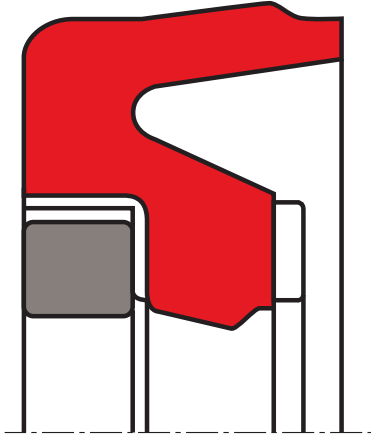


rod seal S02-S

seal spec



description

asymmetric rod seal, for special housings (DIN/ISO 7425 part 2) and for the use as a primary rod seal in sealing system. due to design with active back-up ring suitable for high pressure peaks or larger extrusion gaps.

two-piece S02-S seal set for use as a primary rod seal. the S02-S seal set is always used in a sealing system in combination with U-ring.

application



not bolded symbols; please consult our technical for application limitations

category of profile

machined or molded/standard/trade product.

single acting

the S02-S seal is designed for use as a rod seal.

area of application: hydraulics

earth moving equipment, agricultural machinery, injection moulding machines, industrial vehicles, cranes, standard cylinders.

advantages

the Merkel U-Ring Syprim SM is designed especially for use as a system seal

- short primary seal.
- no pressure enclosed between primary and secondary seal.
- low friction.
- highly wear-resistant.
- protection against extrusion through activated back-up ring.

operating parameters & material

diameter range: up to 600 mm

material		temperature	max. surface speed	max. pressure ¹
sealing element	back-up ring			
s-mart PU	s-mart POM / s-mart PA ²	-30 °C ... +100 °C	0,5 m/s	400 bar (40 MPa)
s-mart HPU	s-mart POM / s-mart PA ²	-20 °C ... +100 °C	0,5 m/s	400 bar (40 MPa)
s-mart SPU	s-mart POM / s-mart PA ²	-20 °C ... +100 °C	0,7 m/s	400 bar (40 MPa)
s-mart LTPU	s-mart POM / s-mart PA ²	-50 °C ... +100 °C	0,5 m/s	400 bar (40 MPa)
s-mart GPU	s-mart POM / s-mart PA ²	-30 °C ... +100 °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.

¹ pressure ratings are dependent on the size of the extrusion gap.

² POM up to ø260 mm, PA above ø260 mm.

**gap dimension**

the decisive factor for the function of the seal is the largest gap dimension occurring during operation on the non-pressurised side of the seal.

operating pressure (Mpa)	$(\varnothing D - \varnothing d)/2$ mm	
	7,55 (L=6,3)	10,25 (L=10,25)
	max. permissible gap dimension	
16	0,60	0,70
26	0,50	0,60
32	0,40	0,50
40	0,40	0,50

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.

surface quality

surface roughness	Rtmax (μ m)	Ra (μ m)
sliding surface	$\leq 2,5$	$\leq 0,1-0,5$
bottom of groove	$\leq 6,3$	$\leq 1,6$
groove face	≤ 15	≤ 3

tolerance recommendation

the admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account when designing D2.

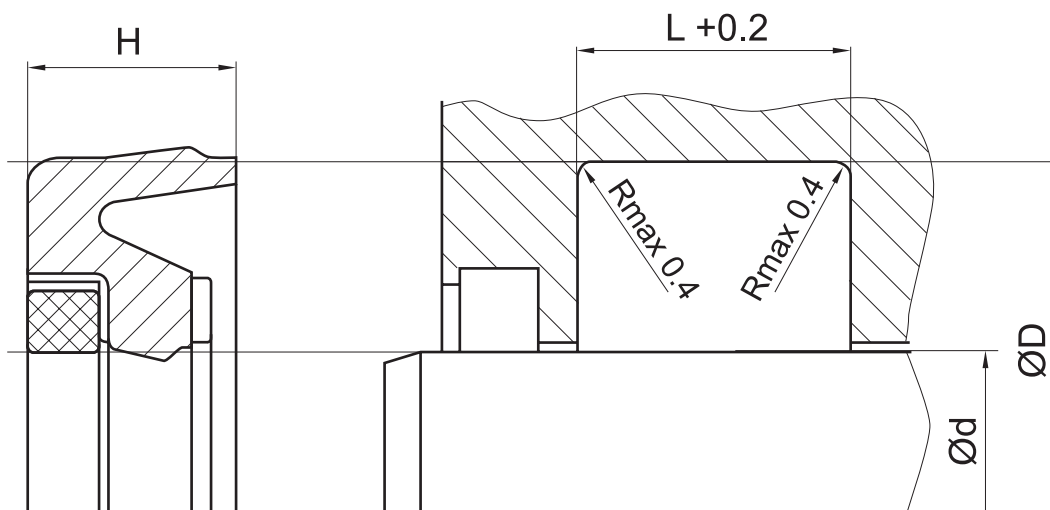
seal housing tolerances		
	45 .. 80	> 80 ... 200
$\varnothing d$	f8	f8
$\varnothing D$	H9	H10

fitting & installation

careful fitting is a prerequisite for the correct function of the seal.

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.