

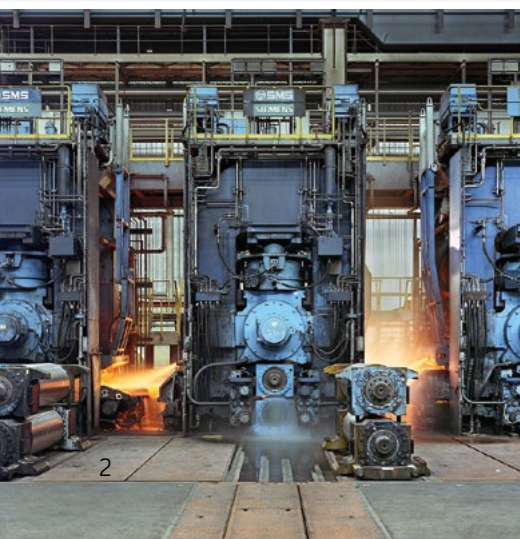
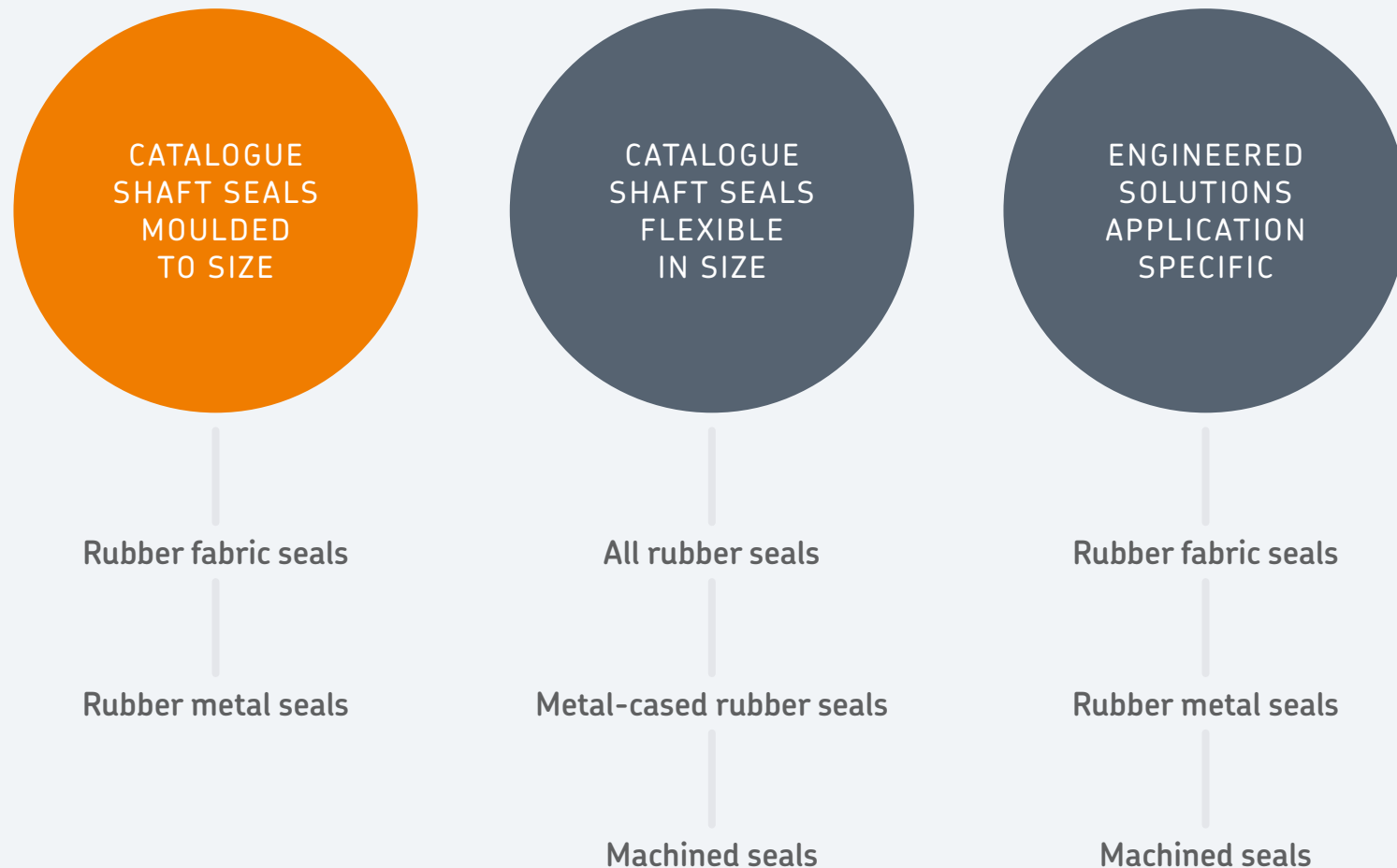
# Reinforced shaft seals

Catalogue radial shaft seals for heavy duty industrial applications

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# Radial shaft seals for heavy industrial applications



## Foreword

### From catalogue to engineered solutions

SKF created a complete Heavy Industrial Seals (HIS) offer to meet our customer needs. This brochure provides an overview on SKF catalogue heavy industrial shaft seals. The brochure is a guide to seal selection. It provides an introduction to the most important factors to be considered.

The catalogue seal offer has been expanded by complementary offers with size flexibility, customization and engineering services.

#### Catalogue seals and expanded offer

- HIS flexible in size
- Express service
- Engineered solutions

#### Catalogue seals for easy retrofit

*Catalogue shaft seals moulded to size* are manufactured in an efficient moulding process for mid and higher volumes. Please refer to the enclosed size tables in this catalogue. On request SKF tools up additional sizes.

#### Express service with flexible manufacturing processes

*Catalogue shaft seals flexible in size* are available in customized main dimensions with minimum order quantity of just one seal and optional express service. Please refer to shaft seals flexible in size.

#### Engineering service to exceed limits in extreme conditions

*Engineered solutions application specific* demands are relevant where operating parameters are exceeding the limits of catalogue seals. Please refer to engineered solutions.

#### SKF heavy industrial seals

- Availability, matching your needs schedule and express service
- Unlimited size range, not limited to listed catalogue part numbers
- Fast and simple installation, reduces risk of failure and resulting downtime
- Highly flexible design options, configured to your requirements
- Improve rotating equipment performance

Heavy duty industrial applications, like in construction equipment, metal, mining, paper, oil drilling or wind turbines can be very challenging for radial shaft seals. In operation, the seals are exposed to a wide range of temperatures, speeds and abrasive contaminants. Besides their generally sturdy designs and often large size, seals for these applications come with some special features to help improve seal performance, reliability and handling.

#### Typical applications

- Steel and aluminium rolling
- Pulp and paper feeders and paper machine wet section
- Mining and cement machinery
- Traditional energy – coal grinding mills
- Wind turbines
- Tunnel boring machines
- Heavy duty gearboxes
- Special purpose machinery
- Construction machinery

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Designed to the toughest operating conditions



# Catalogue shaft seals moulded to size

Catalogue shaft seals moulded to size are manufactured in an efficient moulding process for mid and higher volumes. Typical applications in rough environment in heavy duty operations for large machinery.

| Table 1           |                                              |
|-------------------|----------------------------------------------|
| Seal capabilities |                                              |
| Size              | from 25 to 2 500 mm<br>(from 1 to 98 in.)    |
| Pressure          | max. 0,5 bar<br>(max. 7.25 psi)              |
| DRO/MRO           | max. 1,5 mm<br>(max. 0.06 in.)               |
| Speed             | max. 25 m/s<br>(max. 4 900 ft/min)           |
| Temperature       | from -30 to +200 °C<br>(from -22 to +392 °F) |
| Materials         | NBR<br>HNBR<br>FKM                           |

Selection criteria are the internal and external application environment, seal housing designs and the operating parameters such as media, rotating speed, DRO (Dynamic runout) and mis-alignment, operating temperature and pressure. For the seal-system performance it is important to have the right seal, seal counterface conditions, effective lubrication and installation procedures.

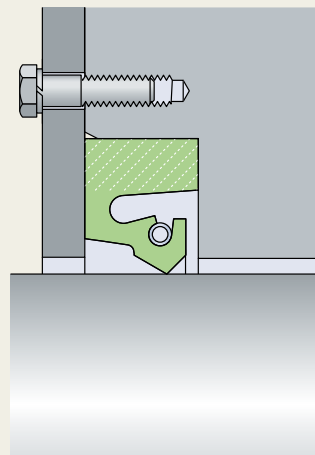
Shaft seals – moulded to size by SKF is a range of seal designs for easy retrofit. The size tables include a selection of available sizes. On request SKF tools up additional sizes. For seals with full size flexibility and express service – even for just one seal – please refer to **page 54** *catalogue shaft seals flexible in size*.

For seals with capabilities exceeding the limits (→ **table 1**) or special customer requirements please refer to *engineered solutions application specific* on **page 56**.

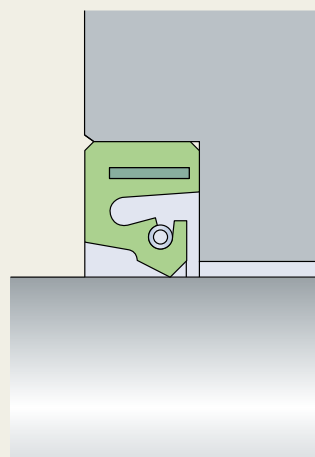


# Seal selection

The most important factors to consider for seal selection are:



*Housing with cover plate, seal axially clamped*



*Open housing, seal self-retaining*

## 1. Seal housing designs

The two common housing designs determine the seal selection. Housings with cover plate ensure proper stability by axial clamping for rubber fabric seals. Open housings require a metal reinforced self-retaining seal.

### Rubber fabric reinforced (solid + split)

The fabric reinforced rubber seals are available in solid and split executions. The seals are finished oversized to the housing bore to allow proper compression and stability. A cover plate is required to compress the seal within the housing, helping to stabilize the seal. The split seal execution allows seal replacement without shaft removal or dismounting of other machine components.

### Rubber metal reinforced

The seals are self-retaining in open housing bores without the use of a cover plate. The metal reinforcement provides the required stability in the housing bore. The L-shape metal reinforcement further increases seal stability e.g. in case of vibrations in the system.

## 2. Lip features

A garter or finger spring provides the appropriate radial load against the shaft. To avoid the potential risk of losing a spring in blind installations SKF seals feature an optional moulded-in garter spring or the finger spring execution.

## 3. Re-lubrication features

All seals of the range can be equipped with lubrication grooves at the back of the seal to allow the re-greasing between the sealing lips in back-to-back or tandem installations of two seals. For metal reinforced seals spacer lugs in customized dimensions are available on request.

## 4. Auxiliary lip

The auxiliary lip on radial shaft seals is an optional feature for increased protection against contaminants. Auxiliary lips are meant for applications in slightly contaminated environment. In an environment with heavy contamination an additional seal with excluding function is highly recommended.

## 5. Main lip materials

Material selection has a significant impact on seal performance and reliability. Important material properties are resistance to swelling, elasticity, chemical resistance, thermal resistance and low temperature behaviour. Seals are available in nitrile rubber (NBR), hydrogenated nitrile rubber (HNBR) and fluoro rubber (FKM).

The recommended maximum rotating speed for a seal is linked to the thermal resistance of the sealing lip material. Radial force and friction causes elevated temperatures under the sealing lip, which may require increased thermal resistance of the sealing material.

Details about the chemical resistance of the sealing material against the various media can be found in the section "chemical resistance" of SKF publication "10919-Industrial shaft seals".

NBR is a general purpose sealing material with good resistance to most mineral oils and greases, normal fuels such as gasoline, diesel and light heating oils, animal and vegetable oils and hot water. The permissible operating temperature range is +30 to +100 °C (+22 to +210 °F) for brief periods temperatures of up to +120 °C (+250 °F) can be tolerated.

HNBR combines increased wear resistance with increased high-temperature resistance. HNBR additionally features increased resistance to chemical attack, weather, ageing and ozone. Mixtures of oil in air may have a negative effect. The upper operating temperature limit is +150 °C (+300 °F).

FKM features a very good thermal and chemical resistance with very good ageing, weather, UV light and ozone resistance. The upper operating temperature limit is +200 °C (+390 °F).



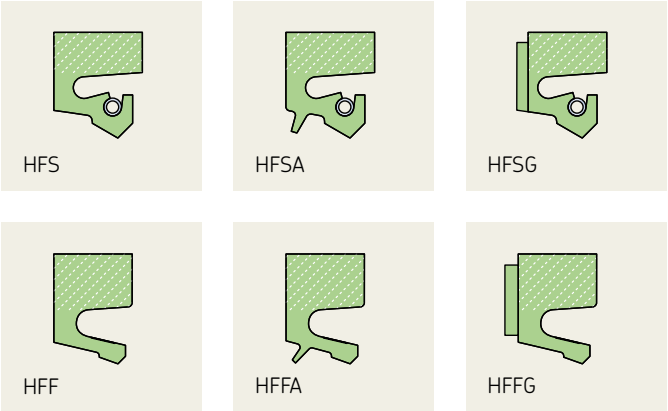
*Rubber fabric reinforced (solid + split), seal axially clamped*



*Rubber metal reinforced, self retaining seal with auxiliary lip*

# Design overview

## HF seals – rubber fabric reinforced



## HB and HL seals – rubber metal reinforced



| Operating parameters |             |      |      |      |          |      |                |        |
|----------------------|-------------|------|------|------|----------|------|----------------|--------|
| Material Seal        | Temperature |      |      |      | Pressure |      | Rotating speed |        |
|                      | from        | to   | from | to   | max.     |      | max.           |        |
|                      | °C          |      | °F   |      | MPa      | psi  | m/s            | ft/min |
| NBR                  | −30         | +100 | −22  | +212 | 0,05     | 7.25 | 15             | 2 950  |
| HNBR                 | −20         | +150 | −4   | +302 | 0,05     | 7.25 | 20             | 3 950  |
| FKM                  | −20         | +200 | −4   | +392 | 0,05     | 7.25 | 25             | 4 900  |

High pressure and high speed seals are available as engineered solutions

## Seal design configuration

| Seal body designs      | Reinforcement                      | Fabric solid         | Fabric split (O) | Metal band (B)       | L shap metal band (L) |
|------------------------|------------------------------------|----------------------|------------------|----------------------|-----------------------|
| Main construction type |                                    | HF                   | HF               | HB                   | HL                    |
| Main lip features      | No spring                          | HF                   | –                | HB                   | HL                    |
|                        | Garter spring (S)                  | HFS                  | HFSO             | HBS                  | HLS                   |
|                        | Garter spring – moulded-in (M)     | HFM                  | –                | HBM                  | HLM                   |
|                        | Finger spring (F)                  | HFF                  | HFFO             | HBFB                 | HLF                   |
|                        | Garter spring + Finger spring (SF) | –                    | –                | –                    | HLSF                  |
|                        | Pressure design (P)                | –                    | –                | –                    | HLP                   |
| Re-lub features        | Lub groove (G)                     | HFSG<br>HFMB<br>HFFG | HFSGO            | HBSG<br>HBMB<br>HBFG | HLSG<br>HLMG<br>HLFG  |
|                        | Lugs (L)                           | –                    | –                | HBSL<br>HBML         | HLSL<br>HLML<br>HLSFL |
| Auxiliary lip          | Dust lip (A)                       | HFSA<br>HFMA<br>HFFA | HFSAO<br>HFFAO   | HBSA<br>HBMA<br>HBFA | HLSA<br>HLMA<br>HLSFA |
| Design variation       | 1, 2, ...                          | HFS1                 | –                | –                    | HLSF1                 |
| Main lip material      | NBR                                | R                    | R                | R                    | R                     |
|                        | HNBR                               | H                    | H                | H                    | H                     |
|                        | FKM                                | V                    | V                | V                    | V                     |

## Designation examples metric and imperial

### 50x75x10 HFSA V

The metric seal designation shows the dimensions, the design and the material.

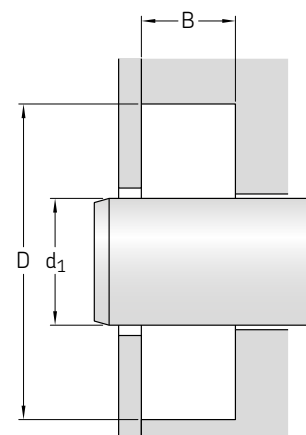
### 208-316-32 HFSA R

Inch dimensions are coded and separated with an hyphen. See product tables at the following pages.

$d_1$  25–80 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**

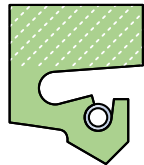


| Dimensions     |       |       | Dimensions     |       |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|-------|----------------|-------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B     | d <sub>1</sub> | D     | B     |               |                    |
| mm             |       |       | in.            |       |       |               |                    |
| 25             | 38    | 8     | 0.984          | 1.496 | 0.315 | NBR           | 25x38x8 HFS R      |
|                |       |       |                |       |       | HNBR          | 25x38x8 HFS H      |
|                |       |       |                |       |       | FKM           | 25x38x8 HFS V      |
| 25             | 50    | 10    | 0.984          | 1.969 | 0.394 | NBR           | 25x50x10 HFS R     |
|                |       |       |                |       |       | HNBR          | 25x50x10 HFS H     |
|                |       |       |                |       |       | FKM           | 25x50x10 HFS V     |
| 28             | 50    | 10    | 1.102          | 1.969 | 0.394 | NBR           | 28x50x10 HFS R     |
|                |       |       |                |       |       | HNBR          | 28x50x10 HFS H     |
|                |       |       |                |       |       | FKM           | 28x50x10 HFS V     |
| 30             | 48    | 8     | 1.181          | 1.890 | 0.315 | NBR           | 30x48x8 HFS R      |
|                |       |       |                |       |       | HNBR          | 30x48x8 HFS H      |
|                |       |       |                |       |       | FKM           | 30x48x8 HFS V      |
| 30             | 50    | 10    | 1.181          | 1.969 | 0.394 | NBR           | 30x50x10 HFS R     |
|                |       |       |                |       |       | HNBR          | 30x50x10 HFS H     |
|                |       |       |                |       |       | FKM           | 30x50x10 HFS V     |
| 30             | 52    | 10    | 1.181          | 2.047 | 0.394 | NBR           | 30x52x10 HFS R     |
|                |       |       |                |       |       | HNBR          | 30x52x10 HFS H     |
|                |       |       |                |       |       | FKM           | 30x52x10 HFS V     |
| 30,16          | 47,72 | 9,52  | 1.187          | 1.879 | 0.375 | NBR           | 112-156-24 HFS R   |
|                |       |       |                |       |       | HNBR          | 112-156-24 HFS H   |
|                |       |       |                |       |       | FKM           | 112-156-24 HFS V   |
| 35             | 60    | 10    | 1.378          | 2.362 | 0.394 | NBR           | 35x60x10 HFS R     |
|                |       |       |                |       |       | HNBR          | 35x60x10 HFS H     |
|                |       |       |                |       |       | FKM           | 35x60x10 HFS V     |
| 38,1           | 53,98 | 11,11 | 1.500          | 2.125 | 0.437 | NBR           | 132-208-28 HFS R   |
|                |       |       |                |       |       | HNBR          | 132-208-28 HFS H   |
|                |       |       |                |       |       | FKM           | 132-208-28 HFS V   |
| 42             | 65    | 10    | 1.654          | 2.559 | 0.394 | NBR           | 42x65x10 HFS R     |
|                |       |       |                |       |       | HNBR          | 42x65x10 HFS H     |
|                |       |       |                |       |       | FKM           | 42x65x10 HFS V     |
| 44,4           | 73,1  | 10    | 1.748          | 2.878 | 0.394 | NBR           | 44,4x73,1x10 HFS R |
|                |       |       |                |       |       | HNBR          | 44,4x73,1x10 HFS H |
|                |       |       |                |       |       | FKM           | 44,4x73,1x10 HFS V |
| 45             | 60    | 7     | 1.772          | 2.362 | 0.276 | NBR           | 45x60x7 HFS R      |
|                |       |       |                |       |       | HNBR          | 45x60x7 HFS H      |
|                |       |       |                |       |       | FKM           | 45x60x7 HFS V      |

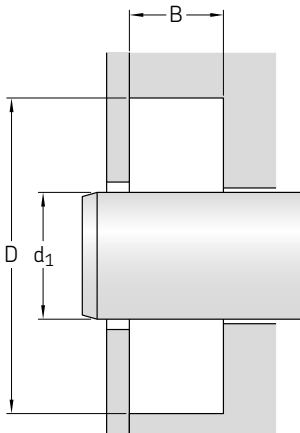
| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation   |
|----------------|-------|------|----------------|-------|-------|---------------|-------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                   |
| mm             |       |      | in.            |       |       |               |                   |
| 45             | 62    | 12   | 1.772          | 2.441 | 0.472 | NBR           | 45x62x12 HFS R    |
|                |       |      |                |       |       | HNBR          | 45x62x12 HFS H    |
|                |       |      |                |       |       | FKM           | 45x62x12 HFS V    |
| 45             | 62    | 8    | 1.772          | 2.441 | 0.315 | NBR           | 45x62x8 HFS R     |
|                |       |      |                |       |       | HNBR          | 45x62x8 HFS H     |
|                |       |      |                |       |       | FKM           | 45x62x8 HFS V     |
| 45             | 62    | 9    | 1.772          | 2.441 | 0.354 | NBR           | 45x62x9 HFS R     |
|                |       |      |                |       |       | HNBR          | 45x62x9 HFS H     |
|                |       |      |                |       |       | FKM           | 45x62x9 HFS V     |
| 45             | 72    | 10   | 1.772          | 2.835 | 0.394 | NBR           | 45x72x10 HFS R    |
|                |       |      |                |       |       | HNBR          | 45x72x10 HFS H    |
|                |       |      |                |       |       | FKM           | 45x72x10 HFS V    |
| 50             | 70    | 10   | 1.969          | 2.756 | 0.394 | NBR           | 50x70x10 HFS R    |
|                |       |      |                |       |       | HNBR          | 50x70x10 HFS H    |
|                |       |      |                |       |       | FKM           | 50x70x10 HFS V    |
| 50             | 72    | 10   | 1.969          | 2.835 | 0.394 | NBR           | 50x72x10 HFS R    |
|                |       |      |                |       |       | HNBR          | 50x72x10 HFS H    |
|                |       |      |                |       |       | FKM           | 50x72x10 HFS V    |
| 50             | 72    | 8    | 1.969          | 2.835 | 0.315 | NBR           | 50x72x8 HFS R     |
|                |       |      |                |       |       | HNBR          | 50x72x8 HFS H     |
|                |       |      |                |       |       | FKM           | 50x72x8 HFS V     |
| 50,8           | 69,85 | 12,7 | 2.000          | 2.750 | 0.5   | NBR           | 200-248-32 HFS R  |
|                |       |      |                |       |       | HNBR          | 200-248-32 HFS H  |
|                |       |      |                |       |       | FKM           | 200-248-32 HFS V  |
| 54             | 74,6  | 9,5  | 2.126          | 2.937 | 0.374 | NBR           | 54x75,6x9,5 HFS R |
|                |       |      |                |       |       | HNBR          | 54x75,6x9,5 HFS H |
|                |       |      |                |       |       | FKM           | 54x75,6x9,5 HFS V |
| 54             | 79,4  | 11   | 2.126          | 3.126 | 0.433 | NBR           | 54x79,4x11 HFS R  |
|                |       |      |                |       |       | HNBR          | 54x79,4x11 HFS H  |
|                |       |      |                |       |       | FKM           | 54x79,4x11 HFS V  |
| 55             | 70    | 8    | 2.165          | 2.756 | 0.315 | NBR           | 55x70x8 HFS R     |
|                |       |      |                |       |       | HNBR          | 55x70x8 HFS H     |
|                |       |      |                |       |       | FKM           | 55x70x8 HFS V     |
| 55             | 72    | 8    | 2.165          | 2.835 | 0.315 | NBR           | 55x72x8 HFS R     |
|                |       |      |                |       |       | HNBR          | 55x72x8 HFS H     |
|                |       |      |                |       |       | FKM           | 55x72x8 HFS V     |

| Dimensions     |       |      | Dimensions     |       |       | Material | SKF Designation  |
|----------------|-------|------|----------------|-------|-------|----------|------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |          |                  |
| mm             |       |      | in.            |       |       |          |                  |
| 55             | 76    | 12   | 2.165          | 2.992 | 0.472 | NBR      | 55x76x12 HFS R   |
|                |       |      |                |       |       | HNBR     | 55x76x12 HFS H   |
|                |       |      |                |       |       | FKM      | 55x76x12 HFS V   |
| 55             | 80    | 11   | 2.165          | 3.150 | 0.433 | NBR      | 55x80x11 HFS R   |
|                |       |      |                |       |       | HNBR     | 55x80x11 HFS H   |
|                |       |      |                |       |       | FKM      | 55x80x11 HFS V   |
| 55             | 80    | 12   | 2.165          | 3.150 | 0.472 | NBR      | 55x80x12 HFS R   |
|                |       |      |                |       |       | HNBR     | 55x80x12 HFS H   |
|                |       |      |                |       |       | FKM      | 55x80x12 HFS V   |
| 58,7           | 79,4  | 9,5  | 2.313          | 3.125 | 0.375 | NBR      | 220-308-24 HFS R |
|                |       |      |                |       |       | HNBR     | 220-308-24 HFS H |
|                |       |      |                |       |       | FKM      | 220-308-24 HFS V |
| 60             | 80    | 10   | 2.362          | 3.150 | 0.394 | NBR      | 60x80x10 HFS R   |
|                |       |      |                |       |       | HNBR     | 60x80x10 HFS H   |
|                |       |      |                |       |       | FKM      | 60x80x10 HFS V   |
| 60             | 85    | 11   | 2.362          | 3.346 | 0.433 | NBR      | 60x85x11 HFS R   |
|                |       |      |                |       |       | HNBR     | 60x85x11 HFS H   |
|                |       |      |                |       |       | FKM      | 60x85x11 HFS V   |
| 60             | 86    | 10   | 2.362          | 3.386 | 0.394 | NBR      | 60x86x10 HFS R   |
|                |       |      |                |       |       | HNBR     | 60x86x10 HFS H   |
|                |       |      |                |       |       | FKM      | 60x86x10 HFS V   |
| 60             | 90    | 13   | 2.362          | 3.543 | 0.512 | NBR      | 60x90x13 HFS R   |
|                |       |      |                |       |       | HNBR     | 60x90x13 HFS H   |
|                |       |      |                |       |       | FKM      | 60x90x13 HFS V   |
| 60,33          | 79,38 | 9,53 | 2.375          | 3.125 | 0.375 | NBR      | 224-308-24 HFS R |
|                |       |      |                |       |       | HNBR     | 224-308-24 HFS H |
|                |       |      |                |       |       | FKM      | 224-308-24 HFS V |
| 62,5           | 95    | 10   | 2.461          | 3.740 | 0.394 | NBR      | 62,5x95x10 HFS R |
|                |       |      |                |       |       | HNBR     | 62,5x95x10 HFS H |
|                |       |      |                |       |       | FKM      | 62,5x95x10 HFS V |
| 65             | 85    | 10   | 2.559          | 3.346 | 0.394 | NBR      | 65x85x10 HFS R   |
|                |       |      |                |       |       | HNBR     | 65x85x10 HFS H   |
|                |       |      |                |       |       | FKM      | 65x85x10 HFS V   |
| 65             | 90    | 11   | 2.559          | 3.543 | 0.433 | NBR      | 65x90x11 HFS R   |
|                |       |      |                |       |       | HNBR     | 65x90x11 HFS H   |
|                |       |      |                |       |       | FKM      | 65x90x11 HFS V   |
| 65             | 95    | 10   | 2.559          | 3.740 | 0.394 | NBR      | 65x95x10 HFS R   |
|                |       |      |                |       |       | HNBR     | 65x95x10 HFS H   |
|                |       |      |                |       |       | FKM      | 65x95x10 HFS V   |
| 65             | 100   | 10   | 2.559          | 3.937 | 0.394 | NBR      | 65x100x10 HFS R  |
|                |       |      |                |       |       | HNBR     | 65x100x10 HFS H  |
|                |       |      |                |       |       | FKM      | 65x100x10 HFS V  |
| 66,67          | 82,55 | 7,95 | 2.625          | 3.250 | 0.313 | NBR      | 240-316-20 HFS R |
|                |       |      |                |       |       | HNBR     | 240-316-20 HFS H |
|                |       |      |                |       |       | FKM      | 240-316-20 HFS V |
| 69,8           | 85,7  | 7,9  | 2.750          | 3.375 | 0.313 | NBR      | 248-324-20 HFS R |
|                |       |      |                |       |       | HNBR     | 248-324-20 HFS H |
|                |       |      |                |       |       | FKM      | 248-324-20 HFS V |
| 69,85          | 95,25 | 12,7 | 2.750          | 3.750 | 0.5   | NBR      | 248-348-32 HFS R |
|                |       |      |                |       |       | HNBR     | 248-348-32 HFS H |
|                |       |      |                |       |       | FKM      | 248-348-32 HFS V |

| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation   |
|----------------|-------|------|----------------|-------|-------|---------------|-------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                   |
| mm             |       |      | in.            |       |       |               |                   |
| 69,85          | 101,6 | 12,7 | 2.750          | 4.000 | 0.5   | NBR           | 248-400-32 HFS R  |
|                |       |      |                |       |       | HNBR          | 248-400-32 HFS H  |
|                |       |      |                |       |       | FKM           | 248-400-32 HFS V  |
| 70             | 90    | 7    | 2.756          | 3.543 | 0.276 | NBR           | 70x90x7 HFS R     |
|                |       |      |                |       |       | HNBR          | 70x90x7 HFS H     |
|                |       |      |                |       |       | FKM           | 70x90x7 HFS V     |
| 70             | 90    | 8    | 2.756          | 3.543 | 0.315 | NBR           | 70x90x8 HFS R     |
|                |       |      |                |       |       | HNBR          | 70x90x8 HFS H     |
|                |       |      |                |       |       | FKM           | 70x90x8 HFS V     |
| 70             | 105   | 12,5 | 2.756          | 4.134 | 0.492 | NBR           | 70x105x12,5 HFS R |
|                |       |      |                |       |       | HNBR          | 70x105x12,5 HFS H |
|                |       |      |                |       |       | FKM           | 70x105x12,5 HFS V |
| 70             | 110   | 13   | 2.756          | 4.331 | 0.512 | NBR           | 70x110x13 HFS R   |
|                |       |      |                |       |       | HNBR          | 70x110x13 HFS H   |
|                |       |      |                |       |       | FKM           | 70x110x13 HFS V   |
| 72             | 100   | 10   | 2.835          | 3.937 | 0.394 | NBR           | 72x100x10 HFS R   |
|                |       |      |                |       |       | HNBR          | 72x100x10 HFS H   |
|                |       |      |                |       |       | FKM           | 72x100x10 HFS V   |
| 73             | 95    | 12,5 | 2.874          | 3.740 | 0.492 | NBR           | 73x95x12,5 HFS R  |
|                |       |      |                |       |       | HNBR          | 73x95x12,5 HFS H  |
|                |       |      |                |       |       | FKM           | 73x95x12,5 HFS V  |
| 74,6           | 92    | 9,5  | 2.937          | 3.622 | 0.374 | NBR           | 75x92x9,5 HFS R   |
|                |       |      |                |       |       | HNBR          | 75x92x9,5 HFS H   |
|                |       |      |                |       |       | FKM           | 75x92x9,5 HFS V   |
| 75             | 95    | 12,5 | 2.953          | 3.740 | 0.492 | NBR           | 75x95x12,5 HFS R  |
|                |       |      |                |       |       | HNBR          | 75x95x12,5 HFS H  |
|                |       |      |                |       |       | FKM           | 75x95x12,5 HFS V  |
| 75             | 100   | 12   | 2.953          | 3.937 | 0.472 | NBR           | 75x100x12 HFS R   |
|                |       |      |                |       |       | HNBR          | 75x100x12 HFS H   |
|                |       |      |                |       |       | FKM           | 75x100x12 HFS V   |
| 75             | 105   | 15   | 2.953          | 4.134 | 0.591 | NBR           | 75x105x15 HFS R   |
|                |       |      |                |       |       | HNBR          | 75x105x15 HFS H   |
|                |       |      |                |       |       | FKM           | 75x105x15 HFS V   |
| 76,5           | 113   | 12   | 3.012          | 4.449 | 0.472 | NBR           | 76,5x113x12 HFS R |
|                |       |      |                |       |       | HNBR          | 76,5x113x12 HFS H |
|                |       |      |                |       |       | FKM           | 76,5x113x12 HFS V |
| 77,5           | 113   | 12   | 3.051          | 4.449 | 0.472 | NBR           | 77,5x113x12 HFS R |
|                |       |      |                |       |       | HNBR          | 77,5x113x12 HFS H |
|                |       |      |                |       |       | FKM           | 77,5x113x12 HFS V |
| 80             | 100   | 10   | 3.150          | 3.937 | 0.394 | NBR           | 80x100x10 HFS R   |
|                |       |      |                |       |       | HNBR          | 80x100x10 HFS H   |
|                |       |      |                |       |       | FKM           | 80x100x10 HFS V   |
| 80             | 100   | 13   | 3.150          | 3.937 | 0.512 | NBR           | 80x100x13 HFS R   |
|                |       |      |                |       |       | HNBR          | 80x100x13 HFS H   |
|                |       |      |                |       |       | FKM           | 80x100x13 HFS V   |
| 80             | 100   | 13   | 3.150          | 3.937 | 0.512 | NBR           | 80x100x13 HFS R   |
|                |       |      |                |       |       | HNBR          | 80x100x13 HFS H   |
|                |       |      |                |       |       | FKM           | 80x100x13 HFS V   |
| 80             | 100   | 8    | 3.150          | 3.937 | 0.315 | NBR           | 80x100x8 HFS R    |
|                |       |      |                |       |       | HNBR          | 80x100x8 HFS H    |
|                |       |      |                |       |       | FKM           | 80x100x8 HFS V    |



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**

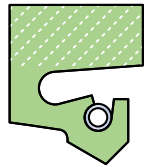


| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation      |
|----------------|-------|------|----------------|-------|-------|---------------|----------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                      |
| mm             |       |      | in.            |       |       |               |                      |
| 80             | 112   | 12,5 | 3.150          | 4.409 | 0.492 | NBR           | 80x112x13 HFS R      |
|                |       |      |                |       |       | HNBR          | 80x112x13 HFS H      |
|                |       |      |                |       |       | FKM           | 80x112x13 HFS V      |
| 80             | 115   | 10   | 3.150          | 4.528 | 0.394 | NBR           | 80x115x10 HFS R      |
|                |       |      |                |       |       | HNBR          | 80x115x10 HFS H      |
|                |       |      |                |       |       | FKM           | 80x115x10 HFS V      |
| 82,6           | 110   | 12   | 3.250          | 4.331 | 0.472 | NBR           | 82,6x110x12 HFS R    |
|                |       |      |                |       |       | HNBR          | 82,6x110x12 HFS H    |
|                |       |      |                |       |       | FKM           | 82,6x110x12 HFS V    |
| 85             | 102   | 13   | 3.346          | 4.016 | 0.512 | NBR           | 85x102x13 HFS R      |
|                |       |      |                |       |       | HNBR          | 85x102x13 HFS H      |
|                |       |      |                |       |       | FKM           | 85x102x13 HFS V      |
| 85             | 105   | 10   | 3.346          | 4.134 | 0.394 | NBR           | 85x105x10 HFS R      |
|                |       |      |                |       |       | HNBR          | 85x105x10 HFS H      |
|                |       |      |                |       |       | FKM           | 85x105x10 HFS V      |
| 85             | 109   | 12   | 3.346          | 4.291 | 0.472 | NBR           | 85x109x12 HFS R      |
|                |       |      |                |       |       | HNBR          | 85x109x12 HFS H      |
|                |       |      |                |       |       | FKM           | 85x109x12 HFS V      |
| 85             | 110   | 12,5 | 3.346          | 4.331 | 0.492 | NBR           | 85x110x13 HFS R      |
|                |       |      |                |       |       | HNBR          | 85x110x13 HFS H      |
|                |       |      |                |       |       | FKM           | 85x110x13 HFS V      |
| 85             | 117   | 12,5 | 3.346          | 4.606 | 0.492 | NBR           | 85x117x13 HFS R      |
|                |       |      |                |       |       | HNBR          | 85x117x13 HFS H      |
|                |       |      |                |       |       | FKM           | 85x117x13 HFS V      |
| 85,6           | 106,4 | 8,7  | 3.370          | 4.188 | 0.341 | NBR           | 85,6x106,4x8,7 HFS R |
|                |       |      |                |       |       | HNBR          | 85,6x106,4x8,7 HFS H |
|                |       |      |                |       |       | FKM           | 85,6x106,4x8,7 HFS V |
| 88             | 126   | 12   | 3.465          | 4.961 | 0.472 | NBR           | 88x126x12 HFS R      |
|                |       |      |                |       |       | HNBR          | 88x126x12 HFS H      |
|                |       |      |                |       |       | FKM           | 88x126x12 HFS V      |
| 88,9           | 111,1 | 9,5  | 3.500          | 4.375 | 0.375 | NBR           | 332-424-24 HFS R     |
|                |       |      |                |       |       | HNBR          | 332-424-24 HFS H     |
|                |       |      |                |       |       | FKM           | 332-424-24 HFS V     |
| 88,9           | 114,3 | 12,7 | 3.500          | 4.500 | 0.5   | NBR           | 332-432-32 HFS R     |
|                |       |      |                |       |       | HNBR          | 332-432-32 HFS H     |
|                |       |      |                |       |       | FKM           | 332-432-32 HFS V     |

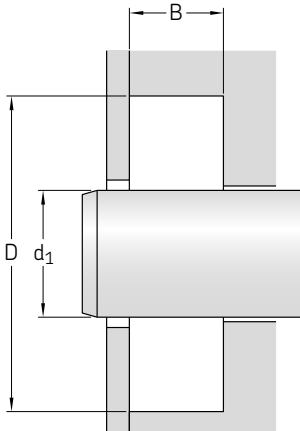
| Dimensions     |     |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation  |
|----------------|-----|------|----------------|-------|-------|---------------|------------------|
| d <sub>1</sub> | D   | B    | d <sub>1</sub> | D     | B     |               |                  |
| mm             |     |      | in.            |       |       |               |                  |
| 88,9           | 127 | 14,3 | 3.500          | 5.000 | 0.563 | NBR           | 332-500-36 HFS R |
|                |     |      |                |       |       | HNBR          | 332-500-36 HFS H |
|                |     |      |                |       |       | FKM           | 332-500-36 HFS V |
| 89             | 113 | 12   | 3.504          | 4.449 | 0.472 | NBR           | 89x113x12 HFS R  |
|                |     |      |                |       |       | HNBR          | 89x113x12 HFS H  |
|                |     |      |                |       |       | FKM           | 89x113x12 HFS V  |
| 90             | 110 | 10   | 3.543          | 4.331 | 0.394 | NBR           | 90x110x10 HFS R  |
|                |     |      |                |       |       | HNBR          | 90x110x10 HFS H  |
|                |     |      |                |       |       | FKM           | 90x110x10 HFS V  |
| 90             | 110 | 12   | 3.543          | 4.331 | 0.472 | NBR           | 90x110x12 HFS R  |
|                |     |      |                |       |       | HNBR          | 90x110x12 HFS H  |
|                |     |      |                |       |       | FKM           | 90x110x12 HFS V  |
| 90             | 110 | 8    | 3.543          | 4.331 | 0.315 | NBR           | 90x110x8 HFS R   |
|                |     |      |                |       |       | HNBR          | 90x110x8 HFS H   |
|                |     |      |                |       |       | FKM           | 90x110x8 HFS V   |
| 90             | 115 | 12   | 3.543          | 4.528 | 0.472 | NBR           | 90x115x12 HFS R  |
|                |     |      |                |       |       | HNBR          | 90x115x12 HFS H  |
|                |     |      |                |       |       | FKM           | 90x115x12 HFS V  |
| 90             | 120 | 13   | 3.543          | 4.724 | 0.512 | NBR           | 90x120x13 HFS R  |
|                |     |      |                |       |       | HNBR          | 90x120x13 HFS H  |
|                |     |      |                |       |       | FKM           | 90x120x13 HFS V  |
| 90             | 130 | 12   | 3.543          | 5.118 | 0.472 | NBR           | 90x130x12 HFS R  |
|                |     |      |                |       |       | HNBR          | 90x130x12 HFS H  |
|                |     |      |                |       |       | FKM           | 90x130x12 HFS V  |
| 90             | 130 | 16   | 3.543          | 5.118 | 0.63  | NBR           | 90x130x16 HFS R  |
|                |     |      |                |       |       | HNBR          | 90x130x16 HFS H  |
|                |     |      |                |       |       | FKM           | 90x130x16 HFS V  |
| 92             | 120 | 13   | 3.622          | 4.724 | 0.512 | NBR           | 92x120x13 HFS R  |
|                |     |      |                |       |       | HNBR          | 92x120x13 HFS H  |
|                |     |      |                |       |       | FKM           | 92x120x13 HFS V  |
| 92,08          | 127 | 12,7 | 3.625          | 5.000 | 0.5   | NBR           | 340-500-32 HFS R |
|                |     |      |                |       |       | HNBR          | 340-500-32 HFS H |
|                |     |      |                |       |       | FKM           | 340-500-32 HFS V |
| 93             | 127 | 13   | 3.661          | 5.000 | 0.512 | NBR           | 93x127x13 HFS R  |
|                |     |      |                |       |       | HNBR          | 93x127x13 HFS H  |
|                |     |      |                |       |       | FKM           | 93x127x13 HFS V  |

| Dimensions     |        |       | Dimensions     |       |       | Material | SKF Designation       |
|----------------|--------|-------|----------------|-------|-------|----------|-----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D     | B     |          |                       |
| mm             |        |       | in.            |       |       |          |                       |
| 95             | 115    | 10    | 3.740          | 4.528 | 0.394 | NBR      | 95x115x10 HFS R       |
|                |        |       |                |       |       | HNBR     | 95x115x10 HFS H       |
|                |        |       |                |       |       | FKM      | 95x115x10 HFS V       |
| 95             | 120    | 10    | 3.740          | 4.724 | 0.394 | NBR      | 95x120x10 HFS R       |
|                |        |       |                |       |       | HNBR     | 95x120x10 HFS H       |
|                |        |       |                |       |       | FKM      | 95x120x10 HFS V       |
| 95             | 120    | 10    | 3.740          | 4.724 | 0.394 | NBR      | 95x120x10 HFS R       |
|                |        |       |                |       |       | HNBR     | 95x120x10 HFS H       |
|                |        |       |                |       |       | FKM      | 95x120x10 HFS V       |
| 95             | 120    | 13    | 3.740          | 4.724 | 0.512 | NBR      | 95x120x13 HFS R       |
|                |        |       |                |       |       | HNBR     | 95x120x13 HFS H       |
|                |        |       |                |       |       | FKM      | 95x120x13 HFS V       |
| 95             | 127    | 12,5  | 3.740          | 5.000 | 0.492 | NBR      | 95x127x13 HFS R       |
|                |        |       |                |       |       | HNBR     | 95x127x13 HFS H       |
|                |        |       |                |       |       | FKM      | 95x127x13 HFS V       |
| 95,25          | 127    | 15,88 | 3.750          | 5.000 | 0.625 | NBR      | 348-500-40 HFS R      |
|                |        |       |                |       |       | HNBR     | 348-500-40 HFS H      |
|                |        |       |                |       |       | FKM      | 348-500-40 HFS V      |
| 98             | 115    | 9     | 3.858          | 4.528 | 0.354 | NBR      | 98x115x9 HFS R        |
|                |        |       |                |       |       | HNBR     | 98x115x9 HFS H        |
|                |        |       |                |       |       | FKM      | 98x115x9 HFS V        |
| 98             | 125    | 13    | 3.858          | 4.921 | 0.512 | NBR      | 98x125x13 HFS R       |
|                |        |       |                |       |       | HNBR     | 98x125x13 HFS H       |
|                |        |       |                |       |       | FKM      | 98x125x13 HFS V       |
| 98,4           | 123,88 | 12,7  | 3.875          | 4.875 | 0.5   | NBR      | 356-456-32 HFS R      |
|                |        |       |                |       |       | HNBR     | 356-456-32 HFS H      |
|                |        |       |                |       |       | FKM      | 356-456-32 HFS V      |
| 98,4           | 136,4  | 12,7  | 3.875          | 5.370 | 0.5   | NBR      | 98,4x136,4x12,7 HFS R |
|                |        |       |                |       |       | HNBR     | 98,4x136,4x12,7 HFS H |
|                |        |       |                |       |       | FKM      | 98,4x136,4x12,7 HFS V |
| 99,5           | 127    | 12,7  | 3.917          | 5.000 | 0.5   | NBR      | 99,5x127x12,7 HFS R   |
|                |        |       |                |       |       | HNBR     | 99,5x127x12,7 HFS H   |
|                |        |       |                |       |       | FKM      | 99,5x127x12,7 HFS V   |
| 100            | 120    | 10    | 3.937          | 4.724 | 0.394 | NBR      | 100x120x10 HFS R      |
|                |        |       |                |       |       | HNBR     | 100x120x10 HFS H      |
|                |        |       |                |       |       | FKM      | 100x120x10 HFS V      |
| 100            | 125    | 10    | 3.937          | 4.921 | 0.394 | NBR      | 100x125x10 HFS R      |
|                |        |       |                |       |       | HNBR     | 100x125x10 HFS H      |
|                |        |       |                |       |       | FKM      | 100x125x10 HFS V      |
| 100            | 127    | 13    | 3.937          | 5.000 | 0.512 | NBR      | 100x127x13 HFS R      |
|                |        |       |                |       |       | HNBR     | 100x127x13 HFS H      |
|                |        |       |                |       |       | FKM      | 100x127x13 HFS V      |
| 100            | 128,5  | 9,5   | 3.937          | 5.059 | 0.374 | NBR      | 100x128,5x9,5 HFS R   |
|                |        |       |                |       |       | HNBR     | 100x128,5x9,5 HFS H   |
|                |        |       |                |       |       | FKM      | 100x128,5x9,5 HFS V   |
| 100            | 130    | 12    | 3.937          | 5.118 | 0.472 | NBR      | 100x130x12 HFS R      |
|                |        |       |                |       |       | HNBR     | 100x130x12 HFS H      |
|                |        |       |                |       |       | FKM      | 100x130x12 HFS V      |
| 100            | 130    | 13    | 3.937          | 5.118 | 0.512 | NBR      | 100x130x13 HFS R      |
|                |        |       |                |       |       | HNBR     | 100x130x13 HFS H      |
|                |        |       |                |       |       | FKM      | 100x130x13 HFS V      |

d<sub>1</sub> 112,7–148 mm



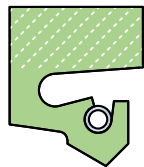
The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



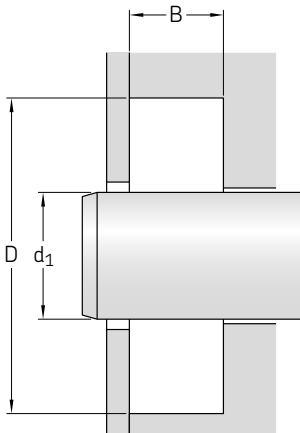
| Dimensions     |        |       | Dimensions     |       |       | Mate-<br>rial | SKF Designation  |
|----------------|--------|-------|----------------|-------|-------|---------------|------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D     | B     |               |                  |
| mm             |        |       | in.            |       |       |               |                  |
| 112,7          | 139,7  | 12,7  | 4.438          | 5.500 | 0.5   | NBR           | 428-532-32 HFS R |
|                |        |       |                |       |       | HNBR          | 428-532-32 HFS H |
|                |        |       |                |       |       | FKM           | 428-532-32 HFS V |
| 112,72         | 139,7  | 14,27 | 4.438          | 5.500 | 0.563 | NBR           | 428-532-36 HFS R |
|                |        |       |                |       |       | HNBR          | 428-532-36 HFS H |
|                |        |       |                |       |       | FKM           | 428-532-36 HFS V |
| 113            | 140    | 13    | 4.449          | 5.512 | 0.512 | NBR           | 113x140x13 HFS R |
|                |        |       |                |       |       | HNBR          | 113x140x13 HFS H |
|                |        |       |                |       |       | FKM           | 113x140x13 HFS V |
| 114,29         | 139,69 | 9,52  | 4.500          | 5.500 | 0.375 | NBR           | 432-532-24 HFS R |
|                |        |       |                |       |       | HNBR          | 432-532-24 HFS H |
|                |        |       |                |       |       | FKM           | 432-532-24 HFS V |
| 114,3          | 152,41 | 15,88 | 4.500          | 6.000 | 0.625 | NBR           | 432-600-40 HFS R |
|                |        |       |                |       |       | HNBR          | 432-600-40 HFS H |
|                |        |       |                |       |       | FKM           | 432-600-40 HFS V |
| 115            | 135    | 10    | 4.528          | 5.315 | 0.394 | NBR           | 115x135x10 HFS R |
|                |        |       |                |       |       | HNBR          | 115x135x10 HFS H |
|                |        |       |                |       |       | FKM           | 115x135x10 HFS V |
| 115            | 137    | 9     | 4.528          | 5.394 | 0.354 | NBR           | 115x137x9 HFS R  |
|                |        |       |                |       |       | HNBR          | 115x137x9 HFS H  |
|                |        |       |                |       |       | FKM           | 115x137x9 HFS V  |
| 115            | 140    | 12    | 4.528          | 5.512 | 0.472 | NBR           | 115x140x12 HFS R |
|                |        |       |                |       |       | HNBR          | 115x140x12 HFS H |
|                |        |       |                |       |       | FKM           | 115x140x12 HFS V |
| 115            | 150    | 10    | 4.528          | 5.906 | 0.394 | NBR           | 115x150x10 HFS R |
|                |        |       |                |       |       | HNBR          | 115x150x10 HFS H |
|                |        |       |                |       |       | FKM           | 115x150x10 HFS V |
| 115            | 150    | 10    | 4.528          | 5.906 | 0.394 | NBR           | 115x150x10 HFS R |
|                |        |       |                |       |       | HNBR          | 115x150x10 HFS H |
|                |        |       |                |       |       | FKM           | 115x150x10 HFS V |
| 115            | 155    | 16    | 4.528          | 6.102 | 0.63  | NBR           | 115x155x16 HFS R |
|                |        |       |                |       |       | HNBR          | 115x155x16 HFS H |
|                |        |       |                |       |       | FKM           | 115x155x16 HFS V |
| 117,48         | 146,08 | 14,3  | 4.625          | 5.750 | 0.563 | NBR           | 440-548-36 HFS R |
|                |        |       |                |       |       | HNBR          | 440-548-36 HFS H |
|                |        |       |                |       |       | FKM           | 440-548-36 HFS V |

| Dimensions     |        |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation        |
|----------------|--------|------|----------------|-------|-------|---------------|------------------------|
| d <sub>1</sub> | D      | B    | d <sub>1</sub> | D     | B     |               |                        |
| mm             |        |      | in.            |       |       |               |                        |
| 117.48         | 152,4  | 12,7 | 4.625          | 6.000 | 0.5   | NBR           | 440-600-32 HFS R       |
|                |        |      |                |       |       | HNBR          | 440-600-32 HFS H       |
|                |        |      |                |       |       | FKM           | 440-600-32 HFS V       |
| 117,5          | 142,5  | 12,5 | 4.626          | 5.610 | 0.492 | NBR           | 117,5x142,5x12,5 HFS R |
|                |        |      |                |       |       | HNBR          | 117,5x142,5x12,5 HFS H |
|                |        |      |                |       |       | FKM           | 117,5x142,5x12,5 HFS V |
| 118            | 150    | 15   | 4.646          | 5.906 | 0.591 | NBR           | 118x150x15 HFS R       |
|                |        |      |                |       |       | HNBR          | 118x150x15 HFS H       |
|                |        |      |                |       |       | FKM           | 118x150x15 HFS V       |
| 120            | 145    | 15,5 | 4.724          | 5.709 | 0.61  | NBR           | 120x145x43235 HFS R    |
|                |        |      |                |       |       | HNBR          | 120x145x43235 HFS H    |
|                |        |      |                |       |       | FKM           | 120x145x43235 HFS V    |
| 120            | 145,4  | 12,7 | 4.724          | 5.724 | 0.5   | NBR           | 120x145,4x12,7 HFS R   |
|                |        |      |                |       |       | HNBR          | 120x145,4x12,7 HFS H   |
|                |        |      |                |       |       | FKM           | 120x145,4x12,7 HFS V   |
| 120            | 150    | 13   | 4.724          | 5.906 | 0.512 | NBR           | 120x150x13 HFS R       |
|                |        |      |                |       |       | HNBR          | 120x150x13 HFS H       |
|                |        |      |                |       |       | FKM           | 120x150x13 HFS V       |
| 120            | 150    | 15   | 4.724          | 5.906 | 0.591 | NBR           | 120x150x15 HFS R       |
|                |        |      |                |       |       | HNBR          | 120x150x15 HFS H       |
|                |        |      |                |       |       | FKM           | 120x150x15 HFS V       |
| 120            | 152    | 16   | 4.724          | 5.984 | 0.63  | NBR           | 120x152x16 HFS R       |
|                |        |      |                |       |       | HNBR          | 120x152x16 HFS H       |
|                |        |      |                |       |       | FKM           | 120x152x16 HFS V       |
| 120,65         | 152,43 | 14,3 | 4.750          | 6.000 | 0.563 | NBR           | 448-600-36 HFS R       |
|                |        |      |                |       |       | HNBR          | 448-600-36 HFS H       |
|                |        |      |                |       |       | FKM           | 448-600-36 HFS V       |
| 123,8          | 149,2  | 12,7 | 4.875          | 5.875 | 0.5   | NBR           | 456-556-32 HFS R       |
|                |        |      |                |       |       | HNBR          | 456-556-32 HFS H       |
|                |        |      |                |       |       | FKM           | 456-556-32 HFS V       |
| 125            | 150    | 13   | 4.921          | 5.906 | 0.512 | NBR           | 125x150x13 HFS R       |
|                |        |      |                |       |       | HNBR          | 125x150x13 HFS H       |
|                |        |      |                |       |       | FKM           | 125x150x13 HFS V       |
| 125            | 155    | 12   | 4.921          | 6.102 | 0.472 | NBR           | 125x155x12 HFS R       |
|                |        |      |                |       |       | HNBR          | 125x155x12 HFS H       |
|                |        |      |                |       |       | FKM           | 125x155x12 HFS V       |

| Dimensions     |        |       | Dimensions     |       |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|-------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D     | B     |               |                      |
| mm             |        |       | in.            |       |       |               |                      |
| 125            | 165    | 16    | 4.921          | 6.496 | 0.63  | NBR           | 125x165x16 HFS R     |
|                |        |       |                |       |       | HNBR          | 125x165x16 HFS H     |
|                |        |       |                |       |       | FKM           | 125x165x16 HFS V     |
| 125            | 170    | 13    | 4.921          | 6.693 | 0.512 | NBR           | 125x170x13 HFS R     |
|                |        |       |                |       |       | HNBR          | 125x170x13 HFS H     |
|                |        |       |                |       |       | FKM           | 125x170x13 HFS V     |
| 125,43         | 158,75 | 12,7  | 4.938          | 6.250 | 0.5   | NBR           | 460-616-32 HFS R     |
|                |        |       |                |       |       | HNBR          | 460-616-32 HFS H     |
|                |        |       |                |       |       | FKM           | 460-616-32 HFS V     |
| 126            | 160    | 15    | 4.961          | 6.299 | 0.591 | NBR           | 126x160x15 HFS R     |
|                |        |       |                |       |       | HNBR          | 126x160x15 HFS H     |
|                |        |       |                |       |       | FKM           | 126x160x15 HFS V     |
| 127            | 152,4  | 9,5   | 5.000          | 6.000 | 0.375 | NBR           | 500-600-24 HFS R     |
|                |        |       |                |       |       | HNBR          | 500-600-24 HFS H     |
|                |        |       |                |       |       | FKM           | 500-600-24 HFS V     |
| 127            | 171,5  | 15,9  | 5.000          | 6.752 | 0.626 | NBR           | 127x171,5x15,9 HFS R |
|                |        |       |                |       |       | HNBR          | 127x171,5x15,9 HFS H |
|                |        |       |                |       |       | FKM           | 127x171,5x15,9 HFS V |
| 130            | 155    | 12,5  | 5.118          | 6.102 | 0.492 | NBR           | 130x155x12,5 HFS R   |
|                |        |       |                |       |       | HNBR          | 130x155x12,5 HFS H   |
|                |        |       |                |       |       | FKM           | 130x155x12,5 HFS V   |
| 130            | 155    | 15,5  | 5.118          | 6.102 | 0.61  | NBR           | 130x155x15,5 HFS R   |
|                |        |       |                |       |       | HNBR          | 130x155x15,5 HFS H   |
|                |        |       |                |       |       | FKM           | 130x155x15,5 HFS V   |
| 130            | 160    | 15    | 5.118          | 6.299 | 0.591 | NBR           | 130x160x15 HFS R     |
|                |        |       |                |       |       | HNBR          | 130x160x15 HFS H     |
|                |        |       |                |       |       | FKM           | 130x160x15 HFS V     |
| 130            | 170    | 10    | 5.118          | 6.693 | 0.394 | NBR           | 130x170x10 HFS R     |
|                |        |       |                |       |       | HNBR          | 130x170x10 HFS H     |
|                |        |       |                |       |       | FKM           | 130x170x10 HFS V     |
| 133,36         | 171,46 | 15,88 | 5.250          | 6.750 | 0.625 | NBR           | 516-628-40 HFS R     |
|                |        |       |                |       |       | HNBR          | 516-628-40 HFS H     |
|                |        |       |                |       |       | FKM           | 516-628-40 HFS V     |
| 135            | 155    | 12    | 5.315          | 6.102 | 0.472 | NBR           | 135x155x12 HFS R     |
|                |        |       |                |       |       | HNBR          | 135x155x12 HFS H     |
|                |        |       |                |       |       | FKM           | 135x155x12 HFS V     |
| 135            | 165    | 12    | 5.315          | 6.496 | 0.472 | NBR           | 135x165x12 HFS R     |
|                |        |       |                |       |       | HNBR          | 135x165x12 HFS H     |
|                |        |       |                |       |       | FKM           | 135x165x12 HFS V     |
| 135            | 170    | 12    | 5.315          | 6.693 | 0.472 | NBR           | 135x170x12 HFS R     |
|                |        |       |                |       |       | HNBR          | 135x170x12 HFS H     |
|                |        |       |                |       |       | FKM           | 135x170x12 HFS V     |
| 135            | 170    | 15    | 5.315          | 6.693 | 0.591 | NBR           | 135x170x15 HFS R     |
|                |        |       |                |       |       | HNBR          | 135x170x15 HFS H     |
|                |        |       |                |       |       | FKM           | 135x170x15 HFS V     |
| 136.53         | 161.93 | 12,7  | 5.375          | 6.375 | 0.5   | NBR           | 524-624-32 HFS R     |
|                |        |       |                |       |       | HNBR          | 524-624-32 HFS H     |
|                |        |       |                |       |       | FKM           | 524-624-32 HFS V     |
| 139,7          | 171,45 | 15,88 | 5.500          | 6.750 | 0.625 | NBR           | 532-648-40 HFS R     |
|                |        |       |                |       |       | HNBR          | 532-648-40 HFS H     |
|                |        |       |                |       |       | FKM           | 532-648-40 HFS V     |



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



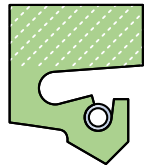
| Dimensions     |       |       | Dimensions     |       |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|-------|----------------|-------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B     | d <sub>1</sub> | D     | B     |               |                    |
| mm             |       |       | in.            |       |       |               |                    |
| 150            | 170   | 15    | 5.906          | 6.693 | 0.591 | NBR           | 150x170x15 HFS R   |
|                |       |       |                |       |       | HNBR          | 150x170x15 HFS H   |
|                |       |       |                |       |       | FKM           | 150x170x15 HFS V   |
| 150            | 180   | 14    | 5.906          | 7.087 | 0.551 | NBR           | 150x180x14 HFS R   |
|                |       |       |                |       |       | HNBR          | 150x180x14 HFS H   |
|                |       |       |                |       |       | FKM           | 150x180x14 HFS V   |
| 150            | 182   | 16    | 5.906          | 7.165 | 0.63  | NBR           | 150x182x16 HFS R   |
|                |       |       |                |       |       | HNBR          | 150x182x16 HFS H   |
|                |       |       |                |       |       | FKM           | 150x182x16 HFS V   |
| 150            | 190   | 16    | 5.906          | 7.480 | 0.63  | NBR           | 150x190x16 HFS R   |
|                |       |       |                |       |       | HNBR          | 150x190x16 HFS H   |
|                |       |       |                |       |       | FKM           | 150x190x16 HFS V   |
| 150,81         | 177,8 | 14,28 | 5.938          | 7.000 | 0.563 | NBR           | 560-700-36 HFS R   |
|                |       |       |                |       |       | HNBR          | 560-700-36 HFS H   |
|                |       |       |                |       |       | FKM           | 560-700-36 HFS V   |
| 152            | 181   | 12,5  | 5.984          | 7.126 | 0.492 | NBR           | 152x181x12,5 HFS R |
|                |       |       |                |       |       | HNBR          | 152x181x12,5 HFS H |
|                |       |       |                |       |       | FKM           | 152x181x12,5 HFS V |
| 152,4          | 181   | 12,7  | 6.000          | 7.125 | 0.5   | NBR           | 600-708-32 HFS R   |
|                |       |       |                |       |       | HNBR          | 600-708-32 HFS H   |
|                |       |       |                |       |       | FKM           | 600-708-32 HFS V   |
| 155            | 180   | 12,5  | 6.102          | 7.087 | 0.492 | NBR           | 155x180x13 HFS R   |
|                |       |       |                |       |       | HNBR          | 155x180x13 HFS H   |
|                |       |       |                |       |       | FKM           | 155x180x13 HFS V   |
| 155            | 190   | 15    | 6.102          | 7.480 | 0.591 | NBR           | 155x190x15 HFS R   |
|                |       |       |                |       |       | HNBR          | 155x190x15 HFS H   |
|                |       |       |                |       |       | FKM           | 155x190x15 HFS V   |
| 155            | 195   | 16    | 6.102          | 7.677 | 0.63  | NBR           | 155x195x16 HFS R   |
|                |       |       |                |       |       | HNBR          | 155x195x16 HFS H   |
|                |       |       |                |       |       | FKM           | 155x195x16 HFS V   |
| 155            | 215   | 20    | 6.102          | 8.465 | 0.787 | NBR           | 155x215x20 HFS R   |
|                |       |       |                |       |       | HNBR          | 155x215x20 HFS H   |
|                |       |       |                |       |       | FKM           | 155x215x20 HFS V   |
| 156            | 200   | 16    | 6.142          | 7.874 | 0.63  | NBR           | 156x200x16 HFS R   |
|                |       |       |                |       |       | HNBR          | 156x200x16 HFS H   |
|                |       |       |                |       |       | FKM           | 156x200x16 HFS V   |

| Dimensions     |     |    | Dimensions     |       |       | Mate-<br>rial | SKF Designation  |
|----------------|-----|----|----------------|-------|-------|---------------|------------------|
| d <sub>1</sub> | D   | B  | d <sub>1</sub> | D     | B     |               |                  |
| mm             |     |    | in.            |       |       |               |                  |
| 158            | 180 | 15 | 6.220          | 7.087 | 0.591 | NBR           | 158x180x15 HFS R |
|                |     |    |                |       |       | HNBR          | 158x180x15 HFS H |
|                |     |    |                |       |       | FKM           | 158x180x15 HFS V |
| 160            | 185 | 10 | 6.299          | 7.283 | 0.394 | NBR           | 160x185x10 HFS R |
|                |     |    |                |       |       | HNBR          | 160x185x10 HFS H |
|                |     |    |                |       |       | FKM           | 160x185x10 HFS V |
| 160            | 188 | 21 | 6.299          | 7.402 | 0.827 | NBR           | 160x188x21 HFS R |
|                |     |    |                |       |       | HNBR          | 160x188x21 HFS H |
|                |     |    |                |       |       | FKM           | 160x188x21 HFS V |
| 160            | 190 | 15 | 6.299          | 7.480 | 0.591 | NBR           | 160x190x15 HFS R |
|                |     |    |                |       |       | HNBR          | 160x190x15 HFS H |
|                |     |    |                |       |       | FKM           | 160x190x15 HFS V |
| 160            | 190 | 15 | 6.299          | 7.480 | 0.591 | NBR           | 160x190x15 HFS R |
|                |     |    |                |       |       | HNBR          | 160x190x15 HFS H |
|                |     |    |                |       |       | FKM           | 160x190x15 HFS V |
| 160            | 190 | 16 | 6.299          | 7.480 | 0.63  | NBR           | 160x190x16 HFS R |
|                |     |    |                |       |       | HNBR          | 160x190x16 HFS H |
|                |     |    |                |       |       | FKM           | 160x190x16 HFS V |
| 160            | 200 | 15 | 6.299          | 7.874 | 0.591 | NBR           | 160x200x15 HFS R |
|                |     |    |                |       |       | HNBR          | 160x200x15 HFS H |
|                |     |    |                |       |       | FKM           | 160x200x15 HFS V |
| 160            | 200 | 16 | 6.299          | 7.874 | 0.63  | NBR           | 160x200x16 HFS R |
|                |     |    |                |       |       | HNBR          | 160x200x16 HFS H |
|                |     |    |                |       |       | FKM           | 160x200x16 HFS V |
| 162            | 190 | 12 | 6.378          | 7.480 | 0.472 | NBR           | 162x190x12 HFS R |
|                |     |    |                |       |       | HNBR          | 162x190x12 HFS H |
|                |     |    |                |       |       | FKM           | 162x190x12 HFS V |
| 162            | 202 | 16 | 6.378          | 7.953 | 0.63  | NBR           | 162x202x16 HFS R |
|                |     |    |                |       |       | HNBR          | 162x202x16 HFS H |
|                |     |    |                |       |       | FKM           | 162x202x16 HFS V |
| 165            | 190 | 13 | 6.496          | 7.480 | 0.512 | NBR           | 165x190x13 HFS R |
|                |     |    |                |       |       | HNBR          | 165x190x13 HFS H |
|                |     |    |                |       |       | FKM           | 165x190x13 HFS V |
| 165            | 190 | 15 | 6.496          | 7.480 | 0.591 | NBR           | 165x190x15 HFS R |
|                |     |    |                |       |       | HNBR          | 165x190x15 HFS H |
|                |     |    |                |       |       | FKM           | 165x190x15 HFS V |

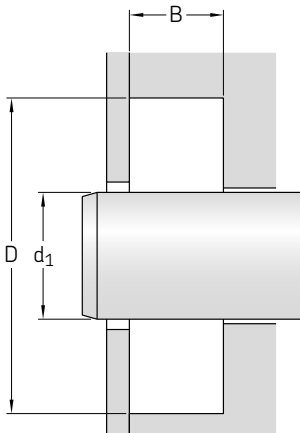
| Dimensions     |        |       | Dimensions     |       |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|-------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D     | B     |               |                      |
| mm             |        |       | in.            |       |       |               |                      |
| 165            | 200    | 15    | 6.496          | 7.874 | 0.591 | NBR           | 165x200x15 HFS R     |
|                |        |       |                |       |       | HNBR          | 165x200x15 HFS H     |
|                |        |       |                |       |       | FKM           | 165x200x15 HFS V     |
| 165            | 205    | 16    | 6.496          | 8.071 | 0.63  | NBR           | 165x205x16 HFS R     |
|                |        |       |                |       |       | HNBR          | 165x205x16 HFS H     |
|                |        |       |                |       |       | FKM           | 165x205x16 HFS V     |
| 165,1          | 203,2  | 19,1  | 6.500          | 8.000 | 0.75  | NBR           | 632-800-48 HFS R     |
|                |        |       |                |       |       | HNBR          | 632-800-48 HFS H     |
|                |        |       |                |       |       | FKM           | 632-800-48 HFS V     |
| 168            | 196,9  | 19,1  | 6.614          | 7.750 | 0.75  | NBR           | 168x196,9x19,1 HFS R |
|                |        |       |                |       |       | HNBR          | 168x196,9x19,1 HFS H |
|                |        |       |                |       |       | FKM           | 168x196,9x19,1 HFS V |
| 168,3          | 206,4  | 17,5  | 6.625          | 8.125 | 0.688 | NBR           | 640-808-44 HFS R     |
|                |        |       |                |       |       | HNBR          | 640-808-44 HFS H     |
|                |        |       |                |       |       | FKM           | 640-808-44 HFS V     |
| 170            | 200    | 12    | 6.693          | 7.874 | 0.472 | NBR           | 170x200x12 HFS R     |
|                |        |       |                |       |       | HNBR          | 170x200x12 HFS H     |
|                |        |       |                |       |       | FKM           | 170x200x12 HFS V     |
| 170            | 200    | 15    | 6.693          | 7.874 | 0.591 | NBR           | 170x200x15 HFS R     |
|                |        |       |                |       |       | HNBR          | 170x200x15 HFS H     |
|                |        |       |                |       |       | FKM           | 170x200x15 HFS V     |
| 170            | 200    | 16    | 6.693          | 7.874 | 0.63  | NBR           | 170x200x16 HFS R     |
|                |        |       |                |       |       | HNBR          | 170x200x16 HFS H     |
|                |        |       |                |       |       | FKM           | 170x200x16 HFS V     |
| 170            | 210    | 16    | 6.693          | 8.268 | 0.63  | NBR           | 170x210x16 HFS R     |
|                |        |       |                |       |       | HNBR          | 170x210x16 HFS H     |
|                |        |       |                |       |       | FKM           | 170x210x16 HFS V     |
| 170,26         | 202    | 12,7  | 6.703          | 7.953 | 0.5   | NBR           | 645-761-32 HFS R     |
|                |        |       |                |       |       | HNBR          | 645-761-32 HFS H     |
|                |        |       |                |       |       | FKM           | 645-761-32 HFS V     |
| 171,5          | 197    | 17,5  | 6.750          | 7.756 | 0.689 | NBR           | 171,5x197x17,5 HFS R |
|                |        |       |                |       |       | HNBR          | 171,5x197x17,5 HFS H |
|                |        |       |                |       |       | FKM           | 171,5x197x17,5 HFS V |
| 175            | 213,1  | 19,1  | 6.890          | 8.390 | 0.75  | NBR           | 175x213,1x19,1 HFS R |
|                |        |       |                |       |       | HNBR          | 175x213,1x19,1 HFS H |
|                |        |       |                |       |       | FKM           | 175x213,1x19,1 HFS V |
| 177,81         | 209,55 | 19,1  | 7.000          | 8.250 | 0.75  | NBR           | 700-816-48 HFS R     |
|                |        |       |                |       |       | HNBR          | 700-816-48 HFS H     |
|                |        |       |                |       |       | FKM           | 700-816-48 HFS V     |
| 177,81         | 215,91 | 15,88 | 7.000          | 8.500 | 0.625 | NBR           | 700-832-40 HFS R     |
|                |        |       |                |       |       | HNBR          | 700-832-40 HFS H     |
|                |        |       |                |       |       | FKM           | 700-832-40 HFS V     |
| 178            | 205    | 11    | 7.008          | 8.071 | 0.433 | NBR           | 178x205x11 HFS R     |
|                |        |       |                |       |       | HNBR          | 178x205x11 HFS H     |
|                |        |       |                |       |       | FKM           | 178x205x11 HFS V     |
| 179            | 219    | 16    | 7.047          | 8.622 | 0.63  | NBR           | 179x219x16 HFS R     |
|                |        |       |                |       |       | HNBR          | 179x219x16 HFS H     |
|                |        |       |                |       |       | FKM           | 179x219x16 HFS V     |
| 179,38         | 219,06 | 15,88 | 7.063          | 8.625 | 0.625 | NBR           | 704-840-40 HFS R     |
|                |        |       |                |       |       | HNBR          | 704-840-40 HFS H     |
|                |        |       |                |       |       | FKM           | 704-840-40 HFS V     |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 190–239,71 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



| Dimensions     |        |       | Dimensions     |       |       | Mate-<br>rial | SKF Designation        |
|----------------|--------|-------|----------------|-------|-------|---------------|------------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D     | B     |               |                        |
| mm             |        |       | in.            |       |       |               |                        |
| 190            | 235    | 16    | 7.480          | 9.252 | 0.63  | NBR           | 190x235x16 HFS R       |
|                |        |       |                |       |       | HNBR          | 190x235x16 HFS H       |
|                |        |       |                |       |       | FKM           | 190x235x16 HFS V       |
| 190,5          | 215,9  | 15,7  | 7.500          | 8.500 | 0.618 | NBR           | 191,5x215,9x15,7 HFS R |
|                |        |       |                |       |       | HNBR          | 191,5x215,9x15,7 HFS H |
|                |        |       |                |       |       | FKM           | 191,5x215,9x15,7 HFS V |
| 195            | 233,1  | 19,1  | 7.677          | 9.177 | 0.752 | NBR           | 195x233,1x19,1 HFS R   |
|                |        |       |                |       |       | HNBR          | 195x233,1x19,1 HFS H   |
|                |        |       |                |       |       | FKM           | 195x233,1x19,1 HFS V   |
| 195            | 235    | 16    | 7.677          | 9.252 | 0.63  | NBR           | 195x235x16 HFS R       |
|                |        |       |                |       |       | HNBR          | 195x235x16 HFS H       |
|                |        |       |                |       |       | FKM           | 195x235x16 HFS V       |
| 195,26         | 234,94 | 15,88 | 7.688          | 9.250 | 0.625 | NBR           | 744-916-40 HFS R       |
|                |        |       |                |       |       | HNBR          | 744-916-40 HFS H       |
|                |        |       |                |       |       | FKM           | 744-916-40 HFS V       |
| 196,85         | 238,12 | 15,88 | 7.750          | 9.375 | 0.625 | NBR           | 748-924-40 HFS R       |
|                |        |       |                |       |       | HNBR          | 748-924-40 HFS H       |
|                |        |       |                |       |       | FKM           | 748-924-40 HFS V       |
| 197            | 236    | 16    | 7.756          | 9.291 | 0.63  | NBR           | 197x236x16 HFS R       |
|                |        |       |                |       |       | HNBR          | 197x236x16 HFS H       |
|                |        |       |                |       |       | FKM           | 197x236x16 HFS V       |
| 200            | 225    | 15    | 7.874          | 8.858 | 0.591 | NBR           | 200x225x15 HFS R       |
|                |        |       |                |       |       | HNBR          | 200x225x15 HFS H       |
|                |        |       |                |       |       | FKM           | 200x225x15 HFS V       |
| 200            | 230    | 16    | 7.874          | 9.055 | 0.63  | NBR           | 200x230x16 HFS R       |
|                |        |       |                |       |       | HNBR          | 200x230x16 HFS H       |
|                |        |       |                |       |       | FKM           | 200x230x16 HFS V       |
| 200            | 231,74 | 15,88 | 7.875          | 9.125 | 0.625 | NBR           | 756-908-40 HFS R       |
|                |        |       |                |       |       | HNBR          | 756-908-40 HFS H       |
|                |        |       |                |       |       | FKM           | 756-908-40 HFS V       |
| 200            | 238    | 19    | 7.874          | 9.370 | 0.748 | NBR           | 200x238x19 HFS R       |
|                |        |       |                |       |       | HNBR          | 200x238x19 HFS H       |
|                |        |       |                |       |       | FKM           | 200x238x19 HFS V       |
| 200            | 238,1  | 18    | 7.874          | 9.375 | 0.709 | NBR           | 200x238,1x18 HFS R     |
|                |        |       |                |       |       | HNBR          | 200x238,1x18 HFS H     |
|                |        |       |                |       |       | FKM           | 200x238,1x18 HFS V     |

| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 200            | 240    | 16    | 7.874          | 9.449  | 0.63  | NBR           | 200x240x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 200x240x16 HFS H     |
|                |        |       |                |        |       | FKM           | 200x240x16 HFS V     |
| 200            | 240    | 20    | 7.874          | 9.449  | 0.787 | NBR           | 200x240x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 200x240x20 HFS H     |
|                |        |       |                |        |       | FKM           | 200x240x20 HFS V     |
| 200            | 260    | 16    | 7.874          | 10.236 | 0.63  | NBR           | 200x260x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 200x260x16 HFS H     |
|                |        |       |                |        |       | FKM           | 200x260x16 HFS V     |
| 200,02         | 238,12 | 19,1  | 7.875          | 9.375  | 0.75  | NBR           | 756-924-48 HFS R     |
|                |        |       |                |        |       | HNBR          | 756-924-48 HFS H     |
|                |        |       |                |        |       | FKM           | 756-924-48 HFS V     |
| 200,02         | 239,7  | 15,88 | 7.875          | 9.438  | 0.625 | NBR           | 756-928-40 HFS R     |
|                |        |       |                |        |       | HNBR          | 756-928-40 HFS H     |
|                |        |       |                |        |       | FKM           | 756-928-40 HFS V     |
| 200,08         | 238,12 | 17,45 | 7.875          | 9.375  | 0.688 | NBR           | 756-924-44 HFS R     |
|                |        |       |                |        |       | HNBR          | 756-924-44 HFS H     |
|                |        |       |                |        |       | FKM           | 756-924-44 HFS V     |
| 205            | 245    | 16    | 8.071          | 9.646  | 0.63  | NBR           | 205x245x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 205x245x16 HFS H     |
|                |        |       |                |        |       | FKM           | 205x245x16 HFS V     |
| 209,5          | 235    | 15,8  | 8.248          | 9.252  | 0.622 | NBR           | 209,5x235x15,8 HFS R |
|                |        |       |                |        |       | HNBR          | 209,5x235x15,8 HFS H |
|                |        |       |                |        |       | FKM           | 209,5x235x15,8 HFS V |
| 209,55         | 250,03 | 15,88 | 8.250          | 9.844  | 0.625 | NBR           | 816-954-40 HFS R     |
|                |        |       |                |        |       | HNBR          | 816-954-40 HFS H     |
|                |        |       |                |        |       | FKM           | 816-954-40 HFS V     |
| 210            | 240    | 12    | 8.268          | 9.449  | 0.472 | NBR           | 210x240x12 HFS R     |
|                |        |       |                |        |       | HNBR          | 210x240x12 HFS H     |
|                |        |       |                |        |       | FKM           | 210x240x12 HFS V     |
| 210            | 240    | 15    | 8.268          | 9.449  | 0.591 | NBR           | 210x240x15 HFS R     |
|                |        |       |                |        |       | HNBR          | 210x240x15 HFS H     |
|                |        |       |                |        |       | FKM           | 210x240x15 HFS V     |
| 210            | 245    | 18    | 8.268          | 9.646  | 0.709 | NBR           | 210x245x18 HFS R     |
|                |        |       |                |        |       | HNBR          | 210x245x18 HFS H     |
|                |        |       |                |        |       | FKM           | 210x245x18 HFS V     |

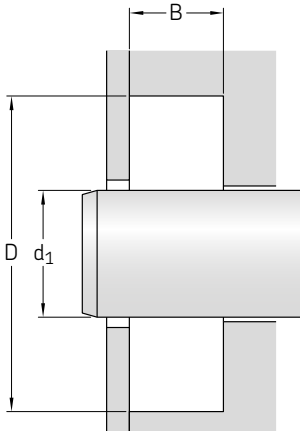
| Dimensions     |        |       | Dimensions     |        |       | Material | SKF Designation        |
|----------------|--------|-------|----------------|--------|-------|----------|------------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |          |                        |
| mm             |        |       | in.            |        |       |          |                        |
| 210            | 250    | 16    | 8.268          | 9.843  | 0.63  | NBR      | 210x250x16 HFS R       |
|                |        |       |                |        |       | HNBR     | 210x250x16 HFS H       |
|                |        |       |                |        |       | FKM      | 210x250x16 HFS V       |
| 210            | 250    | 20    | 8.268          | 9.843  | 0.787 | NBR      | 210x250x20 HFS R       |
|                |        |       |                |        |       | HNBR     | 210x250x20 HFS H       |
|                |        |       |                |        |       | FKM      | 210x250x20 HFS V       |
| 212,7          | 247,6  | 15,8  | 8.374          | 9.748  | 0.622 | NBR      | 212,7x246,6x15,8 HFS R |
|                |        |       |                |        |       | HNBR     | 212,7x246,6x15,8 HFS H |
|                |        |       |                |        |       | FKM      | 212,7x246,6x15,8 HFS V |
| 212,72         | 250,82 | 15,88 | 8.375          | 9.875  | 0.625 | NBR      | 824-956-40 HFS R       |
|                |        |       |                |        |       | HNBR     | 824-956-40 HFS H       |
|                |        |       |                |        |       | FKM      | 824-956-40 HFS V       |
| 215            | 240    | 12    | 8.465          | 9.449  | 0.472 | NBR      | 215x240x12 HFS R       |
|                |        |       |                |        |       | HNBR     | 215x240x12 HFS H       |
|                |        |       |                |        |       | FKM      | 215x240x12 HFS V       |
| 215            | 248    | 15    | 8.465          | 9.764  | 0.591 | NBR      | 215x248x15 HFS R       |
|                |        |       |                |        |       | HNBR     | 215x248x15 HFS H       |
|                |        |       |                |        |       | FKM      | 215x248x15 HFS V       |
| 215            | 250    | 16    | 8.465          | 9.843  | 0.63  | NBR      | 215x250x16 HFS R       |
|                |        |       |                |        |       | HNBR     | 215x250x16 HFS H       |
|                |        |       |                |        |       | FKM      | 215x250x16 HFS V       |
| 215,8          | 247,6  | 19    | 8.496          | 9.748  | 0.748 | NBR      | 215,8x247,6x19 HFS R   |
|                |        |       |                |        |       | HNBR     | 215,8x247,6x19 HFS H   |
|                |        |       |                |        |       | FKM      | 215,8x247,6x19 HFS V   |
| 215,9          | 254    | 15,88 | 8.500          | 10.000 | 0.625 | NBR      | 832-1000-40 HFS R      |
|                |        |       |                |        |       | HNBR     | 832-1000-40 HFS H      |
|                |        |       |                |        |       | FKM      | 832-1000-40 HFS V      |
| 215,9          | 254    | 19,1  | 8.500          | 10.000 | 0.75  | NBR      | 832-1000-48 HFS R      |
|                |        |       |                |        |       | HNBR     | 832-1000-48 HFS H      |
|                |        |       |                |        |       | FKM      | 832-1000-48 HFS V      |
| 216            | 254    | 16    | 8.504          | 10.000 | 0.63  | NBR      | 216x254x16 HFS R       |
|                |        |       |                |        |       | HNBR     | 216x254x16 HFS H       |
|                |        |       |                |        |       | FKM      | 216x254x16 HFS V       |
| 216            | 254    | 16    | 8.504          | 10.000 | 0.63  | NBR      | 216x254x16 HFS R       |
|                |        |       |                |        |       | HNBR     | 216x254x16 HFS H       |
|                |        |       |                |        |       | FKM      | 216x254x16 HFS V       |
| 219            | 250    | 12    | 8.622          | 9.843  | 0.472 | NBR      | 219x250x12 HFS R       |
|                |        |       |                |        |       | HNBR     | 219x250x12 HFS H       |
|                |        |       |                |        |       | FKM      | 219x250x12 HFS V       |
| 220            | 225    | 18    | 8.661          | 8.858  | 0.709 | NBR      | 220x225x18 HFS R       |
|                |        |       |                |        |       | HNBR     | 220x225x18 HFS H       |
|                |        |       |                |        |       | FKM      | 220x225x18 HFS V       |
| 220            | 240    | 16    | 8.661          | 9.449  | 0.63  | NBR      | 220x240x16 HFS R       |
|                |        |       |                |        |       | HNBR     | 220x240x16 HFS H       |
|                |        |       |                |        |       | FKM      | 220x240x16 HFS V       |
| 220            | 250    | 12    | 8.661          | 9.843  | 0.472 | NBR      | 220x250x12 HFS R       |
|                |        |       |                |        |       | HNBR     | 220x250x12 HFS H       |
|                |        |       |                |        |       | FKM      | 220x250x12 HFS V       |
| 220            | 250    | 15    | 8.661          | 9.843  | 0.591 | NBR      | 220x250x15 HFS R       |
|                |        |       |                |        |       | HNBR     | 220x250x15 HFS H       |
|                |        |       |                |        |       | FKM      | 220x250x15 HFS V       |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 240–279,4 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



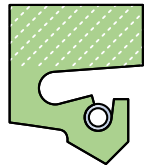
| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 240            | 265    | 12,5  | 9.449          | 10.433 | 0.492 | NBR           | 240x265x13 HFS R     |
|                |        |       |                |        |       | HNBR          | 240x265x13 HFS H     |
|                |        |       |                |        |       | FKM           | 240x265x13 HFS V     |
| 240            | 270    | 13,5  | 9.449          | 10.630 | 0.531 | NBR           | 240x270x14 HFS R     |
|                |        |       |                |        |       | HNBR          | 240x270x14 HFS H     |
|                |        |       |                |        |       | FKM           | 240x270x14 HFS V     |
| 240            | 275    | 18    | 9.449          | 10.827 | 0.709 | NBR           | 240x275x18 HFS R     |
|                |        |       |                |        |       | HNBR          | 240x275x18 HFS H     |
|                |        |       |                |        |       | FKM           | 240x275x18 HFS V     |
| 240            | 280    | 16    | 9.449          | 11.024 | 0.63  | NBR           | 240x280x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 240x280x16 HFS H     |
|                |        |       |                |        |       | FKM           | 240x280x16 HFS V     |
| 240            | 280    | 20    | 9.449          | 11.024 | 0.787 | NBR           | 240x280x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 240x280x20 HFS H     |
|                |        |       |                |        |       | FKM           | 240x280x20 HFS V     |
| 240            | 280    | 20    | 9.449          | 11.024 | 0.787 | NBR           | 240x280x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 240x280x20 HFS H     |
|                |        |       |                |        |       | FKM           | 240x280x20 HFS V     |
| 241            | 279    | 19    | 9.488          | 10.984 | 0.748 | NBR           | 241x279x19 HFS R     |
|                |        |       |                |        |       | HNBR          | 241x279x19 HFS H     |
|                |        |       |                |        |       | FKM           | 241x279x19 HFS V     |
| 241,3          | 273    | 15,8  | 9.500          | 10.748 | 0.622 | NBR           | 241,3x273x15,8 HFS R |
|                |        |       |                |        |       | HNBR          | 241,3x273x15,8 HFS H |
|                |        |       |                |        |       | FKM           | 241,3x273x15,8 HFS V |
| 241,3          | 279,4  | 15,88 | 9.500          | 11.000 | 0.625 | NBR           | 932-1100-40 HFS R    |
|                |        |       |                |        |       | HNBR          | 932-1100-40 HFS H    |
|                |        |       |                |        |       | FKM           | 932-1100-40 HFS V    |
| 241,31         | 279,41 | 17,46 | 9.500          | 11.000 | 0.688 | NBR           | 932-1100-44 HFS R    |
|                |        |       |                |        |       | HNBR          | 932-1100-44 HFS H    |
|                |        |       |                |        |       | FKM           | 932-1100-44 HFS V    |
| 241,3          | 279,4  | 19,1  | 9.500          | 11.000 | 0.75  | NBR           | 932-1100-48 HFS R    |
|                |        |       |                |        |       | HNBR          | 932-1100-48 HFS H    |
|                |        |       |                |        |       | FKM           | 932-1100-48 HFS V    |
| 245            | 285    | 16    | 9.646          | 11.220 | 0.63  | NBR           | 245x285x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 245x285x16 HFS H     |
|                |        |       |                |        |       | FKM           | 245x285x16 HFS V     |

| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 245            | 288    | 16    | 9.646          | 11.339 | 0.63  | NBR           | 245x288x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 245x288x16 HFS H     |
|                |        |       |                |        |       | FKM           | 245x288x16 HFS V     |
| 249,23         | 289,71 | 15,88 | 9.813          | 11.406 | 0.625 | NBR           | 952-1126-40 HFS R    |
|                |        |       |                |        |       | HNBR          | 952-1126-40 HFS H    |
|                |        |       |                |        |       | FKM           | 952-1126-40 HFS V    |
| 250            | 275,4  | 12,7  | 9.844          | 10.844 | 0.5   | NBR           | 954-1054-32 HFS R    |
|                |        |       |                |        |       | HNBR          | 954-1054-32 HFS H    |
|                |        |       |                |        |       | FKM           | 954-1054-32 HFS V    |
| 250            | 280    | 12    | 9.843          | 11.024 | 0.472 | NBR           | 250x280x12 HFS R     |
|                |        |       |                |        |       | HNBR          | 250x280x12 HFS H     |
|                |        |       |                |        |       | FKM           | 250x280x12 HFS V     |
| 250            | 280    | 15    | 9.843          | 11.024 | 0.591 | NBR           | 250x280x15 HFS R     |
|                |        |       |                |        |       | HNBR          | 250x280x15 HFS H     |
|                |        |       |                |        |       | FKM           | 250x280x15 HFS V     |
| 250            | 285    | 18    | 9.843          | 11.220 | 0.709 | NBR           | 250x285x18 HFS R     |
|                |        |       |                |        |       | HNBR          | 250x285x18 HFS H     |
|                |        |       |                |        |       | FKM           | 250x285x18 HFS V     |
| 250            | 288    | 19,1  | 9.843          | 11.339 | 0.75  | NBR           | 250x288x19 HFS R     |
|                |        |       |                |        |       | HNBR          | 250x288x19 HFS H     |
|                |        |       |                |        |       | FKM           | 250x288x19 HFS V     |
| 250            | 290    | 16    | 9.843          | 11.417 | 0.63  | NBR           | 250x290x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 250x290x16 HFS H     |
|                |        |       |                |        |       | FKM           | 250x290x16 HFS V     |
| 250,8          | 290    | 15,88 | 9.875          | 11.417 | 0.625 | NBR           | 250,8x290x15,9 HFS R |
|                |        |       |                |        |       | HNBR          | 250,8x290x15,9 HFS H |
|                |        |       |                |        |       | FKM           | 250,8x290x15,9 HFS V |
| 250,82         | 290,5  | 15,88 | 9.875          | 11.438 | 0.625 | NBR           | 956-1128-40 HFS R    |
|                |        |       |                |        |       | HNBR          | 956-1128-40 HFS H    |
|                |        |       |                |        |       | FKM           | 956-1128-40 HFS V    |
| 254            | 279,4  | 15    | 10.000         | 11.000 | 0.591 | NBR           | 254x279x15 HFS R     |
|                |        |       |                |        |       | HNBR          | 254x279x15 HFS H     |
|                |        |       |                |        |       | FKM           | 254x279x15 HFS V     |
| 254            | 280    | 15    | 10.000         | 11.024 | 0.591 | NBR           | 254x280x15 HFS R     |
|                |        |       |                |        |       | HNBR          | 254x280x15 HFS H     |
|                |        |       |                |        |       | FKM           | 254x280x15 HFS V     |

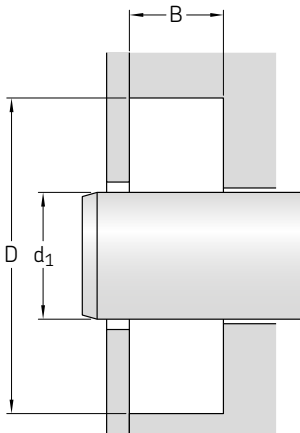
| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 254            | 292,1  | 15,88 | 10.000         | 11.500 | 0.625 | NBR           | 1000-1132-40 HFS R   |
|                |        |       |                |        |       | HNBR          | 1000-1132-40 HFS H   |
|                |        |       |                |        |       | FKM           | 1000-1132-40 HFS V   |
| 255            | 290    | 16    | 10.039         | 11.417 | 0.63  | NBR           | 255x290x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 255x290x16 HFS H     |
|                |        |       |                |        |       | FKM           | 255x290x16 HFS V     |
| 255            | 299    | 20    | 10.039         | 11.772 | 0.787 | NBR           | 255x299x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 255x299x20 HFS H     |
|                |        |       |                |        |       | FKM           | 255x299x20 HFS V     |
| 258            | 290    | 16    | 10.157         | 11.417 | 0.63  | NBR           | 258x290x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 258x290x16 HFS H     |
|                |        |       |                |        |       | FKM           | 258x290x16 HFS V     |
| 260            | 290    | 16    | 10.236         | 11.417 | 0.63  | NBR           | 260x290x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x290x16 HFS H     |
|                |        |       |                |        |       | FKM           | 260x290x16 HFS V     |
| 260            | 295    | 17    | 10.236         | 11.614 | 0.669 | NBR           | 260x295x17 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x295x17 HFS H     |
|                |        |       |                |        |       | FKM           | 260x295x17 HFS V     |
| 260            | 298    | 17    | 10.236         | 11.732 | 0.669 | NBR           | 260x298x17 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x298x17 HFS H     |
|                |        |       |                |        |       | FKM           | 260x298x17 HFS V     |
| 260            | 300    | 14,4  | 10.236         | 11.811 | 0.567 | NBR           | 260x300x14,4 HFS R   |
|                |        |       |                |        |       | HNBR          | 260x300x14,4 HFS H   |
|                |        |       |                |        |       | FKM           | 260x300x14,4 HFS V   |
| 260            | 300    | 18    | 10.236         | 11.811 | 0.709 | NBR           | 260x300x18 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x300x18 HFS H     |
|                |        |       |                |        |       | FKM           | 260x300x18 HFS V     |
| 260            | 300    | 20    | 10.236         | 11.811 | 0.787 | NBR           | 260x300x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x300x20 HFS H     |
|                |        |       |                |        |       | FKM           | 260x300x20 HFS V     |
| 260            | 304    | 19,1  | 10.236         | 11.969 | 0.75  | NBR           | 260x304x19 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x304x19 HFS H     |
|                |        |       |                |        |       | FKM           | 260x304x19 HFS V     |
| 260            | 304    | 20    | 10.236         | 11.969 | 0.787 | NBR           | 260x304x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x304x20 HFS H     |
|                |        |       |                |        |       | FKM           | 260x304x20 HFS V     |
| 260            | 305    | 16    | 10.236         | 12.008 | 0.63  | NBR           | 260x305x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 260x305x16 HFS H     |
|                |        |       |                |        |       | FKM           | 260x305x16 HFS V     |
| 260,3          | 298,6  | 19,1  | 10.248         | 11.756 | 0.75  | NBR           | 260,3x298,6x19 HFS R |
|                |        |       |                |        |       | HNBR          | 260,3x298,6x19 HFS H |
|                |        |       |                |        |       | FKM           | 260,3x298,6x19 HFS V |
| 260,35         | 300,03 | 19,84 | 10.250         | 11.813 | 0.781 | NBR           | 1016-1152-50 HFS R   |
|                |        |       |                |        |       | HNBR          | 1016-1152-50 HFS H   |
|                |        |       |                |        |       | FKM           | 1016-1152-50 HFS V   |
| 260,35         | 311,15 | 15,88 | 10.250         | 12.250 | 0.625 | NBR           | 1016-1216-40 HFS R   |
|                |        |       |                |        |       | HNBR          | 1016-1216-40 HFS H   |
|                |        |       |                |        |       | FKM           | 1016-1216-40 HFS V   |
| 261            | 311    | 16    | 10.276         | 12.244 | 0.63  | NBR           | 261x311x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 261x311x16 HFS H     |
|                |        |       |                |        |       | FKM           | 261x311x16 HFS V     |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 279,4–331 mm



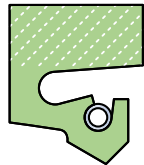
The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



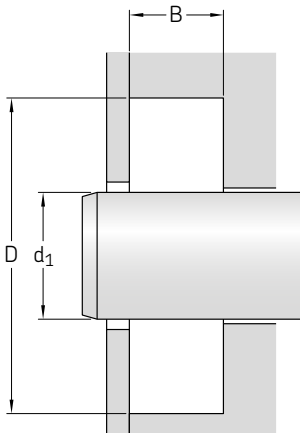
| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 279,4          | 319,87 | 19,84 | 11.000         | 12.594 | 0.781 | NBR           | 1100-1238-50 HFS R   |
|                |        |       |                |        |       | HNBR          | 1100-1238-50 HFS H   |
|                |        |       |                |        |       | FKM           | 1100-1238-50 HFS V   |
| 280            | 310    | 15    | 11.024         | 12.205 | 0.591 | NBR           | 280x310x15 HFS R     |
|                |        |       |                |        |       | HNBR          | 280x310x15 HFS H     |
|                |        |       |                |        |       | FKM           | 280x310x15 HFS V     |
| 280            | 310    | 16    | 11.024         | 12.205 | 0.63  | NBR           | 280x310x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 280x310x16 HFS H     |
|                |        |       |                |        |       | FKM           | 280x310x16 HFS V     |
| 280            | 320    | 18    | 11.024         | 12.598 | 0.709 | NBR           | 280x320x18 HFS R     |
|                |        |       |                |        |       | HNBR          | 280x320x18 HFS H     |
|                |        |       |                |        |       | FKM           | 280x320x18 HFS V     |
| 280            | 320    | 20    | 11.024         | 12.598 | 0.787 | NBR           | 280x320x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 280x320x20 HFS H     |
|                |        |       |                |        |       | FKM           | 280x320x20 HFS V     |
| 280            | 324    | 20    | 11.024         | 12.756 | 0.787 | NBR           | 280x324x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 280x324x20 HFS H     |
|                |        |       |                |        |       | FKM           | 280x324x20 HFS V     |
| 280            | 340    | 15    | 11.024         | 13.386 | 0.591 | NBR           | 280x340x15 HFS R     |
|                |        |       |                |        |       | HNBR          | 280x340x15 HFS H     |
|                |        |       |                |        |       | FKM           | 280x340x15 HFS V     |
| 280,2          | 320    | 16    | 11.031         | 12.598 | 0.63  | NBR           | 280,2x320x16 HFS R   |
|                |        |       |                |        |       | HNBR          | 280,2x320x16 HFS H   |
|                |        |       |                |        |       | FKM           | 280,2x320x16 HFS V   |
| 285            | 325    | 16    | 11.220         | 12.795 | 0.63  | NBR           | 285x325x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 285x325x16 HFS H     |
|                |        |       |                |        |       | FKM           | 285x325x16 HFS V     |
| 285            | 325    | 20    | 11.220         | 12.795 | 0.787 | NBR           | 285x325x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 285x325x20 HFS H     |
|                |        |       |                |        |       | FKM           | 285x325x20 HFS V     |
| 289            | 327    | 19    | 11.378         | 12.874 | 0.748 | NBR           | 289x327x19 HFS R     |
|                |        |       |                |        |       | HNBR          | 289x327x19 HFS H     |
|                |        |       |                |        |       | FKM           | 289x327x19 HFS V     |
| 290            | 315,4  | 12,7  | 11.417         | 12.417 | 0.5   | NBR           | 290x315,4x12,7 HFS R |
|                |        |       |                |        |       | HNBR          | 290x315,4x12,7 HFS H |
|                |        |       |                |        |       | FKM           | 290x315,4x12,7 HFS V |

| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 290            | 320    | 15    | 11.417         | 12.598 | 0.591 | NBR           | 290x320x15 HFS R     |
|                |        |       |                |        |       | HNBR          | 290x320x15 HFS H     |
|                |        |       |                |        |       | FKM           | 290x320x15 HFS V     |
| 290            | 330    | 16    | 11.417         | 12.992 | 0.63  | NBR           | 290x330x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 290x330x16 HFS H     |
|                |        |       |                |        |       | FKM           | 290x330x16 HFS V     |
| 290            | 330    | 20    | 11.417         | 12.992 | 0.787 | NBR           | 290x330x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 290x330x20 HFS H     |
|                |        |       |                |        |       | FKM           | 290x330x20 HFS V     |
| 290            | 334    | 20    | 11.417         | 13.150 | 0.787 | NBR           | 290x334x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 290x334x20 HFS H     |
|                |        |       |                |        |       | FKM           | 290x334x20 HFS V     |
| 290            | 340    | 20    | 11.417         | 13.386 | 0.787 | NBR           | 290x340x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 290x340x20 HFS H     |
|                |        |       |                |        |       | FKM           | 290x340x20 HFS V     |
| 292,1          | 330,19 | 17,85 | 11.500         | 13.000 | 0.703 | NBR           | 1132-1300-45 HFS R   |
|                |        |       |                |        |       | HNBR          | 1132-1300-45 HFS H   |
|                |        |       |                |        |       | FKM           | 1132-1300-45 HFS V   |
| 292,1          | 330,2  | 18    | 11.500         | 13.000 | 0.709 | NBR           | 292,1x330,2x18 HFS R |
|                |        |       |                |        |       | HNBR          | 292,1x330,2x18 HFS H |
|                |        |       |                |        |       | FKM           | 292,1x330,2x18 HFS V |
| 292,1          | 336,5  | 19    | 11.500         | 13.248 | 0.748 | NBR           | 292,1x336,5x19 HFS R |
|                |        |       |                |        |       | HNBR          | 292,1x336,5x19 HFS H |
|                |        |       |                |        |       | FKM           | 292,1x336,5x19 HFS V |
| 295            | 335    | 16    | 11.614         | 13.189 | 0.63  | NBR           | 295x335x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 295x335x16 HFS H     |
|                |        |       |                |        |       | FKM           | 295x335x16 HFS V     |
| 295            | 344    | 20    | 11.614         | 13.543 | 0.787 | NBR           | 295x344x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 295x344x20 HFS H     |
|                |        |       |                |        |       | FKM           | 295x344x20 HFS V     |
| 298            | 338    | 16    | 11.732         | 13.307 | 0.63  | NBR           | 298x338x16 HFS R     |
|                |        |       |                |        |       | HNBR          | 298x338x16 HFS H     |
|                |        |       |                |        |       | FKM           | 298x338x16 HFS V     |
| 300            | 330    | 14    | 11.811         | 12.992 | 0.551 | NBR           | 300x330x14 HFS R     |
|                |        |       |                |        |       | HNBR          | 300x330x14 HFS H     |
|                |        |       |                |        |       | FKM           | 300x330x14 HFS V     |

| Dimensions     |        |       | Dimensions     |        |       | Material | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|----------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |          |                      |
| mm             |        |       | in.            |        |       |          |                      |
| 300            | 330    | 15    | 11.811         | 12.992 | 0.591 | NBR      | 300x330x15 HFS R     |
|                |        |       |                |        |       | HNBR     | 300x330x15 HFS H     |
|                |        |       |                |        |       | FKM      | 300x330x15 HFS V     |
| 300            | 332    | 16    | 11.811         | 13.071 | 0.63  | NBR      | 300x332x16 HFS R     |
|                |        |       |                |        |       | HNBR     | 300x332x16 HFS H     |
|                |        |       |                |        |       | FKM      | 300x332x16 HFS V     |
| 300            | 335    | 18    | 11.811         | 13.189 | 0.709 | NBR      | 300x335x18 HFS R     |
|                |        |       |                |        |       | HNBR     | 300x335x18 HFS H     |
|                |        |       |                |        |       | FKM      | 300x335x18 HFS V     |
| 300            | 340    | 18    | 11.811         | 13.386 | 0.709 | NBR      | 300x340x18 HFS R     |
|                |        |       |                |        |       | HNBR     | 300x340x18 HFS H     |
|                |        |       |                |        |       | FKM      | 300x340x18 HFS V     |
| 300            | 340    | 20    | 11.811         | 13.386 | 0.787 | NBR      | 300x340x20 HFS R     |
|                |        |       |                |        |       | HNBR     | 300x340x20 HFS H     |
|                |        |       |                |        |       | FKM      | 300x340x20 HFS V     |
| 300            | 344    | 20    | 11.811         | 13.543 | 0.787 | NBR      | 300x344x20 HFS R     |
|                |        |       |                |        |       | HNBR     | 300x344x20 HFS H     |
|                |        |       |                |        |       | FKM      | 300x344x20 HFS V     |
| 300            | 350,8  | 19,1  | 11.811         | 13.811 | 0.75  | NBR      | 300x350,8x19,1 HFS R |
|                |        |       |                |        |       | HNBR     | 300x350,8x19,1 HFS H |
|                |        |       |                |        |       | FKM      | 300x350,8x19,1 HFS V |
| 300            | 360    | 25    | 11.811         | 14.173 | 0.984 | NBR      | 300x360x25 HFS R     |
|                |        |       |                |        |       | HNBR     | 300x360x25 HFS H     |
|                |        |       |                |        |       | FKM      | 300x360x25 HFS V     |
| 300,03         | 331,77 | 15,88 | 11.813         | 13.063 | 0.625 | NBR      | 1152-1304-40 HFS R   |
|                |        |       |                |        |       | HNBR     | 1152-1304-40 HFS H   |
|                |        |       |                |        |       | FKM      | 1152-1304-40 HFS V   |
| 310            | 354    | 20    | 12.205         | 13.937 | 0.787 | NBR      | 310x354x20 HFS R     |
|                |        |       |                |        |       | HNBR     | 310x354x20 HFS H     |
|                |        |       |                |        |       | FKM      | 310x354x20 HFS V     |
| 310            | 355,6  | 20    | 12.205         | 14.000 | 0.787 | NBR      | 310x355,6x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 310x355,6x20 HFS H   |
|                |        |       |                |        |       | FKM      | 310x355,6x20 HFS V   |
| 311            | 345    | 18    | 12.244         | 13.583 | 0.709 | NBR      | 311x345x18 HFS R     |
|                |        |       |                |        |       | HNBR     | 311x345x18 HFS H     |
|                |        |       |                |        |       | FKM      | 311x345x18 HFS V     |
| 315            | 345    | 14    | 12.402         | 13.583 | 0.551 | NBR      | 315x345x14 HFS R     |
|                |        |       |                |        |       | HNBR     | 315x345x14 HFS H     |
|                |        |       |                |        |       | FKM      | 315x345x14 HFS V     |
| 315            | 347    | 13    | 12.402         | 13.661 | 0.512 | NBR      | 315x347x13 HFS R     |
|                |        |       |                |        |       | HNBR     | 315x347x13 HFS H     |
|                |        |       |                |        |       | FKM      | 315x347x13 HFS V     |
| 315            | 355    | 20    | 12.402         | 13.976 | 0.787 | NBR      | 315x355x20 HFS R     |
|                |        |       |                |        |       | HNBR     | 315x355x20 HFS H     |
|                |        |       |                |        |       | FKM      | 315x355x20 HFS V     |
| 315            | 359    | 22    | 12.402         | 14.134 | 0.866 | NBR      | 315x359x22 HFS R     |
|                |        |       |                |        |       | HNBR     | 315x359x22 HFS H     |
|                |        |       |                |        |       | FKM      | 315x359x22 HFS V     |
| 316            | 360    | 20    | 12.441         | 14.173 | 0.787 | NBR      | 316x360x20 HFS R     |
|                |        |       |                |        |       | HNBR     | 316x360x20 HFS H     |
|                |        |       |                |        |       | FKM      | 316x360x20 HFS V     |



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



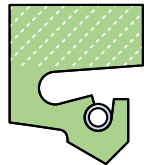
| Dimensions     |     |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-----|------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D   | B    | d <sub>1</sub> | D      | B     |               |                    |
| mm             |     |      | in.            |        |       |               |                    |
| 331            | 371 | 15   | 13.031         | 14.606 | 0.591 | NBR           | 331x371x15 HFS R   |
|                |     |      |                |        |       | HNBR          | 331x371x15 HFS H   |
|                |     |      |                |        |       | FKM           | 331x371x15 HFS V   |
| 331            | 371 | 16   | 13.031         | 14.606 | 0.63  | NBR           | 331x371x16 HFS R   |
|                |     |      |                |        |       | HNBR          | 331x371x16 HFS H   |
|                |     |      |                |        |       | FKM           | 331x371x16 HFS V   |
| 335            | 375 | 15   | 13.189         | 14.764 | 0.591 | NBR           | 335x375x15 HFS R   |
|                |     |      |                |        |       | HNBR          | 335x375x15 HFS H   |
|                |     |      |                |        |       | FKM           | 335x375x15 HFS V   |
| 335            | 395 | 16   | 13.189         | 15.551 | 0.63  | NBR           | 335x395x16 HFS R   |
|                |     |      |                |        |       | HNBR          | 335x395x16 HFS H   |
|                |     |      |                |        |       | FKM           | 335x395x16 HFS V   |
| 336            | 380 | 20   | 13.228         | 14.961 | 0.787 | NBR           | 336x380x20 HFS R   |
|                |     |      |                |        |       | HNBR          | 336x380x20 HFS H   |
|                |     |      |                |        |       | FKM           | 336x380x20 HFS V   |
| 340            | 370 | 18   | 13.386         | 14.567 | 0.709 | NBR           | 340x370x18 HFS R   |
|                |     |      |                |        |       | HNBR          | 340x370x18 HFS H   |
|                |     |      |                |        |       | FKM           | 340x370x18 HFS V   |
| 340            | 372 | 16   | 13.386         | 14.646 | 0.63  | NBR           | 340x372x16 HFS R   |
|                |     |      |                |        |       | HNBR          | 340x372x16 HFS H   |
|                |     |      |                |        |       | FKM           | 340x372x16 HFS V   |
| 340            | 380 | 18   | 13.386         | 14.961 | 0.709 | NBR           | 340x380x18 HFS R   |
|                |     |      |                |        |       | HNBR          | 340x380x18 HFS H   |
|                |     |      |                |        |       | FKM           | 340x380x18 HFS V   |
| 340            | 380 | 20   | 13.386         | 14.961 | 0.787 | NBR           | 340x380x20 HFS R   |
|                |     |      |                |        |       | HNBR          | 340x380x20 HFS H   |
|                |     |      |                |        |       | FKM           | 340x380x20 HFS V   |
| 340            | 384 | 20   | 13.386         | 15.118 | 0.787 | NBR           | 340x384x20 HFS R   |
|                |     |      |                |        |       | HNBR          | 340x384x20 HFS H   |
|                |     |      |                |        |       | FKM           | 340x384x20 HFS V   |
| 342,9          | 381 | 17,4 | 13.500         | 15.000 | 0.688 | NBR           | 1332-1500-44 HFS R |
|                |     |      |                |        |       | HNBR          | 1332-1500-44 HFS H |
|                |     |      |                |        |       | FKM           | 1332-1500-44 HFS V |
| 342,9          | 381 | 19,1 | 13.500         | 15.000 | 0.75  | NBR           | 1332-1500-48 HFS R |
|                |     |      |                |        |       | HNBR          | 1332-1500-48 HFS H |
|                |     |      |                |        |       | FKM           | 1332-1500-48 HFS V |

| Dimensions     |        |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B    | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |      | in.            |        |       |               |                      |
| 342,9          | 393,7  | 20,7 | 13.500         | 15.500 | 0.813 | NBR           | 1332-1532-52 HFS R   |
|                |        |      |                |        |       | HNBR          | 1332-1532-52 HFS H   |
|                |        |      |                |        |       | FKM           | 1332-1532-52 HFS V   |
| 345            | 395    | 20   | 13.583         | 15.551 | 0.787 | NBR           | 345x395x20 HFS R     |
|                |        |      |                |        |       | HNBR          | 345x395x20 HFS H     |
|                |        |      |                |        |       | FKM           | 345x395x20 HFS V     |
| 350            | 380    | 15   | 13.780         | 14.961 | 0.591 | NBR           | 350x380x15 HFS R     |
|                |        |      |                |        |       | HNBR          | 350x380x15 HFS H     |
|                |        |      |                |        |       | FKM           | 350x380x15 HFS V     |
| 350            | 380    | 20   | 13.780         | 14.961 | 0.787 | NBR           | 350x380x20 HFS R     |
|                |        |      |                |        |       | HNBR          | 350x380x20 HFS H     |
|                |        |      |                |        |       | FKM           | 350x380x20 HFS V     |
| 350            | 380    | 20   | 13.780         | 14.961 | 0.787 | NBR           | 350x380x20 HFS R     |
|                |        |      |                |        |       | HNBR          | 350x380x20 HFS H     |
|                |        |      |                |        |       | FKM           | 350x380x20 HFS V     |
| 350            | 390    | 18   | 13.780         | 15.354 | 0.709 | NBR           | 350x390x18 HFS R     |
|                |        |      |                |        |       | HNBR          | 350x390x18 HFS H     |
|                |        |      |                |        |       | FKM           | 350x390x18 HFS V     |
| 350            | 391    | 16   | 13.780         | 15.394 | 0.63  | NBR           | 350x391x16 HFS R     |
|                |        |      |                |        |       | HNBR          | 350x391x16 HFS H     |
|                |        |      |                |        |       | FKM           | 350x391x16 HFS V     |
| 350            | 391    | 16   | 13.780         | 15.394 | 0.63  | NBR           | 350x391x16 HFS R     |
|                |        |      |                |        |       | HNBR          | 350x391x16 HFS H     |
|                |        |      |                |        |       | FKM           | 350x391x16 HFS V     |
| 350            | 394    | 20   | 13.780         | 15.512 | 0.787 | NBR           | 350x394x20 HFS R     |
|                |        |      |                |        |       | HNBR          | 350x394x20 HFS H     |
|                |        |      |                |        |       | FKM           | 350x394x20 HFS V     |
| 350,6          | 395    | 20,6 | 13.802         | 15.551 | 0.812 | NBR           | 350,6x395x20,6 HFS R |
|                |        |      |                |        |       | HNBR          | 350,6x395x20,6 HFS H |
|                |        |      |                |        |       | FKM           | 350,6x395x20,6 HFS V |
| 351            | 390    | 20   | 13.819         | 15.354 | 0.787 | NBR           | 351x390x20 HFS R     |
|                |        |      |                |        |       | HNBR          | 351x390x20 HFS H     |
|                |        |      |                |        |       | FKM           | 351x390x20 HFS V     |
| 355,6          | 400,04 | 19,1 | 14.000         | 15.750 | 0.75  | NBR           | 1400-1548-48 HFS R   |
|                |        |      |                |        |       | HNBR          | 1400-1548-48 HFS H   |
|                |        |      |                |        |       | FKM           | 1400-1548-48 HFS V   |

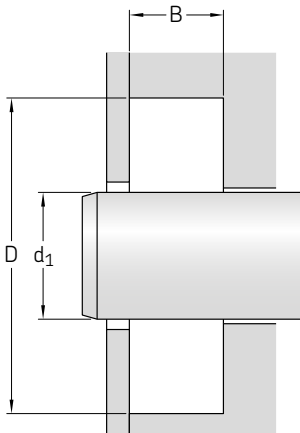
| Dimensions     |        |       | Dimensions     |        |       | Material | SKF Designation    |
|----------------|--------|-------|----------------|--------|-------|----------|--------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |          |                    |
| mm             |        |       | in.            |        |       |          |                    |
| 356            | 432    | 28    | 14.016         | 17.008 | 1.102 | NBR      | 356x432x28 HFS R   |
|                |        |       |                |        |       | HNBR     | 356x432x28 HFS H   |
|                |        |       |                |        |       | FKM      | 356x432x28 HFS V   |
| 360            | 390    | 18    | 14.173         | 15.354 | 0.709 | NBR      | 360x390x18 HFS R   |
|                |        |       |                |        |       | HNBR     | 360x390x18 HFS H   |
|                |        |       |                |        |       | FKM      | 360x390x18 HFS V   |
| 360            | 400    | 17    | 14.173         | 15.748 | 0.669 | NBR      | 360x400x17 HFS R   |
|                |        |       |                |        |       | HNBR     | 360x400x17 HFS H   |
|                |        |       |                |        |       | FKM      | 360x400x17 HFS V   |
| 360            | 400    | 18    | 14.173         | 15.748 | 0.709 | NBR      | 360x400x18 HFS R   |
|                |        |       |                |        |       | HNBR     | 360x400x18 HFS H   |
|                |        |       |                |        |       | FKM      | 360x400x18 HFS V   |
| 360            | 404    | 20    | 14.173         | 15.906 | 0.787 | NBR      | 360x404x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 360x404x20 HFS H   |
|                |        |       |                |        |       | FKM      | 360x404x20 HFS V   |
| 360            | 420    | 15    | 14.173         | 16.535 | 0.591 | NBR      | 360x420x15 HFS R   |
|                |        |       |                |        |       | HNBR     | 360x420x15 HFS H   |
|                |        |       |                |        |       | FKM      | 360x420x15 HFS V   |
| 360,36         | 420,68 | 15,08 | 14.188         | 16.563 | 0.594 | NBR      | 1412-1636-38 HFS R |
|                |        |       |                |        |       | HNBR     | 1412-1636-38 HFS H |
|                |        |       |                |        |       | FKM      | 1412-1636-38 HFS V |
| 361,9          | 400    | 16    | 14.248         | 15.748 | 0.63  | NBR      | 361,9x400x16 HFS R |
|                |        |       |                |        |       | HNBR     | 361,9x400x16 HFS H |
|                |        |       |                |        |       | FKM      | 361,9x400x16 HFS V |
| 362            | 400    | 20    | 14.252         | 15.748 | 0.787 | NBR      | 362x400x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 362x400x20 HFS H   |
|                |        |       |                |        |       | FKM      | 362x400x20 HFS V   |
| 362            | 406    | 20    | 14.252         | 15.984 | 0.787 | NBR      | 362x406x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 362x406x20 HFS H   |
|                |        |       |                |        |       | FKM      | 362x406x20 HFS V   |
| 365            | 405    | 20    | 14.370         | 15.945 | 0.787 | NBR      | 365x405x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 365x405x20 HFS H   |
|                |        |       |                |        |       | FKM      | 365x405x20 HFS V   |
| 365,12         | 404,8  | 19,84 | 14.375         | 15.938 | 0.781 | NBR      | 1424-1560-50 HFS R |
|                |        |       |                |        |       | HNBR     | 1424-1560-50 HFS H |
|                |        |       |                |        |       | FKM      | 1424-1560-50 HFS V |
| 368,3          | 419,1  | 20,6  | 14.500         | 16.500 | 0.813 | NBR      | 1432-1632-52 HFS R |
|                |        |       |                |        |       | HNBR     | 1432-1632-52 HFS H |
|                |        |       |                |        |       | FKM      | 1432-1632-52 HFS V |
| 370            | 410    | 18    | 14.567         | 16.142 | 0.709 | NBR      | 370x410x18 HFS R   |
|                |        |       |                |        |       | HNBR     | 370x410x18 HFS H   |
|                |        |       |                |        |       | FKM      | 370x410x18 HFS V   |
| 370            | 414    | 20    | 14.567         | 16.299 | 0.787 | NBR      | 370x414x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 370x414x20 HFS H   |
|                |        |       |                |        |       | FKM      | 370x414x20 HFS V   |
| 370            | 420    | 15    | 14.567         | 16.535 | 0.591 | NBR      | 370x420x15 HFS R   |
|                |        |       |                |        |       | HNBR     | 370x420x15 HFS H   |
|                |        |       |                |        |       | FKM      | 370x420x15 HFS V   |
| 373,06         | 398,46 | 12,7  | 14.688         | 15.688 | 0.5   | NBR      | 1444-1544-32 HFS R |
|                |        |       |                |        |       | HNBR     | 1444-1544-32 HFS H |
|                |        |       |                |        |       | FKM      | 1444-1544-32 HFS V |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 393,7–480 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



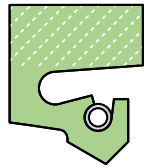
| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 393,7          | 444,5  | 23    | 15.500         | 17.500 | 0.906 | NBR           | 1532-1732-58 HFS R   |
|                |        |       |                |        |       | HNBR          | 1532-1732-58 HFS H   |
|                |        |       |                |        |       | FKM           | 1532-1732-58 HFS V   |
| 393,7          | 438,2  | 20    | 15.500         | 17.250 | 0.787 | NBR           | 393,7x438,2x20 HFS R |
|                |        |       |                |        |       | HNBR          | 393,7x438,2x20 HFS H |
|                |        |       |                |        |       | FKM           | 393,7x438,2x20 HFS V |
| 400            | 444    | 19,1  | 15.748         | 17.480 | 0.75  | NBR           | 400x444x19 HFS R     |
|                |        |       |                |        |       | HNBR          | 400x444x19 HFS H     |
|                |        |       |                |        |       | FKM           | 400x444x19 HFS V     |
| 400            | 444    | 20    | 15.748         | 17.480 | 0.787 | NBR           | 400x444x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 400x444x20 HFS H     |
|                |        |       |                |        |       | FKM           | 400x444x20 HFS V     |
| 400            | 444,5  | 22    | 15.748         | 17.500 | 0.866 | NBR           | 400x444,5x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 400x444,5x22 HFS H   |
|                |        |       |                |        |       | FKM           | 400x444,5x22 HFS V   |
| 400            | 450    | 20    | 15.748         | 17.717 | 0.787 | NBR           | 400x450x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 400x450x20 HFS H     |
|                |        |       |                |        |       | FKM           | 400x450x20 HFS V     |
| 400            | 450    | 22    | 15.748         | 17.717 | 0.866 | NBR           | 400x450x22 HFS R     |
|                |        |       |                |        |       | HNBR          | 400x450x22 HFS H     |
|                |        |       |                |        |       | FKM           | 400x450x22 HFS V     |
| 400            | 460    | 25    | 15.748         | 18.110 | 0.984 | NBR           | 400x460x25 HFS R     |
|                |        |       |                |        |       | HNBR          | 400x460x25 HFS H     |
|                |        |       |                |        |       | FKM           | 400x460x25 HFS V     |
| 404,81         | 455,61 | 22,22 | 15.938         | 17.938 | 0.875 | NBR           | 1560-1760-56 HFS R   |
|                |        |       |                |        |       | HNBR          | 1560-1760-56 HFS H   |
|                |        |       |                |        |       | FKM           | 1560-1760-56 HFS V   |
| 405            | 455    | 22    | 15.945         | 17.913 | 0.866 | NBR           | 405x455x22 HFS R     |
|                |        |       |                |        |       | HNBR          | 405x455x22 HFS H     |
|                |        |       |                |        |       | FKM           | 405x455x22 HFS V     |
| 406,2          | 445,5  | 17    | 15.992         | 17.539 | 0.669 | NBR           | 406,2x445,5x17 HFS R |
|                |        |       |                |        |       | HNBR          | 406,2x445,5x17 HFS H |
|                |        |       |                |        |       | FKM           | 406,2x445,5x17 HFS V |
| 406,4          | 457,2  | 19    | 16.000         | 18.000 | 0.748 | NBR           | 406,4x457,2x19 HFS R |
|                |        |       |                |        |       | HNBR          | 406,4x457,2x19 HFS H |
|                |        |       |                |        |       | FKM           | 406,4x457,2x19 HFS V |

| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation        |
|----------------|--------|-------|----------------|--------|-------|---------------|------------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                        |
| mm             |        |       | in.            |        |       |               |                        |
| 406,4          | 457,2  | 20,6  | 16.000         | 18.000 | 0.813 | NBR           | 1600-1800-52 HFS R     |
|                |        |       |                |        |       | HNBR          | 1600-1800-52 HFS H     |
|                |        |       |                |        |       | FKM           | 1600-1800-52 HFS V     |
| 406,4          | 457,2  | 21,2  | 16.000         | 18.000 | 0.835 | NBR           | 406,4x457,2x21,2 HFS R |
|                |        |       |                |        |       | HNBR          | 406,4x457,2x21,2 HFS H |
|                |        |       |                |        |       | FKM           | 406,4x457,2x21,2 HFS V |
| 406,4          | 457,2  | 28,6  | 16.000         | 18.000 | 1.125 | NBR           | 1600-1800-108 HFS R    |
|                |        |       |                |        |       | HNBR          | 1600-1800-108 HFS H    |
|                |        |       |                |        |       | FKM           | 1600-1800-108 HFS V    |
| 410            | 445    | 12    | 16.142         | 17.520 | 0.472 | NBR           | 410x445x12 HFS R       |
|                |        |       |                |        |       | HNBR          | 410x445x12 HFS H       |
|                |        |       |                |        |       | FKM           | 410x445x12 HFS V       |
| 412,74         | 450,84 | 17,46 | 16.250         | 17.750 | 0.688 | NBR           | 1616-1748-44 HFS R     |
|                |        |       |                |        |       | HNBR          | 1616-1748-44 HFS H     |
|                |        |       |                |        |       | FKM           | 1616-1748-44 HFS V     |
| 412,74         | 450,84 | 22,22 | 16.250         | 17.750 | 0.875 | NBR           | 1616-1748-56 HFS R     |
|                |        |       |                |        |       | HNBR          | 1616-1748-56 HFS H     |
|                |        |       |                |        |       | FKM           | 1616-1748-56 HFS V     |
| 413            | 463    | 22    | 16.260         | 18.228 | 0.866 | NBR           | 413x463x22 HFS R       |
|                |        |       |                |        |       | HNBR          | 413x463x22 HFS H       |
|                |        |       |                |        |       | FKM           | 413x463x22 HFS V       |
| 419            | 451    | 19    | 16.496         | 17.756 | 0.748 | NBR           | 419x451x19 HFS R       |
|                |        |       |                |        |       | HNBR          | 419x451x19 HFS H       |
|                |        |       |                |        |       | FKM           | 419x451x19 HFS V       |
| 419,09         | 450,84 | 19,1  | 16.500         | 17.750 | 0.75  | NBR           | 1632-1748-48 HFS R     |
|                |        |       |                |        |       | HNBR          | 1632-1748-48 HFS H     |
|                |        |       |                |        |       | FKM           | 1632-1748-48 HFS V     |
| 419,09         | 469,89 | 23,01 | 16.500         | 18.500 | 0.906 | NBR           | 1632-1832-58 HFS R     |
|                |        |       |                |        |       | HNBR          | 1632-1832-58 HFS H     |
|                |        |       |                |        |       | FKM           | 1632-1832-58 HFS V     |
| 420            | 460    | 17    | 16.535         | 18.110 | 0.669 | NBR           | 420x460x17 HFS R       |
|                |        |       |                |        |       | HNBR          | 420x460x17 HFS H       |
|                |        |       |                |        |       | FKM           | 420x460x17 HFS V       |
| 420            | 460    | 20    | 16.535         | 18.110 | 0.787 | NBR           | 420x460x20 HFS R       |
|                |        |       |                |        |       | HNBR          | 420x460x20 HFS H       |
|                |        |       |                |        |       | FKM           | 420x460x20 HFS V       |

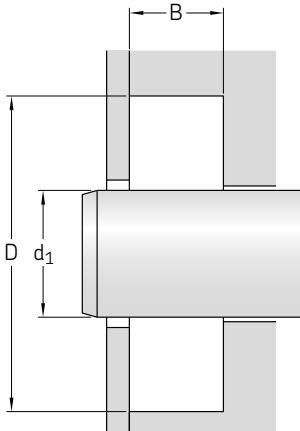
| Dimensions     |        |       | Dimensions     |        |       | Material | SKF Designation    |
|----------------|--------|-------|----------------|--------|-------|----------|--------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |          |                    |
| mm             |        |       | in.            |        |       |          |                    |
| 420            | 470    | 20    | 16.535         | 18.504 | 0.787 | NBR      | 420x470x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 420x470x20 HFS H   |
|                |        |       |                |        |       | FKM      | 420x470x20 HFS V   |
| 420            | 470    | 22    | 16.535         | 18.504 | 0.866 | NBR      | 420x470x22 HFS R   |
|                |        |       |                |        |       | HNBR     | 420x470x22 HFS H   |
|                |        |       |                |        |       | FKM      | 420x470x22 HFS V   |
| 420            | 470    | 23    | 16.535         | 18.504 | 0.906 | NBR      | 420x470x23 HFS R   |
|                |        |       |                |        |       | HNBR     | 420x470x23 HFS H   |
|                |        |       |                |        |       | FKM      | 420x470x23 HFS V   |
| 420            | 480    | 24    | 16.535         | 18.898 | 0.945 | NBR      | 420x480x24 HFS R   |
|                |        |       |                |        |       | HNBR     | 420x480x24 HFS H   |
|                |        |       |                |        |       | FKM      | 420x480x24 HFS V   |
| 420            | 485,1  | 19,1  | 16.535         | 19.098 | 0.75  | NBR      | 420x485x19 HFS R   |
|                |        |       |                |        |       | HNBR     | 420x485x19 HFS H   |
|                |        |       |                |        |       | FKM      | 420x485x19 HFS V   |
| 425            | 483    | 23    | 16.732         | 19.016 | 0.906 | NBR      | 425x483x23 HFS R   |
|                |        |       |                |        |       | HNBR     | 425x483x23 HFS H   |
|                |        |       |                |        |       | FKM      | 425x483x23 HFS V   |
| 425,5          | 482,6  | 23,01 | 16.752         | 19.000 | 0.906 | NBR      | 1648-1900-58 HFS R |
|                |        |       |                |        |       | HNBR     | 1648-1900-58 HFS H |
|                |        |       |                |        |       | FKM      | 1648-1900-58 HFS V |
| 430            | 480    | 22    | 16.929         | 18.898 | 0.866 | NBR      | 430x480x22 HFS R   |
|                |        |       |                |        |       | HNBR     | 430x480x22 HFS H   |
|                |        |       |                |        |       | FKM      | 430x480x22 HFS V   |
| 430            | 480    | 25    | 16.929         | 18.898 | 0.984 | NBR      | 430x480x25 HFS R   |
|                |        |       |                |        |       | HNBR     | 430x480x25 HFS H   |
|                |        |       |                |        |       | FKM      | 430x480x25 HFS V   |
| 430            | 480    | 27,5  | 16.929         | 18.898 | 1.083 | NBR      | 430x480x27,5 HFS R |
|                |        |       |                |        |       | HNBR     | 430x480x27,5 HFS H |
|                |        |       |                |        |       | FKM      | 430x480x27,5 HFS V |
| 431,8          | 482,6  | 20,6  | 17.000         | 19.000 | 0.813 | NBR      | 1700-1900-52 HFS R |
|                |        |       |                |        |       | HNBR     | 1700-1900-52 HFS H |
|                |        |       |                |        |       | FKM      | 1700-1900-52 HFS V |
| 435            | 485    | 22    | 17.126         | 19.094 | 0.866 | NBR      | 435x485x22 HFS R   |
|                |        |       |                |        |       | HNBR     | 435x485x22 HFS H   |
|                |        |       |                |        |       | FKM      | 435x485x22 HFS V   |
| 439,73         | 484,23 | 19,1  | 17.313         | 19.063 | 0.75  | NBR      | 1720-1904-48 HFS R |
|                |        |       |                |        |       | HNBR     | 1720-1904-48 HFS H |
|                |        |       |                |        |       | FKM      | 1720-1904-48 HFS V |
| 440            | 480    | 20    | 17.323         | 18.898 | 0.787 | NBR      | 440x480x20 HFS R   |
|                |        |       |                |        |       | HNBR     | 440x480x20 HFS H   |
|                |        |       |                |        |       | FKM      | 440x480x20 HFS V   |
| 440            | 484,3  | 19    | 17.323         | 19.067 | 0.748 | NBR      | 440x484,3x19 HFS R |
|                |        |       |                |        |       | HNBR     | 440x484,3x19 HFS H |
|                |        |       |                |        |       | FKM      | 440x484,3x19 HFS V |
| 440            | 490    | 22    | 17.323         | 19.291 | 0.866 | NBR      | 440x490x22 HFS R   |
|                |        |       |                |        |       | HNBR     | 440x490x22 HFS H   |
|                |        |       |                |        |       | FKM      | 440x490x22 HFS V   |
| 444,5          | 508    | 19,1  | 17.500         | 20.000 | 0.75  | NBR      | 1732-2000-48 HFS R |
|                |        |       |                |        |       | HNBR     | 1732-2000-48 HFS H |
|                |        |       |                |        |       | FKM      | 1732-2000-48 HFS V |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 480–580 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



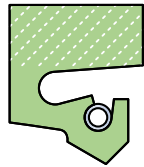
| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|--------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |        |       | in.            |        |       |               |                      |
| 480            | 530    | 22    | 18.898         | 20.866 | 0.866 | NBR           | 480x530x22 HFS R     |
|                |        |       |                |        |       | HNBR          | 480x530x22 HFS H     |
|                |        |       |                |        |       | FKM           | 480x530x22 HFS V     |
| 480            | 530    | 25    | 18.898         | 20.866 | 0.984 | NBR           | 480x530x25 HFS R     |
|                |        |       |                |        |       | HNBR          | 480x530x25 HFS H     |
|                |        |       |                |        |       | FKM           | 480x530x25 HFS V     |
| 481            | 520,68 | 19,84 | 18.938         | 20.500 | 0.781 | NBR           | 1860-2036-50 HFS R   |
|                |        |       |                |        |       | HNBR          | 1860-2036-50 HFS H   |
|                |        |       |                |        |       | FKM           | 1860-2036-50 HFS V   |
| 482,6          | 520,7  | 26,5  | 19.000         | 20.500 | 1.047 | NBR           | 1900-2032-103 HFS R  |
|                |        |       |                |        |       | HNBR          | 1900-2032-103 HFS H  |
|                |        |       |                |        |       | FKM           | 1900-2032-103 HFS V  |
| 485            | 535    | 22    | 19.094         | 21.063 | 0.866 | NBR           | 485x535x22 HFS R     |
|                |        |       |                |        |       | HNBR          | 485x535x22 HFS H     |
|                |        |       |                |        |       | FKM           | 485x535x22 HFS V     |
| 490            | 540    | 22    | 19.291         | 21.260 | 0.866 | NBR           | 490x540x22 HFS R     |
|                |        |       |                |        |       | HNBR          | 490x540x22 HFS H     |
|                |        |       |                |        |       | FKM           | 490x540x22 HFS V     |
| 495,3          | 546,3  | 22    | 19.500         | 21.508 | 0.866 | NBR           | 495,3x546,3x22 HFS R |
|                |        |       |                |        |       | HNBR          | 495,3x546,3x22 HFS H |
|                |        |       |                |        |       | FKM           | 495,3x546,3x22 HFS V |
| 497            | 540    | 20    | 19.567         | 21.260 | 0.787 | NBR           | 497x540x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 497x540x20 HFS H     |
|                |        |       |                |        |       | FKM           | 497x540x20 HFS V     |
| 500            | 540    | 20    | 19.685         | 21.260 | 0.787 | NBR           | 500x540x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 500x540x20 HFS H     |
|                |        |       |                |        |       | FKM           | 500x540x20 HFS V     |
| 500            | 540    | 22    | 19.685         | 21.260 | 0.866 | NBR           | 500x540x22 HFS R     |
|                |        |       |                |        |       | HNBR          | 500x540x22 HFS H     |
|                |        |       |                |        |       | FKM           | 500x540x22 HFS V     |
| 500            | 544    | 20    | 19.685         | 21.417 | 0.787 | NBR           | 500x544x20 HFS R     |
|                |        |       |                |        |       | HNBR          | 500x544x20 HFS H     |
|                |        |       |                |        |       | FKM           | 500x544x20 HFS V     |
| 500            | 544    | 22    | 19.685         | 21.417 | 0.866 | NBR           | 500x544x22 HFS R     |
|                |        |       |                |        |       | HNBR          | 500x544x22 HFS H     |
|                |        |       |                |        |       | FKM           | 500x544x22 HFS V     |

| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|--------|-------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                    |
| mm             |        |       | in.            |        |       |               |                    |
| 500            | 545    | 20    | 19.685         | 21.457 | 0.787 | NBR           | 500x545x20 HFS R   |
|                |        |       |                |        |       | HNBR          | 500x545x20 HFS H   |
|                |        |       |                |        |       | FKM           | 500x545x20 HFS V   |
| 500            | 545    | 20,5  | 19.685         | 21.457 | 0.807 | NBR           | 500x545x21 HFS R   |
|                |        |       |                |        |       | HNBR          | 500x545x21 HFS H   |
|                |        |       |                |        |       | FKM           | 500x545x21 HFS V   |
| 500            | 550    | 20    | 19.685         | 21.654 | 0.787 | NBR           | 500x550x20 HFS R   |
|                |        |       |                |        |       | HNBR          | 500x550x20 HFS H   |
|                |        |       |                |        |       | FKM           | 500x550x20 HFS V   |
| 500            | 550    | 22    | 19.685         | 21.654 | 0.866 | NBR           | 500x550x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 500x550x22 HFS H   |
|                |        |       |                |        |       | FKM           | 500x550x22 HFS V   |
| 500,05         | 544,49 | 22,22 | 19.688         | 21.438 | 0.875 | NBR           | 1944-2128-56 HFS R |
|                |        |       |                |        |       | HNBR          | 1944-2128-56 HFS H |
|                |        |       |                |        |       | FKM           | 1944-2128-56 HFS V |
| 508            | 558,8  | 20,63 | 20.000         | 22.000 | 0.813 | NBR           | 2000-2200-52 HFS R |
|                |        |       |                |        |       | HNBR          | 2000-2200-52 HFS H |
|                |        |       |                |        |       | FKM           | 2000-2200-52 HFS V |
| 510            | 560    | 22    | 20.079         | 22.047 | 0.866 | NBR           | 510x560x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 510x560x22 HFS H   |
|                |        |       |                |        |       | FKM           | 510x560x22 HFS V   |
| 510            | 560    | 25    | 20.079         | 22.047 | 0.984 | NBR           | 510x560x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 510x560x25 HFS H   |
|                |        |       |                |        |       | FKM           | 510x560x25 HFS V   |
| 520            | 570    | 22    | 20.472         | 22.441 | 0.866 | NBR           | 520x570x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 520x570x22 HFS H   |
|                |        |       |                |        |       | FKM           | 520x570x22 HFS V   |
| 520            | 570    | 25    | 20.472         | 22.441 | 0.984 | NBR           | 520x570x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 520x570x25 HFS H   |
|                |        |       |                |        |       | FKM           | 520x570x25 HFS V   |
| 520,7          | 558,8  | 19,1  | 20.500         | 22.000 | 0.75  | NBR           | 2032-2000-48 HFS R |
|                |        |       |                |        |       | HNBR          | 2032-2000-48 HFS H |
|                |        |       |                |        |       | FKM           | 2032-2000-48 HFS V |
| 520,7          | 558,8  | 24,2  | 20.500         | 22.000 | 0.953 | NBR           | 2032-2200-61 HFS R |
|                |        |       |                |        |       | HNBR          | 2032-2200-61 HFS H |
|                |        |       |                |        |       | FKM           | 2032-2200-61 HFS V |

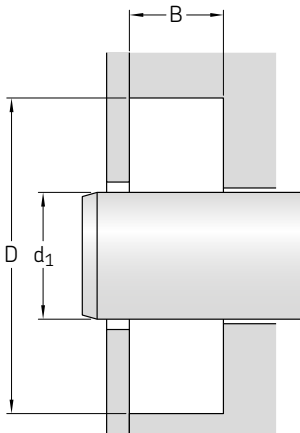
| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|--------|-------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                    |
| mm             |        |       | in.            |        |       |               |                    |
| 525            | 569    | 20    | 20.669         | 22.402 | 0.787 | NBR           | 525x569x20 HFS R   |
|                |        |       |                |        |       | HNBR          | 525x569x20 HFS H   |
|                |        |       |                |        |       | FKM           | 525x569x20 HFS V   |
| 525            | 575    | 22    | 20.669         | 22.638 | 0.866 | NBR           | 525x575x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 525x575x22 HFS H   |
|                |        |       |                |        |       | FKM           | 525x575x22 HFS V   |
| 528            | 578    | 22    | 20.787         | 22.756 | 0.866 | NBR           | 528x578x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 528x578x22 HFS H   |
|                |        |       |                |        |       | FKM           | 528x578x22 HFS V   |
| 530            | 580    | 20    | 20.866         | 22.835 | 0.787 | NBR           | 530x580x20 HFS R   |
|                |        |       |                |        |       | HNBR          | 530x580x20 HFS H   |
|                |        |       |                |        |       | FKM           | 530x580x20 HFS V   |
| 530            | 580    | 22    | 20.866         | 22.835 | 0.866 | NBR           | 530x580x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 530x580x22 HFS H   |
|                |        |       |                |        |       | FKM           | 530x580x22 HFS V   |
| 530            | 580    | 24,2  | 20.866         | 22.835 | 0.953 | NBR           | 530x580x24,2 HFS R |
|                |        |       |                |        |       | HNBR          | 530x580x24,2 HFS H |
|                |        |       |                |        |       | FKM           | 530x580x24,2 HFS V |
| 535            | 585    | 22    | 21.063         | 23.031 | 0.866 | NBR           | 535x585x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 535x585x22 HFS H   |
|                |        |       |                |        |       | FKM           | 535x585x22 HFS V   |
| 540            | 590    | 22    | 21.260         | 23.228 | 0.866 | NBR           | 540x590x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 540x590x22 HFS H   |
|                |        |       |                |        |       | FKM           | 540x590x22 HFS V   |
| 540            | 590    | 25    | 21.260         | 23.228 | 0.984 | NBR           | 540x590x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 540x590x25 HFS H   |
|                |        |       |                |        |       | FKM           | 540x590x25 HFS V   |
| 540            | 590    | 27,5  | 21.260         | 23.228 | 1.083 | NBR           | 540x590x27,5 HFS R |
|                |        |       |                |        |       | HNBR          | 540x590x27,5 HFS H |
|                |        |       |                |        |       | FKM           | 540x590x27,5 HFS V |
| 541,33         | 577,83 | 17,85 | 21.313         | 22.750 | 0.703 | NBR           | 2120-2248-45 HSF R |
|                |        |       |                |        |       | HNBR          | 2120-2248-45 HSF H |
|                |        |       |                |        |       | FKM           | 2120-2248-45 HSF V |
| 542            | 578    | 18    | 21.339         | 22.756 | 0.709 | NBR           | 542x578x18 HFS R   |
|                |        |       |                |        |       | HNBR          | 542x578x18 HFS H   |
|                |        |       |                |        |       | FKM           | 542x578x18 HFS V   |
| 549,27         | 600,07 | 21,82 | 21.625         | 23.625 | 0.859 | NBR           | 2140-2340-55 HFS R |
|                |        |       |                |        |       | HNBR          | 2140-2340-55 HFS H |
|                |        |       |                |        |       | FKM           | 2140-2340-55 HFS V |
| 550            | 590    | 20    | 21.654         | 23.228 | 0.787 | NBR           |                    |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 580–750 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



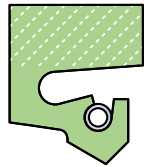
| Dimensions     |     |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-----|------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D   | B    | d <sub>1</sub> | D      | B     |               |                    |
| mm             |     |      | in.            |        |       |               |                    |
| 580            | 620 | 20   | 22.835         | 24.409 | 0.787 | NBR           | 580x620x20 HFS R   |
|                |     |      |                |        |       | HNBR          | 580x620x20 HFS H   |
|                |     |      |                |        |       | FKM           | 580x620x20 HFS V   |
| 580            | 620 | 20   | 22.835         | 24.409 | 0.787 | NBR           | 580x620x20 HFS R   |
|                |     |      |                |        |       | HNBR          | 580x620x20 HFS H   |
|                |     |      |                |        |       | FKM           | 580x620x20 HFS V   |
| 580            | 620 | 25   | 22.835         | 24.409 | 0.984 | NBR           | 580x620x25 HFS R   |
|                |     |      |                |        |       | HNBR          | 580x620x25 HFS H   |
|                |     |      |                |        |       | FKM           | 580x620x25 HFS V   |
| 590            | 640 | 20   | 23.228         | 25.197 | 0.787 | NBR           | 590x640x20 HFS R   |
|                |     |      |                |        |       | HNBR          | 590x640x20 HFS H   |
|                |     |      |                |        |       | FKM           | 590x640x20 HFS V   |
| 590            | 640 | 22   | 23.228         | 25.197 | 0.866 | NBR           | 590x640x22 HFS R   |
|                |     |      |                |        |       | HNBR          | 590x640x22 HFS H   |
|                |     |      |                |        |       | FKM           | 590x640x22 HFS V   |
| 600            | 650 | 22   | 23.622         | 25.591 | 0.866 | NBR           | 600x650x22 HFS R   |
|                |     |      |                |        |       | HNBR          | 600x650x22 HFS H   |
|                |     |      |                |        |       | FKM           | 600x650x22 HFS V   |
| 600            | 660 | 22,2 | 23.622         | 25.984 | 0.875 | NBR           | 600x660x22,2 HFS R |
|                |     |      |                |        |       | HNBR          | 600x660x22,2 HFS H |
|                |     |      |                |        |       | FKM           | 600x660x22,2 HFS V |
| 600            | 660 | 25   | 23.622         | 25.984 | 0.984 | NBR           | 600x660x25 HFS R   |
|                |     |      |                |        |       | HNBR          | 600x660x25 HFS H   |
|                |     |      |                |        |       | FKM           | 600x660x25 HFS V   |
| 605            | 645 | 18   | 23.819         | 25.394 | 0.709 | NBR           | 605x645x18 HFS R   |
|                |     |      |                |        |       | HNBR          | 605x645x18 HFS H   |
|                |     |      |                |        |       | FKM           | 605x645x18 HFS V   |
| 605            | 655 | 22   | 23.819         | 25.787 | 0.866 | NBR           | 605x655x22 HFS R   |
|                |     |      |                |        |       | HNBR          | 605x655x22 HFS H   |
|                |     |      |                |        |       | FKM           | 605x655x22 HFS V   |
| 610            | 674 | 22   | 24.016         | 26.535 | 0.866 | NBR           | 610x674x22 HFS R   |
|                |     |      |                |        |       | HNBR          | 610x674x22 HFS H   |
|                |     |      |                |        |       | FKM           | 610x674x22 HFS V   |
| 610            | 674 | 25   | 24.016         | 26.535 | 0.984 | NBR           | 610x674x25 HFS R   |
|                |     |      |                |        |       | HNBR          | 610x674x25 HFS H   |
|                |     |      |                |        |       | FKM           | 610x674x25 HFS V   |

| Dimensions     |        |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|--------|------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D      | B    | d <sub>1</sub> | D      | B     |               |                    |
| mm             |        |      | in.            |        |       |               |                    |
| 616            | 666,8  | 22   | 24.252         | 26.252 | 0.866 | NBR           | 616x666,8x22 HFS R |
|                |        |      |                |        |       | HNBR          | 616x666,8x22 HFS H |
|                |        |      |                |        |       | FKM           | 616x666,8x22 HFS V |
| 620            | 684    | 25   | 24.409         | 26.929 | 0.984 | NBR           | 620x684x25 HFS R   |
|                |        |      |                |        |       | HNBR          | 620x684x25 HFS H   |
|                |        |      |                |        |       | FKM           | 620x684x25 HFS V   |
| 625            | 670    | 20   | 24.606         | 26.378 | 0.787 | NBR           | 625x670x20 HFS R   |
|                |        |      |                |        |       | HNBR          | 625x670x20 HFS H   |
|                |        |      |                |        |       | FKM           | 625x670x20 HFS V   |
| 630            | 680    | 25   | 24.803         | 26.772 | 0.984 | NBR           | 630x680x25 HFS R   |
|                |        |      |                |        |       | HNBR          | 630x680x25 HFS H   |
|                |        |      |                |        |       | FKM           | 630x680x25 HFS V   |
| 630            | 694    | 25   | 24.803         | 27.323 | 0.984 | NBR           | 630x694x25 HFS R   |
|                |        |      |                |        |       | HNBR          | 630x694x25 HFS H   |
|                |        |      |                |        |       | FKM           | 630x694x25 HFS V   |
| 639,75         | 682,63 | 19,1 | 25.188         | 26.875 | 0.75  | NBR           | 2512-2656-48 HFS R |
|                |        |      |                |        |       | HNBR          | 2512-2656-48 HFS H |
|                |        |      |                |        |       | FKM           | 2512-2656-48 HFS V |
| 640            | 684    | 20   | 25.197         | 26.929 | 0.787 | NBR           | 640x684x20 HFS R   |
|                |        |      |                |        |       | HNBR          | 640x684x20 HFS H   |
|                |        |      |                |        |       | FKM           | 640x684x20 HFS V   |
| 640            | 688    | 20   | 25.197         | 27.087 | 0.787 | NBR           | 640x688x20 HFS R   |
|                |        |      |                |        |       | HNBR          | 640x688x20 HFS H   |
|                |        |      |                |        |       | FKM           | 640x688x20 HFS V   |
| 640            | 690    | 22   | 25.197         | 27.165 | 0.866 | NBR           | 640x690x22 HFS R   |
|                |        |      |                |        |       | HNBR          | 640x690x22 HFS H   |
|                |        |      |                |        |       | FKM           | 640x690x22 HFS V   |
| 640            | 704    | 25   | 25.197         | 27.717 | 0.984 | NBR           | 640x704x25 HFS R   |
|                |        |      |                |        |       | HNBR          | 640x704x25 HFS H   |
|                |        |      |                |        |       | FKM           | 640x704x25 HFS V   |
| 641            | 707    | 25   | 25.236         | 27.835 | 0.984 | NBR           | 641x707x25 HFS R   |
|                |        |      |                |        |       | HNBR          | 641x707x25 HFS H   |
|                |        |      |                |        |       | FKM           | 641x707x25 HFS V   |
| 650            | 690    | 18   | 25.591         | 27.165 | 0.709 | NBR           | 650x690x18 HFS R   |
|                |        |      |                |        |       | HNBR          | 650x690x18 HFS H   |
|                |        |      |                |        |       | FKM           | 650x690x18 HFS V   |

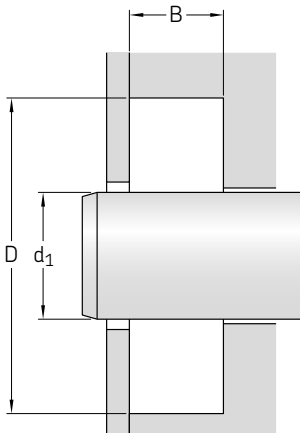
| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|--------|-------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                    |
| mm             |        |       | in.            |        |       |               |                    |
| 650            | 690    | 20    | 25.591         | 27.165 | 0.787 | NBR           | 650x690x20 HFS R   |
|                |        |       |                |        |       | HNBR          | 650x690x20 HFS H   |
|                |        |       |                |        |       | FKM           | 650x690x20 HFS V   |
| 660            | 704    | 18    | 25.984         | 27.717 | 0.709 | NBR           | 660x704x18 HFS R   |
|                |        |       |                |        |       | HNBR          | 660x704x18 HFS H   |
|                |        |       |                |        |       | FKM           | 660x704x18 HFS V   |
| 660            | 704    | 20    | 25.984         | 27.717 | 0.787 | NBR           | 660x704x20 HFS R   |
|                |        |       |                |        |       | HNBR          | 660x704x20 HFS H   |
|                |        |       |                |        |       | FKM           | 660x704x20 HFS V   |
| 660            | 724    | 25    | 25.984         | 28.504 | 0.984 | NBR           | 660x724x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 660x724x25 HFS H   |
|                |        |       |                |        |       | FKM           | 660x724x25 HFS V   |
| 670            | 734    | 25    | 26.378         | 28.898 | 0.984 | NBR           | 670x734x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 670x734x25 HFS H   |
|                |        |       |                |        |       | FKM           | 670x734x25 HFS V   |
| 672            | 737    | 25    | 26.457         | 29.016 | 0.984 | NBR           | 672x737x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 672x737x25 HFS H   |
|                |        |       |                |        |       | FKM           | 672x737x25 HFS V   |
| 676            | 740    | 25    | 26.614         | 29.134 | 0.984 | NBR           | 676x740x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 676x740x25 HFS H   |
|                |        |       |                |        |       | FKM           | 676x740x25 HFS V   |
| 679,44         | 742,94 | 25    | 26.750         | 29.250 | 0.984 | NBR           | 2648-2916-63 HFS R |
|                |        |       |                |        |       | HNBR          | 2648-2916-63 HFS H |
|                |        |       |                |        |       | FKM           | 2648-2916-63 HFS V |
| 680            | 730    | 22    | 26.772         | 28.740 | 0.866 | NBR           | 680x730x22 HFS R   |
|                |        |       |                |        |       | HNBR          | 680x730x22 HFS H   |
|                |        |       |                |        |       | FKM           | 680x730x22 HFS V   |
| 680            | 744    | 25    | 26.772         | 29.291 | 0.984 | NBR           | 680x744x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 680x744x25 HFS H   |
|                |        |       |                |        |       | FKM           | 680x744x25 HFS V   |
| 685            | 749    | 25    | 26.969         | 29.488 | 0.984 | NBR           | 685x749x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 685x749x25 HFS H   |
|                |        |       |                |        |       | FKM           | 685x749x25 HFS V   |
| 685,8          | 736,6  | 22,22 | 27.000         | 29.000 | 0.875 | NBR           | 2700-2900-56 HFS R |
|                |        |       |                |        |       | HNBR          | 2700-2900-56 HFS H |
|                |        |       |                |        |       | FKM           | 2700-2900-56 HFS V |
| 690            | 740    | 25    | 27.165         | 29.134 | 0.984 | NBR           | 690x740x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 690x740x25 HFS H   |
|                |        |       |                |        |       | FKM           | 690x740x25 HFS V   |
| 700            | 750    | 25    | 27.559         | 29.528 | 0.984 | NBR           | 700x750x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 70                 |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 750–990 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



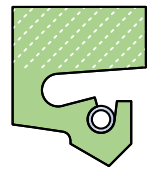
| Dimensions     |       |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|-------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D     | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |       |       | in.            |        |       |               |                      |
| 750            | 800   | 25    | 29.528         | 31.496 | 0.984 | NBR           | 750x800x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 750x800x25 HFS H     |
|                |       |       |                |        |       | FKM           | 750x800x25 HFS V     |
| 750            | 800   | 27,5  | 29.528         | 31.496 | 1.083 | NBR           | 750x800x27,5 HFS R   |
|                |       |       |                |        |       | HNBR          | 750x800x27,5 HFS H   |
|                |       |       |                |        |       | FKM           | 750x800x27,5 HFS V   |
| 750            | 810   | 30    | 29.528         | 31.890 | 1.181 | NBR           | 750x810x30 HFS R     |
|                |       |       |                |        |       | HNBR          | 750x810x30 HFS H     |
|                |       |       |                |        |       | FKM           | 750x810x30 HFS V     |
| 750            | 814   | 25    | 29.528         | 32.047 | 0.984 | NBR           | 750x814x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 750x814x25 HFS H     |
|                |       |       |                |        |       | FKM           | 750x814x25 HFS V     |
| 750            | 814   | 28    | 29.528         | 32.047 | 1.102 | NBR           | 750x814x28 HFS R     |
|                |       |       |                |        |       | HNBR          | 750x814x28 HFS H     |
|                |       |       |                |        |       | FKM           | 750x814x28 HFS V     |
| 753,5          | 817,5 | 25    | 29.665         | 32.185 | 0.984 | NBR           | 753,5x817,5x25 HFS R |
|                |       |       |                |        |       | HNBR          | 753,5x817,5x25 HFS H |
|                |       |       |                |        |       | FKM           | 753,5x817,5x25 HFS V |
| 753,5          | 817,5 | 28    | 29.665         | 32.185 | 1.102 | NBR           | 753,5x817,5x28 HFS R |
|                |       |       |                |        |       | HNBR          | 753,5x817,5x28 HFS H |
|                |       |       |                |        |       | FKM           | 753,5x817,5x28 HFS V |
| 760            | 820   | 25    | 29.921         | 32.283 | 0.984 | NBR           | 760x820x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 760x820x25 HFS H     |
|                |       |       |                |        |       | FKM           | 760x820x25 HFS V     |
| 773,7          | 825,5 | 23    | 30.461         | 32.500 | 0.906 | NBR           | 773,7x825,5x23 HFS R |
|                |       |       |                |        |       | HNBR          | 773,7x825,5x23 HFS H |
|                |       |       |                |        |       | FKM           | 773,7x825,5x23 HFS V |
| 774,7          | 820   | 22,22 | 30.500         | 32.281 | 0.875 | NBR           | 3032-3218-56 HFS R   |
|                |       |       |                |        |       | HNBR          | 3032-3218-56 HFS H   |
|                |       |       |                |        |       | FKM           | 3032-3218-56 HFS V   |
| 774,7          | 838,2 | 22,22 | 30.500         | 33.000 | 0.875 | NBR           | 3032-3300-56 HFS R   |
|                |       |       |                |        |       | HNBR          | 3032-3300-56 HFS H   |
|                |       |       |                |        |       | FKM           | 3032-3300-56 HFS V   |
| 775            | 825   | 25    | 30.512         | 32.480 | 0.984 | NBR           | 775x825x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 775x825x25 HFS H     |
|                |       |       |                |        |       | FKM           | 775x825x25 HFS V     |

| Dimensions     |        |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|--------|-------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D      | B     | d <sub>1</sub> | D      | B     |               |                    |
| mm             |        |       | in.            |        |       |               |                    |
| 780            | 844    | 25    | 30.709         | 33.228 | 0.984 | NBR           | 780x844x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 780x844x25 HFS H   |
|                |        |       |                |        |       | FKM           | 780x844x25 HFS V   |
| 787,4          | 838,2  | 22,22 | 31.000         | 33.000 | 0.875 | NBR           | 3100-3300-56 HFS R |
|                |        |       |                |        |       | HNBR          | 3100-3300-56 HFS H |
|                |        |       |                |        |       | FKM           | 3100-3300-56 HFS V |
| 790            | 854    | 25    | 31.102         | 33.622 | 0.984 | NBR           | 790x854x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 790x854x25 HFS H   |
|                |        |       |                |        |       | FKM           | 790x854x25 HFS V   |
| 800            | 840    | 25    | 31.496         | 33.071 | 0.984 | NBR           | 800x840x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 800x840x25 HFS H   |
|                |        |       |                |        |       | FKM           | 800x840x25 HFS V   |
| 800            | 864    | 25    | 31.496         | 34.016 | 0.984 | NBR           | 800x864x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 800x864x25 HFS H   |
|                |        |       |                |        |       | FKM           | 800x864x25 HFS V   |
| 800            | 870    | 30    | 31.496         | 34.252 | 1.181 | NBR           | 800x870x30 HFS R   |
|                |        |       |                |        |       | HNBR          | 800x870x30 HFS H   |
|                |        |       |                |        |       | FKM           | 800x870x30 HFS V   |
| 800            | 874    | 25    | 31.496         | 34.409 | 0.984 | NBR           | 800x874x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 800x874x25 HFS H   |
|                |        |       |                |        |       | FKM           | 800x874x25 HFS V   |
| 800            | 874    | 25    | 31.496         | 34.409 | 0.984 | NBR           | 800x874x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 800x874x25 HFS H   |
|                |        |       |                |        |       | FKM           | 800x874x25 HFS V   |
| 805            | 869    | 25    | 31.693         | 34.213 | 0.984 | NBR           | 805x869x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 805x869x25 HFS H   |
|                |        |       |                |        |       | FKM           | 805x869x25 HFS V   |
| 809,61         | 873,11 | 25    | 31.875         | 34.375 | 0.984 | NBR           | 3156-3424-63 HFS R |
|                |        |       |                |        |       | HNBR          | 3156-3424-63 HFS H |
|                |        |       |                |        |       | FKM           | 3156-3424-63 HFS V |
| 810            | 860    | 25    | 31.890         | 33.858 | 0.984 | NBR           | 810x860x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 810x860x25 HFS H   |
|                |        |       |                |        |       | FKM           | 810x860x25 HFS V   |
| 810            | 870    | 25    | 31.890         | 34.252 | 0.984 | NBR           | 810x870x25 HFS R   |
|                |        |       |                |        |       | HNBR          | 810x870x25 HFS H   |
|                |        |       |                |        |       | FKM           | 810x870x25 HFS V   |

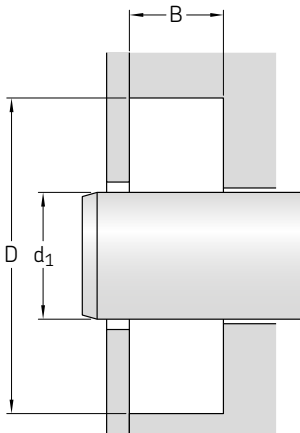
| Dimensions     |       |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|-------|-------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D     | B     | d <sub>1</sub> | D      | B     |               |                      |
| mm             |       |       | in.            |        |       |               |                      |
| 810            | 874   | 25    | 31.890         | 34.409 | 0.984 | NBR           | 810x874x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 810x874x25 HFS H     |
|                |       |       |                |        |       | FKM           | 810x874x25 HFS V     |
| 812,5          | 876,5 | 25    | 31.988         | 34.508 | 0.984 | NBR           | 812,5x876,5x25 HFS R |
|                |       |       |                |        |       | HNBR          | 812,5x876,5x25 HFS H |
|                |       |       |                |        |       | FKM           | 812,5x876,5x25 HFS V |
| 820            | 870   | 22    | 32.283         | 34.252 | 0.866 | NBR           | 820x870x22 HFS R     |
|                |       |       |                |        |       | HNBR          | 820x870x22 HFS H     |
|                |       |       |                |        |       | FKM           | 820x870x22 HFS V     |
| 820            | 870   | 25    | 32.283         | 34.252 | 0.984 | NBR           | 820x870x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 820x870x25 HFS H     |
|                |       |       |                |        |       | FKM           | 820x870x25 HFS V     |
| 820            | 884   | 28    | 32.283         | 34.803 | 1.102 | NBR           | 820x884x28 HFS R     |
|                |       |       |                |        |       | HNBR          | 820x884x28 HFS H     |
|                |       |       |                |        |       | FKM           | 820x884x28 HFS V     |
| 826            | 876   | 30    | 32.520         | 34.488 | 1.181 | NBR           | 826x876x30 HFS R     |
|                |       |       |                |        |       | HNBR          | 826x876x30 HFS H     |
|                |       |       |                |        |       | FKM           | 826x876x30 HFS V     |
| 830            | 894   | 25    | 32.677         | 35.197 | 0.984 | NBR           | 830x894x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 830x894x25 HFS H     |
|                |       |       |                |        |       | FKM           | 830x894x25 HFS V     |
| 840            | 904   | 25    | 33.071         | 35.591 | 0.984 | NBR           | 840x904x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 840x904x25 HFS H     |
|                |       |       |                |        |       | FKM           | 840x904x25 HFS V     |
| 849,3          | 900,1 | 19,84 | 33.438         | 35.438 | 0.781 | NBR           | 3328-3528-50 HFS R   |
|                |       |       |                |        |       | HNBR          | 3328-3528-50 HFS H   |
|                |       |       |                |        |       | FKM           | 3328-3528-50 HFS V   |
| 850            | 900   | 19    | 33.465         | 35.433 | 0.748 | NBR           | 850x900x19 HFS R     |
|                |       |       |                |        |       | HNBR          | 850x900x19 HFS H     |
|                |       |       |                |        |       | FKM           | 850x900x19 HFS V     |
| 850            | 900   | 20    | 33.465         | 35.433 | 0.787 | NBR           | 850x900x20 HFS R     |
|                |       |       |                |        |       | HNBR          | 850x900x20 HFS H     |
|                |       |       |                |        |       | FKM           | 850x900x20 HFS V     |
| 850            | 910   | 25    | 33.465         | 35.827 | 0.984 | NBR           | 850x910x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 850x910x25 HFS H     |
|                |       |       |                |        |       | FKM           | 850x910x25 HFS V     |
| 850            | 914   | 25    | 33.465         | 35.984 | 0.984 | NBR           | 850x914x25 HFS R     |
|                |       |       |                |        |       | HNBR          | 850x914x25 HFS H     |
|                |       |       |                |        |       | FKM           | 850x914x25 HFS V     |
| 850            | 924   | 25    | 33.465         | 36.378 | 0.984 | NBR           | 850x924x25 HFS R     |

HFS seals – rubber fabric reinforced

d<sub>1</sub> 990–2 350 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



| Dimensions     |       |    | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|----|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B  | d <sub>1</sub> | D      | B     |               |                    |
| mm             |       |    | in.            |        |       |               |                    |
| 990            | 1 040 | 25 | 38.976         | 40.945 | 0.984 | NBR           | 990x1040x25 HFS R  |
|                |       |    |                |        |       | HNBR          | 990x1040x25 HFS H  |
|                |       |    |                |        |       | FKM           | 990x1040x25 HFS V  |
| 990            | 1 054 | 25 | 38.976         | 41.496 | 0.984 | NBR           | 990x1054x25 HFS R  |
|                |       |    |                |        |       | HNBR          | 990x1054x25 HFS H  |
|                |       |    |                |        |       | FKM           | 990x1054x25 HFS V  |
| 1 000          | 1 064 | 25 | 39.370         | 41.890 | 0.984 | NBR           | 1000x1064x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1000x1064x25 HFS H |
|                |       |    |                |        |       | FKM           | 1000x1064x25 HFS V |
| 1 020          | 1 084 | 25 | 40.157         | 42.677 | 0.984 | NBR           | 1020x1084x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1020x1084x25 HFS H |
|                |       |    |                |        |       | FKM           | 1020x1084x25 HFS V |
| 1 055          | 1 119 | 25 | 41.535         | 44.055 | 0.984 | NBR           | 1055x1119x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1055x1119x25 HFS H |
|                |       |    |                |        |       | FKM           | 1055x1119x25 HFS V |
| 1 080          | 1 140 | 25 | 42.520         | 44.882 | 0.984 | NBR           | 1080x1140x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1080x1140x25 HFS H |
|                |       |    |                |        |       | FKM           | 1080x1140x25 HFS V |
| 1 105          | 1 154 | 25 | 43.504         | 45.433 | 0.984 | NBR           | 1105x1154x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1105x1154x25 HFS H |
|                |       |    |                |        |       | FKM           | 1105x1154x25 HFS V |
| 1 105          | 1 160 | 25 | 43.504         | 45.669 | 0.984 | NBR           | 1105x1160x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1105x1160x25 HFS H |
|                |       |    |                |        |       | FKM           | 1105x1160x25 HFS V |
| 1 110          | 1 160 | 22 | 43.701         | 45.669 | 0.866 | NBR           | 1110x1160x22 HFS R |
|                |       |    |                |        |       | HNBR          | 1110x1160x22 HFS H |
|                |       |    |                |        |       | FKM           | 1110x1160x22 HFS V |
| 1 166          | 1 230 | 25 | 45.906         | 48.425 | 0.984 | NBR           | 1166x1230x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1166x1230x25 HFS H |
|                |       |    |                |        |       | FKM           | 1166x1230x25 HFS V |
| 1 220          | 1 284 | 25 | 48.031         | 50.551 | 0.984 | NBR           | 1220x1284x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1220x1284x25 HFS H |
|                |       |    |                |        |       | FKM           | 1220x1284x25 HFS V |
| 1 310          | 1 374 | 25 | 51.575         | 54.094 | 0.984 | NBR           | 1310x1374x25 HFS R |
|                |       |    |                |        |       | HNBR          | 1310x1374x25 HFS H |
|                |       |    |                |        |       | FKM           | 1310x1374x25 HFS V |

| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|-------|------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                      |
| mm             |       |      | in.            |        |       |               |                      |
| 1 320          | 1 370 | 20   | 51.969         | 53.937 | 0.787 | NBR           | 1320x1370x20 HFS R   |
|                |       |      |                |        |       | HNBR          | 1320x1370x20 HFS H   |
|                |       |      |                |        |       | FKM           | 1320x1370x20 HFS V   |
| 1 330          | 1 394 | 25   | 52.362         | 54.882 | 0.984 | NBR           | 1330x1394x25 HFS R   |
|                |       |      |                |        |       | HNBR          | 1330x1394x25 HFS H   |
|                |       |      |                |        |       | FKM           | 1330x1394x25 HFS V   |
| 1 385          | 1 435 | 25   | 54.528         | 56.496 | 0.984 | NBR           | 1385x1435x25 HFS R   |
|                |       |      |                |        |       | HNBR          | 1385x1435x25 HFS H   |
|                |       |      |                |        |       | FKM           | 1385x1435x25 HFS V   |
| 1 435          | 1 499 | 25   | 56.496         | 59.016 | 0.984 | NBR           | 1435x1499x25 HFS R   |
|                |       |      |                |        |       | HNBR          | 1435x1499x25 HFS H   |
|                |       |      |                |        |       | FKM           | 1435x1499x25 HFS V   |
| 1 447,8        | 1 524 | 19,1 | 57.000         | 60.000 | 0.75  | NBR           | 5700-6000-48 HFS R   |
|                |       |      |                |        |       | HNBR          | 5700-6000-48 HFS H   |
|                |       |      |                |        |       | FKM           | 5700-6000-48 HFS V   |
| 1 550          | 1 614 | 25   | 61.024         | 63.543 | 0.984 | NBR           | 1550x1614x25 HFS R   |
|                |       |      |                |        |       | HNBR          | 1550x1614x25 HFS H   |
|                |       |      |                |        |       | FKM           | 1550x1614x25 HFS V   |
| 1 556          | 1 620 | 25   | 61.260         | 63.780 | 0.984 | NBR           | 1556x1620x25 HFS R   |
|                |       |      |                |        |       | HNBR          | 1556x1620x25 HFS H   |
|                |       |      |                |        |       | FKM           | 1556x1620x25 HFS V   |
| 1 600          | 1 664 | 25,3 | 62.992         | 65.512 | 0.996 | NBR           | 1600x1664x25,3 HFS R |
|                |       |      |                |        |       | HNBR          | 1600x1664x25,3 HFS H |
|                |       |      |                |        |       | FKM           | 1600x1664x25,3 HFS V |
| 1 610          | 1 660 | 20   | 63.386         | 65.354 | 0.787 | NBR           | 1610x1660x20 HFS R   |
|                |       |      |                |        |       | HNBR          | 1610x1660x20 HFS H   |
|                |       |      |                |        |       | FKM           | 1610x1660x20 HFS V   |
| 1 610          | 1 670 | 20   | 63.386         | 65.748 | 0.787 | NBR           | 1610x1670x20 HFS R   |
|                |       |      |                |        |       | HNBR          | 1610x1670x20 HFS H   |
|                |       |      |                |        |       | FKM           | 1610x1670x20 HFS V   |
| 1 620          | 1 684 | 25   | 63.780         | 66.299 | 0.984 | NBR           | 1620x1684x25 HFS R   |
|                |       |      |                |        |       | HNBR          | 1620x1684x25 HFS H   |
|                |       |      |                |        |       | FKM           | 1620x1684x25 HFS V   |
| 1 656          | 1 720 | 25   | 65.197         | 67.717 | 0.984 | NBR           | 1656x1720x25 HFS R   |
|                |       |      |                |        |       | HNBR          | 1656x1720x25 HFS H   |
|                |       |      |                |        |       | FKM           | 1656x1720x25 HFS V   |

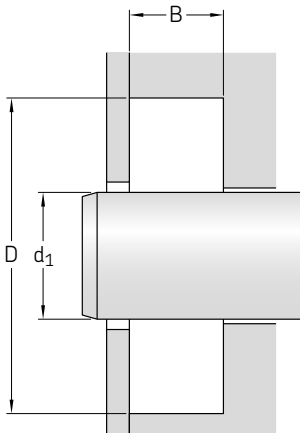
| Dimensions     |       |    | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|----|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B  | d <sub>1</sub> | D      | B     |               |                    |
| mm             |       |    | in.            |        |       |               |                    |
| 2 350          | 2 414 | 25 | 92.520         | 95.039 | 0.984 | NBR           | 2350x2414x25 HFS R |
|                |       |    |                |        |       | HNBR          | 2350x2414x25 HFS H |
|                |       |    |                |        |       | FKM           | 2350x2414x25 HFS V |

Reinforced rubber seals – HFSA

d<sub>1</sub> 50–2 000 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



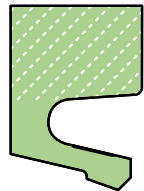
| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|------|----------------|-------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                    |
| mm             |       |      | in.            |       |       |               |                    |
| 50             | 75    | 10   | 1.969          | 2.953 | 0.394 | NBR           | 50x75x10 HFSA R    |
|                |       |      |                |       |       | HNBR          | 50x75x10 HFSA H    |
|                |       |      |                |       |       | FKM           | 50x75x10 HFSA V    |
| 54,0           | 82,6  | 12,7 | 2.125          | 3.250 | 0.500 | NBR           | 208-316-32 HFSA R  |
|                |       |      |                |       |       | HNBR          | 208-316-32 HFSA H  |
|                |       |      |                |       |       | FKM           | 208-316-32 HFSA V  |
| 60             | 85    | 11   | 2.362          | 3.346 | 0.433 | NBR           | 60x85x11 HFSA R    |
|                |       |      |                |       |       | HNBR          | 60x85x11 HFSA H    |
|                |       |      |                |       |       | FKM           | 60x85x11 HFSA V    |
| 69,9           | 108,0 | 14,3 | 2.750          | 4.250 | 0.563 | NBR           | 248-416-36 HFSA R  |
|                |       |      |                |       |       | HNBR          | 248-416-36 HFSA H  |
|                |       |      |                |       |       | FKM           | 248-416-36 HFSA V  |
| 70             | 90    | 12   | 2.756          | 3.543 | 0.472 | NBR           | 70x90x12 HFSA R    |
|                |       |      |                |       |       | HNBR          | 70x90x12 HFSA H    |
|                |       |      |                |       |       | FKM           | 70x90x12 HFSA V    |
| 70             | 102   | 12,5 | 2.756          | 4.016 | 0.492 | NBR           | 70x102x12.5 HFSA R |
|                |       |      |                |       |       | HNBR          | 70x102x12.5 HFSA H |
|                |       |      |                |       |       | FKM           | 70x102x12.5 HFSA V |
| 75             | 95    | 12   | 2.953          | 3.740 | 0.472 | NBR           | 75x95x12 HFSA R    |
|                |       |      |                |       |       | HNBR          | 75x95x12 HFSA H    |
|                |       |      |                |       |       | FKM           | 75x95x12 HFSA V    |
| 75             | 100   | 11   | 2.953          | 3.937 | 0.433 | NBR           | 75x100x11 HFSA R   |
|                |       |      |                |       |       | HNBR          | 75x100x11 HFSA H   |
|                |       |      |                |       |       | FKM           | 75x100x11 HFSA V   |
| 100            | 120   | 12   | 3.937          | 4.724 | 0.472 | NBR           | 100x120x12 HFSA R  |
|                |       |      |                |       |       | HNBR          | 100x120x12 HFSA H  |
|                |       |      |                |       |       | FKM           | 100x120x12 HFSA V  |
| 105            | 130   | 12   | 4.134          | 5.118 | 0.472 | NBR           | 105x130x12 HFSA R  |
|                |       |      |                |       |       | HNBR          | 105x130x12 HFSA H  |
|                |       |      |                |       |       | FKM           | 105x130x12 HFSA V  |
| 110            | 130   | 12   | 4.331          | 5.118 | 0.472 | NBR           | 110x130x12 HFSA R  |
|                |       |      |                |       |       | HNBR          | 110x130x12 HFSA H  |
|                |       |      |                |       |       | FKM           | 110x130x12 HFSA V  |
| 115            | 140   | 12   | 4.528          | 5.512 | 0.472 | NBR           | 115x140x12 HFSA R  |
|                |       |      |                |       |       | HNBR          | 115x140x12 HFSA H  |
|                |       |      |                |       |       | FKM           | 115x140x12 HFSA V  |

| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation   |
|----------------|-------|------|----------------|--------|-------|---------------|-------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                   |
| mm             |       |      | in.            |        |       |               |                   |
| 115            | 150   | 15   | 4.528          | 5.906  | 0.591 | NBR           | 115x150x15 HFSA R |
|                |       |      |                |        |       | HNBR          | 115x150x15 HFSA H |
|                |       |      |                |        |       | FKM           | 115x150x15 HFSA V |
| 130            | 160   | 15   | 5.118          | 6.299  | 0.591 | NBR           | 130x160x15 HFSA R |
|                |       |      |                |        |       | HNBR          | 130x160x15 HFSA H |
|                |       |      |                |        |       | FKM           | 130x160x15 HFSA V |
| 140            | 180   | 16   | 5.512          | 7.087  | 0.630 | NBR           | 140x180x16 HFSA R |
|                |       |      |                |        |       | HNBR          | 140x180x16 HFSA H |
|                |       |      |                |        |       | FKM           | 140x180x16 HFSA V |
| 150            | 180   | 15   | 5.906          | 7.087  | 0.591 | NBR           | 150x180x15 HFSA R |
|                |       |      |                |        |       | HNBR          | 150x180x15 HFSA H |
|                |       |      |                |        |       | FKM           | 150x180x15 HFSA V |
| 160            | 185   | 12,5 | 6.299          | 7.283  | 0.492 | NBR           | 160x185x13 HFSA R |
|                |       |      |                |        |       | HNBR          | 160x185x13 HFSA H |
|                |       |      |                |        |       | FKM           | 160x185x13 HFSA V |
| 165            | 205   | 16   | 6.496          | 8.071  | 0.630 | NBR           | 165x205x16 HFSA R |
|                |       |      |                |        |       | HNBR          | 165x205x16 HFSA H |
|                |       |      |                |        |       | FKM           | 165x205x16 HFSA V |
| 171,5          | 196,9 | 15,9 | 6.750          | 7.750  | 0.625 | NBR           | 648-748-40 HFSA R |
|                |       |      |                |        |       | HNBR          | 648-748-40 HFSA H |
|                |       |      |                |        |       | FKM           | 648-748-40 HFSA V |
| 200            | 230   | 15   | 7.874          | 9.055  | 0.591 | NBR           | 200x230x15 HFSA R |
|                |       |      |                |        |       | HNBR          | 200x230x15 HFSA H |
|                |       |      |                |        |       | FKM           | 200x230x15 HFSA V |
| 200            | 240   | 16   | 7.874          | 9.449  | 0.630 | NBR           | 200x240x16 HFSA R |
|                |       |      |                |        |       | HNBR          | 200x240x16 HFSA H |
|                |       |      |                |        |       | FKM           | 200x240x16 HFSA V |
| 210            | 240   | 15   | 8.268          | 9.449  | 0.591 | NBR           | 210x240x15 HFSA R |
|                |       |      |                |        |       | HNBR          | 210x240x15 HFSA H |
|                |       |      |                |        |       | FKM           | 210x240x15 HFSA V |
| 210            | 240   | 17   | 8.268          | 9.449  | 0.669 | NBR           | 210x240x17 HFSA R |
|                |       |      |                |        |       | HNBR          | 210x240x17 HFSA H |
|                |       |      |                |        |       | FKM           | 210x240x17 HFSA V |
| 240            | 270   | 17   | 9.449          | 10.630 | 0.669 | NBR           | 240x270x17 HFSA R |
|                |       |      |                |        |       | HNBR          | 240x270x17 HFSA H |
|                |       |      |                |        |       | FKM           | 240x270x17 HFSA V |

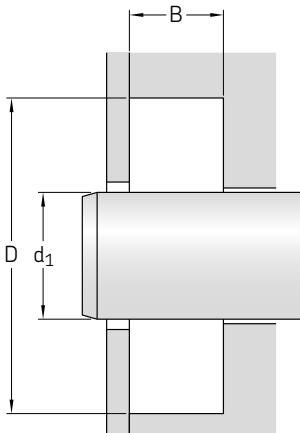
| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation         |
|----------------|-------|------|----------------|--------|-------|---------------|-------------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                         |
| mm             |       |      | in.            |        |       |               |                         |
| 250            | 280   | 15   | 9.843          | 11.024 | 0.591 | NBR           | 250x280x15 HFSA R       |
|                |       |      |                |        |       | HNBR          | 250x280x15 HFSA H       |
|                |       |      |                |        |       | FKM           | 250x280x15 HFSA V       |
| 250            | 290   | 16   | 9.843          | 11.417 | 0.630 | NBR           | 250x290x16 HFSA R       |
|                |       |      |                |        |       | HNBR          | 250x290x16 HFSA H       |
|                |       |      |                |        |       | FKM           | 250x290x16 HFSA V       |
| 270            | 310   | 20   | 10.630         | 12.205 | 0.787 | NBR           | 270x310x20 HFSA R       |
|                |       |      |                |        |       | HNBR          | 270x310x20 HFSA H       |
|                |       |      |                |        |       | FKM           | 270x310x20 HFSA V       |
| 279,4          | 311,2 | 15,9 | 11.000         | 12.250 | 0.625 | NBR           | 1100-1216-40 HFSA R     |
|                |       |      |                |        |       | HNBR          | 1100-1216-40 HFSA H     |
|                |       |      |                |        |       | FKM           | 1100-1216-40 HFSA V     |
| 280            | 310   | 14   | 11.024         | 12.205 | 0.551 | NBR           | 280x310x14 HFSA R       |
|                |       |      |                |        |       | HNBR          | 280x310x14 HFSA H       |
|                |       |      |                |        |       | FKM           | 280x310x14 HFSA V       |
| 288,9          | 342,9 | 31,8 | 11.375         | 13.500 | 1.250 | NBR           | 1124-1332-116 HFSA R    |
|                |       |      |                |        |       | HNBR          | 1124-1332-116 HFSA H    |
|                |       |      |                |        |       | FKM           | 1124-1332-116 HFSA V    |
| 290            | 330   | 16   | 11.417         | 12.992 | 0.630 | NBR           | 290x330x16 HFSA R       |
|                |       |      |                |        |       | HNBR          | 290x330x16 HFSA H       |
|                |       |      |                |        |       | FKM           | 290x330x16 HFSA V       |
| 290            | 334   | 20   | 11.417         | 13.150 | 0.787 | NBR           | 290x334x20 HFSA R       |
|                |       |      |                |        |       | HNBR          | 290x334x20 HFSA H       |
|                |       |      |                |        |       | FKM           | 290x334x20 HFSA V       |
| 330            | 360   | 14   | 12.992         | 14.173 | 0.551 | NBR           | 330x360x14 HFSA R       |
|                |       |      |                |        |       | HNBR          | 330x360x14 HFSA H       |
|                |       |      |                |        |       | FKM           | 330x360x14 HFSA V       |
| 330            | 370   | 20   | 12.992         | 14.567 | 0.787 | NBR           | 330x370x20 HFSA R       |
|                |       |      |                |        |       | HNBR          | 330x370x20 HFSA H       |
|                |       |      |                |        |       | FKM           | 330x370x20 HFSA V       |
| 330            | 374   | 20   | 12.992         | 14.724 | 0.787 | NBR           | 330x374x20 HFSA R       |
|                |       |      |                |        |       | HNBR          | 330x374x20 HFSA H       |
|                |       |      |                |        |       | FKM           | 330x374x20 HFSA V       |
| 335            | 390   | 20,6 | 13.189         | 15.354 | 0.811 | NBR           | 335x390x20.6 HFSA R     |
|                |       |      |                |        |       | HNBR          | 335x390x20.6 HFSA H     |
|                |       |      |                |        |       | FKM           | 335x390x20.6 HFSA V     |
| 340            | 380   | 20,3 | 13.386         | 14.961 | 0.799 | NBR           | 340x380x20.3 HFSA R     |
|                |       |      |                |        |       | HNBR          | 340x380x20.3 HFSA H     |
|                |       |      |                |        |       | FKM           | 340x380x20.3 HFSA V     |
| 370            | 410   | 20   | 14.567         | 16.142 | 0.787 | NBR           | 370x410x20 HFSA R       |
|                |       |      |                |        |       | HNBR          | 370x410x20 HFSA H       |
|                |       |      |                |        |       | FKM           | 370x410x20 HFSA V       |
| 400            | 450   | 22   | 15.748         | 17.717 | 0.866 | NBR           | 400x450x22 HFSA R       |
|                |       |      |                |        |       | HNBR          | 400x450x22 HFSA H       |
|                |       |      |                |        |       | FKM           | 400x450x22 HFSA V       |
| 400            | 460   | 28   | 15.748         | 18.110 | 1.102 | NBR           | 400x460x28 HFSA R       |
|                |       |      |                |        |       | HNBR          | 400x460x28 HFSA H       |
|                |       |      |                |        |       | FKM           | 400x460x28 HFSA V       |
| 406,4          | 457,2 | 21,2 | 16.000         | 18.000 | 0.835 | NBR           | 406,4x457,2x21,2 HFSA R |
|                |       |      |                |        |       | HNBR          | 406,4x457,2x21,2 HFSA H |
|                |       |      |                |        |       | FKM           | 406,4x457,2x21,2 HFSA V |

HFF seals – rubber fabric reinforced

d<sub>1</sub> 37–540 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



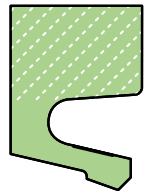
| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|------|----------------|-------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                    |
| mm             |       |      | in.            |       |       |               |                    |
| 37             | 55    | 10   | 1.457          | 2.165 | 0.394 | NBR           | 37x55x10 HFF R     |
|                |       |      |                |       |       | HNBR          | 37x55x10 HFF H     |
|                |       |      |                |       |       | FKM           | 37x55x10 HFF V     |
| 47,6           | 66,7  | 11,1 | 1.875          | 2.625 | 0.438 | NBR           | 156-240-28 HFF R   |
|                |       |      |                |       |       | HNBR          | 156-240-28 HFF H   |
|                |       |      |                |       |       | FKM           | 156-240-28 HFF V   |
| 73,0           | 98,4  | 9,5  | 2.875          | 3.875 | 0.375 | NBR           | 256-35624 HFF R    |
|                |       |      |                |       |       | HNBR          | 256-35624 HFF H    |
|                |       |      |                |       |       | FKM           | 256-35624 HFF V    |
| 90             | 122   | 12,5 | 3.543          | 4.803 | 0.492 | NBR           | 90x122x12,5 HFF R  |
|                |       |      |                |       |       | HNBR          | 90x122x12,5 HFF H  |
|                |       |      |                |       |       | FKM           | 90x122x12,5 HFF V  |
| 98             | 120   | 13   | 3.858          | 4.724 | 0.512 | NBR           | 98x120x13 HFF R    |
|                |       |      |                |       |       | HNBR          | 98x120x13 HFF H    |
|                |       |      |                |       |       | FKM           | 98x120x13 HFF V    |
| 100            | 132   | 12,5 | 3.937          | 5.197 | 0.492 | NBR           | 100x132x12,5 HFF R |
|                |       |      |                |       |       | HNBR          | 100x132x12,5 HFF H |
|                |       |      |                |       |       | FKM           | 100x132x12,5 HFF V |
| 110            | 140   | 15   | 4.331          | 5.512 | 0.591 | NBR           | 110x140x15 HFF R   |
|                |       |      |                |       |       | HNBR          | 110x140x15 HFF H   |
|                |       |      |                |       |       | FKM           | 110x140x15 HFF V   |
| 120            | 160   | 12   | 4.724          | 6.299 | 0.472 | NBR           | 120x160x12 HFF R   |
|                |       |      |                |       |       | HNBR          | 120x160x12 HFF H   |
|                |       |      |                |       |       | FKM           | 120x160x12 HFF V   |
| 120            | 160   | 16   | 4.724          | 6.299 | 0.630 | NBR           | 120x160x16 HFF R   |
|                |       |      |                |       |       | HNBR          | 120x160x16 HFF H   |
|                |       |      |                |       |       | FKM           | 120x160x16 HFF V   |
| 123,8          | 158,8 | 12,7 | 4.875          | 6.250 | 0.500 | NBR           | 456-616-32 HFF R   |
|                |       |      |                |       |       | HNBR          | 456-616-32 HFF H   |
|                |       |      |                |       |       | FKM           | 456-616-32 HFF V   |
| 135            | 170   | 15   | 5.315          | 6.693 | 0.591 | NBR           | 135x170x15 HFF R   |
|                |       |      |                |       |       | HNBR          | 135x170x15 HFF H   |
|                |       |      |                |       |       | FKM           | 135x170x15 HFF V   |
| 140            | 160   | 13   | 5.512          | 6.299 | 0.512 | NBR           | 140x160x13 HFF R   |
|                |       |      |                |       |       | HNBR          | 140x160x13 HFF H   |
|                |       |      |                |       |       | FKM           | 140x160x13 HFF V   |

| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|-------|------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                      |
| mm             |       |      | in.            |        |       |               |                      |
| 150            | 170   | 15   | 5.906          | 6.693  | 0.591 | NBR           | 150x170x15 HFF R     |
|                |       |      |                |        |       | HNBR          | 150x170x15 HFF H     |
|                |       |      |                |        |       | FKM           | 150x170x15 HFF V     |
| 170            | 210   | 16   | 6.693          | 8.268  | 0.630 | NBR           | 170x210x16 HFF R     |
|                |       |      |                |        |       | HNBR          | 170x210x16 HFF H     |
|                |       |      |                |        |       | FKM           | 170x210x16 HFF V     |
| 194,8          | 235   | 20   | 7.669          | 9.252  | 0.787 | NBR           | 194,8x235x20 HFF R   |
|                |       |      |                |        |       | HNBR          | 194,8x235x20 HFF H   |
|                |       |      |                |        |       | FKM           | 194,8x235x20 HFF V   |
| 195            | 220   | 20   | 7.677          | 8.661  | 0.787 | NBR           | 195x220x20 HFF R     |
|                |       |      |                |        |       | HNBR          | 195x220x20 HFF H     |
|                |       |      |                |        |       | FKM           | 195x220x20 HFF V     |
| 200            | 240   | 16   | 7.874          | 9.449  | 0.630 | NBR           | 200x240x16 HFF R     |
|                |       |      |                |        |       | HNBR          | 200x240x16 HFF H     |
|                |       |      |                |        |       | FKM           | 200x240x16 HFF V     |
| 200,0          | 238,1 | 17,5 | 7.875          | 9.375  | 0.688 | NBR           | 756-924-44 HFF R     |
|                |       |      |                |        |       | HNBR          | 756-924-44 HFF H     |
|                |       |      |                |        |       | FKM           | 756-924-44 HFF V     |
| 215,9          | 266,7 | 19,1 | 8.500          | 10.500 | 0.750 | NBR           | 832-1032-48 HFF R    |
|                |       |      |                |        |       | HNBR          | 832-1032-48 HFF H    |
|                |       |      |                |        |       | FKM           | 832-1032-48 HFF V    |
| 220            | 260   | 16   | 8.661          | 10.236 | 0.630 | NBR           | 220x260x16 HFF R     |
|                |       |      |                |        |       | HNBR          | 220x260x16 HFF H     |
|                |       |      |                |        |       | FKM           | 220x260x16 HFF V     |
| 240            | 280   | 16   | 9.449          | 11.024 | 0.630 | NBR           | 240x280x16 HFF R     |
|                |       |      |                |        |       | HNBR          | 240x280x16 HFF H     |
|                |       |      |                |        |       | FKM           | 240x280x16 HFF V     |
| 266,7          | 298,5 | 15,9 | 10.500         | 11.750 | 0.625 | NBR           | 1032-1148-40 HFF R   |
|                |       |      |                |        |       | HNBR          | 1032-1148-40 HFF H   |
|                |       |      |                |        |       | FKM           | 1032-1148-40 HFF V   |
| 279,4          | 317,5 | 15   | 11.000         | 12.500 | 0.591 | NBR           | 279,4x317,5x15 HFF R |
|                |       |      |                |        |       | HNBR          | 279,4x317,5x15 HFF H |
|                |       |      |                |        |       | FKM           | 279,4x317,5x15 HFF V |
| 280            | 325   | 22   | 11.024         | 12.795 | 0.866 | NBR           | 280x325x22 HFF R     |
|                |       |      |                |        |       | HNBR          | 280x325x22 HFF H     |
|                |       |      |                |        |       | FKM           | 280x325x22 HFF V     |

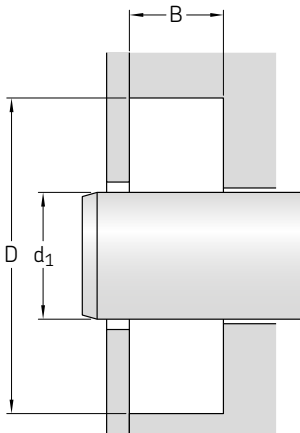
| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                    |
| mm             |       |      | in.            |        |       |               |                    |
| 285            | 310   | 16   | 11.220         | 12.205 | 0.630 | NBR           | 285x310x16 HFF R   |
|                |       |      |                |        |       | HNBR          | 285x310x16 HFF H   |
|                |       |      |                |        |       | FKM           | 285x310x16 HFF V   |
| 285,8          | 323,9 | 19,1 | 11.250         | 12.750 | 0.750 | NBR           | 1116-1248-48 HFF R |
|                |       |      |                |        |       | HNBR          | 1116-1248-48 HFF H |
|                |       |      |                |        |       | FKM           | 1116-1248-48 HFF V |
| 288,5          | 349,3 | 22,2 | 11.359         | 13.750 | 0.875 | NBR           | 1123-1348-56 HFF R |
|                |       |      |                |        |       | HNBR          | 1123-1348-56 HFF H |
|                |       |      |                |        |       | FKM           | 1123-1348-56 HFF V |
| 298,5          | 330,2 | 19,1 | 11.750         | 13.000 | 0.750 | NBR           | 1148-1300-48 HFF R |
|                |       |      |                |        |       | HNBR          | 1148-1300-48 HFF H |
|                |       |      |                |        |       | FKM           | 1148-1300-48 HFF V |
| 300            | 330   | 15   | 11.811         | 12.992 | 0.591 | NBR           | 300x330x15 HFF R   |
|                |       |      |                |        |       | HNBR          | 300x330x15 HFF H   |
|                |       |      |                |        |       | FKM           | 300x330x15 HFF V   |
| 300            | 340   | 16,5 | 11.811         | 13.386 | 0.650 | NBR           | 300x340x16,5 HFF R |
|                |       |      |                |        |       | HNBR          | 300x340x16,5 HFF H |
|                |       |      |                |        |       | FKM           | 300x340x16,5 HFF V |
| 300            | 340   | 20   | 11.811         | 13.386 | 0.787 | NBR           | 300x340x20 HFF R   |
|                |       |      |                |        |       | HNBR          | 300x340x20 HFF H   |
|                |       |      |                |        |       | FKM           | 300x340x20 HFF V   |
| 300            | 360   | 30   | 11.811         | 14.173 | 1.181 | NBR           | 300x360x30 HFF R   |
|                |       |      |                |        |       | HNBR          | 300x360x30 HFF H   |
|                |       |      |                |        |       | FKM           | 300x360x30 HFF V   |
| 310            | 340   | 15   | 12.205         | 13.386 | 0.591 | NBR           | 310x340x15 HFF R   |
|                |       |      |                |        |       | HNBR          | 310x340x15 HFF H   |
|                |       |      |                |        |       | FKM           | 310x340x15 HFF V   |
| 316            | 360   | 20   | 12.441         | 14.173 | 0.787 | NBR           | 316x360x20 HFF R   |
|                |       |      |                |        |       | HNBR          | 316x360x20 HFF H   |
|                |       |      |                |        |       | FKM           | 316x360x20 HFF V   |
| 317,5          | 349,3 | 19,1 | 12.500         | 13.750 | 0.750 | NBR           | 1232-1348-48 HFF R |
|                |       |      |                |        |       | HNBR          | 1232-1348-48 HFF H |
|                |       |      |                |        |       | FKM           | 1232-1348-48 HFF V |
| 318            | 368   | 25   | 12.520         | 14.488 | 0.984 | NBR           | 318x368x25 HFF R   |
|                |       |      |                |        |       | HNBR          | 318x368x25 HFF H   |
|                |       |      |                |        |       | FKM           | 318x368x25 HFF V   |
| 320            | 350   | 15   | 12.598         | 13.780 | 0.591 | NBR           | 320x350x15 HFF R   |
|                |       |      |                |        |       | HNBR          | 320x350x15 HFF H   |
|                |       |      |                |        |       | FKM           | 320x350x15 HFF V   |
| 350            | 380   | 16   | 13.780         | 14.961 | 0.630 | NBR           | 350x380x16 HFF R   |
|                |       |      |                |        |       | HNBR          | 350                |

HFF seals – rubber fabric reinforced

d<sub>1</sub> 580–1 163 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                    |
| mm             |       |      | in.            |        |       |               |                    |
| 580            | 615   | 20   | 22.835         | 24.213 | 0.787 | NBR           | 580x615x20 HFF R   |
|                |       |      |                |        |       | HNBR          | 580x615x20 HFF H   |
|                |       |      |                |        |       | FKM           | 580x615x20 HFF V   |
| 609,6          | 673,1 | 25,4 | 24.000         | 26.500 | 1.000 | NBR           | 2400-2632-64 HFF R |
|                |       |      |                |        |       | HNBR          | 2400-2632-64 HFF H |
|                |       |      |                |        |       | FKM           | 2400-2632-64 HFF V |
| 640            | 700   | 25   | 25.197         | 27.559 | 0.984 | NBR           | 640x700x25 HFF R   |
|                |       |      |                |        |       | HNBR          | 640x700x25 HFF H   |
|                |       |      |                |        |       | FKM           | 640x700x25 HFF V   |
| 670            | 710   | 20   | 26.378         | 27.953 | 0.787 | NBR           | 670x710x20 HFF R   |
|                |       |      |                |        |       | HNBR          | 670x710x20 HFF H   |
|                |       |      |                |        |       | FKM           | 670x710x20 HFF V   |
| 707,3          | 758,0 | 22,2 | 27.844         | 29.844 | 0.875 | NBR           | 2754-2954-56 HFF R |
|                |       |      |                |        |       | HNBR          | 2754-2954-56 HFF H |
|                |       |      |                |        |       | FKM           | 2754-2954-56 HFF V |
| 720            | 770   | 20   | 28.346         | 30.315 | 0.787 | NBR           | 720x770x20 HFF R   |
|                |       |      |                |        |       | HNBR          | 720x770x20 HFF H   |
|                |       |      |                |        |       | FKM           | 720x770x20 HFF V   |
| 745            | 795   | 30   | 29.331         | 31.299 | 1.181 | NBR           | 745x795x30 HFF R   |
|                |       |      |                |        |       | HNBR          | 745x795x30 HFF H   |
|                |       |      |                |        |       | FKM           | 745x795x30 HFF V   |
| 750            | 800   | 22   | 29.528         | 31.496 | 0.866 | NBR           | 750x800x22 HFF R   |
|                |       |      |                |        |       | HNBR          | 750x800x22 HFF H   |
|                |       |      |                |        |       | FKM           | 750x800x22 HFF V   |
| 850            | 910   | 25   | 33.465         | 35.827 | 0.984 | NBR           | 850x910x25 HFF R   |
|                |       |      |                |        |       | HNBR          | 850x910x25 HFF H   |
|                |       |      |                |        |       | FKM           | 850x910x25 HFF V   |
| 860            | 910   | 22   | 33.858         | 35.827 | 0.866 | NBR           | 860x910x22 HFF R   |
|                |       |      |                |        |       | HNBR          | 860x910x22 HFF H   |
|                |       |      |                |        |       | FKM           | 860x910x22 HFF V   |
| 920            | 970   | 20   | 36.220         | 38.189 | 0.787 | NBR           | 920x970x20 HFF R   |
|                |       |      |                |        |       | HNBR          | 920x970x20 HFF H   |
|                |       |      |                |        |       | FKM           | 920x970x20 HFF V   |
| 980            | 1 054 | 25   | 38.583         | 41.496 | 0.984 | NBR           | 980x1054x25 HFF R  |
|                |       |      |                |        |       | HNBR          | 980x1054x25 HFF H  |
|                |       |      |                |        |       | FKM           | 980x1054x25 HFF V  |

| Dimensions     |         |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|---------|------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D       | B    | d <sub>1</sub> | D      | B     |               |                    |
| mm             |         |      | in.            |        |       |               |                    |
| 990            | 1 054   | 25   | 38.976         | 41.496 | 0.984 | NBR           | 990x1054x25 HFF R  |
|                |         |      |                |        |       | HNBR          | 990x1054x25 HFF H  |
|                |         |      |                |        |       | FKM           | 990x1054x25 HFF V  |
| 1 054,1        | 1 104,9 | 22,2 | 41.500         | 43.500 | 0.875 | NBR           | 4132-4332-56 HFF R |
|                |         |      |                |        |       | HNBR          | 4132-4332-56 HFF H |
|                |         |      |                |        |       | FKM           | 4132-4332-56 HFF V |
| 1 064          | 1 124   | 25   | 41.890         | 44.252 | 0.984 | NBR           | 1064x1124x25 HFF R |
|                |         |      |                |        |       | HNBR          | 1064x1124x25 HFF H |
|                |         |      |                |        |       | FKM           | 1064x1124x25 HFF V |
| 1 163          | 1 225   | 25   | 45.787         | 48.228 | 0.984 | NBR           | 1163x1225x25 HFF R |
|                |         |      |                |        |       | HNBR          | 1163x1225x25 HFF H |
|                |         |      |                |        |       | FKM           | 1163x1225x25 HFF V |

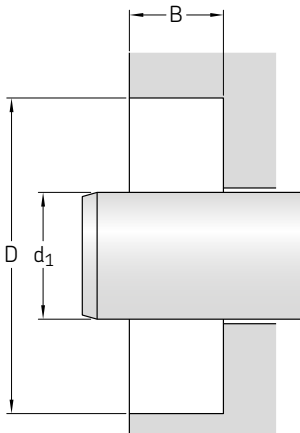


HBS seals – rubber metal reinforced

d<sub>1</sub> 50–165,1 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



| Dimensions     |     |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation   |
|----------------|-----|------|----------------|-------|-------|---------------|-------------------|
| d <sub>1</sub> | D   | B    | d <sub>1</sub> | D     | B     |               |                   |
| mm             |     |      | in.            |       |       |               |                   |
| 50             | 70  | 10   | 1.969          | 2.756 | 0.394 | NBR           | 50x70x10 HBS R    |
|                |     |      |                |       |       | HNBR          | 50x70x10 HBS H    |
|                |     |      |                |       |       | FKM           | 50x70x10 HBS V    |
| 55             | 80  | 10   | 2.165          | 3.150 | 0.394 | NBR           | 55x80x10 HBS R    |
|                |     |      |                |       |       | HNBR          | 55x80x10 HBS H    |
|                |     |      |                |       |       | FKM           | 55x80x10 HBS V    |
| 60             | 80  | 8    | 2.362          | 3.150 | 0.315 | NBR           | 60x80x8 HBS R     |
|                |     |      |                |       |       | HNBR          | 60x80x8 HBS H     |
|                |     |      |                |       |       | FKM           | 60x80x8 HBS V     |
| 65             | 90  | 12   | 2.559          | 3.543 | 0.472 | NBR           | 65x90x12 HBS R    |
|                |     |      |                |       |       | HNBR          | 65x90x12 HBS H    |
|                |     |      |                |       |       | FKM           | 65x90x12 HBS V    |
| 65             | 100 | 13   | 2.559          | 3.937 | 0.512 | NBR           | 65x100x13 HBS R   |
|                |     |      |                |       |       | HNBR          | 65x100x13 HBS H   |
|                |     |      |                |       |       | FKM           | 65x100x13 HBS V   |
| 70             | 95  | 12   | 2.756          | 3.740 | 0.472 | NBR           | 70x95x12 HBS R    |
|                |     |      |                |       |       | HNBR          | 70x95x12 HBS H    |
|                |     |      |                |       |       | FKM           | 70x95x12 HBS V    |
| 75             | 95  | 10   | 2.953          | 3.740 | 0.394 | NBR           | 75x95x10 HBS R    |
|                |     |      |                |       |       | HNBR          | 75x95x10 HBS H    |
|                |     |      |                |       |       | FKM           | 75x95x10 HBS V    |
| 75             | 95  | 12,5 | 2.953          | 3.740 | 0.492 | NBR           | 75x95x12,5 HBS R  |
|                |     |      |                |       |       | HNBR          | 75x95x12,5 HBS H  |
|                |     |      |                |       |       | FKM           | 75x95x12,5 HBS V  |
| 76             | 102 | 10   | 2.992          | 4.016 | 0.394 | NBR           | 76x102x10 HBS R   |
|                |     |      |                |       |       | HNBR          | 76x102x10 HBS H   |
|                |     |      |                |       |       | FKM           | 76x102x10 HBS V   |
| 80             | 100 | 10   | 3.150          | 3.937 | 0.394 | NBR           | 80x100x10 HBS R   |
|                |     |      |                |       |       | HNBR          | 80x100x10 HBS H   |
|                |     |      |                |       |       | FKM           | 80x100x10 HBS V   |
| 85             | 110 | 12   | 3.346          | 4.331 | 0.472 | NBR           | 85x110x12 HBS R   |
|                |     |      |                |       |       | HNBR          | 85x110x12 HBS H   |
|                |     |      |                |       |       | FKM           | 85x110x12 HBS V   |
| 85             | 110 | 12,5 | 3.346          | 4.331 | 0.492 | NBR           | 85x110x12,5 HBS R |
|                |     |      |                |       |       | HNBR          | 85x110x12,5 HBS H |
|                |     |      |                |       |       | FKM           | 85x110x12,5 HBS V |

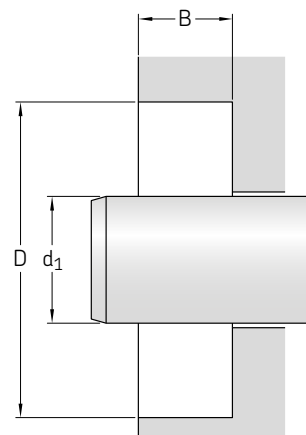
| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation     |
|----------------|-------|------|----------------|-------|-------|---------------|---------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                     |
| mm             |       |      | in.            |       |       |               |                     |
| 88,9           | 114,3 | 12,7 | 3.500          | 4.500 | 0.500 | NBR           | 332-432-32 HBS R    |
|                |       |      |                |       |       | HNBR          | 332-432-32 HBS H    |
|                |       |      |                |       |       | FKM           | 332-432-32 HBS V    |
| 88,9           | 114,3 | 13   | 3.500          | 4.500 | 0.512 | NBR           | 88,9x114,3x13 HBS R |
|                |       |      |                |       |       | HNBR          | 88,9x114,3x13 HBS H |
|                |       |      |                |       |       | FKM           | 88,9x114,3x13 HBS V |
| 88,9           | 127,0 | 11,9 | 3.500          | 5.000 | 0.469 | NBR           | 332-500-30 HBS R    |
|                |       |      |                |       |       | HNBR          | 332-500-30 HBS H    |
|                |       |      |                |       |       | FKM           | 332-500-30 HBS V    |
| 90             | 110   | 12   | 3.543          | 4.331 | 0.472 | NBR           | 90x110x12 HBS R     |
|                |       |      |                |       |       | HNBR          | 90x110x12 HBS H     |
|                |       |      |                |       |       | FKM           | 90x110x12 HBS V     |
| 90             | 115   | 15   | 3.543          | 4.528 | 0.591 | NBR           | 90x115x15 HBS R     |
|                |       |      |                |       |       | HNBR          | 90x115x15 HBS H     |
|                |       |      |                |       |       | FKM           | 90x115x15 HBS V     |
| 90             | 120   | 12   | 3.543          | 4.724 | 0.472 | NBR           | 90x120x12 HBS R     |
|                |       |      |                |       |       | HNBR          | 90x120x12 HBS H     |
|                |       |      |                |       |       | FKM           | 90x120x12 HBS V     |
| 90             | 122   | 12,5 | 3.543          | 4.803 | 0.492 | NBR           | 90x122x12,5 HBS R   |
|                |       |      |                |       |       | HNBR          | 90x122x12,5 HBS H   |
|                |       |      |                |       |       | FKM           | 90x122x12,5 HBS V   |
| 90             | 140   | 11   | 3.543          | 5.512 | 0.433 | NBR           | 90x140x11 HBS R     |
|                |       |      |                |       |       | HNBR          | 90x140x11 HBS H     |
|                |       |      |                |       |       | FKM           | 90x140x11 HBS V     |
| 95,3           | 120,7 | 12,7 | 3.750          | 4.750 | 0.500 | NBR           | 348-448-32 HBS R    |
|                |       |      |                |       |       | HNBR          | 348-448-32 HBS H    |
|                |       |      |                |       |       | FKM           | 348-448-32 HBS V    |
| 100            | 120   | 13   | 3.937          | 4.724 | 0.512 | NBR           | 100x120x13 HBS R    |
|                |       |      |                |       |       | HNBR          | 100x120x13 HBS H    |
|                |       |      |                |       |       | FKM           | 100x120x13 HBS V    |
| 100            | 130   | 12   | 3.937          | 5.118 | 0.472 | NBR           | 100x130x12 HBS R    |
|                |       |      |                |       |       | HNBR          | 100x130x12 HBS H    |
|                |       |      |                |       |       | FKM           | 100x130x12 HBS V    |
| 100            | 132   | 12,5 | 3.937          | 5.197 | 0.492 | NBR           | 100x132x12,5 HBS R  |
|                |       |      |                |       |       | HNBR          | 100x132x12,5 HBS H  |
|                |       |      |                |       |       | FKM           | 100x132x12,5 HBS V  |

| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation  |
|----------------|-------|------|----------------|-------|-------|---------------|------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                  |
| mm             |       |      | in.            |       |       |               |                  |
| 105            | 130   | 12   | 4.134          | 5.118 | 0.472 | NBR           | 105x130x12 HBS R |
|                |       |      |                |       |       | HNBR          | 105x130x12 HBS H |
|                |       |      |                |       |       | FKM           | 105x130x12 HBS V |
| 105            | 130   | 13   | 4.134          | 5.118 | 0.512 | NBR           | 105x130x13 HBS R |
|                |       |      |                |       |       | HNBR          | 105x130x13 HBS H |
|                |       |      |                |       |       | FKM           | 105x130x13 HBS V |
| 105            | 131   | 13   | 4.134          | 5.157 | 0.512 | NBR           | 105x131x13 HBS R |
|                |       |      |                |       |       | HNBR          | 105x131x13 HBS H |
|                |       |      |                |       |       | FKM           | 105x131x13 HBS V |
| 110            | 130   | 13   | 4.331          | 5.118 | 0.512 | NBR           | 110x130x13 HBS R |
|                |       |      |                |       |       | HNBR          | 110x130x13 HBS H |
|                |       |      |                |       |       | FKM           | 110x130x13 HBS V |
| 110            | 130   | 12   | 4.331          | 5.118 | 0.472 | NBR           | 110x130x12 HBS R |
|                |       |      |                |       |       | HNBR          | 110x130x12 HBS H |
|                |       |      |                |       |       | FKM           | 110x130x12 HBS V |
| 110            | 140   | 12   | 4.331          | 5.512 | 0.472 | NBR           | 110x140x12 HBS R |
|                |       |      |                |       |       | HNBR          | 110x140x12 HBS H |
|                |       |      |                |       |       | FKM           | 110x140x12 HBS V |
| 112,7          | 139,7 | 14,3 | 4.438          | 5.500 | 0.563 | NBR           | 428-532-36 HBS R |
|                |       |      |                |       |       | HNBR          | 428-532-36 HBS H |
|                |       |      |                |       |       | FKM           | 428-532-36 HBS V |
| 115            | 140   | 12   | 4.528          | 5.512 | 0.472 | NBR           | 115x140x12 HBS R |
|                |       |      |                |       |       | HNBR          | 115x140x12 HBS H |
|                |       |      |                |       |       | FKM           | 115x140x12 HBS V |
| 118            | 150   | 12   | 4.646          | 5.906 | 0.472 | NBR           | 118x150x12 HBS R |
|                |       |      |                |       |       | HNBR          | 118x150x12 HBS H |
|                |       |      |                |       |       | FKM           | 118x150x12 HBS V |
| 120            | 150   | 13   | 4.724          | 5.906 | 0.512 | NBR           | 120x150x13 HBS R |
|                |       |      |                |       |       | HNBR          | 120x150x13 HBS H |
|                |       |      |                |       |       | FKM           | 120x150x13 HBS V |
| 120            | 160   | 16   | 4.724          | 6.299 | 0.630 | NBR           | 120x160x16 HBS R |
|                |       |      |                |       |       | HNBR          | 120x160x16 HBS H |
|                |       |      |                |       |       | FKM           | 120x160x16 HBS V |
| 120,7          | 146,1 | 9,9  | 4.750          | 5.750 | 0.391 | NBR           | 448-548-25 HBS R |
|                |       |      |                |       |       | HNBR          | 448-548-25 HBS H |
|                |       |      |                |       |       | FKM           | 448-548-25 HBS V |
| 125            | 150   | 12   | 4.921          | 5.906 | 0.472 | NBR           | 125x150x12 HBS R |
|                |       |      |                |       |       | HNBR          | 125x150x12 HBS H |
|                |       |      |                |       |       | FKM           | 125x150x12 HBS V |
| 125            | 170   | 15   | 4.921          | 6.693 | 0.591 | NBR           | 125x170x15 HBS R |
|                |       |      |                |       |       | HNBR          | 125x170x15 HBS H |
|                |       |      |                |       |       | FKM           | 125x170x15 HBS V |
| 130,1          | 158,8 | 14,3 | 5.125          | 6.250 | 0.563 | NBR           | 508-616-36 HBS R |
|                |       |      |                |       |       | HNBR          | 508-616-36 HBS H |
|                |       |      |                |       |       | FKM           | 508-616-36 HBS V |
| 133,3          | 158,9 | 12,7 | 5.248          | 6.256 | 0.500 | NBR           | 133x159x13 HBS R |
|                |       |      |                |       |       | HNBR          | 133x159x13 HBS H |
|                |       |      |                |       |       | FKM           | 133x159x13 HBS V |
| 135            | 170   | 15   | 5.315          | 6.693 | 0.591 | NBR           | 135x170x15 HBS R |
|                |       |      |                |       |       | HNBR          | 135x170x15 HBS H |
|                |       |      |                |       |       | FKM           | 135x170x15 HBS V |

$d_1$  **170–310** mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



| Dimensions     |       |      | Dimensions     |       |       | Material | SKF Designation  |
|----------------|-------|------|----------------|-------|-------|----------|------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |          |                  |
| mm             |       |      | in.            |       |       |          |                  |
| 170            | 200   | 15   | 6.693          | 7.874 | 0.591 | NBR      | 170x200x15 HBS R |
|                |       |      |                |       |       | HNBR     | 170x200x15 HBS H |
|                |       |      |                |       |       | FKM      | 170x200x15 HBS V |
| 170            | 210   | 16   | 6.693          | 8.268 | 0.630 | NBR      | 170x210x16 HBS R |
|                |       |      |                |       |       | HNBR     | 170x210x16 HBS H |
|                |       |      |                |       |       | FKM      | 170x210x16 HBS V |
| 175            | 200   | 15   | 6.890          | 7.874 | 0.591 | NBR      | 175x200x15 HBS R |
|                |       |      |                |       |       | HNBR     | 175x200x15 HBS H |
|                |       |      |                |       |       | FKM      | 175x200x15 HBS V |
| 175            | 215   | 15   | 6.890          | 8.465 | 0.591 | NBR      | 175x215x15 HBS R |
|                |       |      |                |       |       | HNBR     | 175x215x15 HBS H |
|                |       |      |                |       |       | FKM      | 175x215x15 HBS V |
| 180            | 210   | 15   | 7.087          | 8.268 | 0.591 | NBR      | 180x210x15 HBS R |
|                |       |      |                |       |       | HNBR     | 180x210x15 HBS H |
|                |       |      |                |       |       | FKM      | 180x210x15 HBS V |
| 180            | 220   | 12   | 7.087          | 8.661 | 0.472 | NBR      | 180x220x12 HBS R |
|                |       |      |                |       |       | HNBR     | 180x220x12 HBS H |
|                |       |      |                |       |       | FKM      | 180x220x12 HBS V |
| 181,0          | 209,6 | 19,1 | 7.125          | 8.250 | 0.750 | NBR      | 708-816-48 HBS R |
|                |       |      |                |       |       | HNBR     | 708-816-48 HBS H |
|                |       |      |                |       |       | FKM      | 708-816-48 HBS V |
| 182            | 215   | 16   | 7.165          | 8.465 | 0.630 | NBR      | 182x215x16 HBS R |
|                |       |      |                |       |       | HNBR     | 182x215x16 HBS H |
|                |       |      |                |       |       | FKM      | 182x215x16 HBS V |
| 190            | 220   | 16   | 7.480          | 8.661 | 0.630 | NBR      | 190x220x16 HBS R |
|                |       |      |                |       |       | HNBR     | 190x220x16 HBS H |
|                |       |      |                |       |       | FKM      | 190x220x16 HBS V |
| 190            | 220   | 15   | 7.480          | 8.661 | 0.591 | NBR      | 190x220x15 HBS R |
|                |       |      |                |       |       | HNBR     | 190x220x15 HBS H |
|                |       |      |                |       |       | FKM      | 190x220x15 HBS V |
| 200            | 230   | 15   | 7.874          | 9.055 | 0.591 | NBR      | 200x230x15 HBS R |
|                |       |      |                |       |       | HNBR     | 200x230x15 HBS H |
|                |       |      |                |       |       | FKM      | 200x230x15 HBS V |
| 200            | 240   | 15   | 7.874          | 9.449 | 0.591 | NBR      | 200x240x15 HBS R |
|                |       |      |                |       |       | HNBR     | 200x240x15 HBS H |
|                |       |      |                |       |       | FKM      | 200x240x15 HBS V |

| Dimensions     |       |      | Dimensions     |        |       | Material | SKF Designation  |
|----------------|-------|------|----------------|--------|-------|----------|------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |          |                  |
| mm             |       |      | in.            |        |       |          |                  |
| 200            | 240   | 16   | 7.874          | 9.449  | 0.630 | NBR      | 200x240x16 HBS R |
|                |       |      |                |        |       | HNBR     | 200x240x16 HBS H |
|                |       |      |                |        |       | FKM      | 200x240x16 HBS V |
| 200,0          | 238,1 | 19,1 | 7.875          | 9.375  | 0.750 | NBR      | 756-924-48 HBS R |
|                |       |      |                |        |       | HNBR     | 756-924-48 HBS H |
|                |       |      |                |        |       | FKM      | 756-924-48 HBS V |
| 210            | 240   | 15   | 8.268          | 9.449  | 0.591 | NBR      | 210x240x15 HBS R |
|                |       |      |                |        |       | HNBR     | 210x240x15 HBS H |
|                |       |      |                |        |       | FKM      | 210x240x15 HBS V |
| 215            | 240   | 12   | 8.465          | 9.449  | 0.472 | NBR      | 215x240x12 HBS R |
|                |       |      |                |        |       | HNBR     | 215x240x12 HBS H |
|                |       |      |                |        |       | FKM      | 215x240x12 HBS V |
| 215            | 248   | 15   | 8.465          | 9.764  | 0.591 | NBR      | 215x248x15 HBS R |
|                |       |      |                |        |       | HNBR     | 215x248x15 HBS H |
|                |       |      |                |        |       | FKM      | 215x248x15 HBS V |
| 215            | 260   | 16   | 8.465          | 10.236 | 0.630 | NBR      | 215x260x16 HBS R |
|                |       |      |                |        |       | HNBR     | 215x260x16 HBS H |
|                |       |      |                |        |       | FKM      | 215x260x16 HBS V |
| 220            | 250   | 15   | 8.661          | 9.843  | 0.591 | NBR      | 220x250x15 HBS R |
|                |       |      |                |        |       | HNBR     | 220x250x15 HBS H |
|                |       |      |                |        |       | FKM      | 220x250x15 HBS V |
| 220            | 250   | 15   | 8.661          | 9.843  | 0.591 | NBR      | 220x250x15 HBS R |
|                |       |      |                |        |       | HNBR     | 220x250x15 HBS H |
|                |       |      |                |        |       | FKM      | 220x250x15 HBS V |
| 225            | 250   | 13   | 8.858          | 9.843  | 0.512 | NBR      | 225x250x13 HBS R |
|                |       |      |                |        |       | HNBR     | 225x250x13 HBS H |
|                |       |      |                |        |       | FKM      | 225x250x13 HBS V |
| 225            | 255   | 15   | 8.858          | 10.039 | 0.591 | NBR      | 225x255x15 HBS R |
|                |       |      |                |        |       | HNBR     | 225x255x15 HBS H |
|                |       |      |                |        |       | FKM      | 225x255x15 HBS V |
| 227            | 254   | 12   | 8.937          | 10.000 | 0.472 | NBR      | 227x254x12 HBS R |
|                |       |      |                |        |       | HNBR     | 227x254x12 HBS H |
|                |       |      |                |        |       | FKM      | 227x254x12 HBS V |
| 227            | 254   | 16   | 8.937          | 10.000 | 0.630 | NBR      | 227x254x16 HBS R |
|                |       |      |                |        |       | HNBR     | 227x254x16 HBS H |
|                |       |      |                |        |       | FKM      | 227x254x16 HBS V |

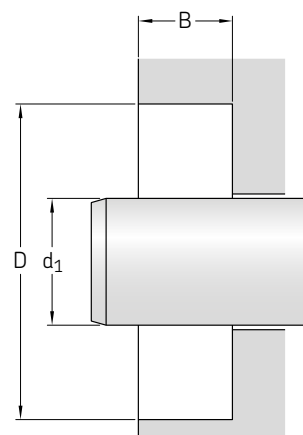
| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation        |
|----------------|-------|------|----------------|--------|-------|---------------|------------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                        |
| mm             |       |      | in.            |        |       |               |                        |
| 230            | 260   | 15   | 9.055          | 10.236 | 0.591 | NBR           | 230x260x15 HBS R       |
|                |       |      |                |        |       | HNBR          | 230x260x15 HBS H       |
|                |       |      |                |        |       | FKM           | 230x260x15 HBS V       |
| 230            | 260   | 16   | 9.055          | 10.236 | 0.630 | NBR           | 230x260x16 HBS R       |
|                |       |      |                |        |       | HNBR          | 230x260x16 HBS H       |
|                |       |      |                |        |       | FKM           | 230x260x16 HBS V       |
| 240            | 270   | 15   | 9.449          | 10.630 | 0.591 | NBR           | 240x270x15 HBS R       |
|                |       |      |                |        |       | HNBR          | 240x270x15 HBS H       |
|                |       |      |                |        |       | FKM           | 240x270x15 HBS V       |
| 240            | 270   | 17   | 9.449          | 10.630 | 0.669 | NBR           | 240x270x17 HBS R       |
|                |       |      |                |        |       | HNBR          | 240x270x17 HBS H       |
|                |       |      |                |        |       | FKM           | 240x270x17 HBS V       |
| 240            | 280   | 16   | 9.449          | 11.024 | 0.630 | NBR           | 240x280x16 HBS R       |
|                |       |      |                |        |       | HNBR          | 240x280x16 HBS H       |
|                |       |      |                |        |       | FKM           | 240x280x16 HBS V       |
| 240            | 280   | 15   | 9.449          | 11.024 | 0.591 | NBR           | 240x280x15 HBS R       |
|                |       |      |                |        |       | HNBR          | 240x280x15 HBS H       |
|                |       |      |                |        |       | FKM           | 240x280x15 HBS V       |
| 241,3          | 292,1 | 25,4 | 9.500          | 11.500 | 1.000 | NBR           | 932-1132-64 HBS R      |
|                |       |      |                |        |       | HNBR          | 932-1132-64 HBS H      |
|                |       |      |                |        |       | FKM           | 932-1132-64 HBS V      |
| 250,0          | 281,7 | 15,9 | 9.844          | 11.094 | 0.625 | NBR           | 954-1106-40 HBS R      |
|                |       |      |                |        |       | HNBR          | 954-1106-40 HBS H      |
|                |       |      |                |        |       | FKM           | 954-1106-40 HBS V      |
| 250            | 290   | 16   | 9.843          | 11.417 | 0.630 | NBR           | 250x290x16 HBS R       |
|                |       |      |                |        |       | HNBR          | 250x290x16 HBS H       |
|                |       |      |                |        |       | FKM           | 250x290x16 HBS V       |
| 260            | 290   | 19   | 10.236         | 11.417 | 0.748 | NBR           | 260x290x19 HBS R       |
|                |       |      |                |        |       | HNBR          | 260x290x19 HBS H       |
|                |       |      |                |        |       | FKM           | 260x290x19 HBS V       |
| 260            | 290   | 16   | 10.236         | 11.417 | 0.630 | NBR           | 260x290x16 HBS R       |
|                |       |      |                |        |       | HNBR          | 260x290x16 HBS H       |
|                |       |      |                |        |       | FKM           | 260x290x16 HBS V       |
| 260            | 290   | 20   | 10.236         | 11.417 | 0.787 | NBR           | 260x290x20 HBS R       |
|                |       |      |                |        |       | HNBR          | 260x290x20 HBS H       |
|                |       |      |                |        |       | FKM           | 260x290x20 HBS V       |
| 260            | 290   | 20   | 10.236         | 11.417 | 0.787 | NBR           | 260x290x20 HBS R       |
|                |       |      |                |        |       | HNBR          | 260x290x20 HBS H       |
|                |       |      |                |        |       | FKM           | 260x290x20 HBS V       |
| 260            | 300   | 15   | 10.236         | 11.811 | 0.591 | NBR           | 260x300x15 HBS R       |
|                |       |      |                |        |       | HNBR          | 260x300x15 HBS H       |
|                |       |      |                |        |       | FKM           | 260x300x15 HBS V       |
| 270            | 300   | 15   | 10.630         | 11.811 | 0.591 | NBR           | 270x300x15 HBS R       |
|                |       |      |                |        |       | HNBR          | 270x300x15 HBS H       |
|                |       |      |                |        |       | FKM           | 270x300x15 HBS V       |
| 270            | 314   | 20   | 10.630         | 12.362 | 0.787 | NBR           | 270x314x20 HBS R       |
|                |       |      |                |        |       | HNBR          | 270x314x20 HBS H       |
|                |       |      |                |        |       | FKM           | 270x314x20 HBS V       |
| 273,1          | 298,5 | 14,3 | 10.752         | 11.752 | 0.563 | NBR           | 273.1x298,5x14,3 HBS R |
|                |       |      |                |        |       | HNBR          | 273.1x298,5x14,3 HBS H |
|                |       |      |                |        |       | FKM           | 273.1x298.5x14,3 HBS V |

| Dimensions     |       |      | Dimensions     |        |       | Material | SKF Designation      |
|----------------|-------|------|----------------|--------|-------|----------|----------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |          |                      |
| mm             |       |      | in.            |        |       |          |                      |
| 275            | 310   | 15   | 10.827         | 12.205 | 0.591 | NBR      | 275x310x15 HBS R     |
|                |       |      |                |        |       | HNBR     | 275x310x15 HBS H     |
|                |       |      |                |        |       | FKM      | 275x310x15 HBS V     |
| 275            | 310   | 15   | 10.827         | 12.205 | 0.591 | NBR      | 275x310x15 HBS R     |
|                |       |      |                |        |       | HNBR     | 275x310x15 HBS H     |
|                |       |      |                |        |       | FKM      | 275x310x15 HBS V     |
| 275            | 315   | 20   | 10.827         | 12.402 | 0.787 | NBR      | 275x315x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 275x315x20 HBS H     |
|                |       |      |                |        |       | FKM      | 275x315x20 HBS V     |
| 280            | 320   | 20   | 11.024         | 12.598 | 0.787 | NBR      | 280x320x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 280x320x20 HBS H     |
|                |       |      |                |        |       | FKM      | 280x320x20 HBS V     |
| 280            | 320   | 20   | 11.024         | 12.598 | 0.787 | NBR      | 280x320x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 280x320x20 HBS H     |
|                |       |      |                |        |       | FKM      | 280x320x20 HBS V     |
| 290            | 330   | 20   | 11.417         | 12.992 | 0.787 | NBR      | 290x330x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 290x330x20 HBS H     |
|                |       |      |                |        |       | FKM      | 290x330x20 HBS V     |
| 290            | 330   | 18   | 11.417         | 12.992 | 0.709 | NBR      | 290x330x18 HBS R     |
|                |       |      |                |        |       | HNBR     | 290x330x18 HBS H     |
|                |       |      |                |        |       | FKM      | 290x330x18 HBS V     |
| 290            | 425   | 23   | 11.417         | 16.732 | 0.906 | NBR      | 290x425x23 HBS R     |
|                |       |      |                |        |       | HNBR     | 290x425x23 HBS H     |
|                |       |      |                |        |       | FKM      | 290x425x23 HBS V     |
| 292,1          | 342,9 | 23,0 | 11.500         | 13.500 | 0.906 | NBR      | 1132-1332-58 HBS R   |
|                |       |      |                |        |       | HNBR     | 1132-1332-58 HBS H   |
|                |       |      |                |        |       | FKM      | 1132-1332-58 HBS V   |
| 300            | 340   | 15   | 11.811         | 13.386 | 0.591 | NBR      | 300x340x15 HBS R     |
|                |       |      |                |        |       | HNBR     | 300x340x15 HBS H     |
|                |       |      |                |        |       | FKM      | 300x340x15 HBS V     |
| 300            | 344   | 20   | 11.811         | 13.543 | 0.787 | NBR      | 300x344x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 300x344x20 HBS H     |
|                |       |      |                |        |       | FKM      | 300x344x20 HBS V     |
| 300            | 344   | 20   | 11.811         | 13.543 | 0.787 | NBR      | 300x344x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 300x344x20 HBS H     |
|                |       |      |                |        |       | FKM      | 300x344x20 HBS V     |
| 310            | 347,7 | 15,9 | 12.205         | 13.688 | 0.625 | NBR      | 310x347,7x15,9 HBS R |
|                |       |      |                |        |       | HNBR     | 310x347,7x15,9 HBS H |
|                |       |      |                |        |       | FKM      | 310x347,7x15,9 HBS V |
| 310            | 350   | 20   | 12.205         | 13.780 | 0.787 | NBR      | 310x350x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 310x350x20 HBS H     |
|                |       |      |                |        |       | FKM      | 310x350x20 HBS V     |
| 310            | 350   | 18   | 12.205         | 13.780 | 0.709 | NBR      | 310x350x18 HBS R     |
|                |       |      |                |        |       | HNBR     | 310x350x18 HBS H     |
|                |       |      |                |        |       | FKM      | 310x350x18 HBS V     |
| 310            | 354   | 18   | 12.205         | 13.937 | 0.709 | NBR      | 310x354x18 HBS R     |
|                |       |      |                |        |       | HNBR     | 310x354x18 HBS H     |
|                |       |      |                |        |       | FKM      | 310x354x18 HBS V     |
| 310            | 354   | 20   | 12.205         | 13.937 | 0.787 | NBR      | 310x354x20 HBS R     |
|                |       |      |                |        |       | HNBR     | 310x354x20 HBS H     |
|                |       |      |                |        |       | FKM      | 310x354x20 HBS V     |

$d_1$  312–645 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54** *catalogue shaft seals flexible in size.*



| Dimensions     |     |    | Dimensions     |        |       | Mate-<br>rial | SKF Designation  |
|----------------|-----|----|----------------|--------|-------|---------------|------------------|
| d <sub>1</sub> | D   | B  | d <sub>1</sub> | D      | B     |               |                  |
| mm             |     |    | in.            |        |       |               |                  |
| 312            | 356 | 20 | 12.283         | 14.016 | 0.787 | NBR           | 312x356x20 HBS R |
|                |     |    |                |        |       | HNBR          | 312x356x20 HBS H |
|                |     |    |                |        |       | FKM           | 312x356x20 HBS V |
| 320            | 360 | 20 | 12.598         | 14.173 | 0.787 | NBR           | 320x360x20 HBS R |
|                |     |    |                |        |       | HNBR          | 320x360x20 HBS H |
|                |     |    |                |        |       | FKM           | 320x360x20 HBS V |
| 324,7          | 354 | 15 | 12.783         | 13.937 | 0.591 | NBR           | 325x354x15 HBS R |
|                |     |    |                |        |       | HNBR          | 325x354x15 HBS H |
|                |     |    |                |        |       | FKM           | 325x354x15 HBS V |
| 325            | 365 | 18 | 12.795         | 14.370 | 0.709 | NBR           | 325x365x18 HBS R |
|                |     |    |                |        |       | HNBR          | 325x365x18 HBS H |
|                |     |    |                |        |       | FKM           | 325x365x18 HBS V |
| 330            | 370 | 20 | 12.992         | 14.567 | 0.787 | NBR           | 330x370x20 HBS R |
|                |     |    |                |        |       | HNBR          | 330x370x20 HBS H |
|                |     |    |                |        |       | FKM           | 330x370x20 HBS V |
| 335            | 375 | 22 | 13.189         | 14.764 | 0.866 | NBR           | 335x375x22 HBS R |
|                |     |    |                |        |       | HNBR          | 335x375x22 HBS H |
|                |     |    |                |        |       | FKM           | 335x375x22 HBS V |
| 340            | 372 | 16 | 13.386         | 14.646 | 0.630 | NBR           | 340x372x16 HBS R |
|                |     |    |                |        |       | HNBR          | 340x372x16 HBS H |
|                |     |    |                |        |       | FKM           | 340x372x16 HBS V |
| 340            | 378 | 16 | 13.386         | 14.882 | 0.630 | NBR           | 340x378x16 HBS R |
|                |     |    |                |        |       | HNBR          | 340x378x16 HBS H |
|                |     |    |                |        |       | FKM           | 340x378x16 HBS V |
| 350            | 390 | 16 | 13.780         | 15.354 | 0.630 | NBR           | 350x390x16 HBS R |
|                |     |    |                |        |       | HNBR          | 350x390x16 HBS H |
|                |     |    |                |        |       | FKM           | 350x390x16 HBS V |
| 350            | 390 | 18 | 13.780         | 15.354 | 0.709 | NBR           | 350x390x18 HBS R |
|                |     |    |                |        |       | HNBR          | 350x390x18 HBS H |
|                |     |    |                |        |       | FKM           | 350x390x18 HBS V |
| 350            | 394 | 20 | 13.780         | 15.512 | 0.787 | NBR           | 350x394x20 HBS R |
|                |     |    |                |        |       | HNBR          | 350x394x20 HBS H |
|                |     |    |                |        |       | FKM           | 350x394x20 HBS V |
| 355            | 395 | 20 | 13.976         | 15.551 | 0.787 | NBR           | 355x395x20 HBS R |
|                |     |    |                |        |       | HNBR          | 355x395x20 HBS H |
|                |     |    |                |        |       | FKM           | 355x395x20 HBS V |

| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|------|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                    |
| mm             |       |      | in.            |        |       |               |                    |
| 370            | 410   | 15   | 14.567         | 16.142 | 0.591 | NBR           | 370x410x15 HBS R   |
|                |       |      |                |        |       | HNBR          | 370x410x15 HBS H   |
|                |       |      |                |        |       | FKM           | 370x410x15 HBS V   |
| 370            | 414   | 17   | 14.567         | 16.299 | 0.669 | NBR           | 370x414x17 HBS R   |
|                |       |      |                |        |       | HNBR          | 370x414x17 HBS H   |
|                |       |      |                |        |       | FKM           | 370x414x17 HBS V   |
| 380            | 420   | 22   | 14.961         | 16.535 | 0.866 | NBR           | 380x420x22 HBS R   |
|                |       |      |                |        |       | HNBR          | 380x420x22 HBS H   |
|                |       |      |                |        |       | FKM           | 380x420x22 HBS V   |
| 380            | 420   | 20   | 14.961         | 16.535 | 0.787 | NBR           | 380x420x20 HBS R   |
|                |       |      |                |        |       | HNBR          | 380x420x20 HBS H   |
|                |       |      |                |        |       | FKM           | 380x420x20 HBS V   |
| 380            | 420   | 22   | 14.961         | 16.535 | 0.866 | NBR           | 380x420x22 HBS R   |
|                |       |      |                |        |       | HNBR          | 380x420x22 HBS H   |
|                |       |      |                |        |       | FKM           | 380x420x22 HBS V   |
| 380            | 420   | 20   | 14.961         | 16.535 | 0.787 | NBR           | 380x420x20 HBS R   |
|                |       |      |                |        |       | HNBR          | 380x420x20 HBS H   |
|                |       |      |                |        |       | FKM           | 380x420x20 HBS V   |
| 381            | 444,5 | 22,2 | 15.000         | 17.500 | 0.875 | NBR           | 1500-1732-56 HBS R |
|                |       |      |                |        |       | HNBR          | 1500-1732-56 HBS H |
|                |       |      |                |        |       | FKM           | 1500-1732-56 HBS V |
| 392            | 448   | 18   | 15.433         | 17.638 | 0.709 | NBR           | 392x448x18 HBS R   |
|                |       |      |                |        |       | HNBR          | 392x448x18 HBS H   |
|                |       |      |                |        |       | FKM           | 392x448x18 HBS V   |
| 400            | 440   | 18   | 15.748         | 17.323 | 0.709 | NBR           | 400x440x18 HBS R   |
|                |       |      |                |        |       | HNBR          | 400x440x18 HBS H   |
|                |       |      |                |        |       | FKM           | 400x440x18 HBS V   |
| 400            | 450   | 22   | 15.748         | 17.717 | 0.866 | NBR           | 400x450x22 HBS R   |
|                |       |      |                |        |       | HNBR          | 400x450x22 HBS H   |
|                |       |      |                |        |       | FKM           | 400x450x22 HBS V   |
| 425            | 483   | 23   | 16.732         | 19.016 | 0.906 | NBR           | 425x483x23 HBS R   |
|                |       |      |                |        |       | HNBR          | 425x483x23 HBS H   |
|                |       |      |                |        |       | FKM           | 425x483x23 HBS V   |
| 440            | 469   | 12,5 | 17.323         | 18.465 | 0.492 | NBR           | 440x469x13 HBS R   |
|                |       |      |                |        |       | HNBR          | 440x469x13 HBS H   |
|                |       |      |                |        |       | FKM           | 440x469x13 HBS V   |

| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation     |
|----------------|-------|------|----------------|--------|-------|---------------|---------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                     |
| mm             |       |      | in.            |        |       |               |                     |
| 440            | 480   | 20   | 17.323         | 18.898 | 0.787 | NBR           | 440x480x20 HBS R    |
|                |       |      |                |        |       | HNBR          | 440x480x20 HBS H    |
|                |       |      |                |        |       | FKM           | 440x480x20 HBS V    |
| 445            | 485   | 20   | 17.520         | 19.094 | 0.787 | NBR           | 445x485x20 HBS R    |
|                |       |      |                |        |       | HNBR          | 445x485x20 HBS H    |
|                |       |      |                |        |       | FKM           | 445x485x20 HBS V    |
| 445            | 485   | 20   | 17.520         | 19.094 | 0.787 | NBR           | 445x485x20 HBS R    |
|                |       |      |                |        |       | HNBR          | 445x485x20 HBS H    |
|                |       |      |                |        |       | FKM           | 445x485x20 HBS V    |
| 450            | 500   | 25   | 17.717         | 19.685 | 0.984 | NBR           | 450x500x25 HBS R    |
|                |       |      |                |        |       | HNBR          | 450x500x25 HBS H    |
|                |       |      |                |        |       | FKM           | 450x500x25 HBS V    |
| 450            | 500   | 25   | 17.717         | 19.685 | 0.984 | NBR           | 450x500x25 HBS R    |
|                |       |      |                |        |       | HNBR          | 450x500x25 HBS H    |
|                |       |      |                |        |       | FKM           | 450x500x25 HBS V    |
| 455            | 505   | 25   | 17.913         | 19.882 | 0.984 | NBR           | 455x505x25 HBS R    |
|                |       |      |                |        |       | HNBR          | 455x505x25 HBS H    |
|                |       |      |                |        |       | FKM           | 455x505x25 HBS V    |
| 460            | 500   | 20   | 18.110         | 19.685 | 0.787 | NBR           | 460x500x20 HBS R    |
|                |       |      |                |        |       | HNBR          | 460x500x20 HBS H    |
|                |       |      |                |        |       | FKM           | 460x500x20 HBS V    |
| 460            | 510   | 22   | 18.110         | 20.079 | 0.866 | NBR           | 460x510x22 HBS R    |
|                |       |      |                |        |       | HNBR          | 460x510x22 HBS H    |
|                |       |      |                |        |       | FKM           | 460x510x22 HBS V    |
| 460            | 510   | 22   | 18.110         | 20.079 | 0.866 | NBR           | 460x510x22 HBS R    |
|                |       |      |                |        |       | HNBR          | 460x510x22 HBS H    |
|                |       |      |                |        |       | FKM           | 460x510x22 HBS V    |
| 470            | 510   | 20   | 18.504         | 20.079 | 0.787 | NBR           | 470x510x20 HBS R    |
|                |       |      |                |        |       | HNBR          | 470x510x20 HBS H    |
|                |       |      |                |        |       | FKM           | 470x510x20 HBS V    |
| 470            | 520   | 22   | 18.504         | 20.472 | 0.866 | NBR           | 470x520x22 HBS R    |
|                |       |      |                |        |       | HNBR          | 470x520x22 HBS H    |
|                |       |      |                |        |       | FKM           | 470x520x22 HBS V    |
| 470            | 520   | 23   | 18.504         | 20.472 | 0.906 | NBR           | 470x520x23 HBS R    |
|                |       |      |                |        |       | HNBR          | 470x520x23 HBS H    |
|                |       |      |                |        |       | FKM           | 470x520x23 HBS V    |
| 480            | 524   | 25   | 18.898         | 20.630 | 0.984 | NBR           | 480x524x25 HBS R    |
|                |       |      |                |        |       | HNBR          | 480x524x25 HBS H    |
|                |       |      |                |        |       | FKM           | 480x524x25 HBS V    |
| 482,6          | 520,7 | 26,2 | 19.000         | 20.500 | 1.031 | NBR           | 1900-2032-102 HBS R |
|                |       |      |                |        |       | HNBR          | 1900-2032-102 HBS H |
|                |       |      |                |        |       | FKM           | 1900-2032-102 HBS V |
| 485            | 535   | 22   | 19.094         | 21.063 | 0.866 | NBR           | 485x535x22 HBS R    |
|                |       |      |                |        |       | HNBR          | 485x535x22 HBS H    |
|                |       |      |                |        |       | FKM           | 485x535x22 HBS V    |
| 485            | 535   | 22   | 19.094         | 21.063 | 0.866 | NBR           | 485x535x22 HBS R    |
|                |       |      |                |        |       | HNBR          | 485x535x22 HBS H    |
|                |       |      |                |        |       | FKM           | 485x535x22 HBS V    |
| 500            | 540   | 20   | 19.685         | 21.260 | 0.787 | NBR           | 500x540x20 HBS R    |
|                |       |      |                |        |       | HNBR          | 500x540x20 HBS H    |
|                |       |      |                |        |       | FKM           | 500x540x20 HBS V    |

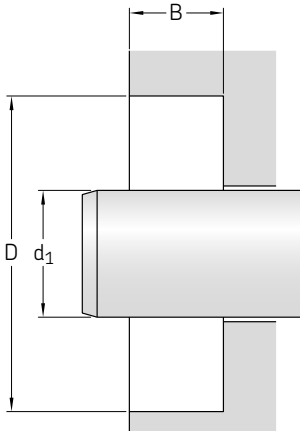
| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation        |
|----------------|-------|------|----------------|--------|-------|---------------|------------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                        |
| mm             |       |      | in.            |        |       |               |                        |
| 520,7          | 558,8 | 22,5 | 20.500         | 22.000 | 0.886 | NBR           | 520,7x558,8x22,5 HBS R |
|                |       |      |                |        |       | HNBR          | 520,7x558,8x22,5 HBS H |
|                |       |      |                |        |       | FKM           | 520,7x558,8x22,5 HBS V |
| 528            | 666,8 | 25,4 | 20.787         | 26.250 | 1.000 | NBR           | 528x666,8x25,4 HBS R   |
|                |       |      |                |        |       | HNBR          | 528x666,8x25,4 HBS H   |
|                |       |      |                |        |       | FKM           | 528x666,8x25,4 HBS V   |
| 540            | 590   | 22   | 21.260         | 23.228 | 0.866 | NBR           | 540x590x22 HBS R       |
|                |       |      |                |        |       | HNBR          | 540x590x22 HBS H       |
|                |       |      |                |        |       | FKM           | 540x590x22 HBS V       |
| 540            | 590   | 22   | 21.260         | 23.228 | 0.866 | NBR           | 540x590x22 HBS R       |
|                |       |      |                |        |       | HNBR          | 540x590x22 HBS H       |
|                |       |      |                |        |       | FKM           | 540x590x22 HBS V       |
| 540            | 590   | 22   | 21.260         | 23.228 | 0.866 | NBR           | 540x590x22 HBS R       |
|                |       |      |                |        |       | HNBR          | 540x590x22 HBS H       |
|                |       |      |                |        |       | FKM           | 540x590x22 HBS V       |
| 550            | 600   | 22   | 21.654         | 23.622 | 0.866 | NBR           | 550x600x22 HBS R       |
|                |       |      |                |        |       | HNBR          | 550x600x22 HBS H       |
|                |       |      |                |        |       | FKM           | 550x600x22 HBS V       |
| 558,8          | 596,9 | 19,1 | 22.000         | 23.500 | 0.750 | NBR           | 2200-2332-48 HBS R     |
|                |       |      |                |        |       | HNBR          | 2200-2332-48 HBS H     |
|                |       |      |                |        |       | FKM           | 2200-2332-48 HBS V     |
| 560            | 610   | 20   | 22.047         | 24.016 | 0.787 | NBR           | 560x610x20 HBS R       |
|                |       |      |                |        |       | HNBR          | 560x610x20 HBS H       |
|                |       |      |                |        |       | FKM           | 560x610x20 HBS V       |
| 570            | 620   | 22   | 22.441         | 24.409 | 0.866 | NBR           | 570x620x22 HBS R       |
|                |       |      |                |        |       | HNBR          | 570x620x22 HBS H       |
|                |       |      |                |        |       | FKM           | 570x620x22 HBS V       |
| 580            | 616   | 17   | 22.835         | 24.252 | 0.669 | NBR           | 580x616x17 HBS R       |
|                |       |      |                |        |       | HNBR          | 580x616x17 HBS H       |
|                |       |      |                |        |       | FKM           | 580x616x17 HBS V       |
| 580            | 616   | 17   | 22.835         | 24.252 | 0.669 | NBR           | 580x616x17 HBS R       |
|                |       |      |                |        |       | HNBR          | 580x616x17 HBS H       |
|                |       |      |                |        |       | FKM           | 580x616x17 HBS V       |
| 580            | 620   | 20   | 22.835         | 24.409 | 0.787 | NBR           | 580x620x20 HBS R       |
|                |       |      |                |        |       | HNBR          | 580x620x20 HBS H       |
|                |       |      |                |        |       | FKM           | 580x620x20 HBS V       |
| 590            | 630   | 20   | 23.228         | 24.803 | 0.787 | NBR           | 590x630x20 HBS R       |
|                |       |      |                |        |       | HNBR          | 590x630x20 HBS H       |
|                |       |      |                |        |       | FKM           | 590x630x20 HBS V       |
| 590            | 630   | 20   | 23.228         | 24.803 | 0.787 | NBR           | 590x630x20 HBS R       |
|                |       |      |                |        |       | HNBR          | 590x630x20 HBS H       |
|                |       |      |                |        |       | FKM           | 590x630x20 HBS V       |
| 600            | 632   | 12,5 | 23.622         | 24.882 | 0.492 | NBR           | 600x632x12,5 HBS R     |
|                |       |      |                |        |       | HNBR          | 600x632x12,5 HBS H     |
|                |       |      |                |        |       | FKM           | 600x632x12,5 HBS V     |
| 600            | 650   | 25   | 23.622         | 25.591 | 0.984 | NBR           | 600x650x25 HBS R       |
|                |       |      |                |        |       | HNBR          | 600x650x25 HBS H       |
|                |       |      |                |        |       | FKM           | 600x650x25 HBS V       |
| 645            | 695   | 22   | 25.394         | 27.362 | 0.866 | NBR           | 645x695x22 HBS R       |
|                |       |      |                |        |       | HNBR          | 645x695x22 HBS H       |
|                |       |      |                |        |       | FKM           | 645x695x22 HBS V       |

HBS seals – rubber metal reinforced

d<sub>1</sub> 650–1 496,6 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation      |
|----------------|-------|------|----------------|--------|-------|---------------|----------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                      |
| mm             |       |      | in.            |        |       |               |                      |
| 650            | 700   | 20   | 25.591         | 27.559 | 0.787 | NBR           | 650x700x20 HBS R     |
|                |       |      |                |        |       | HNBR          | 650x700x20 HBS H     |
|                |       |      |                |        |       | FKM           | 650x700x20 HBS V     |
| 650            | 700   | 20   | 25.591         | 27.559 | 0.787 | NBR           | 650x700x20 HBS R     |
|                |       |      |                |        |       | HNBR          | 650x700x20 HBS H     |
|                |       |      |                |        |       | FKM           | 650x700x20 HBS V     |
| 685,8          | 736,6 | 22,2 | 27.000         | 29.000 | 0.875 | NBR           | 2700-2900-56 HBS R   |
|                |       |      |                |        |       | HNBR          | 2700-2900-56 HBS H   |
|                |       |      |                |        |       | FKM           | 2700-2900-56 HBS V   |
| 692            | 732   | 15   | 27.244         | 28.819 | 0.591 | NBR           | 692x732x15 HBS R     |
|                |       |      |                |        |       | HNBR          | 692x732x15 HBS H     |
|                |       |      |                |        |       | FKM           | 692x732x15 HBS V     |
| 700            | 750   | 20   | 27.559         | 29.528 | 0.787 | NBR           | 700x750x20 HBS R     |
|                |       |      |                |        |       | HNBR          | 700x750x20 HBS H     |
|                |       |      |                |        |       | FKM           | 700x750x20 HBS V     |
| 710            | 760   | 25   | 27.953         | 29.921 | 0.984 | NBR           | 710x760x25 HBS R     |
|                |       |      |                |        |       | HNBR          | 710x760x25 HBS H     |
|                |       |      |                |        |       | FKM           | 710x760x25 HBS V     |
| 780            | 830   | 25   | 30.709         | 32.677 | 0.984 | NBR           | 780x830x25 HBS R     |
|                |       |      |                |        |       | HNBR          | 780x830x25 HBS H     |
|                |       |      |                |        |       | FKM           | 780x830x25 HBS V     |
| 780            | 844   | 25   | 30.709         | 33.228 | 0.984 | NBR           | 780x844x25 HBS R     |
|                |       |      |                |        |       | HNBR          | 780x844x25 HBS H     |
|                |       |      |                |        |       | FKM           | 780x844x25 HBS V     |
| 780            | 844   | 25   | 30.709         | 33.228 | 0.984 | NBR           | 780x844x25 HBS R     |
|                |       |      |                |        |       | HNBR          | 780x844x25 HBS H     |
|                |       |      |                |        |       | FKM           | 780x844x25 HBS V     |
| 816            | 866,8 | 22,5 | 32.126         | 34.126 | 0.886 | NBR           | 816x866,8x22,5 HBS R |
|                |       |      |                |        |       | HNBR          | 816x866,8x22,5 HBS H |
|                |       |      |                |        |       | FKM           | 816x866,8x22,5 HBS V |
| 825,5          | 876,3 | 22,2 | 32.500         | 34.500 | 0.875 | NBR           | 3232-3432-56 HBS R   |
|                |       |      |                |        |       | HNBR          | 3232-3432-56 HBS H   |
|                |       |      |                |        |       | FKM           | 3232-3432-56 HBS V   |
| 860            | 924   | 25   | 33.858         | 36.378 | 0.984 | NBR           | 860x924x25 HBS R     |
|                |       |      |                |        |       | HNBR          | 860x924x25 HBS H     |
|                |       |      |                |        |       | FKM           | 860x924x25 HBS V     |

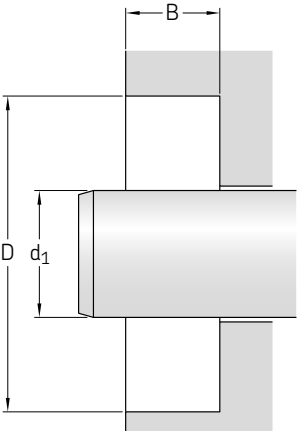
| Dimensions     |         |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation         |
|----------------|---------|------|----------------|--------|-------|---------------|-------------------------|
| d <sub>1</sub> | D       | B    | d <sub>1</sub> | D      | B     |               |                         |
| mm             |         |      | in.            |        |       |               |                         |
| 910            | 974     | 25   | 35.827         | 38.346 | 0.984 | NBR           | 910x974x25 HBS R        |
|                |         |      |                |        |       | HNBR          | 910x974x25 HBS H        |
|                |         |      |                |        |       | FKM           | 910x974x25 HBS V        |
| 970            | 1 030   | 21,5 | 38.189         | 40.551 | 0.846 | NBR           | 970x1030x21,5 HBS R     |
|                |         |      |                |        |       | HNBR          | 970x1030x21,5 HBS H     |
|                |         |      |                |        |       | FKM           | 970x1030x21,5 HBS V     |
| 970            | 1 030   | 21,5 | 38.189         | 40.551 | 0.846 | NBR           | 970x1030x22 HBS R       |
|                |         |      |                |        |       | HNBR          | 970x1030x22 HBS H       |
|                |         |      |                |        |       | FKM           | 970x1030x22 HBS V       |
| 970            | 1 034   | 25   | 38.189         | 40.709 | 0.984 | NBR           | 970x1034x25 HBS R       |
|                |         |      |                |        |       | HNBR          | 970x1034x25 HBS H       |
|                |         |      |                |        |       | FKM           | 970x1034x25 HBS V       |
| 985            | 1 045   | 25   | 38.780         | 41.142 | 0.984 | NBR           | 985x1045x25 HBS R       |
|                |         |      |                |        |       | HNBR          | 985x1045x25 HBS H       |
|                |         |      |                |        |       | FKM           | 985x1045x25 HBS V       |
| 985            | 1 045   | 25   | 38.780         | 41.142 | 0.984 | NBR           | 985x1045x25 HBS R       |
|                |         |      |                |        |       | HNBR          | 985x1045x25 HBS H       |
|                |         |      |                |        |       | FKM           | 985x1045x25 HBS V       |
| 1 024,5        | 1 070   | 24,4 | 40.335         | 42.126 | 0.961 | NBR           | 1 024,5x1070x24,4 HBS R |
|                |         |      |                |        |       | HNBR          | 1 024,5x1070x24,4 HBS H |
|                |         |      |                |        |       | FKM           | 1 024,5x1070x24,4 HBS V |
| 1 100          | 1 164   | 25   | 43.307         | 45.827 | 0.984 | NBR           | 1100x1164x25 HBS R      |
|                |         |      |                |        |       | HNBR          | 1100x1164x25 HBS H      |
|                |         |      |                |        |       | FKM           | 1100x1164x25 HBS V      |
| 1 100          | 1 164   | 25   | 43.307         | 45.827 | 0.984 | NBR           | 1100x1164x25 HBS R      |
|                |         |      |                |        |       | HNBR          | 1100x1164x25 HBS H      |
|                |         |      |                |        |       | FKM           | 1100x1164x25 HBS V      |
| 1 302          | 1 353   | 22,2 | 51.260         | 53.268 | 0.875 | NBR           | 1302x1353x22,2 HBS R    |
|                |         |      |                |        |       | HNBR          | 1302x1353x22,2 HBS H    |
|                |         |      |                |        |       | FKM           | 1302x1353x22,2 HBS V    |
| 1 320          | 1 384   | 25   | 51.969         | 54.488 | 0.984 | NBR           | 1320x1384x25 HBS R      |
|                |         |      |                |        |       | HNBR          | 1320x1384x25 HBS H      |
|                |         |      |                |        |       | FKM           | 1320x1384x25 HBS V      |
| 1 496,6        | 1 549,4 | 25   | 58.921         | 61.000 | 0.984 | NBR           | 5859-6100-63 HBS R      |
|                |         |      |                |        |       | HNBR          | 5859-6100-63 HBS H      |
|                |         |      |                |        |       | FKM           | 5859-6100-63 HBS V      |

HBSA seals – rubber metal reinforced

d<sub>1</sub> 90–1 100 mm



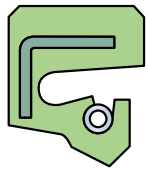
The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



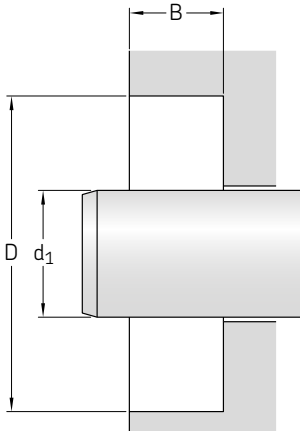
| Dimensions     |       |      | Dimensions     |        |       | Mate-<br>rial | SKF Designation         |
|----------------|-------|------|----------------|--------|-------|---------------|-------------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D      | B     |               |                         |
| mm             |       |      | in.            |        |       |               |                         |
| 90             | 120   | 13   | 3.543          | 4.724  | 0.512 | NBR           | 90x120x13 HBSA R        |
|                |       |      |                |        |       | HNBR          | 90x120x13 HBSA H        |
|                |       |      |                |        |       | FKM           | 90x120x13 HBSA V        |
| 260            | 290   | 19   | 10.236         | 11.417 | 0.748 | NBR           | 260x290x19 HBSA R       |
|                |       |      |                |        |       | HNBR          | 260x290x19 HBSA H       |
|                |       |      |                |        |       | FKM           | 260x290x19 HBSA V       |
| 275            | 310   | 19   | 10.827         | 12.205 | 0.748 | NBR           | 275x310x19 HBSA R       |
|                |       |      |                |        |       | HNBR          | 275x310x19 HBSA H       |
|                |       |      |                |        |       | FKM           | 275x310x19 HBSA V       |
| 370            | 410   | 15   | 14.567         | 16.142 | 0.591 | NBR           | 370x410x15 HBSA R       |
|                |       |      |                |        |       | HNBR          | 370x410x15 HBSA H       |
|                |       |      |                |        |       | FKM           | 370x410x15 HBSA V       |
| 381            | 431,8 | 20,6 | 15.000         | 17.000 | 0.811 | NBR           | 381x431,8x20,6 HBSA R   |
|                |       |      |                |        |       | HNBR          | 381x431,8x20,6 HBSA H   |
|                |       |      |                |        |       | FKM           | 381x431,8x20,6 HBSA V   |
| 381,0          | 444,5 | 25,4 | 15.000         | 17.500 | 1.000 | NBR           | 1500-1732-64 HBSA R     |
|                |       |      |                |        |       | HNBR          | 1500-1732-64 HBSA H     |
|                |       |      |                |        |       | FKM           | 1500-1732-64 HBSA R     |
| 393,7          | 444,4 | 20,6 | 15.500         | 17.496 | 0.811 | NBR           | 393,7x444,4x20,6 HBSA R |
|                |       |      |                |        |       | HNBR          | 393,7x444,4x20,6 HBSA H |
|                |       |      |                |        |       | FKM           | 393,7x444,4x20,6 HBSA V |
| 420            | 460   | 20   | 16.535         | 18.110 | 0.787 | NBR           | 420x460x20 HBSA R       |
|                |       |      |                |        |       | HNBR          | 420x460x20 HBSA H       |
|                |       |      |                |        |       | FKM           | 420x460x20 HBSA V       |
| 460            | 510   | 22   | 18.110         | 20.079 | 0.866 | NBR           | 460x510x22 HBSA R       |
|                |       |      |                |        |       | HNBR          | 460x510x22 HBSA H       |
|                |       |      |                |        |       | FKM           | 460x510x22 HBSA V       |
| 480            | 530   | 22   | 18.898         | 20.866 | 0.866 | NBR           | 480x530x22 HBSA R       |
|                |       |      |                |        |       | HNBR          | 480x530x22 HBSA H       |
|                |       |      |                |        |       | FKM           | 480x530x22 HBSA V       |
| 500            | 550   | 25   | 19.685         | 21.654 | 0.984 | NBR           | 500x550x25 HBSA R       |
|                |       |      |                |        |       | HNBR          | 500x550x25 HBSA H       |
|                |       |      |                |        |       | FKM           | 500x550x25 HBSA V       |
| 515            | 555   | 20   | 20.276         | 21.850 | 0.787 | NBR           | 515x555x20 HBSA R       |
|                |       |      |                |        |       | HNBR          | 515x555x20 HBSA H       |
|                |       |      |                |        |       | FKM           | 515x555x20 HBSA V       |

| Dimensions |  |  |
|------------|--|--|
|------------|--|--|

d<sub>1</sub> 38,1–275 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation  |
|----------------|-------|------|----------------|-------|-------|---------------|------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                  |
| mm             |       |      | in.            |       |       |               |                  |
| 38,1           | 57,2  | 9,5  | 1.500          | 2.250 | 0.375 | NBR           | 132-216-24 HLS R |
|                |       |      |                |       |       | HNBR          | 132-216-24 HLS H |
|                |       |      |                |       |       | FKM           | 132-216-24 HLS V |
| 40             | 60    | 10   | 1.575          | 2.362 | 0.394 | NBR           | 40x60x10 HLS R   |
|                |       |      |                |       |       | HNBR          | 40x60x10 HLS H   |
|                |       |      |                |       |       | FKM           | 40x60x10 HLS V   |
| 50             | 65    | 8    | 1.969          | 2.559 | 0.315 | NBR           | 50x65x8 HLS R    |
|                |       |      |                |       |       | HNBR          | 50x65x8 HLS H    |
|                |       |      |                |       |       | FKM           | 50x65x8 HLS V    |
| 55             | 72    | 10   | 2.165          | 2.835 | 0.394 | NBR           | 55x72x10 HLS R   |
|                |       |      |                |       |       | HNBR          | 55x72x10 HLS H   |
|                |       |      |                |       |       | FKM           | 55x72x10 HLS V   |
| 60             | 75    | 8    | 2.362          | 2.953 | 0.315 | NBR           | 60x75x8 HLS R    |
|                |       |      |                |       |       | HNBR          | 60x75x8 HLS H    |
|                |       |      |                |       |       | FKM           | 60x75x8 HLS V    |
| 60             | 80    | 10   | 2.362          | 3.150 | 0.394 | NBR           | 60x80x10 HLS R   |
|                |       |      |                |       |       | HNBR          | 60x80x10 HLS H   |
|                |       |      |                |       |       | FKM           | 60x80x10 HLS V   |
| 74             | 95    | 10   | 2.913          | 3.740 | 0.394 | NBR           | 74x95x10 HLS R   |
|                |       |      |                |       |       | HNBR          | 74x95x10 HLS H   |
|                |       |      |                |       |       | FKM           | 74x95x10 HLS V   |
| 82             | 105   | 12   | 3.228          | 4.134 | 0.472 | NBR           | 82x105x12 HLS R  |
|                |       |      |                |       |       | HNBR          | 82x105x12 HLS H  |
|                |       |      |                |       |       | FKM           | 82x105x12 HLS V  |
| 82             | 130   | 13   | 3.228          | 5.118 | 0.512 | NBR           | 82x130x13 HLS R  |
|                |       |      |                |       |       | HNBR          | 82x130x13 HLS H  |
|                |       |      |                |       |       | FKM           | 82x130x13 HLS V  |
| 88,9           | 114,3 | 12,7 | 3.500          | 4.500 | 0.500 | NBR           | 332-432-32 HLS R |
|                |       |      |                |       |       | HNBR          | 332-432-32 HLS H |
|                |       |      |                |       |       | FKM           | 332-432-32 HLS V |
| 90             | 120   | 10   | 3.543          | 4.724 | 0.394 | NBR           | 90x120x10 HLS R  |
|                |       |      |                |       |       | HNBR          | 90x120x10 HLS H  |
|                |       |      |                |       |       | FKM           | 90x120x10 HLS V  |
| 90             | 140   | 13   | 3.543          | 5.512 | 0.512 | NBR           | 90x140x13 HLS R  |
|                |       |      |                |       |       | HNBR          | 90x140x13 HLS H  |
|                |       |      |                |       |       | FKM           | 90x140x13 HLS V  |

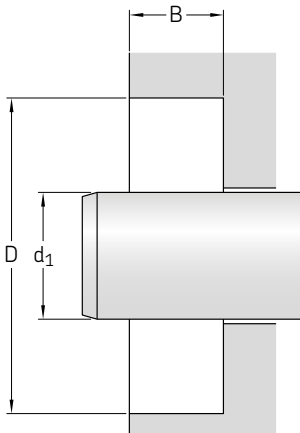
| Dimensions     |       |      | Dimensions     |       |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|------|----------------|-------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B    | d <sub>1</sub> | D     | B     |               |                    |
| mm             |       |      | in.            |       |       |               |                    |
| 98,4           | 123,8 | 12,7 | 3.875          | 4.875 | 0.500 | NBR           | 356-456-32 HLS R   |
|                |       |      |                |       |       | HNBR          | 356-456-32 HLS H   |
|                |       |      |                |       |       | FKM           | 356-456-32 HLS V   |
| 101,6          | 133,4 | 14,3 | 4.000          | 5.250 | 0.563 | NBR           | 400-516-36 HLS R   |
|                |       |      |                |       |       | HNBR          | 400-516-36 HLS H   |
|                |       |      |                |       |       | FKM           | 400-516-36 HLS V   |
| 119,1          | 146,1 | 12,7 | 4.688          | 5.750 | 0.500 | NBR           | 444-548-32 HLS R   |
|                |       |      |                |       |       | HNBR          | 444-548-32 HLS H   |
|                |       |      |                |       |       | FKM           | 444-548-32 HLS V   |
| 120            | 150   | 13   | 4.724          | 5.906 | 0.512 | NBR           | 120x150x13 HLS R   |
|                |       |      |                |       |       | HNBR          | 120x150x13 HLS H   |
|                |       |      |                |       |       | FKM           | 120x150x13 HLS V   |
| 120            | 160   | 12   | 4.724          | 6.299 | 0.472 | NBR           | 120x160x12 HLS R   |
|                |       |      |                |       |       | HNBR          | 120x160x12 HLS H   |
|                |       |      |                |       |       | FKM           | 120x160x12 HLS V   |
| 130            | 160   | 12,5 | 5.118          | 6.299 | 0.492 | NBR           | 130x160x12,5 HLS R |
|                |       |      |                |       |       | HNBR          | 130x160x12,5 HLS H |
|                |       |      |                |       |       | FKM           | 130x160x12,5 HLS V |
| 133,4          | 158,8 | 12,7 | 5.250          | 6.250 | 0.500 | NBR           | 516-616-32 HLS R   |
|                |       |      |                |       |       | HNBR          | 516-616-32 HLS H   |
|                |       |      |                |       |       | FKM           | 516-616-32 HLS V   |
| 135            | 160   | 12   | 5.315          | 6.299 | 0.472 | NBR           | 135x160x12 HLS R   |
|                |       |      |                |       |       | HNBR          | 135x160x12 HLS H   |
|                |       |      |                |       |       | FKM           | 135x160x12 HLS V   |
| 136,5          | 161,9 | 12,7 | 5.375          | 6.375 | 0.500 | NBR           | 524-624-32 HLS R   |
|                |       |      |                |       |       | HNBR          | 524-624-32 HLS H   |
|                |       |      |                |       |       | FKM           | 524-624-32 HLS V   |
| 139,7          | 165,1 | 12,7 | 5.500          | 6.500 | 0.500 | NBR           | 532-632-32 HLS R   |
|                |       |      |                |       |       | HNBR          | 532-632-32 HLS H   |
|                |       |      |                |       |       | FKM           | 532-632-32 HLS V   |
| 141,3          | 168,3 | 12,7 | 5.563          | 6.625 | 0.500 | NBR           | 536-640-32 HLS R   |
|                |       |      |                |       |       | HNBR          | 536-640-32 HLS H   |
|                |       |      |                |       |       | FKM           | 536-640-32 HLS V   |
| 145            | 160   | 15   | 5.709          | 6.299 | 0.591 | NBR           | 145x160x15 HLS R   |
|                |       |      |                |       |       | HNBR          | 145x160x15 HLS H   |
|                |       |      |                |       |       | FKM           | 145x160x15 HLS V   |

| Dimensions     |       |       | Dimensions     |       |       | Mate-<br>rial | SKF Designation      |
|----------------|-------|-------|----------------|-------|-------|---------------|----------------------|
| d <sub>1</sub> | D     | B     | d <sub>1</sub> | D     | B     |               |                      |
| mm             |       |       | in.            |       |       |               |                      |
| 145            | 170   | 13    | 5.709          | 6.693 | 0.512 | NBR           | 145x170x13 HLS R     |
|                |       |       |                |       |       | HNBR          | 145x170x13 HLS H     |
|                |       |       |                |       |       | FKM           | 145x170x13 HLS V     |
| 145            | 175   | 15    | 5.709          | 6.890 | 0.591 | NBR           | 145x175x15 HLS R     |
|                |       |       |                |       |       | HNBR          | 145x175x15 HLS H     |
|                |       |       |                |       |       | FKM           | 145x175x15 HLS V     |
| 149,2          | 174,6 | 12,7  | 5.875          | 6.875 | 0.500 | NBR           | 556-656-32 HLS R     |
|                |       |       |                |       |       | HNBR          | 556-656-32 HLS H     |
|                |       |       |                |       |       | FKM           | 556-656-32 HLS V     |
| 155,3          | 181   | 15,9  | 6.113          | 7.125 | 0.625 | NBR           | 155,3x181x15,9 HLS R |
|                |       |       |                |       |       | HNBR          | 155,3x181x15,9 HLS H |
|                |       |       |                |       |       | FKM           | 155,3x181x15,9 HLS V |
| 155,6          | 181   | 12,7  | 6.125          | 7.125 | 0.500 | NBR           | 156x181x12,7 HLS R   |
|                |       |       |                |       |       | HNBR          | 156x181x12,7 HLS H   |
|                |       |       |                |       |       | FKM           | 156x181x12,7 HLS V   |
| 155,6          | 190,0 | 12,7  | 6.125          | 7.480 | 0.500 | NBR           | 155,6x190x12,7 HLS R |
|                |       |       |                |       |       | HNBR          | 155,6x190x12,7 HLS H |
|                |       |       |                |       |       | FKM           | 155,6x190x12,7 HLS V |
| 160            | 190   | 15    | 6.299          | 7.480 | 0.591 | NBR           | 160x190x15 HLS R     |
|                |       |       |                |       |       | HNBR          | 160x190x15 HLS H     |
|                |       |       |                |       |       | FKM           | 160x190x15 HLS V     |
| 177,8          | 203,2 | 12,7  | 7.000          | 8.000 | 0.500 | NBR           | 700-800-32 HLS R     |
|                |       |       |                |       |       | HNBR          | 700-800-32 HLS H     |
|                |       |       |                |       |       | FKM           | 700-800-32 HLS V     |
| 180            | 220   | 12    | 7.087          | 8.661 | 0.472 | NBR           | 180x220x12 HLS R     |
|                |       |       |                |       |       | HNBR          | 180x220x12 HLS H     |
|                |       |       |                |       |       | FKM           | 180x220x12 HLS V     |
| 180            | 220   | 15    | 7.087          | 8.661 | 0.591 | NBR           | 180x220x15 HLS R     |
|                |       |       |                |       |       | HNBR          | 180x220x15 HLS H     |
|                |       |       |                |       |       | FKM           | 180x220x15 HLS V     |
| 185            | 210   | 13    | 7.283          | 8.268 | 0.512 | NBR           | 185x210x13 HLS R     |
|                |       |       |                |       |       | HNBR          | 185x210x13 HLS H     |
|                |       |       |                |       |       | FKM           | 185x210x13 HLS V     |
| 190,5          | 228,6 | 14,28 | 7.500          | 9.000 | 0.563 | NBR           | 732-900-36 HLS R     |
|                |       |       |                |       |       | HNBR          | 732-900-36 HLS H     |
|                |       |       |                |       |       | FKM           | 732-900-36 HLS V     |
| 200            | 230   | 16    | 7.874          | 9.055 | 0.630 | NBR           | 200x230x16 HLS R     |
|                |       |       |                |       |       | HNBR          | 200x230x16 HLS H     |
|                |       |       |                |       |       | FKM           | 200x230x16 HLS V     |
| 205            | 230   | 16    | 8.071          | 9.055 | 0.630 | NBR           | 205x230x16 HLS R     |
|                |       |       |                |       |       | HNBR          | 205x230x16 HLS H     |
|                |       |       |                |       |       | FKM           | 205x230x16 HLS V     |
| 210            | 240   | 15    | 8.268          | 9.449 | 0.591 | NBR           | 210x240x15 HLS R     |
|                |       |       |                |       |       | HNBR          | 210x240x15 HLS H     |
|                |       |       |                |       |       | FKM           | 210x240x15 HLS V     |
| 210            | 245   | 18    | 8.268          | 9.646 | 0.709 | NBR           | 210x245x18 HLS R     |
|                |       |       |                |       |       | HNBR          | 210x245x18 HLS H     |
|                |       |       |                |       |       | FKM           | 210x245x18 HLS V     |
| 220            | 250   | 15    | 8.661          | 9.843 | 0.591 | NBR           | 220x250x15 HLS R     |
|                |       |       |                |       |       | HNBR          | 220x250x15 HLS H     |
|                |       |       |                |       |       | FKM           | 220x250x15 HLS V     |

d<sub>1</sub> 280–1 350 mm



The size tables include a selection of available sizes. **On request SKF tools up additional sizes.** For seals with full size flexibility and express service – even for just one seal – refer to **page 54 catalogue shaft seals flexible in size.**



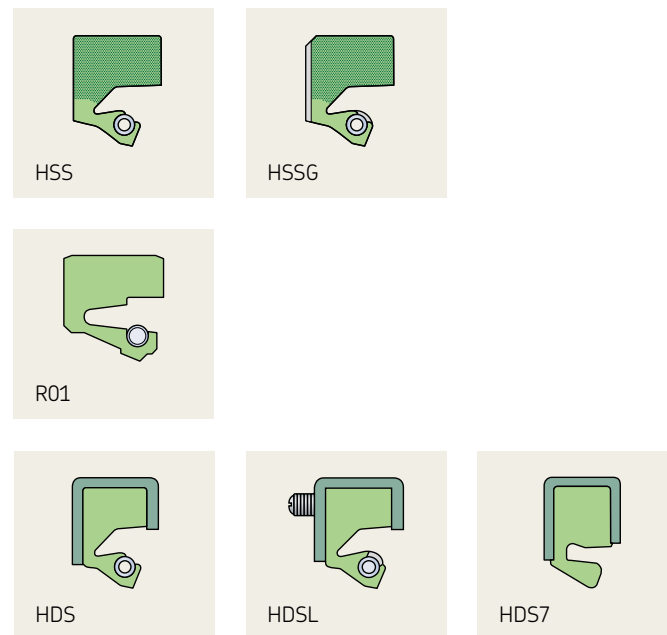
| Dimensions     |       |    | Dimensions     |        |       | Mate-<br>rial | SKF Designation    |
|----------------|-------|----|----------------|--------|-------|---------------|--------------------|
| d <sub>1</sub> | D     | B  | d <sub>1</sub> | D      | B     |               |                    |
| mm             |       |    | in.            |        |       |               |                    |
| 280            | 310   | 15 | 11.024         | 12.205 | 0.591 | NBR           | 280x310x15 HLS R   |
|                |       |    |                |        |       | HNBR          | 280x310x15 HLS H   |
|                |       |    |                |        |       | FKM           | 280x310x15 HLS V   |
| 280            | 320   | 18 | 11.024         | 12.598 | 0.709 | NBR           | 280x320x18 HLS R   |
|                |       |    |                |        |       | HNBR          | 280x320x18 HLS H   |
|                |       |    |                |        |       | FKM           | 280x320x18 HLS V   |
| 290            | 330   | 18 | 11.417         | 12.992 | 0.709 | NBR           | 290x330x18 HLS R   |
|                |       |    |                |        |       | HNBR          | 290x330x18 HLS H   |
|                |       |    |                |        |       | FKM           | 290x330x18 HLS V   |
| 300            | 340   | 18 | 11.811         | 13.386 | 0.709 | NBR           | 300x340x18 HLS R   |
|                |       |    |                |        |       | HNBR          | 300x340x18 HLS H   |
|                |       |    |                |        |       | FKM           | 300x340x18 HLS V   |
| 300            | 340   | 15 | 11.811         | 13.386 | 0.591 | NBR           | 300x340x15 HLS R   |
|                |       |    |                |        |       | HNBR          | 300x340x15 HLS H   |
|                |       |    |                |        |       | FKM           | 300x340x15 HLS V   |
| 315            | 355,6 | 16 | 12.402         | 14.000 | 0.630 | NBR           | 315x355,6x16 HLS R |
|                |       |    |                |        |       | HNBR          | 315x355,6x16 HLS H |
|                |       |    |                |        |       | FKM           | 315x355,6x16 HLS V |
| 320            | 360   | 18 | 12.598         | 14.173 | 0.709 | NBR           | 320x360x18 HLS R   |
|                |       |    |                |        |       | HNBR          | 320x360x18 HLS H   |
|                |       |    |                |        |       | FKM           | 320x360x18 HLS V   |
| 320            | 360   | 25 | 12.598         | 14.173 | 0.984 | NBR           | 320x360x25 HLS R   |
|                |       |    |                |        |       | HNBR          | 320x360x25 HLS H   |
|                |       |    |                |        |       | FKM           | 320x360x25 HLS V   |
| 324,7          | 354   | 15 | 12.783         | 13.937 | 0.591 | NBR           | 324,7x354x15 HLS R |
|                |       |    |                |        |       | HNBR          | 324,7x354x15 HLS H |
|                |       |    |                |        |       | FKM           | 324,7x354x15 HLS V |
| 330            | 370   | 20 | 12.992         | 14.567 | 0.787 | NBR           | 330x370x20 HLS R   |
|                |       |    |                |        |       | HNBR          | 330x370x20 HLS H   |
|                |       |    |                |        |       | FKM           | 330x370x20 HLS V   |
| 335            | 375   | 22 | 13.189         | 14.764 | 0.866 | NBR           | 335x375x22 HLS R   |
|                |       |    |                |        |       | HNBR          | 335x375x22 HLS H   |
|                |       |    |                |        |       | FKM           | 335x375x22 HLS V   |
| 340            | 372   | 16 | 13.386         | 14.646 | 0.630 | NBR           | 340x372x16 HLS R   |
|                |       |    |                |        |       | HNBR          | 340x372x16 HLS H   |
|                |       |    |                |        |       | FKM           | 340x372x16 HLS V   |

| Dimensions     |     |    | Dimensions     |        |       | Mate-<br>rial | SKF Designation  |
|----------------|-----|----|----------------|--------|-------|---------------|------------------|
| d <sub>1</sub> | D   | B  | d <sub>1</sub> | D      | B     |               |                  |
| mm             |     |    | in.            |        |       |               |                  |
| 360            | 400 | 18 | 14.173         | 15.748 | 0.709 | NBR           | 360x400x18 HLS R |
|                |     |    |                |        |       | HNBR          | 360x400x18 HLS H |
|                |     |    |                |        |       | FKM           | 360x400x18 HLS V |
| 370            | 414 | 17 | 14.567         | 16.299 | 0.669 | NBR           | 370x414x17 HLS R |
|                |     |    |                |        |       | HNBR          | 370x414x17 HLS H |
|                |     |    |                |        |       | FKM           | 370x414x17 HLS V |
| 394            | 420 | 16 | 15.512         | 16.535 | 0.630 | NBR           | 394x420x16 HLS R |
|                |     |    |                |        |       | HNBR          | 394x420x16 HLS H |
|                |     |    |                |        |       | FKM           | 394x420x16 HLS V |
| 400            | 440 | 20 | 15.748         | 17.323 | 0.787 | NBR           | 400x440x20 HLS R |
|                |     |    |                |        |       | HNBR          | 400x440x20 HLS H |
|                |     |    |                |        |       | FKM           | 400x440x20 HLS V |
| 400            | 440 | 22 | 15.748         | 17.323 | 0.866 | NBR           | 400x440x22 HLS R |
|                |     |    |                |        |       | HNBR          | 400x440x22 HLS H |
|                |     |    |                |        |       | FKM           | 400x440x22 HLS V |
| 400            | 440 | 18 | 15.748         | 17.323 | 0.709 | NBR           | 400x440x18 HLS R |
|                |     |    |                |        |       | HNBR          | 400x440x18 HLS H |
|                |     |    |                |        |       | FKM           | 400x440x18 HLS V |
| 420            | 460 | 20 | 16.535         | 18.110 | 0.787 | NBR           | 420x460x20 HLS R |
|                |     |    |                |        |       | HNBR          | 420x460x20 HLS H |
|                |     |    |                |        |       | FKM           | 420x460x20 HLS V |
| 460            | 500 | 20 | 18.110         | 19.685 | 0.787 | NBR           | 460x500x20 HLS R |
|                |     |    |                |        |       | HNBR          | 460x500x20 HLS H |
|                |     |    |                |        |       | FKM           | 460x500x20 HLS V |
| 470            | 520 | 22 | 18.504         | 20.472 | 0.866 | NBR           | 470x520x22 HLS R |
|                |     |    |                |        |       | HNBR          | 470x520x22 HLS H |
|                |     |    |                |        |       | FKM           | 470x520x22 HLS V |
| 470            | 520 | 23 | 18.504         | 20.472 | 0.906 | NBR           | 470x520x23 HLS R |
|                |     |    |                |        |       | HNBR          | 470x520x23 HLS H |
|                |     |    |                |        |       | FKM           | 470x520x23 HLS V |
| 470            | 530 | 25 | 18.504         | 20.866 | 0.984 | NBR           | 470x530x25 HLS R |
|                |     |    |                |        |       | HNBR          | 470x530x25 HLS H |
|                |     |    |                |        |       | FKM           | 470x530x25 HLS V |
| 480            | 530 | 25 | 18.898         | 20.866 | 0.984 | NBR           | 480x530x25 HLS R |
|                |     |    |                |        |       | HNBR          | 480x530x25 HLS H |
|                |     |    |                |        |       | FKM           | 480x530x25 HLS V |

| Dimensions     |       |       | Dimensions     |        |       | Mate-<br>rial | SKF Designation        |
|----------------|-------|-------|----------------|--------|-------|---------------|------------------------|
| d <sub>1</sub> | D     | B     | d <sub>1</sub> | D      | B     |               |                        |
| mm             |       |       | in.            |        |       |               |                        |
| 500            | 550   | 25    | 19.685         | 21.654 | 0.984 | NBR           | 500x550x25 HLS R       |
|                |       |       |                |        |       | HNBR          | 500x550x25 HLS H       |
|                |       |       |                |        |       | FKM           | 500x550x25 HLS V       |
| 510            | 550   | 25    | 20.079         | 21.654 | 0.984 | NBR           | 510x550x25 HLS R       |
|                |       |       |                |        |       | HNBR          | 510x550x25 HLS H       |
|                |       |       |                |        |       | FKM           | 510x550x25 HLS V       |
| 560            | 610   | 20    | 22.047         | 24.016 | 0.787 | NBR           | 560x610x20 HLS R       |
|                |       |       |                |        |       | HNBR          | 560x610x20 HLS H       |
|                |       |       |                |        |       | FKM           | 560x610x20 HLS V       |
| 565,2          | 616,0 | 22,2  | 22.250         | 24.250 | 0.875 | NBR           | 2216-2416-56 HLS R     |
|                |       |       |                |        |       | HNBR          | 2216-2416-56 HLS H     |
|                |       |       |                |        |       | FKM           | 2216-2416-56 HLS V     |
| 647,7          | 699   | 21,8  | 25.500         | 27.520 | 0.858 | NBR           | 647,7x699x21,8 HLS R   |
|                |       |       |                |        |       | HNBR          | 647,7x699x21,8 HLS H   |
|                |       |       |                |        |       | FKM           | 647,7x699x21,8 HLS V   |
| 740,5          | 790,8 | 21,8  | 29.154         | 31.134 | 0.858 | NBR           | 740,5x790,8x21,8 HLS R |
|                |       |       |                |        |       | HNBR          | 740,5x790,8x21,8 HLS H |
|                |       |       |                |        |       | FKM           | 740,5x790,8x21,8 HLS V |
| 800            | 850   | 25    | 31.496         | 33.465 | 0.984 | NBR           | 800x850x25 HLS R       |
|                |       |       |                |        |       | HNBR          | 800x850x25 HLS H       |
|                |       |       |                |        |       | FKM           | 800x850x25 HLS V       |
| 825,5          | 876,3 | 22,22 | 32.500         | 34.500 | 0.875 | NBR           | 3232-3432-56 HLS R     |
|                |       |       |                |        |       | HNBR          | 3232-3432-56 HLS H     |
|                |       |       |                |        |       | FKM           | 3232-3432-56 HLS V     |
| 876,3          | 927,1 | 22,22 | 34.500         | 36.500 | 0.875 | NBR           | 3432-3632-56 HLS R     |
|                |       |       |                |        |       | HNBR          | 3432-3632-56 HLS H     |
|                |       |       |                |        |       | FKM           | 3432-3632-56 HLS V     |
| 914,4          | 977,9 | 25,4  | 36.000         | 38.500 | 1.000 | NBR           | 3600-3832-64 HLS R     |
|                |       |       |                |        |       | HNBR          | 3600-3832-64 HLS H     |
|                |       |       |                |        |       | FKM           | 3600-3832-64 HLS V     |
| 1 350          | 1 415 | 25    | 53.150         | 55.709 | 0.984 | NBR           | 1350x1415x25 HLS R     |
|                |       |       |                |        |       | HNBR          | 1350x1415x25 HLS H     |
|                |       |       |                |        |       | FKM           | 1350x1415x25 HLS V     |

# Catalogue shaft seals flexible in size

The catalogue seal offer with the highest availability in customized dimensions



HSS, R01 and HDS seals

**These SKF seals are manufactured in flexible sizing processes.**

The highest flexibility for customized main dimensions is available with minimum order quantity of one seal only, even for a new size.

Innovative manufacturing processes do not require moulds and machine set up enabling optional express service.

The assortment includes heavy duty all rubber seals and metal cased rubber seals in NBR, HNBR and FKM.

Seal design and material selection follows the same criteria as for the *catalogue shaft seals moulded to size*.

## Seal design options

### All rubber seals (solid + split)

The all rubber seals HS, HSS and R01 are available in solid and split executions. The seals are finished oversized to the housing bore. A cover plate is required to ensure proper compression and stability within the housing. The optional split seal execution allows seal replacement without shaft removal or dismounting of other machine components.

HSS features an all rubber reinforcement of the outer diameter further stabilizing the seal in the housing bore. Lubrication grooves at the back of the seal are optional to allow the re-greasing between the sealing lips in back-to-back or tandem installations of two seals.

R01 is a machined seal available from local manufacturing in many countries around the globe. R01 features an optional auxiliary lip for contamination exclusion.

### Metal cased rubber seals

The seals are self retaining in open housing bores without the use of a cover plate. The metal casing provides the required stability in the housing bore.

Spacer lugs are optional to provide space for grease lubrication in between 2 seals in tandem or back to back installations.

HDS7 features a sealing lip without spring, optimized for excluding contaminations in grease purge applications.

### Spring activated sealing lips

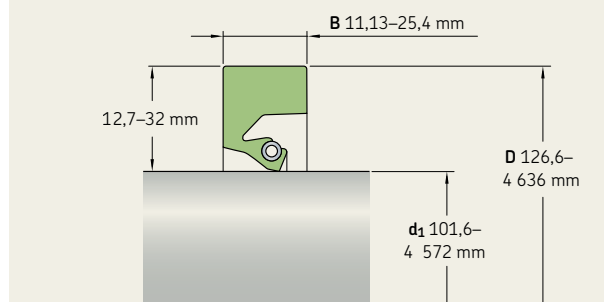
HS, HSS and HDS seals feature the same heavy duty spring activated lip design. The seals are equipped with stainless garter springs. The SKF Springfix for HSS and HDS seals is an optional feature for blind installations, where spring displacement may go undetected.

For this range catalogue size tables are obsolete. The seals are configured by the customer with the full size flexibility within the range of the offering (→ fig. 1, 2, 3).

**Please refer to the SKF seal configuration tools or contact SKF.**

Fig. 1

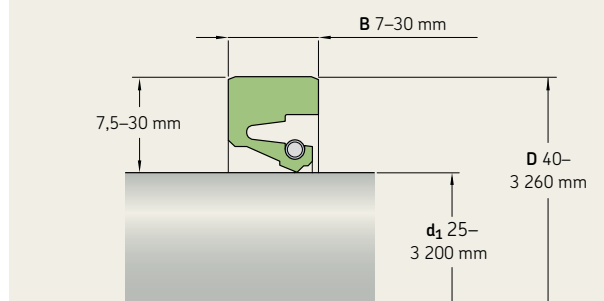
### HS and HSS nominal housing dimensions



Note: Not all combinations are possible

Fig. 2

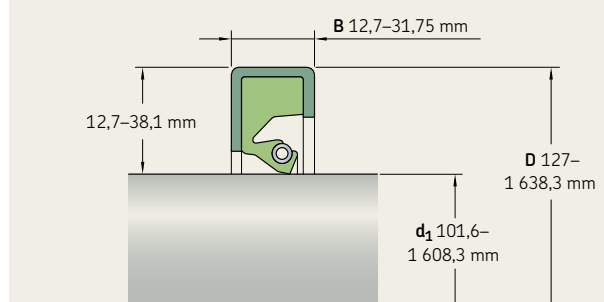
### R01 nominal housing dimensions



Note: Not all combinations are possible

Fig. 3

### HDS nominal housing dimensions



Note: Not all combinations are possible

# Engineered solutions application specific

Engineered solutions is the service offer by SKF to exceed the limits of catalogue seals

Customer requirements and experience indicate the need for advanced seal engineering.

Proprietary SKF seal design and material competences, innovative manufacturing processes and the vast SKF application experience enable outstanding solutions meeting our customers' demand.



Customers and SKF engineers cooperate and create solutions meeting the application parameters

## Seal application parameters

- |                              |                                      |
|------------------------------|--------------------------------------|
| • Type of machine            | • Application speed                  |
| • Expected seal function     | • Misalignment/Runout                |
| • Environment, contamination | • Seal counterface material          |
| • Contact media              | • Counterface finish and roughness   |
| • Pressure (min./max.)       | • Seal housing design and dimensions |
| • Temperature (min./max.)    |                                      |

ENGINEERING  
SERVICE



*Cement grinding mill*



*Wind turbine*



*Aluminium rolling mill*



*Tunnel boring machine*



*Steel wire mill*



*Mining equipment*



Application specific design

# Shaft and bore requirements

## Shaft requirements

### Hardness

The surface hardness of the seal counterface should be at least 30 HRC. If the counterface surface could be damaged during transport or installation, this value should be increased to 45 HRC.

### Lead-in chamfers

The sealing lip must not be damaged during installation. Depending on the installation direction Y or Z, a chamfer or radius on the shaft is recommended first. If the direction of installation of the shaft is Y the values of **table 2** ( $d_1 - d_2$ ) should be adhered to. If the direction is Z, the shaft end could be either rounded ( $r$ ) or chamfered ( $d_1 - d_2$ ).

### Surface finish

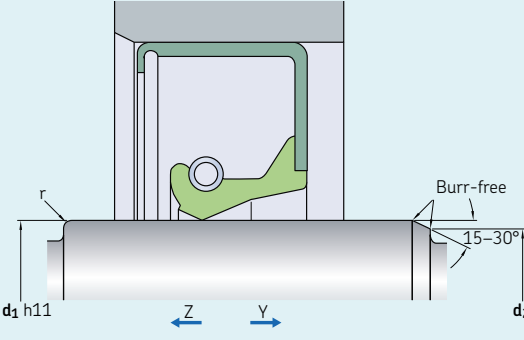
Depending on the direction of rotation, directionality on the seal counterface may cause a seal to leak. Plunge grinding is the preferred machining method to minimize directionality ( $0 \pm 0,05^\circ$ ) on the seal counterface. When plunge grinding, whole number ratios of the grinding wheel speed to the work piece speed should be avoided.

### Surface roughness

The surface roughness values of the counterface for radial shaft seals, calculated according to methods described in ISO 4288 (DIN 4768), should be kept within the limits specified in **table 3**.

### Tolerances

The diameter of the shaft  $d_1$  at the counterface should be machined to the tolerances provided in **table 4**. Out-of-roundness must be less than 0,005 mm ( $0.0002 \text{ in.}$ ) at a maximum of 2 lobes or less than 0,0025 mm ( $0.0001 \text{ in.}$ ) at a maximum of 7 lobes.

| Table 2                                                                            |       |                                      |        |                     |       |                                        |       |                            |       |
|------------------------------------------------------------------------------------|-------|--------------------------------------|--------|---------------------|-------|----------------------------------------|-------|----------------------------|-------|
| Lead-in chamfers and radii                                                         |       |                                      |        |                     |       |                                        |       |                            |       |
|  |       |                                      |        |                     |       |                                        |       |                            |       |
| Shaft diameter<br>Nominal                                                          |       | Diameter<br>difference <sup>1)</sup> |        |                     |       | Radii<br>Seal without<br>auxiliary lip |       | Seal with<br>auxiliary lip |       |
| $d_1$<br>over                                                                      | incl. | over                                 | incl.  | $d_1 - d_2$<br>min. |       | $r$<br>min.                            |       | $r$<br>min.                |       |
| mm                                                                                 |       | in.                                  |        | mm                  | in.   | mm                                     | in.   | mm                         | in.   |
| –                                                                                  | 10    | –                                    | 0.394  | 1,5                 | 0.059 | 0,6                                    | 0.024 | 1                          | 0.039 |
| 10                                                                                 | 20    | 0.394                                | 0.787  | 2                   | 0.079 | 0,6                                    | 0.024 | 1                          | 0.039 |
| 20                                                                                 | 30    | 0.787                                | 1.181  | 2,5                 | 0.098 | 0,6                                    | 0.024 | 1                          | 0.039 |
| 30                                                                                 | 40    | 1.181                                | 1.575  | 3                   | 0.118 | 0,6                                    | 0.024 | 1                          | 0.039 |
| 40                                                                                 | 50    | 1.575                                | 1.968  | 3,5                 | 0.138 | 0,6                                    | 0.024 | 1                          | 0.039 |
| 50                                                                                 | 70    | 1.968                                | 2.756  | 4                   | 0.157 | 0,6                                    | 0.024 | 1                          | 0.039 |
| 70                                                                                 | 95    | 2.756                                | 3.740  | 4,5                 | 0.177 | 0,6                                    | 0.024 | 1                          | 0.039 |
| 95                                                                                 | 130   | 3.740                                | 5.118  | 5,5                 | 0.216 | 1                                      | 0.039 | 2                          | 0.079 |
| 130                                                                                | 240   | 5.118                                | 9.449  | 7                   | 0.216 | 1                                      | 0.039 | 2                          | 0.079 |
| 240                                                                                | 500   | 9.449                                | 19.685 | 11                  | 0.433 | 2                                      | 0.079 | 3                          | 0.118 |
| 500                                                                                | –     | 19.685                               | –      | 13                  | 0.512 | 5                                      | 0.197 | 5                          | 0.197 |

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

| Table 3                                    |               |                 |               |                 |               |                 |
|--------------------------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| Recommended shaft surface roughness values |               |                 |               |                 |               |                 |
|                                            | ISO           |                 | DIN           |                 | RMA           |                 |
|                                            | $\mu\text{m}$ | $\mu\text{in.}$ | $\mu\text{m}$ | $\mu\text{in.}$ | $\mu\text{m}$ | $\mu\text{in.}$ |
| $R_a$                                      | 0,2–0,5       | 8–20            | 0,2–0,8       | 8–32            | 0,2–0,43      | 8–17            |
| $R_z$                                      | 1,2–3         | 48–120          | 1–5           | 40–200          | 1,65–2,9      | 65–115          |
| $R_{pm}$                                   | N/A           | N/A             | N/A           | N/A             | 0,5–1,5       | 20–50           |

| Table 4                                        |       |                                     |       |
|------------------------------------------------|-------|-------------------------------------|-------|
| Counterface tolerances for metric shafts (ISO) |       |                                     |       |
| Shaft diameter<br>Nominal                      |       | Diameter tolerance h11<br>Deviation |       |
| $d_1$<br>over                                  | incl. | high                                | low   |
| mm                                             |       | $\mu\text{m}$                       |       |
| 6                                              | 10    | 0                                   | –90   |
| 10                                             | 18    | 0                                   | –110  |
| 18                                             | 30    | 0                                   | –130  |
| 30                                             | 50    | 0                                   | –160  |
| 50                                             | 80    | 0                                   | –190  |
| 80                                             | 120   | 0                                   | –220  |
| 120                                            | 180   | 0                                   | –250  |
| 180                                            | 250   | 0                                   | –290  |
| 250                                            | 315   | 0                                   | –320  |
| 315                                            | 400   | 0                                   | –360  |
| 400                                            | 500   | 0                                   | –400  |
| 500                                            | 630   | 0                                   | –440  |
| 630                                            | 800   | 0                                   | –500  |
| 800                                            | 1000  | 0                                   | –560  |
| 1000                                           | 1250  | 0                                   | –660  |
| 1250                                           | 1600  | 0                                   | –780  |
| 1600                                           | 2000  | 0                                   | –920  |
| 2000                                           | 2500  | 0                                   | –1100 |
| 2500                                           | 3150  | 0                                   | –1350 |
| 3150                                           | 4000  | 0                                   | –1650 |
| 4000                                           | 5000  | 0                                   | –2000 |

| Table 5                                           |       |                                      |        |
|---------------------------------------------------|-------|--------------------------------------|--------|
| Counterface tolerances for inch-size shafts (RMA) |       |                                      |        |
| Shaft diameter<br>Nominal                         |       | Diameter tolerance OS-4<br>Deviation |        |
| $d_1$<br>over                                     | incl. | high                                 | low    |
| in.                                               |       | in                                   |        |
| –                                                 | 4     | +0.003                               | –0.003 |
| 4                                                 | 6     | +0.004                               | –0.004 |
| 6                                                 | 10    | +0.005                               | –0.005 |
| 10                                                |       | +0.006                               | –0.006 |

Housing bore requirements

Lead-in chamfers

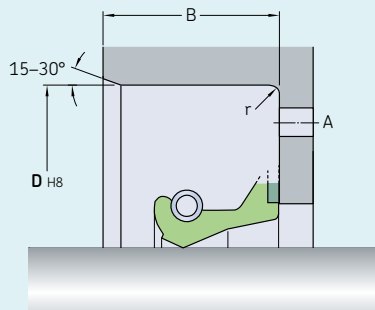
To reduce the risk of seal damage during installation, the housing bore should have a 15 to 30° lead-in chamfer. The chamfer should be free of burrs and the transition radius *r* between the seal seat and shoulder should be in accordance with the recommendations in **table 6**.

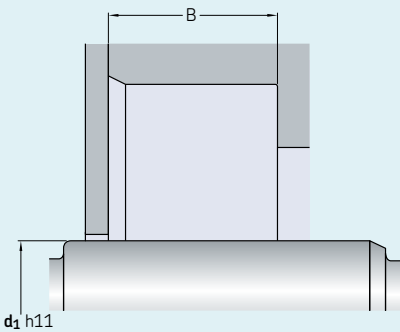
Housing bore depth tolerances

For housings with cover plate (axially clamped seals), the bore depth tolerance should be in accordance with the recommendations in **table 8**.

Housing bore surfaces

The surface roughness (to ISO 4288, DIN 4768 or RMA OS-1-1) of the housing bore should be kept within the limits specified in **table 7**.

| Table 6                                                                                                                                                 |       |                                           |     |              |                                        |        |                        |         |              |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------|-----|--------------|----------------------------------------|--------|------------------------|---------|--------------|--|
| Housing bore tolerances                                                                                                                                 |       |                                           |     |              |                                        |        |                        |         |              |  |
|                                                                       |       |                                           |     |              |                                        |        |                        |         |              |  |
| Housing bore for metric seals (ISO)                                                                                                                     |       |                                           |     |              | Housing bore for inch-size seals (RMA) |        |                        |         |              |  |
| Nominal diameter                                                                                                                                        |       | Housing bore tolerance (ISO tolerance H8) |     | Fillet radii | Nominal diameter                       |        | Housing bore tolerance |         | Fillet radii |  |
| D over                                                                                                                                                  | incl. | high                                      | low | r max.       | D over                                 | incl.  | high                   | low     | r max.       |  |
| mm                                                                                                                                                      |       | μm                                        |     | mm           | in.                                    |        | in.                    |         | in.          |  |
| –                                                                                                                                                       | 3     | +14                                       | 0   | 0,3          | –                                      | 3.000  | +0.001                 | –0.001  | 0.031        |  |
| 3                                                                                                                                                       | 6     | +18                                       | 0   | 0,3          | 3.000                                  | 7.000  | +0.0015                | –0.0015 | 0.031        |  |
| 6                                                                                                                                                       | 10    | +22                                       | 0   | 0,3          | 7.000                                  | 10.000 | +0.002                 | –0.002  | 0.031        |  |
| 10                                                                                                                                                      | 18    | +27                                       | 0   | 0,3          | 10.000 <sup>2)</sup>                   | 12.000 | +0.002                 | –0.002  | 0.031        |  |
| 18                                                                                                                                                      | 30    | +33                                       | 0   | 0,3          | 12.000 <sup>2)</sup>                   | 20.000 | +0.003                 | –0.003  | 0.031        |  |
| 30                                                                                                                                                      | 50    | +39                                       | 0   | 0,3          | 20.000 <sup>2)</sup>                   | 40.000 | +0.004                 | –0.004  | 0.031        |  |
| 50                                                                                                                                                      | 80    | +46                                       | 0   | 0,4          | 40.000 <sup>2)</sup>                   | 60.000 | +0.006                 | –0.006  | 0.031        |  |
| 80                                                                                                                                                      | 120   | +54                                       | 0   | 0,8          |                                        |        |                        |         |              |  |
| 120                                                                                                                                                     | 180   | +63                                       | 0   | 0,8          |                                        |        |                        |         |              |  |
| 180                                                                                                                                                     | 250   | +72                                       | 0   | 0,8          |                                        |        |                        |         |              |  |
| 250                                                                                                                                                     | 315   | +81                                       | 0   | 0,8          |                                        |        |                        |         |              |  |
| 315                                                                                                                                                     | 400   | +89                                       | 0   | 0,8          |                                        |        |                        |         |              |  |
| 400                                                                                                                                                     | 500   | +97                                       | 0   | 0,8          |                                        |        |                        |         |              |  |
| 500                                                                                                                                                     | 630   | +110                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 630                                                                                                                                                     | 800   | +125                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 800                                                                                                                                                     | 1 000 | +140                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 1 000                                                                                                                                                   | 1 250 | +165                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 1 250                                                                                                                                                   | 1 600 | +195                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 1 600                                                                                                                                                   | 2 000 | +230                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 2 000                                                                                                                                                   | 2 500 | +280                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 2 500                                                                                                                                                   | 3 150 | +330                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 3 150 <sup>1)</sup>                                                                                                                                     | 4 000 | +410                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| 4 000                                                                                                                                                   | 5 000 | +500                                      | 0   | 0,8          |                                        |        |                        |         |              |  |
| <sup>1)</sup> SKF recommended bore specifications not covered in ISO 286-2<br><sup>2)</sup> SKF recommended bore specifications not covered in RMA OS-4 |       |                                           |     |              |                                        |        |                        |         |              |  |

| Table 7                                                                             |       |                        |      |                          |       |                        |        |  |  |  |
|-------------------------------------------------------------------------------------|-------|------------------------|------|--------------------------|-------|------------------------|--------|--|--|--|
| Housing with cover plate, bore depth tolerances                                     |       |                        |      |                          |       |                        |        |  |  |  |
|  |       |                        |      |                          |       |                        |        |  |  |  |
| Metric housings (ISO)                                                               |       |                        |      | Inch-size housings (RMA) |       |                        |        |  |  |  |
| Nominal shaft diameter                                                              |       | Bore depth B tolerance |      | Nominal shaft diameter   |       | Bore depth B tolerance |        |  |  |  |
| d1 over                                                                             | incl. | high                   | low  | d1 over                  | until | high                   | low    |  |  |  |
| mm                                                                                  |       | mm                     |      | in.                      |       | in.                    |        |  |  |  |
| –                                                                                   | 15    | 0                      | –0,1 | –                        | 1.000 | 0                      | –0.004 |  |  |  |
| 16                                                                                  |       | +0,1                   | –0,1 | 1.000                    |       | +0.004                 | –0.004 |  |  |  |

| Table 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |         |         |         |                     |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|---------|---------|---------------------|--------|
| Recommended housing bore surface roughness values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |         |         |         |                     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ISO <sup>1)</sup> |         | DIN     |         | RMA <sup>2)3)</sup> |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | μm                | μin.    | μm      | μin.    | μm                  | μin.   |
| R <sub>a</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1,6–3,2           | 64–128  | 1,6–3,2 | 64–128  | 1–2,5               | 40–100 |
| R <sub>z</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6,3–12,5          | 252–500 | 10–20   | 400–800 | N/A                 | N/A    |
| R <sub>pm</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A               | N/A     | 25      | 1 000   | N/A                 | N/A    |
| <sup>1)</sup> ISO – The housing bore surface roughness may require lower values when metal-cased seals are used, in which case they should be subject to agreement between the manufacturer and user.<br><sup>2)</sup> RMA – If the bore surface texture is greater than 2,5 μm (100 μin.) R <sub>a</sub> , a sealant should be used.<br><sup>3)</sup> RMA – Turned bores, where a lubricant head of up to 0,20 bar (3.0 psi) is present at the seal. If this texture is maintained and tool removal marks or bore defects are present, no outside diameter leakage should occur. |                   |         |         |         |                     |        |



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