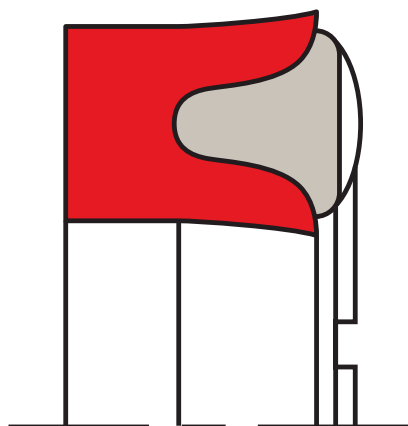


piston seal K81

seal spec



description

the piston seal K81 consists of a preformed fabric back and an elastomer part which are vulcanized together to form a single unit.

application



not bolded symbols; please consult our technical for application limitations

category of profile

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

single acting

the K81 seal is designed for use as a piston seal for medium load, preferably for spare parts requirement - either single or double acting where two seals are used 'back to back'

area of application: hydraulics

reciprocating movements.

function

the K81 is a single function piston seal and is particularly well-suited for cylinder with one-sided pistons. its effective sealing function result from its compact design. it is provided with radial self energising which is activated by the hydraulic system pressure. due to the high proportion of fabric in the seal profile, this seal displays much less frictional behaviour than the classic elastomer seal. in addition, the fabric back provides very effective protection against fission extrusion. the elastomer serves as an energising element in the seal head and produces constant contact pressure of the sealing lips on the adjacent surface. for this reason, the sealing function is fully retained even at low and zero pressure.

media

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

operating parameters & material

material		temperature	max. surface speed	max. pressure ¹
sealing element	energizer			
NBR (fabric) NBR - impregnated cotton fabric	NBR	-30°C ... + 100°C	0,5 m/s	250 bar (25 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.

**surface quality**

surface roughness	Rtmax (µm)	Ra (µm)
running surface	≤ 3.0	≤ 0.4
bottom of groove	≤ 10.0	≤ 1.8
side of groove	≤ 16	≤ 3.0

tolerance recommendation

seal housing tolerances	
Ød	h9
ØD	H11

fitting & installation

the K81 can only be installed by hand in axially accessible housing. to push the piston body and seal into the cylinder pipe without damaging it, a lead-in chamfer acc. to the following table is required:

cs (mm)	chamfer (mm)
4	2
5	2,5
7,5	4
10	5
12,5	6,5
15	7,5
20	10
25	10

gap dimension

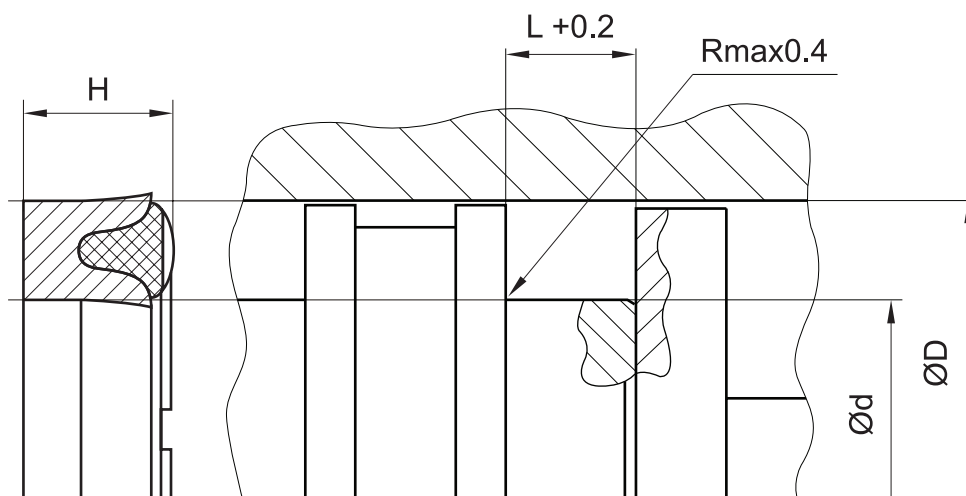
if the housing is provided with a metallic fitting on the side opposite the pressure, the service life of the seal is lengthened. within the operating parameters given above, a metallic wedge can be fitted between the cylinder pipe and piston acc. to the following table:

cs	safe extrusion gap (mm)
4	0,1
5	0,1
7,5	0,15
10	0,2
12,5	0,2
15	0,2
20	0,2
25	0,2

the piston diameter should generally be 1,5 mm smaller than the ØD diameter provided.

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.