

TIMKEN

Where You Turn



Timken Industrial Seals

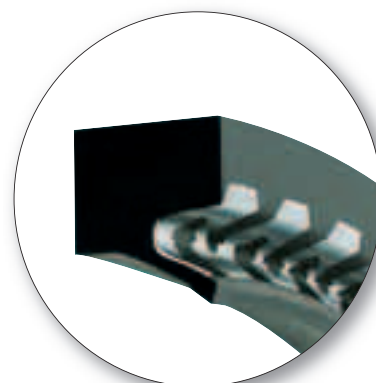
Timken Industrial Seals



Model 64 and 59



Model 53 and 63



Model 23

*Timken PS-SEAL® Thermo-Elastic
High-Performance Seals (see page 26)*



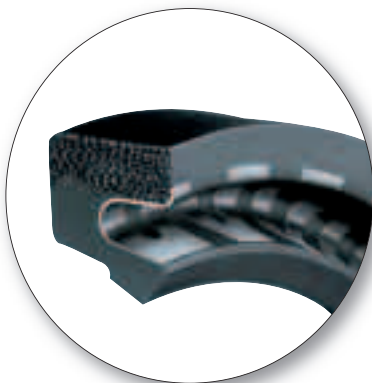
TIMKEN

Where You Turn

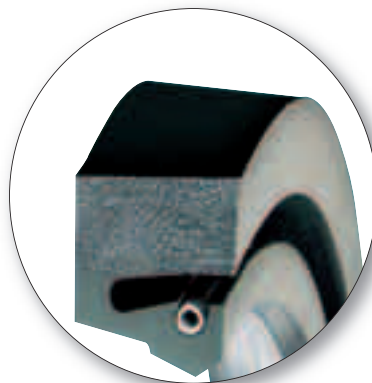
No one knows bearings, and how to protect them, better than Timken. Our complete line of high performance oil seals and bearing isolators are specifically engineered for long life and high performance in the toughest applications. Turn to us for longer bearing life, increased productivity and reduced maintenance costs.

Creating the most advanced seals for heavy industrial markets requires quality materials. Timken industrial seals are manufactured using special elastomers that are engineered for high abrasion resistance, low wear and outstanding temperature and

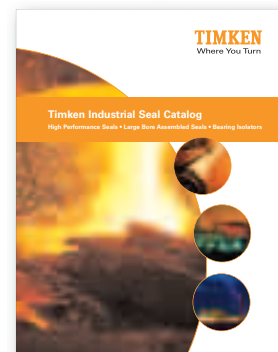
chemical resistance. In addition, we have materials and designs suited for a wide range of applications and our color-coded seals help you identify the seal to ensure you are using the right seal for the right application.



Model 26



Model 154



**For other types of seal please refer to:
Timken Industrial Seal Catalog**

Coping with really demanding conditions

Timken technology provides the answer in difficult operating conditions.

Timken seals 23, 26, 151, 154 and 161 come without a metal case. They are intended for all applications where use of shaft seals with a metal case is, for structural, assembly-related, or medium-specific reasons, not possible. All of these models are available either in split (except for model 161) or continuous versions. Their straightforward design makes them suitable for all sorts of applications and they have proven their reliability in many industries. The sealing lip is made from a high-quality elastomer compound which in terms of its low friction values and long useful life is truly outstanding.

These models, with this carefully selected elastomer and stainless-steel springs, are highly resistant to the adverse effects of chemicals and corrosives.

Model 64, 53, 63, 59



Model 64

Timken Model 64 is specially designed for use in particularly difficult operating conditions. It has proved indispensable in the pulp and paper, aluminum and steel industries worldwide. Model 64 has proven its particular value in all applications which involve large shaft-to-bore misalignment and high peripheral speeds but still require a long useful life and high reliability. The elastic and rust-resistant stainless steel finger springs press the sealing lip uniformly and evenly onto the rotating shaft. Shaft-to-bore misalignment and dynamic runout are absorbed by the finger spring (see warning on page 7). The garter spring which is integrated in the finger spring only responds in the event of extreme misalignment or runout. In conjunction with this spring assembly the sealing lip operates very elastically, generating only a low radial force. The sealing lip is clamped in position together with the finger spring in a heavy-duty metal-case. This heavy-duty housing makes the sealing ring dimensionally very stable, especially suitable for large diameter bores, and easy to install.



Model 53, Model 63

Timken Model 53 and Model 63 cover the requirements spectrum for smaller diameters and lower speeds.

They share the same design as the Model 64 except that these models, intended for smaller diameter applications, incorporate the finger spring only; (the garter spring is not needed).

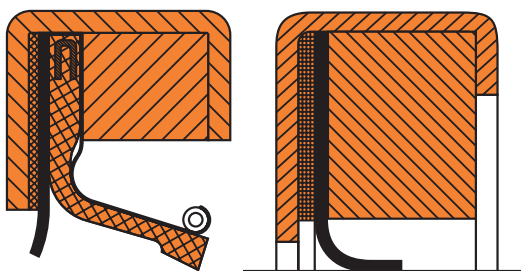
Within the range of applications for which they are intended these seals offer all the same advantages, including functional reliability and a long useful life.



Model 59

Timken Model 59 successfully combines the excellent qualities of the 64 model with special assembly and installation advantages. Otherwise identical to the Model 64 in terms of basic design and structure, the only difference is that the Model 59 operates not with the Model 64's finger spring and garter spring combination but with a vulcanized finger spring instead.

Thanks to the structural design the Model 59 is easy to install – even when mounting / installing against the shaft. The Model 59 is available for shafts of 150 mm diameter and above.



Model 64
with GYLON dustlip

GYLON lip seal in
KLOZURE housing

*For your information:
Picture shows
a GYLON® lip in
the housing. This
demonstrates the
individual character
we can offer, since we
can assemble GYLON
lips in every available
metal casing. This has
potential uses for high
speed applications.*

Model Specials

The highly successful Timken Model concept can also, on request, be modified for unusual needs (e.g. peripheral speeds up to 35 meters per second and temperatures above 200°C). The two examples show the full breadth of our spectrum of Model special solutions. For further details please contact us at Timken. We shall be pleased to give you more information.

Technical data Model 64, 53, 63, 59

| Model | Case | Spring | Shaft Diameters (mm) | Maximum Shaft Speed (m/s) | Maximum Shaft Misalignment and Runout (mm) | Available Lip Material | Installation | | | |
|-------|--------|--|----------------------|---------------------------|--|--|--|--|--|-----------|
| 64 | steel* | Stainless steel garter and finger spring | 200 - 2300 | 35 | 2,4 | - Silicone - MILL-RIGHT® N - MILL-RIGHT® ES - MILL-RIGHT® V | press-fit | | | |
| | | | | 25 | 3 | | | | | |
| 53 | steel* | Stainless steel finger spring | 75 - 1000 | 5 | 0,4 | | - Silicone - MILL-RIGHT® N - MILL-RIGHT® ES - MILL-RIGHT® V | press-fit | | |
| | | | | 10 | 0,25 | | | | | |
| | | | | 15 | 0,13 | | | | | |
| 63 | steel* | Stainless steel finger spring | 6 - 75 | 5 | 0,4 | | | - Silicone - MILL-RIGHT® N - MILL-RIGHT® ES - MILL-RIGHT® V | press-fit | |
| | | | | 10 | 0,25 | | | | | |
| | | | | 15 | 0,13 | | | | | |
| 59 | steel* | Bonded in stainless steel finger spring | 150 - 2300 | 25 | 2 | | | | - Silicone - MILL-RIGHT® N - MILL-RIGHT® ES - MILL-RIGHT® V | press-fit |

*Other materials are available on request

Tolerances and assembling dimensions

| Shaft Diameter (mm) | Tolerances (mm) |
|---------------------|-----------------|
| up to 100 | ± 0,08 |
| 101 - 150 | ± 0,1 |
| 151 - 250 | ± 0,13 |
| over 250 | ± 0,15 |

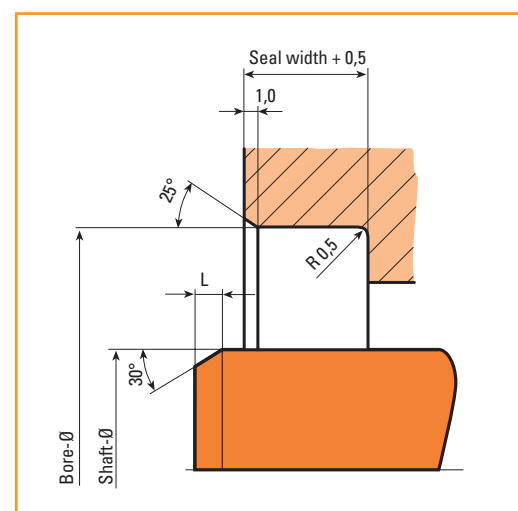
| Bore Diameter (mm) | Tolerances (mm) |
|--------------------|-----------------|
| up to 76 | ± 0,025 |
| 77 - 150 | ± 0,04 |
| 151 - 255 | ± 0,05 |
| 256 - 510 | + 0,05/- 0,10 |
| 511 - 1015 | + 0,05/- 0,15 |
| over 1015 | + 0,05/- 0,25 |

| Shaft Diameter (mm) | Shaft Lead Corner 'L' (mm) |
|---------------------|----------------------------|
| up to 20 | 2,0 |
| 21 - 40 | 3,0 |
| 41 - 70 | 4,0 |
| 71 - 130 | 6,0 |
| 131 - 240 | 7,0 |
| over 240 | 12,0 |

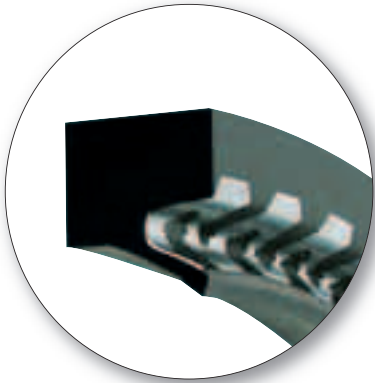
Sealing surface requirements

| Shaft Speed (m/s) | Surface Finish | | min. Surface Hardness (HRC) |
|-------------------|----------------|-----------|-----------------------------|
| | Ra (µm) | Rmax (µm) | |
| up to 10 | 0,5 - 0,6 | 2,0 - 3,0 | 30 |
| 11 - 16 | 0,3 - 0,5 | 1,0 - 2,0 | 40 |
| over 16 | 0,2 - 0,3 | 0,8 - 1,0 | 40 |

Obtained by plunge grinding



Model 23, 26, Universal Oil Seal Models 151, 154, 161, 154-M

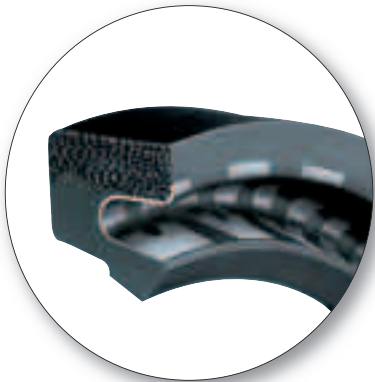


Model 23 Split

Certain situations where installation is particularly difficult may require a split sealing ring. This is where Timken Model 23 Split comes in handy. It is manufactured from homogeneous nitrile rubber and incorporates vulcanized, stainless steel finger springs. Thanks to this finger spring design the Model 23 Split sealing ring can be easily installed and operates reliably.

Timken Model 23 has proven its value in the construction of heavy machinery, in rolling mills, paper-making machines, marine motors, earth movers, and gear systems, as well as in wipers for hydraulic applications.

The Model 23 must always be installed together with a cover plate. It is suitable for non-pressurized applications only.



Model 26

Timken Model 26 is a sealing ring without a metal-case. Its homogeneous elastomer compound reinforced back ensures that the ring is not axially twisted (not for split or pressurized applications). Thanks to its structural design the Model 26 is easy to use and easy to install. Even in difficult positions where it has to be mounted against the lip, the sealing lip cannot flip over and the spring cannot jump out.

In cases where a split sealing ring is used, a cover plate is required. The Model 26 is used predominantly in the pulp and paper, aluminum, and steel industries. In the steel industry in particular, it has proven indispensable for working rollers. Other applications include blowers, pumps, mining machinery, general mechanical engineering and machine construction. When installed together with its cover plate the Model 26 can be used under pressures up to 1 bar.

Range of applications and design features

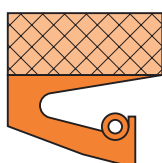
The cross-section of Timken sealing rings comprise three elements. The back is a substantially dimensioned, fabric-reinforced elastomer for supporting the sealing ring against the housing bore (not on Model 23).

The sealing lip with its integrated stainless steel garter spring (Models 151, 154, 161) ensures that this design can also cope with large shaft-to-bore misalignment and dynamic run out (see warning on page 7).

These Timken sealing rings are used predominantly in the pulp and paper, aluminum, and steel industries, in the construction of heavy machinery, and particularly in gear systems and pumps.

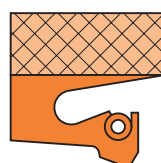
Universal Oil Seals

Timken universal oil seals can be used anywhere. They can also be supplied in many variants. Your Timken advisor will be pleased to give you further detailed information regarding application possibilities tailor-made for your specific conditions.



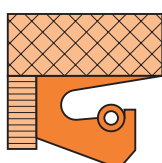
Model 151

Universal oil seal can be supplied in two versions, either split (151-1) or endless (151-2). This is a tested and established sealing lip design.



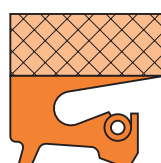
Model 154

Universal oil seal can be supplied in two versions, either split (154-1) or endless (154-2). This is a new sealing lip design.



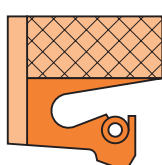
Model 161-0

Universal oil seal is available in an endless version only, with PTFE back-up ring, and is pressure-resistant.



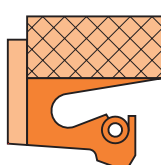
Model 154-DL

Universal oil seal 154-DL incorporates a dust lip. This is a new sealing lip design.



Model 154-P

Universal oil seal 154-P incorporates radial lubrication grooves.



Model 154-PG

Universal oil seal 154-PG incorporates radial lubrication grooves and peripheral lubrication grooves.



Model 154-M

Universal oil seal 154-M incorporates a metallic reinforcement ring; it can be installed without an axial cover plate.

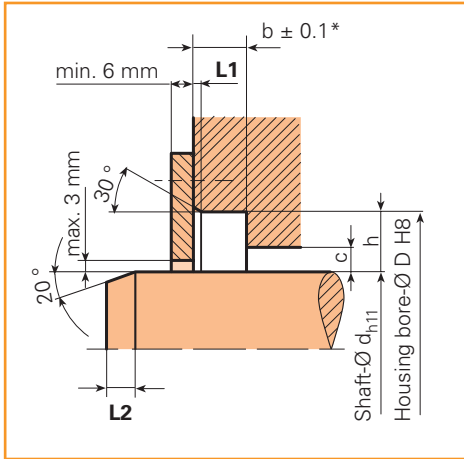
Technical data Model 23, 26, 151, 154, 161, 154-M

| Model | Spring | Shaft Diameters (mm) | Maximum Shaft Speed (m/s) | Maximum Shaft Misalignment and Runout (mm) | Available Lip Material | Installation |
|-------|---|----------------------|---------------------------|--|--|-------------------------|
| 23 | Bonded in stainless steel finger spring | 75 - 3050 | 5 10 | 0,25 0,13 | - MILL-RIGHT® N - Silicone | Cover plate recommended |
| 26 | Bonded in stainless steel finger spring | 20 - 1500 | 25 | 0,5 | - MILL-RIGHT® ES - MILL-RIGHT® V | Cover plate required |
| 151 | Stainless steel garter spring | up to 2400 | 25 | 1,5* | NBR, Silicone, MILL-RIGHT, Fluoroelastomer | Cover plate required |
| 154 | Stainless steel garter spring | up to 2400 | 25 | 1,5* | NBR, Silicone, MILL-RIGHT, Fluoroelastomer** | Cover plate required |
| 161 | Stainless steel garter spring | up to 2400 | 25 | 0,25* | | Cover plate required |
| 154-M | Stainless steel garter spring | up to 2400 | 25 | 1,5* | | No cover plate required |

All oil seals are available in split and endless version - Model 23 only in split version / Model 154-M and 161 only in endless version

* For more information please see the technical instructions on page 9 - ** Other materials are available.

Models 23, 26 and Universal Oil Seals



Calculating the bore diameter

The bore diameter D is calculated as follows:

$$D = d + (2 \cdot h)$$

Clearance: max. 0,5 · h
 min. 0,3 · h

Installation dimensions and tolerances

For the dimensions of Timken universal sealing rings available, please refer to the tools lists. For Model 23 and Model 26, please inquire separately.

Our installation diagrams and the associated tables contain all the data you will need for properly and reliably calculating the dimensions of a shaft seal using Model 23, 26 and Timken universal sealing rings.

* This applies for one sealing ring. If two sealing rings are being used in one mounting recess, choose the tolerance +0.1/+0.3

Model 23 split, metric dimensions

| Shaft Diameter (mm) | Cross Section Radial Height h (mm) | Cross Section Axial Width b (mm) |
|---------------------|------------------------------------|----------------------------------|
| 70 - 250 | 12,5 | 12,5 |
| 120 - 350 | 15,0 | 15,0 |
| 250 - 500 | 20,0 | 20,0 |
| 400 - 1500 | 25,0 | 25,0 |

These metric cross-sections are the standard Model 23 series available from stock. On request the Model 23 version is also available measured in inches.

Model 23, 26, 154, 151, 161

| Shaft Diameter (mm) | L1 (mm) | L2 (mm) |
|---------------------|---------|---------|
| up to 50 | 1,1 | 5,0 |
| 51 - 100 | 1,6 | 6,0 |
| 101 - 250 | 2,0 | 7,5 |
| 251 - 400 | 2,2 | 9,0 |
| 401 - 600 | 2,5 | 11 |
| 601 - 1800 | 3,2 | 20 |

Sealing surface requirements

| Shaft Speed (m/s) | Surface Finish | | min. Surface Hardness (HRC) |
|-------------------|----------------|-----------|-----------------------------|
| | Ra (µm) | Rmax (µm) | |
| up to 10 | 0,5 - 0,6 | 2,0 - 3,0 | 30 |
| 11 - 16 | 0,3 - 0,5 | 1,0 - 2,0 | 40 |
| over 16 | 0,2 - 0,3 | 0,8 - 1,0 | 40 |

The shaft surface must have been ground smooth without any nicks, gouges, or other surface defects. Please refer to the list of sealing lip materials on page 11.

Universal Oil Seals – Technical instructions

Shaft speed

Timken Universal Oil Seal Models 151 and Model 154 can, in otherwise ideal conditions, be used for peripheral speeds of up to a maximum of 25 meters per second.

With Timken Universal Oil Seal Model 161, the maximum permissible shaft speed depends on the pressure.

For further details, please refer to the pressure diagram in the section entitled "Pressure".

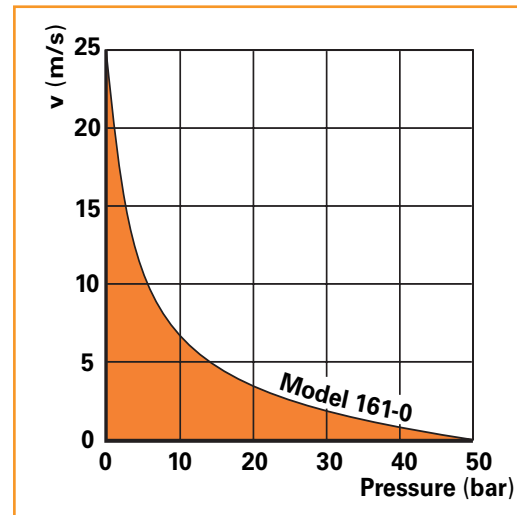
Pressure

Split Universal Oil Seals Model 151-1 and Model 154-1 are not designed for applications involving exposure to pressure.

Models 151-2 and 154-2 can, depending on revolution and shaft speed, be used in applications involving pressure differences as per DIN 3760.

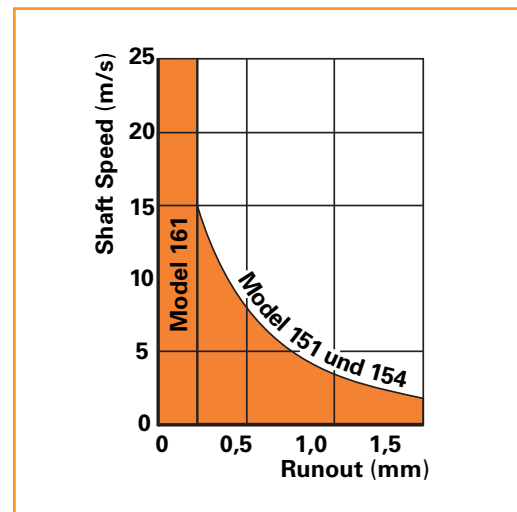
The maximum permissible pressure is 0.5 bar.

Model 161-0 is designed to be especially pressure-resistant. It can withstand pressures, depending on shaft speed, as shown in the pressure diagram.



Shaft-to-bore misalignment and dynamic runout

Thanks to their design and construction, Timken universal sealing rings can absorb considerable radial shaft-to-bore misalignment and dynamic runout. The maximum radial play depends on the cross-section and diameter of the sealing ring and on the shaft speed involved. The maximum permissible radial excursion as a combination of shaft-to-bore misalignment and dynamic runout is shown in simplified form in the adjacent diagram.



WARNING!

Proper maintenance and handling practices are critical. Failure to follow the manufacturer's instructions can result in equipment failure, creating a risk of serious bodily harm.

Models 23, 26 and 151, 154, 161 – Assembly and installation

Lubrication

The prerequisite for giving Timken universal sealing rings a long and useful life is to ensure that the sealing lip is always adequately lubricated. If lubrication is not provided by the medium itself then it must be supplied separately (radial or peripheral grooves).

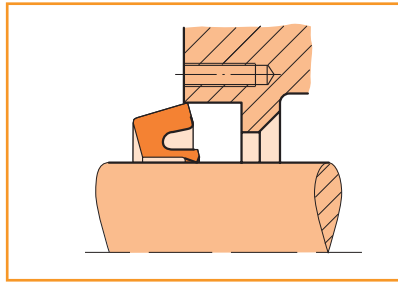


Fig. 1

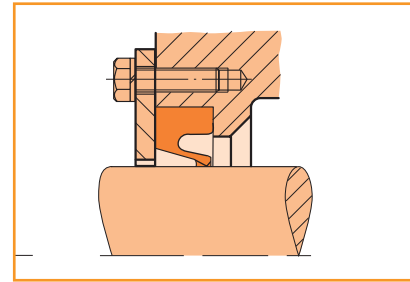
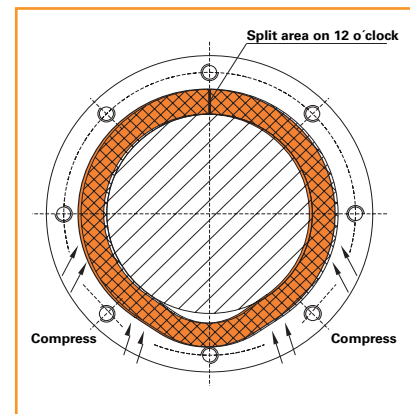


Fig. 2

Insertion and installation instructions

- Timken Universal Oil Seal Models 151, 154, 161, 23, 26 (split) must be inserted together with the retainer ring, which, when completely tightened, generates extra axial twist and thus increased static hermeticity.
- Also, with a view to achieving optimal hermeticity, the external diameter of the sealing ring is made slightly larger than that of the housing bore. To facilitate installation the housing bore should be chamfered.
- Universal Oil Seal Models 151, 154 and 26 are available in both split and continuous versions. In certain situations a split sealing ring is easier to install. The split versions of these sealing rings are not pressure-resistant.
- Before installing, check the sealing rings for signs of damage and for dust and dirt. Also before installing, apply

- lubricant to the sealing lip.
- Clean the mounting recess.
- Lay the split sealing rings around the shaft. In the case of sealing rings with a garter spring, the spring must first be opened at the spring lock. As soon as the sealing ring is sitting in position on the shaft, the garter spring must then be closed again at the spring lock and laid in the groove on the sealing lip.
- In the case of horizontal shafts the joint must be positioned on top. In tandem arrangements, the joint must be positioned at 11:00 hours / 13:00 hours. First the joint must be placed in the mounting recess; (see Figure 1) Then the seal must be pressed slowly in all around the mounting recess. Then the retainer ring must be mounted and tightened; (see Figure 2). Having installed the sealing ring, check that the sealing lip sits snugly all round.



Additional information for cover plates

The cover plate can be either split or continuous. In either case it should have a minimum thickness of 6 mm thus ensuring that the sealing rings are pressed properly in position.

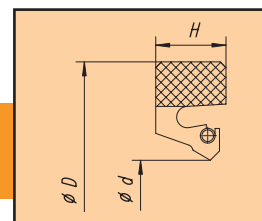
Lip material selection chart

| Material* | Areas of application | Operating temperature*** |
|---------------------------------------|---|--------------------------|
| Nitrile, NBR, MILL-RIGHT N | Lubricants, hydraulic oils, and greases based on mineral oil, water*, HFA-, HFB*-, HFC-fluids, washing liquids. | -40 to +120°C |
| Silicones VMQ | Vegetable oils, oils with a high aniline point, motor and engine oils, gear oils. Medium resistance to swelling in mineral oils and greases. Not suitable for aliphatic and aromatic hydrocarbons. Good temperature stability and cold flexibility. | -60 to +175°C |
| MILL-RIGHT, MILL-RIGHT ES | Lubricants, hydraulic oils, and greases based on mineral oil, water*, HFA*-, HFB*-, HFC*-fluids, washing liquids. Higher temperature stability than nitrile rubber. Excellent resistance to wear. | -40 to +175°C |
| Fluoroelastomers, MILL-RIGHT V | Mineral fluids and lubricating greases, HFA-, HFB*-, HFC*-, HFD-fluids, water*, chemicals, solvents. Not suitable for some hardly inflammable, phosphoric-ester-based fluids (e.g. Pydraul 10E) | -30 to +205°C |

* Additional lubrication recommended

*** Maximum temperatures for continuous operation are 15 % lower

Timken Universal Oil Seals



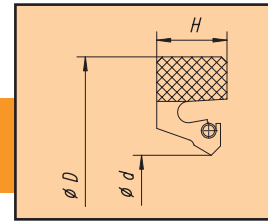
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 8 | 22 | 7 | • | | | | | | | | |
| 12 | 24 | 7 | • | | | | | | | | |
| 15 | 30 | 7 | | | • | | | | | | |
| 15 | 35 | 10 | • | | | | | | | | |
| 17 | 28 | 7 | | • | | | | | | | |
| 19,5 | 33,33 | 7,93 | | | | • | | | | | |
| 20 | 35 | 10 | | | • | | | | | | |
| 22 | 32 | 6 | • | | | | | | | | |
| 22 | 36 | 7 | • | | | | | | | | |
| 24 | 36 | 10 | | | • | | | | | | |
| 24 | 40 | 10 | | | • | | | | | | |
| 24 | 40,1 | 10 | • | | | | | | | | |
| 25 | 38 | 8 | | • | | | | | | | |
| 25 | 40 | 8 | • | | | | | | | | |
| 25 | 47 | 10 | • | | | | | | | | |
| 25 | 50 | 10 | | • | | | | | | | |
| 25 | 51,8 | 12,5 | • | | | | | | | | |
| 28 | 47 | 7 | • | | | | | | | | |
| 28 | 50 | 10 | | • | | | | | | | |
| 28,5 | 46,5 | 10 | • | | | | | | | | |
| 30 | 40 | 8 | • | | | | | | | | |
| 30 | 48 | 8 | | • | | | | | | | |
| 30 | 50 | 10 | | • | • | | | | | | |
| 30 | 52 | 10 | • | • | | | | | | | |
| 30,16 | 50 | 10 | • | | | | | | | | |
| 31 | 50 | 10 | | | • | | | | | | |
| 33 | 52 | 10 | | | • | | | | | | |
| 33 | 55 | 10 | | | • | | | | | | |
| 35 | 47 | 7 | • | | | | | | | | |
| 35 | 50 | 10 | • | | • | | | | • | | |
| 35 | 52 | 8 | • | | | | | | | | |
| 35 | 55 | 10 | • | | • | | | | | | |
| 35 | 57 | 10 | • | | | | | | | | |
| 35 | 60 | 10 | | • | | | | | | | |
| 38 | 55 | 9 | | | • | | | | | | |
| 38 | 57 | 10 | • | | | | | | | | |
| 38,1 | 53,98 | 11,11 | • | | | | | | | | |
| 38,1 | 60 | 10 | • | | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 40 | 52 | 8 | • | | | | | | | | |
| 40 | 55 | 8 | • | | • | | | | | | |
| 40 | 58 | 10 | • | | • | | | | | | |
| 40 | 62 | 12 | • | | • | | | | | | |
| 40 | 65 | 11 | • | | | | | | | | |
| 40 | 68 | 15,62 | • | | | | | | | | |
| 42 | 60 | 8 | | | • | | | | | | |
| 42 | 65 | 10 | | • | | | | | | | |
| 42 | 67 | 11 | • | | | | | | | | |
| 42,68 | 65 | 10 | • | | | | | | | | |
| 44 | 65 | 11 | • | | | | | | | | |
| 44,4 | 73,1 | 10 | | • | | | | | | | |
| 45 | 60 | 7 | | • | | | | | | | |
| 45 | 60 | 9 | • | | • | | | | | | |
| 45 | 62 | 8 | | • | | | | | | | |
| 45 | 62 | 9 | | • | | | | | | | |
| 45 | 62 | 10 | • | | | | | | | | |
| 45 | 62 | 12 | | • | | | | | | | |
| 45 | 65 | 7 | • | | | | | | | | |
| 45 | 65 | 8 | • | | | | | | | | |
| 45 | 65 | 10 | • | | • | | | | | | |
| 45 | 68 | 12 | • | | | | | | | | |
| 45 | 70 | 11 | • | | | | | | | | |
| 48 | 66 | 10 | • | | | | | | | | |
| 49,174 | 68,224 | 9,525 | • | | | | | | | | |
| 49,21 | 70 | 10 | • | | | | | | | | |
| 50 | 65 | 8 | • | | | | | | | | |
| 50 | 70 | 10 | • | • | • | | | | | | • |
| 50 | 72 | 8 | | • | | | | | | | |
| 50 | 72 | 10 | | • | • | | | | | | |
| 50 | 72 | 12 | • | | | | | | | | |
| 50 | 75 | 10 | | | | | • | | | | |
| 50 | 75 | 11 | • | | | | | | • | | |
| 50,8 | 69,85 | 12,7 | | • | | | | | | | |
| 50,8 | 80,95 | 11 | • | | | | | | | | |
| 50,8 | 81 | 13 | • | | | | | | | | |
| 53,975 | 82,55 | 12,7 | | | | | • | | | | |
| 54 | 74,6 | 9,5 | | • | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 54 | 79,4 | 11 | | • | | | | | | | |
| 55 | 69 | 8 | • | | | | | | | | |
| 55 | 70 | 8 | | • | | | | | | | |
| 55 | 72 | 8 | | • | | | | | | | |
| 55 | 72 | 10 | • | | | | | | | | |
| 55 | 75 | 10 | • | | • | | | | | | |
| 55 | 75 | 12 | • | | | | | | | | |
| 55 | 76 | 12 | | • | | | | | | • | |
| 55 | 80 | 10 | • | | | | | | | | • |
| 55 | 80 | 11 | | • | | | | | | | |
| 55 | 80 | 12 | • | • | | | | | | | |
| 58 | 72 | 10 | • | | | | | | | | |
| 58 | 80 | 10 | | | • | | | | | | |
| 58 | 80 | 12 | • | | | | | | | | |
| 58 | 80 | 17 | • | | | | | | | | |
| 58,7 | 79,4 | 9,5 | | • | | | | | | | |
| 58,8 | 80 | 10 | | | • | | | | | | |
| 60 | 74 | 8 | • | | | | | | | | |
| 60 | 78 | 10 | • | | | | | | | | |
| 60 | 80 | 10 | • | • | • | | | | | | |
| 60 | 80 | 11 | • | | | | | | | | |
| 60 | 80 | 12 | • | | • | | | | | | |
| 60 | 85 | 11 | | • | | • | | | | | |
| 60 | 86 | 10 | | • | | | | | | | |
| 60 | 90 | 13 | | • | | | | | | | |
| 64 | 85 | 12 | • | | • | | | | • | | |
| 64 | 85 | 13 | • | | | | | | | | |
| 65 | 80 | 8 | • | | | | | | | | |
| 65 | 80 | 12 | • | | • | | | | | | |
| 65 | 85 | 10 | | • | | | | | | | |
| 65 | 85 | 12 | • | | • | | | | | | |
| 65 | 90 | 11 | | • | | | | | | | |
| 65 | 85 | 12,5 | | | • | | | | | | |
| 65 | 90 | 11 | | • | | | | | | | • |
| 65 | 90 | 12 | • | | | | | | | | |
| 65 | 95 | 10 | | • | | | | | | | |
| 65 | 100 | 13 | | | | | | | | | • |
| 68 | 90 | 10 | • | | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 68 | 90 | 12 | • | | | | | | | | |
| 69,8 | 85,7 | 7,9 | | • | | | | | | | |
| 69,8 | 88,9 | 9,52 | • | | | | | | | | |
| 69,85 | 95,2 | 9,5 | • | | | | | | | | |
| 69,85 | 95,2 | 14,25 | | | | • | | | | | |
| 69,85 | 95,25 | 12,7 | | • | | | | | | | |
| 69,85 | 101,6 | 12,7 | | • | | | | | | | |
| 69,85 | 107,95 | 14,3 | | | | | • | | | • | |
| 70 | 90 | 7 | • | | | | | | | | |
| 70 | 90 | 10 | • | • | • | • | | | | | |
| 70 | 90 | 12 | • | | | | • | | | | |
| 70 | 95 | 12 | • | | | | | | | | • |
| 70 | 100 | 12 | | | • | | | | | | |
| 70 | 102 | 12,5 | • | | | | • | | | | |
| 72 | 100 | 10 | | • | | | | | | | |
| 74 | 90 | 10 | • | | | | | | | | |
| 74,6 | 92 | 9,5 | | • | | | | | | | |
| 74,8 | 99,8 | 11,11 | | | | | | • | | | |
| 75 | 95 | 10 | • | | • | | | | | | • |
| 75 | 95 | 12 | | | | | • | | | | |
| 75 | 95 | 12,5 | • | • | • | | | | | | • |
| 75 | 95 | 13 | • | | | | | | | | |
| 75 | 100 | 11 | | | | | • | | | | |
| 75 | 100 | 12 | | • | • | | | | | | |
| 75 | 105 | 15 | • | • | | | | | | | |
| 75 | 107 | 12,5 | • | | • | • | | | | | |
| 76 | 102 | 10 | | | | | | | | | • |
| 76 | 107 | 12,5 | | | • | | | | | | |
| 76,2 | 95,25 | 11,11 | • | | | | | | | | |
| 76,5 | 104,5 | 12 | • | | | | | | | | |
| 76,5 | 113 | 12 | | • | | | | | | | |
| 77,5 | 104,5 | 12 | • | | | | | | | | |
| 77,5 | 113 | 12 | | • | | | | | | | |
| 78,5 | 104,5 | 12 | • | | | | | | | | |
| 80 | 100 | 8 | | • | | | | | | | |
| 80 | 100 | 10 | • | • | • | | | | | • | • |
| 80 | 100 | 12,5 | | | • | | | | | | |
| 80 | 100 | 13 | • | • | • | | | | | | |



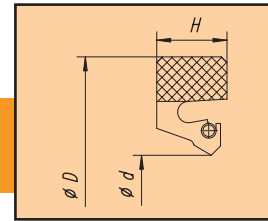
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 80 | 105 | 12 | • | | • | • | | | | | |
| 80 | 110 | 13 | • | | | | | | | | |
| 80 | 112 | 12,5 | • | • | • | • | | | | | |
| 80 | 115 | 13 | | | • | | | | | | |
| 82 | 101,6 | 6,35 | • | | | | | | | | |
| 82,5 | 101,6 | 6,35 | • | | | | | | | | |
| 82,5 | 101,6 | 12 | • | | | | | | | | |
| 82,5 | 110 | 12 | | • | | | | | | | |
| 82,5 | 114,3 | 12,7 | • | | | | | | | | |
| 85 | 102 | 13 | | • | | | | | | | |
| 85 | 105 | 10 | | • | | | | | | | |
| 85 | 105 | 12,5 | | | • | | | | | | |
| 85 | 110 | 12 | | | | | | | | | • |
| 85 | 110 | 12,5 | • | • | | | | | | | • |
| 85 | 110 | 13 | • | | • | | | | | | |
| 85 | 115 | 16 | • | | | | | | | | |
| 85 | 117 | 12,5 | • | • | • | | | | | | |
| 85 | 120 | 12 | • | | | | | | | | |
| 85,6 | 106,37 | 8,66 | | • | | | | | | | |
| 85,725 | 111,125 | 15,87 | • | | | | | | | | |
| 88 | 126 | 12 | | • | | | | | | • | |
| 88,9 | 111,1 | 9,52 | | • | | | | | | | |
| 88,9 | 114,3 | 12,7 | | • | | | | | | | |
| 88,9 | 114,3 | 13 | | | | | | | | | • |
| 88,9 | 127 | 11,9 | | | | | | | | | • |
| 88,9 | 127 | 14,3 | | • | | | | | | | |
| 90 | 110 | 8 | | • | | | | | | | |
| 90 | 110 | 10 | • | • | | | | | | | |
| 90 | 110 | 12 | | • | | | | | | • | |
| 90 | 110 | 13 | • | | | | | | | | |
| 90 | 115 | 12 | | • | • | | | | | | |
| 90 | 115 | 15 | • | | | | | | | | • |
| 90 | 120 | 12 | | | • | | | | | | • |
| 90 | 120 | 13 | | • | | | | | | | |
| 90 | 120 | 15 | | | | • | | | | | |
| 90 | 122 | 12,5 | • | | • | | | | | | • |
| 90 | 130 | 12 | | • | | | | | | | |
| 90 | 140 | 11 | | | | | | | | | • |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 92 | 120 | 13 | • | • | | | | | | | |
| 92,08 | 127 | 12,7 | | • | | | | | | | |
| 93 | 127 | 13 | | • | | | | | | | |
| 95 | 115 | 10 | | • | | | | | | | • |
| 95 | 120 | 10 | | • | | | | | | | |
| 95 | 120 | 12,5 | | | • | | | | | | |
| 95 | 120 | 13 | • | • | • | • | | | | | • |
| 95 | 120,4 | 9,5 | • | | | | | | | | |
| 95 | 125 | 12 | | | • | | | | | | |
| 95 | 127 | 12,5 | • | • | • | | | | | | • |
| 95 | 135 | 18 | • | | | | | | | | |
| 95,25 | 120,65 | 12,7 | | | | | | | | | • |
| 95,25 | 127 | 15,875 | | • | | | | | | | |
| 96 | 127 | 12,5 | | | • | | | | | | |
| 97 | 120 | 13 | • | | | | | | | | |
| 98 | 115 | 9 | | • | | | | | | | |
| 98 | 125 | 13 | | • | | | | | | | |
| 98,4 | 123,88 | 12,7 | | • | | | | | | | |
| 100 | 115 | 9 | • | | | | | | | | |
| 100 | 120 | 10 | | • | | | | | | | |
| 100 | 120 | 12 | • | • | | • | | | | | |
| 100 | 120 | 13 | • | | | | | | | | • |
| 100 | 125 | 12 | • | | | | | | | | |
| 100 | 125,4 | 12,7 | • | | | | | | | | |
| 100 | 127 | 13 | | • | | | | | | | |
| 100 | 128,5 | 9,5 | | • | | | | | | | |
| 100 | 130 | 12 | • | • | | | | • | | | • |
| 100 | 130 | 12,5 | | | • | | | | | | |
| 100 | 130 | 13 | | • | • | | | | | | |
| 100 | 130 | 16 | | • | | | | | | | |
| 100 | 132 | 12,5 | • | • | | | | | | | |
| 100 | 140 | 16 | | • | • | | | | | | |
| 100 | 140 | 18 | • | | | | | | | | |
| 100,01 | 130,17 | 11,9 | • | | | | | | | | |
| 100,01 | 130,17 | 15,87 | | • | | | | | | | |
| 100,01 | 139,69 | 17,85 | • | | | | | | | | |
| 101,6 | 126,97 | 12,7 | • | | | | | | | | |
| 101,6 | 127 | 12,7 | • | | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 101,6 | 133,35 | 12,7 | | • | | | | | | | |
| 101,6 | 136,52 | 19,05 | • | | | | | | | | |
| 102,158 | 134,778 | 12,4 | | • | | | | | | | |
| 104,77 | 142,87 | 15,87 | • | | | | | | | | |
| 105 | 130 | 12 | • | • | | • | | | | • | • |
| 105 | 130 | 13 | • | | • | | | | | | • |
| 105 | 133 | 12,7 | | | • | | | | | | |
| 105 | 133,6 | 12,7 | • | | | | | | | | |
| 105 | 135 | 12 | • | | | | | | | | |
| 105 | 135 | 13 | • | | • | | | | | | |
| 105 | 136,75 | 12,7 | • | | | | | | | | |
| 105 | 143 | 16 | • | | | | | | | | |
| 105 | 145 | 16 | | • | | | | | | | |
| 106,36 | 133,5 | 12,7 | • | | | | | | | | |
| 107 | 147 | 16 | • | | | | | | | | |
| 107,9 | 146 | 14,2 | • | | | | | | | | |
| 107,95 | 133,35 | 11,125 | • | | | | | | | | |
| 107,95 | 133,35 | 12,7 | | • | | | | | | | |
| 107,95 | 138,1 | 9,52 | | • | | | | | | | |
| 107,95 | 138,1 | 12,7 | | • | | | | | | | |
| 110 | 126 | 9 | • | | | | | | | | |
| 110 | 130 | 9 | | • | • | | | | | • | |
| 110 | 130 | 12 | | | | | • | | | | |
| 110 | 130 | 13 | • | | • | | | | | | • |
| 110 | 140 | 12 | • | | | • | | | | | • |
| 110 | 140 | 13 | | | • | | | | | | |
| 110 | 140 | 15 | | • | | | | | | | |
| 110 | 142 | 12 | • | | • | | | | | | |
| 110 | 145 | 19 | | • | | | | | | | |
| 110 | 150 | 16 | • | | • | • | | | | | |
| 110 | 160 | 13 | • | | | | | | | | |
| 112,7 | 139,7 | 12,7 | | • | | | | | | | |
| 112,72 | 139,7 | 14,27 | | • | | | | | | | • |
| 113 | 140 | 13 | | • | | | | | | | |
| 114 | 139 | 15 | • | | | | | | | | |
| 114 | 140 | 13,3 | • | | | | | | | | |
| 114,29 | 139,69 | 9,52 | | • | | | | | | | |
| 114,29 | 139,69 | 12,7 | • | | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 114,3 | 152,41 | 15,88 | | • | | | | | | | |
| 115 | 135 | 10 | | • | • | | | | | | |
| 115 | 137 | 9 | | • | | | | | • | | |
| 115 | 140 | 10 | | | • | | | | | | |
| 115 | 140 | 12 | | • | | | | | | | • |
| 115 | 140 | 13 | • | | • | | | | | | |
| 115 | 145 | 15 | • | | • | | | | | | |
| 115 | 150 | 10 | | • | | | | | | | |
| 115 | 150 | 12 | | | • | | | | | | |
| 115 | 150 | 15 | | | | | • | | | | |
| 115 | 155 | 16 | | • | | | | | | | |
| 115 | 160 | 15 | • | | | | | | | | |
| 117,4 | 152,4 | 15,87 | • | | | | | | | | |
| 117,47 | 136,52 | 10,31 | • | | | | | | | | |
| 117,475 | 152,4 | 12,7 | | • | | | | | | | |
| 117,48 | 146,08 | 14,3 | | • | | | | | | | |
| 117,5 | 142,5 | 12,5 | | • | | | | | | | |
| 117,81 | 215,91 | 15,88 | | • | | | | | | | |
| 120 | 136 | 9 | • | | | | | | | | |
| 120 | 140 | 12,5 | • | | | | | | | | |
| 120 | 142 | 12 | | | • | | | | | | |
| 120 | 144 | 12 | • | | | | | | | | |
| 120 | 145 | 15,5 | | • | | | | | | | |
| 120 | 145,4 | 12,7 | | • | | | | | | | |
| 120 | 150 | 12 | • | | • | | | | | | |
| 120 | 150 | 13 | • | • | • | | | | | | • |
| 120 | 150 | 15 | | • | • | | | | | | |
| 120 | 150 | 16 | • | | | | | | | | |
| 120 | 152 | 16 | • | • | | | | | | | |
| 120 | 155 | 18 | • | | | | | | | | |
| 120 | 160 | 12 | • | | | | | | | | |
| 120 | 160 | 15 | • | | | | | | | | |
| 120 | 160 | 16 | • | | • | | | | | | • |
| 120 | 160 | 18 | • | | | | | | | | |
| 120,65 | 146,05 | 9,92 | | | | | | | | | • |
| 120,65 | 150,01 | 11,9 | | | • | | | | | | |
| 120,65 | 152,43 | 14,3 | | • | | | | | | | |
| 123 | 155 | 15 | | | • | | | | | | |



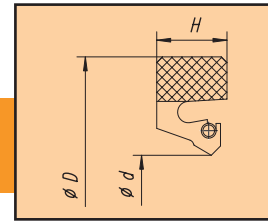
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 123,8 | 149,2 | 12,7 | | • | | | | | | | |
| 123,8 | 158,75 | 14,3 | • | | | | | | | | |
| 125 | 140 | 10 | • | | • | | | | | | |
| 125 | 145 | 10 | | | • | | | | | | |
| 125 | 150 | 12 | | | | | | | | | • |
| 125 | 151 | 17 | • | | | | | | | | |
| 125 | 160 | 15 | • | | | | | | | | |
| 125 | 165 | 15 | • | | | | | | | | |
| 125 | 165 | 16 | • | • | • | | | | | | |
| 125 | 170 | 13 | | • | | | | | | | |
| 125,42 | 158,75 | 12,7 | | • | | | | | | | |
| 126 | 160 | 15 | | • | | | | | | • | |
| 126,2 | 146 | 9,5 | • | | | | | | | | |
| 127 | 146 | 9,5 | • | | | | | | | | |
| 127 | 152,4 | 9,5 | | • | | | | | | | |
| 127 | 152,4 | 12,7 | • | | | | | | | | |
| 127 | 158,9 | 14,29 | • | | | | | | | | |
| 128,575 | 161,925 | 14,275 | • | | | | | | | | |
| 130 | 150 | 10 | • | | | | | | | | |
| 130 | 150 | 12 | • | | | | | | | | |
| 130 | 155 | 12,5 | | • | | | | | | | |
| 130 | 155 | 15,5 | | • | | | | | | | |
| 130 | 160 | 12 | • | | | | | | | | |
| 130 | 160 | 15 | • | • | | | • | | | | |
| 130 | 160 | 18 | | | | • | | | | | |
| 130 | 165 | 13 | • | | | | | | | | |
| 130 | 165 | 18 | • | | | | | | | | |
| 130 | 170 | 10 | | • | • | | | | | | |
| 130 | 170 | 12 | | | • | | | | | | |
| 130 | 170 | 16 | • | | • | • | | | | | |
| 130,1 | 158,75 | 14,29 | | | | | | | | | • |
| 130,17 | 169,85 | 15,87 | • | | • | | | | | | |
| 133,3 | 158,9 | 12,7 | | | | | | | | | • |
| 133,36 | 171,46 | 15,88 | | • | | | | | | | |
| 134,94 | 174,62 | 15,87 | • | | | | | | | | |
| 135 | 167 | 15 | • | | | | | | | | |
| 135 | 170 | 12 | | • | • | | | | | | |
| 135 | 170 | 15 | • | • | | | | | | | • |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 135 | 170 | 16,5 | • | | | | | | | | |
| 135 | 175 | 16 | • | | | | | | | | |
| 136,525 | 161,925 | 12,7 | | • | | | | | | | |
| 139,7 | 171,45 | 15,87 | • | • | | | | | | | |
| 139,7 | 174,7 | 15 | • | | | | | | | | |
| 139,7 | 177,8 | 15,87 | | • | | | | | | | |
| 140 | 155 | 10 | • | | • | | | | | | |
| 140 | 165 | 12 | | • | | | | | | | |
| 140 | 168 | 21 | | | | | • | | | • | |
| 140 | 170 | 15 | • | • | • | | | • | • | • | |
| 140 | 170 | 16 | | • | | | | | | • | |
| 140 | 178 | 16 | | • | | | | | | | |
| 140 | 180 | 16 | • | • | • | | • | | | • | |
| 141 | 170 | 15 | | | • | | | | | | |
| 143 | 165 | 10 | | • | | | | | | | |
| 143 | 165 | 12 | | • | | | | | | | |
| 145 | 170 | 13 | • | | | | | | | | |
| 145 | 174 | 14 | | • | | | | | | | |
| 145 | 175 | 14 | • | | | | | | | | |
| 145 | 180 | 12 | | | • | | | | | • | |
| 145 | 180 | 13 | • | | | | | | | | |
| 145 | 185 | 16 | | • | | | | | | | |
| 145 | 185 | 18 | • | | | | | | | | |
| 146 | 177,8 | 15,8 | | | | | | | | | • |
| 146 | 177,8 | 15,9 | • | • | | | | | | | |
| 146 | 178 | 16 | | • | | | | | | | |
| 146 | 190,5 | 15 | | | | | | | | | • |
| 148 | 170 | 16 | | | | | | | | | • |
| 149,22 | 174,62 | 12,7 | • | | | | | | | | |
| 150 | 170 | 15 | | • | | | | | | | |
| 150 | 178 | 12 | | | • | | | | | | |
| 150 | 180 | 12 | • | | | | | | | | |
| 150 | 180 | 13 | • | | | | | | | | |
| 150 | 180 | 14 | • | • | | | | | | | • |
| 150 | 180 | 15 | • | | | | • | | | | • |
| 150 | 180 | 16 | • | | | | | | | | |
| 150 | 182 | 16 | | • | | | | | | | |
| 150 | 186 | 20 | • | | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 150 | 190 | 15 | | | | | | | | | • |
| 150 | 190 | 16 | • | • | • | • | | | | | |
| 150 | 200 | 16 | • | | | | | | | | |
| 150,81 | 177,8 | 14,28 | | • | | | | | | | |
| 152 | 181 | 12,5 | | • | | | | | | | |
| 152,4 | 177,8 | 12,7 | • | | | | | | | | |
| 152,4 | 181 | 12 | • | | | | | | | | |
| 152,4 | 181 | 12,7 | | • | | | | | | | |
| 152,4 | 184,15 | 15,87 | • | | | | | | | | |
| 152,4 | 190,5 | 17 | • | | | | | | | | |
| 152,5 | 183 | 15 | • | | | | | | | | |
| 155 | 180 | 12,5 | | • | | | | | | | |
| 155 | 190 | 15 | | • | | | | | | | |
| 155 | 195 | 16 | | • | | | | | | | |
| 155 | 195 | 18 | • | | | | | | | | |
| 155 | 215 | 20 | | • | | | | | | | |
| 156 | 196 | 16 | | | | | | • | | | |
| 158 | 180 | 15 | | • | | | | | | | |
| 158,75 | 184,15 | 12,7 | • | | | | | | | • | |
| 160 | 185 | 10 | | • | | | | | | | |
| 160 | 185 | 12,5 | | | | | • | | | | |
| 160 | 188 | 21 | | • | | | | | | • | |
| 160 | 190 | 15 | • | • | • | | | | | | |
| 160 | 190 | 16 | | • | | | | | | | |
| 160 | 196 | 20 | • | | | | | | | | |
| 160 | 200 | 15 | | • | | | | | | | |
| 160 | 200 | 16 | • | • | • | | | | | | • |
| 161,1 | 210,2 | 15,8 | • | | | | | | | | |
| 161,9 | 187,3 | 12,7 | | | | | | | • | | |
| 161,925 | 200,025 | 15,87 | • | | | | | | | | |
| 162 | 190 | 12 | | • | | | | | | | • |
| 162 | 202 | 16 | | • | | | | | | | |
| 163 | 190 | 12 | | | • | | | • | | | |
| 165 | 190 | 13 | | • | | | | | | | |
| 165 | 190 | 15 | | • | | | | | | | • |
| 165 | 195 | 15 | • | | • | | | | • | | • |
| 165 | 200 | 15 | | • | | | | | | | |
| 165 | 205 | 16 | • | | | | • | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 165,1 | 190,5 | 15,88 | | | | | | | | | • |
| 165,1 | 204,78 | 15,87 | • | | | | | | | | |
| 165,1 | 203,2 | 19,05 | | • | | | | | | | |
| 165,16 | 190,5 | 14,29 | • | | | | | | | | |
| 168,3 | 206,4 | 17,5 | | • | | | | | | | |
| 170 | 192 | 10,7 | | | • | | | | | • | |
| 170 | 200 | 12 | • | • | | | | | | | |
| 170 | 200 | 15 | | • | • | | | | | | |
| 170 | 200 | 16 | • | • | | | | | | | |
| 170 | 210 | 16 | • | • | | | | | | | |
| 170,26 | 202 | 12,7 | | • | | | | | | | |
| 171,45 | 196,85 | 15,87 | | | | | • | | | | |
| 171,45 | 196,85 | 19,05 | • | • | | | | | | | |
| 171,45 | 197 | 17,5 | | • | | | | | | | |
| 171,45 | 209,55 | 15,8 | • | | | | | | | | |
| 174,6 | 212,9 | 15,87 | | | • | | | | | | |
| 175 | 200 | 15 | | | | • | | | | | • |
| 175 | 205 | 15 | • | | | | | | | | |
| 175 | 210 | 16 | | | | | | | | • | |
| 175 | 215 | 15 | | | • | | | | | | • |
| 175 | 215 | 16 | • | | | | | | | • | |
| 175,6 | 208,8 | 18,8 | • | | | | | | | | |
| 177,8 | 203,2 | 12,7 | • | | | | | | | | |
| 177,81 | 209,55 | 19,05 | | • | | | | | | | |
| 177,81 | 212,73 | 15,88 | • | | | | | | | | |
| 177,8 | 215,9 | 19,05 | • | | | | | | | | |
| 178 | 228 | 20 | • | | | | | | | | |
| 179 | 219 | 16 | | • | | | | | | | |
| 179,38 | 219,06 | 15,87 | | • | | | | | | | |
| 180 | 200 | 15 | | • | | | | | | | |
| 180 | 200 | 16 | | • | | | | | | | |
| 180 | 205 | 11 | | • | | | | | | | |
| 180 | 210 | 12 | | • | | | | | | | |
| 180 | 210 | 15 | • | • | • | • | | | • | • | • |
| 180 | 210 | 16 | | • | | | | | | • | |
| 180 | 215 | 15 | | | • | | | | | | |
| 180 | 215 | 16 | • | | | | | | | | |
| 180 | 215 | 18 | • | | | | | | | | |



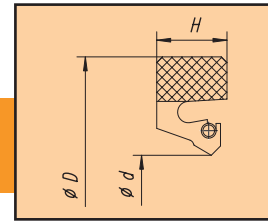
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 180 | 215 | 19 | • | | | | | | | | |
| 180 | 220 | 15 | • | | | | | | | | |
| 180 | 220 | 16 | • | | • | • | | | | | |
| 180 | 220 | 20 | • | | | | | | | | |
| 180,975 | 209,55 | 19,05 | | • | | | | | | | • |
| 181 | 219 | 15 | | • | | | | | | | |
| 182 | 215 | 16 | | | | | | | | | • |
| 185 | 215 | 15 | • | | | | | | | | |
| 185 | 225 | 16 | • | | | | | | | | |
| 185 | 225 | 16,5 | | | | | | | • | | |
| 188 | 215 | 16 | | • | | | | | | | |
| 190 | 220 | 13 | • | | | | | | | | |
| 190 | 220 | 15 | • | • | • | | | | | • | • |
| 190 | 220 | 16 | • | | | | | | | | • |
| 190 | 220,4 | 12,7 | | • | | | | | | | |
| 190 | 225 | 18 | • | • | | | | | | • | |
| 190 | 228,8 | 20,9 | | | | | | | • | | |
| 190 | 230 | 16 | • | • | • | | | | | • | |
| 190 | 230 | 17 | | • | | | | | | | |
| 190,5 | 215,9 | 15,87 | | | | • | | | | | |
| 190,5 | 215,9 | 15,7 | • | • | | | | | | | |
| 195 | 220,4 | 17,7 | • | | | | | | | | |
| 195 | 233,1 | 19,1 | | • | | | | | | | |
| 195 | 235 | 16 | | • | | | | | | | |
| 195,26 | 234,94 | 15,87 | | • | | | | | | | |
| 196,85 | 238,12 | 15,87 | | • | | | | | | | |
| 200 | 225 | 15 | | • | | | | | | | |
| 200 | 230 | 15 | • | | • | | | | | | • |
| 200 | 230 | 16 | | • | | | | | | | |
| 200 | 231,74 | 15,87 | | • | | | | | | | |
| 200 | 235 | 19 | • | | | | | | | | |
| 200 | 238 | 19 | | • | | | | | | | |
| 200 | 238,12 | 18 | • | | | | | | | | |
| 200 | 240 | 15 | | | | | | | | | • |
| 200 | 240 | 16 | • | • | | | • | • | | | • |
| 200 | 240 | 18 | | | • | | | | | | |
| 200 | 250 | 18 | • | | • | | | | | | |
| 200 | 260 | 16 | | • | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 200,02 | 225,425 | 12,7 | • | | | | | | | | |
| 200,02 | 228,6 | 11,11 | • | | | | | | | | |
| 200,02 | 234,95 | 18 | • | | | | | | | | |
| 200,02 | 234,95 | 19 | • | | | | | | | | |
| 200,02 | 234,95 | 20 | • | | | | | | | | |
| 200,02 | 238,12 | 19,05 | • | • | | | | | | | • |
| 200,02 | 239,7 | 15,87 | | • | | | | | | | |
| 200,02 | 225,42 | 12,7 | • | | | | | | | | |
| 200,03 | 225,42 | 12,7 | • | | | | | | | | |
| 200,08 | 238,12 | 17,45 | | • | | | | | | | • |
| 203 | 241 | 16 | • | | | | | | | | |
| 203,21 | 241,31 | 15,88 | • | | | | | | | | |
| 205 | 230 | 15 | • | | | | | | | | |
| 205 | 245 | 16 | | • | | | | | | | |
| 205 | 245 | 20 | • | | | | | | | | |
| 207,97 | 233,37 | 12,7 | • | | | | | | | | |
| 208 | 233 | 12,5 | • | | | | | | | | |
| 208 | 242 | 15 | | | | | | | • | | |
| 209,5 | 234,9 | 15,8 | • | | | | | | | | |
| 209,5 | 235 | 15,8 | • | • | | | | | | | |
| 209,55 | 250,03 | 15,87 | | • | | | | | | | |
| 210 | 230 | 10 | • | | | | | | | | |
| 210 | 240 | 12 | | • | | | | | | | |
| 210 | 240 | 15 | | • | | | • | | | | • |
| 210 | 250 | 15 | • | | | | | | | | |
| 210 | 250 | 16 | • | • | | | | | | • | |
| 210 | 250 | 20 | | • | | | | | | | |
| 212,72 | 247,6 | 15,87 | | • | | | | | | | |
| 212,72 | 250,82 | 15,87 | | • | | | | | | | |
| 213 | 235 | 12 | | | • | | | | | | |
| 215 | 240 | 12 | | • | | | | | | | |
| 215 | 248 | 15 | • | | • | | | | | | • |
| 215 | 250 | 16 | | • | | | | | | | |
| 215,8 | 247,6 | 19 | | • | • | | | | | | |
| 215,9 | 254 | 15,87 | | • | | | | | | | |
| 215,9 | 254 | 19,05 | | • | • | | | | | | |
| 216 | 247,8 | 19,8 | | | | | | | | • | |
| 216 | 254 | 16 | | • | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 219 | 250 | 12 | | • | | | | | | • | |
| 220 | 250 | 12 | | • | | | | | | • | |
| 220 | 250 | 15 | • | • | • | | | | | | • |
| 220 | 255 | 18 | • | • | | | | | | | |
| 220 | 260 | 15 | | • | | | | | | | |
| 220 | 260 | 16 | • | • | | • | | • | | • | |
| 220 | 260 | 18 | • | | | | | | | | |
| 220 | 260 | 18 | | • | | | | | | | |
| 225 | 250 | 12,5 | • | | | | | | | | |
| 225 | 255 | 15 | • | | | | | | | | |
| 225 | 265 | 16 | | • | | | | | | | |
| 225 | 265 | 20 | | • | | | | • | | • | |
| 225 | 270 | 16 | • | | | | | | | | |
| 225,42 | 269,92 | 15,87 | • | | | | | | | | |
| 226 | 258 | 16 | • | | | | | | | | |
| 228 | 268 | 16 | • | | | | | | | | |
| 228 | 268 | 20 | • | | | | | | | | |
| 228,6 | 268,28 | 15,87 | • | | | | | | | | |
| 230 | 260 | 12,5 | | • | | | | | | | |
| 230 | 260 | 15 | | • | | | | | | | • |
| 230 | 260 | 16 | • | | | | | | | | • |
| 230 | 265 | 20 | | • | | | | | | | |
| 230 | 270 | 16 | • | | • | | | | | | |
| 230 | 270 | 18 | | | | | | | | • | |
| 230 | 270 | 20 | | • | | | | | | | |
| 230 | 280 | 22,5 | | | | | | | | • | |
| 230,18 | 269,86 | 15,87 | • | | | | | | | | |
| 231,77 | 269,87 | 15,87 | • | | | | | | | | |
| 234,95 | 273,05 | 19,05 | • | | | | | | | | |
| 234,95 | 274,63 | 15,87 | • | | | | | | | | |
| 235 | 265 | 12 | | | • | | | | | | |
| 235 | 265 | 15 | | • | | | | | | • | |
| 235 | 270 | 16 | • | | | | | | | | |
| 235 | 273 | 19 | • | | | | | | | | |
| 235 | 275 | 16 | • | | | | | | | | |
| 235 | 275 | 20 | • | | | | | | | | |
| 239,71 | 274,63 | 17,85 | • | | | | | | | | |
| 239,71 | 280,19 | 15,87 | | | | | | • | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 240 | 265 | 12,5 | | • | | | | | | | |
| 240 | 270 | 13,5 | | • | • | | | | | | |
| 240 | 270 | 15 | • | | | • | | | | | • |
| 240 | 270 | 16 | • | | | | | | | | |
| 240 | 270 | 17 | | | | | | | | | • |
| 240 | 275 | 18 | • | • | | | | | | • | |
| 240 | 280 | 16 | • | • | • | • | | | | • | • |
| 240 | 280 | 18 | | | | • | | | | | |
| 240 | 280 | 20 | | • | | | | | | | • |
| 241 | 279 | 19 | | • | | | | | | | |
| 241,3 | 279,4 | 15,88 | | • | | | | | | | |
| 241,3 | 279,4 | 19,05 | | • | | | | | | | |
| 241,31 | 279,41 | 17,46 | | • | | | | | | | |
| 243 | 263 | 10 | | | • | | | | | | |
| 244 | 284 | 16 | | | | | | | | • | |
| 244,47 | 276,22 | 19,05 | • | | | | | | | | |
| 244,47 | 276,22 | 20 | • | | | | | | | | |
| 245 | 275 | 16 | • | | | | | | | | |
| 245 | 285 | 16 | | • | | | | | | • | |
| 245 | 288 | 16 | | • | | | | | | | |
| 247,6 | 273 | 12,7 | • | | | | | | | | |
| 247,65 | 273,05 | 15,87 | • | | | | | | | | |
| 247,65 | 279,4 | 12,7 | • | | | | | | | | |
| 247,65 | 279,4 | 15,87 | • | | | | | | | | |
| 247,65 | 298,45 | 19,05 | • | | | | | | | | |
| 249,23 | 289,71 | 15,87 | | • | | | | | | | |
| 250 | 275,4 | 12,7 | | • | | | | | | | |
| 250 | 280 | 12 | | • | | | | | | | |
| 250 | 280 | 15 | | • | • | | • | | • | | |
| 250 | 280 | 16 | • | | | | | | | | |
| 250 | 281,74 | 12,7 | | | | | | | | | • |
| 250 | 281,74 | 15,875 | | | | | | | | | • |
| 250 | 285 | 18 | | • | | | | | | | |
| 250 | 285,8 | 17,5 | • | | | | | | | | |
| 250 | 288 | 19,05 | | • | | | | | | | |
| 250 | 290 | 14 | | | • | | | | | | |
| 250 | 290 | 16 | • | • | | | • | | • | • | |
| 250 | 294 | 20 | • | | | | | | | | |



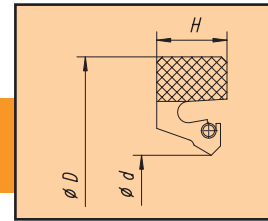
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 250 | 295 | 24 | • | | | | | | | | |
| 250 | 300 | 20 | • | | | | | | | | |
| 250,8 | 290 | 15,87 | • | | | | | | | | |
| 250,8 | 290,5 | 15,87 | • | | | | | | | | |
| 254 | 279,4 | 15 | • | | | | | | | | |
| 254 | 280 | 14,7 | • | | | | | | | | |
| 254 | 285,75 | 16,76 | • | | | | | | | | |
| 254 | 292,1 | 15,87 | • | | | | | | | | |
| 254 | 298 | 16 | | | | | | • | | | |
| 254,1 | 285,76 | 15,87 | • | | | | | | | | |
| 255 | 290 | 16 | | | | | | | • | | |
| 255 | 295 | 16 | | | | | | | • | | |
| 255 | 299 | 20 | • | | | | | | | | |
| 255,58 | 300,03 | 19,84 | • | | | | | | | | |
| 256 | 300 | 20 | • | | | | | | | | |
| 258 | 290 | 16 | • | | | | | | | | |
| 260 | 280 | 11,8 | • | | | | | | | | |
| 260 | 290 | 16 | | • | • | | | • | | | • |
| 260 | 290 | 20 | • | | | | | | | | |
| 260 | 298 | 17 | | • | | | | | | | |
| 260 | 300 | 14 | | | • | | | | | | |
| 260 | 300 | 16 | • | | | | | | • | | |
| 260 | 300 | 18 | • | • | • | • | | | | | |
| 260 | 300 | 20 | | • | | | | | | | |
| 260 | 304 | 19,05 | | • | | | | | | | |
| 260 | 304 | 20 | • | • | | | | | | • | |
| 260 | 305 | 16 | | • | | | | | | | |
| 260 | 310 | 16 | | | | • | | | | | |
| 260,35 | 300,03 | 17,85 | • | | | | | | | | |
| 260,35 | 300,03 | 19,84 | | • | | | | | | | |
| 260,35 | 311,15 | 15,87 | | • | | | | | | | |
| 261 | 311 | 16 | | • | | | | | | | |
| 264 | 310 | 13 | | • | | | | | | | |
| 264 | 310 | 17 | • | | | | | | | | |
| 265 | 303 | 16 | • | | | | | | | | |
| 265 | 310 | 22 | • | • | | | | | | | |
| 265,11 | 303,21 | 15,87 | • | | | | | | | | |
| 266,7 | 311,15 | 19,05 | | • | | | | | | • | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 260,75 | 300,03 | 13,89 | | | | | | | • | | |
| 269,87 | 309,55 | 15,87 | • | | | | | | | | |
| 269,87 | 314,3 | 19,84 | • | | | | | | | | |
| 270 | 300 | 15 | • | | • | | | | | | • |
| 270 | 308,55 | 15,87 | • | | | | | | | | |
| 270 | 310 | 16 | • | | • | | | | • | | |
| 270 | 310 | 18 | | | | | | | | • | |
| 270 | 310 | 20 | • | • | | | | | | | |
| 270 | 319 | 19 | | | | | | • | | | |
| 270 | 314 | 20 | • | • | • | | | | | | • |
| 273 | 311 | 15 | • | | | | | | | | |
| 273 | 317 | 19 | • | | • | | | | • | | |
| 273,05 | 311,15 | 15,08 | • | | | | | | | | |
| 273,1 | 298,5 | 14,3 | | | | | | | | | • |
| 274,63 | 315,11 | 19,84 | • | | | | | | | | |
| 274,8 | 320 | 15 | | • | | | | | | | |
| 274,8 | 320 | 16 | | • | | | | | | | • |
| 275 | 310 | 15 | • | | | | | | | | • |
| 275 | 315 | 20 | • | | | | | | | | • |
| 275 | 319 | 20 | | • | | | | • | | | |
| 275 | 320 | 15 | • | | | | | | | | |
| 275 | 320 | 18 | | | • | | | | | | |
| 279 | 323 | 20 | | | | • | | | | | |
| 279,39 | 319,87 | 19,84 | | • | | | | | | | |
| 279,39 | 323,03 | 19,84 | | | | • | | | | | |
| 279,39 | 330,19 | 23,81 | • | | | | | | | | |
| 279,4 | 304,8 | 15,87 | | • | | | | | | | |
| 279,4 | 311,15 | 15,87 | | | | | • | | | | |
| 279,4 | 317,5 | 15,87 | • | | | | | | | | |
| 279,4 | 317,5 | 17,46 | • | | | | | | | | |
| 279,4 | 317,5 | 19,05 | | • | | | | | | | |
| 280 | 310 | 14 | | | • | | • | | | | |
| 280 | 310 | 15 | • | • | | | | | | | • |
| 280 | 310 | 16 | • | • | | | | | | | |
| 280 | 310 | 20 | • | | | | | | | | |
| 280 | 315 | 15 | • | | | | | | | | |
| 280 | 318 | 15 | • | | | | | | | | |
| 280 | 318,75 | 27 | • | | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 280 | 320 | 16 | • | | • | • | | • | | | |
| 280 | 320 | 17,5 | • | | | | | | | | |
| 280 | 320 | 18 | | • | | • | | | | | |
| 280 | 320 | 20 | | • | | | | | | • | • |
| 280 | 324 | 20 | • | • | | | | | | • | |
| 280 | 340 | 15 | | • | | | | | | | |
| 285 | 325 | 16 | | • | | | | | | | |
| 286 | 336,54 | 15 | • | | | | | | | | |
| 287 | 315 | 12,7 | • | | | | | | | | |
| 290 | 315,4 | 12,7 | | • | | | | | | • | |
| 290 | 320 | 15 | | • | | | | | | | |
| 290 | 328,1 | 19,05 | • | | | | | | | | |
| 290 | 330 | 20 | | • | | | | | | | |
| 290 | 334 | 20 | • | | | | | | | | |
| 290 | 334 | 20,5 | | | | | | | • | | |
| 290 | 335 | 24 | • | | | | | | | | |
| 290 | 344 | 20 | • | | | | | | | | |
| 290 | 425 | 23 | | | | | | | | | • |
| 290,51 | 328,1 | 19,05 | • | | | | | | | | |
| 292,09 | 330,19 | 17,85 | | • | | | | | | | |
| 292,09 | 330,19 | 18 | | • | | | | | | | |
| 292,09 | 330,19 | 19,05 | • | | | | | | | | |
| 292,09 | 342,89 | 23,01 | • | | | | | | | | • |
| 292,1 | 336,5 | 19 | | • | | | | | | | |
| 295 | 335 | 16 | | • | | | | | | • | |
| 295 | 339 | 20 | • | | | | | | • | | |
| 295,27 | 339,72 | 19,84 | • | | | | | | | | |
| 296 | 340 | 20 | • | | | | | | | | |
| 298,44 | 336,54 | 12,5 | • | | | | | | | | |
| 298,44 | 336,54 | 17,46 | • | | | | | | | | |
| 298,44 | 358,77 | 25,4 | • | | | | | | | | |
| 298,6 | 260,3 | 19,05 | | • | | | | | | | |
| 300 | 330 | 14 | | • | • | | | | | • | |
| 300 | 330 | 15 | | • | | | | | | | |
| 300 | 330 | 20 | | | • | | | | | | |
| 300 | 332 | 16 | | • | | | | | | | |
| 300 | 335 | 18 | | • | | | | | | • | |
| 300 | 340 | 16 | • | | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 300 | 340 | 18 | | • | | | | | | • | |
| 300 | 340 | 20 | • | • | | | | | | | |
| 300 | 340 | 22 | | | | • | | | | | |
| 300 | 344 | 20 | | • | • | | | | | • | • |
| 300 | 344 | 22 | • | | | | | | | | |
| 300 | 350,8 | 19,05 | | • | | | | | | | |
| 300 | 360 | 20 | | | • | | | | | | |
| 300 | 360 | 25 | | • | | | | | | • | |
| 300,03 | 331,77 | 15,87 | | • | | | | | | | |
| 300,03 | 343,67 | 19,84 | | | | | | | | • | |
| 300,03 | 344,48 | 19,84 | | | | | | | | • | |
| 301,62 | 341,3 | 15,87 | • | | | | | | | | |
| 302 | 342 | 16 | • | | | | | | | | |
| 304,79 | 342,89 | 19,05 | • | | | • | | | | | |
| 304,8 | 355,6 | 20,64 | • | | | | | | | | |
| 304,8 | 355,6 | 25,4 | • | | | | | | | | |
| 305 | 345 | 20 | • | | | | | | | | |
| 305 | 349 | 20 | | | • | | | | | | |
| 307,8 | 407 | 26 | • | | | | | | | | |
| 310 | 347,67 | 15,87 | | | | | | | | | • |
| 310 | 350 | 18 | | | | | | | | • | • |
| 310 | 350 | 20 | | | | | | | | • | • |
| 310 | 354 | 18 | | | | | | | | | • |
| 310 | 354 | 20 | • | | | | | | | | • |
| 310 | 355,6 | 20 | | | | | | | | • | |
| 311,15 | 362,2 | 25,4 | • | | | | | | | | |
| 314 | 355 | 20 | • | | | | | | | | |
| 314,32 | 355,52 | 19,84 | • | | | | | | | | |
| 315 | 343 | 14 | • | | | | | | | | |
| 315 | 355 | 16 | | | | | | | | • | |
| 315 | 359 | 20 | | | • | | | | | | |
| 315 | 359 | 22 | | • | | | | | | | |
| 315 | 364 | 20 | • | | | | | | | | |
| 316 | 360 | 20 | | • | | | | | | | |
| 317 | 361 | 20 | • | | | | | | | | |
| 317,49 | 355,59 | 17,46 | • | | | | | | | | |
| 317,5 | 355,6 | 19,05 | | • | | | | | | | |
| 317,6 | 355,6 | 17,45 | • | | | | | | | | |



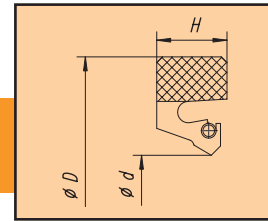
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 320 | 344 | 12,5 | | | • | | | | | | |
| 320 | 346 | 15 | | • | • | | | | | | |
| 320 | 350 | 15 | • | | • | | | | | • | |
| 320 | 355 | 16 | | | | | | • | • | | |
| 320 | 358 | 20 | | • | | | | | | | |
| 320 | 360 | 15 | | • | | | | | | • | |
| 320 | 360 | 18 | | • | | | | | | | |
| 320 | 360 | 20 | • | | | • | | | | | |
| 320 | 364 | 20 | • | • | | | | | | • | |
| 320,67 | 358,77 | 25,4 | • | | | | | | | | |
| 323 | 363 | 16 | | • | | | | | | | |
| 323,85 | 361,95 | 17,45 | | • | | | | | | | |
| 324 | 362 | 17,5 | | • | | | | | | | |
| 325 | 350 | 15 | | | • | | | | | | |
| 325 | 365 | 18 | | | | | | | | | • |
| 325 | 375 | 22,8 | • | | | | | | • | | |
| 325,43 | 374,64 | 22,6 | | | | | | | • | | |
| 330 | 360 | 14 | | | | | • | | | | |
| 330 | 360 | 18 | | • | | | | | | • | |
| 330 | 370 | 14 | | | • | | | | | | |
| 330 | 370 | 20 | • | • | • | • | • | | • | • | |
| 330 | 374 | 19 | • | | | | | | • | | |
| 330 | 374 | 20 | | • | | | • | • | | | |
| 330,19 | 368,29 | 17,45 | | • | | | | | | | |
| 330,19 | 373,06 | 19,05 | • | | | | | | • | | |
| 330,2 | 368,3 | 17,45 | | • | | | | | | | |
| 330,2 | 368,3 | 19,05 | | | | • | | | • | | |
| 334,96 | 365,12 | 15,87 | • | | | | | | | | |
| 334,96 | 374,64 | 17,85 | | | | | | | | • | |
| 335 | 365 | 16 | • | | | | | | | | |
| 335 | 375 | 15 | | • | | | | • | | | |
| 335 | 375 | 18 | • | | | | | | | • | |
| 335 | 390 | 20,6 | | | | | • | | | | |
| 335 | 395 | 16 | | • | | | | | | | |
| 336 | 380 | 20 | | • | | | | | | | |
| 340 | 370 | 18 | | • | | | | | | | |
| 340 | 372 | 16 | | • | | | | | | | |
| 340 | 378 | 16 | | | | | | | | | • |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 340 | 380 | 15 | • | | | | | | | | |
| 340 | 380 | 18 | | | • | | | | | | • |
| 340 | 380 | 20 | • | | | | | | | | • |
| 340 | 380 | 22 | • | | | | | | | | |
| 340 | 384 | 20 | | • | | • | | | | | |
| 342,9 | 381 | 17,4 | | • | | | | | | | |
| 342,9 | 381 | 19,05 | | • | | | | | | | |
| 342,9 | 387,3 | 19 | • | • | | | | | | | |
| 342,9 | 387,3 | 20 | | • | | | | | | | • |
| 342,9 | 393,7 | 20,7 | | • | | | | | | | |
| 348 | 380 | 16 | • | | | | | | | | |
| 350 | 380 | 15 | | • | | | | | | | |
| 350 | 380 | 16 | • | | • | | | | | | |
| 350 | 390 | 16 | | | | | | | | | • |
| 350 | 390 | 18 | | | | | | | | | • |
| 350 | 390 | 20 | • | | | | | | | • | |
| 350 | 394 | 20 | • | • | | | | | | | • |
| 350 | 394,44 | 19,05 | • | | | | | | | | |
| 350,56 | 395 | 20,63 | | • | | | | | | | |
| 355 | 394 | 20 | • | | • | | | | | | |
| 355 | 395 | 20 | • | | | | | | | | • |
| 355 | 405 | 20 | • | | | | | | | | |
| 355,59 | 393,69 | 17,46 | | | | | | | | | • |
| 355,59 | 393,69 | 19,84 | • | | | | | | | | |
| 355,59 | 393,69 | 20 | | | | | | | | | • |
| 355,59 | 400,04 | 19,05 | • | • | | | | | | | |
| 356 | 400 | 20 | | | | | | | | • | |
| 360 | 390 | 18 | | • | | | | | | | |
| 360 | 398 | 19 | • | | | | | | | | |
| 360 | 400 | 17 | | • | | | | | | | |
| 360 | 400 | 18 | | • | | | | | | | |
| 360 | 400 | 20 | • | | • | | | | | | |
| 360 | 400 | 22 | • | | | | | | | | |
| 360 | 404 | 20 | • | • | | | | | | | • |
| 360 | 410 | 20 | • | | | | | | | | |
| 360 | 420 | 15 | | • | | | | | | | |
| 360,36 | 398,46 | 19,05 | • | | | | | | | | |
| 360,36 | 404 | 19,84 | • | | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 360,36 | 420,68 | 15,08 | | • | | | | | | | |
| 361,9 | 400 | 16 | | • | | | | | | | |
| 361,94 | 406,38 | 19,05 | • | | | | | | | | |
| 362 | 400 | 20 | | • | | | | | | | |
| 362 | 406 | 19,05 | • | | | | | | | | |
| 362 | 406 | 20 | | • | | | | | | | |
| 365 | 405 | 18 | | | | | | | | • | |
| 365 | 405 | 20 | | • | | | | | | | |
| 365 | 409 | 20 | | | | | | | • | | |
| 365,1 | 408,8 | 19,8 | • | | | | | | | | |
| 365,12 | 404,8 | 19,84 | | • | | | | | | | |
| 365,12 | 408,76 | 19,84 | | | | | | | • | | |
| 367 | 405 | 18 | | | | | | | | • | |
| 368,3 | 419,1 | 20,6 | | • | | | | | | | |
| 368,3 | 419,1 | 29,25 | | | | | | | | • | |
| 369,88 | 414,32 | 19,05 | • | | | | | | | | |
| 369,88 | 414,32 | 19,84 | • | | | | | | | | |
| 370 | 400 | 10 | • | | | | | | | | |
| 370 | 410 | 15 | | | • | | | | | | |
| 370 | 410 | 18 | | • | | | | | | • | |
| 370 | 410 | 20 | | | | • | | | | | |
| 370 | 414 | 19 | • | | | | | | | | |
| 370 | 414 | 20 | • | • | | | | | | • | |
| 373,06 | 398,46 | 12,7 | | • | | | | | | | |
| 374,64 | 419,08 | 19,84 | • | | | | | | | | |
| 375 | 419 | 20 | • | | | | | | | | |
| 375 | 420 | 16 | • | • | • | | | | | | |
| 376,2 | 427 | 22,22 | | • | | | | | | | |
| 380 | 419 | 24 | | • | | | | | | | |
| 380 | 419 | 25 | • | | | | | | | | |
| 380 | 420 | 15 | • | | | | | | | | |
| 380 | 420 | 20 | • | • | | | | | | | • |
| 380 | 424 | 20 | • | • | | • | | | • | | |
| 380 | 424 | 22 | | | • | | | | | | |
| 380 | 429 | 24 | | • | | | | | | • | |
| 380 | 430 | 19 | • | • | • | | | | | | |
| 380 | 435 | 25 | • | • | | | | | | | |
| 381 | 419,1 | 17,45 | • | | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 384 | 405 | 15 | • | | | | | | | | |
| 385 | 435 | 25 | • | | | | | | | | |
| 387 | 431 | 22 | | | | | | | | • | |
| 387 | 431 | 22,5 | | • | | | | | | | • |
| 387,34 | 430,98 | 21,82 | | | | | | | | • | |
| 387,4 | 438,15 | 25,4 | | | | | | | | • | |
| 390 | 420 | 14 | • | | | | | | | | |
| 390 | 420 | 15 | | | • | | | | | | |
| 390 | 424,8 | 13,5 | | • | | | | | | | |
| 390 | 428,1 | 19,05 | • | | | | | | | | |
| 390 | 430 | 16 | | | | | | | | | |
| 390 | 430 | 16 | | • | | • | | | | | |
| 390 | 430 | 20 | | • | | | | | | | |
| 390 | 434 | 20 | • | | | | | | | • | |
| 390,52 | 425,44 | 13,49 | | • | | | | | | | |
| 392 | 448 | 18 | | | | | | | | | • |
| 393,7 | 433,7 | 18 | | | | | | | | | • |
| 393,7 | 444,5 | 23 | | • | | | | | | | |
| 393,7 | 444,52 | 23,57 | • | | | | | | | | |
| 393,71 | 438,15 | 19,05 | | • | | | | | | | |
| 393,71 | 438,15 | 20 | | • | | | | | | | |
| 395 | 430 | 18 | | | | | | | | | • |
| 395 | 439 | 20 | • | | | | | | | | |
| 395,28 | 430,2 | 17,86 | • | | | | | | | | |
| 396,875 | 444,5 | 22,22 | | | | | | | | | • |
| 398,46 | 430,2 | 19,05 | • | | | | | | | | |
| 399 | 431 | 19 | • | | | | | | | | |
| 400 | 438,1 | 18,5 | • | | | | | | | | |
| 400 | 440 | 14 | • | | | | | | | • | |
| 400 | 440 | 15 | | | • | | | | | | |
| 400 | 440 | 18 | | | | | | | | | • |
| 400 | 440 | 20 | | • | | | | | | | • |
| 400 | 444 | 19,05 | | • | | | | | | | |
| 400 | 444 | 20 | | • | | | | | | • | • |
| 400 | 444 | 20 | | • | | | | | | • | • |
| 400 | 444,5 | 22 | | • | | | | | | | |
| 400 | 450 | 20 | • | • | | | | | | • | |
| 400 | 450 | 22 | | • | | | | | • | • | • |
| 400 | 460 | 25 | • | | | | | | | | |



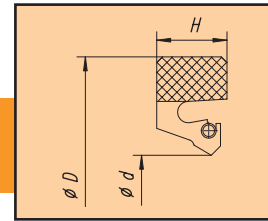
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 400 | 460 | 28 | | | | | • | | | | |
| 400,04 | 444,48 | 19,84 | • | | | | | | • | | |
| 400,04 | 450,84 | 22,22 | • | | | | | | | | |
| 404,81 | 455,61 | 22,22 | | • | | | | | | | |
| 405 | 449 | 20 | • | | | | | | | | |
| 405 | 455 | 22 | | • | | | | | | | |
| 406,2 | 444,5 | 17 | | | | | | | • | | |
| 406,4 | 457,2 | 19 | | • | | | | | | | |
| 406,4 | 457,2 | 20,6 | | • | | | | | | | |
| 406,4 | 457,2 | 21,2 | | • | | | • | | | | |
| 406,4 | 457,2 | 22,22 | • | | | | | | | | |
| 406,4 | 457,2 | 28,6 | • | • | | | | | | | |
| 410 | 440 | 15 | | | • | | | | | | |
| 410 | 450 | 18 | | | | | | | | • | |
| 410 | 450 | 20 | • | | | | | | | | |
| 410 | 460 | 22 | • | | | | | | | | |
| 410 | 460 | 25 | • | | | | | | | | |
| 412,74 | 450,84 | 17,46 | | • | | | | | | | |
| 412,74 | 450,84 | 22,22 | | • | | | | | | | |
| 413 | 463 | 22 | | • | | | | | | | |
| 419 | 451 | 19 | | • | | | | | | | |
| 419,09 | 450,84 | 19,05 | | • | | | | | | | |
| 419,09 | 469,89 | 22,22 | | | | | | | | • | |
| 419,09 | 469,89 | 23,01 | | • | | | | | | | |
| 420 | 460 | 15 | • | | | | | | | | |
| 420 | 460 | 17 | | • | | | | | | | |
| 420 | 460 | 18 | | | | | | | • | | |
| 420 | 460 | 20 | | • | | • | | | | | |
| 420 | 470 | 20 | | • | | | | | | | |
| 420 | 470 | 22 | • | • | | | | | • | • | |
| 420 | 470 | 23 | | • | | | | | | | |
| 420 | 470 | 25 | • | | | | | | | | |
| 420 | 485,1 | 19,05 | | • | | | | | | | |
| 420,68 | 460,36 | 19,05 | • | | | | | | | | |
| 425 | 483 | 23 | | • | | | | | | | • |
| 425,5 | 482,6 | 23,01 | | • | | | | | | | |
| 430 | 460 | 15 | • | | | | | | | | |
| 430 | 470 | 15 | | | • | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 430 | 474 | 22 | | | | | | | • | | |
| 430 | 480 | 22 | • | | | | | | • | | |
| 430 | 480 | 25 | • | • | | | | | | | |
| 430 | 480 | 30 | • | | | | | | | | |
| 431,8 | 469,89 | 22,22 | • | | | | | | | | |
| 431,8 | 482,6 | 20,6 | | • | | | | | | | |
| 432 | 470 | 22 | • | | | | | | | | |
| 435 | 485 | 22 | | • | | | | | | | |
| 435 | 485 | 23 | • | | | | | | | | |
| 439,73 | 484,23 | 19,05 | | • | | | | | | | |
| 439,73 | 490,53 | 22,22 | | | | | | | • | | |
| 440 | 469 | 12,5 | | | | | | | | | • |
| 440 | 470 | 20 | • | | | | | | | | |
| 440 | 472 | 20 | • | | | | | | | | |
| 440 | 480 | 20 | | | | | | | | | • |
| 440 | 484,3 | 19 | | • | | | | | | | |
| 440 | 490 | 20,5 | • | | | | | | | | |
| 440 | 490 | 22 | | • | | | | | • | • | |
| 444,5 | 508 | 19,05 | | • | | | | | | | |
| 445 | 485 | 18 | | • | | | | | | • | |
| 445 | 495 | 22 | | • | | | | • | | • | |
| 446 | 486 | 16 | | • | | | | | | • | |
| 449,25 | 500,25 | 23,01 | • | | | | | | | | |
| 450 | 494 | 20 | • | | | | | | | | |
| 450 | 500 | 22 | • | • | | | | | • | | |
| 450 | 500 | 23 | • | | | | | | | | |
| 450,85 | 479,29 | 13,05 | • | | | | | | | | |
| 457,2 | 508 | 22,22 | | • | | | | | | | |
| 458 | 494 | 18 | | • | | | | | | | |
| 460 | 500 | 16 | • | | | | | | | | |
| 460 | 500 | 20 | | • | | | | | | | |
| 460 | 510 | 22 | • | | • | • | | • | • | | • |
| 460,37 | 510,37 | 21,82 | • | | | | | | | | |
| 466,72 | 509,58 | 19,84 | • | | | | | | | | |
| 467 | 510 | 20 | • | • | | | | | | | • |
| 467 | 510 | 25 | | • | | | | | | | |
| 469,89 | 519,09 | 21,82 | | | | | | | • | | |
| 470 | 508 | 19 | • | | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 470 | 520 | 22 | • | | | | | • | • | | • |
| 470 | 520 | 23 | | | | | | | | | • |
| 470,7 | 519,9 | 21,82 | | | | | | | • | | |
| 474 | 514 | 20 | • | | | | | | | | |
| 474,65 | 524,65 | 21,82 | • | | | | | | | | |
| 475 | 525 | 22 | • | | | | | | | | |
| 475 | 525,8 | 25,4 | | • | | | | | | | |
| 475 | 530 | 18 | • | | | | | | | | |
| 475,8 | 520 | 22 | • | | | | | | | | |
| 479,42 | 519,9 | 19,84 | | • | | | | | | | |
| 479,42 | 529,42 | 21,82 | • | | | | | | | | |
| 480 | 520 | 20 | | • | | | | | | | • |
| 480 | 530 | 22 | • | • | | | | | | | • |
| 480 | 530 | 25 | • | • | | | | | • | • | |
| 481 | 520,68 | 19,84 | | • | | | | | | | |
| 482,58 | 520,68 | 19,05 | • | | | | | | | | |
| 485 | 535 | 22 | • | • | | | | | | | • |
| 488,94 | 539,79 | 21,82 | • | | | | | | | | |
| 490 | 540 | 22 | • | • | | | | | | • | |
| 495 | 545 | 22 | | | | | | | • | | |
| 495,3 | 546,3 | 22 | | • | | | | | | | |
| 495,29 | 546,09 | 22,22 | | | | | | | • | | |
| 495,5 | 546 | 22 | | | | | | | • | | |
| 498,47 | 549,27 | 22,22 | | | | | | | | • | |
| 500 | 540 | 16 | • | | | | | | | | |
| 500 | 540 | 20 | • | • | • | | | | | • | |
| 500 | 540 | 22 | | • | | | | | | | |
| 500 | 544 | 20 | | • | | | | | | | |
| 500 | 544 | 22 | | • | | | | | | | |
| 500 | 545 | 20,5 | | | | | | | | • | |
| 500 | 550 | 22 | • | • | | | | | | • | |
| 500 | 550,8 | 25,4 | • | | | | | | | | |
| 500 | 558,8 | 22 | • | | | | | | | | |
| 500 | 560 | 25 | • | | | | | | | | |
| 500,05 | 544,49 | 22,22 | | • | | | | | | | |
| 502 | 542 | 20 | • | | | | | | | | |
| 503 | 552 | 20 | • | | | | | | | | |
| 503 | 553 | 22 | • | | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 503,23 | 552,43 | 19,84 | • | | | | | | | | |
| 505 | 535 | 15 | • | | | | | | | • | |
| 508 | 546,1 | 19,05 | • | | | | | | | | |
| 508 | 558,8 | 20,63 | | • | | | | | | | |
| 509,58 | 549,26 | 19,84 | | | | | | | | • | |
| 509,58 | 550,06 | 17,46 | | | | | | | | • | |
| 510 | 550 | 17,5 | | | | | | | | • | |
| 510 | 550 | 20 | | | | | | | | • | |
| 510 | 554 | 20 | • | | | | | | | | |
| 510 | 560 | 22 | | • | | | | | | | |
| 512 | 542 | 15 | | | • | | | | | | |
| 514,34 | 554,02 | 19,84 | | | • | • | | | | | |
| 515 | 555 | 20 | | | • | • | | | | | |
| 515 | 565 | 22 | • | | | | | | | | |
| 520 | 570 | 22 | | • | | | | | | • | |
| 520 | 570 | 25 | | • | | | | | | • | |
| 520,7 | 558,8 | 19,05 | | • | | | | | | | |
| 520,7 | 571,5 | 22,22 | • | | | | | | | | |
| 520,7 | 571,5 | 25,4 | | | | | | | | • | |
| 525 | 575 | 22 | | • | | | | | | | |
| 528 | 578 | 22 | | • | | | | | | • | |
| 528 | 666,75 | 25,4 | | | | | | | | | • |
| 530 | 555 | 12,5 | • | | | | | | | | |
| 530 | 580 | 20 | | • | | | | | | | |
| 530 | 580 | 22 | | • | | | | | | | |
| 530 | 580 | 25 | • | | | | | | | | |
| 530 | 580,8 | 25,4 | • | | | | | | | | |
| 530 | 590 | 38 | | | | | | | | | • |
| 530,22 | 555,52 | 12,7 | • | | | | | | | | |
| 533,39 | 584,19 | 22,22 | • | | | | | | | | |
| 534 | 584 | 22 | • | | | | | | | | |
| 535 | 585 | 22 | | • | | | | | | | |
| 539,74 | 540,54 | 22,22 | • | | | | | | | | |
| 540 | 584 | 20 | | | | | | | | • | |
| 540 | 590 | 22 | • | • | | | | | | • | • |
| 540 | 590 | 25 | • | • | | | | | | | |
| 541,33 | 577,83 | 17,85 | | • | | | | | | | |
| 542 | 578 | 18 | • | | | | | | | | |



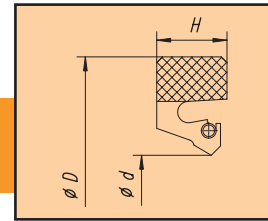
| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 544,5 | 593,7 | 21,82 | • | | | | | | | | |
| 545 | 595 | 22 | • | | | | | | | | |
| 549 | 600,8 | 20,6 | • | | | | | | | | |
| 549,27 | 600,07 | 20,63 | • | | | | | | | | |
| 549,27 | 600,07 | 21,82 | | • | | | | | | • | |
| 550 | 590 | 20 | | • | | | | | | | |
| 550 | 600 | 19 | | | | | | | • | | |
| 550 | 600 | 22 | | • | | | | • | | • | • |
| 550 | 600 | 25 | • | | | | | | | | |
| 552,45 | 596,9 | 19,05 | • | | | | | | | | |
| 558,8 | 596,9 | 19,05 | | • | | | | | | | |
| 558,8 | 609,6 | 22,22 | | • | | | | | | • | |
| 559 | 597 | 19 | | • | | | | | | | |
| 560 | 604 | 20 | | | | | | | | • | |
| 560 | 610 | 20 | • | | | | | | | • | |
| 560 | 610 | 22 | • | | • | | | • | | | |
| 560 | 610 | 26 | • | | | | | | | | |
| 560,38 | 609,58 | 21,82 | • | | | | | | | | |
| 565,15 | 615,95 | 22,22 | | • | | | | | | • | |
| 569,9 | 619,12 | 21,82 | | | | | | | | • | |
| 570 | 620 | 22 | | • | | | | | | • | |
| 571,5 | 615,95 | 22,22 | | • | | | | | | | |
| 571,5 | 615,95 | 25 | | • | | | | | | | |
| 571,52 | 622,32 | 20,64 | | • | | | | | | | |
| 574 | 610 | 16 | | | | | | | | • | |
| 574,68 | 619,12 | 19,84 | • | | | | | | | | |
| 575 | 619 | 20 | • | | | | | | | | |
| 577,85 | 617,9 | 14,6 | • | | | | | | | | |
| 579,43 | 615,93 | 15,87 | | • | | | | | | | |
| 579,43 | 628,63 | 21,82 | • | | | | | | • | | |
| 580 | 616 | 16 | | • | | | | | | | |
| 580 | 616 | 17 | | • | | | | | | • | • |
| 580 | 620 | 25 | | • | | | | | | | |
| 580 | 630 | 22 | • | | • | | | • | | | |
| 585 | 635 | 22 | • | | | | | | | | |
| 586 | 626 | 15 | | | • | | | | | | |
| 587 | 637 | 22 | | | | | | • | | | |
| 590 | 640 | 20 | • | | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 590 | 640 | 22 | | • | | | • | | | | |
| 590,55 | 641,35 | 20,63 | • | | | | | | | | |
| 590,55 | 643,7 | 25,4 | • | | | | | | | | |
| 596,89 | 641,35 | 19,05 | • | | | | | | | | |
| 596,89 | 647,7 | 22,22 | • | | | | | | | | |
| 600 | 632 | 12,5 | | | | | | | | | • |
| 600 | 640 | 20 | • | | | | | | | • | |
| 600 | 650 | 22 | • | | | | | • | | | |
| 600 | 650 | 25 | • | | | | | | • | • | |
| 600,06 | 649,26 | 21,82 | • | | | | | | | | |
| 605 | 645 | 18 | | • | | | | | | | |
| 609,6 | 658,8 | 21,82 | • | | | | | | | | |
| 609,6 | 673,1 | 25,4 | • | | | | | | | | |
| 610 | 660 | 22 | • | | | | | • | | | |
| 610 | 674 | 22 | | • | | | | | | | |
| 610 | 674 | 25 | | • | | | | | | | |
| 615 | 665 | 24,5 | • | | | | | | | | |
| 615,95 | 679,84 | 25 | | | | | | | | • | |
| 616 | 680 | 25 | | | | | | | | • | |
| 620 | 684 | 25 | | | | | | | | | • |
| 630 | 660 | 15 | • | | | | | | | | |
| 630 | 680 | 25 | | | • | | | | | | |
| 630 | 694 | 25 | | • | | | | | | | |
| 634,9 | 685,7 | 22,22 | • | | | | | | | | |
| 635 | 685 | 22 | • | | | | | | | | |
| 635 | 699 | 25 | • | | | | | | | | • |
| 639,75 | 680,23 | 19,84 | | | | | | | | • | |
| 639,75 | 682,63 | 19,05 | | • | | | | | | | • |
| 640 | 684 | 20 | | • | | | | | | | |
| 640 | 688 | 20 | | • | | | | | | • | |
| 640 | 690 | 22 | | • | | | | | | | • |
| 640 | 704 | 25 | | • | | | | | | | |
| 645 | 695 | 22 | | | | | | | | | • |
| 647,72 | 698,53 | 22,23 | • | | | | | | | | |
| 647,72 | 698,53 | 23,81 | | | | | | | | • | |
| 649,28 | 712,78 | 25 | | | | | | | | | • |
| 650 | 690 | 18 | | • | | | | | | | |
| 650 | 690 | 20 | | • | | | | | | | |

Timken Universal Oil Seals

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 650 | 700 | 20 | | | | | | | | | • |
| 650 | 700 | 22 | | | | | | | | | • |
| 650 | 714 | 25 | | | | | | | | | • |
| 660 | 724 | 25 | • | • | | | | | | | |
| 660,3 | 723,8 | 25,4 | • | | | | | | | | |
| 660,4 | 711,2 | 25,4 | • | | • | | | | • | | |
| 665 | 729 | 25 | • | | | | | | • | | |
| 665,15 | 728,65 | 25 | • | | | | | | | | |
| 670 | 734 | 25 | | • | | | | | | | • |
| 676 | 740 | 25 | | | | | | • | | | |
| 679,44 | 742,94 | 25 | | • | | | | | | | |
| 680 | 730 | 22 | | • | | | | | | | • |
| 680 | 744 | 25 | | • | | | | | | | • |
| 685 | 735 | 22 | • | | | | | | | | |
| 685 | 749 | 25 | | • | | | | | | | |
| 685,8 | 736,6 | 22,22 | | • | | | | | | | • |
| 690 | 740 | 25 | | • | | | | | | | |
| 700 | 740 | 20 | | | • | | | | | | |
| 700 | 750 | 20 | | | | | | | | | • |
| 700 | 750 | 25 | | • | | | | | | | • |
| 700 | 764 | 25 | | • | | | | | | | • |
| 700 | 774 | 25 | | | | | | | | | |
| 710 | 760 | 22 | | | | | | | | | • |
| 710 | 770 | 25 | | • | | | | | | | |
| 710 | 774 | 25 | • | | | | | • | | | |
| 711 | 775 | 25 | • | | | | | | | | |
| 711,19 | 774,69 | 25 | • | | | | | | | | |
| 715,95 | 779,45 | 25 | • | | | | | | | | |
| 716 | 780 | 25 | • | | | | | | | | |
| 720 | 780 | 25 | | • | | | | | | | |
| 720 | 784 | 25 | | • | | | | | | | |
| 723,9 | 774,7 | 22,22 | | | • | | | | | | |
| 730 | 780 | 20 | | • | | | | | | | |
| 730 | 794 | 25 | | • | | | | | | | • |
| 735 | 799 | 25 | | | | | | • | | • | |
| 736 | 800 | 25 | | • | | | | | | | |
| 740 | 782 | 18 | | • | | | | | | | |
| 740 | 804 | 25 | | • | | | | | | | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 748 | 812 | 25 | | • | | | | | | | • |
| 749,29 | 809,61 | 25 | • | | | | | | | • | |
| 749,3 | 812,8 | 25,4 | | | | | | | | | • |
| 750 | 780 | 18 | • | | | | | | | | |
| 750 | 810 | 25 | • | | | | | | | • | |
| 750 | 814 | 25 | | • | | | | | | | • |
| 750 | 814 | 28 | | | | | | | | | • |
| 750 | 850 | 25 | • | | | | | | | | |
| 760 | 800 | 20 | • | | | | | | | | |
| 773,7 | 825,5 | 23,01 | | • | | | | | | | |
| 774,7 | 820 | 22,22 | | • | | | | | | | |
| 775 | 839 | 25 | • | | | | | | | | |
| 780 | 830 | 25 | • | | | | | | | • | |
| 780 | 844 | 25 | • | | | | | | | • | • |
| 786 | 836 | 25 | • | | | | | | | | |
| 800 | 864 | 23 | | | | | | | | • | |
| 800 | 864 | 25 | | • | | | | | | | |
| 800 | 870 | 30 | | • | | | | | | | |
| 800 | 874 | 25 | | • | | | | | | | |
| 800,09 | 863,59 | 23,01 | • | | | | | | | | |
| 809,61 | 873,11 | 25 | | • | | | | | | | |
| 810 | 860 | 25 | • | • | | | | | | | |
| 810 | 870 | 25 | | • | | | | | | | |
| 810 | 874 | 25 | | • | | | | | | | • |
| 810 | 910 | 25 | • | | | | | | | | |
| 816 | 866,8 | 22,5 | | | | | | | | | • |
| 820 | 870 | 25 | • | | | | | | | | |
| 820 | 884 | 28 | • | | | | | • | | | |
| 825 | 875 | 22 | • | | | | | | | | |
| 825,5 | 876,3 | 22,22 | • | | | | | | | | |
| 830 | 894 | 25 | | • | | | | | | | • |
| 838 | 880 | 20 | • | | | | | | | | |
| 838,15 | 880,8 | 20 | • | | | | | | | | |
| 838,18 | 879,46 | 19,84 | • | | | | | | | | |
| 840 | 904 | 25 | | • | | | | | | | |
| 849,3 | 900,1 | 19,84 | | • | | | | | | | |
| 850 | 890 | 20 | | | • | | | | | | |
| 850 | 900 | 19 | | • | | | | | | | |



| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 850 | 900 | 20 | • | | | | | | | | |
| 850 | 910 | 25 | • | | | | | | | | |
| 850 | 914 | 25 | • | | | | | | | • | |
| 850,9 | 900,1 | 19,84 | • | | | | | | | | |
| 860 | 910 | 25 | | • | | | | | | | |
| 860 | 920 | 22 | | | | | | | • | | |
| 860 | 920 | 25 | | • | | | | | | | |
| 863,58 | 927,08 | 25 | • | | | | | | | | |
| 864 | 928 | 25 | • | | | | | | | | |
| 890 | 954 | 25 | • | | | | | | • | | |
| 890,57 | 954,07 | 25 | • | | | | | | | | |
| 899,5 | 960,5 | 30 | • | | | | | | | | |
| 900 | 960 | 30 | • | • | | | | | | | |
| 900 | 980 | 23 | | • | | | | | | | |
| 914,4 | 965,2 | 20,624 | | | | | | | • | | |
| 914,4 | 965,2 | 23,81 | | | | | | | • | | |
| 920 | 970 | 20 | • | | | | | | | | |
| 930 | 990 | 25 | • | | | | | | | | |
| 930 | 994 | 25 | • | | | | | | | | |
| 933,45 | 984,29 | 22,22 | • | | | | | | | | |
| 934 | 984 | 22 | • | | | | | | | | |
| 940 | 995 | 25 | • | | | | | | | | |
| 950 | 1014 | 25 | | • | | | | | | • | |
| 953 | 1003 | 22 | • | | | | | | | | |
| 954 | 1004 | 22 | • | | | | | | | | |
| 960 | 1040 | 28 | | | | | | | | • | |
| 965 | 1015 | 22 | • | | | | | | | | |
| 965,2 | 1016 | 20 | | • | | | | | | | |
| 965,2 | 1016 | 22,22 | | • | | | | | | | |
| 970 | 1020 | 22 | | | | | | | | • | |
| 970 | 1030 | 21,5 | | • | | | | | | • | • |
| 970 | 1034 | 25 | | • | | | | | | • | • |
| 985 | 1045 | 25 | | | | | | | | • | |
| 990 | 1040 | 22 | | • | | | | | | | |
| 990 | 1040 | 25 | | • | | | | | | • | |
| 990 | 1054 | 25 | | • | | | | | | | |
| 995 | 1025 | 15 | • | | | | | | | | |
| 1000 | 1064 | 25 | | • | | | | | | • | |

| Sizes | | | Model | | | | | | | | |
|---------|---------|--------|-------|-----|-------|-------|-------|------|-------|-------|------|
| ød (mm) | øD (mm) | H (mm) | 151 | 154 | 161-0 | 151DL | 154DL | 154P | 151PG | 154PG | 154M |
| 1020 | 1084 | 25 | | • | | | | | | • | |
| 1049,3 | 1112,8 | 25 | • | | | | | | | | |
| 1050 | 1114 | 25 | • | | | | | | | | |
| 1060 | 1110 | 20 | • | | | | | | | | |
| 1060,4 | 1109,6 | 19,84 | • | | | | | | | | |
| 1073 | 1104 | 15 | • | | | | | | | | |
| 1100 | 1164 | 25 | | | | | | | | | • |
| 1105 | 1155 | 22 | | | | | | | | | • |
| 1105 | 1160 | 25 | | • | | | | | | | |
| 1110 | 1160 | 22 | | • | | | | | | | |
| 1200 | 1250 | 22 | | | | | | | | | • |
| 1219,2 | 1270 | 21 | • | | | | | | | | |
| 1249,3 | 1298,5 | 19,84 | • | | | | | | | | |
| 1250 | 1300 | 20 | • | | | | | | | | |
| 1250 | 1314 | 25 | • | | | | | | | • | |
| 1320 | 1370 | 20 | | • | | | | | | | |
| 1320 | 1384 | 25 | | | | | | | | | • |
| 1330 | 1394 | 25 | | • | | | | | | | • |
| 1447,8 | 1524 | 19,05 | | • | | | | | | | |
| 1550 | 1614 | 25 | | • | | | | | | | |
| 1575 | 1635 | 30 | | | • | | | | | | |
| 1610 | 1670 | 20 | | | | | | | | | • |
| 1620 | 1684 | 25 | | • | | | | | | | |
| 2000 | 2050 | 20 | | | | | | | | • | |
| 2350 | 2414 | 25 | | • | | | | | | | • |

PS-SEAL®
Thermo-Elastic
High-Performance
Seals



TIMKEN

Where You Turn

Technology provides the answer in difficult operating conditions.

Seals in the thermoelastic high-performance PS-SEAL® series operate with a sealing lip made from modified PTFE. This material is produced using a special method marketed under the brandname GYLON®. Sealing lips made from GYLON have a particularly effective memory characteristic, are highly elastic and flexible and cause very low friction thanks to their non-stickslip motion, suffer little wear and tear, and need no metallic spring element.

The high-performance PS-SEAL is specially designed for sealing rotating shafts with high peripheral speeds, high pressure and temperature fluctuations, and aggressive media. In such demanding applications conventional radial shaft seals with elastomer sealing lips are of only limited use or often no use at all. A seal in the thermoelastic high-performance PS-SEAL series is the sensible alternative to mechanical seals and packings. In many applications the use of the high-performance PS-SEAL offers an ideal solution for reliable sealing needs.

The PS-SEAL is suitable for a wide range of applications: in the chemicals industry, process engineering, and in general machine construction.

Here are just a few typical applications:

- centrifuge machinery
- separators
- rotating air compressors
- mixers
- agitators
- spiral conveyors
- rotary lead-throughs
- pumps

The advantages of PS-SEAL:

- suitable for applications under pressurized or vacuum conditions
- capable of handling high peripheral speeds up to 45 m/s
- suitable for a temperature range of -60°C to $+260^{\circ}\text{C}$
- outstanding resistance to chemical environments
- can be used in the food, beverage and pharmaceuticals industries
- good dry-running characteristics
- low friction, and high resistance to wear and tear.



Given the many different needs involved in practical applications, the thermo-elastic high-performance PS-SEAL series is also an economical solution. Timken offers users four different product versions, ranging from the standard sealing ring, available from stock and ready-to-install, right through to customized special designs:

- PS-SEAL Standard**
- PS-SEAL Lip**
- PS-SEAL Special**
- PS-SEAL Floating Seal Device**

Technical data

Materials for the sealing lip

| | |
|----------|--|
| GYLON-B | Standard material |
| GYLON-W | Special material for the pharmaceutical industry and for the food and beverage industry (carries FDA approval) |
| GYLON-F | Special material with good dry-running characteristics and suitable for soft counter-running surfaces |
| GYLON-BI | Special material with very good dry-running characteristics and FDA approval. Not suitable for pressure applications |
| GYLON-KF | Special lip material for water services |

Case material

| | |
|------------------|--|
| PS-SEAL Standard | Standard Casing material = 1.4571 (equal to AISI 316 TI) |
| PS-SEAL Special | Special material for the pharmaceutical, food and beverage industries (carries FDA approval) |

Static sealing element

| | |
|---------------------|---|
| Fluoroelastomer FKM | Standard material |
| GYLON | Special material for applications where improved chemical resistance or FDA approval is required. |

Materials

GYLON®, the basic material used for the sealing lips, is the most significant reason for the success of the PS-SEAL series. Several variants of this sealing lip material are available. Suitable application-specific materials must also be selected for the seal case and for the static seal.

Unless specifically requested in the order documentation, all seals in the PS-SEAL series are delivered in the standard materials.

Shaft surface

In order to achieve optimum sealing performance between the PS-SEAL and the shaft, the shaft should have the following surface roughness characteristics:

| | | |
|-------------|---|-----------------------|
| Ra | = | 0.10 - 0.40 µm |
| Rz | = | 0.65 - 2.50 µm |
| Rmax | = | 4.00 µm |

The shaft surface must have been machined without any nicks, gouges, or other surface defects which might lead to a leak. The surface hardness must be selected in accordance with the pressure ranges as listed below:

| | |
|----------------------|-----------------------|
| up to 1.5 bar | minimum 45 HRC |
| above 1.5 bar | minimum 60 HRC |

For unusually exacting combinations (p x v) of over 20 bar x m/s we recommend a plasma coating with chromium oxide, ground without any nicks, gouges, or other surface defects, and PTFE-sealed.

Pressure/Vacuum

| | |
|-------------------------|--------------------|
| PS-SEAL Standard | max. 10 bar |
| PS-SEAL Lip | max. 25 bar |
| PS-SEAL Special | max. 25 bar |

For maximum pressure applications please check the p x v value. Please also see page 29 "Application limits". The PS-SEAL is also recommended in applications with a vacuum.

Operating temperatures

GYLON, the lip material used in the PS-SEAL series, has a theoretical temperature range of -90°C to +260°C. However, when used in dynamic shaft seals, GYLON is of course subject a number of operating parameters besides temperature, e.g. pressure and the shaft's rotational speed. These other parameters may reduce this maximum theoretical operating temperature range.

ATEX Conformity

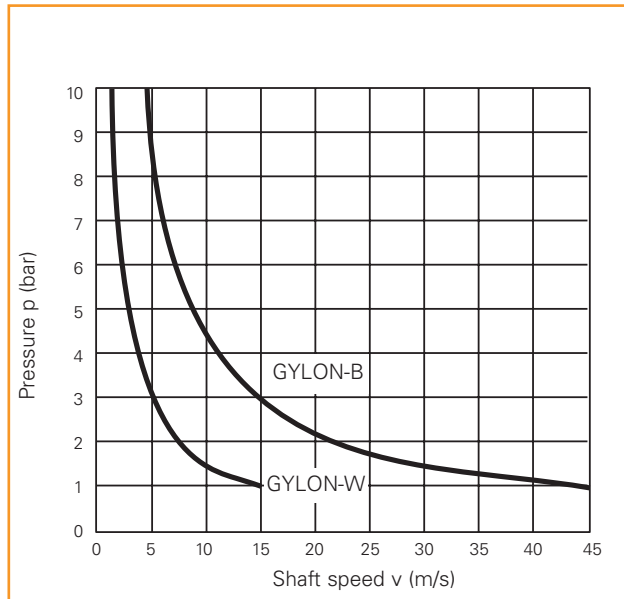
When customer requirements demand it, the Timken PS-SEAL can be manufactured to comply with the requirements according to the ATEX - Directive 94/9/EC. For further details, please contact your Timken sales representative.

Application limits

The simultaneous effects of several operating parameters, e.g. pressure and peripheral speed, makes it necessary to regularly check the tolerances. The following $p \times v$ diagram gives the limits for GYLON-B and GYLON-W:

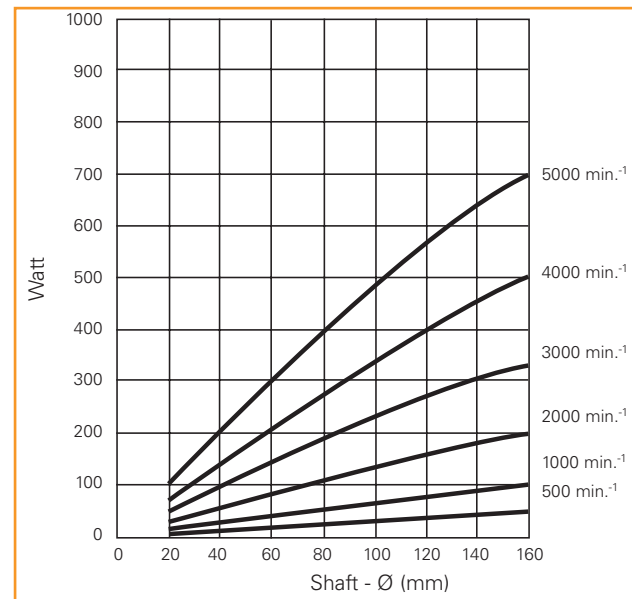
Unfavourable lubrication conditions, i.e. inadequate lubrication and running dry, may make it necessary to substantially lower the maximum permissible $p \times v$ value even with an optimal counter-running surface. In such cases we recommend that you seek advice from our Timken specialists.

$p \times v$ -diagramm for PS-SEAL



The $p \times v$ values shown in the previous diagram are for systems with full lubrication, approximately 100°C operating temperature, and for all PS-SEAL designs up to 10 bar pressure.

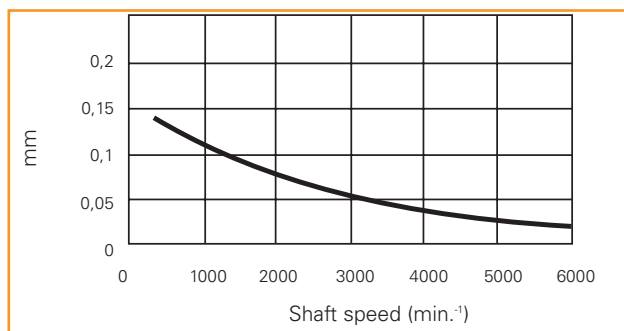
Loss of power caused by lip friction



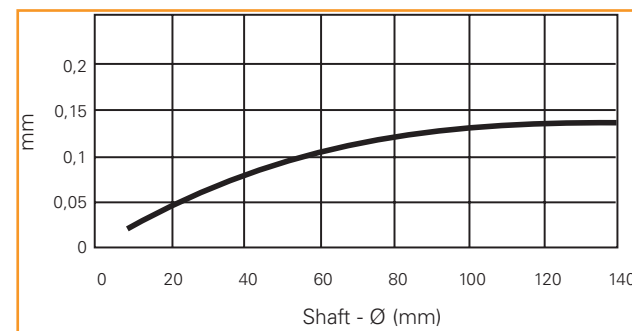
The power dissipation through friction shown in this diagram represents typical values obtained under laboratory conditions. Under operating conditions with a medium temperature of 80°C - 100°C power dissipated through friction may be as much as 50 percent lower.

Test conditions:
engine oil 15-W-40
room temperature, not pressurized

Maximum shaft runout



Maximum shaft misalignment



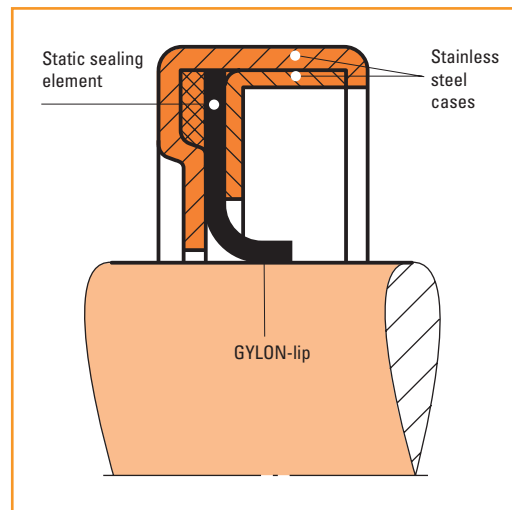
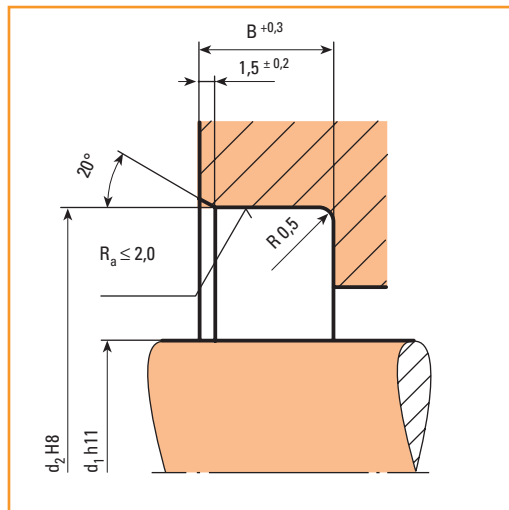
PS-SEAL Standard

The PS-SEAL Standard is a ready-to-install radial sealing ring with a stainless steel case and a sealing lip made from GYLON-B. Models with dimensions printed in the list in bold face are available from stock and for models with dimensions not featured in the list, please contact us for an alternate proposal. If you need non-standard materials for the case and/or the sealing lip, please contact us.

PS-SEAL Standard sizes

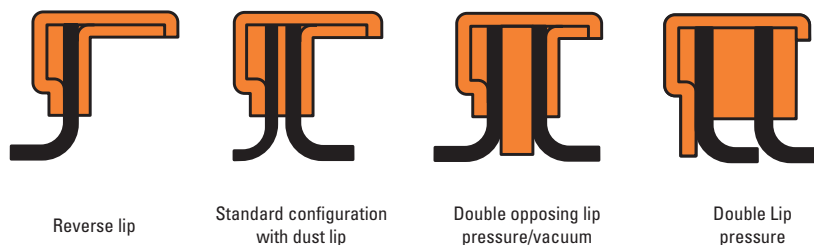
| d1 | d2 | B | d1 | d2 | B | d1 | d2 | B | d1 | d2 | B |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|------------|------------|-----------|
| 8 | 18 | 5 | 30 | 47 | 10 | 50 | 70 | 10 | 90 | 110 | 10 |
| 10 | 25 | 7 | 32 | 47 | 8 | 50 | 72 | 10 | 90 | 120 | 12 |
| 12 | 25 | 7 | 32 | 47 | 10 | 55 | 72 | 10 | 95 | 120 | 12 |
| 12 | 28 | 8 | 35 | 47 | 8 | 55 | 80 | 8 | 100 | 120 | 12 |
| 14 | 30 | 7 | 35 | 50 | 10 | 60 | 75 | 8 | 100 | 130 | 13 |
| 15 | 30 | 8 | 38 | 55 | 7 | 60 | 80 | 10 | 105 | 130 | 12 |
| 16 | 30 | 8 | 40 | 55 | 10 | 62 | 80 | 10 | 110 | 130 | 12 |
| 17 | 28 | 8 | 40 | 60 | 10 | 65 | 85 | 10 | 110 | 140 | 13 |
| 17 | 35 | 8 | 40 | 62 | 10 | 70 | 90 | 10 | 115 | 140 | 12 |
| 18 | 35 | 7 | 42 | 60 | 10 | 70 | 95 | 10 | 120 | 150 | 12 |
| 20 | 35 | 8 | 42 | 62 | 8 | 73 | 100 | 10 | 125 | 150 | 12 |
| 22 | 40 | 8 | 45 | 62 | 10 | 75 | 95 | 13 | 130 | 160 | 12 |
| 25 | 35 | 8 | 45 | 65 | 10 | 75 | 100 | 10 | 135 | 170 | 12 |
| 25 | 42 | 8 | 48 | 62 | 8 | 80 | 100 | 10 | 140 | 165 | 10 |
| 25 | 47 | 7 | 48 | 65 | 10 | 80 | 110 | 10 | | | |
| 28 | 47 | 10 | 50 | 65 | 10 | 85 | 110 | 12 | | | |

Common sizes are indicated with bold type face.



PS-SEAL Standard, special versions

Timken PS-SEAL seals are also available in series dimensions but with different lips and configurations.



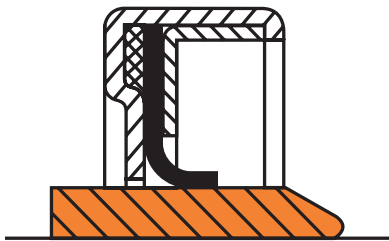
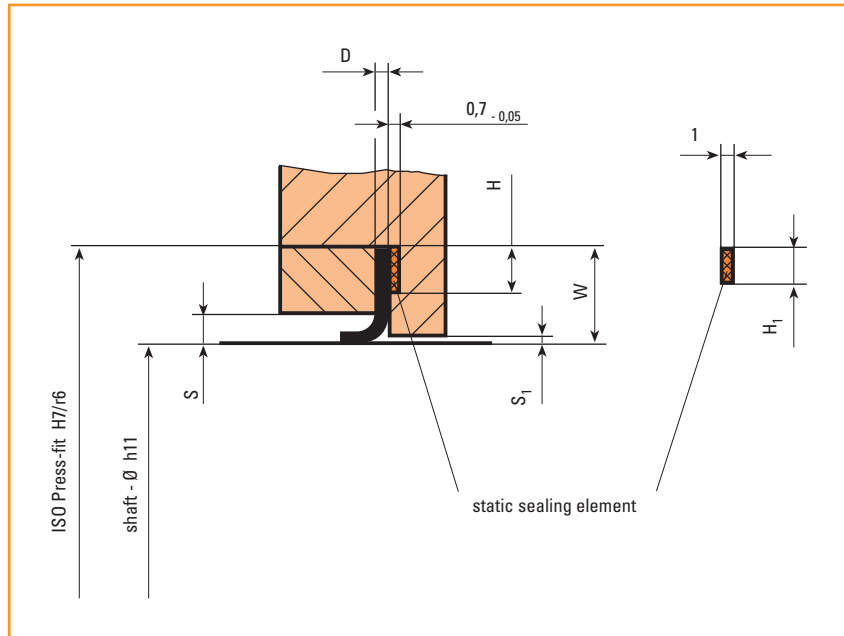
PS-SEAL Lip

For shaft sealing, where for space and/or design reasons the ready-to-install PS-SEAL Standard ring cannot be used, we recommend the PS-SEAL Lip version.

The PS-SEAL Lip is a ready-to-assemble sealing set comprising a GYLON sealing lip and the necessary static seal.

This sealing set is normally supplied in GYLON-B and Viton. Other material variants are available for the sealing lip and the static seal. Please refer to the materials selection tables.

For the standard installation dimensions recommended by Timken, please refer to the following installation diagram and dimensions table.



For PS-SEAL Standard and PS-SEAL Special we also supply ready-to-install shaft sleeves.



Sealing surface requirements

| Shaft - Ø | W | D | H | H1 | S | S ₁ | | |
|-----------|------|-----|-----|-----|-----|----------------|--------|--------|
| | | | | | | 5 bar | 10 bar | 25 bar |
| up to 19 | 6 | 0,8 | 2,5 | 2,0 | 2,0 | 2,0 | 0,5 | 0,2 |
| 20 - 49 | 7,5 | 0,8 | 3,5 | 2,5 | 2,5 | 2,5 | 0,5 | 0,2 |
| 50 - 149 | 10 | 1,0 | 4,5 | 3,5 | 3,0 | 3,0 | 0,5 | 0,2 |
| 150 - 299 | 12,5 | 1,0 | 6,0 | 4,5 | 3,0 | 3,0 | 0,5 | 0,2 |
| 300 - 450 | 15 | 1,0 | 8,0 | 6,0 | 3,0 | 3,0 | 0,5 | 0,2 |

Ordering example for shaft - Ø 100 mm:
 Timken PS-SEAL-Lip- Ø 100 x 120 x 1
 Static sealing element - Ø 113 x 120 x 1

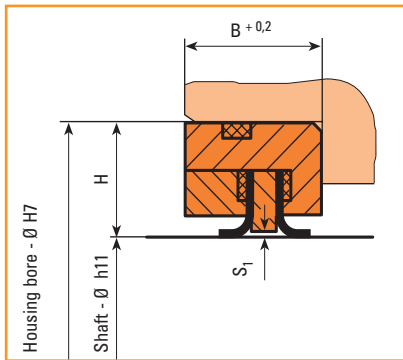
PS-Seal Special

Since the range of possible applications for seals in Timken's thermo-elastic high-performance PS-SEAL series is so wide, the PS-SEAL Standard or PS-SEAL Lip versions may, for dimensional and/or application-specific reasons, not always

represent the ideal solution. In order to be able to offer customers an economical solution for such special situations, Timken produces additional single-lip and dual-lip variants in standardized dimensions.

If you wish to use any of these PS-SEAL Special variants we recommend that you seek advice from our Timken specialists. PS-SEAL Special is available not only in the standard materials listed here, but also in other material variants.

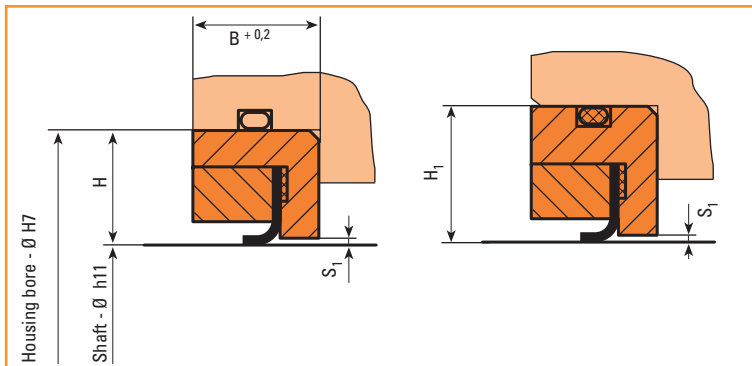
PS-SEAL Special, double lip pressure/vacuum



| Shaft - Ø | H | B | S ₁ | | |
|-----------|------|----|----------------|--------|--------|
| | | | 5 bar | 10 bar | 25 bar |
| up to 19 | 10 | 12 | 2,2 | 0,5 | 0,2 |
| 20 - 64 | 12,5 | 15 | 2,5 | 0,5 | 0,2 |
| 65 - 119 | 15 | 17 | 3,0 | 0,5 | 0,2 |
| 120 - 199 | 17 | 20 | 3,0 | 0,5 | 0,2 |
| 200 - 299 | 20 | 24 | 3,0 | 0,5 | 0,2 |
| 300 - 450 | 25 | 25 | 3,0 | 0,5 | 0,2 |

Ordering example for shaft - Ø 100; 10 bar:
Timken PS-SEAL Special, double lip, pressure/vacuum
100 x 130 x 17; 10 bar with O-ring

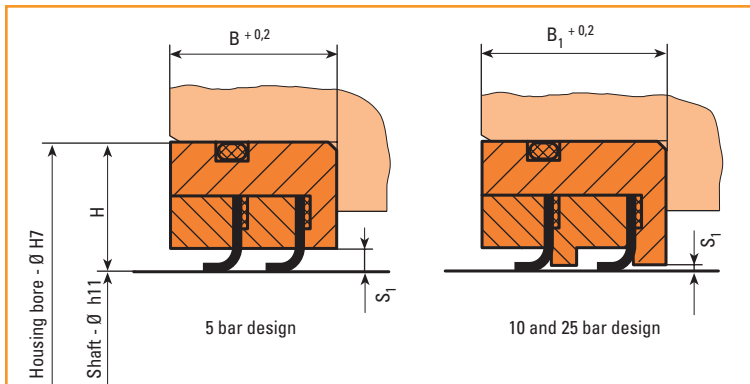
PS-SEAL Special, single lip



| Shaft - Ø | H | H ₁ | B | S ₁ | | |
|-----------|------|----------------|----|----------------|--------|--------|
| | | | | 5 bar | 10 bar | 25 bar |
| up to 19 | 8 | 10 | 8 | 2,2 | 0,5 | 0,2 |
| 20 - 64 | 11 | 12,5 | 10 | 2,5 | 0,5 | 0,2 |
| 65 - 119 | 14 | 15 | 10 | 3,0 | 0,5 | 0,2 |
| 120 - 199 | 15 | 17 | 12 | 3,0 | 0,5 | 0,2 |
| 200 - 299 | 17,5 | 20 | 15 | 3,0 | 0,5 | 0,2 |
| 300 - 450 | 20 | 25 | 20 | 3,0 | 0,5 | 0,2 |

Ordering example for shaft - Ø 100; 10 bar:
Timken PS-SEAL Special 100 x 128 x 10; 10 bar
Ordering example with O-ring:
Timken PS-SEAL Special - 100 x 130 x 10; 10 bar
with O-ring

PS-SEAL Special, double lip



| Shaft - Ø | H | B | B ₁ | S ₁ | | |
|-----------|------|----|----------------|----------------|--------|--------|
| | | | | 5 bar | 10 bar | 25 bar |
| up to 19 | 10 | 14 | 16 | 2,2 | 0,5 | 0,2 |
| 20 - 64 | 12,5 | 17 | 19 | 2,5 | 0,5 | 0,2 |
| 65 - 119 | 15 | 18 | 20 | 3,0 | 0,5 | 0,2 |
| 120 - 199 | 17 | 20 | 24 | 3,0 | 0,5 | 0,2 |
| 200 - 299 | 20 | 23 | 26 | 3,0 | 0,5 | 0,2 |
| 300 - 450 | 25 | 25 | 30 | 3,0 | 0,5 | 0,2 |

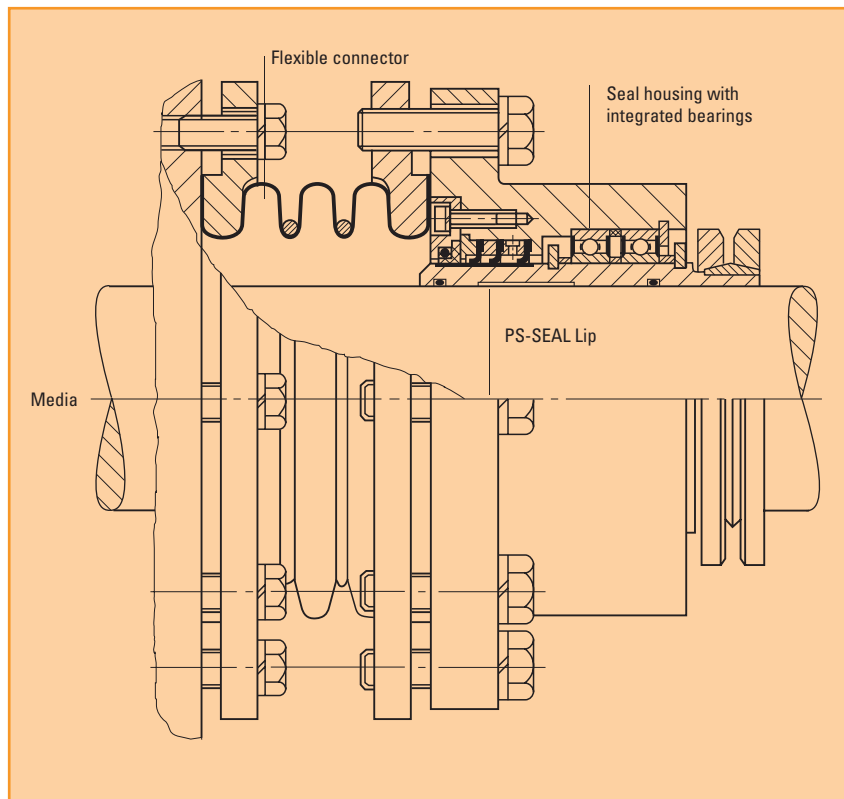
Ordering example for shaft - Ø 100; 10 bar:
Timken PS-SEAL Special, double lip
100 x 130 x 20; 10 bar with O-ring

PS-SEAL Floating Seal Device

Timken's PS-SEAL Floating Seal Device is designed to provide a complete solution for very individual problems. This version can be used in mixers and other similar machines involving substantial excursion or deflection in the shaft area to be sealed. With conventional radial sealing rings or gland packings, shaft movement of this nature might lead to short-term failure of the sealing system.

The basic idea behind Timken's PS-SEAL Floating Seal Device is to separate the sealing assembly on the shaft from the fixed parts of the case and to provide a permanently elastic connection between these two elements.

All applications for which Timken's PS-SEAL Floating Seal Device might be used require individual consultation and customized design and construction. You contact us for further information.



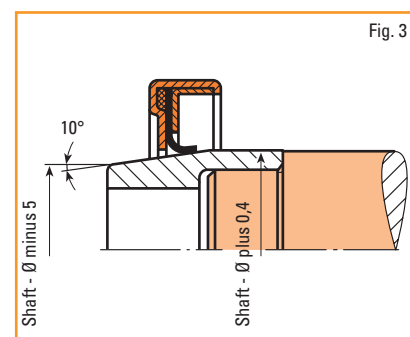
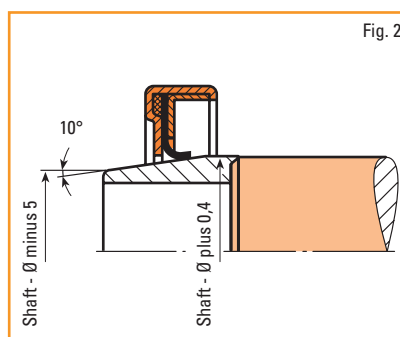
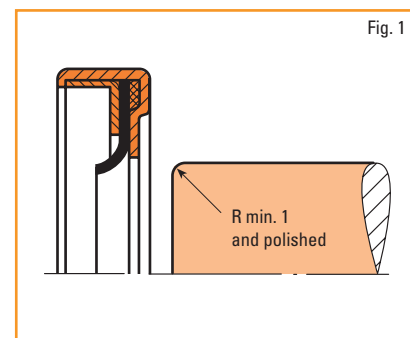
Assembly and Installation Instructions

The sealing lip in the Timken PS-SEAL series must be installed without being damaged. It must never be mounted it over sharp edges.

When installing the GYLON sealing lip with its back to the shaft, auxiliary radii or bevels must be used on the shaft end; (see Figure 1). All edges must be chamfered, rounded, and polished.

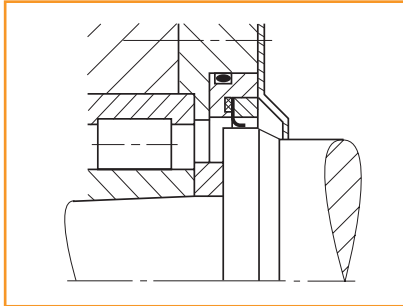
When installing the GYLON sealing lip towards the shaft end, an auxiliary bevel of approximately 10 degrees is required. This auxiliary bevel can be placed directly on the shaft end. If, however, for structural reasons this is not possible, we recommend using a specially made mounting cone as an installation aid; (see Figure 2).

The use of the auxiliary bevel and examples for the shape of the mounting cone are shown in Figure 2 and Figure 3. The surface of these installation aids must be smooth and free from all nicks and gouges. All edges must be rounded off.

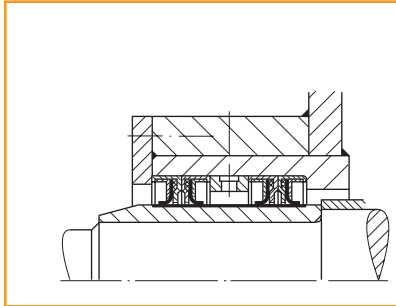


Application examples

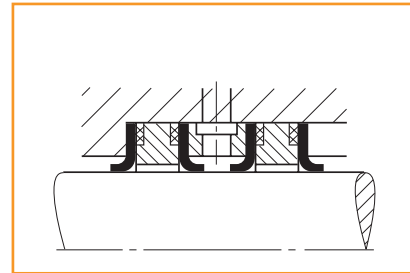
PS-SEAL Special:
Sealing a bearing



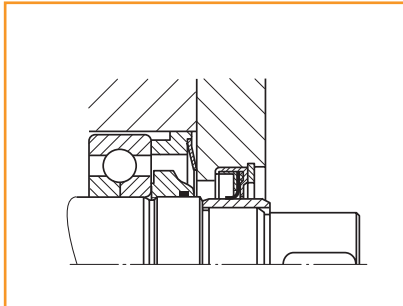
PS-SEAL Standard:
Sealing a spiral conveyor shaft



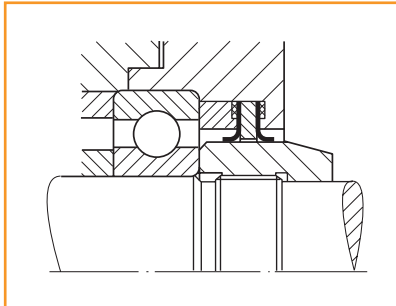
PS-SEAL Lip: Lip arrangement
for overpressure or vacuum
with a block



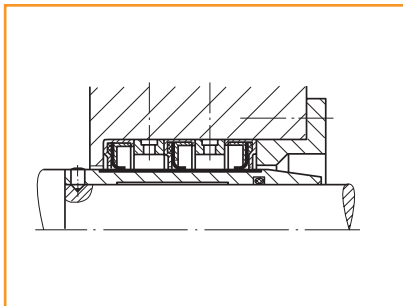
PS-SEAL Standard: Sealing a
screw-type compressor shaft



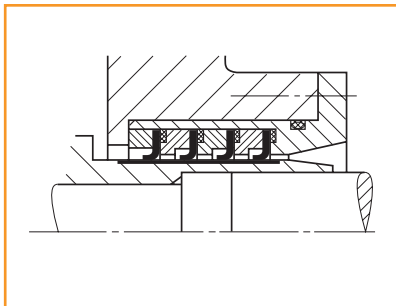
PS-SEAL Lip:
Sealing a worm shaft bearing



PS-SEAL Standard:
Sealing a boring head



PS-SEAL Lip: Sealing a pump
as substitute for gland packing



WARNING!


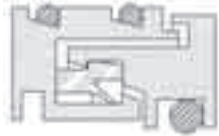




















Proper maintenance and handling practices are critical. Failure to follow the manufacturer's instructions can result in equipment failure, creating a risk of serious bodily harm.

Other types of Timken oil seals

| | | | | | | | |
|---|---|---|---|--|---|---|--|
| Model 3  | Model 21  | Model 23  | Model 24  | Model 25  | Model 26  | Model 26-E  | Model 26-R1  |
| Model 53  | Model 53-F1  | Model 53-G1  | Model 53-R1  | Model 53-R2  | Model 53-T2  | Model 53-TB  | Model 53-TF  |
| Model 54  | Model 57  | Model 58  | Model 59  | Model 59-G1  | PS®-1  | PS®-1 Dbl Opposed  | PS®-1 Dbl Tandem  |
| PS®-1 Reverse Lip  | Model 62  | Model 63  | Model 63-F1  | Model 63-G1  | Model 63-R1  | Model 63-R2  | Model 63-T2  |
| Model 63-TB  | Model 63-TF  | Model 64  | Model 64-G1  | Model 71  | Model 76  | Model 87  | Model 88  |
| Model 91  | Model 92  | Model 94  | Model 111  | Model 113  | Model 123  | Model 143  | Model 145  |

please refer to:
Timken Industrial Seal Catalog

Other types of Timken oils seals

| | | | | |
|---|--|---|---|--|
| Metallic Isolator – Flanged  | Metallic Isolator – Flangeless  | Metallic Isolator – Narrow Width  | Metallic Isolator – Small C-S  | Metallic Isolator – SPB  |
| Metallic Isolator – Step Shaft  | Metallic Isolator – Vertical  | Metallic Isolator – Vertical  | Non-Metallic Isolator (Glass-Filled PTFE) – Flanged  | Non-Metallic Isolator (Glass-Filled PTFE) – Flanged  |
| Non-Metallic Isolator (Glass-Filled PTFE) – Flangeless  | Non-Metallic Isolator (Glass-Filled PTFE) – Grease Purge  | Non-Metallic Isolator (Glass-Filled PTFE) – Small C-S  | Non-Metallic Isolator (Glass-Filled PTFE) – SPB  | Non-Metallic Isolator (Glass-Filled PTFE) – Step Shaft  |
| Non-Metallic Isolator (Glass-Filled PTFE) – Vertical  | Non-Metallic Isolator (Glass-Filled PTFE) – Vertical  | Metallic Isolator (Microcellular Filter)  | Metallic Isolator (Microcellular Filter) Flangeless  | Non-Metallic Isolator (Graphite-Filled PTFE)  |
| Non-Metallic Isolator (Graphite-Filled PTFE) – Flangeless  | Non-Metallic Isolator (Graphite-Filled PTFE) – Small C-S  | | | |

please refer to:
Timken Industrial Seal Catalog

Recommendations printed in this catalog pertaining to shaft finishes, misalignment, runout, speeds, temperatures and tolerances are generally applicable.

The combination of a selected seal with a certain application, and the operating circumstances involved, could modify the performance of the seal and/or

the equipment. To get the most out of your Timken seals, submit full information to ensure that the seal(s) you receive are suitable for your application.

Application Data Sheet

TIMKEN

Contact Information

Timken Representative: _____ Timken Area Manager: _____
 Phone: _____ Phone: _____
 Email Address: _____ Email Address: _____

Customer Information

Company: _____ Contact: _____
 Customer Type: _____ Title: _____
 Mailing Address: _____ Phone: _____
 City: _____ Fax: _____
 State: _____ Email Address: _____
 Zip: _____

Current Seal Information

Seal Manufacturer: _____ Purity: _____
 Seal Part Number: _____ Approximate Cost: _____
 Seal Type: _____ Approximate Monthly Usage: _____
 Seal Element Material: _____ Approximate Annual Usage: _____
 Seal Case Material: _____

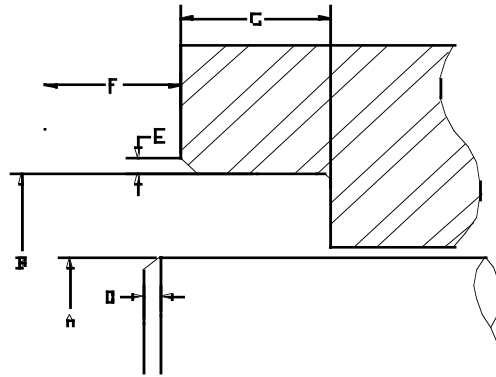
Application Information

General

Equipment Type: _____
 Bearing Type: _____
 Shaft Attitude: _____

Size/Finish

(A) Shaft Diameter: in mm
 Shaft Surface Finish: _____ micro-inch Ra
 Shaft Surface Hardness: _____ Rockwell-C
 (B) Bore Diameter: in mm
 Bore Surface Finish: _____ micro-inch Ra
 Bore Surface Hardness: _____ Rockwell-C
 (C) Bore Depth: in mm
 (D) Shaft Chamfer: in mm
 (E) Bore Chamfer: in mm
 (F) Distance to Obstruction: in mm



Motion

Type of Motion: _____
 Speed (rotation): RPM fpm mps
 Stroke (reciprocating): in mm
 Speed (reciprocating): cps cpm
 Degrees of Arc: _____
 Speed (oscillation): cps cpm

Alignment/Movement

Radial Misalignment (STBM): in mm
 Radial Movement: in mm
 Axial Movement: in mm

Pressure

Location: _____
 Pressure Value: psi bar kp

Media

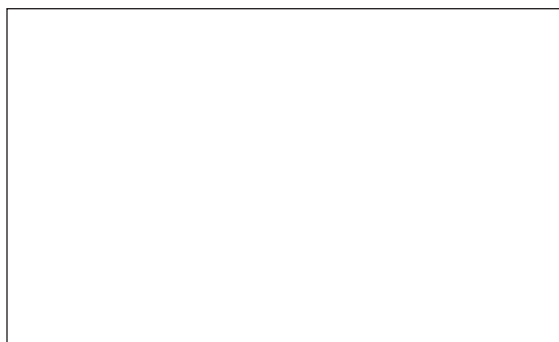
Media Type: _____
 Description: _____
 Manufacturer: _____
 Level: _____
 Location: _____

Temperature

Nominal: F C
 Minimum: F C
 Exposure Time at Minimum: sec min hrs day
 Maximum: F C
 Exposure Time at Maximum: sec min hrs day

Notes

Authorized distributor



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Precision Components • Lubrication •
Seals • Remanufacture and Repair •
Engineering Services

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