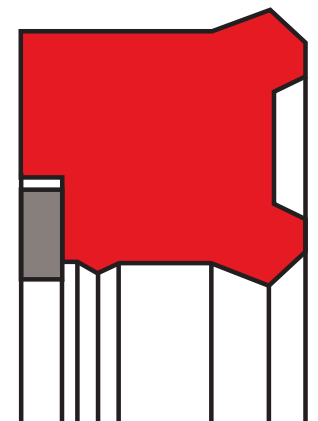


rod seal S76

seal spec



description

the rod seal S76 is designed for small grooves. it is thus particularly suitable for use in space-saving designs. for large gaps and high pressure peaks, the rod seal S76 has an integrated back up ring. this seal has two sealing lips in the dynamic sealing zone. this shape with two sealing lips provides an improvement in the leakage behaviour at low system pressures. due to the incorporation of an oil trap between the two sealing lips, friction at pressures above approx. 10 Mpa is reduced. furthermore, the second sealing lip prevents the entry of dirt from the atmosphere side.

the rod seal S76 with symmetrical sealing lips which are cut at an angle of less than 45°. there is a second seal lip on the inner diameter and the seal unit has an integrated support ring.

application



not bolded symbols; please consult our technical for application limitations

category of profile

machined or molded/standard/trade product.

single acting

the S76 seal is designed for use as a rod seal.

area of application: hydraulics

hydraulics, reciprocating movements.

function

the S74 is a single function piston rod seal in the form of a U-ring. the symmetrical seal lips and the excellent material characteristics of polyurethane guarantee effective sealing at low and zero pressure as well as high pressure loads and a particularly long service life. due to the second seal lip which provides even greater effectiveness of the sealing function, it is particularly well-suited for positioning work in hydraulics. the semi-active support ring on the inner diameter protects against fission extrusion.

media

hydraulic oils acc. DIN 51524/51525, lubricating oils, mineral oil based lubricating fats, non-flammable hydraulic fluids HFA, HFB, HFC acc. VDMA 24317.

operating parameters & material

material		temperature	max. surface speed	max. pressure ¹
sealing element	back-up ring			
s-mart PU	s-mart POM / s-mart PA ²	-30 °C ... +80 °C	0,5 m/s	400 bar (40 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 POM up to ø260 mm, PA above ø260 mm.

**surface quality**

surface roughness	Rtmax [μm]	Ra [μm]
mating surface	0.63 - 2.50	0.05 - 0.20
	0,40 - 1,60	
groove surface	< 16	< 1.6

tolerance recommendation

seal housing tolerances	
$\varnothing d$	h11
$\varnothing D$	H11

fitting & installation

the S76, from an inner diameter of 25mm and a thin profile, can always be installed in cut housing. due to the high tensile resistance of polyurethane, it is necessary to use installation tools for thick seals. with an inner diameter of less than 25mm, we recommend axially accessible housing.

to push the cylinder head and seal over the piston rod without damaging it, an lead-in chamfer C acc. to the following table is required:

cs	C
4	2
5	2,5
7,5	4
10	5
12,5	6,5
15	7,5
20	10
25	10

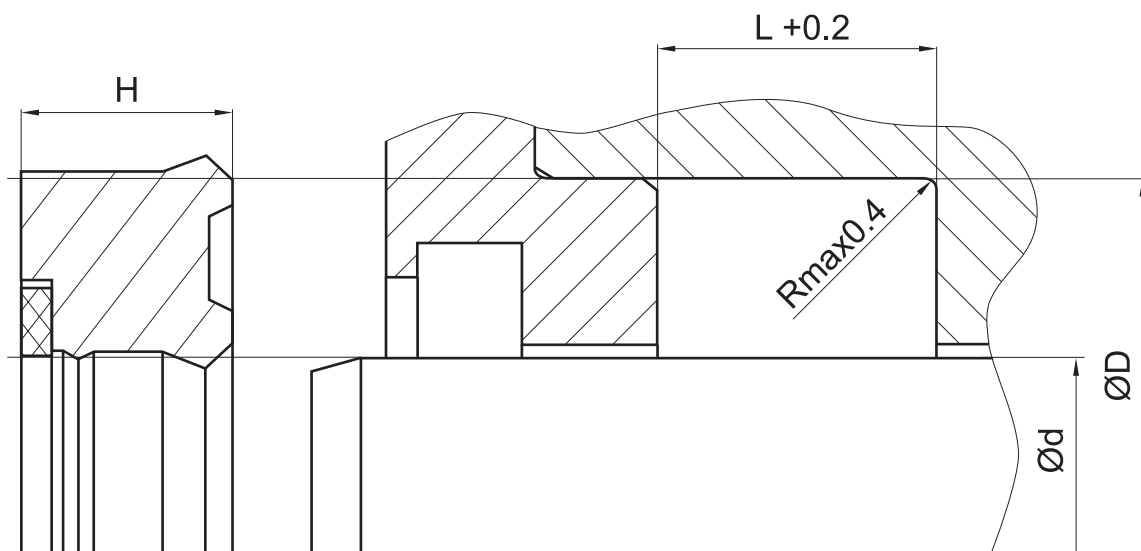
gap dimension

the service life of the seal is lengthened if the housing is provided with a metallic fitting on the side opposite the pressure. within the operating parameters given above, depending on pressure, a metallic wedge can be fitted between the cylinder head and piston rod acc. to the following table:

operating pressure (MPa)	safe extrusion gap (mm)
5	1
10	0,8
20	0,6
30	0,5
40	0,4

seal & housing recommendations

please note that we are able to produce those profiles to your specific need or any non standard housing. for detail measurements, please see seal-mart catalog...



don't hesitate to contact our technical department for further information or for special requirements (temperature, speed etc.), so that suitable materials and/or designs can be recommended.