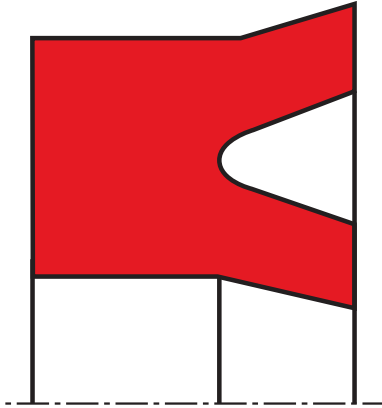


## rod seal S06-SA

## seal spec



### description

rod and piston rod seal with symmetrical sealing lips which are cut straight.

### application



not bolded symbols; please consult our technical for application limitations

### category of profile

machined or molded/standard/trade product.

### single acting

the S06-SA seal is designed for use as a rod seal - either single or double acting where two seals are used 'back to back'

### area of application: hydraulics & pneumatics

- hydraulics and pneumatics reciprocating movements
- special cylinders, agricultural machinery, cranes, injection moulding machines, loading platforms, standard cylinders.

### function

the S06-SA is a single function rod seal in the form of a U-ring which can be used as a rod and piston rod seal due to its symmetrical sealing lips. its sealing function is very effective due to the sealing lips being provided with radial self energising which is activated by the system pressure.

### advantages

single-acting piston or rod seal, preferably for spare parts requirements.

### operating parameters & material

| material                | temperature       | max. surface speed | max. pressure <sup>1</sup> |
|-------------------------|-------------------|--------------------|----------------------------|
| s-mart NBR (90 Shore A) | -30°C ... + 100°C | 0.5 m/s            | 100 bar (10 MPa)           |
| s-mart PU (94 Shore A)  | -30°C ... + 110°C | 0.5 m/s            | 200 bar (20 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> attention: not suitable for mineral oils!

### media

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

**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, depending on the pressure, a metallic wedge can be fitted between the cylinder pipe and piston acc. to the following table:

| operating pressure<br>(Mpa) | cs = (ØD - Ød)/2 mm            |      |
|-----------------------------|--------------------------------|------|
|                             | ≤ 5                            | > 5  |
|                             | max. permissible gap dimension |      |
| 2,5                         | 0,45                           | 0,50 |
| 5                           | 0,35                           | 0,40 |
| 7,5                         | 0,30                           | 0,35 |
| 10                          | 0,25                           | 0,30 |

the piston diameter d1 should generally be by factor 0.65 of the profile smaller than the DN diameter provided.

*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) | Ra (µm)   |
|-------------------|------------|-----------|
| running surface   | ≤ 2.5      | 0.05-0.30 |
| bottom of groove  | ≤ 6.3      | ≤ 1.6     |
| side of groove    | ≤ 15       | ≤ 3.0     |

**tolerance recommendation**

| seal housing tolerances |     |
|-------------------------|-----|
| Ød                      | h11 |
| ØD                      | H11 |

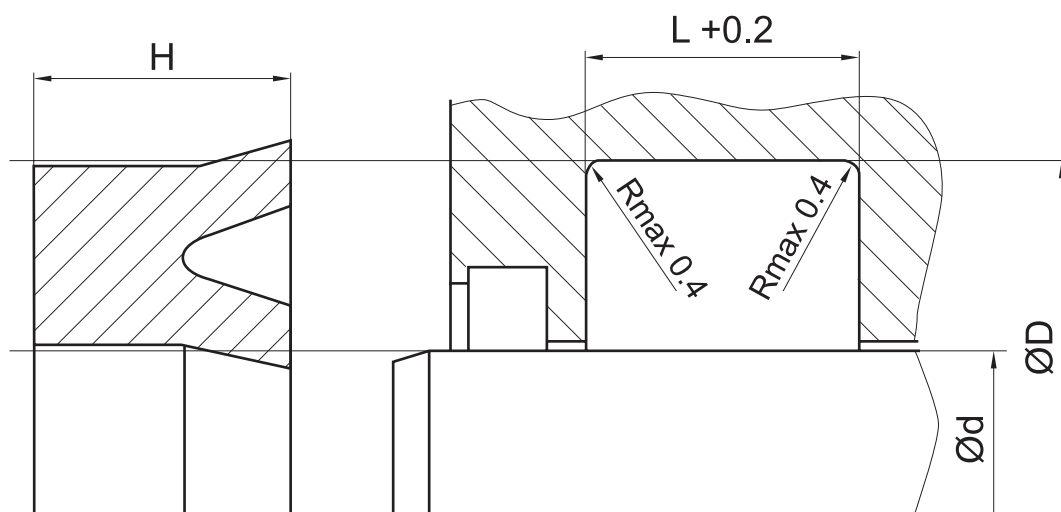
**fitting & installation**

the S06-SA, with an inner diameter of 25 mm and a thinner profile can always be installed in cut housing. with an inner diameter of less than 25 mm, we recommend axially accessible housing. to push the piston body and seal into the cylinder pipe or over the piston rod without damaging it, a lead-in chamfer C acc. to the following table is required:

| profile width (mm) | lead-in chamfer C (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.*