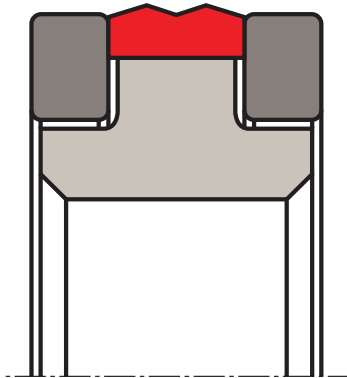


# piston seal K23-SA

## seal spec



### description

the K23-SA Seal is a high-pressure heavy-duty piston seal with excellent leakage control and superior extrusion and wear resistance.

the K23-SA seal is a combination of a polyurethane slipper seal energised by an elastomer profile ring and completed with two Back-up rings (POM). it is manufactured with a predefined interference fit, which together with the squeeze of the elastomer part ensures a good sealing effect even at low system pressure. at higher pressures the elastomer part is energised by the system pressure and consequently activates the slipper seal in the radial direction.

the Back-up rings prevent the slipper seal from extrusion and ensure a long service life even under harsh conditions.

### application



not bolded symbols; please consult our technical for application limitations

### category of profile

machined or molded/standard/trade product.

### double acting

the K23-SA seal is designed for use as a piston seal.

### area of application: hydraulics

the K23-SA seal is the recommended sealing element for double acting pistons of hydraulic cylinders working in very harsh conditions such as:

- excavators
- heavy duty cylinders

### advantages

- simple groove design
- excellent sealing effect
- excellent wear resistance
- increased clearance possible
- long service life

### operating parameters & material

for hydraulic components in mineral oils or medium with good lubricating performance.

material			temperature	max. surface speed	max. pressure <sup>1</sup>
sealing element	energizer	back-up ring			
s-mart PU (93 Shore A)	s-mart NBR (80 Shore A)	s-mart POM <sup>2</sup>	-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.

<sup>2</sup> POM up to ø260 mm, PA above ø260 mm

### gap dimension

the largest gap dimension occurring on the non-pressurised side of the seal in operation is of vital importance for the function of the seal.

**surface quality**

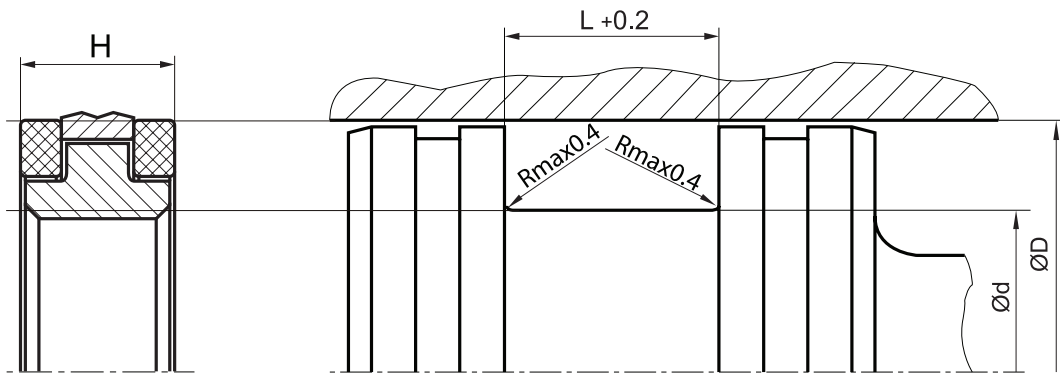
surface roughness	material	Rtmax [μm]	Rz DIN [μm]	Ra [μm]
mating surface	PTFE + .....	0.63 - 2.50	0.40 - 1.60	0.05 - 0.20
	PU & Rubber	1.00 - 4.00	0.63 - 2.50	0.10 - 0.40
groove surface		< 16	< 10.0	< 1.6

**tolerance recommendation****seal housing tolerances**

Ød	h9
ØD	H9

**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.