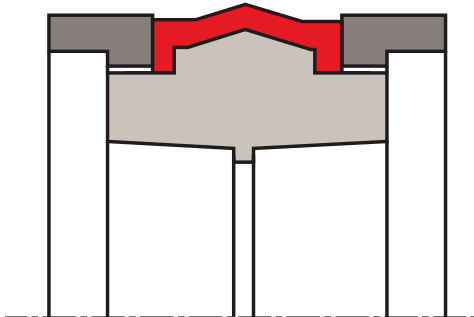


piston seal K09-SF

seal spec



description

the K09-SE & K09-SF types are double acting piston seals with integrated guide rings. it has been designed to optimize the advantages of the materials selection:

- fabric reinforcement with high mechanical strength, optimum thermal stability and lubricating properties is incorporated in the sealing element all over the dynamic contact area. for the K09-SF the reinforcement is extended on both sides to improve the extrusion resistance.
- nitrile based elastomer with optimum elasticity and low compression set provides the initial radial pre-load.
- acetal resin with improved form stability gives the guide/backup rings high distortion and extrusion resistance.

the K09-SF profile is much more robust and can therefore be used for pressure level up to 70 MPa.

application



not bolded symbols; please consult our technical for application limitations

category of profile

molded/standard/trade product or machined with minor design change.

double acting

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

area of application: hydraulics

the compact seals are the recommended sealing element for double acting pistons of hydraulic components in following applications:

- mining cylinders
- presses
- steel mills equipment
- water hydraulic cylinders

advantages

- K09-SF are usually installed in open grooves in heavy duty applications (pressure peak up to 80MPa).
- improved abrasion resistance.
- excellent sealing effect in combination with good dynamic and static friction behavior.

operating parameters & material

material		temperature	max. surface speed	max. pressure ¹
sealing element	guide ring/back up ring			
NBR (fabric) - rubber fabric reinforced	s-mart POM ²	-30°C ... + 130°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 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.

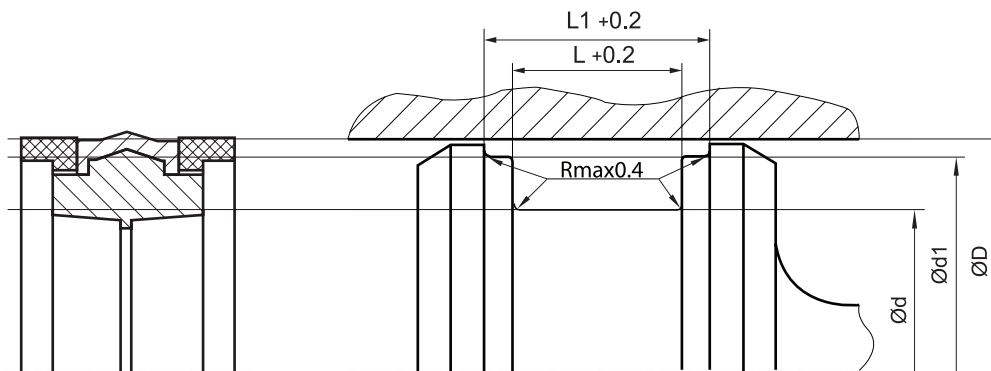
tolerance recommendation

seal housing tolerances

$\varnothing d$	h9
$\varnothing d1$	h11
$\varnothing D$	H11

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.