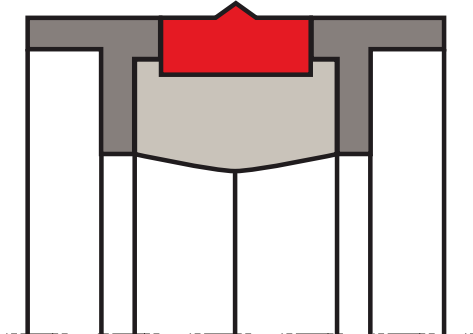


## piston seal K09-SD

## seal spec



### description

the K09-SD are double-acting piston seals with integrated guide rings. the combination of the elastomer energiser and the polyurethane special shaped sealing element provide excellent sealing effect and service life. the function of the guide rings is to guide the piston in the cylinder tube and to absorb transverse forces. the K09-SD design includes T-shaped Back-up/guide rings and a combination of seal ring and energiser.

### application



not bolded symbols; please consult our technical for application limitations

### category of profile

machined or molded/standard/trade product.

### double acting

the K09-SD seal is designed for use as a piston seal.

### area of application: hydraulics

the K09-SD are the recommended sealing element for double acting pistons of hydraulic cylinders for:

- truck cranes
- mini excavators
- heavy duty cylinders

### advantages

- high wear resistance
- low compression set
- optimal leakage control
- easy installation into closed grooves
- excellent service life

### operating parameters & material

material			temperature	max. surface speed	max. pressure <sup>1</sup>
sealing element	energizer	guide ring			
s-mart PU (93 Shore A)	s-mart NBR (78 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

### 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

**gap dimension**

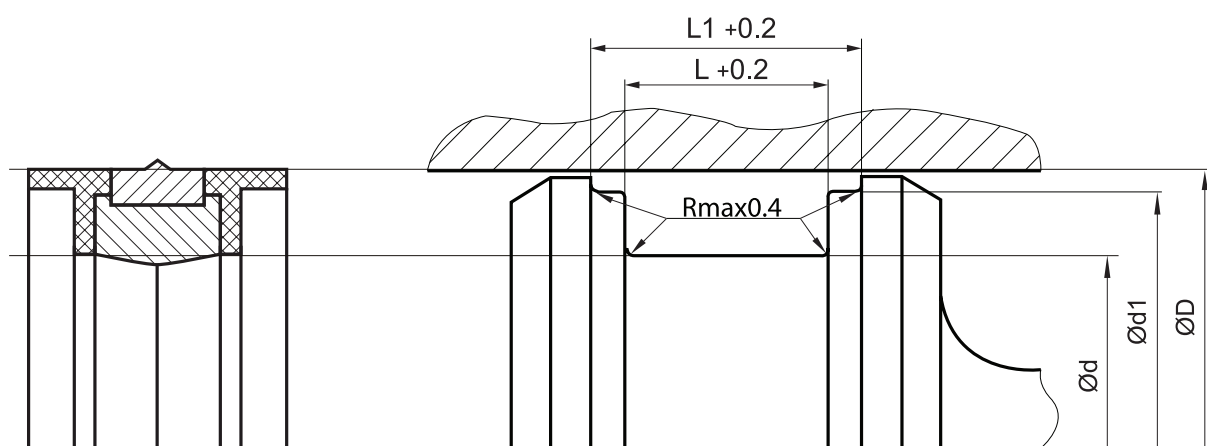
the largest gap dimension occurring on the non-pressurised side of the seal in operation is of vital importance for the function of the seal.

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

$\varnothing d$	h9
$\varnothing d1$	h9
$\varnothing D$	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.*