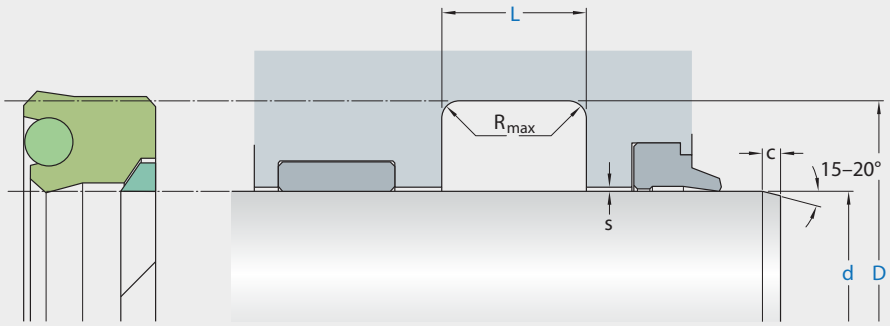
S04-PD



Ordering dimensions in blue

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

Bearing area: 50–95% and a cutting depth of0,5 R_z based on C_{ref} = 0%

application

not bolded symbols; please consult our technical for application limitations

Standard dimensions d f8 over	incl.	D H10	L +0,2	R_{max}	c	Maximal radial extrusion gap s[1] 20 bar	100 bar	400 bar	700 bar
mm						mm			
16	25	d + 8	6,3	0,4	3,5	0,80	0,80	0,30	0,04
25	50	d + 10	8,0	0,4	4,0	1,00	1,00	0,37	0,04
50	150	d + 15	10,0	0,4	5,0	1,50	1,47	0,46	0,05
150	300	d + 20	14,0	0,4	6,0	2,00	1,77	0,54	0,06
300	500	d + 25	17,0	0,4	8,5	2,50	2,06	0,62	0,06
500	600	d + 30	25,0	0,4	10,0	3,00	2,43	0,76	0,06
600	1000	d + 40	32,0	0,4	13,0	3,00	2,43	0,76	[2]
1000	1600	d + 50	40,0	0,4	15,0	3,00	2,43	0,76	[2]

[1] Extrusion gap values shown above are valid fora temperature of 70 °C, higher temperatures require lower values.
[2] Please contact SKF.

operating parameters & material

diameter range: up to 600 mm

material			temperature	max. surface speed	max. pressure [1]	hydrolysis	dry running	wear resistance
sealing element	energizer	back-up ring						
ECOPUR	Ecorubber 1	Ecotal/Ecomid [2]	-30 °C ... +100 °C	0,5 m/s	700 bar (70 MPa)	-	+	+
H-ECOPUR	Ecorubber 1	Ecotal/Ecomid [2]	-20 °C ... +100 °C	0,5 m/s	700 bar (70 MPa)	-	+	+
T-ECOPUR	Ecorubber 1	Ecotal/Ecomid [2]	-30 °C ... +100 °C	0,5 m/s	700 bar (70 MPa)	-	+	+
S-ECOPUR	Ecorubber 1	Ecotal/Ecomid [2]	-20 °C ... +100 °C	0,7 m/s	700 bar (70 MPa)	-	+	+
G-ECOPUR	Ecorubber 1	Ecotal/Ecomid [2]	-30 °C ... +100 °C	0,5 m/s	700 bar (70 MPa)	-	+	+

the stated operation conditions represent general indications. it is recommended not to use all maximum values simultaneously.
surface speed limits apply only to the presence of adequate lubrication film.

[1] pressure ratings are dependent on the size of the extrusion gap.

[2] Ecotal up to ø260 mm, Ecomid above ø260 mm.

++ ... particularly suitable
o ... conditional suitable
+ ... suitable
- ... not suitable

for detailed information regarding chemical resistance please refer to our „list of resistance". for increased chemical and thermal resistance rubber materials are to be preferred, attention should be paid to restrictions for pressure range and wear resistance. for higher gliding speeds another system should be used (e.g. PTFE materials).

note on special materials:

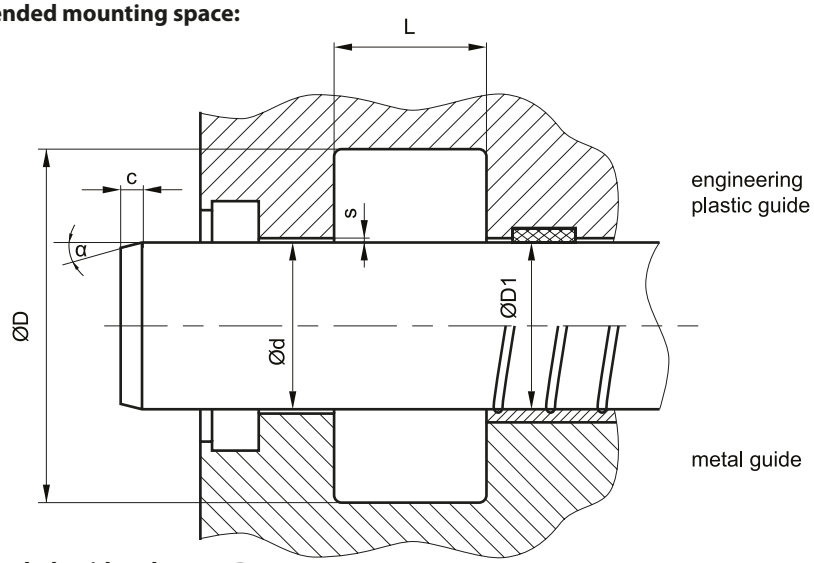
materials such as Viton, Silicone, EPDM, H-NBR, etc. can also be used for the preload element, but they are only useful in specific cases (temperature or chemical influences). the temperature limits are also determined by the supporting element; using special material can expand the temperature range.

mode of installation

for inside diameters of 25 mm or more, and dependant on the radial cross section (cs), the seal can be snapped into the housing

Ød	type of installation
≤ 6•cs	open mounting space required
> 6•cs .....≤ 10•cs	snap mounting with tool
> 10•cs	snap mounting by hand

recommended mounting space:



recommended guide tolerance D1:

d f8 [mm]	p ≤ 100 [bar]	100 < p ≤ 200 [bar]	p > 200 [bar]
≤ 100	H10	H8	H8
> 100 ≤ 200	H10	H8	H7
>200	H9	H8	H7

insertion chamfer:

in order to avoid damage to the rod seal during installation, the piston rod is to be chamfered and rounded as shown in the "recommended mounting space" drawing. the size of chamfer depends on the seal type and profile width.

cs (mm)	c (mm)	
	α = 15° ... 20°	α = 20° ... 30°
4	3,5	2
5	4	2,5
6	4,5	3
7,5	5	4
10	6	5
12,5	8,5	6,5
15	10	7,5
20	13	10