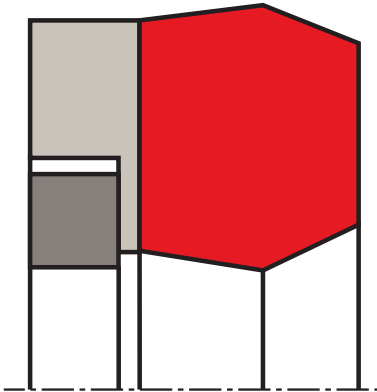


## rod seal S63

## seal spec



### description

the S62 & S63 is a compact rod seal consisting of an elastomeric sealing element and an integrated fabric reinforced base.

due to the radial pre-load an excellent sealing performance will be achieved even at low pressures. the fabric reinforced base prevents the seal from extrusion.

where extrusion gaps are greater than those specified or for higher pressure conditions the S63 with incorporated anti-extrusion ring shall be selected.

### 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 S63 seal is designed for use as a rod seal.

### area of application: hydraulics

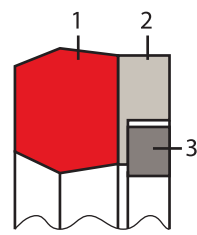
- media: mineral oil, water, air
- standard hydraulic cylinders (low to medium duty)
- mobile hydraulic
- water based fluids equipment
- after market
- presses

### advantages

- small cross sections
- good chemical resistance
- large size range
- no hydrolyses problems
- wide temperature range

### design

1. sealing element manufactured from a specially developed nitrile compound particularly resistant to compression set. the sealing lips are produced to give optimum efficiency and wear resistance.
2. the reinforced base of the seal element is of cotton fabric impregnated with nitrile elastomer and vulcanised with the sealing element 1, thus forming an integral component.
3. guide rings or antiextrusion rings are made from acetal resin. as previously described these rings maintain the seal in the optimum position for maximum performance, and minimise all possible extrusion gaps.



**operating parameters & material**

material			temperature	max. surface speed	max. pressure <sup>1</sup>
sealing element	energizer	back-up ring			
s-mart NBR	NBR (fabric)	s-mart POM / s-mart PA <sup>2</sup>	-30°C ... + 130°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.

<sup>2</sup> POM up to Ø260 mm, PA above Ø260 mm.

**gap dimension:**

operating pressure	safe extrusion gap (mm)
160 bar (16 MPa)	0,20
250 bar (25 MPa)	0,10

**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 [µm]	Rz DIN [µm]	Ra [µm]
mating surface	0.63 - 2.50	0.40 - 1.60	0.05 - 0.20
groove surface	< 16	< 10.0	< 1.6

**tolerance recommendation**

seal housing tolerances	
Ød	h11
ØD	H11

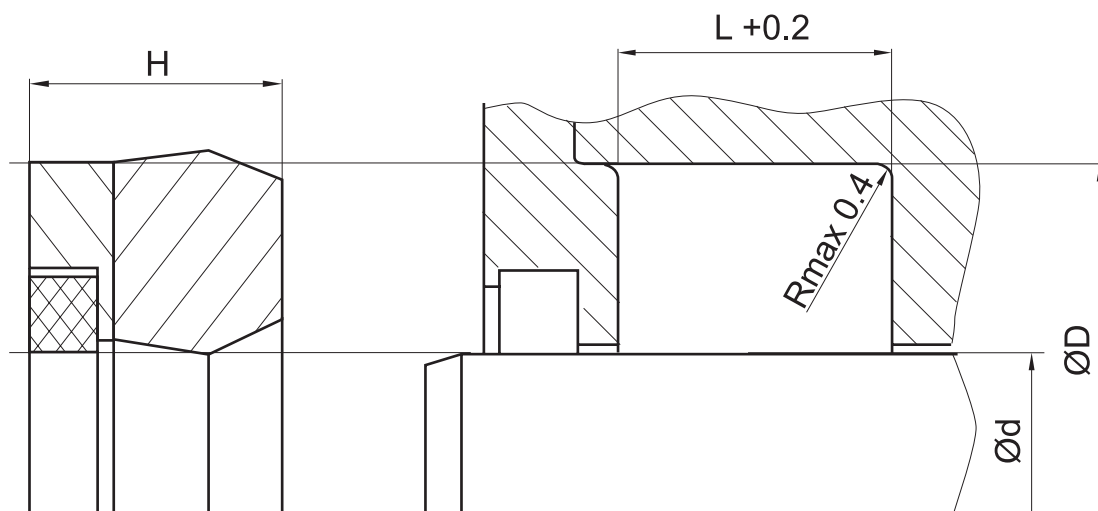
**lead in chamfers**

in order to avoid damage to the Balsele during installation, lead in chamfers of min. 5 x 20° must be provided on the rods.

rod diameter	lead in chamfer
0 - 100	5 x 20°
101 - 200	7 x 20°
201 - 400	10 x 20°

**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.