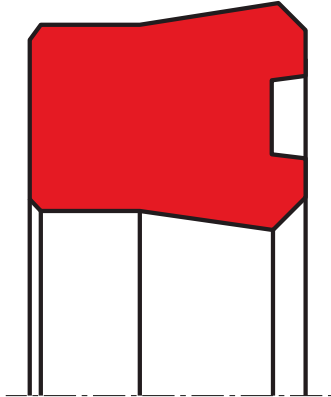


## piston seal K86

## seal spec



### description

the piston seal K86 with asymmetrical profile and press fit at the outside diameter. rod and piston rod seal with symmetrical seal lips which are cut at an angle of less than 45°.

### application



not bolded symbols; please consult our technical for application limitations

### category of profile

machined or molded/standard/trade product.

### single acting

the K86 seal is designed for use as a piston seal - either single or double acting where two seals are used 'back to back'

### area of application: hydraulics

earth moving equipment, industrial vehicles, agricultural machinery, cranes, injection moulding machines, telescopic cylinders, steering cylinders, loading platforms.

### function

the K86 is a single function piston rod in the form of a compact U-ring which, due to its symmetrical seal lips, can be applied as a piston and piston rod seal. its sealing function is very effective as the seal lips are provided with radial self-energising which is activated by the system pressure. its compact design and the excellent material characteristics of polyurethane guarantee effective sealing on the one hand at low as well as high pressure loads and on the other, a particularly long service life.

### advantages

- single-acting rod seal for standardised housings, amongst others, according to ISO 5597
- very good static and dynamic tightness
- compact compression, higher surface roughness in the groove base is permitted
- designed for radially restricted housings

### operating parameters & material

material	temperature	max. surface speed	max. pressure <sup>1</sup>
sealing element			
s-mart PU (94 Shore A)	-30°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.

**surface quality**

surface roughness	Rtmax (µm)	Ra (µm)
sliding surface	≤2,5	0,05-0,3
bottom of groove	≤10	≤2,0
groove face	≤15	≤3,0

**gap dimension**

operating pressure (MPa)	(ØD - Ød)/2 mm	
	≤ 4mm	> 4 ..... 6 mm
	max. permissible gap dimension	
16	0,45	0,50
26	0,35	0,40
32	0,30	0,35
40	0,25	0,30

important note:

the above data are maximum value and can't be used at the same time. e.g. the maximum operating speed depend on material type, pressure, temperature and gap value. temperature range also dependent on medium.

**tolerance recommendation**

seal housing tolerances	
Ød	f8
ØD	H11

**fitting & installation**

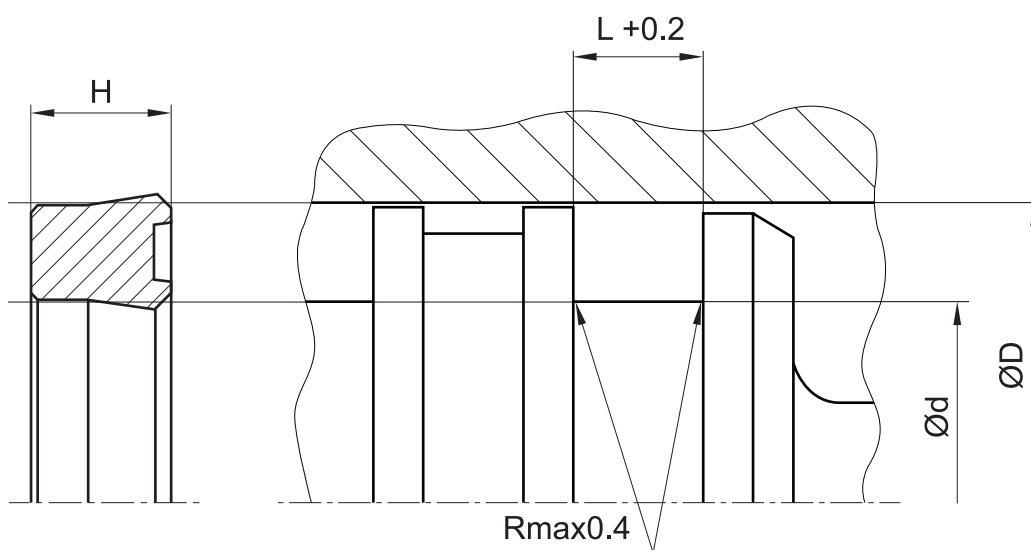
the K86, from an inner diameter of 25mm and a thin profile, can always be installed in cut housing. due to the high tensile resistance of polyurethane, it is necessary to use installation tools for thick seal. with an inner diameter of less than 25mm, we recommend axially accessible housing. to push the cylinder head and seal over the piston rod or push the piston rod with the seal into the cylinder rod without damaging the seal, an 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



# **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.*