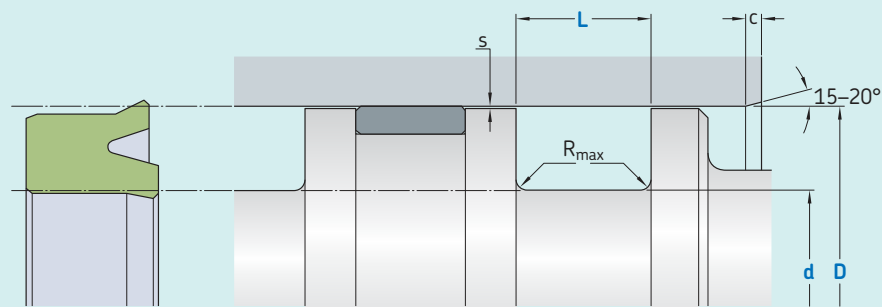


K01-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 200 bar | 400 bar |
| H9 | h10 | + 0,2 | | | | | | | |
| over | incl. | | | | | | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,33 | 0,18 | 0,11 | 0,05 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,37 | 0,22 | 0,16 | 0,10 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,42 | 0,27 | 0,20 | 0,14 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,46 | 0,31 | 0,25 | 0,19 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,54 | 0,39 | 0,32 | 0,26 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,61 | 0,46 | 0,39 | 0,33 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 0,67 | 0,52 | 0,45 | 0,39 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 0,67 | 0,52 | 0,45 | 0,39 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K01-P
100 x 85 x 10
ECOPUR

Operating parameters

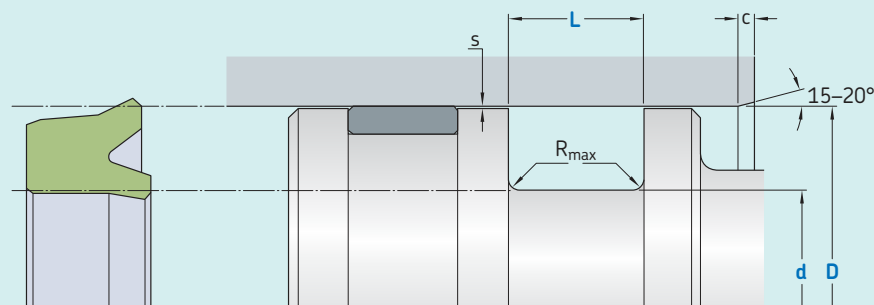
| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 0,5 | 400 (40) |
| ■ ECOPUR LD | -35 | +110 | 0,5 | 400 (40) |
| ■ G-ECOPUR | -30 | +110 | 0,5 | 400 (40) |
| ■ H-ECOPUR | -20 | +110 | 0,5 | 400 (40) |
| ■ S-ECOPUR | -20 | +110 | 0,5 | 400 (40) |
| ■ T-ECOPUR | -50 | +110 | 0,5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K01-PE



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 200 bar | 400 bar |
| H9 over | incl. | + 0,2 | | | | | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,33 | 0,18 | 0,11 | 0,05 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,37 | 0,22 | 0,16 | 0,10 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,42 | 0,27 | 0,20 | 0,14 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,46 | 0,31 | 0,25 | 0,19 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,54 | 0,39 | 0,32 | 0,26 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,61 | 0,46 | 0,39 | 0,33 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 0,67 | 0,52 | 0,45 | 0,39 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 0,67 | 0,52 | 0,45 | 0,39 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K01-PE
100 x 85 x 10
ECOPUR

Operating parameters

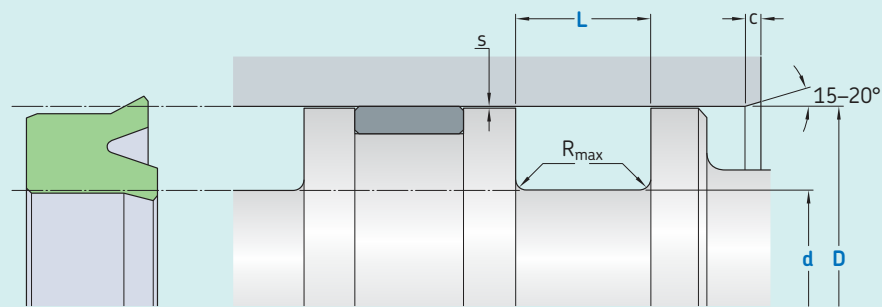
| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 0,5 | 400 (40) |
| ■ ECOPUR LD | -35 | +110 | 0,5 | 400 (40) |
| ■ G-ECOPUR | -30 | +110 | 0,5 | 400 (40) |
| ■ H-ECOPUR | -20 | +110 | 0,5 | 400 (40) |
| ■ S-ECOPUR | -20 | +110 | 0,5 | 400 (40) |
| ■ T-ECOPUR | -50 | +110 | 0,5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K01-R



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 160 bar |
| H9 over | incl. h10 | + 0,2 | | | | | | |
| mm | | | | | | mm | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,23 | 0,16 | 0,14 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,26 | 0,19 | 0,17 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,29 | 0,22 | 0,20 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,32 | 0,24 | 0,22 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,35 | 0,27 | 0,25 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,39 | 0,30 | 0,29 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 0,40 | 0,34 | 0,32 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 0,40 | 0,34 | 0,32 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K01-R
100 x 85 x 10
SKF Ecorubber-1

Operating parameters

| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|----------------------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | -30 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | -25 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-2 | -20 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | -50 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecoflas | -10 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecosil ³⁾ | -60 | +200 | - | - |

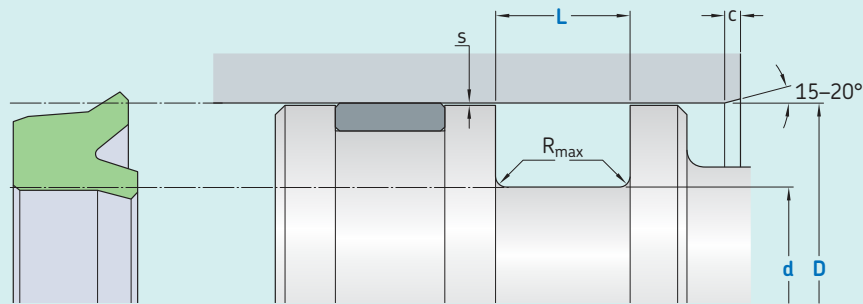
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Only recommended for static or quasi-static applications.

K01-RE



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 160 bar |
| H9 over | incl. | + 0,2 | | | | | | |
| mm | | | | | | mm | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,23 | 0,16 | 0,14 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,26 | 0,19 | 0,17 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,29 | 0,22 | 0,20 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,32 | 0,24 | 0,22 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,35 | 0,27 | 0,25 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,39 | 0,30 | 0,29 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 0,40 | 0,34 | 0,32 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 0,40 | 0,34 | 0,32 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K01-RE
100 x 85 x 10
SKF Ecorubber-1

Operating parameters

| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|----------------------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | -30 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | -25 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-2 | -20 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | -50 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecoflas | -10 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecosil ³⁾ | -60 | +200 | – | – |

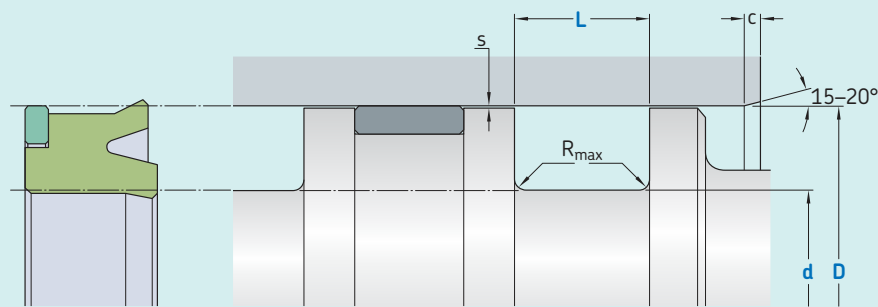
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Only recommended for static or quasi-static applications.

K02-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|-------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | | | | |
| H9 | h10 | + 0,2 | | | | 20 bar | 100 bar | 400 bar | 700 bar |
| over | incl. | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,80 | 0,80 | 0,30 | 0,04 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 1,00 | 1,00 | 0,37 | 0,04 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 1,25 | 1,24 | 0,42 | 0,05 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 1,50 | 1,47 | 0,46 | 0,05 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 2,00 | 1,77 | 0,54 | 0,06 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 2,5 | 2,06 | 0,62 | 0,06 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 3,00 | 2,43 | 0,76 | 0,06 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 3,00 | 2,43 | 0,76 | 0,06 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Back-up ring

Piston seal K02-P
 100 x 85 x 10
 ECOPUR / SKF Ecotal

Operating parameters

| Material Seal | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar(MPa) |
| ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 700 (70) |
| ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 700 (70) |
| ■ ECOPUR LD | ■ SKF Ecomid | -35 | +110 | 0,5 | 700 (70) |
| ■ G-ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 700 (70) |
| ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 700 (70) |
| ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 700 (70) |
| ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 700 (70) |
| ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 700 (70) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

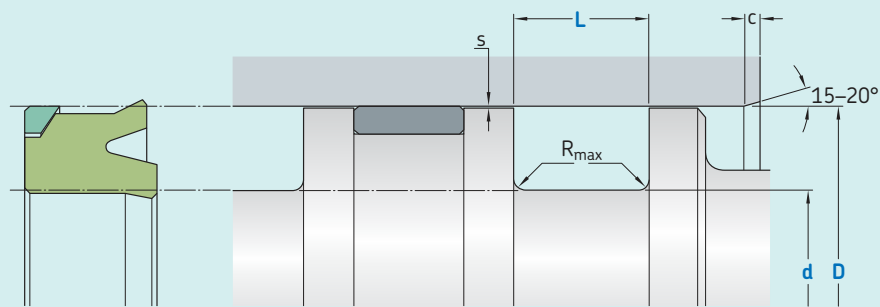
¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.



K02-PD



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | | | | |
| H9 | h10 | + 0,2 | | | | 20 bar | 100 bar | 400 bar | 700 bar |
| over | incl. | | | | | mm | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,80 | 0,80 | 0,30 | 0,04 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 1,00 | 1,00 | 0,37 | 0,04 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 1,25 | 1,24 | 0,42 | 0,05 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 1,50 | 1,47 | 0,46 | 0,05 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 2,00 | 1,77 | 0,54 | 0,06 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 2,50 | 2,06 | 0,62 | 0,06 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 3,00 | 2,43 | 0,76 | 0,06 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 3,00 | 2,43 | 0,76 | 0,06 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Back-up ring

Piston seal K02-PD
100 x 85 x 10
 ECOPUR / SKF Ecotal

Operating parameters

| Material Seal | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 700 (70) |
| ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 700 (70) |
| ■ ECOPUR LD | ■ SKF Ecomid | -35 | +110 | 0,5 | 700 (70) |
| ■ G-ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 700 (70) |
| ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 700 (70) |
| ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 700 (70) |
| ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 700 (70) |
| ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 700 (70) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

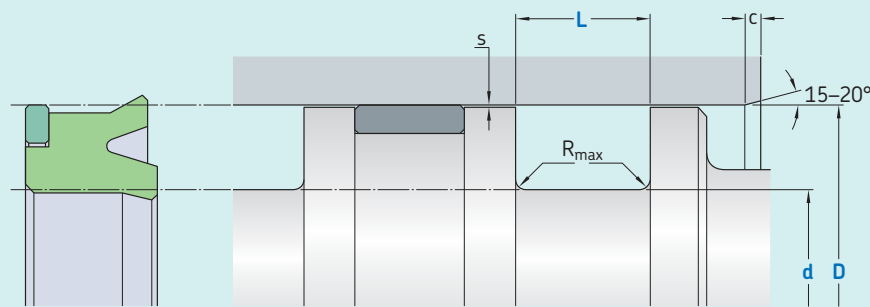
¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.



K02-R



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05-0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50-95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 250 bar |
| H9 over | incl. | + 0,2 | | | | | | |
| mm | | | | | | mm | | |
| 13 | 25 | D - 8 | 6,0 | 0,4 | 3,5 | 0,80 | 0,80 | 0,52 |
| 25 | 50 | D - 10 | 7,0 | 0,4 | 4,0 | 1,00 | 1,00 | 0,66 |
| 50 | 75 | D - 12 | 8,0 | 0,4 | 4,5 | 1,25 | 1,20 | 0,72 |
| 75 | 150 | D - 15 | 10,0 | 0,4 | 5,0 | 1,50 | 1,40 | 0,78 |
| 150 | 300 | D - 20 | 12,0 | 0,4 | 6,0 | 2,00 | 1,66 | 0,88 |
| 300 | 500 | D - 25 | 18,0 | 0,4 | 8,5 | 2,50 | 1,91 | 1,00 |
| 500 | 750 | D - 30 | 20,0 | 0,4 | 10,0 | 3,00 | 2,18 | 1,13 |
| 750 | | D - 40 | 26,0 | 0,4 | 13,0 | 3,00 | 2,18 | 1,13 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material / Back-up ring

Piston seal K02-R
100 x 85 x 10
SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecoflon 2 | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecotal | -25 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecomid | -25 | +110 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-2 | ■ SKF Ecoflon 2 | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-3 | ■ SKF Ecoflon 2 | -50 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-3 | ■ SKF Ecotal | -50 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-3 | ■ SKF Ecomid | -40 | +110 | 0,5 | 250 (25) |
| ■ SKF Ecoflas | ■ SKF Ecopaek | -10 | +200 | 0,5 | 250 (25) |

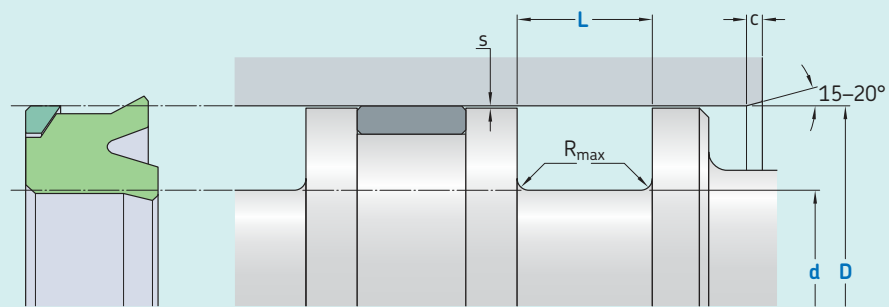
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K02-RD



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 250 bar |
| H9 over | incl. h10 | + 0,2 | | | | | | |
| mm | | | | | | mm | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,80 | 0,80 | 0,52 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 1,00 | 1,00 | 0,66 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 1,25 | 1,20 | 0,72 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 1,50 | 1,40 | 0,78 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 2,00 | 1,66 | 0,88 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 2,50 | 1,91 | 1,00 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 3,00 | 2,18 | 1,13 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 3,00 | 2,18 | 1,13 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Back-up ring

Piston seal K02-RD
100 x 85 x 10
 SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecoflon 2 | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecotal | -25 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecomid | -25 | +110 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-2 | ■ SKF Ecoflon 2 | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-3 | ■ SKF Ecoflon 2 | -50 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-3 | ■ SKF Ecotal | -50 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-3 | ■ SKF Ecomid | -40 | +110 | 0,5 | 250 (25) |
| ■ SKF Ecoflas | ■ SKF Ecopaek | -10 | +200 | 0,5 | 250 (25) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

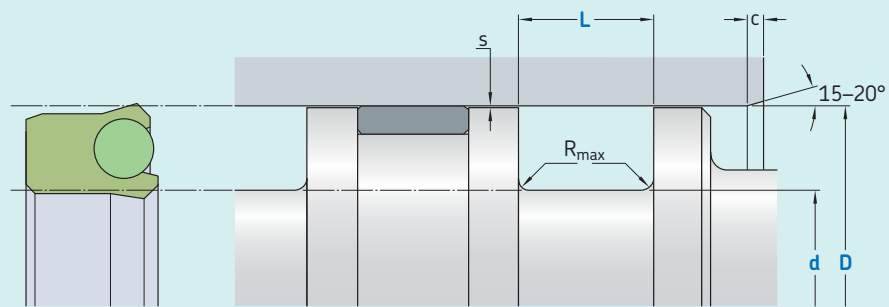
¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.



K03-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|-------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 200 bar | 400 bar |
| H9 over | incl. | + 0,2 | | | | | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,33 | 0,18 | 0,11 | 0,05 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,37 | 0,22 | 0,16 | 0,10 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,42 | 0,27 | 0,20 | 0,14 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,46 | 0,31 | 0,25 | 0,19 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,54 | 0,39 | 0,32 | 0,26 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,61 | 0,46 | 0,39 | 0,33 |
| 500 | 600 | D – 30 | 20,0 | 0,4 | 10,0 | 0,67 | 0,52 | 0,45 | 0,39 |
| 600 | 1000 | D – 40 | 26,0 | 0,4 | 13,0 | 0,67 | 0,52 | 0,45 | 0,39 |
| 1000 | 1600 | D – 50 | 32,0 | 0,4 | 15,0 | 0,80 | 0,60 | 0,50 | 0,39 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material / Energizer

Piston seal K03-P
100 x 85 x 10
ECOPUR / NBR70

Operating parameters

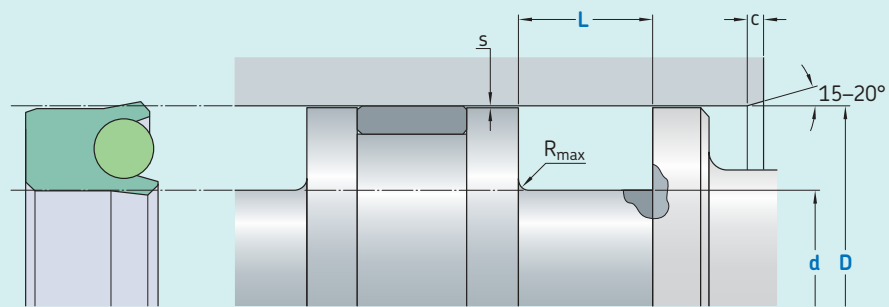
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | NBR 70 | -30 | +100 | 0,5 | 400 (40) |
| ■ ECOPUR LD | NBR 70 | -30 | +100 | 0,5 | 400 (40) |
| ■ G-ECOPUR | NBR 70 | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | NBR 70 | -20 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | NBR 70 | -20 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | MVQ 70 | -50 | +100 | 0,5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K03-F



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|---------------|------------|
| | μm | |
| Sliding surface | ≤ 2 | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 200 bar | 400 bar |
| H9 over | incl. h10 | + 0,2 | | | | | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,4 | 0,4 | 3,5 | 0,40 | 0,20 | 0,15 | 0,09 |
| 25 | 50 | D – 10 | 8,5 | 0,4 | 4,0 | 0,45 | 0,22 | 0,17 | 0,10 |
| 50 | 75 | D – 12 | 10,0 | 0,4 | 4,5 | 0,60 | 0,36 | 0,25 | 0,14 |
| 75 | 150 | D – 15 | 12,3 | 0,4 | 5,0 | 0,75 | 0,40 | 0,33 | 0,18 |
| 150 | 300 | D – 20 | 16,0 | 0,4 | 6,0 | 0,87 | 0,48 | 0,38 | 0,20 |
| 300 | 500 | D – 25 | 19,8 | 0,4 | 8,5 | 0,87 | 0,48 | 0,38 | 0,20 |
| 500 | 600 | D – 30 | 24,5 | 0,4 | 10,0 | 0,87 | 0,48 | 0,38 | 0,20 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer

Piston seal K03-F
100 x 85 x 12,3
 SKF Ecoflon 3 / FPM75

Operating parameters

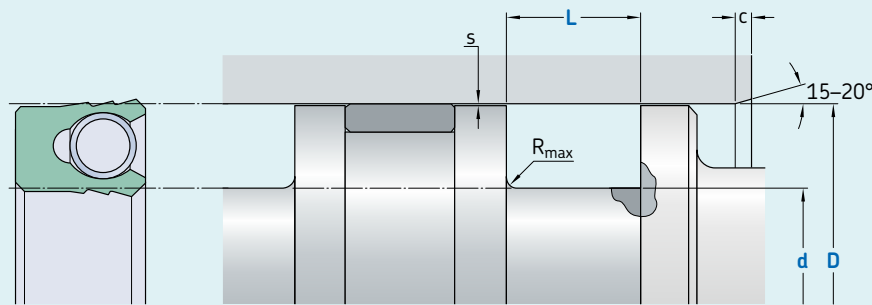
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|------------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| SKF Ecoflon 1 | NBR 70 | -30 | +100 | 1,0 | 200 (20) |
| SKF Ecoflon 1 | MVQ 70 | -55 | +200 | 1,0 | 200 (20) |
| SKF Ecoflon 2 | NBR 70 | -30 | +100 | 1,0 | 400 (40) |
| SKF Ecoflon 2 | FPM 75 | -20 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 2 | EPDM 70 | -50 | +150 | 1,0 | 400 (40) |
| SKF Ecoflon 2 | MVQ 70 | -55 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | NBR 70 | -30 | +100 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | FPM 75 | -20 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | EPDM 70 | -50 | +150 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | MVQ 70 | -55 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | NBR 70 | -30 | +100 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | FPM 75 | -20 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | EPDM 70 | -50 | +150 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | MVQ 70 | -55 | +200 | 1,0 | 400 (40) |
| SKF Ecowear 1000 | NBR 70 | -30 | +90 | 0,5 | 200 (20) |
| SKF Ecowear 1000 | MVQ 70 | -55 | +90 | 0,5 | 200 (20) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K03-S



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|------------|
| | μm | |
| Sliding surface | ≤ 2 | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | | |
|---------------------|-------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | | | | | |
| H9 | h10 | + 0,2 | | | | 20 bar | 100 bar | 200 bar | 300 bar | 400 bar |
| over | incl. | | | | | mm | | | | |
| mm | | | | | | mm | | | | |
| 10 | 15 | D – 4 | 3,5 | 0,4 | 2,0 | 0,25 | 0,12 | 0,10 | 0,08 | 0,07 |
| 15 | 30 | D – 6 | 5,0 | 0,4 | 3,0 | 0,35 | 0,17 | 0,12 | 0,10 | 0,08 |
| 30 | 120 | D – 10 | 8,0 | 0,4 | 4,0 | 0,45 | 0,22 | 0,17 | 0,12 | 0,10 |
| 120 | 200 | D – 15 | 11,5 | 0,4 | 5,0 | 0,75 | 0,40 | 0,33 | 0,25 | 0,18 |
| 200 | 250 | D – 20 | 13,0 | 0,4 | 6,0 | 0,87 | 0,48 | 0,38 | 0,28 | 0,20 |
| 250 | 500 | D – 25 | 18,5 | 0,4 | 8,5 | 0,87 | 0,48 | 0,38 | 0,28 | 0,20 |
| 500 | 1600 | D – 30 | 23,0 | 0,4 | 10,0 | 0,87 | 0,48 | 0,38 | 0,28 | 0,20 |






* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Spring

Piston seal K03-S
103 x 93 x 8
SKF Ecoflon 3 / 1.4310

Operating parameters

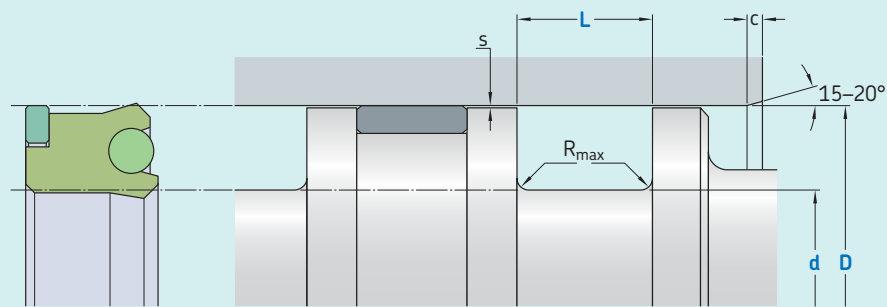
| Material Seal | Spring | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|--|--------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
|  SKF Ecoflon 1 | 1.4310 | -200 | +260 | 1 | 200 (20) |
|  SKF Ecoflon 2 | 1.4310 | -200 | +260 | 1 | 400 (40) |
|  SKF Ecoflon 3 | 1.4310 | -200 | +260 | 1 | 400 (40) |
|  SKF Ecoflon 4 | 1.4310 | -200 | +260 | 1 | 400 (40) |
|  SKF Ecowear 1000 | 1.4310 | -200 | +90 | 0,5 | 200 (20) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K04-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|-------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 400 bar | 700 bar |
| H9 | h10 | + 0,2 | | | | | | | |
| over | incl. | | | | | | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,80 | 0,80 | 0,30 | 0,04 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 1,00 | 1,00 | 0,37 | 0,04 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 1,25 | 1,24 | 0,42 | 0,05 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 1,50 | 1,47 | 0,46 | 0,05 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 2,00 | 1,77 | 0,54 | 0,06 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 2,50 | 2,06 | 0,62 | 0,06 |
| 500 | 600 | D – 30 | 20,0 | 0,4 | 10,0 | 3,00 | 2,43 | 0,76 | 0,06 |
| 600 | 1000 | D – 40 | 26,0 | 0,4 | 13,0 | 3,00 | 2,43 | 0,76 | 2) |
| 1000 | 1600 | D – 50 | 32,0 | 0,4 | 15,0 | 3,00 | 2,43 | 0,76 | 2) |

¹⁾ Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.
²⁾ Please contact SKF.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer / Back-up ring

Piston seal K04-P
100 x 85 x 10
ECOPUR / NBR70 / SKF Ectotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-----------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | NBR 70 | ■ SKF Ecotal | -30 | +100 | 0,5 | 700 (70) |
| ■ ECOPUR | NBR 70 | ■ SKF Ecomid | -30 | +100 | 0,5 | 700 (70) |
| ■ ECOPUR LD | NBR 70 | ■ SKF Ecomid | -30 | +100 | 0,5 | 700 (70) |
| ■ G-ECOPUR | NBR 70 | ■ SKF Ecomid | -30 | +100 | 0,5 | 700 (70) |
| ■ H-ECOPUR | NBR 70 | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ H-ECOPUR | NBR 70 | ■ SKF Ecomid | -20 | +100 | 0,5 | 700 (70) |
| ■ S-ECOPUR | NBR 70 | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ S-ECOPUR | NBR 70 | ■ SKF Ecomid | -20 | +100 | 0,5 | 700 (70) |
| ■ T-ECOPUR | MVQ 70 | ■ SKF Ecotal | -50 | +100 | 0,5 | 700 (70) |
| ■ T-ECOPUR | MVQ 70 | ■ SKF Ecomid | -40 | +100 | 0,5 | 700 (70) |

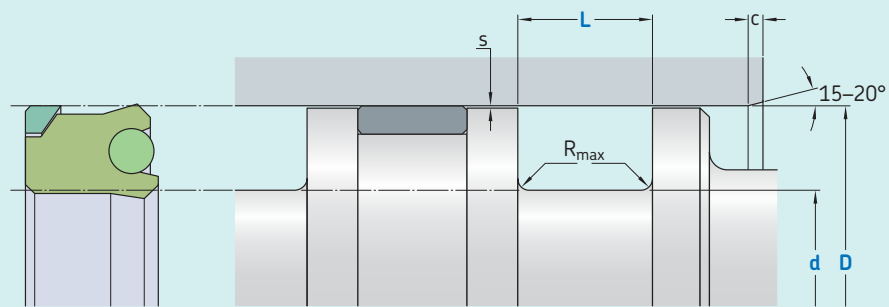
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K04-PD



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|-------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------------|
| D | d | L | R_{max} | c | s^1 | 20 bar | 100 bar | 400 bar | 700 bar |
| H9 | h10 | + 0,2 | | | | | | | |
| over | incl. | | | | | | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,80 | 0,80 | 0,30 | 0,04 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 1,00 | 1,00 | 0,37 | 0,04 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 1,25 | 1,24 | 0,42 | 0,05 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 1,50 | 1,47 | 0,46 | 0,05 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 2,00 | 1,77 | 0,54 | 0,06 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 2,50 | 2,06 | 0,62 | 0,06 |
| 500 | 600 | D – 30 | 20,0 | 0,4 | 10,0 | 3,00 | 2,43 | 0,76 | 0,06 |
| 600 | 1000 | D – 40 | 26,0 | 0,4 | 13,0 | 3,00 | 2,43 | 0,76 | ²⁾ |
| 1000 | 1600 | D – 50 | 32,0 | 0,4 | 15,0 | 3,00 | 2,43 | 0,76 | ²⁾ |

¹⁾ Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.
²⁾ Please contact SKF.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer / Back-up ring

Piston seal K04-PD
100 x 85 x 10
 ECOPUR / NBR70 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-----------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | NBR 70 | ■ SKF Ecotal | -30 | +100 | 0,5 | 700 (70) |
| ■ ECOPUR | NBR 70 | ■ SKF Ecomid | -30 | +100 | 0,5 | 700 (70) |
| ■ ECOPUR LD | NBR 70 | ■ SKF Ecomid | -30 | +100 | 0,5 | 700 (70) |
| ■ G-ECOPUR | NBR 70 | ■ SKF Ecomid | -30 | +100 | 0,5 | 700 (70) |
| ■ H-ECOPUR | NBR 70 | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ H-ECOPUR | NBR 70 | ■ SKF Ecomid | -20 | +100 | 0,5 | 700 (70) |
| ■ S-ECOPUR | NBR 70 | ■ SKF Ecotal | -20 | +100 | 0,5 | 700 (70) |
| ■ S-ECOPUR | NBR 70 | ■ SKF Ecomid | -20 | +100 | 0,5 | 700 (70) |
| ■ T-ECOPUR | MVQ 70 | ■ SKF Ecotal | -50 | +100 | 0,5 | 700 (70) |
| ■ T-ECOPUR | MVQ 70 | ■ SKF Ecomid | -40 | +100 | 0,5 | 700 (70) |

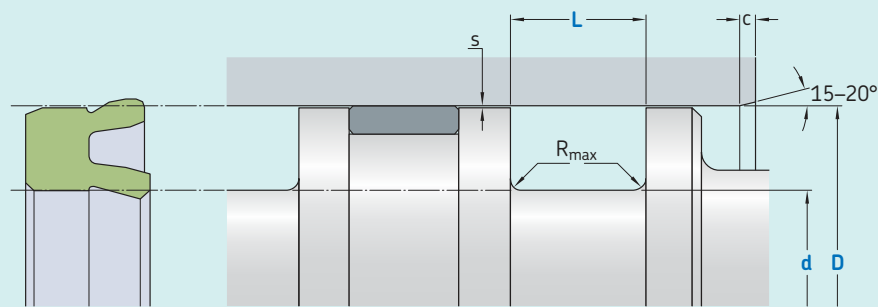
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

1) Surface speed limit values are valid only in the presence of a lubrication film.

2) Pressure ratings depend on the size of the extrusion gap.

3) Size limitation D: Up to 260mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K05-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|---------------|-------|
| | μm | |

Sliding surface $\leq 2,5$ $0,05-0,2$

Bottom of groove $\leq 6,3$ $\leq 1,6$

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|--------------|--------|-----------|-----|--------|
| H9 over | h10 incl. | + 0,2 | | | 25 bar |
| mm | | | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K05-P
100 x 85 x 10
ECOPUR

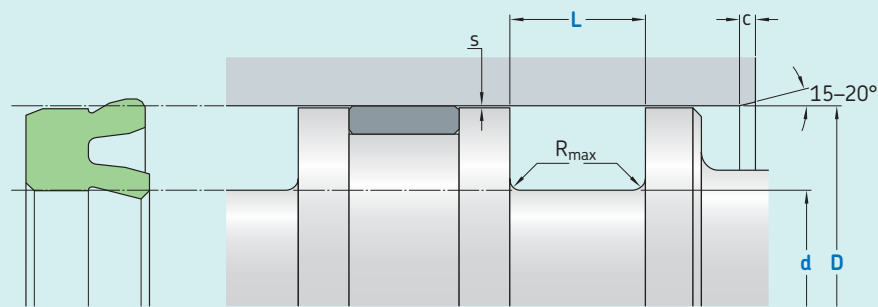
Operating parameters

| Material Seal | Temperature | | Speed ¹⁾ | Pressure |
|---------------|-------------|------|---------------------|-----------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 1 | 25 (2,5) |
| ■ ECOPUR LD | -35 | +110 | 1 | 25 (2,5) |
| ■ G-ECOPUR | -30 | +110 | 1 | 25 (2,5) |
| ■ H-ECOPUR | -20 | +110 | 1 | 25 (2,5) |
| ■ S-ECOPUR | -20 | +110 | 2 | 25 (2,5) |
| ■ T-ECOPUR | -50 | +110 | 1 | 25 (2,5) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

K05-R



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | H9 | d | L | R_{max} | c | s^* |
|------------|------------|--------|-------|-----------|------|--------|
| over | | incl. | + 0,2 | | | 25 bar |
| mm | | | | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,23 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,26 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,29 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,32 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,35 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,39 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 0,40 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 0,40 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K05-R
100 x 85 x 10
SKF Ecorubber-1

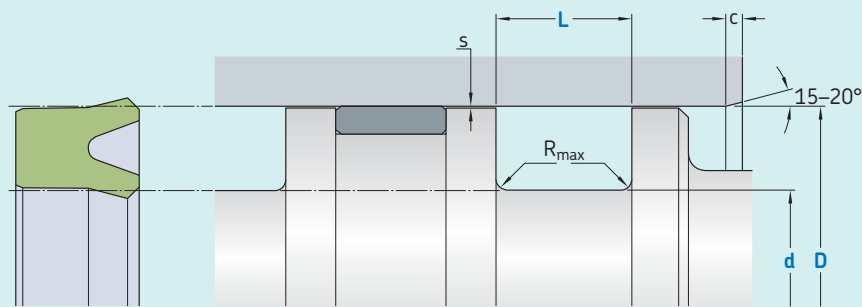
Operating parameters

| Material Seal | Temperature | | Speed ¹⁾ | Pressure |
|-------------------|-------------|------|---------------------|-----------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | -30 | +100 | 1 | 25 (2,5) |
| ■ SKF Ecorubber-H | -25 | +150 | 1 | 25 (2,5) |
| ■ SKF Ecorubber-2 | -20 | +200 | 1 | 25 (2,5) |
| ■ SKF Ecorubber-3 | -50 | +150 | 1 | 25 (2,5) |
| ■ SKF Ecoflas | -10 | +200 | 1 | 25 (2,5) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

K06-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 200 bar | 400 bar |
| H9 over | incl. | + 0,2 | | | | | | | |
| mm | | | | | | mm | | | |
| 14 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,33 | 0,18 | 0,11 | 0,05 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,37 | 0,22 | 0,16 | 0,10 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,42 | 0,27 | 0,20 | 0,14 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,46 | 0,31 | 0,25 | 0,19 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,54 | 0,39 | 0,32 | 0,26 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,61 | 0,46 | 0,39 | 0,33 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 0,67 | 0,52 | 0,45 | 0,39 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 0,67 | 0,52 | 0,45 | 0,39 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K06-P
100 x 85 x 10
ECOPUR

Operating parameters

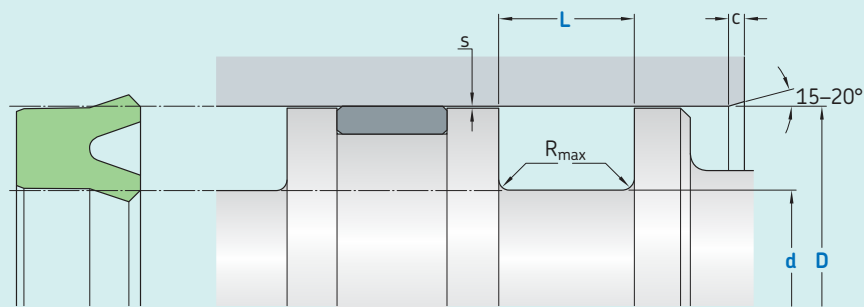
| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 0,5 | 400 (40) |
| ■ ECOPUR LD | -35 | +110 | 0,5 | 400 (40) |
| ■ G-ECOPUR | -30 | +110 | 0,5 | 400 (40) |
| ■ H-ECOPUR | -20 | +110 | 0,5 | 400 (40) |
| ■ S-ECOPUR | -20 | +110 | 0,5 | 400 (40) |
| ■ T-ECOPUR | -50 | +110 | 0,5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K06-R



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 160 bar |
| H9 over | incl. h10 | + 0,2 | | | | | | |
| mm | | | | | | mm | | |
| 14 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,23 | 0,16 | 0,14 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,26 | 0,19 | 0,17 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,29 | 0,22 | 0,20 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,31 | 0,24 | 0,22 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,34 | 0,27 | 0,25 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,37 | 0,30 | 0,29 |
| 500 | 750 | D – 30 | 20,0 | 0,4 | 10,0 | 0,40 | 0,34 | 0,32 |
| 750 | | D – 40 | 26,0 | 0,4 | 13,0 | 0,40 | 0,34 | 0,32 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K06-R
100 x 85 x 10
SKF Ecorubber-1

Operating parameters

| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|----------------------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | -30 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | -25 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-2 | -20 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | -50 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecoflas | -10 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecosil ³⁾ | -60 | +200 | - | - |

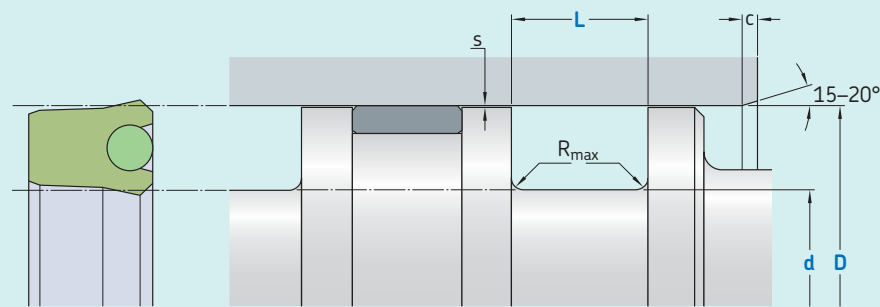
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Only recommended for static or quasi-static applications.

K07-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|-------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | | | | |
| H9 | h10 | + 0,2 | | | | 20 bar | 100 bar | 200 bar | 400 bar |
| over | incl. | | | | | mm | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,33 | 0,18 | 0,11 | 0,05 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,37 | 0,22 | 0,16 | 0,10 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,42 | 0,27 | 0,20 | 0,14 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,46 | 0,31 | 0,25 | 0,19 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,54 | 0,39 | 0,32 | 0,26 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,61 | 0,46 | 0,39 | 0,33 |
| 500 | 600 | D – 30 | 20,0 | 0,4 | 10,0 | 0,67 | 0,52 | 0,45 | 0,39 |
| 600 | 1000 | D – 40 | 26,0 | 0,4 | 13,0 | 0,67 | 0,52 | 0,45 | 0,39 |
| 1000 | 1600 | D – 50 | 32,0 | 0,4 | 15,0 | 0,80 | 0,60 | 0,50 | 0,40 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material / Energizer

Piston seal K07-P
100 x 85 x 10
ECOPUR / NBR70

Operating parameters

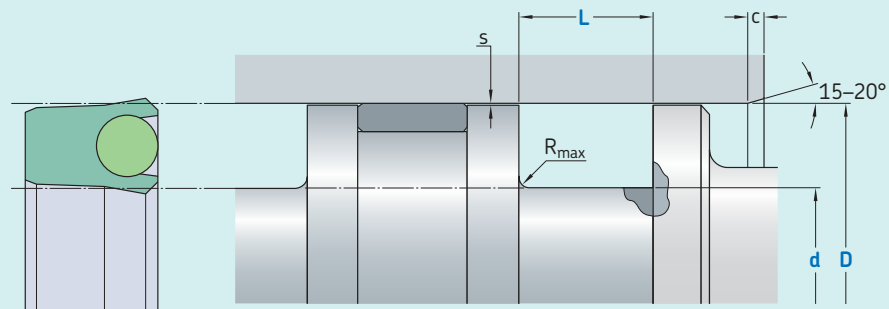
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | NBR 70 | -30 | +100 | 0,5 | 400 (40) |
| ■ ECOPUR LD | NBR 70 | -30 | +100 | 0,5 | 400 (40) |
| ■ G-ECOPUR | NBR 70 | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | NBR 70 | -20 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | NBR 70 | -20 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | MVQ 70 | -50 | +100 | 0,5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K07-F



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | | | | |
| H9 | h10 | + 0,2 | | | | 20 bar | 100 bar | 200 bar | 400 bar |
| over | incl. | | | | | mm | | | |
| mm | | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,4 | 0,4 | 3,5 | 0,25 | 0,12 | 0,10 | 0,07 |
| 25 | 50 | D – 10 | 8,5 | 0,4 | 4,0 | 0,35 | 0,17 | 0,12 | 0,08 |
| 50 | 75 | D – 12 | 10,0 | 0,4 | 4,5 | 0,45 | 0,22 | 0,17 | 0,10 |
| 75 | 150 | D – 15 | 12,3 | 0,4 | 5,0 | 0,75 | 0,40 | 0,33 | 0,18 |
| 150 | 300 | D – 20 | 16,0 | 0,4 | 6,0 | 0,87 | 0,48 | 0,38 | 0,20 |
| 300 | 500 | D – 25 | 19,8 | 0,4 | 8,5 | 0,87 | 0,48 | 0,38 | 0,20 |
| 500 | 600 | D – 30 | 24,5 | 0,4 | 10,0 | 0,87 | 0,48 | 0,38 | 0,20 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer

Piston seal K07-F
100 x 85 x 12,3
 SKF Ecoflon 3 / FPM75

Operating parameters

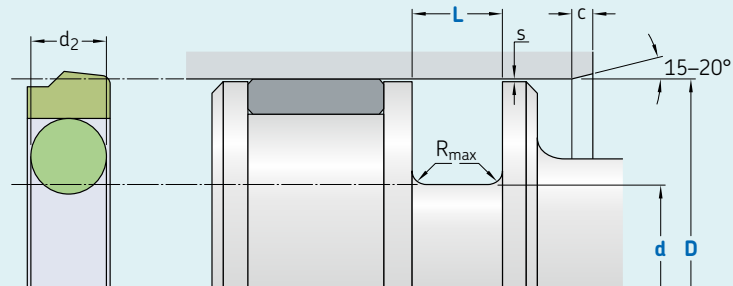
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|------------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| SKF Ecoflon 1 | NBR 70 | -30 | +100 | 1,0 | 200 (20) |
| SKF Ecoflon 1 | MVQ 70 | -55 | +200 | 1,0 | 200 (20) |
| SKF Ecoflon 2 | NBR 70 | -30 | +100 | 1,0 | 400 (40) |
| SKF Ecoflon 2 | FPM 75 | -20 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 2 | EPDM 70 | -50 | +150 | 1,0 | 400 (40) |
| SKF Ecoflon 2 | MVQ 70 | -55 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | NBR 70 | -30 | +100 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | FPM 75 | -20 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | EPDM 70 | -50 | +150 | 1,0 | 400 (40) |
| SKF Ecoflon 3 | MVQ 70 | -55 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | NBR 70 | -30 | +100 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | FPM 75 | -20 | +200 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | EPDM 70 | -50 | +150 | 1,0 | 400 (40) |
| SKF Ecoflon 4 | MVQ 70 | -55 | +200 | 1,0 | 400 (40) |
| SKF Ecowear 1000 | NBR 70 | -30 | +90 | 0,5 | 200 (20) |
| SKF Ecowear 1000 | MVQ 70 | -55 | +90 | 0,5 | 200 (20) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K08-E



Ordering dimensions in **blue**

| Surface roughness | TPU/ PTFE | |
|-------------------------|-----------------------|------------|
| | R_{tmax} | R_a |
| | μm | |
| Sliding surface | $\leq 2,5 / \leq 2^*$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$
 *Lower value valid for PTFE

| Standard dimensions | | | | | | | Maximal radial extrusion gap | | | |
|--------------------------|--------------|----------|-----------|-----|-------|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | d_2 | s^* | 100 bar | 200 bar | 400 bar | 600 bar |
| H9 | d h10 | L + 0,2 | | | | | | | | |
| over | incl. | | | | | | | | | |
| mm | | | | | | | mm | | | |
| TPU and SKF Ecowear 1000 | | | | | | | | | | |
| 10 | 15 | D – 4,9 | 2,2 | 0,4 | 2,5 | 1,78 | 0,30 | 0,30 | 0,20 | 0,10 |
| 15 | 40 | D – 7,5 | 3,2 | 0,6 | 3,5 | 2,62 | 0,40 | 0,30 | 0,20 | 0,10 |
| 40 | 80 | D – 11 | 4,2 | 1,0 | 4,5 | 3,53 | 0,50 | 0,40 | 0,30 | 0,20 |
| 80 | 133 | D – 15,5 | 6,3 | 1,3 | 5,0 | 5,33 | 0,50 | 0,40 | 0,30 | 0,20 |
| 133 | 330 | D – 21 | 8,1 | 1,8 | 6,0 | 7,00 | 0,70 | 0,50 | 0,40 | 0,20 |
| 330 | 670 | D – 24,5 | 8,1 | 1,8 | 8,0 | 7,00 | 0,70 | 0,50 | 0,40 | 0,20 |
| 670 | 1 000 | D – 28 | 9,5 | 2,5 | 10,0 | 8,40 | 0,80 | 0,70 | 0,50 | 0,30 |
| 1 000 | 3 000 | D – 38 | 13,8 | 3,0 | 12,0 | 12,00 | 1,10 | 0,80 | 0,70 | 0,40 |
| PTFE | | | | | | | | | | |
| 10 | 15 | D – 4,9 | 2,2 | 0,4 | 2,5 | 1,78 | 0,30 | 0,20 | 0,15 | 0,05 |
| 15 | 40 | D – 7,5 | 3,2 | 0,6 | 3,5 | 2,62 | 0,40 | 0,25 | 0,15 | 0,05 |
| 40 | 80 | D – 11 | 4,2 | 1,0 | 4,5 | 3,53 | 0,40 | 0,25 | 0,20 | 0,10 |
| 80 | 133 | D – 15,5 | 6,3 | 1,3 | 5,0 | 5,33 | 0,50 | 0,30 | 0,20 | 0,10 |
| 133 | 330 | D – 21 | 8,1 | 1,8 | 6,0 | 7,00 | 0,60 | 0,35 | 0,25 | 0,15 |
| 330 | 670 | D – 24,5 | 8,1 | 1,8 | 8,0 | 7,00 | 0,60 | 0,35 | 0,25 | 0,15 |
| 670 | 1 000 | D – 28 | 9,5 | 2,5 | 10,0 | 8,40 | 0,70 | 0,50 | 0,30 | 0,20 |
| 1 000 | 3 000 | D – 38 | 13,8 | 3,0 | 12,0 | 12,00 | 1,00 | 0,70 | 0,60 | 0,30 |

* The extrusion gap referred to is valid up to 80 °C and valid for the side opposite to the pressure side; higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer

K08-E
100 x 84,5 x 6,3
X-ECOPUR / NBR 70 or SKF Ecoflon 3 / NBR 70

Operating parameters

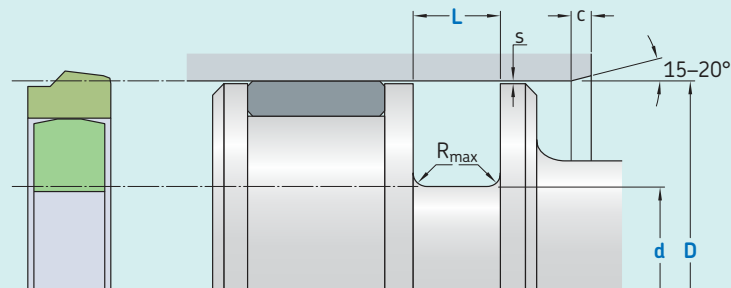
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|--------------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ X-ECOPUR | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR | MVQ 70 | -55 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | MVQ 70 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR H | MVQ 70 | -55 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR H | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | MVQ 70 | -55 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ SKF Ecowear 1000 | MVQ 70 | -55 | +90 | 5 | 600 (60) |
| ■ SKF Ecowear 1000 | NBR 70 | -30 | +90 | 5 | 600 (60) |
| ■ SKF Ecoflon 2 | NBR 70 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 2 | FPM 75 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | NBR 70 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | FPM 75 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | NBR 70 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | FPM 75 | -20 | +200 | 10 | 600 (60) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K08-ES



Ordering dimensions in **blue**

| Surface roughness | TPU/ PTFE | |
|-------------------|-------------------|----------------|
| | R _{tmax} | R _a |
| | μm | |

| | | |
|-------------------------|---------------|----------|
| Sliding surface | ≤ 2,5 / ≤ 2 * | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on C_{ref} = 0%

* Lower value valid for PTFE

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|--------------------------|--------------|--------|------------------|-----|------|------------------------------|---------|---------|---------|
| D | d | L | R _{max} | c | s* | 100 bar | 200 bar | 400 bar | 600 bar |
| H9 | d | + 0,2 | | | | | | | |
| over | h10 | | | | | | | | |
| incl. | | | | | | | | | |
| mm | | | | | | mm | | | |
| TPU and SKF Ecowear 1000 | | | | | | | | | |
| 15 | 50 | D – 10 | 5,0 | 0,3 | 4,0 | 0,5 | 0,40 | 0,30 | 0,20 |
| 50 | 60 | D – 15 | 7,5 | 0,4 | 5,0 | 0,5 | 0,40 | 0,30 | 0,20 |
| 60 | 200 | D – 20 | 10,0 | 0,4 | 6,0 | 0,7 | 0,50 | 0,40 | 0,20 |
| 200 | 300 | D – 25 | 12,5 | 0,4 | 8,5 | 0,8 | 0,60 | 0,50 | 0,30 |
| 300 | 530 | D – 30 | 15,0 | 0,8 | 10,0 | 0,9 | 0,70 | 0,60 | 0,30 |
| 530 | 680 | D – 35 | 17,5 | 1,2 | 13,0 | 1,0 | 0,80 | 0,70 | 0,30 |
| 680 | 1 500 | D – 40 | 20,0 | 1,2 | 15,0 | 1,1 | 0,90 | 0,80 | 0,40 |
| PTFE | | | | | | | | | |
| 15 | 50 | D – 10 | 5,0 | 0,3 | 4,0 | 0,4 | 0,30 | 0,20 | 0,10 |
| 50 | 60 | D – 15 | 7,5 | 0,4 | 5,0 | 0,5 | 0,30 | 0,20 | 0,10 |
| 60 | 200 | D – 20 | 10,0 | 0,4 | 6,0 | 0,6 | 0,40 | 0,25 | 0,15 |
| 200 | 300 | D – 25 | 12,5 | 0,4 | 8,5 | 0,6 | 0,40 | 0,25 | 0,15 |
| 300 | 530 | D – 30 | 15,0 | 0,8 | 10,0 | 0,7 | 0,50 | 0,30 | 0,20 |
| 530 | 680 | D – 35 | 17,5 | 1,2 | 13,0 | 0,8 | 0,60 | 0,50 | 0,20 |
| 680 | 1 500 | D – 40 | 20,0 | 1,2 | 15,0 | 1,0 | 0,70 | 0,60 | 0,30 |

* The extrusion gap referred to is valid up to 80 °C and valid for the side opposite to the pressure side; higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material / Energizer

K08-ES
100 x 80 x 10
X-ECOPUR / SKF Ecorubber-1 or SKF Ecoflon 3 / SKF Ecorubber-1

Operating parameters

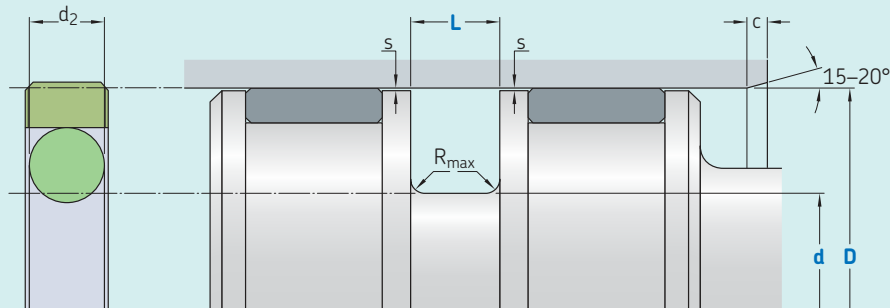
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|--------------------|-------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ X-ECOPUR | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR | ■ SKF Ecosil | -60 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | ■ SKF Ecosil | -60 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR H | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR H | ■ SKF Ecosil | -60 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | ■ SKF Ecosil | -60 | +100 | 5 | 600 (60) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-1 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-2 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-1 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-2 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecowear 1000 | ■ SKF Ecorubber-1 | -30 | +90 | 5 | 400 (40) |
| ■ SKF Ecowear 1000 | ■ SKF Ecosil | -60 | +90 | 5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K08-D



Ordering dimensions in **blue**

| | TPU/ PTFE | |
|-------------------------|-----------------------|------------|
| | R_{tmax} | R_a |
| | μm | |
| Sliding surface | $\leq 2,5 / \leq 2^*$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$
 *Lower value valid for PTFE

| Standard dimensions | | | | | | | Maximal radial extrusion gap | | | |
|--------------------------|--------------|----------|-----------|-----|-------|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | d_2 | s^* | 100 bar | 200 bar | 400 bar | 600 bar |
| H9 | d | L | R_{max} | c | d_2 | s^* | | | | |
| over | incl. | + 0,2 | | | | | mm | mm | mm | mm |
| TPU and SKF Ecowear 1000 | | | | | | | | | | |
| 10 | 15 | D – 4,9 | 2,2 | 0,4 | 2,5 | 1,78 | 0,30 | 0,20 | 0,15 | 0,05 |
| 15 | 40 | D – 7,5 | 3,2 | 0,6 | 3,5 | 2,62 | 0,40 | 0,30 | 0,20 | 0,10 |
| 40 | 80 | D – 11 | 4,2 | 1,0 | 4,5 | 3,53 | 0,50 | 0,40 | 0,30 | 0,20 |
| 80 | 133 | D – 15,5 | 6,3 | 1,3 | 5,0 | 5,33 | 0,50 | 0,40 | 0,30 | 0,20 |
| 133 | 330 | D – 21 | 8,1 | 1,8 | 6,0 | 7,00 | 0,70 | 0,50 | 0,40 | 0,20 |
| 330 | 670 | D – 24,5 | 8,1 | 1,8 | 8,0 | 7,00 | 0,70 | 0,50 | 0,40 | 0,20 |
| 670 | 1 000 | D – 28 | 9,5 | 2,5 | 10,0 | 8,40 | 0,80 | 0,70 | 0,50 | 0,30 |
| 1 000 | 3 000 | D – 38 | 13,8 | 3,0 | 12,0 | 12,00 | 1,10 | 0,80 | 0,70 | 0,40 |
| PTFE | | | | | | | | | | |
| 10 | 15 | D – 4,9 | 2,2 | 0,4 | 2,5 | 1,78 | 0,30 | 0,20 | 0,15 | 0,05 |
| 15 | 40 | D – 7,5 | 3,2 | 0,6 | 3,5 | 2,62 | 0,40 | 0,25 | 0,15 | 0,05 |
| 40 | 80 | D – 11 | 4,2 | 1,0 | 4,5 | 3,53 | 0,40 | 0,25 | 0,20 | 0,10 |
| 80 | 133 | D – 15,5 | 6,3 | 1,3 | 5,0 | 5,33 | 0,50 | 0,30 | 0,20 | 0,10 |
| 133 | 330 | D – 21 | 8,1 | 1,8 | 6,0 | 7,00 | 0,60 | 0,35 | 0,25 | 0,15 |
| 330 | 670 | D – 24,5 | 8,1 | 1,8 | 8,0 | 7,00 | 0,60 | 0,35 | 0,25 | 0,15 |
| 670 | 1 000 | D – 28 | 9,5 | 2,5 | 10,0 | 8,40 | 0,70 | 0,50 | 0,30 | 0,20 |
| 1 000 | 2 000 | D – 38 | 13,8 | 3,0 | 12,0 | 12,00 | 1,00 | 0,70 | 0,60 | 0,30 |

* The extrusion gap referred to is valid up to 80 °C and valid for the side opposite to the pressure side; higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer

K08-D
100 x 84,5 x 6,3
X-ECOPUR / NBR 70 or SKF Ecoflon 3 / NBR 70

Operating parameters

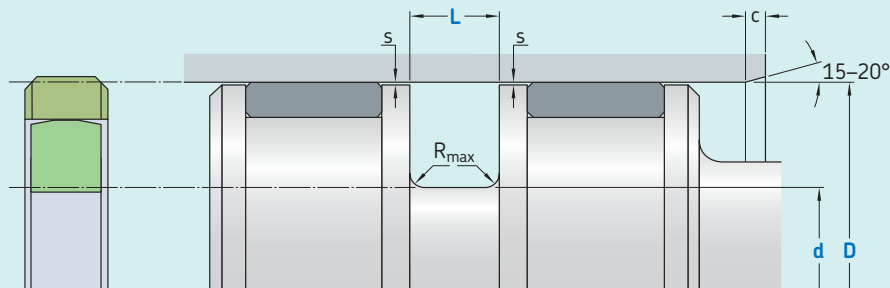
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|--------------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ X-ECOPUR | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR | MVQ 70 | -55 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | MVQ 70 | -55 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR H | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR H | MVQ 70 | -55 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | NBR 70 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | MVQ 70 | -55 | +100 | 5 | 600 (60) |
| ■ SKF Ecoflon 2 | NBR 70 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 2 | FPM 75 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | NBR 70 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | FPM 75 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | NBR 70 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | FPM 75 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecowear 1000 | NBR 70 | -30 | +90 | 5 | 400 (40) |
| ■ SKF Ecowear 1000 | MVQ 70 | -55 | +90 | 5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K08-DS



Ordering dimensions in **blue**

| | Surface roughness TPU/ PTFE | |
|-------------------------|-----------------------------|------------|
| | R_{tmax} | R_a |
| | μm | |
| Sliding surface | $\leq 2,5 / \leq 2^*$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$
 * Lower value valid for PTFE

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|--------------------------|--------------|--------|-------|-----------|------|------------------------------|---------|---------|---------|
| D | H9 | d | L | R_{max} | c | s^* | | | |
| over | incl. | h10 | + 0,2 | | | 100 bar | 200 bar | 400 bar | 600 bar |
| mm | | | | | | mm | | | |
| TPU and SKF Ecowear 1000 | | | | | | | | | |
| 15 | 50 | D – 10 | 5,0 | 0,3 | 4,0 | 0,50 | 0,40 | 0,30 | 0,20 |
| 50 | 60 | D – 15 | 7,5 | 0,4 | 5,0 | 0,50 | 0,40 | 0,30 | 0,20 |
| 60 | 200 | D – 20 | 10,0 | 0,4 | 6,0 | 0,70 | 0,50 | 0,40 | 0,20 |
| 200 | 300 | D – 25 | 12,5 | 0,4 | 8,5 | 0,80 | 0,60 | 0,50 | 0,30 |
| 300 | 530 | D – 30 | 15,0 | 0,8 | 10,0 | 0,90 | 0,70 | 0,60 | 0,30 |
| 530 | 680 | D – 35 | 17,5 | 1,2 | 13,0 | 1,00 | 0,80 | 0,70 | 0,30 |
| 680 | 1 500 | D – 40 | 20,0 | 1,2 | 15,0 | 1,10 | 0,90 | 0,80 | 0,40 |
| PTFE | | | | | | | | | |
| 15 | 50 | D – 10 | 5,0 | 0,3 | 4,0 | 0,40 | 0,30 | 0,20 | 0,10 |
| 50 | 60 | D – 15 | 7,5 | 0,4 | 5,0 | 0,50 | 0,30 | 0,20 | 0,10 |
| 60 | 200 | D – 20 | 10,0 | 0,4 | 6,0 | 0,60 | 0,40 | 0,25 | 0,15 |
| 200 | 300 | D – 25 | 12,5 | 0,4 | 8,5 | 0,60 | 0,40 | 0,25 | 0,15 |
| 300 | 530 | D – 30 | 15,0 | 0,8 | 10,0 | 0,70 | 0,50 | 0,30 | 0,20 |
| 530 | 680 | D – 35 | 17,5 | 1,2 | 13,0 | 0,80 | 0,60 | 0,50 | 0,20 |
| 680 | 1 500 | D – 40 | 20,0 | 1,2 | 15,0 | 1,00 | 0,70 | 0,60 | 0,30 |

* The extrusion gap referred to is valid up to 80 °C and valid for the side opposite to the pressure side; higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer

K08-DS
100 x 80 x 10
X-ECOPUR / SKF Ecorubber-1 or SKF Ecoflon 3 / SKF Ecorubber-1

Operating parameters

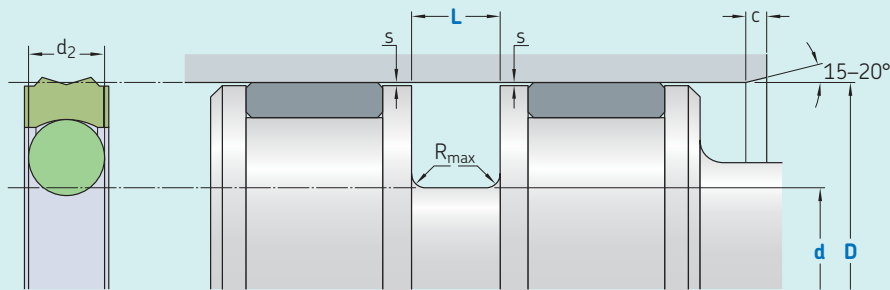
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|--------------------|-------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ X-ECOPUR | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR | ■ SKF Ecosil | -60 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ G-ECOPUR 54D | ■ SKF Ecosil | -60 | +110 | 5 | 600 (60) |
| ■ X-ECOPUR H | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR H | ■ SKF Ecosil | -60 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | ■ SKF Ecorubber-1 | -30 | +100 | 5 | 600 (60) |
| ■ X-ECOPUR S | ■ SKF Ecosil | -60 | +100 | 5 | 600 (60) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-1 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-2 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-1 | -30 | +100 | 10 | 600 (60) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-2 | -20 | +200 | 10 | 600 (60) |
| ■ SKF Ecowear 1000 | ■ SKF Ecorubber-1 | -30 | +90 | 5 | 400 (40) |
| ■ SKF Ecowear 1000 | ■ SKF Ecosil | -60 | +90 | 5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K08-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | | Maximal radial extrusion gap | | |
|---------------------|--------------|----------|-----------|-----|----------------|-------|------------------------------|---------|---------|
| D | d | L | R_{max} | c | d ₂ | s* | 20 bar | 100 bar | 250 bar |
| H9 over | incl. | + 0,2 | | | | | | | |
| mm | | | | | | | mm | | |
| 15 | 40 | D – 7,5 | 3,2 | 0,6 | 3,5 | 2,62 | 0,50 | 0,30 | 0,16 |
| 40 | 80 | D – 11,0 | 4,2 | 1,0 | 4,5 | 3,53 | 0,60 | 0,34 | 0,18 |
| 80 | 133 | D – 15,5 | 6,3 | 1,3 | 5,0 | 5,33 | 0,75 | 0,40 | 0,21 |
| 133 | 330 | D – 21,0 | 8,1 | 1,8 | 6,0 | 7,00 | 0,85 | 0,45 | 0,24 |
| 330 | 670 | D – 24,5 | 8,1 | 1,8 | 8,0 | 7,00 | 1,00 | 0,53 | 0,28 |
| 670 | 1 000 | D – 28,0 | 9,5 | 2,5 | 10,0 | 8,40 | 1,28 | 0,66 | 0,35 |
| 1 000 | 3 000 | D – 38,0 | 13,8 | 3,0 | 12,0 | 12,00 | 1,55 | 0,80 | 0,41 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material / Energizer

Piston seal K08-P
100 x 84,5 x 6,3
ECOPUR / NBR70

Operating parameters

| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | NBR 70 | -30 | +100 | 1 | 250 (25) |
| ■ ECOPUR LD | NBR 70 | -30 | +100 | 1 | 250 (25) |
| ■ G-ECOPUR | NBR 70 | -30 | +100 | 1 | 250 (25) |
| ■ H-ECOPUR | NBR 70 | -20 | +100 | 1 | 250 (25) |
| ■ S-ECOPUR | NBR 70 | -20 | +100 | 1 | 250 (25) |
| ■ T-ECOPUR | MVQ 70 | -50 | +100 | 1 | 250 (25) |

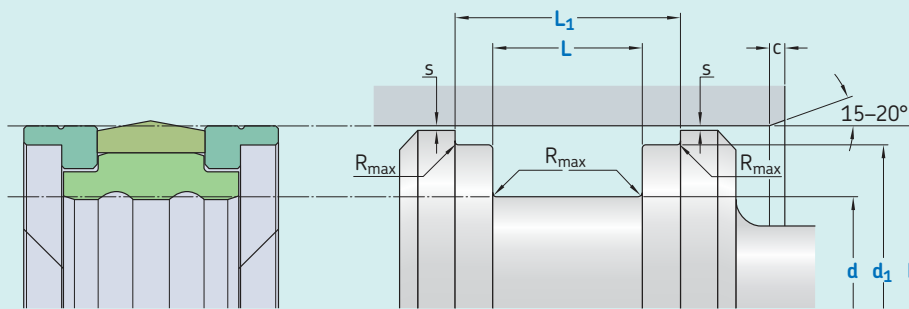
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.



K09-N



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface ≤ 2,5 0,05–0,2

Bottom of groove ≤ 6,3 ≤ 1,6

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | H9 | d | d_1 | L | L_1 | R_{max} | c | s^* |
|------------|------------|--------|-------|-------|-------|-----------|------|---------|
| over | incl. | h9 | h8 | + 0,2 | | | | 400 bar |
| mm | | | | | | | | |
| 20 | 50 | D – 10 | D – 3 | 12,5 | 20,5 | 0,4 | 4,0 | 0,35 |
| 50 | 80 | D – 15 | D – 4 | 20,0 | 28,0 | 0,4 | 5,0 | 0,52 |
| 80 | 150 | D – 20 | D – 5 | 25,0 | 36,0 | 0,4 | 6,0 | 0,65 |
| 150 | 400 | D – 25 | D – 6 | 32,0 | 46,0 | 0,4 | 8,5 | 0,78 |
| 400 | 600 | D – 30 | D – 8 | 36,0 | 50,0 | 0,4 | 10,0 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile

D x d/ d_1 x L/ L_1 [mm]

Sealing material / Energizer / Backup ring

Piston seal K09-N

100 x 80/95 x 25/36

ECOPUR / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecotal | -60 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecomid | -60 | +100 | 0,5 | 400 (40) |

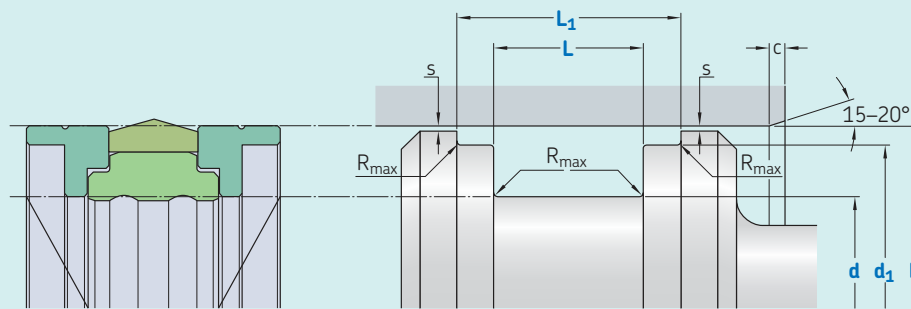
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K09-H



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface ≤ 2,5 0,05–0,2

Bottom of groove ≤ 6,3 ≤ 1,6

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | H9 | d | d_1 | L | L_1 | R_{max} | c | s^* |
|------------|------------|--------|-------|-------|-------|-----------|------|-----------|
| over | incl. | h9 | h8 | + 0,2 | | | | 1 500 bar |
| mm | | | | | | | | |
| 20 | 50 | D – 10 | D – 3 | 12,5 | 20,5 | 0,4 | 4,0 | 0,4 |
| 50 | 80 | D – 15 | D – 4 | 20,0 | 28,0 | 0,4 | 5,0 | 0,4 |
| 80 | 150 | D – 20 | D – 5 | 25,0 | 36,0 | 0,4 | 6,0 | 0,4 |
| 150 | 400 | D – 25 | D – 6 | 32,0 | 46,0 | 0,4 | 8,5 | 0,4 |
| 400 | 600 | D – 30 | D – 8 | 36,0 | 50,0 | 0,4 | 10,0 | 0,4 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile

D x d/ d_1 x L/ L_1 [mm]

Sealing material / Energizer / Back-up rings

Piston seal K09-H

100 x 80/95 x 25/36

ECOPUR / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up rings ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------------|-----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,3 | 1 500 (150) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,3 | 1 500 (150) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,3 | 1 500 (150) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,3 | 1 500 (150) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,3 | 1 500 (150) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,3 | 1 500 (150) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecotal | -60 | +100 | 0,3 | 1 500 (150) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecomid | -60 | +100 | 0,3 | 1 500 (150) |

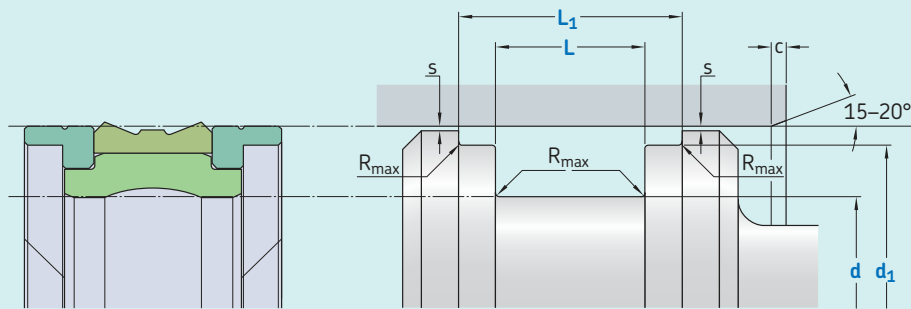
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K09-D



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface ≤ 2,5 0,05–0,2

Bottom of groove ≤ 6,3 ≤ 1,6

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | H9 | d | d_1 | L | L_1 | R_{max} | c | s^* |
|------------|------------|--------|-------|-------|-------|-----------|------|---------|
| over | incl. | h9 | h8 | + 0,2 | | | | 400 bar |
| mm | | | | | | | | |
| 20 | 50 | D – 10 | D – 3 | 12,5 | 20,5 | 0,4 | 4,0 | 0,35 |
| 50 | 80 | D – 15 | D – 4 | 20,0 | 28,0 | 0,4 | 5,0 | 0,52 |
| 80 | 150 | D – 20 | D – 5 | 25,0 | 36,0 | 0,4 | 6,0 | 0,65 |
| 150 | 400 | D – 25 | D – 6 | 32,0 | 46,0 | 0,4 | 8,5 | 0,78 |
| 400 | 600 | D – 30 | D – 8 | 36,0 | 50,0 | 0,4 | 10,0 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile

D x d/d₁ x L/L₁ [mm]

Sealing material / Energizer / Back-up ring

Piston seal K09-D

100 x 80/95 x 25/36

ECOPUR / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecotal | -60 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecomid | -60 | +100 | 0,5 | 400 (40) |

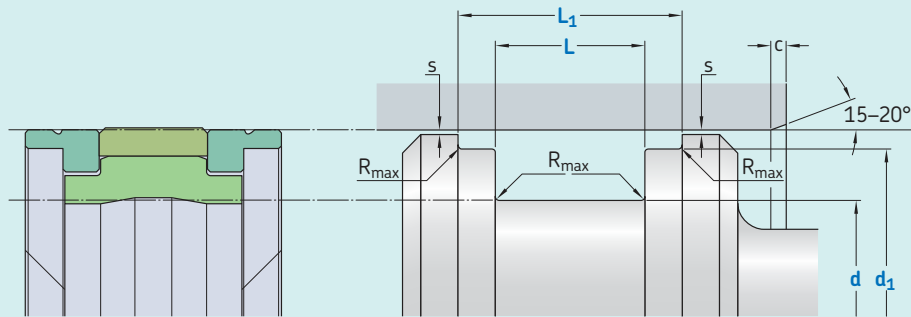
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

1) Surface speed limit values are valid only in the presence of a lubrication film.

2) Pressure ratings depend on the size of the extrusion gap.

3) Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K09-F



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface ≤ 2,5 0,05–0,2

Bottom of groove ≤ 6,3 ≤ 1,6

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | d_1 | L | L_1 | R_{max} | c | s^* | |
|------------|-------------|--------|-------|-------|-----------|-----|---------|------|
| H9 over | h9 incl. | h8 | + 0,2 | | | | 400 bar | |
| mm | | | | | | | | |
| 20 | 50 | D – 10 | D – 3 | 12,5 | 20,5 | 0,4 | 4,0 | 0,35 |
| 50 | 80 | D – 15 | D – 4 | 20,0 | 28,0 | 0,4 | 5,0 | 0,50 |
| 80 | 150 | D – 20 | D – 5 | 25,0 | 36,0 | 0,4 | 6,0 | 0,65 |
| 150 | 400 | D – 25 | D – 6 | 32,0 | 46,0 | 0,4 | 8,5 | 0,78 |
| 400 | 650 | D – 30 | D – 8 | 36,0 | 50,0 | 0,4 | 10,0 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile

D x d/ d_1 x L/ L_1 [mm]

Sealing material / Energizer / Back-up ring

Piston seal K09-F

100 x 80/95 x 25/36

SKF Ecoflon 3 / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-----------------|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ X-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR H | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR H | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR S | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR S | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1 | 400 (40) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 1,5 | 400 (40) |

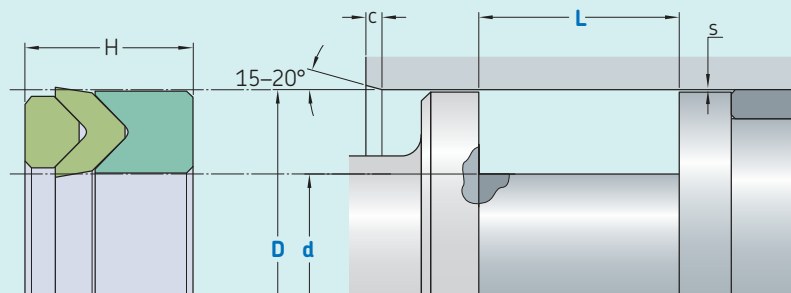
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K1012-T



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface $\leq 2,5$ $0,05-0,2$

Bottom of groove $\leq 6,3$ $\leq 1,6$

Groove face ≤ 15 ≤ 3

Bearing area: 50-95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|------------|--------|-----------|-----|---------|
| H9 over | incl. h10 | + 0,2 | | | 500 bar |
| mm | | | | | |
| 40 | 75 | D - 10 | 9,5 | 0,4 | 0,25 |
| 75 | 150 | D - 15 | 12,3 | 0,4 | 0,37 |
| | | D - 20 | 21,2 | 0,4 | 0,50 |
| 150 | 200 | D - 25 | 25,8 | 0,4 | 0,62 |
| 200 | 300 | D - 30 | 33,5 | 0,4 | 0,75 |
| 300 | | D - 40 | 41,5 | 0,4 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values

Ordering example

Profile

D x d x L [mm] / Numbers of chevrons

Support ring / Chevron / Pressure ring

Piston seal K1012-T

100 x 80 x 21,2 / 2

SKF Ecotal / ECOPUR / SKF Ecotal

Operating parameters

| Material Support ring ³⁾ K10-A | Chevron K11-T | Pressure ring ³⁾ K12-T | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---|-------------------|--------------------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR | ■ X-ECOPUR | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR LD | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR LD | ■ SKF Ecomid | -35 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | ■ SKF Ecoflon 2 | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-H | ■ SKF Ecoflon 2 | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-H | ■ SKF Ecopaek | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | ■ SKF Ecoflon 2 | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-3 | ■ SKF Ecoflon 2 | -50 | +150 | 0,5 | 250 (25) |

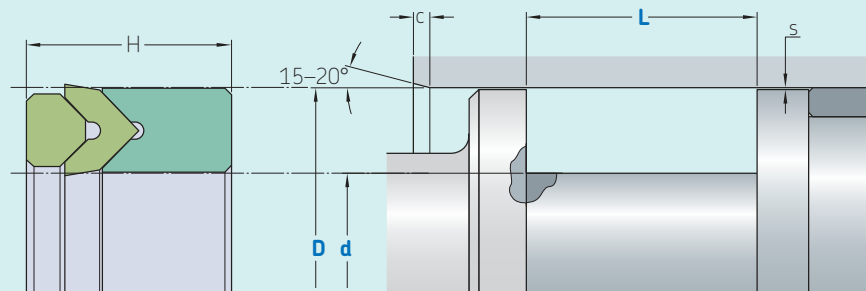
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

1) Surface speed limit values are valid only in the presence of a lubrication film.

2) Pressure ratings depend on the size of the extrusion gap.

3) Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K1012-M



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|---------------|-------|
| | μm | |

Sliding surface $\leq 2,5$ $0,05-0,2$

Bottom of groove $\leq 6,3$ $\leq 1,6$

Groove face ≤ 15 ≤ 3

Bearing area: 50-95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|------------|--------|-----------|-----|---------|
| H9 over | incl. | + 0,2 | | | 500 bar |
| mm | | | | | |
| 40 | 75 | D - 10 | 9,5 | 0,4 | 0,25 |
| 75 | 150 | D - 15 | 12,3 | 0,4 | 0,37 |
| | | D - 20 | 21,2 | 0,4 | 0,50 |
| 150 | 200 | D - 25 | 25,8 | 0,4 | 0,62 |
| 200 | 300 | D - 30 | 33,5 | 0,4 | 0,75 |
| 300 | | D - 40 | 41,5 | 0,4 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile

D x d x L [mm] / Numbers of chevrons

Support ring / Chevron / Pressure ring

Piston seal K1012-M

100 x 80 x 21,2 / 2

SKF Ecotal / ECOPUR / SKF Ecotal

Operating parameters

| Material Support ring ³⁾ K10-A | Chevron K11-M | Pressure ring ³⁾ K12-M | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---|-------------------|--------------------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR | ■ X-ECOPUR | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR LD | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR LD | ■ SKF Ecomid | -35 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | ■ SKF Ecoflon 2 | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-H | ■ SKF Ecoflon 2 | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-H | ■ SKF Ecopaek | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | ■ SKF Ecoflon 2 | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-3 | ■ SKF Ecoflon 2 | -50 | +150 | 0,5 | 250 (25) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

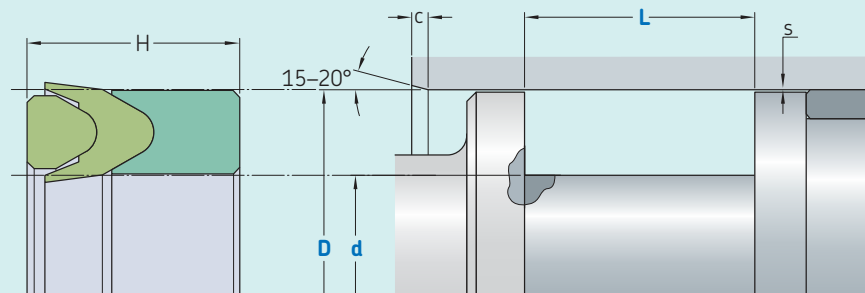
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K1315-T



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface ≤ 2,5 0,05–0,2

Bottom of groove ≤ 6,3 ≤ 1,6

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|------------|--------|-----------|-----|---------|
| H9 over | incl. | + 0,2 | | | 600 bar |
| mm | | | | | |
| 40 | 75 | D – 10 | 12,0 | 0,4 | 0,25 |
| 75 | 150 | D – 15 | 18,2 | 0,4 | 0,37 |
| | | D – 20 | 23,2 | 0,4 | 0,50 |
| 150 | 200 | D – 25 | 28,8 | 0,4 | 0,62 |
| 200 | 300 | D – 30 | 35,7 | 0,4 | 0,75 |
| 300 | | D – 40 | 43,2 | 0,4 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile

D x d x L [mm] / Numbers of chevrons

Support ring / Sealing material / Pressure ring

Piston seal K1315-T

100 x 80 x 23,8 / 2

SKF Ecotal / ECOPUR / SKF Ecotal

Operating parameters

| Material Support ring ³⁾ K13-T | Chevron K14-T | Pressure ring ³⁾ K15-T | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---|------------------|--------------------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecotal | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecotal | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ ECOPUR | ■ X-ECOPUR | -30 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ ECOPUR LD | ■ SKF Ecomid | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ ECOPUR LD | ■ SKF Ecomid | -35 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecotal | ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 600 (60) |
| ■ SKF Ecomid | ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 600 (60) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

skf.com | skf.com/seals

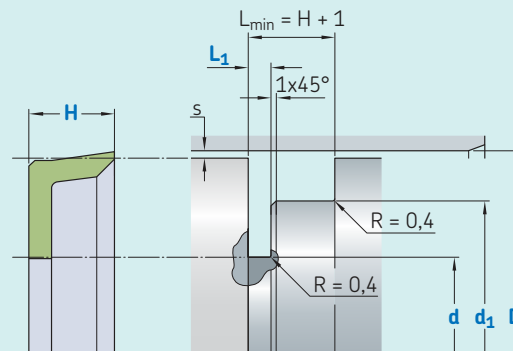
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PUB SE/P8 11846/3 EN · November 2019

K16-A



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|---------------|------------|
| | μm | |
| Sliding surface | $\leq 2,5$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

This is not a standard profile and serves as a replacement seal to fit existing housings. New constructions should use standard profiles.

Ordering example

Profile
 $D \times d/d_1 \times L_1/H$ [mm]
 Sealing material

Piston seal K16-A
 $58 \times 40/49 \times 3/12$
 ECOPUR

Operating parameters

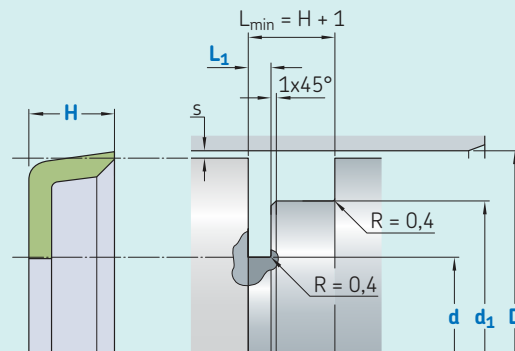
| Material Seal | Temperature | | Speed ¹⁾ linear max | Pressure ²⁾ linear max |
|-------------------|-------------|------|--------------------------------------|---|
| | from | to | | |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 0,5 | 160 (16) |
| ■ ECOPUR LD | -35 | +110 | 0,5 | 160 (16) |
| ■ G-ECOPUR | -30 | +110 | 0,5 | 160 (16) |
| ■ H-ECOPUR | -20 | +110 | 0,5 | 160 (16) |
| ■ S-ECOPUR | -20 | +110 | 0,5 | 160 (16) |
| ■ T-ECOPUR | -50 | +110 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-1 | -30 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | -25 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-2 | -20 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | -50 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecoflas | -10 | +200 | 0,5 | 160 (16) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K16-B



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|---------------|------------|
| | μm | |
| Sliding surface | $\leq 2,5$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

This is not a standard profile and serves as a replacement seal to fit existing housings. New constructions should use standard profiles.

Ordering example

Profile
 $D \times d/d_1 \times L_1/H$ [mm]
 Sealing material

Piston seal K16-B
 $58 \times 40/49 \times 3/12$
 ECOPUR

Operating parameters

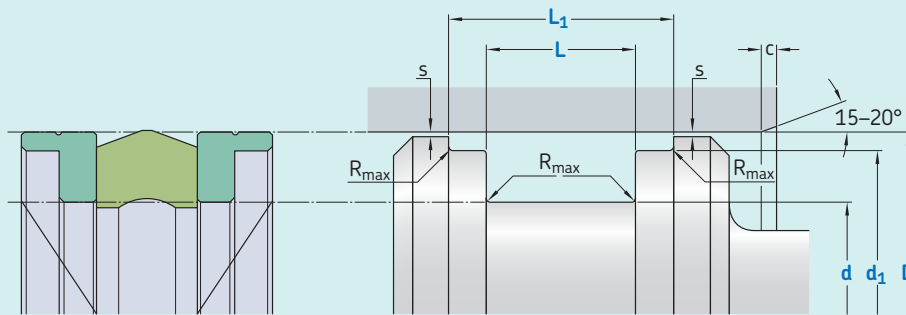
| Material Seal | Temperature | | Speed ¹⁾ linear max | Pressure ²⁾ linear max |
|-------------------|-------------|------|--------------------------------------|---|
| | from | to | | |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 0,5 | 160 (16) |
| ■ ECOPUR LD | -35 | +110 | 0,5 | 160 (16) |
| ■ G-ECOPUR | -30 | +110 | 0,5 | 160 (16) |
| ■ H-ECOPUR | -20 | +110 | 0,5 | 160 (16) |
| ■ S-ECOPUR | -20 | +110 | 0,5 | 160 (16) |
| ■ T-ECOPUR | -50 | +110 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-1 | -30 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | -25 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-2 | -20 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | -50 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecoflas | -10 | +200 | 0,5 | 160 (16) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K17-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface ≤ 2,5 0,05–0,2

Bottom of groove ≤ 6,3 ≤ 1,6

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | d_1 | L | L_1 | R_{max} | c | s^* | |
|------------|-------------|--------|-------|-------|-----------|-----|---------|------|
| H9 over | h9 incl. | h8 | + 0,2 | | | | 250 bar | |
| mm | | | | | | | | |
| 13 | 40 | D – 8 | D – 3 | 10 | 18 | 0,4 | 4,0 | 0,35 |
| 40 | 80 | D – 10 | D – 3 | 10 | 18 | 0,4 | 4,0 | 0,40 |
| 80 | 120 | D – 15 | D – 4 | 15 | 23 | 0,4 | 5,0 | 0,50 |
| 120 | 200 | D – 20 | D – 5 | 20 | 33 | 0,4 | 6,0 | 0,65 |
| 200 | 400 | D – 25 | D – 6 | 25 | 39 | 0,4 | 8,5 | 0,75 |
| 400 | 600 | D – 30 | D – 8 | 30 | 44 | 0,4 | 10 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d/ d_1 x L/ L_1 [mm]
 Sealing material / Back-up ring

Piston seal K17-P
 100 x 85/96 x 15/23
 ECOPUR / SKF Ecotal

Operating parameters

| Material Seal | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 250 (25) |
| ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 250 (25) |
| ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 250 (25) |
| ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 250 (25) |
| ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 250 (25) |
| ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 250 (25) |
| ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 250 (25) |
| ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 250 (25) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

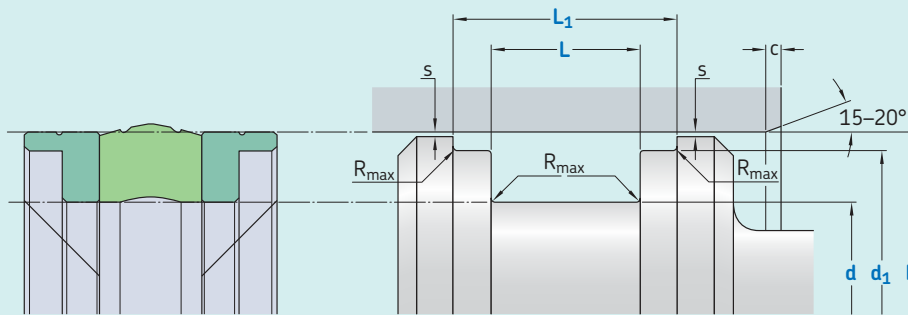
¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.



K17-R



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface $\leq 2,5$ $0,05-0,2$

Bottom of groove $\leq 6,3$ $\leq 1,6$

Groove face ≤ 15 ≤ 3

Bearing area: 50-95% and a cutting depth of $0,5 R_z$ based on $C_{ref} = 0\%$

Standard dimensions

| D | d | d_1 | L | L_1 | R_{max} | c | s^* | |
|------------|------------|--------|-------|-------|-----------|-----|---------|------|
| H9 | h9 | h8 | + 0,2 | | | | 250 bar | |
| over | incl. | | | | | | | |
| mm | | | | | | | | |
| 13 | 40 | D - 8 | D - 3 | 10 | 18 | 0,4 | 4,0 | 0,39 |
| 40 | 80 | D - 10 | D - 3 | 10 | 18 | 0,4 | 4,0 | 0,39 |
| 80 | 120 | D - 15 | D - 4 | 15 | 23 | 0,4 | 5,0 | 0,52 |
| 120 | 200 | D - 20 | D - 5 | 20 | 33 | 0,4 | 6,0 | 0,65 |
| 200 | 400 | D - 25 | D - 6 | 25 | 39 | 0,4 | 8,5 | 0,78 |
| 400 | 600 | D - 30 | D - 8 | 30 | 44 | 0,4 | 10,0 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d/ d_1 x L/ L_1 [mm]
 Sealing material / Back-up ring

Piston seal K17-R
100 x 85/96 x 15/23
 SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecoflon 2 | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecotal | -25 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecomid | -25 | +110 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | ■ SKF Ecopaek | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-2 | ■ SKF Ecoflon 2 | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 0,5 | 250 (25) |

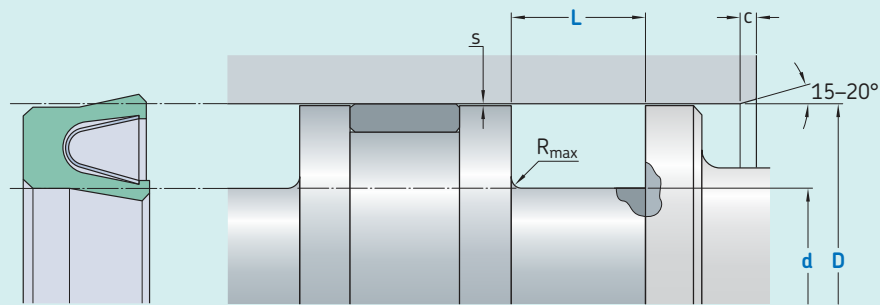
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K19-F



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | | |
|---------------------|--------------|----------|-----------|-----|-------|------------------------------|---------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | | | | | |
| H9 | h10 | + 0,2 | | | | 20 bar | 100 bar | 200 bar | 300 bar | 400 bar |
| over | incl. | | | | | mm | | | | |
| mm | | | | | | mm | | | | |
| 10 | 18 | D – 4,5 | 3,6 | 0,3 | 1,13 | 0,25 | 0,12 | 0,10 | 0,08 | 0,07 |
| 18 | 50 | D – 6,2 | 4,8 | 0,3 | 1,55 | 0,35 | 0,17 | 0,12 | 0,10 | 0,08 |
| 50 | 120 | D – 9,4 | 7,1 | 0,3 | 2,35 | 0,45 | 0,22 | 0,17 | 0,12 | 0,10 |
| 120 | 630 | D – 12,2 | 9,5 | 0,3 | 3,05 | 0,60 | 0,31 | 0,25 | 0,15 | 0,12 |
| 630 | 1 600 | D – 19,0 | 15,0 | 0,3 | 4,75 | 0,87 | 0,48 | 0,38 | 0,28 | 0,20 |






* Extrusion gap values shown above are valid for a temperature of 80 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Spring

Piston seal K19-F
 100 x 90,6 x 7,1
 SKF Ecoflon 3 / 1.4310

Operating parameters

| Material Seal | Spring | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|--|--------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
|  SKF Ecoflon 1 | 1.431 | -200 | +260 | 15 | 200 (20) |
|  SKF Ecoflon 2 | 1.431 | -200 | +260 | 15 | 400 (40) |
|  SKF Ecoflon 3 | 1.431 | -200 | +260 | 15 | 400 (40) |
|  SKF Ecoflon 4 | 1.431 | -200 | +260 | 15 | 400 (40) |
|  SKF Ecowear 1000 | 1.431 | -200 | +90 | 15 | 200 (20) |

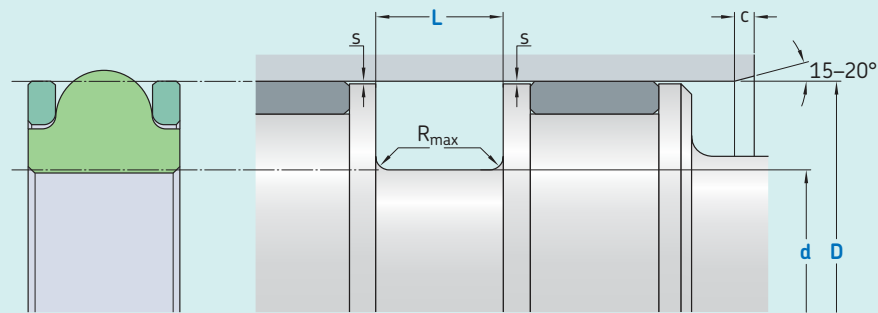
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.



K20-R



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|------------|
| | μm | |
| Sliding surface | $\leq 2,5$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | | L | R_{max} | c | s^* |
|------------|------------|------------|------------|-----------|------|-------|
| H9 | h9 | | +0,25 | | | |
| static | dynamic | | | | | |
| over | incl. | over | incl. | | | |
| mm | | | | | | |
| 8 | 100 | – | – | D – 2,70 | 4,5 | 0,2 |
| 100 | 150 | 8 | 20 | D – 4,36 | 6,5 | 0,2 |
| 150 | 250 | 20 | 40 | D – 6,00 | 7,4 | 0,4 |
| 250 | 400 | 40 | 100 | D – 9,06 | 10,1 | 0,4 |
| 400 | 600 | 100 | 300 | D – 11,88 | 12,8 | 0,4 |
| 600 | | 300 | 600 | D – 17,00 | 17,5 | 0,4 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Back-up ring

Piston seal K20-R
100 x 95,64 x 6,5
 SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 700 (70) |
| ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 700 (70) |
| ■ SKF Ecorubber-H | ■ SKF Ecoflon 2 | -25 | +150 | 0,5 | 700 (70) |
| ■ SKF Ecorubber-H | ■ SKF Ecotal | -25 | +100 | 0,5 | 700 (70) |
| ■ SKF Ecorubber-H | ■ SKF Ecomid | -25 | +110 | 0,5 | 700 (70) |
| ■ SKF Ecorubber-H | ■ SKF Ecopaek | -25 | +150 | 0,5 | 700 (70) |
| ■ SKF Ecorubber-2 | ■ SKF Ecoflon 2 | -20 | +200 | 0,5 | 700 (70) |
| ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 0,5 | 700 (70) |

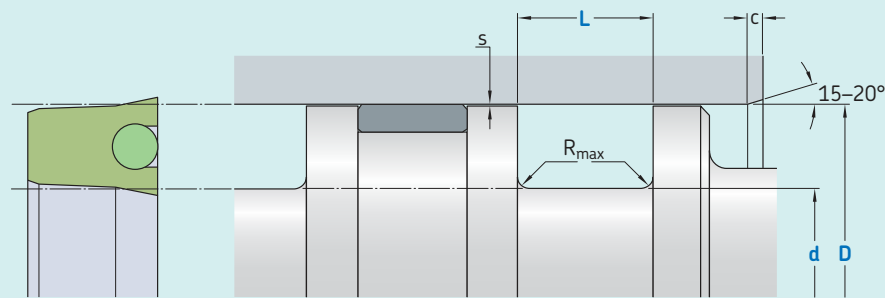
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K21-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|-------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | | | | |
| H9 | h10 | + 0,2 | | | | 20 bar | 100 bar | 200 bar | 400 bar |
| over | incl. | | | | | mm | | | |
| 13 | 25 | D – 8 | 6,0 | 0,4 | 3,5 | 0,33 | 0,18 | 0,11 | 0,05 |
| 25 | 50 | D – 10 | 7,0 | 0,4 | 4,0 | 0,37 | 0,22 | 0,16 | 0,10 |
| 50 | 75 | D – 12 | 8,0 | 0,4 | 4,5 | 0,42 | 0,27 | 0,20 | 0,14 |
| 75 | 150 | D – 15 | 10,0 | 0,4 | 5,0 | 0,46 | 0,31 | 0,25 | 0,19 |
| 150 | 300 | D – 20 | 12,0 | 0,4 | 6,0 | 0,54 | 0,39 | 0,32 | 0,26 |
| 300 | 500 | D – 25 | 18,0 | 0,4 | 8,5 | 0,61 | 0,46 | 0,39 | 0,33 |
| 500 | 600 | D – 30 | 20,0 | 0,4 | 10,0 | 0,67 | 0,52 | 0,45 | 0,39 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material / Energizer

Piston seal K21-P
100 x 85 x 10
ECOPUR / NBR 70

Operating parameters

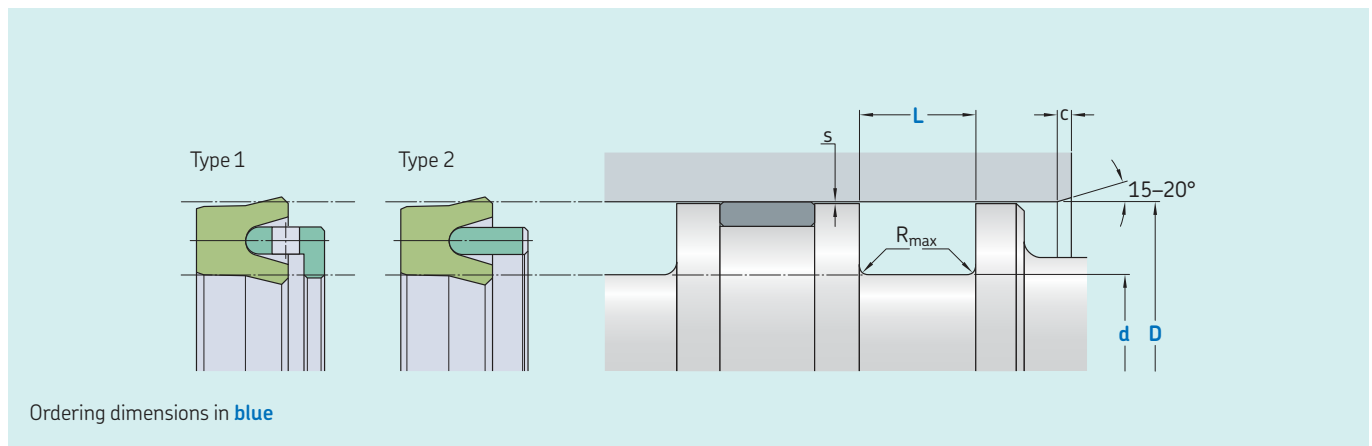
| Material Seal | Energizer | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-----------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | NBR 70 | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | NBR 70 | -20 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | NBR 70 | -20 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | MVQ 70 | -50 | +100 | 0,5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K22-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|------------|
| | μm | |
| Sliding surface | $\leq 2,5$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 200 bar | 400 bar |
| H9 | h10 | + 0,2 | | | | | | | |
| over | incl. | | | | | | | | |
| mm | | | | | | mm | | | |
| 14 | 25 | D – 8 | 6 | 0,4 | 3,5 | 0,33 | 0,18 | 0,11 | 0,05 |
| 25 | 50 | D – 10 | 7 | 0,4 | 4,0 | 0,37 | 0,22 | 0,16 | 0,10 |
| 50 | 75 | D – 12 | 8 | 0,4 | 4,5 | 0,42 | 0,27 | 0,20 | 0,14 |
| 75 | 150 | D – 15 | 10 | 0,4 | 5,0 | 0,46 | 0,31 | 0,25 | 0,19 |
| 150 | 300 | D – 20 | 12 | 0,4 | 6,0 | 0,54 | 0,39 | 0,32 | 0,26 |
| 300 | 500 | D – 25 | 18 | 0,4 | 8,5 | 0,61 | 0,46 | 0,39 | 0,33 |
| 500 | 600 | D – 30 | 20 | 0,4 | 10,0 | 0,67 | 0,52 | 0,45 | 0,39 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.
Standard: Type 2

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Support ring

Piston seal K22-P Type 1
100 x 85 x 10
 ECOPUR / SKF Ecotal

Operating parameters

| Material Seal | Support ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 400 (40) |
| ■ ECOPUR LD | ■ SKF Ecomid | -35 | +100 | 0,5 | 400 (40) |
| ■ G-ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 400 (40) |

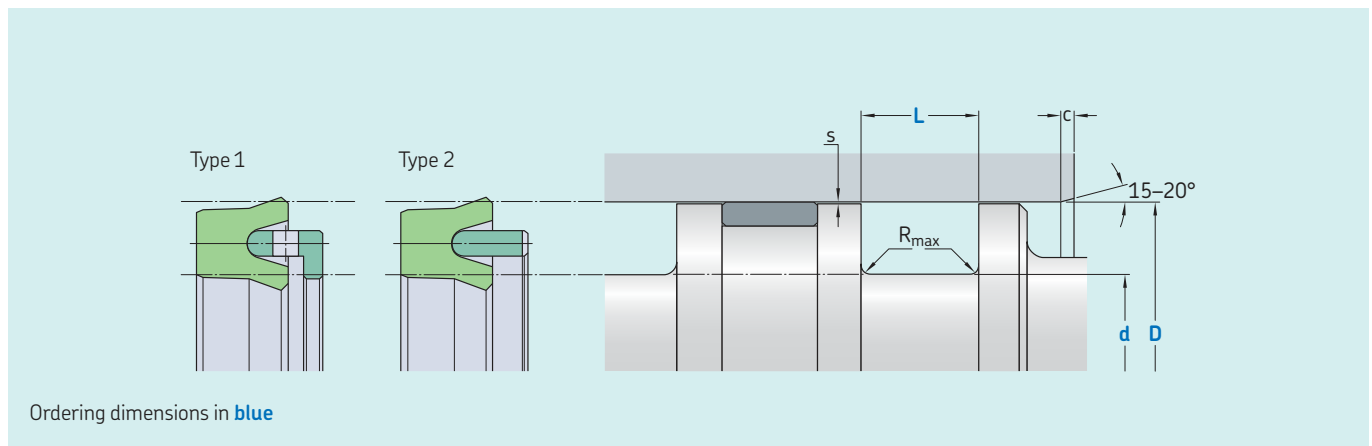
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K22-R



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|------------|
| | μm | |
| Sliding surface | $\leq 2,5$ | $0,05-0,2$ |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50-95% and a cutting depth of $0,5 R_z$ based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | |
|---------------------|------------|--------|-----------|-----|-------|------------------------------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 160 bar |
| H9 | h10 | + 0,2 | | | | | | |
| over | incl. | | | | | | | |
| mm | | | | | | mm | | |
| 14 | 25 | D - 8 | 6 | 0,4 | 3,5 | 0,23 | 0,16 | 0,14 |
| 25 | 50 | D - 10 | 7 | 0,4 | 4,0 | 0,26 | 0,19 | 0,17 |
| 50 | 75 | D - 12 | 8 | 0,4 | 4,5 | 0,29 | 0,22 | 0,20 |
| 75 | 150 | D - 15 | 10 | 0,4 | 5,0 | 0,31 | 0,24 | 0,22 |
| 150 | 300 | D - 20 | 12 | 0,4 | 6,0 | 0,34 | 0,27 | 0,25 |
| 300 | 500 | D - 25 | 18 | 0,4 | 8,5 | 0,37 | 0,30 | 0,29 |
| 500 | 600 | D - 30 | 20 | 0,4 | 10,0 | 0,40 | 0,34 | 0,32 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.
Standard: Type 2

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Support ring

Piston seal K22-R Type 1
100 x 85 x 10
 SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Support ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | from | to | max | max |
| | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | ■ SKF Ecoflon 2 | -25 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | ■ SKF Ecotal | -25 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-H | ■ SKF Ecomid | -25 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-2 | ■ SKF Ecoflon 2 | -20 | +200 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | ■ SKF Ecoflon 2 | -50 | +150 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | ■ SKF Ecotal | -40 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecorubber-3 | ■ SKF Ecomid | -40 | +100 | 0,5 | 160 (16) |
| ■ SKF Ecoflas | ■ SKF Ecoflon 2 | -10 | +200 | 0,5 | 160 (16) |

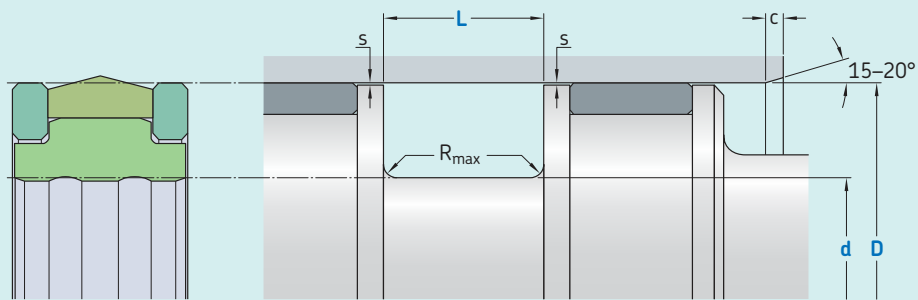
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

1) Surface speed limit values are valid only in the presence of a lubrication film.

2) Pressure ratings depend on the size of the extrusion gap.

3) Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K23-N



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface $\leq 2,5$ $0,05-0,2$

Bottom of groove $\leq 6,3$ $\leq 1,6$

Groove face ≤ 15 ≤ 3

Bearing area: 50-95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|------------|--------|-----------|-----|---------|
| H9 | h9 | + 0,2 | | | 400 bar |
| over | incl. | | | | |
| mm | | | | | |
| 20 | 50 | D - 10 | 12,5 | 0,4 | 0,35 |
| 50 | 80 | D - 15 | 20,0 | 0,4 | 0,52 |
| 80 | 150 | D - 20 | 25,0 | 0,4 | 0,65 |
| 150 | 400 | D - 25 | 32,0 | 0,4 | 0,78 |
| 400 | 600 | D - 30 | 36,0 | 0,4 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer / Back-up ring

Piston seal K23-N
100 x 80 x 25
 ECOPUR / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecotal | -60 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecomid | -60 | +100 | 0,5 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

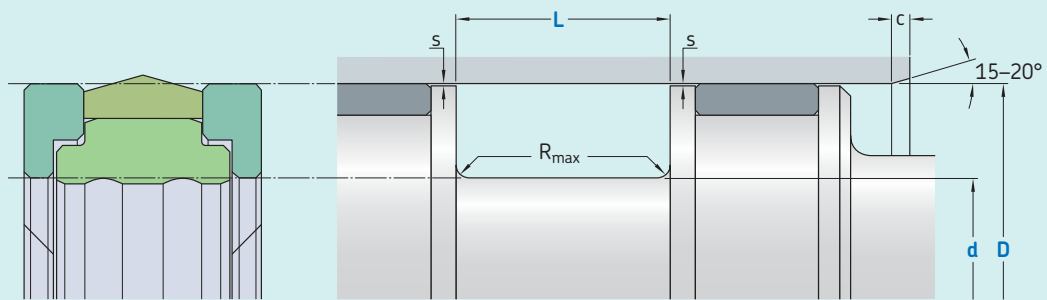
1) Surface speed limit values are valid only in the presence of a lubrication film.

2) Pressure ratings depend on the size of the extrusion gap.

3) Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.



K23-H



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface $\leq 2,5$ $0,05-0,2$

Bottom of groove $\leq 6,3$ $\leq 1,6$

Groove face ≤ 15 ≤ 3

Bearing area: 50–95% and a cutting depth of $0,5 R_z$ based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|------------|--------|-----------|-----|----------|
| H9 | h9 | + 0,2 | | | |
| over | incl. | | | | 1500 bar |
| mm | | | | | |
| 20 | 50 | D - 10 | 12,5 | 0,4 | 0,4 |
| 50 | 80 | D - 15 | 20,0 | 0,4 | 0,4 |
| 80 | 150 | D - 20 | 25,0 | 0,4 | 0,4 |
| 150 | 400 | D - 25 | 32,0 | 0,4 | 0,4 |
| 400 | 600 | D - 30 | 36,0 | 0,4 | 0,4 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer / Back-up ring

Piston seal K23-H
100 x 80 x 25
 ECOPUR / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,3 | 1 500 (150) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,3 | 1 500 (150) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,3 | 1 500 (150) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,3 | 1 500 (150) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,3 | 1 500 (150) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,3 | 1 500 (150) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecotal | -60 | +100 | 0,3 | 1 500 (150) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecomid | -60 | +100 | 0,3 | 1 500 (150) |

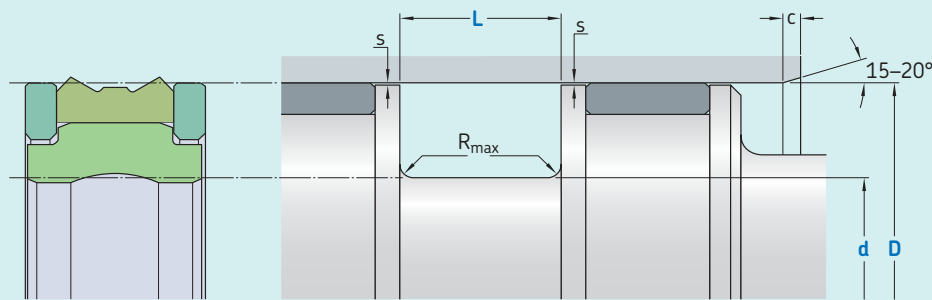
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K23-D



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------|------------|-------|
| | μm | |

Sliding surface $\leq 2,5$ $0,05-0,2$

Bottom of groove $\leq 6,3$ $\leq 1,6$

Groove face ≤ 15 ≤ 3

Bearing area: 50-95% and a cutting depth of $0,5 R_z$ based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|------------|--------|-----------|-----|---------|
| H9 | h9 | + 0,2 | | | 400 bar |
| over | incl. | | | | |
| mm | | | | | |
| 20 | 50 | D - 10 | 12,5 | 0,4 | 0,35 |
| 50 | 80 | D - 15 | 20,0 | 0,4 | 0,52 |
| 80 | 150 | D - 20 | 25,0 | 0,4 | 0,65 |
| 150 | 400 | D - 25 | 32,0 | 0,4 | 0,78 |
| 400 | 600 | D - 30 | 36,0 | 0,4 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer / Back-up ring

Piston seal K23-D
100 x 80 x 25
 ECOPUR / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ H-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 0,5 | 400 (40) |
| ■ S-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecotal | -60 | +100 | 0,5 | 400 (40) |
| ■ T-ECOPUR | ■ SKF Ecosil | ■ SKF Ecomid | -60 | +100 | 0,5 | 400 (40) |

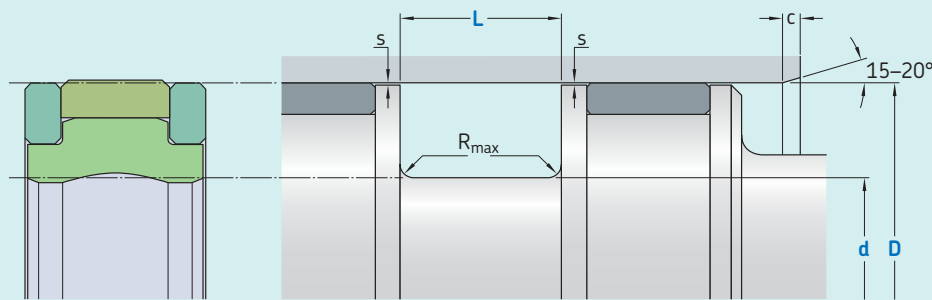
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K23-F



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* |
|------------|------------|--------|-----------|-----|---------|
| H9 | h9 | + 0,2 | | | 400 bar |
| over | incl. | | | | |
| mm | | | | | |
| 20 | 50 | D – 10 | 12,5 | 0,4 | 0,35 |
| 50 | 80 | D – 15 | 20,0 | 0,4 | 0,50 |
| 80 | 150 | D – 20 | 25,0 | 0,4 | 0,65 |
| 150 | 400 | D – 25 | 32,0 | 0,4 | 0,78 |
| 400 | 750 | D – 30 | 36,0 | 0,4 | 1,00 |
| 750 | | D – 40 | 40,0 | 0,4 | 1,00 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm]
 Sealing material / Energizer / Back-up ring

Piston seal K23-F
100 x 80 x 25
SKF Ecoflon 3 / SKF Ecorubber-1 / SKF Ecotal

Operating parameters

| Material Seal | Energizer | Back-up ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-----------------|-------------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ X-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR H | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR H | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR S | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1 | 400 (40) |
| ■ X-ECOPUR S | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1 | 400 (40) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 2 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 3 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +200 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-1 | ■ SKF Ecotal | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-1 | ■ SKF Ecomid | -30 | +100 | 1,5 | 400 (40) |
| ■ SKF Ecoflon 4 | ■ SKF Ecorubber-2 | ■ SKF Ecopaek | -20 | +100 | 1,5 | 400 (40) |

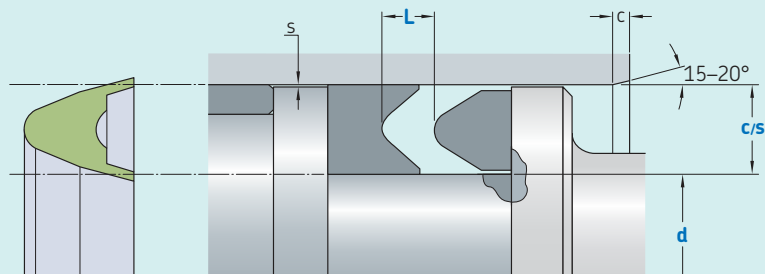
IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

K24-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|------------|
| | μm | |
| Sliding surface | $\leq 2,5$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

Minimum nominal inside diameter
 $d \geq 22 \text{ mm}$.

This is not a standard profile and serves as a replacement seal to fit existing housings. New constructions should use standard profiles.

Ordering example

Profile
 $d \times c/s \times L$
Sealing material

Piston seal K24-P
80 x 10 x 4
ECOPUR

Operating parameters

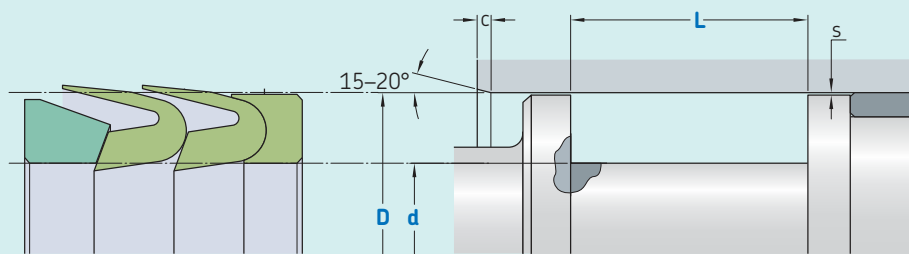
| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|-------------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 0,5 | 500 (50) |
| ■ ECOPUR LD | -35 | +110 | 0,5 | 500 (50) |
| ■ G-ECOPUR | -30 | +110 | 0,5 | 500 (50) |
| ■ H-ECOPUR | -20 | +110 | 0,5 | 500 (50) |
| ■ S-ECOPUR | -20 | +110 | 0,5 | 500 (50) |
| ■ T-ECOPUR | -50 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | -30 | +100 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-H | -25 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-2 | -20 | +200 | 0,5 | 250 (25) |
| ■ SKF Ecorubber-3 | -50 | +150 | 0,5 | 250 (25) |
| ■ SKF Ecoflas | -10 | +200 | 0,5 | 250 (25) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

K32-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|------------|
| | μm | |
| Sliding surface | $\leq 2,5$ | 0,05–0,2 |
| Bottom of groove | $\leq 6,3$ | $\leq 1,6$ |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

Standard dimensions

| D | d | L | R_{max} | c | s^* | |
|------------|------------|-----------|-----------|-----|---------|-----------|
| H9 | h10 | +0,2 | | | 500 bar | |
| over | incl. | | | | | |
| mm | | | | | | |
| 25 | 25 | D – 12 | 24,0 | 0,4 | 4,5 | 0,60 |
| 44 | 44 | D – 15 | 29,0 | 0,4 | 5,0 | 0,38 |
| 44 | 100 | D – 20 | 38,0 | 0,4 | 6,0 | 0,50 |
| 100 | 150 | D – 25 | 47,5 | 0,4 | 8,5 | 0,63 |
| 150 | 250 | D – 30/35 | 57,0 | 0,4 | 10,0 | 0,75/0,88 |
| 250 | 500 | D – 40/45 | 76,0 | 0,4 | 13,0 | 1,00/1,13 |
| 500 | | D – 50 | 95,0 | 0,4 | 16,0 | 1,25 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
 D x d x L [mm] / Numbers of chevrons
 Support ring / Chevron / Pressure ring

Piston seal K32-P
100 x 75 x 47,5 / 2
 SKF Ecotal / ECOPUR / SKF Ecotal

Operating parameters

| Material Pressure ring ³⁾ | Chevron | Support ring ³⁾ | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---|-------------|----------------------------|-------------|------|---------------------|------------------------|
| | | | from | to | max | max |
| | | | °C | | m/s | bar (MPa) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ ECOPUR | ■ X-ECOPUR | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR | ■ X-ECOPUR | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR | ■ SKF Ecomid | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ ECOPUR LD | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ ECOPUR LD | ■ SKF Ecomid | -35 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ G-ECOPUR | ■ G-ECOPUR 54D | -30 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ H-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ X-ECOPUR H | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ H-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ S-ECOPUR | ■ SKF Ecotal | -20 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ X-ECOPUR S | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ S-ECOPUR | ■ SKF Ecomid | -20 | +110 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecotal | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecorubber-1 | ■ T-ECOPUR | ■ SKF Ecomid | -30 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecotal | ■ T-ECOPUR | ■ SKF Ecotal | -50 | +100 | 0,5 | 500 (50) |
| ■ SKF Ecomid | ■ T-ECOPUR | ■ SKF Ecomid | -40 | +110 | 0,5 | 500 (50) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.

³⁾ Size limitation D: Up to 260 mm SKF Ecotal, from 260 – 400 mm SKF Ecotal or SKF Ecomid and above 400 mm SKF Ecomid.

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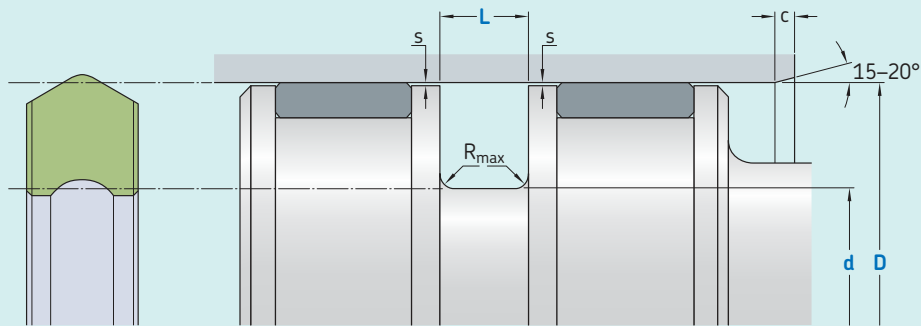
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K35-P



Ordering dimensions in **blue**

| Surface roughness | R_{tmax} | R_a |
|-------------------------|------------|----------|
| | μm | |
| Sliding surface | ≤ 2,5 | 0,05–0,2 |
| Bottom of groove | ≤ 6,3 | ≤ 1,6 |
| Groove face | ≤ 15 | ≤ 3 |

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on $C_{ref} = 0\%$

| Standard dimensions | | | | | | Maximal radial extrusion gap | | | |
|---------------------|--------------|-------|-----------|-----|-------|------------------------------|---------|---------|---------|
| D | d | L | R_{max} | c | s^* | 20 bar | 100 bar | 200 bar | 400 bar |
| H9 over | incl. | + 0,2 | | | | | | | |
| mm | | | | | | mm | | | |
| 10 | 20 | D-5 | 4,0 | 0,4 | 2,0 | 0,31 | 0,16 | 0,08 | 0,03 |
| 20 | 40 | D-6 | 4,5 | 0,4 | 3,0 | 0,33 | 0,18 | 0,10 | 0,05 |
| 40 | 60 | D-8 | 5,5 | 0,4 | 3,5 | 0,33 | 0,18 | 0,10 | 0,05 |
| 60 | 100 | D-10 | 6,5 | 0,4 | 4,0 | 0,37 | 0,23 | 0,15 | 0,10 |
| 100 | 150 | D-15 | 9,5 | 0,4 | 5,0 | 0,46 | 0,33 | 0,25 | 0,18 |
| 150 | 300 | D-20 | 12,5 | 0,4 | 6,0 | 0,54 | 0,38 | 0,33 | 0,25 |
| 300 | 500 | D-25 | 15,0 | 0,4 | 8,5 | 0,61 | 0,45 | 0,40 | 0,33 |
| 500 | 700 | D-30 | 17,5 | 0,4 | 10,0 | 0,67 | 0,50 | 0,45 | 0,40 |
| 700 | 1 250 | D-40 | 22,0 | 0,4 | 13,0 | 0,77 | 0,50 | 0,45 | 0,40 |
| 1 250 | 2 000 | D-50 | 27,0 | 0,4 | 15,0 | 0,87 | 0,60 | 0,50 | 0,40 |
| 2 000 | 4 000 | D-60 | 32,0 | 0,4 | 18,0 | 0,97 | 0,70 | 0,50 | 0,40 |

* Extrusion gap values shown above are valid for a temperature of 70 °C, higher temperatures require lower values.

Ordering example

Profile
D x d x L [mm]
Sealing material

Piston seal K35-P
100 x 85 x 9,5
ECOPUR

Operating parameters

| Material Seal | Temperature | | Speed ¹⁾ | Pressure ²⁾ |
|---------------|-------------|------|---------------------|------------------------|
| | from | to | max | max |
| | °C | | m/s | bar (MPa) |
| ■ ECOPUR | -30 | +110 | 0,4 | 400 (40) |
| ■ ECOPUR LD | -35 | +110 | 0,4 | 400 (40) |
| ■ G-ECOPUR | -30 | +110 | 0,4 | 400 (40) |
| ■ H-ECOPUR | -20 | +110 | 0,4 | 400 (40) |
| ■ S-ECOPUR | -20 | +110 | 0,4 | 400 (40) |
| ■ T-ECOPUR | -50 | +110 | 0,4 | 400 (40) |

IMPORTANT NOTE: The stated operating conditions represent general indications. It is recommended not to use all maximum values simultaneously.

¹⁾ Surface speed limit values are valid only in the presence of a lubrication film.

²⁾ Pressure ratings depend on the size of the extrusion gap.