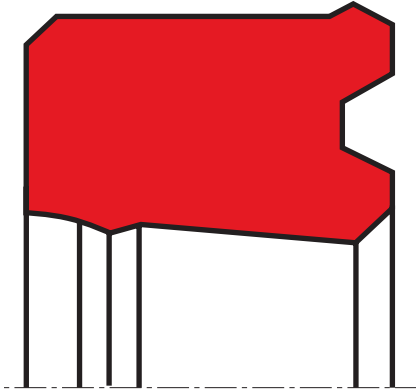


## rod seal S08-SB

## seal spec



### description

the S08-SB is a double lip seal in a compact design.

the compact S08-SB is designed for small grooves. it is thus particularly suitable for use in space-saving designs. the compact form provides a high sealing effect even with low system pressures.

the S08-SB has two sealing lips in the dynamic sealing zone. the compact form 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.

rod and piston rod seal with symmetrical seal lips which are cut at an angle of less than 45°.

there is a second seal lip on the inner diameter.

### application



not bolded symbols; please consult our technical for application limitations

### category of profile

machined or molded/standard/trade product.

### single acting

the S08-SB seal is designed for use as a rod seal.

### area of application: hydraulics

hydraulics & reciprocating movements.

### function

the S08-SB is a single function piston rod in the form of a compact U-ring. its design and the excellent material characteristics of polyurethane guarantee effective sealing at low and zero pressures as well as high pressure loads and a particularly long service life. due to the second seal lip which provides even greater effectivity of the sealing function, it is particularly well-suited for positioning work in hydraulics.

### method of operation

the sealing effect of the U-Cup comes from the intrinsic preload of the seal body and from the compression of the seal lips during installation. in operating condition, the radial mechanical contact forces are superimposed by the system pressure.

at low stroke speeds, U-Cups can tend to have a stick-slip effect due to an inadequate lubrication film formation in the seal clearance and to their material properties. this behaviour corresponds to the Stribeck curve described in okey the relevant literature.

### advantages

- good sealing effect at high and low pressures
- good abrasion resistance, wear-resistant
- unaffected by sudden loads
- suitable for small grooves
- simple installation.

**operating parameters & material**

material	temperature	max. surface speed	max. pressure <sup>1</sup>
s-mart PU (92 shore A)	-40°C ... + 100°C	≤ 0.5 m/s	400 bar (40 MPa)
s-mart PU (93 shore A)	-35°C ... + 110°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.

<sup>1</sup> pressure ratings are dependent on the size of the extrusion gap.

**media**

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

**surface quality**

surface roughness	material	Rtmax [μm]	Rz DIN [μm]	Ra [μm]
mating surface	PTFE + .....	0.63 - 2.50	0.40 - 1.60	0.05 - 0.20
	PU & Rubber	1.00 - 4.00	0.63 - 2.50	0.10 - 0.40
groove surface		< 16	< 10.0	< 1.6

**tolerance recommendation**

seal housing tolerances	
Ød	f8/h9
ØD	H10

**fitting & installation**

the S08-SB, 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 seal. 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

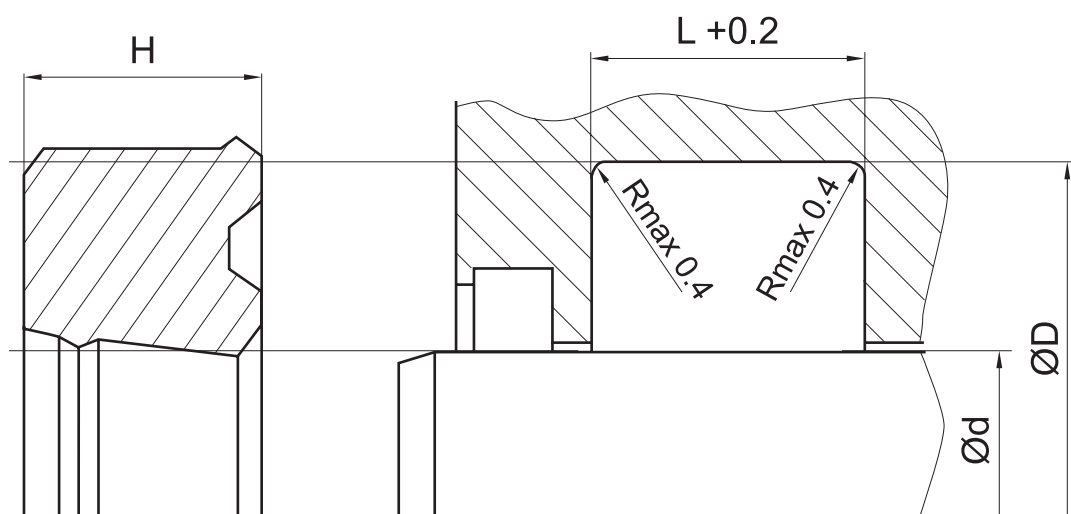
**gap dimension**

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 the 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	0,6
10	0,5
20	0,35
30	0,3
40	0,25

**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.*