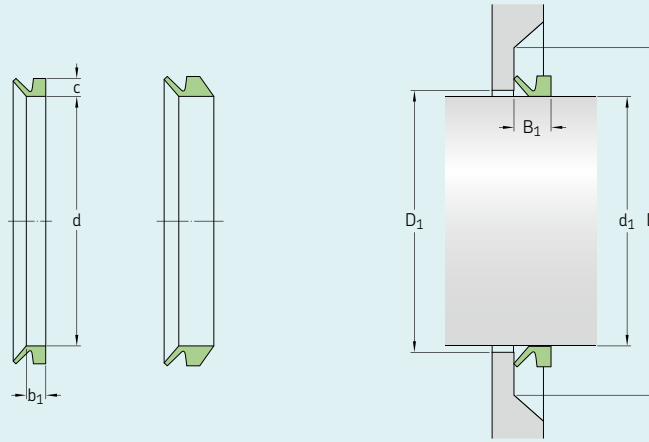
SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
404003	VR4	R	15.748	15.945	15.394	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404053	VR4	R	15.945	16.142	15.591	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404252	VR3	R	16.142	17.323	15.039	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
404256	VR3	V	16.142	17.323	15.039	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
404103	VR4	R	16.142	16.339	15.787	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404153	VR4	R	16.339	16.535	15.945	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404203	VR4	R	16.535	16.732	16.142	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404253	VR4	R	16.732	16.929	16.339	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404500	VR1	R	16.929	18.898	15.945	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
404504	VR1	V	16.929	18.898	15.945	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
404303	VR4	R	16.929	17.126	16.535	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404353	VR4	R	17.126	17.323	16.732	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404502	VR3	R	17.323	18.701	15.945	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
404506	VR3	V	17.323	18.701	15.945	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
404403	VR4	R	17.323	17.520	16.890	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404453	VR4	R	17.520	17.717	17.087	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404503	VR4	R	17.717	17.913	17.283	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404553	VR4	R	17.913	18.110	17.480	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404603	VR4	R	18.110	18.307	17.638	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404653	VR4	R	18.307	18.504	17.835	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404703	VR4	R	18.504	18.701	18.031	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405002	VR3	R	18.701	20.079	17.717	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
405006	VR3	V	18.701	20.079	17.717	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
404753	VR4	R	18.701	18.898	18.228	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405000	VR1	R	18.898	20.866	17.717	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
405004	VR1	V	18.898	20.866	17.717	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
404803	VR4	R	18.898	19.094	18.425	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404853	VR4	R	19.094	19.291	18.622	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404903	VR4	R	19.291	19.488	18.819	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
404953	VR4	R	19.488	19.685	19.016	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405003	VR4	R	19.685	19.882	19.213	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405053	VR4	R	19.882	20.079	19.409	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405252	VR3	R	20.079	21.260	18.583	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
405256	VR3	V	20.079	21.260	18.583	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
405103	VR4	R	20.079	20.276	19.567	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405153	VR4	R	20.276	20.472	19.764	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405203	VR4	R	20.472	20.669	19.961	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405253	VR4	R	20.669	20.866	20.157	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405500	VR1	R	20.866	22.835	19.488	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
405504	VR1	V	20.866	22.835	19.488	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
405303	VR4	R	20.866	21.063	20.354	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405353	VR4	R	21.063	21.260	20.512	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405502	VR3	R	21.260	22.638	19.488	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
405506	VR3	V	21.260	22.638	19.488	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
405403	VR4	R	21.260	21.457	20.709	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405453	VR4	R	21.457	21.654	20.906	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405503	VR4	R	21.654	21.850	21.102	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405553	VR4	R	21.850	22.047	21.299	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181





Metric (mm)

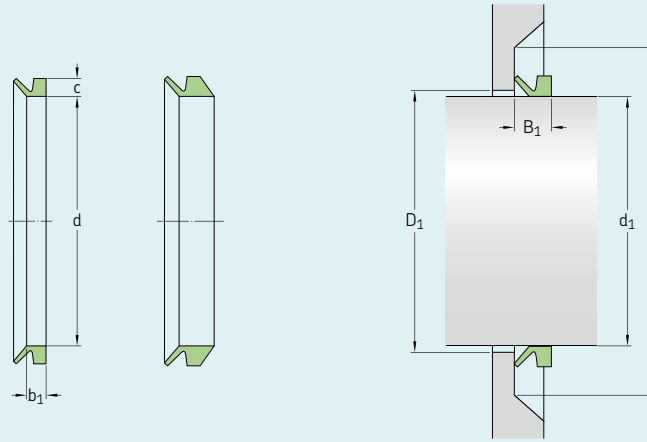
Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
400	405	391	50±12	d1 + 24	d1 + 115	32.5	30	404003
405	410	396	50±12	d1 + 24	d1 + 115	32.5	30	404053
410	440	382	8±1.5	d1 + 5	d1 + 20	6	6.5	404252
410	440	382	8±1.5	d1 + 5	d1 + 20	6	6.5	404256
410	415	401	50±12	d1 + 24	d1 + 115	32.5	30	404103
415	420	405	50±12	d1 + 24	d1 + 115	32.5	30	404153
420	425	410	50±12	d1 + 24	d1 + 115	32.5	30	404203
425	430	415	50±12	d1 + 24	d1 + 115	32.5	30	404253
430	480	405	20±4	d1 + 10	d1 + 45	14.3	15	404500
430	480	405	20±4	d1 + 10	d1 + 45	14.3	15	404504
430	435	420	50±12	d1 + 24	d1 + 115	32.5	30	404303
435	440	425	50±12	d1 + 24	d1 + 115	32.5	30	404353
440	475	405	8±1.5	d1 + 5	d1 + 20	6	6.5	404502
440	475	405	8±1.5	d1 + 5	d1 + 20	6	6.5	404506
440	445	429	50±12	d1 + 24	d1 + 115	32.5	30	404403
445	450	434	50±12	d1 + 24	d1 + 115	32.5	30	404453
450	455	439	50±12	d1 + 24	d1 + 115	32.5	30	404503
455	460	444	50±12	d1 + 24	d1 + 115	32.5	30	404553
460	465	448	50±12	d1 + 24	d1 + 115	32.5	30	404603
465	470	453	50±12	d1 + 24	d1 + 115	32.5	30	404653
470	475	458	50±12	d1 + 24	d1 + 115	32.5	30	404703
475	510	450	8±1.5	d1 + 5	d1 + 20	6	6.5	405002
475	510	450	8±1.5	d1 + 5	d1 + 20	6	6.5	405006
475	480	463	50±12	d1 + 24	d1 + 115	32.5	30	404753
480	530	450	20±4	d1 + 10	d1 + 45	14.3	15	405000
480	530	450	20±4	d1 + 10	d1 + 45	14.3	15	405004
480	485	468	50±12	d1 + 24	d1 + 115	32.5	30	404803
485	490	473	50±12	d1 + 24	d1 + 115	32.5	30	404853
490	495	478	50±12	d1 + 24	d1 + 115	32.5	30	404903
495	500	483	50±12	d1 + 24	d1 + 115	32.5	30	404953
500	505	488	50±12	d1 + 24	d1 + 115	32.5	30	405003
505	510	493	50±12	d1 + 24	d1 + 115	32.5	30	405053
510	540	472	8±1.5	d1 + 5	d1 + 20	6	6.5	405252
510	540	472	8±1.5	d1 + 5	d1 + 20	6	6.5	405256
510	515	497	50±12	d1 + 24	d1 + 115	32.5	30	405103
515	520	502	50±12	d1 + 24	d1 + 115	32.5	30	405153
520	525	507	50±12	d1 + 24	d1 + 115	32.5	30	405203
525	530	512	50±12	d1 + 24	d1 + 115	32.5	30	405253
530	580	495	20±4	d1 + 10	d1 + 45	14.3	15	405500
530	580	495	20±4	d1 + 10	d1 + 45	14.3	15	405504
530	535	517	50±12	d1 + 24	d1 + 115	32.5	30	405303
535	540	521	50±12	d1 + 24	d1 + 115	32.5	30	405353
540	575	495	8±1.5	d1 + 5	d1 + 20	6	6.5	405502
540	575	495	8±1.5	d1 + 5	d1 + 20	6	6.5	405506
540	545	526	50±12	d1 + 24	d1 + 115	32.5	30	405403
545	550	531	50±12	d1 + 24	d1 + 115	32.5	30	405453
550	555	536	50±12	d1 + 24	d1 + 115	32.5	30	405503
555	560	541	50±12	d1 + 24	d1 + 115	32.5	30	405553



Inch

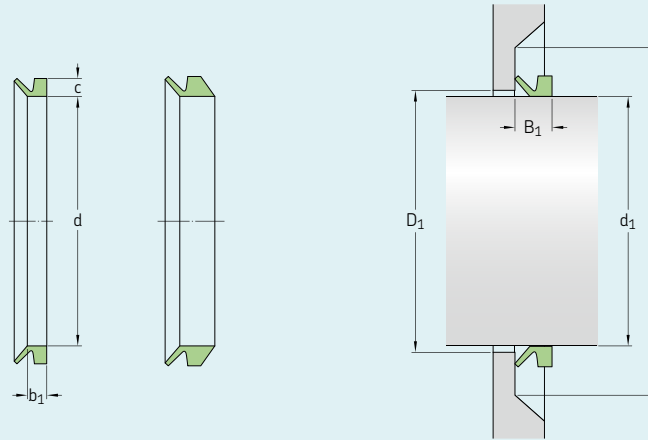
SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
405603	VR4	R	22.047	22.244	21.496	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405653	VR4	R	22.244	22.441	21.654	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405703	VR4	R	22.441	22.638	21.850	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406002	VR3	R	22.638	24.606	21.260	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
406006	VR3	V	22.638	24.606	21.260	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
405753	VR4	R	22.638	22.835	22.047	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406000	VR1	R	22.835	24.803	21.260	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
406004	VR1	V	22.835	24.803	21.260	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
405803	VR4	R	22.835	23.031	22.244	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405853	VR4	R	23.031	23.228	22.441	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
405903	VR4	R	23.228	23.622	22.638	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406003	VR4	R	23.622	24.016	22.913	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406103	VR4	R	24.016	24.409	23.307	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406502	VR3	R	24.213	26.575	23.622	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
406506	VR3	V	24.213	26.575	23.622	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
406203	VR4	R	24.409	24.803	23.701	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406500	VR1	R	24.803	26.181	23.622	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
406504	VR1	V	24.803	26.181	23.622	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
406303	VR4	R	24.803	25.197	24.094	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406403	VR4	R	25.197	25.591	24.449	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406503	VR4	R	25.591	25.984	24.843	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406603	VR4	R	25.984	26.378	25.197	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407000	VR1	R	26.181	27.756	24.803	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
407004	VR1	V	26.181	27.756	24.803	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
406703	VR4	R	26.378	26.772	25.591	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407002	VR3	R	26.575	27.953	24.803	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
407006	VR3	V	26.575	27.953	24.803	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
406803	VR4	R	26.772	27.165	25.984	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
406903	VR4	R	27.165	27.559	26.378	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407003	VR4	R	27.559	27.953	26.772	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407250	VR1	R	27.756	29.331	26.378	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
407254	VR1	V	27.756	29.331	26.378	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
407252	VR3	R	27.953	29.134	26.378	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
407256	VR3	V	27.953	29.134	26.378	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
407103	VR4	R	27.953	28.346	27.126	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407203	VR4	R	28.346	28.740	27.520	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407303	VR4	R	28.740	29.134	27.913	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407502	VR3	R	29.134	30.512	27.756	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
407506	VR3	V	29.134	30.512	27.756	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
407403	VR4	R	29.134	29.528	28.268	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407500	VR1	R	29.331	30.906	27.756	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
407504	VR1	V	29.331	30.906	27.756	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
407503	VR4	R	29.528	29.843	28.661	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407603	VR4	R	29.843	30.157	28.937	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407703	VR4	R	30.157	30.472	29.252	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
407803	VR4	R	30.472	30.827	29.567	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408002	VR3	R	30.512	32.480	29.331	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
408006	VR3	V	30.512	32.480	29.331	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256





Metric (mm)

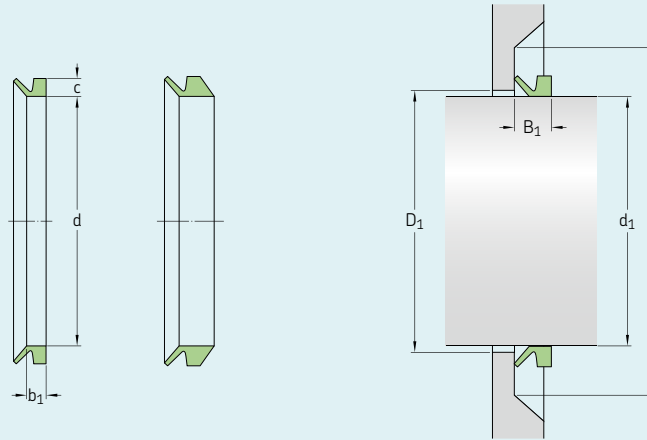
Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
560	565	546	50±12	d1 + 24	d1 + 115	32.5	30	405603
565	570	550	50±12	d1 + 24	d1 + 115	32.5	30	405653
570	575	555	50±12	d1 + 24	d1 + 115	32.5	30	405703
575	625	540	8±1.5	d1 + 5	d1 + 20	6	6.5	406002
575	625	540	8±1.5	d1 + 5	d1 + 20	6	6.5	406006
575	580	560	50±12	d1 + 24	d1 + 115	32.5	30	405753
580	630	540	20±4	d1 + 10	d1 + 45	14.3	15	406000
580	630	540	20±4	d1 + 10	d1 + 45	14.3	15	406004
580	585	565	50±12	d1 + 24	d1 + 115	32.5	30	405803
585	590	570	50±12	d1 + 24	d1 + 115	32.5	30	405853
590	600	575	50±12	d1 + 24	d1 + 115	32.5	30	405903
600	610	582	50±12	d1 + 24	d1 + 115	32.5	30	406003
610	620	592	50±12	d1 + 24	d1 + 115	32.5	30	406103
615	675	600	8±1.5	d1 + 5	d1 + 20	6	6.5	406502
615	675	600	8±1.5	d1 + 5	d1 + 20	6	6.5	406506
620	630	602	50±12	d1 + 24	d1 + 115	32.5	30	406203
630	665	600	20±4	d1 + 10	d1 + 45	14.3	15	406500
630	665	600	20±4	d1 + 10	d1 + 45	14.3	15	406504
630	640	612	50±12	d1 + 24	d1 + 115	32.5	30	406303
640	650	621	50±12	d1 + 24	d1 + 115	32.5	30	406403
650	660	631	50±12	d1 + 24	d1 + 115	32.5	30	406503
660	670	640	50±12	d1 + 24	d1 + 115	32.5	30	406603
665	705	630	20±4	d1 + 10	d1 + 45	14.3	15	407000
665	705	630	20±4	d1 + 10	d1 + 45	14.3	15	407004
670	680	650	50±12	d1 + 24	d1 + 115	32.5	30	406703
675	710	630	8±1.5	d1 + 5	d1 + 20	6	6.5	407002
675	710	630	8±1.5	d1 + 5	d1 + 20	6	6.5	407006
680	690	660	50±12	d1 + 24	d1 + 115	32.5	30	406803
690	700	670	50±12	d1 + 24	d1 + 115	32.5	30	406903
700	710	680	50±12	d1 + 24	d1 + 115	32.5	30	407003
705	745	670	20±4	d1 + 10	d1 + 45	14.3	15	407250
705	745	670	20±4	d1 + 10	d1 + 45	14.3	15	407254
710	740	670	8±1.5	d1 + 5	d1 + 20	6	6.5	407252
710	740	670	8±1.5	d1 + 5	d1 + 20	6	6.5	407256
710	720	689	50±12	d1 + 24	d1 + 115	32.5	30	407103
720	730	699	50±12	d1 + 24	d1 + 115	32.5	30	407203
730	740	709	50±12	d1 + 24	d1 + 115	32.5	30	407303
740	775	705	8±1.5	d1 + 5	d1 + 20	6	6.5	407502
740	775	705	8±1.5	d1 + 5	d1 + 20	6	6.5	407506
740	750	718	50±12	d1 + 24	d1 + 115	32.5	30	407403
745	785	705	20±4	d1 + 10	d1 + 45	14.3	15	407500
745	785	705	20±4	d1 + 10	d1 + 45	14.3	15	407504
750	758	728	50±12	d1 + 24	d1 + 115	32.5	30	407503
758	766	735	50±12	d1 + 24	d1 + 115	32.5	30	407603
766	774	743	50±12	d1 + 24	d1 + 115	32.5	30	407703
774	783	751	50±12	d1 + 24	d1 + 115	32.5	30	407803
775	825	745	8±1.5	d1 + 5	d1 + 20	6	6.5	408002
775	825	745	8±1.5	d1 + 5	d1 + 20	6	6.5	408006



Inch

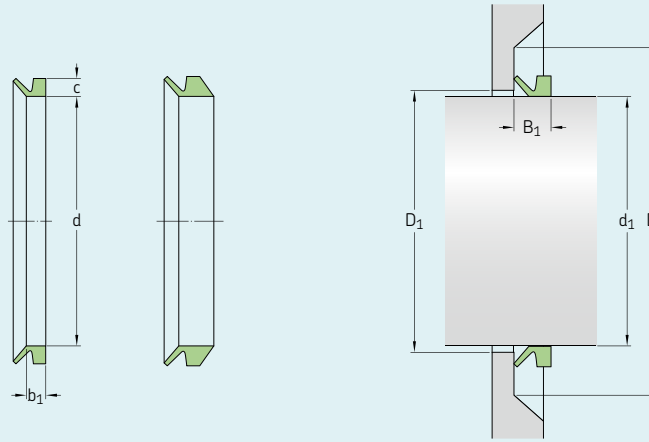
SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
407903	VR4	R	30.827	31.181	29.882	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408000	VR1	R	30.906	32.677	29.331	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
408004	VR1	V	30.906	32.677	29.331	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
408003	VR4	R	31.181	31.535	30.236	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408103	VR4	R	31.535	31.890	30.591	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408203	VR4	R	31.890	32.323	30.945	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408303	VR4	R	32.323	32.717	31.339	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408502	VR3	R	32.480	34.449	30.906	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
408506	VR3	V	32.480	34.449	30.906	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
408500	VR1	R	32.677	34.449	30.906	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
408504	VR1	V	32.677	34.449	30.906	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
408403	VR4	R	32.717	33.110	31.693	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408503	VR4	R	33.110	33.504	32.047	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408603	VR4	R	33.504	33.898	32.441	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408703	VR4	R	33.898	34.291	32.795	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
408803	VR4	R	34.291	34.724	33.189	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409002	VR3	R	34.449	36.417	32.480	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
409006	VR3	V	34.449	36.417	32.480	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
409000	VR1	R	34.449	36.220	32.480	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
409004	VR1	V	34.449	36.220	32.480	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
408903	VR4	R	34.724	35.118	33.583	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409003	VR4	R	35.118	35.906	34.291	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409203	VR4	R	35.906	36.299	34.646	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409500	VR1	R	36.220	37.992	34.055	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
409504	VR1	V	36.220	37.992	34.055	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
409303	VR4	R	36.299	36.732	35.039	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409502	VR3	R	36.417	38.386	34.055	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
409506	VR3	V	36.417	38.386	34.055	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
409403	VR4	R	36.732	37.165	35.433	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409503	VR4	R	37.165	37.598	35.866	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409603	VR4	R	37.598	38.031	36.260	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
410000	VR1	R	37.992	39.961	35.827	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
410004	VR1	V	37.992	39.961	35.827	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
409703	VR4	R	38.031	38.465	36.693	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
410002	VR3	R	38.386	40.354	35.827	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
410006	VR3	V	38.386	40.354	35.827	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
409803	VR4	R	38.465	38.898	37.087	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
409903	VR4	R	38.898	39.331	37.520	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
410003	VR4	R	39.331	39.764	37.913	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
410203	VR4	R	39.764	40.354	38.307	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
410500	VR1	R	39.961	41.929	37.598	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
410502	VR3	R	40.354	42.323	37.598	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
410506	VR3	V	40.354	42.323	37.598	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
410403	VR4	R	40.354	41.142	38.976	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
410603	VR4	R	41.142	41.929	39.685	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
411000	VR1	R	41.929	43.898	39.370	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
410803	VR4	R	41.929	42.717	40.433	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
411002	VR3	R	42.323	44.291	39.370	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256





Metric (mm)

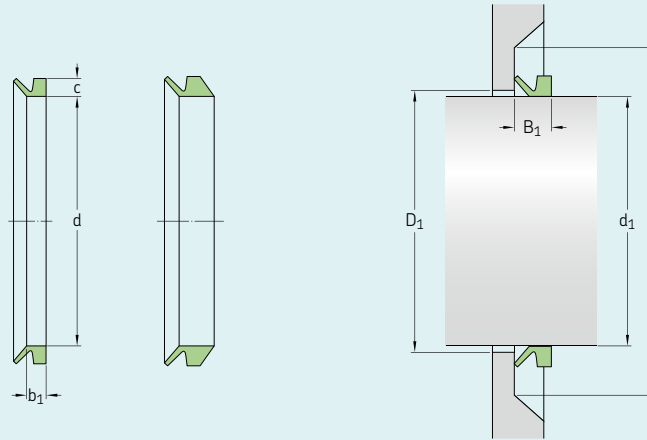
Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
783	792	759	50±12	d1 + 24	d1 + 115	32.5	30	407903
785	830	745	20±4	d1 + 10	d1 + 45	14.3	15	408000
785	830	745	20±4	d1 + 10	d1 + 45	14.3	15	408004
792	801	768	50±12	d1 + 24	d1 + 115	32.5	30	408003
801	810	777	50±12	d1 + 24	d1 + 115	32.5	30	408103
810	821	786	50±12	d1 + 24	d1 + 115	32.5	30	408203
821	831	796	50±12	d1 + 24	d1 + 115	32.5	30	408303
825	875	785	8±1.5	d1 + 5	d1 + 20	6	6.5	408502
825	875	785	8±1.5	d1 + 5	d1 + 20	6	6.5	408506
830	875	785	20±4	d1 + 10	d1 + 45	14.3	15	408500
830	875	785	20±4	d1 + 10	d1 + 45	14.3	15	408504
831	841	805	50±12	d1 + 24	d1 + 115	32.5	30	408403
841	851	814	50±12	d1 + 24	d1 + 115	32.5	30	408503
851	861	824	50±12	d1 + 24	d1 + 115	32.5	30	408603
861	871	833	50±12	d1 + 24	d1 + 115	32.5	30	408703
871	882	843	50±12	d1 + 24	d1 + 115	32.5	30	408803
875	925	825	8±1.5	d1 + 5	d1 + 20	6	6.5	409002
875	925	825	8±1.5	d1 + 5	d1 + 20	6	6.5	409006
875	920	825	20±4	d1 + 10	d1 + 45	14.3	15	409000
875	920	825	20±4	d1 + 10	d1 + 45	14.3	15	409004
882	892	853	50±12	d1 + 24	d1 + 115	32.5	30	408903
892	912	871	50±12	d1 + 24	d1 + 115	32.5	30	409003
912	922	880	50±12	d1 + 24	d1 + 115	32.5	30	409203
920	965	865	20±4	d1 + 10	d1 + 45	14.3	15	409500
920	965	865	20±4	d1 + 10	d1 + 45	14.3	15	409504
922	933	890	50±12	d1 + 24	d1 + 115	32.5	30	409303
925	975	865	8±1.5	d1 + 5	d1 + 20	6	6.5	409502
925	975	865	8±1.5	d1 + 5	d1 + 20	6	6.5	409506
933	944	900	50±12	d1 + 24	d1 + 115	32.5	30	409403
944	955	911	50±12	d1 + 24	d1 + 115	32.5	30	409503
955	966	921	50±12	d1 + 24	d1 + 115	32.5	30	409603
965	1015	910	20±4	d1 + 10	d1 + 45	14.3	15	410000
965	1015	910	20±4	d1 + 10	d1 + 45	14.3	15	410004
966	977	932	50±12	d1 + 24	d1 + 115	32.5	30	409703
975	1025	910	8±1.5	d1 + 5	d1 + 20	6	6.5	410002
975	1025	910	8±1.5	d1 + 5	d1 + 20	6	6.5	410006
977	988	942	50±12	d1 + 24	d1 + 115	32.5	30	409803
988	999	953	50±12	d1 + 24	d1 + 115	32.5	30	409903
999	1010	963	50±12	d1 + 24	d1 + 115	32.5	30	410003
1010	1025	973	50±12	d1 + 24	d1 + 115	32.5	30	410203
1015	1065	955	20±4	d1 + 10	d1 + 45	14.3	15	410500
1025	1075	955	8±1.5	d1 + 5	d1 + 20	6	6.5	410502
1025	1075	955	8±1.5	d1 + 5	d1 + 20	6	6.5	410506
1025	1045	990	50±12	d1 + 24	d1 + 115	32.5	30	410403
1045	1065	1008	50±12	d1 + 24	d1 + 115	32.5	30	410603
1065	1115	1000	20±4	d1 + 10	d1 + 45	14.3	15	411000
1065	1085	1027	50±12	d1 + 24	d1 + 115	32.5	30	410803
1075	1125	1000	8±1.5	d1 + 5	d1 + 20	6	6.5	411002



Inch

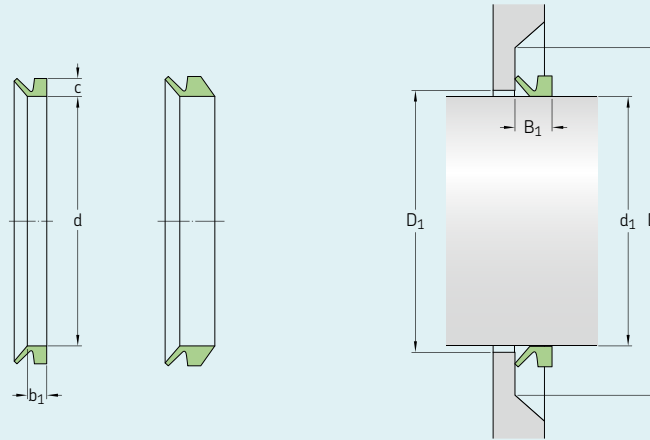
SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
411006	VR3	V	42.323	44.291	39.370	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
411003	VR4	R	42.717	43.504	41.142	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
411203	VR4	R	43.504	44.291	41.929	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
411500	VR1	R	43.898	45.866	41.142	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
411502	VR3	R	44.291	46.260	41.142	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
411506	VR3	V	44.291	46.260	41.142	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
411403	VR4	R	44.291	45.079	42.677	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
411603	VR4	R	45.079	45.866	43.425	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
412000	VR1	R	45.866	47.835	42.913	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
411803	VR4	R	45.866	46.654	44.134	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
412002	VR3	R	46.260	48.228	42.913	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
412006	VR3	V	46.260	48.228	42.913	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
412003	VR4	R	46.654	47.441	44.843	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
412203	VR4	R	47.441	48.228	45.551	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
412500	VR1	R	47.835	50.000	44.685	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
412502	VR3	R	48.228	50.197	44.685	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
412506	VR3	V	48.228	50.197	44.685	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
412403	VR4	R	48.228	49.016	46.299	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
412603	VR4	R	49.016	50.000	47.047	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
413000	VR1	R	50.000	51.969	46.457	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
412803	VR4	R	50.000	50.984	47.953	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
413002	VR3	R	50.197	52.165	46.457	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
413006	VR3	V	50.197	52.165	46.457	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
413003	VR4	R	50.984	51.772	48.819	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
413253	VR4	R	51.772	52.756	49.567	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
413500	VR1	R	51.969	53.937	48.228	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
413502	VR3	R	52.165	54.134	48.228	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
413506	VR3	V	52.165	54.134	48.228	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
413503	VR4	R	52.756	53.740	50.433	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
413753	VR4	R	53.740	54.724	51.378	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
414000	VR1	R	53.937	55.906	50.000	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
414002	VR3	R	54.134	56.102	50.000	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
414006	VR3	V	54.134	56.102	50.000	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
414003	VR4	R	54.724	55.709	52.283	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
414253	VR4	R	55.709	56.693	53.150	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
414500	VR1	R	55.906	57.874	51.772	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
414502	VR3	R	56.102	58.071	51.772	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
414506	VR3	V	56.102	58.071	51.772	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
414503	VR4	R	56.693	57.677	54.094	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
414753	VR4	R	57.677	58.661	55.000	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
415000	VR1	R	57.874	59.843	53.543	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
415002	VR3	R	58.071	60.039	53.543	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
415006	VR3	V	58.071	60.039	53.543	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
415003	VR4	R	58.661	59.646	55.866	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
415253	VR4	R	59.646	60.630	56.811	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
415500	VR1	R	59.843	61.811	55.315	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
415502	VR3	R	60.039	62.008	55.315	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
415506	VR3	V	60.039	62.008	55.315	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256





Metric (mm)

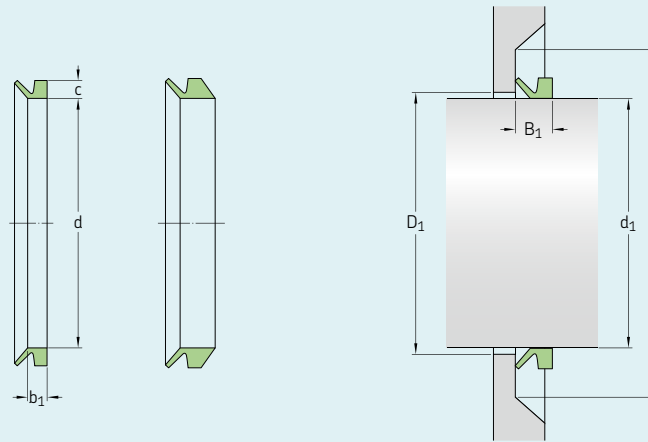
Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
1075	1125	1000	8±1.5	d1 + 5	d1 + 20	6	6.5	411006
1085	1105	1045	50±12	d1 + 24	d1 + 115	32.5	30	411003
1105	1125	1065	50±12	d1 + 24	d1 + 115	32.5	30	411203
1115	1165	1045	20±4	d1 + 10	d1 + 45	14.3	15	411500
1125	1175	1045	8±1.5	d1 + 5	d1 + 20	6	6.5	411502
1125	1175	1045	8±1.5	d1 + 5	d1 + 20	6	6.5	411506
1125	1145	1084	50±12	d1 + 24	d1 + 115	32.5	30	411403
1145	1165	1103	50±12	d1 + 24	d1 + 115	32.5	30	411603
1165	1215	1090	20±4	d1 + 10	d1 + 45	14.3	15	412000
1165	1185	1121	50±12	d1 + 24	d1 + 115	32.5	30	411803
1175	1225	1090	8±1.5	d1 + 5	d1 + 20	6	6.5	412002
1175	1225	1090	8±1.5	d1 + 5	d1 + 20	6	6.5	412006
1185	1205	1139	50±12	d1 + 24	d1 + 115	32.5	30	412003
1205	1225	1157	50±12	d1 + 24	d1 + 115	32.5	30	412203
1215	1270	1135	20±4	d1 + 10	d1 + 45	14.3	15	412500
1225	1275	1135	8±1.5	d1 + 5	d1 + 20	6	6.5	412502
1225	1275	1135	8±1.5	d1 + 5	d1 + 20	6	6.5	412506
1225	1245	1176	50±12	d1 + 24	d1 + 115	32.5	30	412403
1245	1270	1195	50±12	d1 + 24	d1 + 115	32.5	30	412603
1270	1320	1180	20±4	d1 + 10	d1 + 45	14.3	15	413000
1270	1295	1218	50±12	d1 + 24	d1 + 115	32.5	30	412803
1275	1325	1180	8±1.5	d1 + 5	d1 + 20	6	6.5	413002
1275	1325	1180	8±1.5	d1 + 5	d1 + 20	6	6.5	413006
1295	1315	1240	50±12	d1 + 24	d1 + 115	32.5	30	413003
1315	1340	1259	50±12	d1 + 24	d1 + 115	32.5	30	413253
1320	1370	1225	20±4	d1 + 10	d1 + 45	14.3	15	413500
1325	1375	1225	8±1.5	d1 + 5	d1 + 20	6	6.5	413502
1325	1375	1225	8±1.5	d1 + 5	d1 + 20	6	6.5	413506
1340	1365	1281	50±12	d1 + 24	d1 + 115	32.5	30	413503
1365	1390	1305	50±12	d1 + 24	d1 + 115	32.5	30	413753
1370	1420	1270	20±4	d1 + 10	d1 + 45	14.3	15	414000
1375	1425	1270	8±1.5	d1 + 5	d1 + 20	6	6.5	414002
1375	1425	1270	8±1.5	d1 + 5	d1 + 20	6	6.5	414006
1390	1415	1328	50±12	d1 + 24	d1 + 115	32.5	30	414003
1415	1440	1350	50±12	d1 + 24	d1 + 115	32.5	30	414253
1420	1470	1315	20±4	d1 + 10	d1 + 45	14.3	15	414500
1425	1475	1315	8±1.5	d1 + 5	d1 + 20	6	6.5	414502
1425	1475	1315	8±1.5	d1 + 5	d1 + 20	6	6.5	414506
1440	1465	1374	50±12	d1 + 24	d1 + 115	32.5	30	414503
1465	1490	1397	50±12	d1 + 24	d1 + 115	32.5	30	414753
1470	1520	1360	20±4	d1 + 10	d1 + 45	14.3	15	415000
1475	1525	1360	8±1.5	d1 + 5	d1 + 20	6	6.5	415002
1475	1525	1360	8±1.5	d1 + 5	d1 + 20	6	6.5	415006
1490	1515	1419	50±12	d1 + 24	d1 + 115	32.5	30	415003
1515	1540	1443	50±12	d1 + 24	d1 + 115	32.5	30	415253
1520	1570	1405	20±4	d1 + 10	d1 + 45	14.3	15	415500
1525	1575	1405	8±1.5	d1 + 5	d1 + 20	6	6.5	415502
1525	1575	1405	8±1.5	d1 + 5	d1 + 20	6	6.5	415506



Inch

SKF Part Number	Design	Mat'l	Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c
415503	VR4	R	60.630	61.811	57.756	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
416000	VR1	R	61.811	63.780	57.087	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
415753	VR4	R	61.811	62.992	58.858	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
416002	VR3	R	62.008	63.976	57.087	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
416006	VR3	V	62.008	63.976	57.087	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
416003	VR4	R	62.992	64.567	60.000	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
416500	VR1	R	63.780	65.748	58.858	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
416502	VR3	R	63.976	65.945	58.858	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
416506	VR3	V	63.976	65.945	58.858	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
416503	VR4	R	64.567	66.142	61.378	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
417000	VR1	R	65.748	67.717	60.630	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
417002	VR3	R	65.945	67.913	60.630	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
417006	VR3	V	65.945	67.913	60.630	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
417003	VR4	R	66.142	67.717	62.835	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
417500	VR1	R	67.717	69.685	62.402	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
417503	VR4	R	67.717	69.488	64.252	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
417502	VR3	R	67.913	69.882	62.402	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
417506	VR3	V	67.913	69.882	62.402	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
418003	VR4	R	69.488	71.260	65.787	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
418000	VR1	R	69.685	71.654	64.173	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
418002	VR3	R	69.882	71.850	64.173	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
418006	VR3	V	69.882	71.850	64.173	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
418503	VR4	R	71.260	73.031	67.480	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
418500	VR1	R	71.654	73.622	65.945	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
418502	VR3	R	71.850	73.819	65.945	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
418506	VR3	V	71.850	73.819	65.945	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
419003	VR4	R	73.031	75.000	69.016	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
419000	VR1	R	73.622	75.591	67.717	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
419002	VR3	R	73.819	75.787	67.717	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
419006	VR3	V	73.819	75.787	67.717	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
419503	VR4	R	75.000	76.969	70.630	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
419500	VR1	R	75.591	77.559	69.488	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
419502	VR3	R	75.787	77.756	69.488	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
419506	VR3	V	75.787	77.756	69.488	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
420003	VR4	R	76.969	79.134	72.598	1.969±.472	d1 + 0.945	d1 + 4.528	1.280	1.181
420000	VR1	R	77.559	79.528	71.260	0.787±.157	d1 + 0.394	d1 + 1.772	0.563	0.591
420002	VR3	R	77.756	79.724	71.260	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256
420006	VR3	V	77.756	79.724	71.260	0.315±.059	d1 + 0.197	d1 + 0.787	0.236	0.256





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	Free state seal ID d	Fitted width B1	Max face ID D1	Min face OD D	Seal seat width b1	Seal height c	SKF Part Number
1540	1570	1467	50±12	d1 + 24	d1 + 115	32.5	30	415503
1570	1620	1450	20±4	d1 + 10	d1 + 45	14.3	15	416000
1570	1600	1495	50±12	d1 + 24	d1 + 115	32.5	30	415753
1575	1625	1450	8±1.5	d1 + 5	d1 + 20	6	6.5	416002
1575	1625	1450	8±1.5	d1 + 5	d1 + 20	6	6.5	416006
1600	1640	1524	50±12	d1 + 24	d1 + 115	32.5	30	416003
1620	1670	1495	20±4	d1 + 10	d1 + 45	14.3	15	416500
1625	1675	1495	8±1.5	d1 + 5	d1 + 20	6	6.5	416502
1625	1675	1495	8±1.5	d1 + 5	d1 + 20	6	6.5	416506
1640	1680	1559	50±12	d1 + 24	d1 + 115	32.5	30	416503
1670	1720	1540	20±4	d1 + 10	d1 + 45	14.3	15	417000
1675	1725	1540	8±1.5	d1 + 5	d1 + 20	6	6.5	417002
1675	1725	1540	8±1.5	d1 + 5	d1 + 20	6	6.5	417006
1680	1720	1596	50±12	d1 + 24	d1 + 115	32.5	30	417003
1720	1770	1585	20±4	d1 + 10	d1 + 45	14.3	15	417500
1720	1765	1632	50±12	d1 + 24	d1 + 115	32.5	30	417503
1725	1775	1585	8±1.5	d1 + 5	d1 + 20	6	6.5	417502
1725	1775	1585	8±1.5	d1 + 5	d1 + 20	6	6.5	417506
1765	1810	1671	50±12	d1 + 24	d1 + 115	32.5	30	418003
1770	1820	1630	20±4	d1 + 10	d1 + 45	14.3	15	418000
1775	1825	1630	8±1.5	d1 + 5	d1 + 20	6	6.5	418002
1775	1825	1630	8±1.5	d1 + 5	d1 + 20	6	6.5	418006
1810	1855	1714	50±12	d1 + 24	d1 + 115	32.5	30	418503
1820	1870	1675	20±4	d1 + 10	d1 + 45	14.3	15	418500
1825	1875	1675	8±1.5	d1 + 5	d1 + 20	6	6.5	418502
1825	1875	1675	8±1.5	d1 + 5	d1 + 20	6	6.5	418506
1855	1905	1753	50±12	d1 + 24	d1 + 115	32.5	30	419003
1870	1920	1720	20±4	d1 + 10	d1 + 45	14.3	15	419000
1875	1925	1720	8±1.5	d1 + 5	d1 + 20	6	6.5	419002
1875	1925	1720	8±1.5	d1 + 5	d1 + 20	6	6.5	419006
1905	1955	1794	50±12	d1 + 24	d1 + 115	32.5	30	419503
1920	1970	1765	20±4	d1 + 10	d1 + 45	14.3	15	419500
1925	1975	1765	8±1.5	d1 + 5	d1 + 20	6	6.5	419502
1925	1975	1765	8±1.5	d1 + 5	d1 + 20	6	6.5	419506
1955	2010	1844	50±12	d1 + 24	d1 + 115	32.5	30	420003
1970	2020	1810	20±4	d1 + 10	d1 + 45	14.3	15	420000
1975	2025	1810	8±1.5	d1 + 5	d1 + 20	6	6.5	420002
1975	2025	1810	8±1.5	d1 + 5	d1 + 20	6	6.5	420006



LDSLIV wear sleeves for heavy industrial applications

Over time, contaminants trapped between a rotating shaft and a seal can cause severe shaft damage. Rather than repairing or replacing the damaged shaft, an LDSLV wear sleeve can take it from scored to restored in just minutes – or eliminate the need to finish it during manufacturing.

Heavy-duty protection

LDSLIV wear sleeves are recommended for applications where seals are exposed to heavy contaminants and harsh operating conditions, as in rolling mills, metal plants and chemical processing facilities.

In applications where seal wear and shaft damage is common, SKF recommends installing the sleeves before the machine is operational. Installing LDSLV wear sleeves from the outset will eliminate the need to rework the shaft when installing a replacement sleeve; it will also allow the original seal size to be used as the replacement.

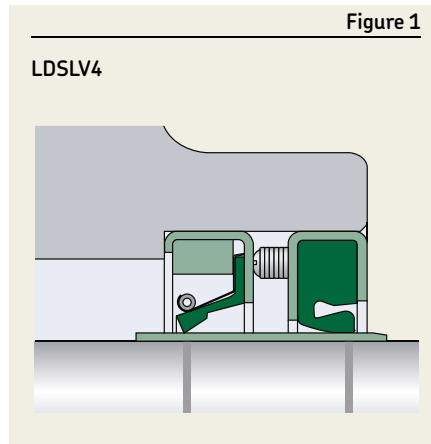


Figure 1

LDSLIV4

Size range

LDSLIV wear sleeves for heavy industrial applications for shaft diameters ranging from 8.313 to 45 in. (211.15 to 1,143 mm). The sleeves are made to order for shaft diameters within the primary ranges listed in **Table 1**.

Design features

LDSLIV4 wear sleeves (→ **Fig. 1**) feature SAE 1008 chromium-plated carbon steel to enhance wear and corrosion resistance. Other sleeve materials are available to meet specific application demands. The sleeve outside diameter is specially ground to provide a precision bore surface for the seal. The wall thickness of the standard sleeves is 0.094 in. (2.39 mm).

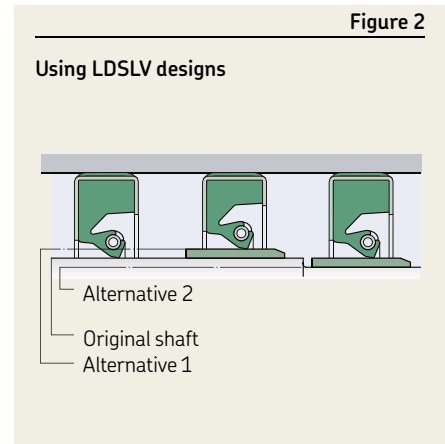


Figure 2

Using LDSLV designs

Applications

There are two alternative ways of using LDSLV4 wear sleeves for heavy industrial applications (→ **fig. 2**):

- 1 The sleeve is positioned on the shaft until it covers the damaged part and a new seal, designed for a 0.188 in. (4.78 mm) larger shaft diameter, is used.
- 2 The shaft is machined down by 0.188 in. (4.78 mm) in diameter, the sleeve is installed and the original seal size is used. The reworked shaft surface for the sleeve should have a surface roughness between Ra 100 to 125 µin (2.5 and 3.2 µm).

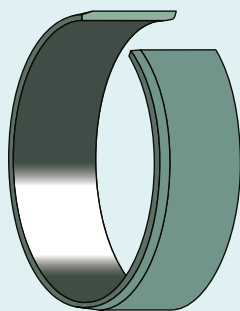
NOTE: The shaft tolerances for LDSLV designs, due to their heated slip-fit installation, are different from those for rotary shaft seals. Contact SKF for assistance if the sleeves are to be used in systems with sustained temperatures higher than 165 °F (75 °C) and surface speeds in excess of 3,900 ft/min (20 m/s).





Table 1

Primary dimension range of LDSLV4



Shaft range		Width ¹⁾	
over	incl.	min	max
in. (mm)		in. (mm)	
8.313	29.000	0.500	2.500
211.15	736.60	12.70	63.50
29.000	45.000	0.750	2.500
736.60	1,143.00	19.05	63.50

¹⁾ Total width (b), 1.5 to 2 in. (38.10 to 50.80 mm) at 45 in. (1,143.00 mm) shaft diameter

Contact SKF for LDSLV4 designs outside the primary size range.

Installation/removal

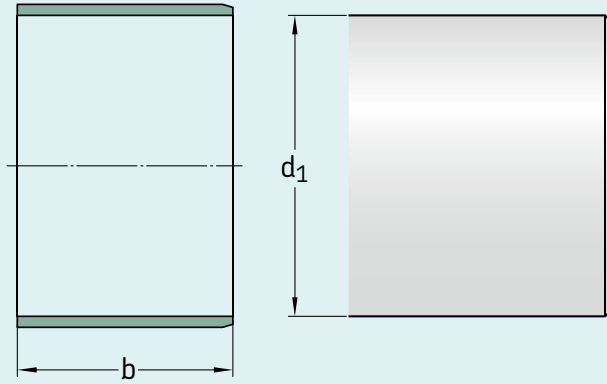
See page 23 in this handbook.

Table 2

LDSLV4 interference fit and tolerances

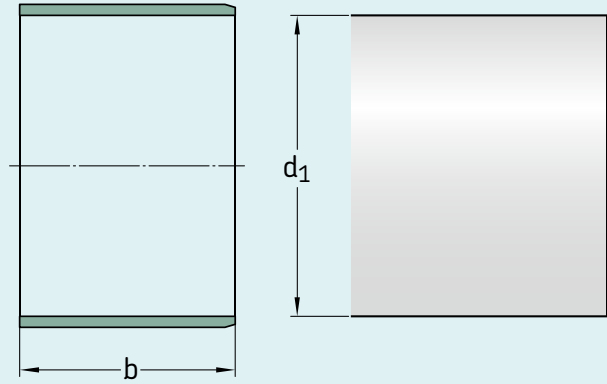
Shaft		Sleeve (metal I.D.)	
Diameter	Tolerance	Nominal press fit	I.D. tolerance
3.001 to 5.000 in. 76.2 to 127 mm	0.0015 in. 0.038 mm	0.005 in. 0.127 mm	+ 0.002 in. – 0.004 in. + 0.051 mm – 0.102 mm
5.001 to 7.000 in. 127 mm to 177.8 mm	0.0015 in. 0.038 mm	0.006 in. 0.152 mm	+ 0.002 in. – 0.004 in. + 0.051 mm – 0.102 mm
7.001 to 12.000 in. 177.8mm to 304.8 mm	0.002 in. 0.051 mm	0.007 in. 0.178 mm	+ 0.002 in. – 0.005 in. + 0.051 mm – 0.127 mm
12.001 to 20.000 in. 304.8mm to 508 mm	+ 0.004 in. – 0.002 in. + 0.102 mm – 0.051 mm	0.008 in. 0.203 mm	+ 0.002 in. – 0.008 in. + 0.051 mm – 0.203 mm
20.001 to 40.000 in. 508 mm to 1016 mm	+ 0.008 in. – 0.002 in. + 0.203 mm – 0.051 mm	0.008 in. 0.203 mm	+ 0.002 in. – 0.008 in. + 0.051 mm – 0.203 mm
40.001 to 60.000 in. 1016 mm to 1524 mm	+ 0.010 in. – 0.002 in. + 0.254 mm – 0.051 mm	0.008 in. 0.203 mm	+ 0.002 in. – 0.010 in. + 0.081 mm – 0.254 mm

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).

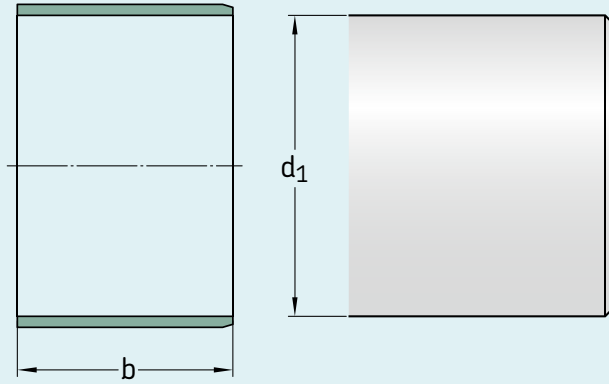


SKF Part Number	Inch				Metric (mm)			
	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b
91780	4.3255	4.3285	4.515	2.000	109.87	109.94	114.68	50.8
91284	4.3305	4.3335	4.520	1.200	109.99	110.07	114.81	30.5
91374	8.065	8.069	8.255	0.787	204.85	204.95	209.68	20
91375	8.068	8.072	8.258	0.787	204.93	205.03	209.75	20
91366	8.078	8.082	8.268	0.984	205.18	205.28	210	25
90812	8.078	8.082	8.268	1.299	205.18	205.28	210	33
90813	8.078	8.082	8.268	1.575	205.18	205.28	210	40
91703	8.266	8.270	8.456	1.574	209.96	210.06	214.78	40
85885	8.311	8.315	8.500	1.250	211.10	211.20	215.90	31.8
91338	8.463	8.467	8.653	1.000	214.96	215.06	219.79	25.4
90885	8.471	8.475	8.661	1.969	215.16	215.27	220	50
91326	8.498	8.502	8.688	1.000	215.85	215.95	220.68	25.4
91333	8.498	8.502	8.688	1.250	215.85	215.95	220.68	31.8
90874	8.659	8.663	8.849	0.787	219.94	220.04	224.76	20
87319	8.659	8.663	8.849	1.000	219.94	220.04	224.76	25.4
87143	8.659	8.663	8.849	1.181	219.94	220.04	224.76	30
91730	8.659	8.663	8.849	1.574	219.94	220.04	224.76	40
90822	8.659	8.663	8.849	1.960	219.94	220.04	224.76	50
86551	8.810	8.814	9.000	2.000	223.77	223.88	228.60	50.8
87166	8.864	8.868	9.054	2.500	225.15	225.25	229.97	63.5
87462	8.865	8.869	9.055	1.000	225.17	225.27	230	25.4
85846	8.998	9.002	9.188	1.750	228.55	228.65	233.38	44.5
87089	9.053	9.057	9.243	2.500	229.95	230.05	234.77	63.5
85931	9.061	9.065	9.250	1.500	230.15	230.25	234.95	38.1
87784	9.248	9.252	9.438	0.625	234.90	235.00	239.73	15.9
84643	9.248	9.252	9.438	0.875	234.90	235.00	239.73	22.2
87789	9.258	9.262	9.449	1.102	235.15	235.25	240	28
90835	9.258	9.262	9.449	1.181	235.15	235.25	240	30
90952	9.259	9.263	9.449	0.709	235.18	235.28	240	18
91382	9.267	9.271	9.449	1.732	235.38	235.48	240	44
91351	9.447	9.451	9.637	0.591	239.95	240.06	244.78	15
91317	9.447	9.451	9.637	0.709	239.95	240.06	244.78	18
91396	9.447	9.451	9.637	0.787	239.95	240.06	244.78	20
91736	9.447	9.451	9.637	1.000	239.95	240.06	244.78	25.4
87144	9.447	9.451	9.637	1.181	239.95	240.06	244.78	30
87911	9.455	9.459	9.646	1.732	240.16	240.26	245	44
91348	9.498	9.502	9.688	0.956	241.25	241.35	246.08	24.3
86562	9.498	9.502	9.688	2.500	241.25	241.35	246.08	63.5
91733	9.651	9.655	9.843	2.500	245.14	245.24	250	63.5
91318	9.652	9.656	9.843	1.330	245.16	245.26	250	34
84965	9.748	9.752	9.938	1.438	247.60	247.70	252.43	36.5
85045	9.748	9.752	9.938	2.250	247.60	247.70	252.43	57.2
86413	9.811	9.815	10.000	1.125	249.20	249.30	254	28.6
87067	9.811	9.815	10.000	2.000	249.20	249.30	254	50.8
90773	9.833	9.837	10.023	1.575	249.76	249.86	254.58	40
90890	9.841	9.845	10.031	1.181	249.96	250.06	254.79	30
91385	9.841	9.845	10.031	1.417	249.96	250.06	254.79	36
91383	10.037	10.041	10.227	2.244	254.94	255.04	259.77	57
86000	10.061	10.065	10.250	2.250	255.55	255.65	260.35	57.2



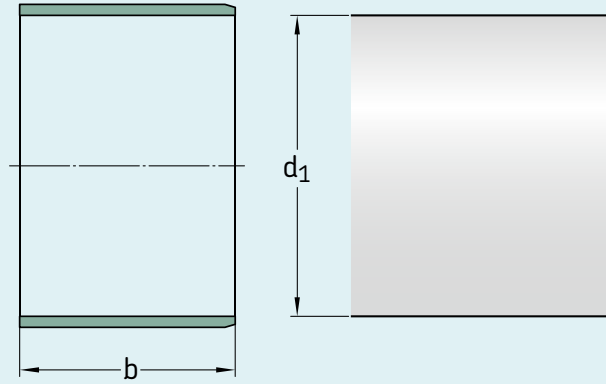


SKF Part Number	Inch				Metric (mm)			
	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b
84962	10.186	10.190	10.375	1.125	258.72	258.83	263.53	28.6
91704	10.225	10.229	10.415	1.299	259.72	259.82	264.54	33
90896	10.234	10.238	10.424	0.787	259.94	260.05	264.77	20
90898	10.234	10.238	10.424	0.787	259.94	260.05	264.77	20
91337	10.234	10.238	10.424	1.181	259.94	260.05	264.77	30
85629	10.311	10.315	10.500	2.000	261.90	262.00	266.70	50.8
86798	10.439	10.443	10.629	2.165	265.15	265.25	269.98	55
85839	10.498	10.502	10.688	1.500	266.65	266.75	271.48	38.1
86013	10.498	10.502	10.688	2.750	266.65	266.75	271.48	69.9
86544	10.560	10.564	10.750	1.813	268.22	268.33	273.05	46.1
87768	10.561	10.565	10.750	1.500	268.25	268.35	273.05	38.1
86435	10.748	10.752	10.938	2.500	273.00	273.10	277.83	63.5
90870	10.810	10.814	11.000	1.575	274.57	274.68	279.40	40
85033	10.811	10.815	11.000	2.000	274.60	274.70	279.40	50.8
90546	10.825	10.829	11.024	0.866	274.96	275.06	280	22
90875	10.833	10.837	11.023	0.500	275.16	275.26	279.98	12.7
86601	10.844	10.848	11.034	0.709	275.44	275.54	280.26	18
84510	10.873	10.877	11.063	2.000	276.17	276.28	281	50.8
91301	10.982	10.986	11.172	2.500	278.94	279.04	283.77	63.5
91322	10.998	11.002	11.188	0.687	279.35	279.45	284.18	17.5
86486	10.998	11.002	11.188	1.500	279.35	279.45	284.18	38.1
91321	10.998	11.002	11.188	1.732	279.35	279.45	284.18	44.0
86454	10.998	11.002	11.188	2.500	279.35	279.45	284.18	63.5
87142	11.021	11.025	11.211	1.181	279.93	280.04	284.76	30
90437	11.022	11.026	11.220	1.772	279.96	280.06	285	45
85212	11.186	11.190	11.375	2.250	284.12	284.23	288.93	57.2
90238	11.227	11.231	11.417	2.500	285.17	285.27	290	63.5
86145	11.373	11.377	11.563	2.250	288.87	288.98	293.70	57.2
86441	11.415	11.419	11.605	1.750	289.94	290.04	294.77	44.5
90761	11.498	11.502	11.688	0.750	292.05	292.15	296.88	19.1
91342	11.498	11.502	11.688	1.688	292.05	292.15	296.88	42.9
91391	11.612	11.616	11.802	0.787	294.94	295.05	299.77	20
91365	11.612	11.616	11.811	1.260	294.94	295.05	300	32
90889	11.612	11.616	11.802	1.575	294.94	295.05	299.77	40
90895	11.809	11.813	12.000	0.787	299.95	300.05	304.80	20
90897	11.809	11.813	12.000	0.787	299.95	300.05	304.80	20
90853	11.809	11.813	12.000	0.984	299.95	300.05	304.80	25
86687	11.810	11.814	12.000	1.125	299.97	300.08	304.80	28.6
85046	11.811	11.815	12.000	2.250	300.00	300.10	304.80	57.2
85844	11.811	11.815	12.000	2.750	300.00	300.10	304.80	69.9
90849	11.998	12.002	12.188	1.000	304.75	304.85	309.58	25.4
85577	11.998	12.002	12.188	2.250	304.75	304.85	309.58	57.2
91302	12.005	12.011	12.195	2.500	304.93	305.08	309.75	63.5
91323	12.015	12.021	12.205	1.969	305.18	305.33	310.01	50
91324	12.015	12.021	12.205	2.047	305.18	305.33	310.01	52
85418	12.061	12.067	12.250	0.625	306.35	306.50	311.15	15.9
91721	12.061	12.067	12.250	2.500	306.35	306.50	311.15	63.5
91376	12.172	12.178	12.362	0.945	309.17	309.32	313.99	24
91387	12.203	12.209	12.393	0.709	309.96	310.11	314.78	18
90174	12.310	12.316	12.500	1.500	312.67	312.83	317.50	38.1

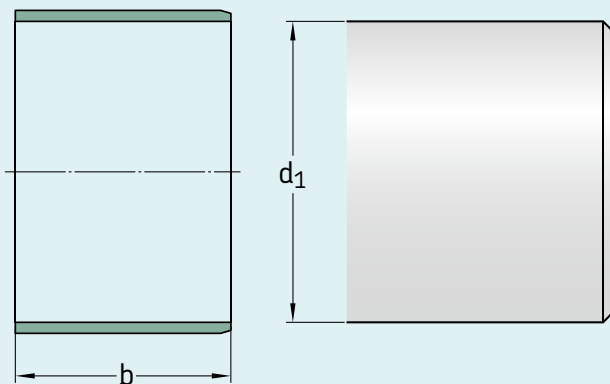


SKF Part Number	Inch				Metric (mm)			
	Shaft min. d_1	Shaft max. d_1	Reference Installed OD D	Width b	Shaft min. d_1	Shaft max. d_1	Reference Installed OD D	Width b
83760	12.311	12.317	12.500	0.750	312.70	312.85	317.50	19.1
90155	12.407	12.413	12.598	2.500	315.14	315.29	320	63.5
91390	12.596	12.602	12.786	1.574	319.94	320.09	324.76	40
90198	12.596	12.602	12.795	2.500	319.94	320.09	325	63.5
87513	12.748	12.754	12.938	0.688	323.80	323.95	328.63	17.5
91367	12.802	12.808	12.992	0.787	325.17	325.32	330	20
90239	12.802	12.808	12.992	2.500	325.17	325.32	330	63.5
91386	12.990	12.996	13.180	1.102	329.95	330.10	334.77	28
91729	12.990	12.996	13.180	1.889	329.95	330.10	334.77	48
85535	12.998	13.004	13.188	1.750	330.15	330.30	334.98	25.4
84963	13.061	13.067	13.250	1.125	331.75	331.90	336.55	28.6
91352	13.116	13.122	13.307	1.594	333.15	333.30	338	40.5
90801	13.196	13.202	13.386	1.969	335.18	335.33	340	50
87463	13.311	13.317	13.501	1.500	338.10	338.25	342.93	38.1
91731	13.383	13.389	13.583	1.968	339.93	340.08	345	50
91305	13.384	13.390	13.574	0.800	339.95	340.11	344.78	20
91309	13.384	13.390	13.574	1.693	339.95	340.11	344.78	43
91310	13.589	13.595	13.780	0.787	345.16	345.31	350	20
90887	13.811	13.817	14.001	1.181	350.80	350.95	355.63	30
90778	13.982	13.988	14.173	1.000	355.14	355.30	360	25.4
90785	13.982	13.988	14.173	1.969	355.14	355.30	360	50
86153	13.998	14.004	14.188	2.000	355.55	355.70	360.38	50.8
87445	14.171	14.177	14.361	1.000	359.94	360.10	364.77	25.4
91353	14.171	14.177	14.370	1.732	359.94	360.10	365	44
90788	14.180	14.186	14.370	1.772	360.17	360.32	365	45
86429	14.311	14.317	14.500	1.500	363.50	363.65	368.30	38.1
91368	14.748	14.754	14.938	1.000	374.60	374.75	379.43	25.4
90841	14.770	14.776	14.961	1.575	375.16	375.31	380	40
87723	14.811	14.817	15.000	1.500	376.20	376.35	381	38.1
91327	14.959	14.965	15.149	1.181	379.96	380.11	384.78	30
90272	15.060	15.066	15.250	0.750	382.52	382.68	387.35	19.1
91330	15.117	15.123	15.307	1.500	383.97	384.12	388.80	38.1
90891	15.155	15.161	15.354	1.575	384.94	385.09	390	40
87569	15.186	15.192	15.375	2.500	385.72	385.88	390.53	63.5
82458	15.498	15.504	15.688	1.500	393.65	393.80	398.48	38.1
91398	15.558	15.564	15.748	1.181	395.17	395.33	400	30
87461	15.558	15.564	15.748	2.500	395.17	395.33	400	63.5
85181	15.811	15.817	16.000	2.000	401.60	401.75	406.40	50.8
85900	15.998	16.004	16.188	2.000	406.35	406.50	411.18	50.8
86175	16.061	16.067	16.250	1.250	407.95	408.10	412.75	31.8
86426	16.061	16.067	16.250	1.300	407.95	408.10	412.75	33.0
86575	16.061	16.067	16.250	2.000	407.95	408.10	412.75	50.8
90866	16.140	16.146	16.330	2.461	409.96	410.11	414.78	62.5
90899	16.494	16.500	16.684	2.500	418.95	419.10	423.77	63.5
91312	16.533	16.539	16.723	2.500	419.94	420.09	424.76	63.5
84616	16.811	16.817	17.000	2.250	427.00	427.15	431.80	57.2
87916	17.132	17.138	17.323	2.500	435.15	435.31	440	63.5
91350	17.133	17.139	17.323	1.730	435.18	435.33	440	44
86430	17.311	17.317	17.500	1.500	439.70	439.85	444.50	38.1





SKF Part Number	Inch				Metric (mm)			
	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b
91300	17.714	17.720	17.904	2.500	449.94	450.09	454.76	63.5
90867	17.715	17.721	17.905	2.500	449.96	450.11	454.79	63.5
91349	17.723	17.729	17.913	2.165	450.16	450.32	454.99	55
90888	17.810	17.816	18.000	1.181	452.37	452.53	457.20	30
87271	17.810	17.816	18.000	2.125	452.37	452.53	457.20	54.0
90347	17.920	17.926	18.110	1.181	455.17	455.32	460	30
91705	18.108	18.114	18.298	1.969	459.94	460.10	464.77	50
91357	18.108	18.114	18.298	2.362	459.94	460.10	464.77	60
87921	18.706	18.712	18.898	0.787	475.13	475.28	480	20
87924	18.810	18.816	19.000	1.575	477.77	477.93	482.60	40.0
86563	18.811	18.817	19.000	1.750	477.80	477.95	482.60	44.5
86716	18.811	18.817	19.000	2.500	477.80	477.95	482.60	63.5
91392	18.895	18.901	19.094	1.969	479.93	480.09	485	50
90259	19.464	19.470	19.654	0.945	494.39	494.54	499.21	24
90886	19.494	19.500	19.685	2.000	495.15	495.30	500	50.8
91732	19.683	19.689	19.873	1.574	499.95	500.10	504.77	40
91370	19.683	19.689	19.873	1.575	499.95	500.10	504.77	40
91336	19.683	19.689	19.873	1.970	499.95	500.10	504.77	50
84781	19.811	19.817	20.000	1.250	503.20	503.35	508	31.8
91308	20.310	20.320	20.500	1.750	515.87	516.13	520.70	44.5
90892	20.470	20.480	20.660	0.984	519.94	520.19	524.76	25
91339	20.810	20.820	21.000	1.000	528.57	528.83	533.40	25.4
85367	20.811	20.821	21.000	2.125	528.60	528.85	533.40	54.0
90805	20.863	20.873	21.053	2.250	529.92	530.17	534.75	57.2
87783	20.864	20.874	21.063	0.787	529.95	530.20	535	20
87069	21.801	21.811	21.991	2.362	553.75	554.00	558.57	60
85222	21.811	21.821	22.000	2.000	554.00	554.25	558.80	50.8
84590	21.811	21.821	22.000	2.250	554.00	554.25	558.80	57.2
91329	21.857	21.867	22.047	0.787	555.17	555.42	560	20
91399	22.045	22.055	22.235	1.181	559.94	560.20	564.77	30
87070	22.301	22.311	22.491	2.362	566.45	566.70	571.27	60
90163	22.810	22.820	23.000	2.000	579.37	579.63	584.20	50.8
90146	22.998	23.008	23.188	2.000	584.15	584.40	588.98	50.8
90840	23.431	23.441	23.622	2.500	595.15	595.40	600	63.5
87777	23.432	23.442	23.622	0.984	595.17	595.43	600	25
89997	23.432	23.442	23.622	2.500	595.17	595.43	600	63.5
91313	23.620	23.630	23.819	1.969	599.95	600.20	605	50
87922	23.810	23.820	24.000	0.750	604.77	605.03	609.60	19.1
90814	23.810	23.820	24.000	1.250	604.77	605.03	609.60	31.8
91395	23.998	24.008	24.188	2.500	609.55	609.80	614.38	63.5
86567	24.998	25.008	25.188	2.500	634.95	635.20	639.78	63.5
91700	25.589	25.599	25.787	2.500	649.96	650.21	655	63.5
91364	25.805	25.815	25.995	2.250	655.45	655.70	660.27	57.2
91343	25.810	25.820	26.000	2.244	655.57	655.83	660.40	57
90799	26.187	26.197	26.378	1.772	665.15	665.40	670	45
90809	26.310	26.320	26.500	1.375	668.27	668.53	673.10	34.9
86974	26.811	26.821	27.000	2.000	681.00	681.25	685.80	50.8
85531	26.811	26.821	27.000	2.250	681.00	681.25	685.80	57.2
84764	27.061	27.071	27.250	2.250	687.35	687.60	692.15	57.2
91331	27.311	27.321	27.500	2.250	693.70	693.95	698.50	57.2



SKF Part Number	Inch				Metric (mm)			
	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b	Shaft min. d1	Shaft max. d1	Reference Installed OD D	Width b
91328	27.360	27.370	27.559	2.500	694.94	695.20	700	63.5
90838	27.368	27.378	27.559	2.500	695.15	695.40	700	63.5
85122	27.431	27.441	27.625	1.500	696.75	697.00	701.68	38.1
91358	27.557	27.567	27.747	2.362	699.95	700.20	704.77	60
89922	27.806	27.816	27.996	2.500	706.27	706.53	711.10	63.5
91340	27.810	27.820	28.000	1.250	706.37	706.63	711.20	31.8
91371	28.310	28.320	28.500	2.313	719.07	719.33	723.90	58.8
90884	28.747	28.757	28.937	2.500	730.17	730.43	735	63.5
90872	28.810	28.820	29.000	1.535	731.77	732.03	736.60	39
84641	28.811	28.821	29.000	2.250	731.80	732.05	736.60	57.2
89949	28.944	28.954	29.134	2.480	735.18	735.43	740	63
91359	29.526	29.536	29.716	2.362	749.96	750.21	754.79	60
87605	30.318	30.328	30.508	1.375	770.08	770.33	774.90	34.9
90893	30.518	30.528	30.709	1.969	775.16	775.41	780	50
90894	30.707	30.717	30.897	2.480	779.96	780.21	784.78	63
91303	31.277	31.287	31.467	2.362	794.44	794.69	799.26	60
91360	31.494	31.504	31.684	2.500	799.95	800.20	804.77	63.5
90869	31.560	31.570	31.750	1.969	801.62	801.88	806.45	50
91320	31.748	31.758	31.938	0.874	806.40	806.65	811.23	22.2
91304	31.748	31.758	31.938	1.960	806.40	806.65	811.23	50
91319	31.748	31.758	31.938	1.968	806.40	806.65	811.23	50.0
91335	31.748	31.758	31.938	2.480	806.40	806.65	811.23	63
90810	31.810	31.820	32.000	2.500	807.97	808.23	812.80	63.5
86090	32.311	32.321	32.501	2.000	820.70	820.95	825.53	50.8
89996	32.761	32.771	32.953	2.500	832.13	832.38	837	63.5
87529	34.310	34.320	34.500	1.750	871.47	871.73	876.30	44.5
91389	35.234	35.244	35.433	1.969	894.94	895.20	900	50
91707	37.498	37.508	37.688	0.750	952.45	952.70	957.28	19.1
87945	38.270	38.280	38.460	2.500	972.06	972.31	976.88	63.5
85123	38.811	38.821	39.000	2.125	985.80	986.05	990.60	54.0
81826	39.811	39.821	40.000	2.125	1011.20	1011.45	1016	54
91737	39.959	39.969	40.149	2.500	1014.96	1015.21	1019.78	63.5
90852	39.966	39.976	40.156	1.181	1015.14	1015.39	1019.96	30
91728	40.155	40.167	40.345	2.500	1019.94	1020.24	1024.76	63.5
90830	41.310	41.322	41.496	1.575	1049.27	1049.58	1054	40
89948	41.310	41.322	41.500	1.968	1049.27	1049.58	1054.10	50
89947	41.310	41.322	41.496	2.362	1049.27	1049.58	1054	60
87379	42.310	42.322	42.500	1.250	1074.67	1074.98	1079.50	31.8
89946	43.313	43.325	43.504	2.480	1100.15	1100.46	1105	63
91708	44.998	45.010	45.188	1.000	1142.95	1143.25	1147.78	25.4





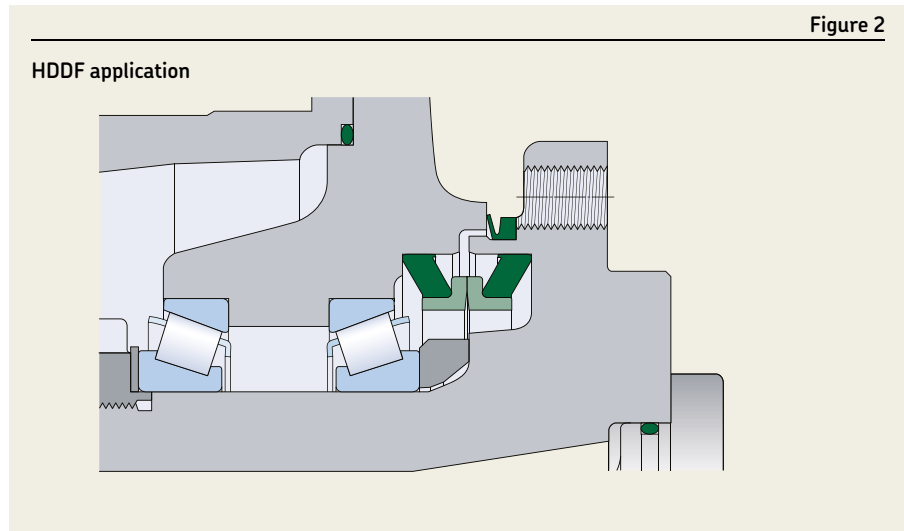
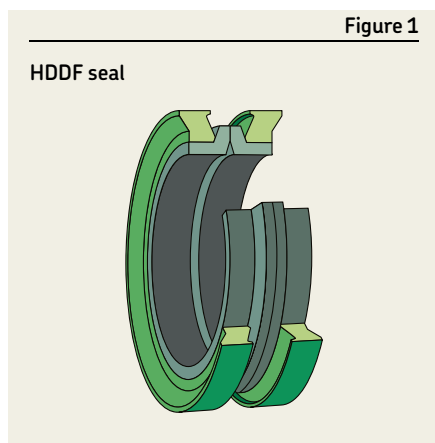
Metal face seals

HDDF metal face seals from SKF (→ **fig. 1**) are designed for severe operating conditions at relatively low circumferential speeds. They offer reliable protection against solid and liquid contaminants as well as leak-proof lubricant retention.

Typical applications

Originally developed for off-road and tracked vehicles, HDDF metal face seals (→ **fig. 2**) have proven equally suitable in applications that need protection against sand, soil, mud, water and more. These include:

- Mixers and conveyors
- Sand treatment equipment
- Mining equipment
- Construction equipment
- Agricultural machinery
- Washing equipment
- Grinding mills /pulverizing equipment



Design features

HDDF seals consist of two identical metal sealing rings and two similar Belleville washers (cup springs) made of nitrile or fluoro rubber compounds, specifically developed for these seals (→ **fig. 3**). The sealing rings are made of wear- and corrosion-resistant cast alloy and have finely finished sliding and sealing surfaces.

The Belleville washers of nitrile or fluoro rubber provide the necessary uniform face loading and effective sealing at the bore and outside diameters. Adequate tolerances between the seal assembly and the bore are critical for proper sealing performance.

Lubricant requirements

A lubricant should be applied on the dynamic sealing surfaces of a metal face seal to prevent scoring and cover at least 30% of the sealing surface to properly lubricate and cool the sealing rings. The lubricant can be either a detergent like SAE 10W-40, or a mineral-based oil ranging from 10 WT to 90 WT, depending on the ambient temperature. Some oils contain additives that make them incompatible with elastomers, which can cause degradation of the Belleville washers, especially when exposed to elevated temperatures.

Although mineral oils are always the recommended lubricant, a grease lubricant can also be used in some slowly rotating or oscillating applications, where the seal face surface speed does not exceed 100 ft/min (0.5 m/s). At higher speeds, an oil lubricant is required, not only to provide lubrication to the sealing faces, but also to cool the sealing rings.



Permissible operating conditions

Depending on their design, metal face seals can withstand different amounts of internal pressure. It should, however, generally be maintained below 35 psi (0.25 MPa). Other recommendations regarding operating conditions for the metal face seals, like temperature and speed, are provided in **Table 1**.

Contaminants

Due to their use in heavily contaminated environments, HDDF metal face seals are subject to a build-up of mud packing in the cavity between the housing and sealing rings and Belleville washer. Eventually, the packing mud will push the Belleville washers out of position, resulting in improper face loads or mud being pumped past the Belleville washers. Contaminants can also cause abrasion to the Belleville washers, which in turn causes deterioration of the elastomer.

Installing HDDF seals

Careful handling and installation of a metal face seal is critical to avoid cutting or tearing of the elastomeric Belleville washers or breaking the metal sealing rings, both of which can cause premature seal failure and immediate leakage. It is also vital to keep the sealing faces free from contaminants like dirt or lint.

All housing components contacting the Belleville washers must be free from contaminants (oil, grease, dust, lint particles, etc.). SKF recommends using a non-petroleum-based solvent and a clean, lint-free wipe to clean these components prior to installation. Once these preparations are complete, proceed with HDDF seal installation:

- 1 Install the Belleville washers seated against the inside shoulder of the metal sealing rings (→ **fig. 4a**).
- 2 Carefully push each seal half (Belleville washer and metal sealing ring) into the housing until it is fully seated. Check that the seal is not cocked and that the washers are seated evenly at the bottom of the housing bore. Improper seal installation can result in uneven face loads around the circumference of the seal faces, causing scoring or the sealing rings to separate and allow oil to leak.
- 3 Clean both metal sealing ring faces with a lint-free wipe and apply a thin film of oil. Ensure that no oil is applied to any surface but the sealing ring faces (→ **fig. 4b**).
- 4 Check that both housings are concentric and in correct alignment. The Belleville washers must not unseat from the bottom of the housing.

- 5 Carefully bring the two housings together, avoiding high impact that can scratch or break the seal components.
- 6 Finally, hold one half of the assembly stationary while rotating the other half at least ten complete revolutions.

NOTE: This procedure enables the installer to check that the housing and the Belleville washers are aligned. If the seal assembly wobbles, it is necessary to disassemble it and make sure that the Belleville washers are properly seated in the housing.

Figure 3

Design features

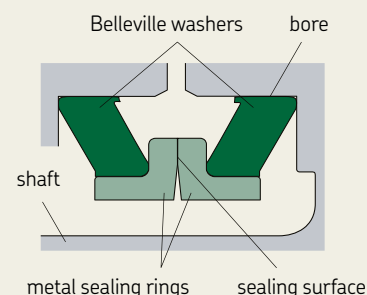


Figure 4

Installation procedure

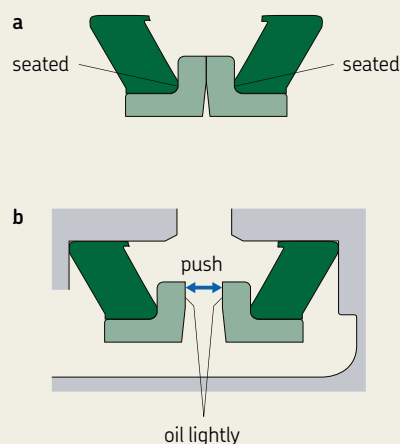
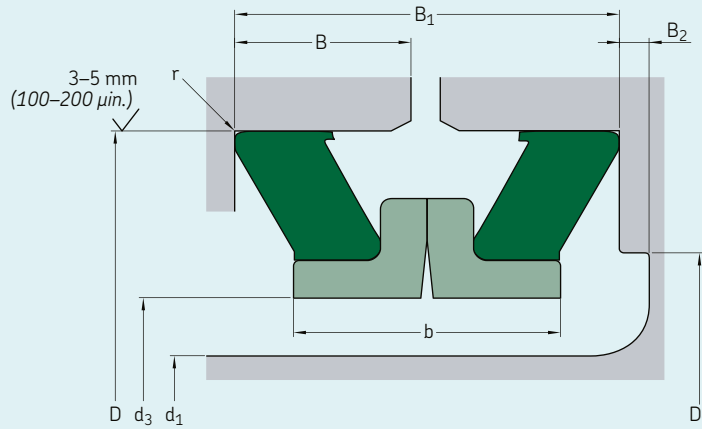


Table 1

Permissible operating conditions

Operating condition	Recommended value	
Temperature, max		
Continuous operation		
Nitrile rubber (NBR)	-15 to +210 °F	-25 to +100 °C
Fluoro rubber (FKM)	+15 to 375 °F	-10 to +190 °C
Circumferential speed, max		
Continuous operation	350 ft/min	1.8 m/s
Brief periods	750 ft/min	3.8 m/s
Pressure, max		
Continuous operation	35 psi	0.25 MPa
Brief periods	50 psi	0.35 MPa





Inch

SKF part number

Lip mat'l

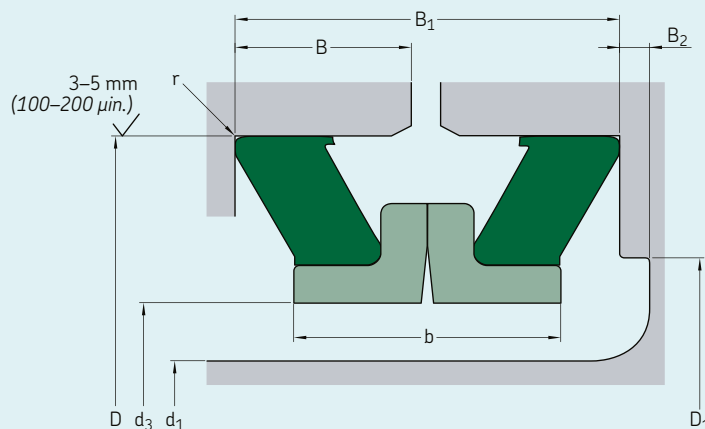
Inch dimensions

Shaft diameter	Bore diameter	Operating width	Seal inside diameter	Bore depth	Recommended shoulder diameter	Under-cut	Sealing ring width	Radius
D_1 max	D	B_1	d_3 min	B	D_1 max min ²⁾	B_2 min	b max	r max

in.

16904	R	1.688	2.760 ±0.002	0.974 ±0.038	1.760	0.453	2.282	-	-	0.846	0.037
18259	R	1.812	3.003 ±0.002	0.892 ±0.031	1.910	0.416	2.475	-	-	0.790	0.042
21306	R	2.125	3.250 ±0.002	0.900 ±0.033	2.215	0.418	2.759	-	-	0.812	0.045
25096	R	2.500	3.762 ±0.002	0.907 ±0.033	2.580	0.422	3.188	-	-	0.840	0.042
27536	R	2.750	4.030 ±0.002	0.918 ±0.035	2.830	0.426	3.480	-	-	0.810	0.042
30651	R	3.063	4.500 ±0.002	1.016 ±0.035	3.170	0.475	3.833	-	-	0.912	0.042
35076	R	3.500	4.953 ±0.002	1.096 ±0.043	3.620	0.511	4.296	-	-	0.962	0.035
38740	R	3.875	5.312 ±0.003	1.102 ±0.024	4.040	0.524	4.750	-	-	1.002	0.042
38751	R	3.875	5.562 ±0.003	1.267 ±0.050	4.040	0.594	4.791	-	-	1.110	0.051
43135	R	4.312	5.823 ±0.003	1.102 ±0.024	4.420	0.524	5.125	-	-	1.002	0.042
43150	R	4.312	6.000 ±0.003	1.320 ±0.040	4.420	0.625	5.173	-	-	1.090	0.051
46975	R	4.688	6.400 ±0.003	1.525 ±0.050	4.795	0.722	5.583	-	-	1.254	0.047
50655	R	5.062	6.750 ±0.003	1.280 ±0.040	5.170	0.605	5.975	-	-	1.150	0.057
54000	R	5.400	6.990 ±0.003	1.310 ±0.030	5.625	0.625	6.625	-	-	1.182	0.057
56170	R	5.625	7.250 ±0.003	1.366 ±0.031	5.825	0.650	6.486	6.174	0.032	1.300	0.057
58775	R	5.875	7.641 ±0.003	1.510 ±0.031	6.000	0.724	6.868	6.548	0.056	1.490	0.073
63796	R	6.375	8.120 ±0.003	1.265 ±0.040	6.570	0.598	7.555	7.505	0.125	1.350	0.042
67560	R	6.750	8.620 ±0.004	1.375 ±0.030	6.920	0.656	7.750	-	-	1.260	0.042
74310	R	7.438	9.400 ±0.004	1.656 ±0.040	7.540	0.793	8.431	-	-	1.344	0.073
78020	R	7.800	10.000 ±0.004	1.750 ±0.050	7.940	0.835	8.910	-	-	1.500	0.058
82540	R	8.250	10.062 ±0.004	1.560 ±0.040	8.358	0.745	9.280	9.220	0.071	1.562	0.058
86850	R	8.688	10.911 ±0.005	1.924 ±0.030	8.790	0.932	9.754	-	-	1.642	0.058
93115	R	9.312	11.000 ±0.005	1.437 ±0.032	9.410	0.687	10.360	10.260	0.090	1.510	0.050
93125	R	9.312	11.625 ±0.005	1.754 ±0.050	9.410	0.837	10.750	-	-	1.510	0.089
95620	R	9.562	11.859 ±0.005	1.949 ±0.069	9.660	0.925	10.703	-	-	1.700	0.074
108710	R	10.875	12.969 ±0.005	1.540 ±0.050	11.060	0.730	12.100	12.000	0.143	1.670	0.043
116500	R	11.625	13.250 ±0.005	1.290 ±0.030	11.780	0.615	12.780	-	-	1.210	0.450
124020	R	12.400	14.375 ±0.005	1.656 ±0.050	12.500	0.788	13.530	13.470	0.060	1.610	0.057
137570	R	13.750	15.817 ±0.005	1.875 ±0.032	13.910	0.906	14.985	-	-	1.670	0.089
806715	R	14.750	16.695 ±0.005	1.875 ±0.032	14.950	0.906	15.863	-	-	1.670	0.620
807115	V	14.750	16.695 ±0.005	1.875 ±0.032	14.950	0.906	15.863	-	-	1.670	0.062
171025	R	17.125	19.240 ±0.006	1.531 ±0.053	17.280	0.724	18.400	18.300	0.140	1.659	0.043
191022	R	19.125	21.500 ±0.006	1.640 ±0.042	19.250	0.784	20.950	20.850	0.175	1.832	0.057
238020	R	23.875	26.875 ±0.006	2.125 ±0.040	24.280	1.018	25.550	-	-	1.851	0.089
807199	V	23.875	26.875 ±0.006	2.125 ±0.040	24.280	1.018	25.550	-	-	1.851	0.089
807149	V	29.000	32.000 ±0.006	2.125 ±0.040	29.512	1.028	30.672	-	-	1.851	0.089





Metric (mm)										Lip mat'l	SKF part number
Metric dimensions											
Shaft diameter	Bore diameter	Operating width	Seal inside diameter	Bore depth	Recommended shoulder diameter	Undercut	Sealing ring width	Radius			
D ₁ max	D	B ₁	d ₃ min	B	D ₁ max min ²⁾	B ₂ min	b max	r max			
in.											
42.88	70.10 ±0.06	24.74 ±0.97	44.70	11.51	57.96	-	-	21.49	0.94	R	16904
46.03	76.28 ±0.06	22.66 ±0.79	48.51	10.57	62.87	-	-	20.07	1.07	R	18259
53.98	82.55 ±0.06	22.86 ±0.84	56.26	10.62	70.08	-	-	20.62	1.14	R	21306
63.50	95.54 ±0.06	23.04 ±0.84	65.53	10.72	80.98	-	-	21.34	1.07	R	25096
69.85	102.36 ±0.06	23.32 ±0.89	71.88	10.82	88.39	-	-	20.57	1.07	R	27536
77.80	114.30 ±0.06	25.81 ±0.89	80.52	12.07	97.36	-	-	23.16	1.07	R	30651
88.90	125.81 ±0.06	27.84 ±1.09	91.95	12.98	109.12	-	-	24.43	0.89	R	35076
98.43	134.92 ±0.08	27.99 ±0.61	102.62	13.31	120.65	-	-	25.45	1.07	R	38740
98.43	141.27 ±0.08	32.18 ±1.27	102.62	15.09	121.69	-	-	28.19	1.30	R	38751
109.52	147.90 ±0.08	27.99 ±0.61	112.27	13.31	130.18	-	-	25.45	1.07	R	43135
109.52	152.40 ±0.08	33.53 ±1.02	112.27	15.88	131.39	-	-	27.69	1.30	R	43150
119.08	162.56 ±0.08	38.74 ±1.27	121.79	18.34	141.81	-	-	31.85	1.19	R	46975
128.57	171.45 ±0.08	32.51 ±1.02	131.32	15.37	151.77	-	-	29.21	1.45	R	50655
137.16	177.55 ±0.08	33.27 ±0.76	142.88	15.88	168.28	-	-	30.02	1.45	R	54000
142.88	184.15 ±0.08	34.70 ±0.79	147.96	16.51	164.74	156.82	0.81	33.02	1.45	R	56170
149.23	194.08 ±0.08	38.35 ±0.79	152.40	18.39	174.45	166.32	1.42	37.85	1.85	R	58775
161.93	206.25 ±0.08	32.13 ±1.02	166.88	15.19	191.90	190.63	3.18	34.29	1.07	R	63796
171.45	218.95 ±0.10	34.93 ±0.76	175.77	16.66	196.85	-	-	32.00	1.07	R	67560
188.93	238.76 ±0.10	42.06 ±1.02	191.52	20.14	214.15	-	-	34.14	1.85	R	74310
198.12	254.00 ±0.10	44.45 ±1.27	201.68	21.21	226.31	-	-	38.10	1.47	R	78020
209.55	255.57 ±0.10	39.62 ±1.02	212.29	18.92	235.71	234.19	1.80	39.67	1.47	R	82540
220.68	277.14 ±0.13	48.87 ±0.76	223.27	23.67	247.75	-	-	41.71	1.47	R	86850
236.52	279.40 ±0.13	36.50 ±0.81	239.01	17.45	263.14	260.60	2.29	38.35	1.27	R	93115
236.52	295.28 ±0.13	44.55 ±1.27	239.01	21.26	273.05	-	-	38.35	2.26	R	93125
242.87	301.22 ±0.13	49.50 ±1.75	245.36	23.50	271.86	-	-	43.18	1.88	R	95620
276.23	329.41 ±0.13	39.12 ±1.27	280.92	18.54	307.34	304.80	3.63	42.42	1.09	R	108710
295.28	336.55 ±0.13	32.77 ±0.76	299.21	15.62	324.61	-	-	30.73	11.43	R	116500
314.96	365.13 ±0.13	42.06 ±1.27	317.50	20.02	343.66	342.14	1.52	40.89	1.45	R	124020
349.25	401.75 ±0.13	47.63 ±0.81	353.31	23.01	380.62	-	-	42.42	2.26	R	137570
374.65	424.05 ±0.13	47.63 ±0.81	379.73	23.01	402.92	-	-	42.42	15.75	R	806715
374.65	424.05 ±0.13	47.63 ±0.81	379.73	23.01	402.92	-	-	42.42	1.57	V	807115
434.98	488.70 ±0.15	38.89 ±1.35	438.91	18.39	467.36	464.82	3.56	42.14	1.09	R	171025
485.78	546.10 ±0.15	41.66 ±1.07	488.95	19.91	532.13	529.59	4.45	46.53	1.45	R	191022
606.43	682.63 ±0.15	53.98 ±1.02	616.71	25.86	648.97	-	-	47.02	2.26	R	238020
606.43	682.63 ±0.15	53.98 ±1.02	616.71	25.86	648.97	-	-	47.02	2.26	V	807199
736.60	812.80 ±0.15	53.98 ±1.02	749.60	26.11	779.07	-	-	47.02	2.26	V	807149



Axial clamp seals

SKF axial clamp seals are designed for large and very large shaft diameters. They are suitable for use as primary seals, or as secondary seals in applications where the primary seals are subjected to excessive solid or fluid contaminants. Axial clamp seals do not rotate but seal axially against a rotating counterface.

SKF axial clamp seals are made of profiled strips of non-reinforced nitrile rubber and are held firmly in position by stainless steel band clamps. They are available for shaft diameters ranging from 5.9 to 181 in. (50 to 4,600 mm).

The standard range of SKF axial clamp seals is intended for inch-size shaft diameters. Because axial clamp seals are typically installed with an approximate 0.984 in. (25 mm) gap between the ends, they may also be used for metric shaft diameters.

Figure 1

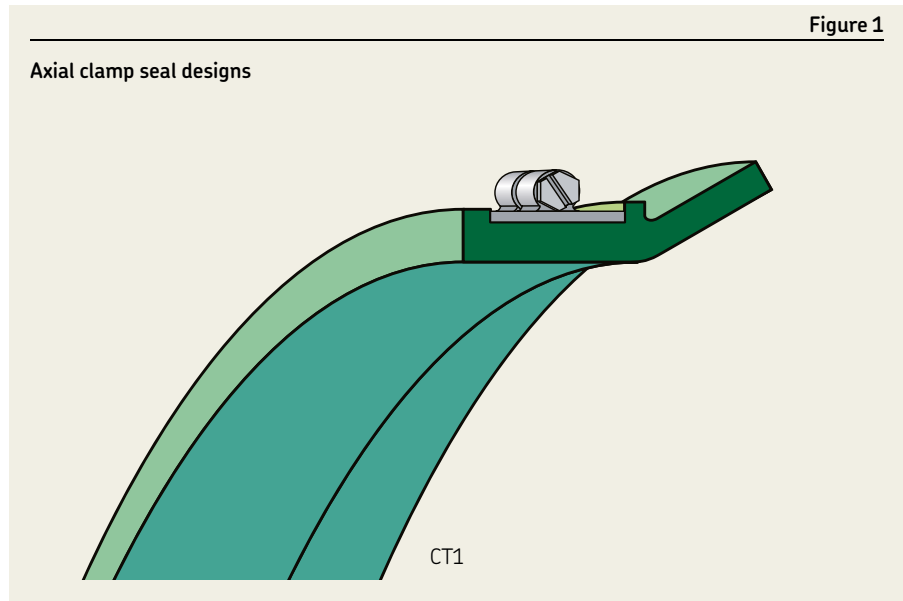


Table 1

Application tolerances

Dimension		Tolerance	Axial clamp seals
			CT1
Seal seat diameter, d_1	in. mm	± 0.063 ± 1.6	6.000 – 180.000 152.40 – 4,572
Seal fitted width, B_1	in. mm	± 0.031 ± 0.8	1.125 – 1.500 28.60 – 38.10
Seal seat width, b_1	in. mm	± 0.125 ± 3.2	0.688 – 1.063 17.50 – 27
Lip height, c_1	in. mm	± 0.031 ± 0.8	0.500 12.70
Gap width, B_3	in. mm		0.437 11.10



Basic design features

CT1 seals (→ **fig. 1**) have the basic design and are held in position by a band clamp.

The maximum permissible axial displacement relative to the bore is 0.094 in. (+2.4 mm).

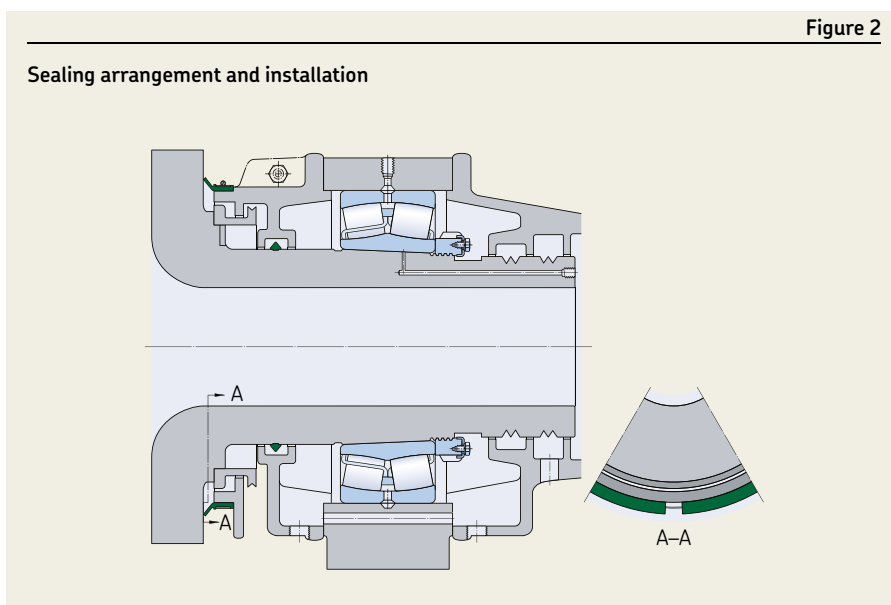
Sealing arrangement design

To obtain reliable sealing performance, the seal seat diameter (d_1), seal seat width (b_1) and the seal fitted width (B_1) should meet the requirements listed in **Table 1**. To simplify alignment, the seal should abut a shoulder.

Finely turned bores are adequate for axial clamp seals. The appropriate surface roughness values are 115 μm ($Ra\ 2.5\ \mu\text{m}$) and 480 μm ($Rt\ 12\ \mu\text{m}$).

Typically, after installation, CT axial clamp seals have an approximate 1 in. (25 mm) gap between the ends. This should be arranged at the 6 o'clock position (→ **fig. 2**) to facilitate installation and drainage of contaminants.

Butt-joint seals are also available for certain applications.



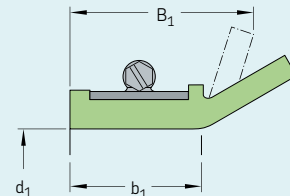
Installation instructions

Axial clamp seals are supplied as rolled-up coils. During installation they are placed in position on their seat in the housing and bolted lightly together. They are then pushed forward toward the counterface and the gap (or joint) between the two ends is arranged at the 6 o'clock position (→ **fig. 2**). The clamps are finally tightened.

The torque applied to the clamp screws should not exceed 7 Nm.



SKF Part Number	Seal type	Lip mat'l	Butt Joint	Seal Seat \varnothing d1	Face/heel offset* B1	Seal seat width b1	SKF Part Number	Seal type	Lip mat'l	Butt Joint	Seal Seat \varnothing d1	Face/heel offset* B1	Seal seat width b1
Inch							565601	CT1	R	✓	32.250	1.063	1.500
594334	CT1	R		6.625	1.125	0.688	524367	CT1	R		32.500	1.250	0.813
529489	CT1	R	✓	6.625	1.125	0.688	526867	CT1	R		33.063	1.250	0.813
523586	CT1	R		7.000	1.500	1.063	565931	CT1	R	✓	33.063	1.250	0.813
594648	CT1	R	✓	7.000	1.500	1.063	524219	CT1	R		33.688	1.250	0.813
565636	CT1	R		7.500	1.125	0.688	523063	CT1	R		34.500	1.500	1.063
528745	CT1	R		8.000	0.875	0.688	524221	CT1	R		35.438	1.250	0.813
527820	CT1	R	✓	8.250	1.125	0.688	528416	CT1	R		36.000	1.125	0.688
529490	CT1	R	✓	8.625	1.125	0.688	525320	CT1	R		37.000	1.500	1.063
531635	CT1	R		8.938	1.125	0.688	524368	CT1	R		37.250	1.250	0.813
524204	CT1	R		9.000	1.125	0.688	524226	CT1	R		38.000	1.250	0.813
527819	CT1	R	✓	9.000	1.125	0.688	556379	CT1	R	✓	38.000	1.250	0.813
524205	CT1	R		10.000	1.125	0.688	529452	CT1	R		39.500	1.125	0.688
527806	CT1	R	✓	10.000	1.125	0.688	526806	CT1	R		39.500	1.250	0.813
528780	CT1	R		10.000	1.000	0.813	525035	CT1	R		40.000	1.438	1.000
524206	CT1	R		11.000	1.125	0.688	527903	CT1	R		40.000	1.500	1.063
524928	CT1	R		11.000	1.250	0.813	524227	CT1	R		41.000	1.500	1.063
597447	CT1	R		11.250	1.125	0.688	525036	CT1	R		41.125	1.500	1.063
593629	CT1	R	✓	11.750	1.125	0.688	527474	CT1	R		41.500	1.250	0.813
524208	CT1	R		12.000	1.250	0.813	597308	CT1	R	✓	42.500	1.125	0.784
525582	CT1	R		12.000	1.500	1.063	524909	CT1	R		43.375	1.250	0.813
524209	CT1	R		13.000	1.125	1	522676	CT1	R		44.875	1.500	1.063
523587	CT1	R		13.000	1.500	1	529086	CT1	R		46.500	1.250	0.813
594110	CT1	R	✓	13.813	1.500	1	527211	CT1	R	✓	47.000	1.500	1.063
593037	CT1	R	✓	14.000	1.375	1	525091	CT1	R		47.500	1.250	0.813
530733	CT1	R	✓	14.000	1.500	1	522677	CT1	R		47.625	1.500	1.063
594025	CT1	R		15.000	1.125	0.750	524232	CT1	R		51.500	1.500	1.063
594954	CT1	R	✓	15.250	1.125	0.688	528927	CT1	R		52.000	1.299	1.063
523826	CT1	R		16.750	1.250	0.813	528526	CT1	R		53.000	1.250	0.813
524815	CT1	R		16.750	1.313	0.875	528525	CT1	R		57.000	1.250	0.813
528535	CT1	R		17.000	1.500	1.063	557318	CT1	R		61.438	1.125	0.688
522679	CT1	R		17.500	1.250	0.813	526809	CT1	R		70.000	1.250	0.813
525737	CT1	R	✓	17.500	1.375	0.938	531456	CT1	R		73.000	1.500	1.063
597489	CT1	R	✓	18.000	1.250	0.813	566079	CT1	R		83.950	1.252	0.815
525708	CT1	R		18.500	1.125	0.688	522856	CT1	R		100.000	1.500	1.063
526192	CT1	R		18.500	1.250	0.813	Metric (mm)						
557678	CT1	R	✓	18.500	1.250	0.813	593637	CT1	R	✓	185	30	25
594181	CT1	R		19.500	1.125	0.688	528631	CT1	R		229	29.21	18.11
524587	CT1	R		20.000	1.250	0.875	557587	CT1	R		320	34.80	30
524599	CT1	R		21.500	1.250	0.813	593171	CT1	R	✓	380	38.10	27
565834	CT1	R	✓	21.750	1.187	0.750	557458	CT1	R		385	35.71	24.46
565603	CT1	R	✓	21.750	1.000	1.437	595110	CT1	R	✓	410	23.83	12.50
524210	CT1	R		21.813	1.250	0.813	565531	CT1	R	✓	470	31.75	20.65
524211	CT1	R		21.938	1.125	0.688	594241	CT1	R		533	31.75	20.65
524347	CT1	R		22.000	1.250	0.813	594431	CT1	R		600	30	18.90
524212	CT1	R		22.500	1.250	0.813	557571	CT1	R	✓	612	33	30
524657	CT1	R		22.750	1.375	0.938	557966	CT1	R	✓	660	28	20
525627	CT1	R		23.375	1.375	0.938	557965	CT1	R	✓	740	28	20
525031	CT1	R		23.438	1.125	0.688	594785	CT1	R	✓	825	28.58	17.48
524364	CT1	R		23.500	1.375	0.938	526021	CT1	R		1206	34.93	23.83
524365	CT1	R		23.750	1.250	0.813	556550	CT1	R	✓	2320	31.80	20.70
597448	CT1	R		24.500	1.125	1	557682	CT1	R		3164	28	20.65
524213	CT1	R		24.750	1.250	1	557683	CT1	R		3566	28	20.65
524214	CT1	R		25.125	1.375	1							
524591	CT1	R		26.000	1.375	1							
524215	CT1	R		26.938	1.125	1							
524592	CT1	R		27.250	1.375	1							
524216	CT1	R		27.750	1.375	1							
527232	CT1	R		28.000	1.250	1							
525032	CT1	R	✓	28.813	1.125	1							
565833	CT1	R	✓	29.250	1.062	0.750							
565602	CT1	R	✓	29.250	1.187	0.750							
524218	CT1	R		29.750	1.500	1.063							
525033	CT1	R		30.063	1.125	0.688							
525212	CT1	R		31.000	1.250	0.813							
525034	CT1	R		32.188	1.250	0.813							
524294	CT1	R		32.250	1.250	0.813							



* fitted width





Pressure seals

CRW5 and CRWA5 seals

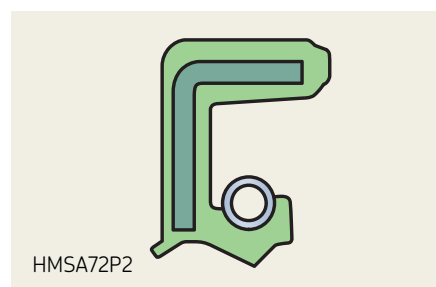
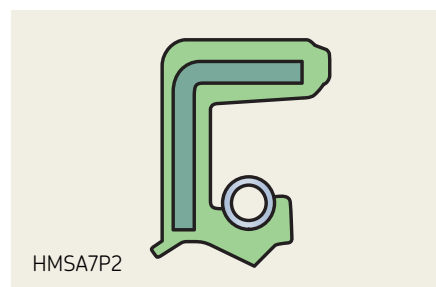
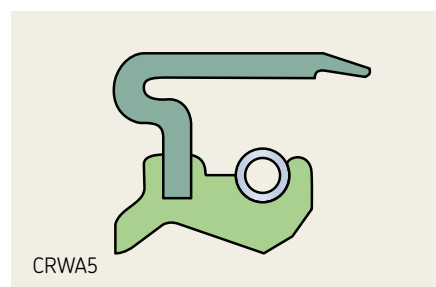
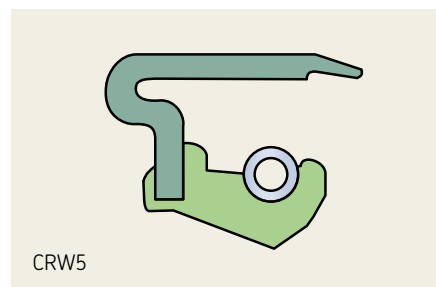
CRW5 and CRWA5 seals are designed to withstand moderate pressure differentials. They have an SKF Wave lip to reduce heat generation and a metal outside diameter for easy installation and a firm and accurate fit in the housing bore; most designs feature SKF Bore Tite Coating on the outside diameter. CRW5 and CRWA5 seals will both operate under a maximum pressure of 50 psi.

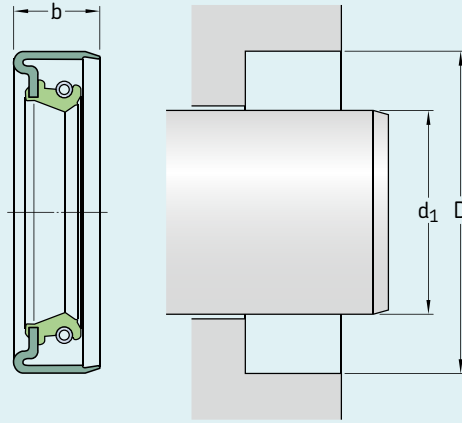
- **CRW5:** Seal with one steel case, SKF Wave lip and a carbon steel garter spring.
- **CRWA5:** Seal with one steel case, SKF Wave lip, a carbon steel garter spring and an auxiliary contacting lip for additional contaminant exclusion ability. A shoulder or retaining ring should be used at the low-pressure side of the seal to prevent it from being pressed out of the housing bore.

CRW5 and CRWA5 seals are available in inch sizes with sealing lips made of either nitrile rubber or the SKF FKM compound SKF Duralife. Other materials are also available on request.

HMSA7P2 and HMSA72P2 seals

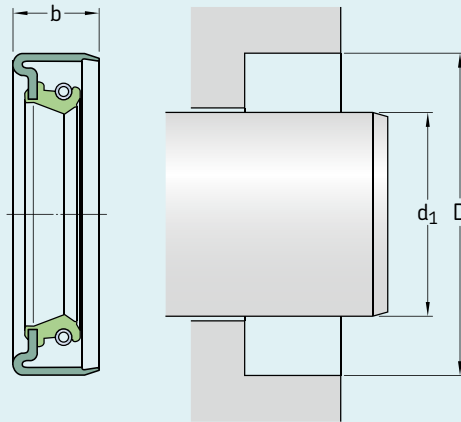
CR Seals also offers a limited number of alternative sizes in HMSA7P2 and HMSA72P2 configurations. These are standard oil seals with a straight lip capable of handling up to 50 psi pressure. A shoulder or retaining ring is required to hold the seals in place.





Bore	Width	Part Number	Seal Type	Lip	Seal	Fea-	Bore	Width	Part Number	Seal Type	Lip	Seal	Fea-	
				Mat'l	Mat'l	tures					Mat'l	Mat'l	tures	
INCH							0.313 in. Shaft Diameter 7.95 mm							
0.686	0.313	3094	CRWA5	R	W		1.250	0.250	8634	CRWA5	V	W	■	
0.686	0.313	3096	CRWA5	V	W		1.375	0.250	8660	CRWA5	R	W	■	
0.749	0.250	3103	CRWA5	V	W		1.375	0.250	8665	CRWA5	V	W	■	
0.749	0.256	3101	CRWA5	R	W		1.497	0.313	8694	CRWA5	V	W	■◎	
0.999	0.313	3171	CRWA5	R	W									
INCH							0.375 in. Shaft Diameter 9.53 mm							
0.749	0.250	3689	CRW5	R	W	■◎	METRIC							
1.124	0.375	3807	CRW5	V	W	■	0.984 in. Shaft Diameter 25 mm							
							40.54	6.35	9700	CRWA5	R	W	■	
							44.50	7.95	9805	CRWA5	V	W	■◎	
							47	6	25X47X6 HMSA72P2 R	HMSA72P2 R	S			
METRIC							0.472 in. Shaft Diameter 12 mm							
22	6	12X22X6 HMSA72P2 R	HMSA72P2 R	S										
24	6	12X24X6 HMSA7P2 R	HMSA7P2 R	S										
INCH							0.500 in. Shaft Diameter 12.70 mm							
0.875	0.313	4940	CRWA5	R	W	■	INCH							
0.875	0.313	4941	CRWA5	V	W	■	1.000 in. Shaft Diameter 25.40 mm							
0.999	0.250	4991	CRWA5	V	W	■◎	1.375	0.250	9814	CRWA5	R	W	■	
0.999	0.313	4996	CRWA5	R	W	■	1.499	0.250	9855	CRW5	R	W	◎	
1.124	0.250	5069	CRWA5	R	W	■	1.499	0.250	9843	CRWA5	R	W	■	
1.124	0.250	5072	CRWA5	V	W	■	1.499	0.250	9858	CRWA5	V	W	■	
							1.499	0.374	544167	CRWA5	P	W	■	
							1.500	0.250	9863	CRWA5	R	W	■	
							1.752	0.313	9967	CRWA5	R	W	■	
							2.000	0.313	10131	CRWA5	R	W	■	
METRIC							0.591 in. Shaft Diameter 15 mm							
32	7	15X32X7 HMSA7P2 R	HMSA7P2 R	S										
35	6	15X35X6 HMSA7P2 R	HMSA7P2 R	S										
INCH							0.625 in. Shaft Diameter 15.88 mm							
0.999	0.250	6151	CRWA5	R	W	■	INCH							
1.124	0.250	6191	CRW5	R	W	■	1.125 in. Shaft Diameter 28.58 mm							
1.124	0.374	6231	CRWA5	V	W	■	1.626	0.250	11139	CRWA5	V	W	■	
1.124	0.375	6229	CRWA5	R	W	■	METRIC							
1.126	0.250	6242	CRW5	R	W	■	1.181 in. Shaft Diameter 30 mm							
1.250	0.313	6280	CRWA5	R	W	■◎	42	6	30X42X6 HMSA7P2 R	HMSA7P2 R	S			
1.250	0.313	6285	CRWA5	V	W	■◎								
1.375	0.250	6371	CRW5	P	W	■								
1.375	0.375	6388	CRWA5	R	W	■◎								
1.500	0.313	6393	CRW5	V	W	■◎								
METRIC							0.709 in. Shaft Diameter 18 mm							
30	6	18X30X6 HMSA7P2 R	HMSA7P2 R	S										
35	6	18X35X6 HMSA7P2 R	HMSA7P2 R	S										
INCH							0.750 in. Shaft Diameter 19.05 mm							
1.250	0.250	7434	CRWA5	R	W	■	INCH							
1.250	0.375	7449	CRWA5	R	W	■	1.250 in. Shaft Diameter 31.75 mm							
1.375	0.250	7509	CRWA5	V	W	■	1.687	0.313	12333	CRWA5	R	W	■	
							1.750	0.250	12360	CRWA5	R	W	■	
							1.750	0.250	12339	CRWA5	V	W	■	
							1.937	0.375	12542	CRWA5	V	W	■	
							1.997	0.438	12438	CRWA5	V	W	■◎	
							2.328	0.500	12609	CRWA5	R	W	■◎	
							2.502	0.500	12640	CRWA5	R	W	■◎	
METRIC							1.378 in. Shaft Diameter 35 mm							
52	6	35X52X6 HMSA72P2 R	HMSA72P2 R	S										
52	6	35X52X6 HMSA7P2 V	HMSA7P2 V	S										
INCH							1.500 in. Shaft Diameter 38.10 mm							
1.997	0.250	14844	CRWA5	V	W	■◎								
2.064	0.375	14868	CRWA5	V	W	■◎								
2.311	0.500	14979	CRWA5	V	W	■◎								
2.328	0.500	14977	CRWA5	R	W	■◎								

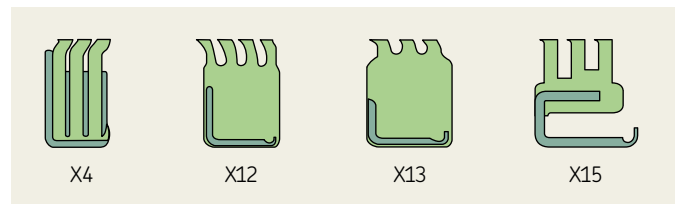
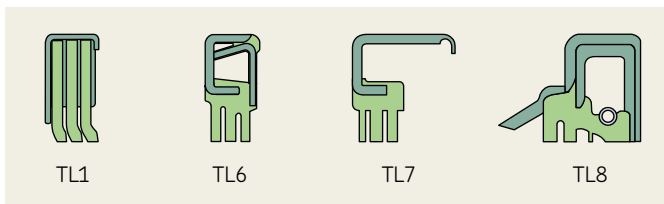




Bore	Width	Part Number	Seal Type	Lip Mat'l	Seal Tech	Fea- tures	Bore	Width	Part Number	Seal Type	Lip Seal Mat'l	Seal Tech	Fea- tures
METRIC	1.575 in.	Shaft Diameter	40 mm				METRIC	2.756 in.	Shaft Diameter	70 mm			
62	6	40X62X6 HMSA7P2 R	HMSA7P2	R	S		90	7	70X90X7 HMSA7P2 R	HMSA7P2	R	S	
INCH	1.750 in.	Shaft Diameter	44.45 mm				METRIC	2.953 in.	Shaft Diameter	75 mm			
2.502	0.500	17374	CRWA5	R	W	■◎	95	7	75X95X7 HMSA7P2 V	HMSA7P2	V	S	
METRIC	1.772 in.	Shaft Diameter	45 mm				METRIC	3.150 in.	Shaft Diameter	80 mm			
65	7	45X65X7 HMSA7P2 R	HMSA7P2	R	S		100	7	80X100X7 HMSA7P2 V	HMSA7P2	V	S	
INCH	1.938 in.	Shaft Diameter	49.23 mm				100	7	80X100X7 HMSA7P2 R	HMSA7P2	R	S	
2.675	0.250	19213	CRWA5	R	W	■	METRIC	3.543 in.	Shaft Diameter	90 mm			
2.835	0.250	19278	CRWA5	R	W	■	110	7.50	90X110X7.50 HMSA7P2 R	HMSA7P2	R	S	
METRIC	1.969 in.	Shaft Diameter	50 mm				METRIC	4.134 in.	Shaft Diameter	105 mm			
68	7	50X68X7 HMSA7P2 R	HMSA7P2	R	S		130	7.50	105X130X7.5 HMSA7P2 R	HMSA7P2	R	S	
72	7	50X72X7 HMSA7P2 R	HMSA7P2	R	S		METRIC	5.906 in.	Shaft Diameter	150 mm			
METRIC	2.165 in.	Shaft Diameter	55 mm				180	8.50	150X180X8.5 HMSA72P2R	HMSA72P2	R	S	
72	7	55X72X7 HMSA72P2 R	HMSA72P2	R	S		METRIC	7.835 in.	Shaft Diameter	200 mm			
INCH	2.500 in.	Shaft Diameter	63.50 mm				230	13	200X230X13 HMSA72P2 R	HMSA72P2	R	S	
3.250	0.350	24892	CRWA5	R	W	■▼◎							
3.250	0.350	534616	CRWA5	V	W								



Seals for grease-lubricated applications

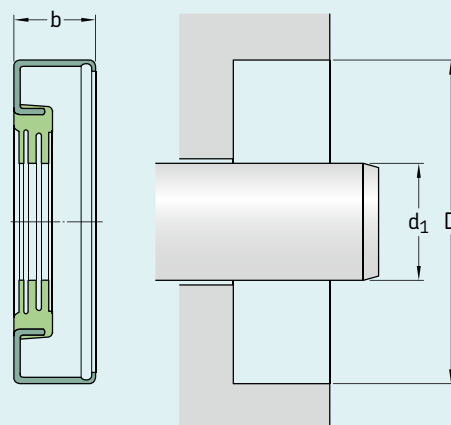


TL seals

CR Seals include an extensive assortment of rotary shaft seals for less demanding grease-lubricated applications operating at moderate speeds. The majority of these seals are designed without a spring. The seals are generally installed with the sealing lip facing outward to provide maximum exclusion ability. Typical applications are grease-lubricated agriculture machinery.

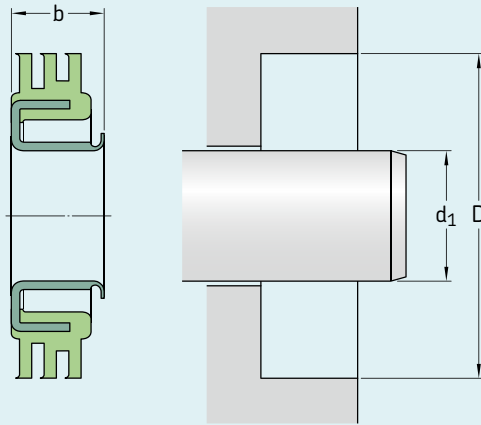
X seals

X seals include an assortment of rotary shaft seals that operate with a press fit on the shaft and with sealing lip(s) that contact the housing bore. These seals are generally installed with the sealing lip(s) facing outward to provide optimum exclusion. Primary applications are grease-lubricated agriculture machinery.



SKF Part Number	Seal type	Lip mat'l	Presses on shaft	Inch			Metric (mm)		
				Shaft dia. d1	Bore dia. B	Width b	Shaft dia. d1	Bore dia. B	Width b
13916	TL8	R		1.375	2.835	0.594	34.93	72.01	15.1
16064	TL7	R		1.625	2.328	0.438	41.28	59.13	11.1
17618	TL7	R		1.750	2.718	0.359	44.45	69.04	9.1
17674	TL7	R		1.750	2.875	0.500	44.45	73.03	12.7
17724	TL6	R		1.750	3.149	0.290	44.45	79.98	7.4
18127	TL7	R		1.813	2.719	0.270	46.05	69.06	6.9
19251	TL8	R		1.938	2.686	0.594	49.23	68.22	15.1
19510	TL6	R		1.945	2.892	0.294	49.40	73.46	7.5
20674	TL7	R		2.063	3.150	0.266	52.40	80.01	6.8
24670	TL1	R		2.474	3.543	0.290	62.84	89.99	7.4
29852	TL1	R		2.953	4.724	0.320	75	120	8.1





SKF Part Number	Lip Seal type	mat'l	Presses on shaft	Inch			Metric (mm)		
				Shaft dia. d1	Bore dia. B	Width b	Shaft dia. d1	Bore dia. B	Width b
538266	X15	R	✓	1.000	2.356	0.270	25.40	59.84	6.9
13807	X15	R	✓	1.375	2.438	0.250	34.93	61.93	6.4
14970	X15	R	✓	1.500	2.286	0.270	38.10	58.06	6.9
15174	X13	R	✓	1.500	2.462	0.290	38.10	62.53	7.4
15530	X4	R	✓	1.563	2.237	0.290	39.70	56.82	7.4
15660	X15	R	✓	1.563	2.531	0.285	39.70	64.29	7.2
15702	X	R	✓	1.563	2.750	0.250	39.70	69.85	6.4
16286	X15	R	✓	1.625	2.462	0.250	41.28	62.53	6.4
16818	X4	R	✓	1.688	2.650	0.290	42.88	67.31	7.4
17485	X4	R	✓	1.750	2.718	0.294	44.45	69.04	7.5
17620	X15	R	✓	1.750	2.786	0.294	44.45	70.76	7.5
18030	X15	R	✓	1.813	2.408	0.300	46.05	61.16	7.6
18510	X13	R	✓	1.872	2.684	0.544	47.55	68.17	13.8
18630	X13	R	✓	1.873	2.716	0.281	47.57	68.99	7.1
19720	X4	R	✓	1.991	2.900	0.290	50.57	73.66	7.4
19844	X15	D	✓	2.000	2.802	0.250	50.80	71.17	6.4
20560	X15	R	✓	2.063	2.938	0.344	52.40	74.63	8.7
20735	X15	R	✓	2.063	3.250	0.294	52.40	82.55	7.5
21298	X15	R	✓	2.125	3.250	0.270	53.98	82.55	6.9
22430	X15	R	✓	2.250	3.250	0.270	57.15	82.55	6.9
22563	X15	R	✓	2.250	3.400	0.294	57.15	86.36	7.5
23744	X15	R	✓	2.375	3.471	0.250	60.33	88.16	6.4
25078	X15	R	✓	2.496	3.672	0.313	63.40	93.27	8.0
30108	X12	R	✓	3.000	4.525	0.375	76.20	114.94	9.5
31514	X15	R	✓	3.150	3.994	0.591	80	101.45	15
32437	X4	R	✓	3.250	4.468	0.315	82.55	113.49	8.0
32441	X15	R	✓	3.250	4.500	0.313	82.55	114.30	8.0
36172	X15	R	✓	3.625	4.500	0.294	92.08	114.30	7.5
36221	X13	R	✓	3.625	4.695	0.395	92.08	119.25	10.0
38590	X12	R	✓	3.875	5.390	0.375	98.43	136.91	9.5
40510	X12	R	✓	4.063	5.390	0.375	103.20	136.91	9.5
44892	X12	R	✓	4.500	6.015	0.550	114.30	152.78	14.0
45161	X12	D	✓	4.500	6.409	0.415	114.30	162.79	10.5
47455	X15	R	✓	4.750	6.002	0.300	120.65	152.45	7.6
49060	X12	R	✓	4.902	7.085	0.475	124.51	179.96	12.1



SKF Speedi-Sleeve wear sleeves

The fastest way to an optimal sealing surface

To seal effectively, rotary shaft seals need to run against a smooth, round shaft surface. If that surface becomes worn, the seal will no longer be able to perform its key function: retaining lubricants and excluding contaminants.

Typically, a shaft surface will become scored when a contaminant particle is caught under the sealing lip and grinds against the shaft as it rotates. As the scoring worsens, the seal will allow more contaminant ingress, eventually leading to a shaft and/or bearing malfunction.

Simply replacing the seal will not correct the problem; at this point the machine will require disassembly to remove the shaft and grind it down until it is within specification. Otherwise, the sealing system will not function properly.

SKF Speedi-Sleeve wear sleeves offer a proven solution for repairing worn shafts, without the need to disassemble and re-machine the shaft, or specify a different size replacement seal. For OEMs, installing SKF Speedi-Sleeve wear sleeves eliminates the need to finish-machine, grind and harden the shaft – with SKF Speedi-Sleeve, rough machining is all that is required. In many cases, SKF Speedi-Sleeve provides a seal running surface that's superior to what can be achieved on a shaft.

A new generation of performance

The new generation of SKF Speedi-Sleeve wear sleeves combines a proprietary stainless steel material and manufacturing process, resulting in an optimized surface that minimizes wear on both the sleeve and sealing lip. The proprietary stainless steel material provides increased strength and excellent ductility properties. Imperceptible lubricant pockets keep the lubricant on the sleeve, thereby preventing the excessive wear caused by dry running of the sealing lip.

The sleeves are thin-walled 0.011 in. (0.28 mm) and the wear-resistant contact surface is manufactured to minimize directionality ($0^\circ \pm 0.05$) with a finish of Ra 10 to 20 μm . (0.25 to 0.5 μm). As noted, this is a superior surface to what can often be achieved on a shaft.

Removable flange

To help simplify installation SKF Speedi-Sleeve has a removable flange (→ fig. 1). For most installations the flange can be left intact, but in applications where the flange will interfere with other system components, it should be removed to prevent excessive friction, heat and wear debris. The flange should also be removed in applications where it may reduce the supply of lubricant to the seal, as this would reduce the cooling effect of the lubricant and result in elevated, underlip temperatures and premature aging of the seal.

If the flange must be removed, it should be cut from the outside diameter into the radius in one location prior to installation. The flange can then be twisted and raised up after installation and grasped with a pair of pliers and twisted into a coil.





SKF Speedi-Sleeve Gold

For highly abrasive applications, the new generation of SKF Speedi-Sleeve is also available in the Gold version. A thin, metallic coating applied to the base stainless steel imparts a gold color and significantly increases durability. SKF Speedi-Sleeve Gold is particularly effective in environments where there are abrasive contaminants, especially when combined with a seal manufactured from the SKF FKM material SKF Duralife. This sealing system solution lasted 2,500 hours in a contamination test.

The installation procedure is common to both SKF Speedi-Sleeve designs and the original seal size can still be used. All sleeves listed in the following product tables can be manufactured as SKF Speedi-Sleeve Gold.

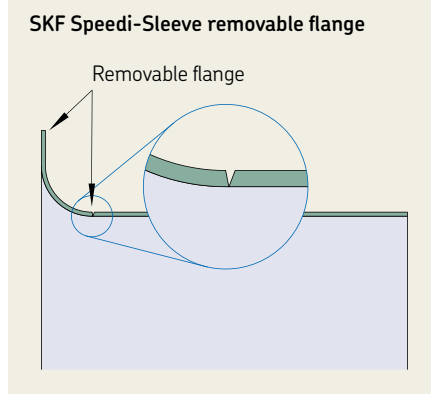
Available size range

The standard size range covers sleeves for shaft diameters from 0.472 to 8 in. (11,99 to 203,33 mm). Depending on production quantities, non-standard sizes can be manufactured (for additional information, contact SKF). Each sleeve is designed to fit a specific shaft range, usually above and below the nominal shaft diameter. This permits some flexibility to accommodate variations in the actual shaft diameter.

Selecting the sleeve size

To determine the appropriate sleeve size, the shaft must be carefully cleaned first. The diameter of an undamaged section of the shaft surface should then be measured on at least three different planes. The arithmetical mean of these measurements determines the size of the required SKF Speedi-Sleeve. If the value lies within the permissible range listed in the product table for the shaft diameter d_1 , the selected SKF Speedi-Sleeve will provide an adequately tight fit on the shaft and will not require an adhesive.

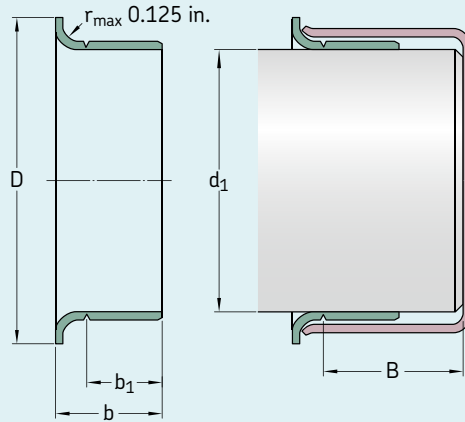
Figure 1



SKF Speedi-Sleeve new generation, Gold version

The standard size range covers sleeves for shaft diameters from 0.472 to 8 in. (11.99 to 203.33 mm)



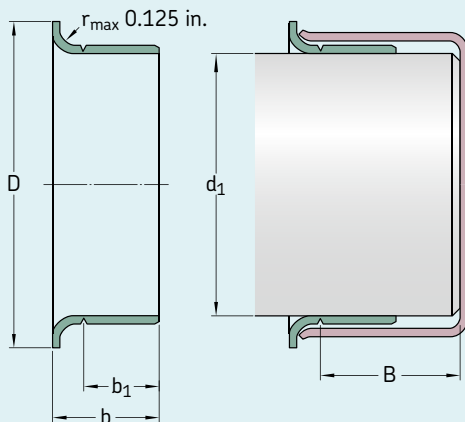


Inch

Nominal shaft size	SKF part number	Style	Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B
12 mm	99049	STD	0.469	0.473	0.236	0.331	0.610	1.875
0.500 in.	99050	STD	0.498	0.502	0.250	0.344	0.610	2.000
14 mm	99055	STD	0.547	0.551	0.250	0.390	0.750	1.831
0.563 in.	99056	STD	0.560	0.564	0.250	0.391	0.750	1.831
15 mm	99059	STD	0.589	0.593	0.197	0.354	0.750	1.862
0.625 in.	99062	STD	0.623	0.627	0.313	0.406	0.750	2.000
0.625 in.	99810	GOLD	0.623	0.627	0.313	0.406	0.750	2.000
16 mm	99058	STD	0.626	0.630	0.313	0.437	0.718	2.000
17 mm	99068	STD	0.667	0.671	0.315	0.433	0.875	2.000
0.684 in.	99060	STD	0.682	0.686	0.313	0.438	0.900	2.000
18 mm	99082	STD	0.704	0.708	0.315	0.433	0.962	1.811
0.750 in.	99076	STD	0.748	0.752	0.313	0.438	0.945	2.000
0.750 in.	99811	GOLD	0.748	0.752	0.313	0.438	0.945	2.000
0.760 in.	99081	STD	0.759	0.763	0.313	0.438	0.938	2.000
0.781 in.	99080	STD	0.780	0.784	0.313	0.438	0.935	2.000
20 mm	99075	STD	0.782	0.786	0.339	0.437	0.930	1.875
20 mm	99078	STD	0.785	0.789	0.315	0.433	0.930	2.000
0.813 in.	99083	STD	0.811	0.815	0.375	0.563	1.188	3.000
0.859 in.	99086	STD	0.857	0.861	0.250	0.375	1.155	2.000
22 mm	99084	STD	0.861	0.865	0.259	0.358	1.188	1.856
22 mm	99085	STD	0.861	0.865	0.315	0.472	1.188	1.812
0.875 in.	99812	GOLD	0.873	0.877	0.313	0.438	1.094	2.000
0.875 in.	99087	STD	0.873	0.877	0.313	0.438	1.094	2.000
0.875 in.	99087	STD	0.873	0.877	0.313	0.438	1.094	2.000
0.910 in.	99091	STD	0.908	0.912	0.313	0.438	1.218	1.847
0.910 in.	99860	GOLD	0.908	0.912	0.313	0.438	1.218	1.847
24 mm	99092	STD	0.940	0.944	0.313	0.437	1.130	2.000
0.969 in.	99094	STD	0.966	0.970	0.313	0.438	1.130	2.000
0.969 in.	99096	STD	0.966	0.970	0.625	0.719	1.130	2.000
25 mm	99098	STD	0.982	0.986	0.313	0.433	1.300	2.000
25 mm	99813	GOLD	0.982	0.986	0.313	0.433	1.300	2.000
1.000 in.	99868	STD	0.998	1.003	0.313	0.438	1.219	2.000
1.000 in.	99814	GOLD	0.998	1.003	0.313	0.438	1.219	2.000
26 mm	99103	STD	1.019	1.024	0.315	0.472	1.313	1.813
1.063 in. or 27 mm	99106	STD	1.060	1.065	0.313	0.438	1.320	1.843
1.063 in. or 27 mm	99815	GOLD	1.060	1.065	0.313	0.438	1.320	1.843
1.089 in.	99108	STD	1.087	1.092	0.313	0.438	1.406	0.625
28 mm	99111	STD	1.100	1.105	0.375	0.500	1.378	1.843
28 mm	99866	GOLD	1.100	1.105	0.375	0.500	1.378	1.843
1.125 in.	99112	STD	1.123	1.128	0.313	0.438	1.500	0.688
1.125 in.	99816	GOLD	1.123	1.128	0.313	0.438	1.500	0.688
1.125 in.	99116	STD	1.123	1.128	0.375	0.500	1.500	0.688
1.156 in.	99120	STD	1.154	1.159	0.375	0.500	1.350	0.688
1.175 in.	99122	STD	1.173	1.178	0.313	0.438	1.400	0.688
30 mm	99114	STD	1.179	1.184	0.315	0.433	1.400	0.688
1.188 in.	99118	STD	1.185	1.190	0.313	0.438	1.400	0.688
31 mm	99123	STD	1.216	1.221	0.313	0.433	1.563	0.625
1.240 in.	99141	STD	1.237	1.243	0.315	0.438	1.540	0.688

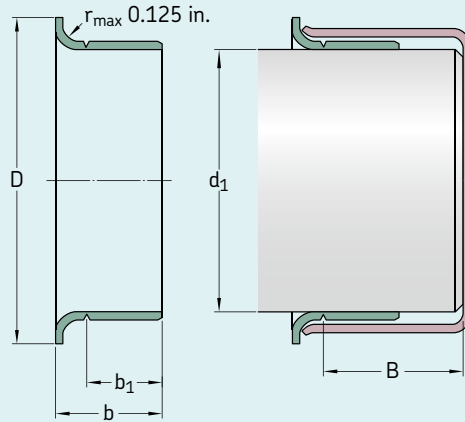
Green shading = inch blue shading = metric gray shading = both





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B	Style	SKF part number	Nominal shaft size
11.91	12.01	6.0	8.4	15.5	47.6	STD	99049	12 mm
12.65	12.75	6.4	8.7	15.5	50.8	STD	99050	0.500 in.
13.89	14.00	6.4	9.9	19.1	46.5	STD	99055	14 mm
14.22	14.33	6.4	9.9	19.1	46.5	STD	99056	0.563 in.
14.96	15.06	5.0	9.0	19.1	47.3	STD	99059	15 mm
15.82	15.93	8.0	10.3	19.1	50.8	STD	99062	0.625 in.
15.82	15.93	8.0	10.3	19.1	50.8	GOLD	99810	0.625 in.
15.90	16.00	8.0	11.1	18.2	50.8	STD	99058	16 mm
16.94	17.04	8.0	11.0	22.2	50.8	STD	99068	17 mm
17.32	17.42	8.0	11.1	22.9	50.8	STD	99060	0.684 in.
17.88	17.98	8.0	11.0	24.4	46.0	STD	99082	18 mm
19.00	19.10	8.0	11.1	24.0	50.8	STD	99076	0.750 in.
19.00	19.10	8.0	11.1	24.0	50.8	GOLD	99811	0.750 in.
19.28	19.38	8.0	11.1	23.8	50.8	STD	99081	0.760 in.
19.81	19.91	8.0	11.1	23.8	50.8	STD	99080	0.781 in.
19.86	19.96	8.6	11.1	23.6	47.6	STD	99075	20 mm
19.94	20.04	8.0	11.0	23.6	50.8	STD	99078	20 mm
20.60	20.70	9.5	14.3	30.2	76.2	STD	99083	0.813 in.
21.77	21.87	6.4	9.5	29.3	50.8	STD	99086	0.859 in.
21.87	21.97	6.6	9.1	30.2	47.1	STD	99084	22 mm
21.87	21.97	8.0	12.0	30.2	46.0	STD	99085	22 mm
22.17	22.28	8.0	11.1	27.8	50.8	GOLD	99812	0.875 in.
22.17	22.28	8.0	11.1	27.8	50.8	STD	99087	0.875 in.
22.17	22.28	8.0	11.1	27.8	50.8	STD	99087	0.875 in.
23.06	23.16	8.0	11.1	30.9	46.9	STD	99091	0.910 in.
23.06	23.16	8.0	11.1	30.9	46.9	GOLD	99860	0.910 in.
23.88	23.98	8.0	11.1	28.7	50.8	STD	99092	24 mm
24.54	24.64	8.0	11.1	28.7	50.8	STD	99094	0.969 in.
24.54	24.64	15.9	18.3	28.7	50.8	STD	99096	0.969 in.
24.94	25.04	8.0	11.0	33.0	50.8	STD	99098	25 mm
24.94	25.04	8.0	11.0	33.0	50.8	GOLD	99813	25 mm
25.35	25.48	8.0	11.1	31.0	50.8	STD	99868	1.000 in.
25.35	25.48	8.0	11.1	31.0	50.8	GOLD	99814	1.000 in.
25.88	26.01	8.0	12.0	33.4	46.1	STD	99103	26 mm
26.92	27.05	8.0	11.1	33.5	46.8	STD	99106	1.063 in. or 27 mm
26.92	27.05	8.0	11.1	33.5	46.8	GOLD	99815	1.063 in. or 27 mm
27.61	27.74	8.0	11.1	35.7	15.9	STD	99108	1.089 in.
27.94	28.07	9.5	12.7	35.0	46.8	STD	99111	28 mm
27.94	28.07	9.5	12.7	35.0	46.8	GOLD	99866	28 mm
28.52	28.65	8.0	11.1	38.1	17.5	STD	99112	1.125 in.
28.52	28.65	8.0	11.1	38.1	17.5	GOLD	99816	1.125 in.
28.52	28.65	9.5	12.7	38.1	17.5	STD	99116	1.125 in.
29.31	29.44	9.5	12.7	34.3	17.5	STD	99120	1.156 in.
29.79	29.92	8.0	11.1	35.6	17.5	STD	99122	1.175 in.
29.95	30.07	8.0	11.0	35.6	17.5	STD	99114	30 mm
30.10	30.23	8.0	11.1	35.6	17.5	STD	99118	1.188 in.
30.89	31.01	8.0	11.0	39.7	15.9	STD	99123	31 mm
31.42	31.57	8.0	11.1	39.1	17.5	STD	99141	1.240 in.

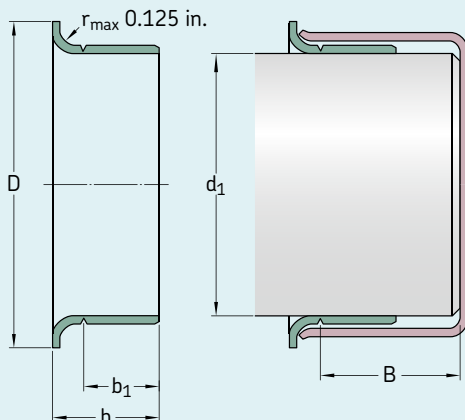


Inch

Nominal shaft size	SKF part number	Style	Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B
1.250 in.	99125	STD	1.247	1.253	0.313	0.438	1.500	0.688
1.250 in.	99817	GOLD	1.247	1.253	0.313	0.438	1.500	0.688
32 mm	99128	STD	1.257	1.263	0.315	0.437	1.500	0.688
32 mm	99876	GOLD	1.257	1.263	0.315	0.437	1.500	0.688
33 mm	99121	STD	1.293	1.299	0.591	0.709	1.594	1.000
1.313 in.	99129	STD	1.308	1.314	0.250	0.374	1.600	0.813
1.313 in.	99131	STD	1.310	1.316	0.500	0.625	1.594	0.813
34 mm	99134	STD	1.333	1.339	0.500	0.626	1.625	0.813
1.375 in.	99133	STD	1.371	1.377	0.313	0.438	1.638	0.813
1.375 in.	99138	STD	1.371	1.377	0.500	0.625	1.638	0.813
1.375 in.	99819	GOLD	1.371	1.377	0.500	0.625	1.638	0.813
35 mm	99139	STD	1.375	1.381	0.512	0.630	1.638	0.813
35 mm	99820	GOLD	1.375	1.381	0.512	0.630	1.638	0.813
36 mm	99146	STD	1.411	1.417	0.512	0.669	1.781	0.984
1.435 in.	99821	GOLD	1.432	1.438	0.563	0.688	1.781	1.016
1.435 in.	99143	STD	1.432	1.438	0.563	0.688	1.781	1.016
1.438 in.	99144	STD	1.435	1.441	0.375	0.500	1.781	1.016
38 mm	99147	STD	1.490	1.496	0.512	0.669	1.781	0.984
1.500 in.	99150	STD	1.497	1.503	0.375	0.500	1.781	1.016
1.500 in.	99823	GOLD	1.497	1.503	0.375	0.500	1.781	1.016
1.500 in.	99149	STD	1.497	1.503	0.563	0.688	1.781	1.016
1.500 in.	99822	GOLD	1.497	1.503	0.563	0.688	1.781	1.016
1.523 in.	99152	STD	1.520	1.526	0.438	0.563	1.859	1.016
1.552 in.	99155	STD	1.549	1.555	0.438	0.563	1.859	1.016
1.562 in.	99156	STD	1.559	1.565	0.563	0.688	1.859	1.016
1.563 in.	99824	GOLD	1.559	1.565	0.563	0.688	1.859	1.016
1.569 in.	99159	STD	1.566	1.572	0.625	0.750	1.859	1.016
40 mm	99153	STD	1.567	1.573	0.390	0.509	1.850	1.000
40 mm	99825	GOLD	1.569	1.575	0.512	0.630	1.850	1.023
40 mm	99157	STD	1.572	1.578	0.512	0.630	1.850	1.023
1.605 in.	99160	STD	1.602	1.608	0.500	0.641	1.938	1.000
41 mm	99163	STD	1.608	1.614	0.500	0.625	1.938	1.016
1.625 in.	99161	STD	1.622	1.628	0.313	0.438	1.875	1.016
1.625 in.	99162	STD	1.622	1.628	0.563	0.688	1.875	0.813
1.625 in.	99826	GOLD	1.622	1.628	0.563	0.688	1.875	0.813
42 mm	99166	STD	1.647	1.653	0.445	0.571	2.087	0.846
42 mm	99169	STD	1.647	1.653	0.563	0.689	2.087	0.827
1.656 in.	99165	STD	1.653	1.659	0.550	0.689	2.087	0.827
1.688 in.	99168	STD	1.684	1.690	0.563	0.688	1.906	0.875
1.688 in.	99167	STD	1.685	1.691	0.313	0.438	1.906	0.875
43 mm	99182	STD	1.687	1.693	0.500	0.625	1.906	0.844
1.718 in.	99171	STD	1.715	1.721	0.563	0.688	2.031	0.813
1.739 in.	99170	STD	1.736	1.742	0.375	0.500	2.063	0.813
1.750 in.	99172	STD	1.747	1.753	0.375	0.500	2.055	0.813
1.750 in.	99180	STD	1.747	1.753	0.531	0.625	2.063	0.878
1.750 in.	99174	STD	1.747	1.753	0.563	0.688	2.063	0.813
1.750 in.	99827	GOLD	1.747	1.753	0.563	0.688	2.063	0.813
1.750 in.	99175	STD	1.747	1.753	0.750	0.875	2.063	0.813

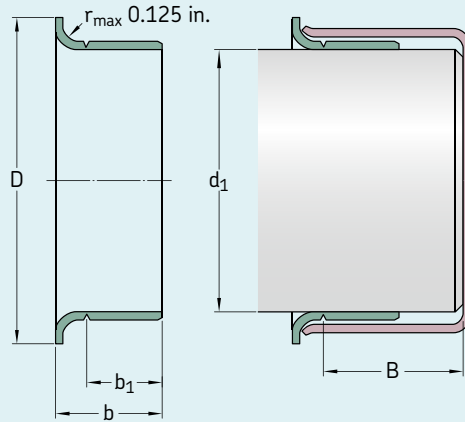
Green shading = inch blue shading = metric gray shading = both





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B	Style	SKF part number	Nominal shaft size
31.67	31.83	8.0	11.1	38.1	17.5	STD	99125	1.250 in.
31.67	31.83	8.0	11.1	38.1	17.5	GOLD	99817	1.250 in.
31.93	32.08	8.0	11.1	38.1	17.5	STD	99128	32 mm
31.93	32.08	8.0	11.1	38.1	17.5	GOLD	99876	32 mm
32.84	32.99	15.0	18.0	40.5	25.4	STD	99121	33 mm
33.22	33.38	6.4	9.5	40.6	20.7	STD	99129	1.313 in.
33.27	33.43	12.7	15.9	40.5	20.7	STD	99131	1.313 in.
33.86	34.01	12.7	15.9	41.3	20.7	STD	99134	34 mm
34.82	34.98	8.0	11.1	41.6	20.7	STD	99133	1.375 in.
34.82	34.98	12.7	15.9	41.6	20.7	STD	99138	1.375 in.
34.82	34.98	12.7	15.9	41.6	20.7	GOLD	99819	1.375 in.
34.93	35.08	13.0	16.0	41.6	20.7	STD	99139	35 mm
34.93	35.08	13.0	16.0	41.6	20.7	GOLD	99820	35 mm
35.84	35.99	13.0	17.0	45.2	25.0	STD	99146	36 mm
36.37	36.53	14.3	17.5	45.2	25.8	GOLD	99821	1.435 in.
36.37	36.53	14.3	17.5	45.2	25.8	STD	99143	1.435 in.
36.45	36.60	9.5	12.7	45.2	25.8	STD	99144	1.438 in.
37.85	38.00	13.0	17.0	45.2	25.0	STD	99147	38 mm
38.02	38.18	9.5	12.7	45.2	25.8	STD	99150	1.500 in.
38.02	38.18	9.5	12.7	45.2	25.8	GOLD	99823	1.500 in.
38.02	38.18	14.3	17.5	45.2	25.8	STD	99149	1.500 in.
38.02	38.18	14.3	17.5	45.2	25.8	GOLD	99822	1.500 in.
38.61	38.76	11.1	14.3	47.2	25.8	STD	99152	1.523 in.
39.34	39.50	11.1	14.3	47.2	25.8	STD	99155	1.552 in.
39.60	39.75	14.3	17.5	47.2	25.8	STD	99156	1.562 in.
39.60	39.75	14.3	17.5	47.2	25.8	GOLD	99824	1.563 in.
39.78	39.93	15.9	19.1	47.2	25.8	STD	99159	1.569 in.
39.81	39.96	9.9	12.9	47.0	25.4	STD	99153	40 mm
39.85	40.01	13.0	16.0	47.0	26.0	GOLD	99825	40 mm
39.93	40.08	13.0	16.0	47.0	26.0	STD	99157	40 mm
40.69	40.84	12.7	16.3	49.2	25.4	STD	99160	1.605 in.
40.84	41.00	12.7	15.9	49.2	25.8	STD	99163	41 mm
41.20	41.35	8.0	11.1	47.6	25.8	STD	99161	1.625 in.
41.20	41.35	14.3	17.5	47.6	20.7	STD	99162	1.625 in.
41.20	41.35	14.3	17.5	47.6	20.7	GOLD	99826	1.625 in.
41.83	41.99	11.3	14.5	53.0	21.5	STD	99166	42 mm
41.83	41.99	14.3	17.5	53.0	21.0	STD	99169	42 mm
41.99	42.14	14.0	17.5	53.0	21.0	STD	99165	1.656 in.
42.77	42.93	14.3	17.5	48.4	22.2	STD	99168	1.688 in.
42.80	42.95	8.0	11.1	48.4	22.2	STD	99167	1.688 in.
42.85	43.00	12.7	15.9	48.4	21.4	STD	99182	43 mm
43.56	43.71	14.3	17.5	51.6	20.7	STD	99171	1.718 in.
44.09	44.25	9.5	12.7	52.4	20.7	STD	99170	1.739 in.
44.37	44.53	9.5	12.7	52.2	20.7	STD	99172	1.750 in.
44.37	44.53	13.5	15.9	52.4	22.3	STD	99180	1.750 in.
44.37	44.53	14.3	17.5	52.4	20.7	STD	99174	1.750 in.
44.37	44.53	14.3	17.5	52.4	20.7	GOLD	99827	1.750 in.
44.37	44.53	19.1	22.2	52.4	20.7	STD	99175	1.750 in.

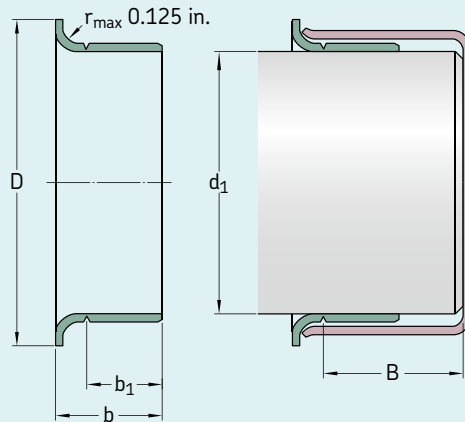


Inch

Nominal shaft size	SKF part number	Style	Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B
1.750 in.	99828	GOLD	1.747	1.753	0.750	0.875	2.063	0.813
1.764 in.	99176	STD	1.761	1.767	0.563	0.688	2.063	0.813
1.764 in.	99829	GOLD	1.761	1.767	0.563	0.688	2.063	0.813
45 mm	99177	STD	1.769	1.775	0.551	0.669	2.087	0.812
45 mm	99830	GOLD	1.769	1.775	0.551	0.669	2.087	0.812
1.781 in.	99179	STD	1.778	1.784	0.664	0.800	2.125	1.062
1.813 in.	99181	STD	1.809	1.815	0.563	0.688	2.090	1.000
1.813 in.	99831	GOLD	1.809	1.815	0.563	0.688	2.090	1.000
1.860 in.	99185	STD	1.857	1.863	0.563	0.688	2.156	1.000
1.869 in.	99186	STD	1.866	1.872	0.889	1.025	2.188	1.000
1.875 in.	99190	STD	1.872	1.878	0.175	0.295	2.203	0.744
1.875 in.	99188	STD	1.872	1.878	0.295	0.415	2.203	0.744
1.875 in.	99184	STD	1.872	1.878	0.375	0.516	2.203	1.050
1.875 in.	99187	STD	1.872	1.878	0.563	0.688	2.203	1.000
1.875 in.	99832	GOLD	1.872	1.878	0.563	0.688	2.203	1.000
48 mm	99189	STD	1.887	1.893	0.551	0.668	2.205	0.984
1.912 in.	99192	STD	1.909	1.915	0.375	0.500	2.219	1.000
1.938 in.	99193	STD	1.934	1.940	0.563	0.688	2.219	1.000
1.938 in.	99833	GOLD	1.934	1.940	0.563	0.688	2.219	1.000
50 mm	99196	STD	1.965	1.971	0.551	0.668	2.244	0.984
50 mm	99052	STD	1.965	1.971	0.551	0.668	2.224	1.350
1.980 in.	99198	STD	1.977	1.983	0.563	0.704	2.313	1.050
2.000 in.	99834	GOLD	1.997	2.003	0.563	0.688	2.406	1.006
2.000 in.	99199	STD	1.997	2.003	0.563	0.688	2.406	1.000
2.000 in.	99200	STD	1.997	2.003	0.875	1.000	2.406	1.000
2.000 in.	99835	GOLD	1.997	2.003	0.875	1.000	2.406	1.000
52 mm	99878	STD	2.040	2.046	0.500	0.625	2.469	1.359
2.063 in.	99205	STD	2.057	2.063	0.781	0.938	2.469	1.375
2.125 in.	99210	STD	2.123	2.129	0.500	0.750	2.422	1.281
2.125 in.	99212	STD	2.124	2.130	0.781	0.938	2.422	1.375
2.125 in.	99836	GOLD	2.124	2.130	0.781	0.938	2.422	1.375
55 mm	99215	STD	2.162	2.168	0.787	0.905	2.441	1.250
55 mm	99863	GOLD	2.162	2.168	0.787	0.905	2.441	1.250
2.188 in.	99218	STD	2.186	2.192	0.781	0.938	2.500	1.313
56 mm	99224	STD	2.198	2.205	0.779	0.936	2.531	3.150
56 mm	99220	STD	2.198	2.204	0.500	0.625	2.531	1.313
2.230 in.	99861	GOLD	2.227	2.233	0.500	0.625	2.531	1.313
2.230 in.	99229	STD	2.227	2.233	0.500	0.625	2.531	1.313
2.230 in.	99230	STD	2.227	2.233	0.781	0.906	2.531	1.250
2.240 in.	99226	STD	2.237	2.243	0.764	0.900	2.563	1.250
2.250 in.	99227	STD	2.249	2.255	0.313	0.438	2.531	1.313
2.250 in.	99838	GOLD	2.249	2.255	0.313	0.438	2.531	1.313
2.250 in.	99225	STD	2.249	2.255	0.781	0.938	2.531	1.313
2.250 in.	99837	GOLD	2.249	2.255	0.781	0.938	2.531	1.313
58 mm	99219	STD	2.280	2.286	0.787	0.938	2.598	1.375
2.313 in.	99231	STD	2.309	2.315	0.781	0.938	2.688	1.375
2.330 in.	99233	STD	2.327	2.333	0.750	0.875	2.750	1.500
60 mm	99241	STD	2.359	2.365	0.370	0.450	2.785	1.471

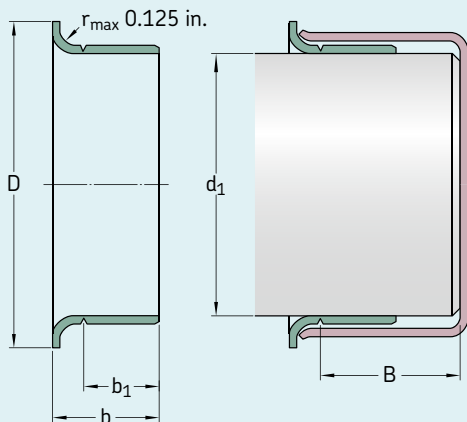
Green shading = inch blue shading = metric gray shading = both





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B	Style	SKF part number	Nominal shaft size
44.37	44.53	19.1	22.2	52.4	20.7	GOLD	99828	1.750 in.
44.73	44.88	14.3	17.5	52.4	20.7	STD	99176	1.764 in.
44.73	44.88	14.3	17.5	52.4	20.7	GOLD	99829	1.764 in.
44.93	45.09	14.0	17.0	53.0	20.6	STD	99177	45 mm
44.93	45.09	14.0	17.0	53.0	20.6	GOLD	99830	45 mm
45.16	45.31	16.9	20.3	54.0	27.0	STD	99179	1.781 in.
45.95	46.10	14.3	17.5	53.1	25.4	GOLD	99831	1.813 in.
47.17	47.32	14.3	17.5	54.8	25.4	STD	99185	1.860 in.
47.40	47.55	22.6	26.0	55.6	25.4	STD	99186	1.869 in.
47.55	47.70	4.5	7.5	56.0	18.9	STD	99190	1.875 in.
47.55	47.70	7.5	10.5	56.0	18.9	STD	99188	1.875 in.
47.55	47.70	9.5	13.1	56.0	26.7	STD	99184	1.875 in.
47.55	47.70	14.3	17.5	56.0	25.4	STD	99187	1.875 in.
47.55	47.70	14.3	17.5	56.0	25.4	GOLD	99832	1.875 in.
47.93	48.08	14.0	17.0	56.0	25.0	STD	99189	48 mm
48.49	48.64	9.5	12.7	56.4	25.4	STD	99192	1.912 in.
49.12	49.28	14.3	17.5	56.4	25.4	STD	99193	1.938 in.
49.12	49.28	14.3	17.5	56.4	25.4	GOLD	99833	1.938 in.
49.91	50.06	14.0	17.0	57.0	25.0	STD	99196	50 mm
49.91	50.06	14.0	17.0	56.5	34.3	STD	99052	50 mm
50.22	50.37	14.3	17.9	58.8	26.7	STD	99198	1.980 in.
50.72	50.88	14.3	17.5	61.1	25.6	GOLD	99834	2.000 in.
50.72	50.88	14.3	17.5	61.1	25.4	STD	99199	2.000 in.
50.72	50.88	22.2	25.4	61.1	25.4	STD	99200	2.000 in.
50.72	50.88	22.2	25.4	61.1	25.4	GOLD	99835	2.000 in.
51.82	51.97	12.7	15.9	62.7	34.5	STD	99878	52 mm
52.25	52.40	19.8	23.8	62.7	34.9	STD	99205	2.063 in.
53.92	54.08	12.7	19.1	61.5	32.5	STD	99210	2.125 in.
53.95	54.10	19.8	23.8	61.5	34.9	STD	99212	2.125 in.
53.95	54.10	19.8	23.8	61.5	34.9	GOLD	99836	2.125 in.
54.91	55.07	20.0	23.0	62.0	31.8	STD	99215	55 mm
54.91	55.07	20.0	23.0	62.0	31.8	GOLD	99863	55 mm
55.52	55.68	19.8	23.8	63.5	33.4	STD	99218	2.188 in.
55.83	56.01	19.8	23.8	64.3	80.0	STD	99224	56 mm
55.83	55.98	12.7	15.9	64.3	33.4	STD	99220	56 mm
56.57	56.72	12.7	15.9	64.3	33.4	GOLD	99861	2.230 in.
56.57	56.72	12.7	15.9	64.3	33.4	STD	99229	2.230 in.
56.57	56.72	19.8	23.0	64.3	31.8	STD	99230	2.230 in.
56.82	56.97	19.4	22.9	65.1	31.8	STD	99226	2.240 in.
57.12	57.28	8.0	11.1	64.3	33.4	STD	99227	2.250 in.
57.12	57.28	8.0	11.1	64.3	33.4	GOLD	99838	2.250 in.
57.12	57.28	19.8	23.8	64.3	33.4	STD	99225	2.250 in.
57.12	57.28	19.8	23.8	64.3	33.4	GOLD	99837	2.250 in.
57.91	58.06	20.0	23.8	66.0	34.9	STD	99219	58 mm
58.65	58.80	19.8	23.8	68.3	34.9	STD	99231	2.313 in.
59.11	59.26	19.1	22.2	69.9	38.1	STD	99233	2.330 in.
59.92	60.07	9.4	11.4	70.7	37.4	STD	99241	60 mm

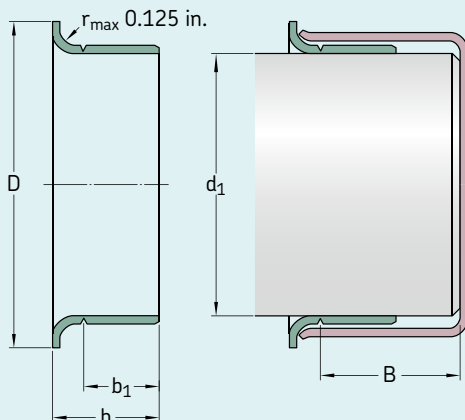


Inch

Nominal shaft size	SKF part number	Style	Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B
60 mm	99235	STD	2.359	2.365	0.787	0.905	2.785	1.375
60 mm	99869	GOLD	2.359	2.365	0.787	0.906	2.785	1.375
2.375 in.	99238	STD	2.372	2.378	0.594	0.750	2.750	1.375
2.375 in.	99240	STD	2.374	2.380	0.526	0.683	2.750	1.375
2.375 in.	99237	STD	2.374	2.380	0.781	0.938	2.750	1.375
2.375 in.	99839	GOLD	2.374	2.380	0.781	0.938	2.750	1.375
62 mm	99244	STD	2.434	2.440	0.500	0.625	2.828	1.425
2.438 in.	99243	STD	2.434	2.440	0.781	0.938	2.828	1.393
2.438 in.	99242	STD	2.435	2.441	0.500	0.625	2.828	1.425
2.492 in.	99249	STD	2.489	2.495	0.781	0.938	2.875	1.393
2.500 in.	99253	STD	2.497	2.504	0.555	0.650	2.820	0.890
2.500 in.	99248	STD	2.500	2.507	0.500	0.656	2.828	1.393
2.500 in.	99250	STD	2.500	2.507	0.781	0.938	2.820	1.375
2.500 in.	99840	GOLD	2.500	2.507	0.781	0.938	2.820	1.375
2.513 in.	99251	STD	2.510	2.517	0.781	0.906	2.828	1.438
65 mm	99254	STD	2.556	2.563	0.787	0.905	2.850	1.375
65 mm	99841	GOLD	2.556	2.563	0.787	0.905	2.850	1.375
2.563 in.	99256	STD	2.560	2.567	0.781	0.938	2.891	1.375
66 mm	99259	STD	2.595	2.602	0.781	0.938	2.990	1.250
2.621 in.	99261	STD	2.618	2.625	0.781	0.938	3.047	1.375
2.625 in.	99264	STD	2.621	2.628	0.781	0.906	3.047	1.375
2.625 in.	99260	STD	2.622	2.629	0.500	0.625	3.047	1.375
2.628 in.	99262	STD	2.625	2.632	0.781	0.938	3.047	1.375
2.628 in.	99842	GOLD	2.625	2.632	0.781	0.938	3.047	1.375
68 mm	99266	STD	2.670	2.677	0.750	0.875	3.125	1.688
2.730 in.	99268	STD	2.727	2.734	0.781	0.906	3.125	1.313
2.743 in.	99273	STD	2.740	2.747	0.781	0.938	3.065	1.250
2.748 in.	99274	STD	2.745	2.752	0.781	0.938	3.125	1.250
2.748 in.	99843	GOLD	2.745	2.752	0.781	0.938	3.125	1.250
2.750 in.	99267	STD	2.747	2.754	1.438	1.625	3.075	1.625
70 mm	99269	STD	2.747	2.754	1.125	1.250	3.125	1.312
70 mm	99272	STD	2.750	2.757	0.406	0.563	3.125	1.250
70 mm	99275	STD	2.750	2.757	0.781	0.938	3.125	1.250
70 mm	99844	GOLD	2.750	2.757	0.781	0.938	3.125	1.250
70 mm	99276	STD	2.753	2.760	0.787	0.945	3.125	1.250
2.813 in.	99281	STD	2.809	2.816	0.594	0.688	3.188	1.250
72 mm	99284	STD	2.828	2.835	0.750	0.875	3.225	1.343
72 mm	99870	GOLD	2.828	2.835	0.750	0.875	3.225	1.343
2.841 in.	99282	STD	2.838	2.845	0.500	0.656	3.225	1.250
2.841 in.	99845	GOLD	2.838	2.845	0.500	0.656	3.225	1.250
2.869 in.	99286	STD	2.866	2.873	0.781	0.938	3.188	1.250
2.875 in.	99287	STD	2.873	2.880	0.781	0.938	3.219	1.250
2.875 in.	99846	GOLD	2.873	2.880	0.781	0.938	3.219	1.250
2.938 in.	99293	STD	2.937	2.944	0.781	0.938	3.344	1.313
2.938 in.	99290	STD	2.937	2.944	0.500	0.641	3.344	1.331
2.938 in.	99847	GOLD	2.937	2.944	0.781	0.938	3.344	1.313
75 mm	99289	STD	2.950	2.957	0.594	0.690	3.273	1.083
75 mm	99294	STD	2.950	2.957	0.866	1.024	3.305	1.313

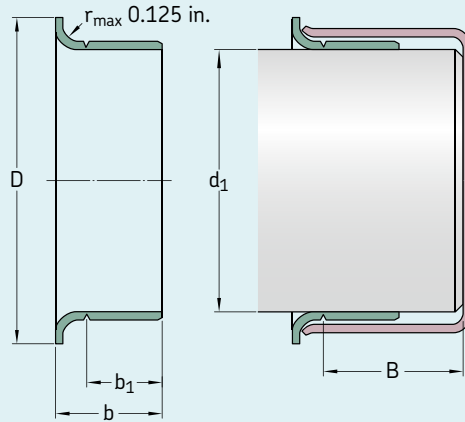
Green shading = inch blue shading = metric gray shading = both





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B	Style	SKF part number	Nominal shaft size
59.92	60.07	20.0	23.0	70.7	34.9	STD	99235	60 mm
59.92	60.07	20.0	23.0	70.7	34.9	GOLD	99869	60 mm
60.25	60.40	15.1	19.1	69.9	34.9	STD	99238	2.375 in.
60.30	60.45	13.4	17.4	69.9	34.9	STD	99240	2.375 in.
60.30	60.45	19.8	23.8	69.9	34.9	STD	99237	2.375 in.
60.30	60.45	19.8	23.8	69.9	34.9	GOLD	99839	2.375 in.
61.82	61.98	12.7	15.9	71.8	36.2	STD	99244	62 mm
61.82	61.98	19.8	23.8	71.8	35.4	STD	99243	2.438 in.
61.85	62.00	12.7	15.9	71.8	36.2	STD	99242	2.438 in.
63.22	63.37	19.8	23.8	73.0	35.4	STD	99249	2.492 in.
63.42	63.60	14.1	16.5	71.6	22.6	STD	99253	2.500 in.
63.50	63.68	12.7	16.7	71.8	35.4	STD	99248	2.500 in.
63.50	63.68	19.8	23.8	71.6	34.9	STD	99250	2.500 in.
63.50	63.68	19.8	23.8	71.6	34.9	GOLD	99840	2.500 in.
63.75	63.93	19.8	23.0	71.8	36.5	STD	99251	2.513 in.
64.92	65.10	20.0	23.0	72.4	34.9	STD	99254	65 mm
64.92	65.10	20.0	23.0	72.4	34.9	GOLD	99841	65 mm
65.02	65.20	19.8	23.8	73.4	34.9	STD	99256	2.563 in.
65.91	66.09	19.8	23.8	76.0	31.8	STD	99259	66 mm
66.50	66.68	19.8	23.8	77.4	34.9	STD	99261	2.621 in.
66.57	66.75	19.8	23.0	77.4	34.9	STD	99264	2.625 in.
66.60	66.78	12.7	15.9	77.4	34.9	STD	99260	2.625 in.
66.68	66.85	19.8	23.8	77.4	34.9	STD	99262	2.628 in.
66.68	66.85	19.8	23.8	77.4	34.9	GOLD	99842	2.628 in.
67.82	68.00	19.1	22.2	79.4	42.9	STD	99266	68 mm
69.27	69.44	19.8	23.0	79.4	33.4	STD	99268	2.730 in.
69.60	69.77	19.8	23.8	77.9	31.8	STD	99273	2.743 in.
69.72	69.90	19.8	23.8	79.4	31.8	STD	99274	2.748 in.
69.72	69.90	19.8	23.8	79.4	31.8	GOLD	99843	2.748 in.
69.77	69.95	36.5	41.3	78.1	41.3	STD	99267	2.750 in.
69.77	69.95	28.6	31.8	79.4	33.3	STD	99269	70 mm
69.85	70.03	10.3	14.3	79.4	31.8	STD	99272	70 mm
69.85	70.03	19.8	23.8	79.4	31.8	STD	99275	70 mm
69.85	70.03	19.8	23.8	79.4	31.8	GOLD	99844	70 mm
69.93	70.10	20.0	24.0	79.4	31.8	STD	99276	70 mm
71.35	71.53	15.1	17.5	81.0	31.8	STD	99281	2.813 in.
71.83	72.01	19.1	22.2	81.9	34.1	STD	99284	72 mm
71.83	72.01	19.1	22.2	81.9	34.1	GOLD	99870	72 mm
72.09	72.26	12.7	16.7	81.9	31.8	STD	99282	2.841 in.
72.09	72.26	12.7	16.7	81.9	31.8	GOLD	99845	2.841 in.
72.80	72.97	19.8	23.8	81.0	31.8	STD	99286	2.869 in.
72.97	73.15	19.8	23.8	81.8	31.8	STD	99287	2.875 in.
72.97	73.15	19.8	23.8	81.8	31.8	GOLD	99846	2.875 in.
74.60	74.78	19.8	23.8	84.9	33.4	STD	99293	2.938 in.
74.60	74.78	12.7	16.3	84.9	33.8	STD	99290	2.938 in.
74.60	74.78	19.8	23.8	84.9	33.4	GOLD	99847	2.938 in.
74.93	75.11	15.1	17.5	83.1	27.5	STD	99289	75 mm
74.93	75.11	22.0	26.0	84.0	33.4	STD	99294	75 mm

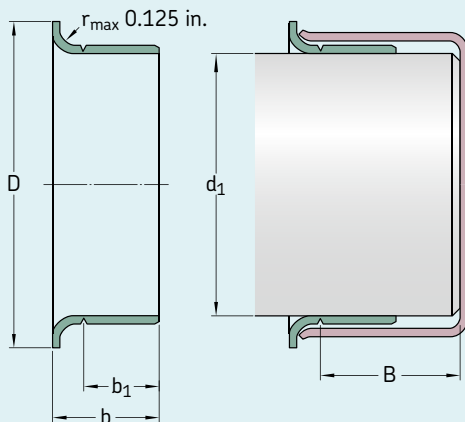


Inch

Nominal shaft size	SKF part number	Style	Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B
75 mm	99875	GOLD	2.950	2.957	0.866	1.024	3.305	1.313
2.974 in.	99292	STD	2.972	2.979	0.812	1.000	3.235	1.250
2.993 in.	99291	STD	2.990	2.997	0.484	0.625	3.359	1.331
2.993 in.	99298	STD	2.990	2.997	0.563	0.688	3.359	1.375
2.993 in.	99299	STD	2.990	2.997	0.813	1.000	3.350	1.281
3.000 in.	99296	STD	2.997	3.004	0.813	0.938	3.240	1.375
3.003 in.	99300	STD	3.000	3.007	0.813	1.000	3.235	1.281
3.003 in.	99048	STD	3.000	3.007	0.625	0.813	3.345	1.280
3.003 in.	99848	GOLD	3.000	3.007	0.813	1.000	3.235	1.281
3.011 in.	99301	STD	3.008	3.015	0.500	0.625	3.355	2.000
78 mm	99306	STD	3.064	3.071	0.750	0.875	3.468	2.056
3.125 in.	99311	STD	3.120	3.127	0.688	0.813	3.531	2.000
3.125 in.	99312	STD	3.120	3.127	0.813	1.000	3.531	2.000
3.125 in.	99849	GOLD	3.120	3.127	0.813	1.000	3.531	2.000
3.125 in.	99053	STD	3.124	3.131	0.551	0.709	3.525	2.031
80 mm	99313	STD	3.142	3.149	0.750	0.886	3.540	1.375
80 mm	99317	STD	3.146	3.153	0.433	0.591	3.543	1.375
80 mm	99315	STD	3.146	3.153	0.827	0.945	3.543	1.375
82 mm	99328	STD	3.225	3.232	0.660	0.848	3.585	1.750
3.250 in.	99322	STD	3.247	3.254	0.813	1.000	3.594	1.375
3.250 in.	99324	STD	3.250	3.257	0.595	0.719	3.575	1.375
3.250 in.	99850	GOLD	3.250	3.257	0.595	0.719	3.575	1.375
3.250 in.	99326	STD	3.250	3.257	0.688	0.875	3.585	1.250
3.250 in.	99325	STD	3.250	3.257	0.813	1.000	3.585	1.375
3.250 in.	99851	GOLD	3.250	3.257	0.813	1.000	3.585	1.375
3.310 in.	99331	STD	3.307	3.314	0.813	1.000	3.688	1.375
3.342 in.	99332	STD	3.337	3.344	0.669	0.827	3.700	1.378
3.342 in.	99333	STD	3.337	3.344	0.827	0.984	3.700	1.378
3.342 in.	99872	GOLD	3.337	3.344	0.827	0.984	3.700	1.378
85 mm	99334	STD	3.338	3.345	0.399	0.499	3.580	1.431
3.375 in.	99338	STD	3.373	3.380	0.375	0.500	3.688	1.410
3.375 in.	99337	STD	3.373	3.380	0.813	1.000	3.695	1.375
3.438 in.	99339	STD	3.435	3.442	0.781	0.906	3.844	1.406
88 mm	99481	STD	3.457	3.464	1.150	1.349	3.752	1.673
3.480 in.	99340	STD	3.477	3.484	0.781	0.906	3.835	1.406
3.500 in.	99346	STD	3.497	3.504	0.625	0.813	3.844	1.347
3.503 in.	99350	STD	3.500	3.507	0.813	1.000	3.844	1.347
3.503 in.	99347	STD	3.500	3.507	0.313	0.500	3.825	1.347
3.503 in.	99852	GOLD	3.500	3.507	0.813	1.000	3.844	1.347
3.504 in.	99349	STD	3.501	3.508	0.625	0.813	3.844	1.348
90 mm	99352	STD	3.540	3.547	0.438	0.538	4.000	1.813
90 mm	99353	STD	3.540	3.547	0.526	0.667	4.000	1.750
90 mm	99351	STD	3.540	3.547	0.710	0.906	4.000	1.813
90 mm	99354	STD	3.540	3.547	0.906	1.102	4.000	1.750
3.563 in.	99356	STD	3.560	3.567	0.813	1.000	3.900	1.750
92 mm	99360	STD	3.618	3.625	0.813	1.000	4.031	1.750
3.625 in.	99363	STD	3.623	3.630	0.500	0.625	4.025	1.750
3.625 in.	99362	STD	3.623	3.630	0.813	1.000	4.031	1.750

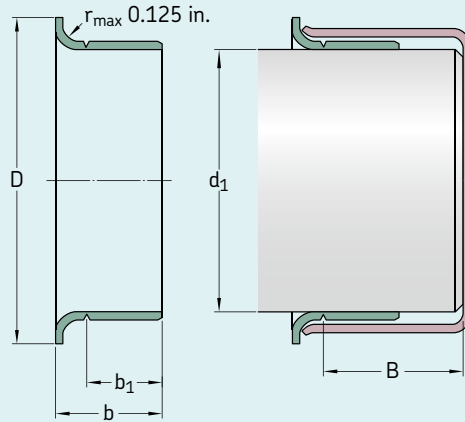
Green shading = inch blue shading = metric gray shading = both





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B	Style	SKF part number	Nominal shaft size
74.93	75.11	22.0	26.0	84.0	33.4	GOLD	99875	75 mm
75.49	75.67	20.6	25.4	82.2	31.8	STD	99292	2.974 in.
75.95	76.12	12.3	15.9	85.3	33.8	STD	99291	2.993 in.
75.95	76.12	14.3	17.5	85.3	34.9	STD	99298	2.993 in.
75.95	76.12	20.7	25.4	85.1	32.5	STD	99299	2.993 in.
76.12	76.30	20.7	23.8	82.3	34.9	STD	99296	3.000 in.
76.20	76.38	20.7	25.4	82.2	32.5	STD	99300	3.003 in.
76.20	76.38	15.9	20.7	85.0	32.5	STD	99048	3.003 in.
76.20	76.38	20.7	25.4	82.2	32.5	GOLD	99848	3.003 in.
76.40	76.58	12.7	15.9	85.2	50.8	STD	99301	3.011 in.
77.83	78.00	19.1	22.2	88.1	52.2	STD	99306	78 mm
79.25	79.43	17.5	20.7	89.7	50.8	STD	99311	3.125 in.
79.25	79.43	20.7	25.4	89.7	50.8	STD	99312	3.125 in.
79.25	79.43	20.7	25.4	89.7	50.8	GOLD	99849	3.125 in.
79.35	79.53	14.0	18.0	89.5	51.6	STD	99053	3.125 in.
79.81	79.98	19.1	22.5	89.9	34.9	STD	99313	80 mm
79.91	80.09	11.0	15.0	90.0	34.9	STD	99317	80 mm
79.91	80.09	21.0	24.0	90.0	34.9	STD	99315	80 mm
81.92	82.09	16.8	21.5	91.1	44.5	STD	99328	82 mm
82.47	82.65	20.7	25.4	91.3	34.9	STD	99322	3.250 in.
82.55	82.73	15.1	18.3	90.8	34.9	STD	99324	3.250 in.
82.55	82.73	15.1	18.3	90.8	34.9	GOLD	99850	3.250 in.
82.55	82.73	17.5	22.2	91.1	31.8	STD	99326	3.250 in.
82.55	82.73	20.7	25.4	91.1	34.9	STD	99325	3.250 in.
82.55	82.73	20.7	25.4	91.1	34.9	GOLD	99851	3.250 in.
84.00	84.18	20.7	25.4	93.7	34.9	STD	99331	3.310 in.
84.76	84.94	17.0	21.0	94.0	35.0	STD	99332	3.342 in.
84.76	84.94	21.0	25.0	94.0	35.0	STD	99333	3.342 in.
84.76	84.94	21.0	25.0	94.0	35.0	GOLD	99872	3.342 in.
84.79	84.96	10.1	12.7	90.9	36.4	STD	99334	85 mm
85.67	85.85	9.5	12.7	93.7	35.8	STD	99338	3.375 in.
85.67	85.85	20.7	25.4	93.9	34.9	STD	99337	3.375 in.
87.25	87.43	19.8	23.0	97.6	35.7	STD	99339	3.438 in.
87.81	87.99	29.2	34.3	95.3	42.5	STD	99481	88 mm
88.32	88.49	19.8	23.0	97.4	35.7	STD	99340	3.480 in.
88.82	89.00	15.9	20.7	97.6	34.2	STD	99346	3.500 in.
88.90	89.08	20.7	25.4	97.6	34.2	STD	99350	3.503 in.
88.90	89.08	8.0	12.7	97.2	34.2	STD	99347	3.503 in.
88.90	89.08	20.7	25.4	97.6	34.2	GOLD	99852	3.503 in.
88.93	89.10	15.9	20.7	97.6	34.2	STD	99349	3.504 in.
89.92	90.09	11.1	13.7	101.6	46.1	STD	99352	90 mm
89.92	90.09	13.4	16.9	101.6	44.5	STD	99353	90 mm
89.92	90.09	18.0	23.0	101.6	46.1	STD	99351	90 mm
89.92	90.09	23.0	28.0	101.6	44.5	STD	99354	90 mm
90.42	90.60	20.7	25.4	99.1	44.5	STD	99356	3.563 in.
91.90	92.08	20.7	25.4	102.4	44.5	STD	99360	92 mm
92.02	92.20	12.7	15.9	102.2	44.5	STD	99363	3.625 in.
92.02	92.20	20.7	25.4	102.4	44.5	STD	99362	3.625 in.

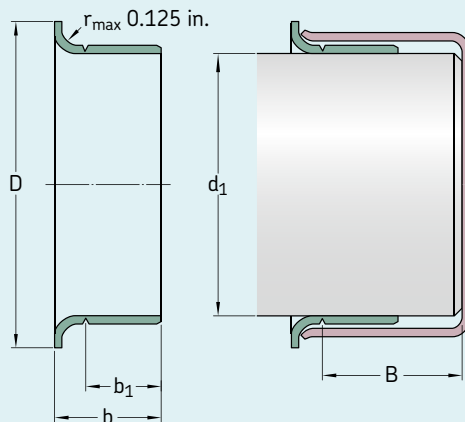


Inch

Nominal shaft size	SKF part number	Style	Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B
3.688 in.	99368	STD	3.684	3.691	0.313	0.438	4.031	0.875
3.688 in.	99365	STD	3.685	3.692	0.813	0.938	4.025	1.800
3.730 in.	99359	STD	3.727	3.734	0.469	0.594	4.016	1.800
3.730 in.	99366	STD	3.727	3.734	0.781	0.906	4.025	1.800
95 mm	99369	STD	3.737	3.744	0.827	0.945	4.025	1.800
95 mm	99374	STD	3.740	3.747	0.344	0.500	4.031	1.800
95 mm	99364	STD	3.740	3.747	0.469	0.594	4.035	1.800
3.750 in.	99376	STD	3.746	3.753	0.563	0.688	4.025	1.800
3.750 in.	99367	STD	3.750	3.757	0.344	0.500	4.025	1.800
3.750 in.	99372	STD	3.750	3.757	0.688	0.875	4.020	1.800
3.750 in.	99853	GOLD	3.750	3.757	0.688	0.875	4.020	1.800
3.875 in.	99386	STD	3.868	3.875	0.813	1.000	4.185	1.875
3.875 in.	99387	STD	3.873	3.880	0.813	1.000	4.219	1.875
3.938 in.	99393	STD	3.935	3.942	0.813	1.000	4.313	2.050
3.938 in.	99854	GOLD	3.935	3.942	0.813	1.000	4.313	2.050
4.000 in.	99401	STD	3.998	4.006	0.500	0.625	4.375	2.066
4.000 in.	99395	STD	3.998	4.006	0.600	0.725	4.375	2.050
4.000 in.	99400	STD	3.998	4.006	0.650	0.775	4.375	1.375
4.000 in.	99399	STD	3.998	4.006	0.813	1.000	4.375	2.050
4.000 in.	99855	GOLD	3.998	4.006	0.813	1.000	4.375	2.050
104 mm	99409	STD	4.090	4.098	0.787	0.945	4.438	1.417
4.125 in.	99412	STD	4.122	4.130	0.813	1.000	4.470	1.375
105 mm	99413	STD	4.130	4.138	0.787	0.913	4.470	1.378
4.187 in.	99418	STD	4.183	4.191	0.813	1.000	4.500	1.375
4.230 in.	99423	STD	4.226	4.234	0.781	0.906	4.610	1.438
4.250 in.	99424	STD	4.248	4.256	0.813	1.000	4.610	1.438
110 mm	99434	STD	4.322	4.330	0.448	0.589	4.921	1.297
110 mm	99435	STD	4.327	4.335	0.509	0.650	4.921	1.250
4.375 in.	99437	STD	4.370	4.378	0.813	1.000	4.750	1.650
112 mm	99438	STD	4.401	4.409	0.750	0.886	4.750	1.300
4.438 in.	99439	STD	4.434	4.442	1.000	1.142	4.813	1.313
4.500 in.	99450	STD	4.496	4.504	0.813	1.000	4.900	1.250
4.500 in.	99856	GOLD	4.496	4.504	0.813	1.000	4.900	1.250
115 mm	99452	STD	4.523	4.531	0.813	0.938	5.000	1.250
4.625 in.	99465	STD	4.621	4.629	0.438	0.625	5.000	1.375
4.625 in.	99463	STD	4.621	4.629	1.000	1.250	5.063	1.375
4.688 in.	99468	STD	4.685	4.693	0.813	1.000	5.063	1.375
120 mm	99471	STD	4.720	4.728	0.315	0.433	5.110	1.323
120 mm	99473	STD	4.720	4.728	0.787	0.984	5.110	1.260
4.750 in.	99475	STD	4.746	4.754	0.500	0.750	5.000	1.500
122 mm	99472	STD	4.799	4.807	0.787	0.945	5.177	1.260
4.875 in.	99487	STD	4.871	4.879	0.625	0.750	5.250	1.438
125 mm	99057	STD	4.916	4.937	0.433	0.551	5.400	1.438
125 mm	99490	STD	4.917	4.925	0.394	0.551	5.400	1.438
125 mm	99492	STD	4.917	4.925	1.024	1.260	5.400	1.438
5.000 in.	99501	STD	4.998	5.007	0.540	0.681	5.400	1.438
5.000 in.	99857	GOLD	4.998	5.007	0.688	0.875	5.400	1.438
5.000 in.	99498	STD	4.998	5.007	0.688	0.875	5.400	1.438

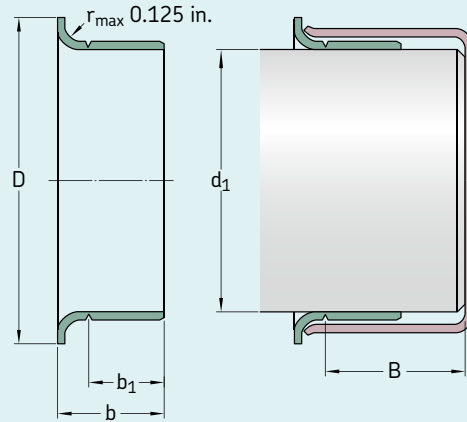
Green shading = inch blue shading = metric gray shading = both





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B	Style	SKF part number	Nominal shaft size
93.57	93.75	8.0	11.1	102.4	22.2	STD	99368	3.688 in.
93.60	93.78	20.7	23.8	102.2	45.7	STD	99365	3.688 in.
94.67	94.84	11.9	15.1	102.0	45.7	STD	99359	3.730 in.
94.67	94.84	19.8	23.0	102.2	45.7	STD	99366	3.730 in.
94.92	95.10	21.0	24.0	102.2	45.7	STD	99369	95 mm
95.00	95.17	8.7	12.7	102.4	45.7	STD	99374	95 mm
95.00	95.17	11.9	15.1	102.5	45.7	STD	99364	95 mm
95.15	95.33	14.3	17.5	102.2	45.7	STD	99376	3.750 in.
95.25	95.43	8.7	12.7	102.2	45.7	STD	99367	3.750 in.
95.25	95.43	17.5	22.2	102.1	45.7	STD	99372	3.750 in.
95.25	95.43	17.5	22.2	102.1	45.7	GOLD	99853	3.750 in.
98.25	98.43	20.7	25.4	106.3	47.6	STD	99386	3.875 in.
98.37	98.55	20.7	25.4	107.2	47.6	STD	99387	3.875 in.
99.95	100.13	20.7	25.4	109.6	52.1	STD	99393	3.938 in.
99.95	100.13	20.7	25.4	109.6	52.1	GOLD	99854	3.938 in.
101.55	101.75	12.7	15.9	111.1	52.5	STD	99401	4.000 in.
101.55	101.75	15.2	18.4	111.1	52.1	STD	99395	4.000 in.
101.55	101.75	16.5	19.7	111.1	34.9	STD	99400	4.000 in.
101.55	101.75	20.7	25.4	111.1	52.1	STD	99399	4.000 in.
101.55	101.75	20.7	25.4	111.1	52.1	GOLD	99855	4.000 in.
103.89	104.09	20.0	24.0	112.7	36.0	STD	99409	104 mm
104.70	104.90	20.7	25.4	113.5	34.9	STD	99412	4.125 in.
104.90	105.11	20.0	23.2	113.5	35.0	STD	99413	105 mm
106.25	106.45	20.7	25.4	114.3	34.9	STD	99418	4.187 in.
107.34	107.54	19.8	23.0	117.1	36.5	STD	99423	4.230 in.
107.90	108.10	20.7	25.4	117.1	36.5	STD	99424	4.250 in.
109.78	109.98	11.4	15.0	125.0	32.9	STD	99434	110 mm
109.91	110.11	12.9	16.5	125.0	31.8	STD	99435	110 mm
111.00	111.20	20.7	25.4	120.7	41.9	STD	99437	4.375 in.
111.79	111.99	19.1	22.5	120.7	33.0	STD	99438	112 mm
112.62	112.83	25.4	29.0	122.3	33.4	STD	99439	4.438 in.
114.20	114.40	20.7	25.4	124.5	31.8	STD	99450	4.500 in.
114.20	114.40	20.7	25.4	124.5	31.8	GOLD	99856	4.500 in.
114.88	115.09	20.7	23.8	127.0	31.8	STD	99452	115 mm
117.37	117.58	11.1	15.9	127.0	34.9	STD	99465	4.625 in.
117.37	117.58	25.4	31.8	128.6	34.9	STD	99463	4.625 in.
119.00	119.20	20.7	25.4	128.6	34.9	STD	99468	4.688 in.
119.89	120.09	8.0	11.0	129.8	33.6	STD	99471	120 mm
119.89	120.09	20.0	25.0	129.8	32.0	STD	99473	120 mm
120.55	120.75	12.7	19.1	127.0	38.1	STD	99475	4.750 in.
121.89	122.10	20.0	24.0	131.5	32.0	STD	99472	122 mm
123.72	123.93	15.9	19.1	133.4	36.5	STD	99487	4.875 in.
124.87	125.40	11.0	14.0	137.2	36.5	STD	99057	125 mm
124.89	125.10	10.0	14.0	137.2	36.5	STD	99490	125 mm
124.89	125.10	26.0	32.0	137.2	36.5	STD	99492	125 mm
126.95	127.18	13.7	17.3	137.2	36.5	STD	99501	5.000 in.
126.95	127.18	17.5	22.2	137.2	36.5	GOLD	99857	5.000 in.
126.95	127.18	17.5	22.2	137.2	36.5	STD	99498	5.000 in.

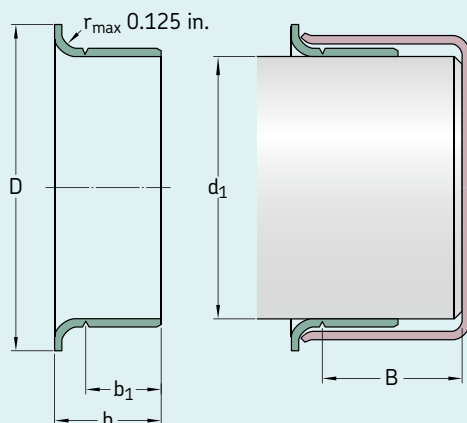


Inch

Nominal shaft size	SKF part number	Style	Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B
5.000 in.	99499	STD	4.998	5.007	0.813	1.000	5.390	1.438
5.000 in.	99858	GOLD	4.998	5.007	0.813	1.000	5.508	1.438
128 mm	99482	STD	5.031	5.040	1.150	1.349	5.327	1.587
130 mm	99494	STD	5.110	5.119	0.750	0.938	5.493	1.181
5.125 in.	99491	STD	5.117	5.126	0.866	0.996	5.493	1.280
5.125 in.	99513	STD	5.120	5.129	0.813	1.000	5.500	1.250
5.250 in.	99525	STD	5.246	5.255	0.813	1.000	5.560	1.250
135 mm	99533	STD	5.307	5.316	0.807	1.000	5.735	1.250
5.375 in.	99537	STD	5.371	5.380	0.813	1.000	5.875	1.250
5.438 in.	99548	STD	5.434	5.443	1.500	1.688	5.750	1.875
5.476 in.	99547	STD	5.472	5.481	0.563	0.750	5.900	1.234
5.500 in.	99550	STD	5.498	5.507	0.518	0.705	5.938	1.250
5.500 in.	99549	STD	5.498	5.507	0.813	1.000	5.938	1.250
5.500 in.	99859	GOLD	5.498	5.507	0.813	1.000	5.938	1.250
140 mm	99552	STD	5.508	5.517	0.807	1.000	5.945	1.250
5.625 in.	99560	STD	5.621	5.630	0.875	1.000	6.188	1.812
145 mm	99571	STD	5.699	5.708	0.750	0.875	6.100	1.812
5.730 in.	99562	STD	5.726	5.735	0.563	0.750	6.100	1.938
5.750 in.	99575	STD	5.746	5.755	0.813	1.000	6.180	1.750
5.875 in.	99587	STD	5.871	5.880	1.000	1.250	6.188	1.313
5.875 in.	99862	GOLD	5.871	5.880	1.000	1.250	6.188	1.313
150 mm	99595	STD	5.896	5.905	1.024	1.181	6.260	1.280
5.938 in.	99596	STD	5.934	5.943	1.000	1.125	6.375	1.875
6.000 in.	99599	STD	5.995	6.005	1.000	1.250	6.375	1.750
154 mm	99605	STD	6.058	6.068	1.024	1.181	6.375	1.299
155 mm	99606	STD	6.092	6.102	1.024	1.181	6.575	1.299
6.203 in.	99620	STD	6.198	6.208	0.813	1.063	6.625	1.750
6.250 in.	99625	STD	6.245	6.255	1.031	1.250	6.625	1.750
160 mm	99630	STD	6.289	6.299	1.000	1.250	6.750	1.375
6.500 in.	99650	STD	6.495	6.505	1.000	1.250	7.000	1.375
170 mm	99640	STD	6.683	6.693	1.250	1.496	7.188	1.750
6.750 in.	99675	STD	6.745	6.755	0.813	1.063	7.125	1.750
175 mm	99687	STD	6.880	6.890	1.102	1.260	7.362	1.378
7.000 in.	99700	STD	6.995	7.006	1.000	1.250	7.475	1.688
180 mm	99721	STD	7.077	7.088	1.299	1.496	7.500	1.752
7.250 in.	99725	STD	7.244	7.255	1.250	1.500	7.760	2.175
185 mm	99726	STD	7.273	7.284	1.260	1.496	7.760	2.165
7.449 in.	99745	STD	7.444	7.455	0.813	1.000	7.860	1.250
7.500 in.	99750	STD	7.495	7.506	0.813	1.000	7.875	1.250
7.750 in.	99775	STD	7.745	7.756	1.000	1.313	8.270	1.875
7.875 in. and 200 mm	99787	STD	7.869	7.880	1.359	1.500	8.375	1.750
7.938 in.	99799	STD	7.933	7.944	1.000	1.250	8.375	1.750
8.000 in.	99800	STD	7.995	8.006	1.000	1.250	8.375	1.750

Green shading = inch blue shading = metric gray shading = both





Metric (mm)

Shaft dia. min d1	Shaft dia. max d1	'On-shaft' width b1	Total width b	Flange dia. D	Max tear groove offset B	Style	SKF part number	Nominal shaft size
126.95	127.18	20.7	25.4	136.9	36.5	STD	99499	5.000 in.
126.95	127.18	20.7	25.4	139.9	36.5	GOLD	99858	5.000 in.
127.79	128.02	29.2	34.3	135.3	40.3	STD	99482	128 mm
129.79	130.02	19.1	23.8	139.5	30.0	STD	99494	130 mm
129.97	130.20	22.0	25.3	139.5	32.5	STD	99491	5.125 in.
130.05	130.28	20.7	25.4	139.7	31.8	STD	99513	5.125 in.
133.25	133.48	20.7	25.4	141.2	31.8	STD	99525	5.250 in.
134.80	135.03	20.5	25.4	145.7	31.8	STD	99533	135 mm
136.42	136.65	20.7	25.4	149.2	31.8	STD	99537	5.375 in.
138.02	138.25	38.1	42.9	146.1	47.6	STD	99548	5.438 in.
138.99	139.22	14.3	19.1	149.9	31.3	STD	99547	5.476 in.
139.65	139.88	13.2	17.9	150.8	31.8	STD	99550	5.500 in.
139.65	139.88	20.7	25.4	150.8	31.8	STD	99549	5.500 in.
139.65	139.88	20.7	25.4	150.8	31.8	GOLD	99859	5.500 in.
139.90	140.13	20.5	25.4	151.0	31.8	STD	99552	140 mm
142.77	143.00	22.2	25.4	157.2	46.0	STD	99560	5.625 in.
144.75	144.98	19.1	22.2	154.9	46.0	STD	99571	145 mm
145.44	145.67	14.3	19.1	154.9	49.2	STD	99562	5.730 in.
145.95	146.18	20.7	25.4	157.0	44.5	STD	99575	5.750 in.
149.12	149.35	25.4	31.8	157.2	33.4	STD	99587	5.875 in.
149.12	149.35	25.4	31.8	157.2	33.4	GOLD	99862	5.875 in.
149.76	149.99	26.0	30.0	159.0	32.5	STD	99595	150 mm
150.72	150.95	25.4	28.6	161.9	47.6	STD	99596	5.938 in.
152.27	152.53	25.4	31.8	161.9	44.5	STD	99599	6.000 in.
153.87	154.13	26.0	30.0	161.9	33.0	STD	99605	154 mm
154.74	154.99	26.0	30.0	167.0	33.0	STD	99606	155 mm
157.43	157.68	20.7	27.0	168.3	44.5	STD	99620	6.203 in.
158.62	158.88	26.2	31.8	168.3	44.5	STD	99625	6.250 in.
159.74	159.99	25.4	31.8	171.5	34.9	STD	99630	160 mm
164.97	165.23	25.4	31.8	177.8	34.9	STD	99650	6.500 in.
169.75	170.00	31.8	38.0	182.6	44.5	STD	99640	170 mm
171.32	171.58	20.7	27.0	181.0	44.5	STD	99675	6.750 in.
174.75	175.01	28.0	32.0	187.0	35.0	STD	99687	175 mm
177.67	177.95	25.4	31.8	189.9	42.9	STD	99700	7.000 in.
179.76	180.04	33.0	38.0	190.5	44.5	STD	99721	180 mm
184.00	184.28	31.8	38.1	197.1	55.3	STD	99725	7.250 in.
184.73	185.01	32.0	38.0	197.1	55.0	STD	99726	185 mm
189.08	189.36	20.7	25.4	199.6	31.8	STD	99745	7.449 in.
190.37	190.65	20.7	25.4	200.0	31.8	STD	99750	7.500 in.
196.72	197.00	25.4	33.4	210.1	47.6	STD	99775	7.750 in.
199.87	200.15	34.5	38.1	212.7	44.5	STD	99787	7.875 in. and 200 mm
201.50	201.78	25.4	31.8	212.7	44.5	STD	99799	7.938 in.
203.07	203.35	25.4	31.8	212.7	44.5	STD	99800	8.000 in.



Appendix

Table explanations

RT = room temperature [70 °F (40 °C)]

1 = minor effect

2 = moderate effect

3 = static only

4 = not recommended

5 = insufficient data, test before use

Materials matrix				
Material	Abbreviation	SKF trade name	Material code	Operating temperatures °F (°C)
Nitrile Rubber	NBR	–	R or RG	–40 to 210 °F (–40 to 100 °C)
Carboxylated Nitrile	XNBR	Duralip	D	–40 to 210 °F (–40 to 100 °C)
Hydrogenated Nitrile	HNBR	Duratemp	H	–40 to 302 °F (–40 to 150 °C)
Fluorocarbon Rubber	FKM	Duralife	V	–5 to 390 °F (–20 to 200 °C)
Polyacrylate elastomer	ACM	–	P	–40 to 300+ °F (–40 to 150+ °C)
Filled Polytetrafluoroethylene	PTFE	–	T	–90 to 480 °F (–70 to 250 °C)

Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–		

A				
Acetaldehyde	RT	4	4	4
Acetamide	RT	1	2	4
Acetic acid, 100% (glacial)	60 (140)	3	3	4
Acetic acid, 30%	RT	2	2	4
Acetic acid, 3% (vinegar)	RT	2	1	4
Acetic anhydride	RT / 80 (175)	3	4	4
Acetone	RT	4	4	4
Acetophenone	RT	4	4	4
Acetylene	60 (140)	1	1	5
Acrylonitrile	RT / 60 (140)	4	3	4
Adipic acid (aq)	RT	1	1	5
Alum (aq)	100 (210)	1	1	4
Aluminium acetate (aq)	RT	2	4	4
Aluminium chloride (aq)	RT	1	1	1
Aluminium fluoride (aq)	RT	1	1	5
Aluminium nitrate (aq)	RT	1	1	5
Aluminium phosphate (aq)	RT	1	1	5
Aluminium sulphate (aq)	RT / 60 (140)	1	1	4
Ammonia (anhydrous)	RT	2	4	4
Ammonia gas	RT	1	4	4
Ammonia gas	80 (175) / 100 (210)	4	4	4
Ammonium carbonate (aq)	RT / 60 (140)	2	5	4
Ammonium chloride (aq)	RT / 60 (140)	1	1	5
Ammonium chloride (dry) (sal ammoniac)	RT	1	1	1
Ammonium nitrate (aq)	RT	1	5	2
Ammonium persulphate (aq)	RT	4	5	4
Ammonium phosphate (aq)	RT / 60 (140)	1	5	5
Ammonium sulphate (aq)	100 (210)	1	4	4
Amyl acetate	RT	4	4	4
Amyl alcohol	60 (140)	2	2	4
Aniline	60 (140) / 100 (210)	4	3	4
Aniline dyes	RT	4	2	4





Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–	–	–
Aniline hydrochloride	RT	2	2	4
Aniline hydrochloride	100 (210)	4	5	5
Animal fats	80 (175)	1	1	1
Aqua Regia	RT	4	5	4
Arsenic acid	RT / 60 (140)	1	1	3
Arsenic trichloride (aq)	RT	1	5	5
Asphalt (liquid)	100 (210)	2	2	4
B				
Barium chloride (aq)	RT / 60 (140)	1	1	1
Barium hydroxide (aq)	RT / 60 (140)	1	1	4
Barium sulphate	RT / 60 (140)	1	1	4
Barium sulphide (aq)	RT / 60 (140)	1	1	4
Beer	RT	1	1	4
Benzaldehyde	RT / 60 (140)	4	4	4
Benzene	RT	4	1	4
Benzene sulphonic acid	RT	4	1	4
Benzoic acid	RT / 60 (140)	4	1	4
Benzoyl chloride	RT	4	1	4
Benzyl alcohol	RT / 60 (140)	4	1	1
Benzyl benzoate	50 (120) / 60 (140)	4	1	4
Benzyl chloride	RT	4	1	4
Blast furnace gas	100 (210)	4	1	4
Borax (aq)	RT / 60 (140)	2	1	5
Bordeaux mixture	RT	2	1	4
Boric acid	60 (140) / 100 (210)	1	1	4
Brake fluid, ATE	80 (175)	4	4	4
Brake fluid, glycol ether	80 (175)	4	5	4
Brine (sodium chloride, aq)	RT / 50 (120)	1	1	4
Bromine, anhydrous (liquid/gaseous)	RT	4	1	4
Bromine trifluoride	RT	4	4	4
Bromine water	RT	4	1	4
Bromobenzene	RT	4	1	4
Bunker oil	60 (140)	1	1	1
Butadiene (gaseous or liquified)	RT	4	1	4
Butane (gaseous or liquified)	RT	1	1	1
Butter (animal fat)	RT / 80 (175)	1	1	1
Butyl acetate	RT	4	4	4
Butyl acrylate	RT	4	4	4
Butyl alcohol	RT	2	1	4
Butyl amines	RT	3	4	4
Butylene	RT	2	1	4
Butyl stearate	50 (120)	2	1	5
Butyraldehyde	RT	4	4	4
C				
Calcium acetate (aq)	RT	2	4	4
Calcium bisulphite (aq)	RT	1	1	4
Calcium chloride (aq)	60 (140)	1	1	1
Calcium hydroxide (aq)	RT	1	1	4
Calcium hypochlorite (aq)	RT / 60 (140)	2	1	4
Calcium nitrate (aq)	RT / 40 (105)	1	1	1
Cane sugar liquors	RT / 60 (140)	1	1	4
Carbon dioxide	RT	1	1	5
Carbon disulphide	RT	3	1	3
Carbonic acid	RT	2	1	1
Carbon monoxide	60 (140)	1	1	5
Carbon tetrachloride	RT / 60 (140)	3	1	4
Castor oil	RT	1	1	1
Cellosolve (ethyl glycol)	RT	4	3	4
Cellosolve acetate (ethyl glycol acetate)	RT	4	4	4
Chlorine (dry)	RT	4	1	4
Chlorine (wet)	RT	4	1	4
Chlorine dioxide	RT	4	1	4
Chlorine trifluoride	RT	4	4	4
Chloroacetic acid	60 (140)	4	4	4
Chloroacetone	RT	4	4	4
Chlorobenzene	RT	4	1	4



Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–		
Chlorobromomethane	RT	4	1	4
Chlorobutadiene	RT	4	1	4
Chloroform	RT	4	1	4
Chlorosulphonic acid	RT	4	4	4
Chlorotoluene	RT	4	1	4
Chromic acid	60 (140)	4	1	4
Citric acid	60 (140) / 70 (160)	1	1	5
Cobalt chloride (aq)	RT	1	1	4
Coconut oil	50 (120) / 80 (175)	1	1	1
Cod liver oil	RT	1	1	1
Coke oven gas	80 (175)	4	1	4
Copper acetate (aq)	RT	2	4	4
Copper chloride (aq)	RT	1	1	1
Copper sulphate (aq)	60 (140)	1	1	4
Corn oil	RT / 60 (140)	1	1	1
Cottonseed oil	RT / 70 (160)	1	1	1
Cresol	50 (120) / 70 (160)	4	1	4
Cumene (isopropylbenzene)	RT	4	1	4
Cyclohexane	RT	1	1	1
Cyclohexanol	RT	3	1	5
Cyclohexanone	RT	4	4	4
p-Cymene	RT	4	1	4
D				
Decahydronaphthalene (decalin)	RT / 60 (140)	4	1	5
Detergent	RT	1	1	4
Developing fluids (photography)	RT	1	1	5
Diacetone alcohol	RT	4	4	4
Dibenzyl ether	RT	4	4	5
Dibutyl amine	RT	4	4	4
Dibutyl ether	RT	4	3	3
Dibutyl phthalate	RT / 60 (140)	4	3	4
Dibutyl sebacate	RT / 60 (140)	4	2	4
o-Dichlorobenzene	RT	4	1	4
Dicyclohexylamine	RT	3	4	4
Diethyl amine	RT	2	4	4
Diethyl benzene	RT	4	1	5
Diethyl ether	RT	4	4	3
Diethyl sebacate	RT	2	2	4
Diisopropyl benzene	RT	4	1	5
Dimethyl aniline (Xylidine)	RT	3	4	4
Dimethyl ether	RT	1	2	4
Dimethyl formamide	RT / 60 (140)	2	4	4
Dimethyl phthalate	RT	4	2	4
Dioctyl phthalate	RT / 60 (140)	3	2	4
Dioctyl sebacate	RT / 60 (140)	4	2	4
Dioxane	RT / 60 (140)	4	4	4
Dioxolane	RT	4	4	4
Dipentene	RT	2	1	4
Diphenyl oxide	RT	4	1	4
Dowtherm oils	100 (210)	4	1	4
Dry cleaning fluids	40 (105)	3	1	4
E				
Epichlorohydrin	RT	4	4	4
Ethane	RT	1	1	1
Ethanol (denatured alcohol)	RT	1	1	4
Ethanolamine (monoethanolamine)	RT	2	4	4
Ethanolamine (di- and triethanolamine)	50 (120)	5	4	4
Ethyl acetate	RT	4	4	4
Ethyl acrylate	RT	4	4	4
Ethyl benzene	RT	4	1	4
Ethyl benzoate	RT	4	1	4
Ethyl chloride	RT	1	1	4
Ethylene	RT	1	1	5
Ethylene chloride	RT	4	2	4
Ethylene chlorohydrin	RT	4	1	4
Ethylene diamine	RT	1	4	4





Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–		
Ethylene glycol	RT	1	1	2
Ethylene glycol	100 (210)	1	1	3
Ethylene oxide	RT	4	4	4
Ethylene trichloride	RT	4	1	4
Ethyl ether	RT	3	4	4
Ethyl formate	RT	4	1	5
Ethyl glycol (Cellosolve)	RT	4	3	4
Ethyl glycol acetate (Cellosolve acetate)	RT	4	4	4
Ethyl silicate	RT	1	1	5
F				
Fatty acids	100 (210)	2	1	5
Ferric chloride (aq)	RT	1	1	1
Ferric nitrate (aq)	RT	1	1	1
Ferric sulphate (aq)	RT	1	1	1
Fish oil	RT	1	1	5
Fluorine (liquified)	RT	4	2	4
Fluorobenzene	RT	4	1	4
Fluorosilic acid	60 (140)	1	1	5
Formaldehyde	RT	3	1	4
Formaldehyde, 37%	below 100 (210)	2	1	4
Formic acid	RT / 60 (140)	2	3	5
Fuels				
– Aero engine fuels JP:				
– JP3 (MIL-J-5624 G)	RT	1	1	2
– JP4 (MIL-J-5624 G)	RT	1	1	2
– JP5 (MIL-J-5624 G)	RT	1	1	2
– JP6 (MIL-F-25656 B)	RT / 60 (140)	1	1	5
– ASTM reference fuels:				
– ASTM-A (MIL-S-3136 B Typ 1)	RT / 60 (140)	1	1	2
– ASTM-B (MIL-S-3136 B Typ 111)	RT / 60 (140)	1	1	5
– ASTM-C	RT / 60 (140)	2	1	4
– Diesel fuel	60 (140)	1	1	2
– Fuel oil	60 (140)	1	1	1
– Gasohol (10% ethanol or methanol)	RT	2	3	4
– Kerosene	RT	1	1	1
– Mineral oil	100 (210)	1	1	1
– Petrol	RT	1	1	4
Fumaric acid	RT	1	1	4
Furan	RT	4	5	4
Furfural	RT	4	4	4
Furfuran	RT	4	5	4
G				
Gelatine (aq)	40 (105)	1	1	4
Glucose	RT	1	1	5
Glue	RT	1	1	5
Glycerin	100 (210)	1	1	3
Glycols	100 (210)	1	1	4
H				
n-Hexaldehyde	RT	4	4	5
Hexane	RT / 60 (140)	1	1	1
1-Hexene	RT	2	1	1
Hexyl alcohol	RT	1	1	4
Hydraulic fluids				
– Hydraulic oils (acc. to DIN 51524)	80 (175)	1	1	1
– Hydraulic fluids (acc to DIN 51502):				
– HFA (oil in water emulsion)	55 (130)	1	1	5
– HFB (water in oil emulsion)	60 (140)	1	1	5
– HFC (aqueous Polymer solutions)	60 (140)	1	1	5
– HFD (phosphoric esters)	80 (175)	4	2/4	4
– Skydrol 500	80 (175)	4	4	4
– Skydrol 7000	80 (175)	4	2	4
Hydrazine	RT	2	4	5
Hydrobromic acid	RT / 60 (140)	4	1	4
Hydrochloric acid (conc.)	RT	3	1	4





Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–		
Hydrochloric acid (conc.)	80 (175)	4	2	4
Hydrocyanic acid (Prussic acid)	RT	2	1	4
Hydrofluoric acid (conc.)	RT	4	1	4
Hydrofluoric acid (conc.)	100 (210)	4	3	4
Hydrofluoric acid (anhydrous)	100 (210)	4	4	4
Hydrogen gas	RT	1	1	2
Hydrogen peroxide (90%)	RT	4	2	4
Hydrogen sulphide (wet)	RT / 100 (210)	4	4	4
Hydroquinone	RT	4	2	4
Hypochlorous acid	RT	4	1	4
I				
Iodine pentafluoride	RT	4	4	4
Isobutyl alcohol	RT	2	1	4
Isooctane	RT	1	1	1
Isophorone	RT	4	4	4
Isopropyl acetate	RT / 80 (175)	4	4	4
Isopropyl alcohol	RT / 60 (140)	2	1	4
Isopropyl chloride	RT	4	1	4
Isopropyl ether	RT / 60 (140)	2	4	3
L				
Lactic acid	RT	1	1	4
Lactic acid	100 (210)	4	1	4
Lard	80 (175)	1	1	1
Lavender oil	RT	2	1	2
Lead acetate (aq)	RT / 60 (140)	2	2	4
Lead nitrate (aq)	RT	1	5	5
Linoleic acid	RT	2	2	5
Linseed oil	RT / 60 (140)	1	1	1
Lubricants				
– ASTM oil No. 1	100 (210)	1	1	1
– ASTM oil No. 2	100 (210)	1	1	1
– ASTM oil No. 3	100 (210)	1	1	1
– ATF oils, type A	100 (210)	1	1	1
– ATF oils, type I	100 (210)	1	1	1
– ATF oils, type II	100 (210)	1	1	1
– ATF oils, type F	100 (210)	1	1	1
– ATF oils, type Mercon	100 (210)	1	1	1
– EP lubes	100 (210)	2	1	1
– Fluorolube	100 (210)	1	2	5
– Grease MIL-G-7118 A	80 (175)	1	1	3
– Grease MIL-G-7711 A	80 (175)	1	1	1
– Lubricating oils (petroleum)	100 (210)	1	1	1
– Red oil (MIL-H-5606)	100 (210)	1	1	1
– RJ-1 (MIL-F-25558 B)	100 (210)	1	1	1
– RP-1 (MIL-F-25576 C)	100 (210)	1	1	1
– Motor oil SAE 30	100 (210)	1	1	1
– Transmission oil SAE 90	100 (210)	1	1	1
– Transmission oil MIL-L-23699 A	100 (210)	1	1	3
– Silicone greases	120 (250)	1	1	1
– Silicone oils	120 (250)	1	1	1
– Transformer oil (Pyranol)	60 (140)	4	1	5
– Transformer oil	60 (140)	1	1	2
– Transmission fluid type A	RT	1	1	1
– Turbine oil	100 (210)	2	1	1
M				
Magnesium chloride (aq)	100 (210)	1	1	5
Magnesium hydroxide (aq)	100 (210)	2	1	4
Magnesium sulphate (aq)	100 (210)	1	1	4
Maleic acid	100 (210)	4	1	4
Maleic anhydride	60 (140)	4	4	4
Malic acid	RT	1	1	4
Mercury	RT / 60 (140)	1	1	5
Mercury chloride (aq)	RT / 60 (140)	1	1	5
Mesityl oxide	RT	4	4	4
Methane	RT	1	2	1





Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–		
Methanol (methyl alcohol)	60 (140)	1	4	4
Methyl acetate	RT	4	4	4
Methyl acrylate	RT	4	4	4
Methyl aniline	RT	4	2	4
Methyl bromide	RT	2	1	3
Methyl cellosolve (methyl glycol)	RT	3	4	4
Methyl chloride	RT	4	2	4
Methyl cyclopentane	RT	4	2	4
Methylene chloride	RT	4	2	4
Methyl ethyl ketone	RT	4	4	4
Methyl formate	RT	4	5	5
Methyl glycol (Cellosolve)	RT	3	4	4
Methyl isobutyl ketone	RT	4	4	4
Methyl methacrylate	RT	4	4	4
Methyl salicylate	RT	4	5	5
Milk	RT	1	1	4
Mustard gas	RT	5	5	5
N				
Naphtha	RT	2	1	2
Naphthalene	60 (140)	4	1	5
Naphthalenic acid	RT	2	1	5
Natural gas	RT	1	1	2
Neat-s-foot oil	RT / 60 (140)	1	1	1
Nickel acetate (aq)	RT	2	4	4
Nickel chloride	RT	1	1	4
Nickel sulphate (aq)	RT / 60 (140)	1	1	4
Nitric acid (conc.)	RT	4	3	4
Nitric acid (fuming)	RT	4	4	4
Nitric acid (dilute)	RT	4	1	4
Nitrobenzene	50 (120)	4	2	4
Nitroethane	RT	4	4	4
Nitrogen	RT	1	1	1
Nitrogen tetroxide	RT	4	4	4
Nitromethane	RT	4	4	4
O				
Octadecane	RT / 50 (120)	1	1	2
n-Octane	RT	2	1	4
Octyl alcohol	RT	2	1	4
Oleic acid	70 (160)	1	2	2
Olive oil	60 (140)	1	1	1
Oxalic acid	70 (160)	2	1	5
Oxygen	RT	2	1	2
Oxygen	> 100 (210)	4	2	4
Ozone	RT	4	1	2
P				
Palmitic acid	60 (140)	1	1	4
Peanut oil	RT / 50 (120)	1	1	1
Perchloric acid	RT	4	1	4
Perchloroethylene	RT / 60 (140)	2	1	4
Petroleum	below 120 (250)	1	1	2
Petroleum	above 120 (250)	4	2	4
Petroleum ether	RT / 60 (140)	1	1	1
Petroleum gas (liquified)	RT	1	1	3
Phenol	60 (140) / 100 (210)	4	1	4
Phenyl ethyl ether	RT	4	4	4
Phenyl hydrazine	RT / 60 (140)	4	1	4
Phoron (diisopropylidene acetone)	60 (140)	4	4	4
Phosphoric acid, 20%	50 (120) / 60 (140)	2	1	5
Phosphoric acid, 45%	50 (120) / 60 (140)	4	1	5
Phosphorus trichloride	RT	4	1	5
Pickling solution	RT	4	2	4
Picric acid	RT	4	1	5
Pinene	RT	2	1	4
Pine oil	RT	4	1	5
Piperidine	RT	4	4	4
Potassium acetate (aq)	RT	2	4	4



Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–		
Potassium chloride (aq)	RT / 60 (140)	1	1	1
Potassium cyanide (aq)	RT / 50 (120)	1	1	1
Potassium dichromate (aq)	RT	1	1	1
Potassium hydroxide (aq)	60 (140)	2	4	4
Potassium nitrate (aq)	RT / 60 (140)	1	1	1
Potassium sulfate (aq)	RT / 60 (140)	1	1	4
Propane	RT	1	1	1
Propyl acetate	RT	4	4	4
Propyl alcohol	RT / 60 (140)	1	1	4
Propylene	RT	4	1	4
Propylene oxide	RT	4	4	4
Prussic acid (hydrocyanic acid)	RT	2	1	4
Pyridine	RT	4	4	4
Pyroligneous acid	RT	4	4	4
Pyrrole	RT	4	4	4
R				
Rapeseed oil	RT	2	1	2
Refrigerants (acc. to DIN 8962)				
– R 11	RT	2	1	5
– R 12	RT	1	2	1
– R 13	RT	1	1	5
– R 13 B1	RT	1	1	5
– R 14	RT	1	1	5
– R 21	RT	4	4	5
– R 22	RT	4	4	2
– R 31	RT	4	4	5
– R 32	RT	1	4	5
– R 112	RT	3	1	5
– R 113	RT	1	2	5
– R 114	RT	1	2	5
– R 114 B2	RT	2	2	5
– R 115	RT	1	2	5
– R C 318	RT	1	2	5
S				
Salicylic acid	RT	2	1	5
Sea water	RT	1	1	4
Silver nitrate (aq)	RT	2	1	1
Soap solution	RT	1	1	4
Sodium acetate (aq)	RT	2	4	4
Sodium bicarbonate (aq)	60 (140)	1	1	5
Sodium bisulphite (aq)	100 (210)	1	1	4
Sodium carbonate (soda)	RT / 60 (140)	1	1	5
Sodium chloride (aq)	RT / 100 (210)	1	1	5
Sodium cyanide (aq)	RT	1	1	5
Sodium hydroxide (aq)	RT	2	2	3
Sodium hypochlorite (aq)	RT / 50 (120)	2	1	4
Sodium metaphosphate	RT / 60 (140)	1	1	5
Sodium nitrate (aq)	RT / 60 (140)	2	5	5
Sodium phosphate (aq)	RT / 60 (140)	1	1	4
Sodium silicate (aq)	RT / 60 (140)	1	1	5
Sodium sulphate (aq) (Glauber's salt)	RT / 60 (140)	1	1	4
Sodium thiosulphate (aq)	RT / 50 (120)	2	1	4
Soyabean oil	RT	1	1	1
Stannic chloride (aq)	RT / 80 (175)	1	1	5
Stannous chloride (aq)	RT / 80 (175)	1	1	5
Steam	below 150 (300)	4	4	4
Steam	above 150 (300)	4	4	4
Stearic acid	60 (140)	2	2	4
Stoddard solvent	RT	1	1	1
Styrene	RT	4	2	4
Sucrose solution	RT / 60 (140)	1	1	4
Sulphur	RT / 60 (140)	4	1	4
Sulphur chloride (aq)	RT	3	1	4
Sulphur dioxide (dry)	RT / 60 (140)	4	1	4
Sulphur dioxide (liquified)	RT / 60 (140)	4	1	4
Sulphur dioxide (wet)	RT / 60 (140)	4	1	4





Table 2

Chemical resistance

Medium	Temperature	Medium's effect on sealing lip material		
		R, D, H	V	P
–	°C (°F)	–	–	–
Sulphur hexafluoride	RT	2	1	4
Sulphuric acid (conc.)	RT / 50 (120)	4	1	4
Sulphuric acid (20%) (battery acid)	60 (140)	4	1	4
Sulphuric acid (dilute)	RT	3	1	2
Sulphurous acid	RT / 60 (140)	4	1	4
Sulphur trioxide	RT	4	1	4
T				
Tannic acid	RT / 60 (140)	1	1	4
Tar, bituminous	RT	2	1	4
Tartaric acid	60 (140)	1	1	5
Tepineol	RT	2	1	5
Tetrabromoethane	RT	4	1	4
Tetrabromomethane	RT	4	1	5
Tetrabutyl titanate	RT	2	1	5
Tetrachloroethylene	60 (140)	4	2	4
Tetraethyl lead	RT	2	1	5
Tetrahydrofuran	RT	4	4	4
Tetrahydronaphthalene (Tetralin)	RT	4	1	5
Thionyl chloride	RT	4	2	4
Titanium tetrachloride	RT	2	1	4
Toluene	RT	4	1	4
Toluene diisocyanate	RT	4	4	4
Triacetin	RT	2	1	4
Tributoxy ethyl phosphate	RT	4	1	4
Tributyl phosphate	RT / 60 (140)	4	4	4
Trichloroacetic acid	60 (140)	5	4	4
Trichloroethane	RT	4	1	4
Trichloroethylene	RT	4	1	4
Tricresyl phosphate	RT / 60 (140)	4	1	4
Triethanol amine	RT	2	4	4
Triethyl aluminium	RT	4	2	4
Triethyl borane	RT	4	1	4
Trinitrotoluene	RT	4	2	4
Trioctyl phosphate	RT / 60 (140)	4	2	4
Tung oil (China wood oil)	RT	1	1	1
Turpentine	RT	1	1	2
V				
Varnish	RT	2	1	4
Vegetable oil	60 (140)	1	1	1
Vinyl acetylene	RT	1	1	5
Vinyl chloride	RT	4	1	5
W				
Water	100 (210)	1	1	4
Whisky	RT	1	1	4
White oil	RT / 80 (175)	1	1	1
Wine	RT	1	1	4
Wood oil	RT	1	1	1
X				
Xylene	RT	4	1	4
Xylidine (di-methyl aniline)	RT	3	4	4
Z				
Zeolites	RT	1	1	5
Zinc acetate (aq)	RT	1	1	4
Zinc chloride (aq)	RT	1	1	4
Zinc sulphate (aq)	RT	1	1	4



Seal Request Form

Email form to: ask.seals.usa@skf.com

Customer to Quote: _____ Contact: _____

End Customer: _____ Contact: _____

Seal Brand and Part #: _____

Application: _____

Purchase QTY: Delivery Date: Profile:
 Annual Usage: Target Price: Material:

Reason for Inquiry:

Delivery Mounting Quality Material New Design
 Seal Life Wear Leakage Price Other:

Seal Type: Piston Seal Rod Seal Guide Ring O-Ring Rotary Shaft Seal
 Wiper Backup Ring Gasket Check if Split Other:

Motion: Static Oscillating Linear (Single Acting Double Acting)
 Rotating (Clockwise* Counter-clockwise* Bi-directional *Viewed from air side) Shaft Rotating Bore Rotating

Internal Media: (Type, Level) _____

External Media: (Type, Level) _____

Operating Conditions (Label Units)	Speed (fpm, m/s, rpm)	Differential Pressure (PSI/BAR)	Temperature (°F/°C)	Service life (h)
Minimum				<input type="text"/>
Normal				<input type="text"/>
Maximum				<input type="text"/>

Cycles/min
 Stroke length or Degrees of arc
 Hardware Image No. (Page 2)

Housing Type: Through Press-in Open End 2 Piece Groove Snap-in

MM <input type="checkbox"/> IN <input type="checkbox"/>	Key	Values	Tolerance	Fixed (Yes/No)	Hardness	Surface Finish	Material
Shaft / Rod / Groove DIA	d						
Shaft / Rod / Groove DIA	d ₁						
Bore / Groove DIA	D						
Bore / Groove DIA	D ₁						
Bore / Groove Length	L						
Bore / Groove Length	L ₁						
Max. Extrusion Gap (Air)	e _{MAX}						

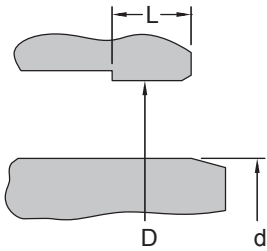
Shaft Treatment Dynamic Run-out Shaft to Bore Misalignment Axial Free Play

Additional information (quality requirements, installation method, torque, pressure cycle, -contamination, etc.):

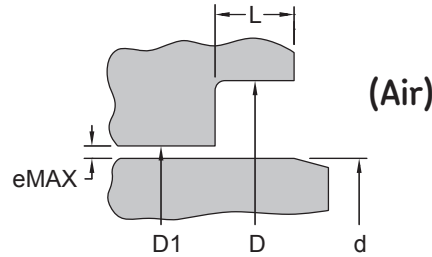


Hardware Images

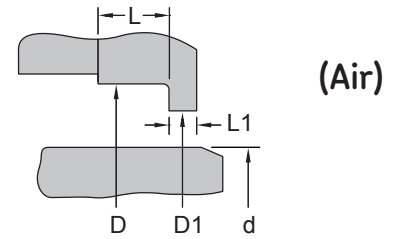
1. Through



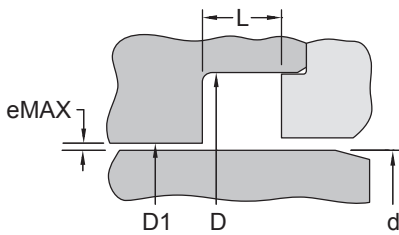
2. Press-in



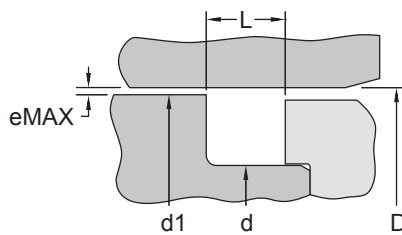
3. Open End



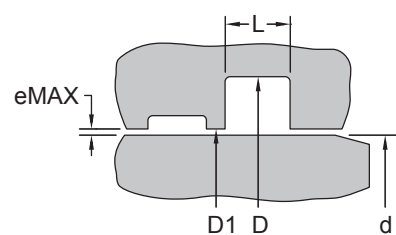
4. 2-Piece Housing



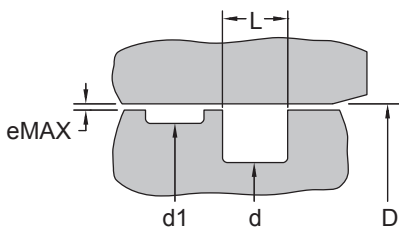
5. 2-Piece Piston



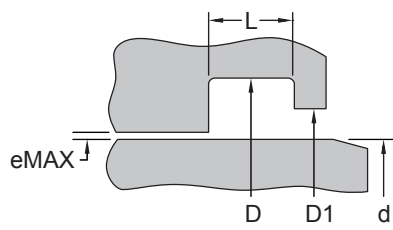
6. Groove in Housing



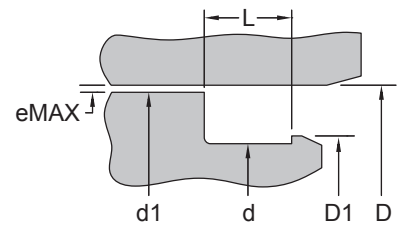
7. Groove in Piston



8. Snap-in Housing



9. Snap-in Lip Retention



MM <input type="checkbox"/> IN <input type="checkbox"/>	Key	Values	10. Sketch
Shaft/Rod/Groove DIA	d		
Shaft/Rod/Groove DIA	d ₁		
Bore/Groove DIA	D		
Bore/Groove DIA	D ₁		
Bore/Groove Length	L		
Bore/Groove Length	L ₁		
Max. Extrusion Gap (Air)	e _{MAX}		

*All corners require radiuses, edges require chamfers and sealing surfaces have defined finishes and hardness values. Please see SKF product catalogs for specific requirements.



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