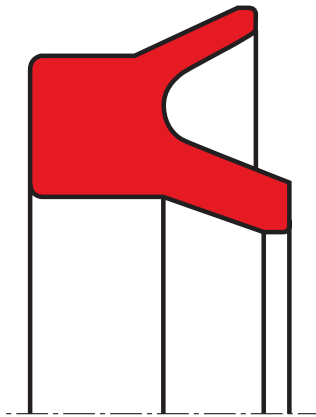


piston seal K05-SB

seal spec



description

the seal type K05-SB has been specifically designed for use on single acting stroke cylinders with spring return, having a good guiding system. it has the same profile as the K05-SA type, but its difference, is in the lower pre-load on the external diameter which reduces both the friction and break-out pressure.

application



category of profile

machined or molded/standard/trade product.

area of application: pneumatic

single acting

the K05-SA seal is designed for use as a piston seal - either single or double acting where two seals are used 'back to back'

operating parameters & material

the standard material is a polyurethane with a very high wear resistance and good flexibility at low temperatures.

material	temperature	max. surface	max. pressure ¹	remarks
s-mart PU (90 Shore A)	-30°C ... + 80°C	1 m/s	16 bar (1,6 MPa)	standard material
s-mart PU (85 Shore A)	-30°C ... + 80°C	1 m/s	16 bar (1,6 MPa)	alternative material

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.

gap dimension

referring to the low pressure range in standard pneumatic applications the extrusion gap depends only on cross section and temperature. the maximum value of the permissible extrusion gap is reached when the piston touches one side of the cylindrical tube or the guide. the extrusion gap should not exceed 10% of the cross section for an operating temperature of 70°C, influences due to thermal expansion and manufacturing tolerances have to be considered.

surface quality

parameter	surface roughness μm	
	mating surface (polyurethane)	groove surface
Rmax	1.0 - 4.0	≤ 16
Rz DIN	6,3 - 2,5	≤ 10
Ra	0.1 - 0.4	≤ 1.6

the material contact area Rmr should be approx. 50 to 70%, determined at a cut depth $c = 0.25 \times Rz$, relative to a reference line of Cref. 5%.



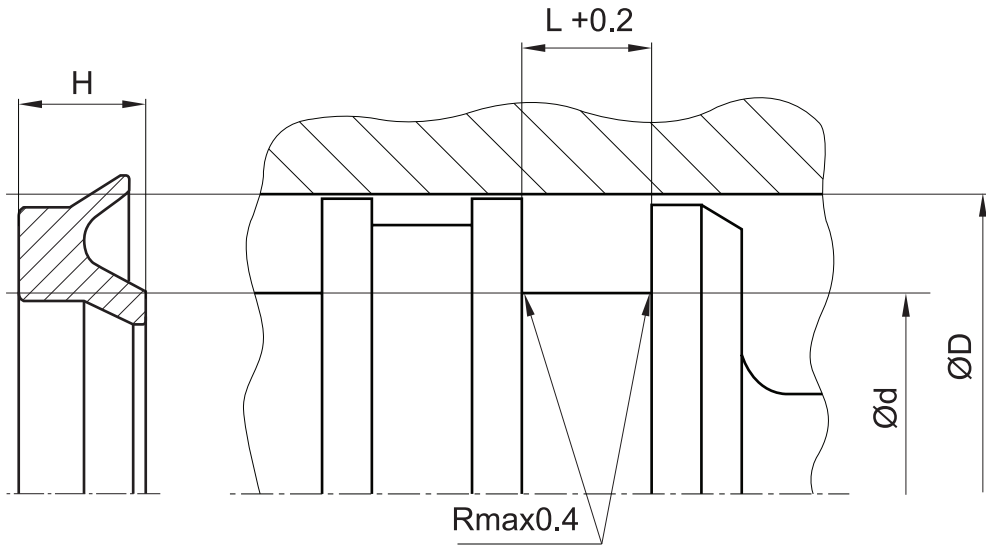
tolerance recommendation

seal housing tolerances

$\varnothing d$	h10
$\varnothing D$	H10

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.