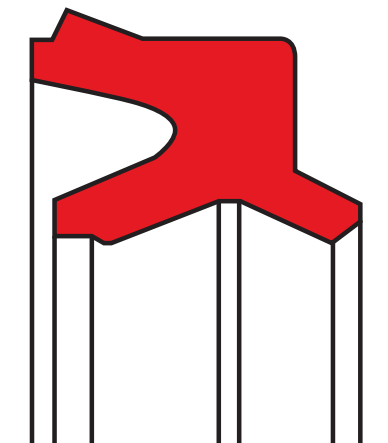


wiper A11-SA

seal spec



description

A11-SA combination wiper seal without metal reinforcement with special pneumatic sealing edge.

the profile design of the profile A11-SA rod seal/wiper combines the profile geometry of our tried and proven profile A11-SJ with the requirements of mini-pneumatics, i.e. the dimensions of profile A11-SA are considerably smaller and friction values are even lower.

application



not bolded symbols; please consult our technical for application limitations

category of profile

machined or molded/standard/trade product.

double acting

area of application: pneumatic

- small cylinders, compact cylinders.
- medium: lubricated air as well as dry air and oil-free air (after initial lubrication on assembly).

advantages

- combination seal with minimal space requirements, which seals inwards and wipes outwards.
- the special pneumatic sealing edge gives very good tightness with low friction and maintains an effective lubricating film.
- suitable for high-temperature applications for FKM 75 shore A material.
- PU 85 & 94 shore A material with high wear resistance.
- optimal material for high loads for NBR 90 shore A.
- minimum space requirement with full serviceability and ideal end finish with the housing contour.
- simple housing, cost-efficient in manufacturing.
- no additional requirements for axial securing.
- due to the special geometry of the sealing and wiping lip in combination with our compounds specially designed for this purpose, the profile A11-SA rod seal/wiper, after initial lubrication, may also be used in dry and/or oil-free air.
- smooth running due to optimum adjustment of the functional lips.
- zero danger of corrosion since part consists solely of polymeric material.

operating parameters & material

material	temperature	max. surface speed	max. pressure ¹
s-mart NBR (90 Shore A)	-20 °C ... +100 °C	1 m/s	10 bar (1 Mpa)
s-mart FKM (75 Shore A)	-5 °C ... +150 °C	1 m/s	10 bar (1 Mpa)
s-mart PU (85 Shore A)	-30 °C ... +80 °C	1 m/s	10 bar (1 Mpa)
s-mart PU (90 Shore A)	-35 °C ... +80 °C	1 m/s	16 bar (1,6 Mpa)
s-mart PU (94 Shore A)	-30 °C ... +90 °C	1 m/s	12 bar (1,2 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)	Rp/Rz (µm)
rod	≤ 4	-
groove base	≤ 10	≤ 0,5

tolerance recommendation

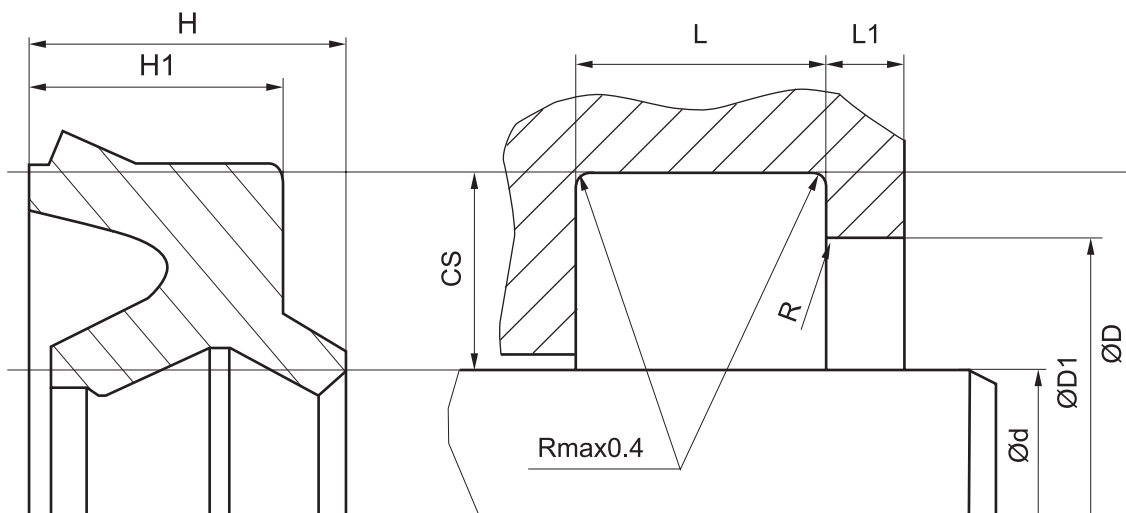
seal housing tolerances		cs	R [mm]
d	f9	≤ 5	max. 0,3
D	H11	>5.....≤ 7,5	max. 0,4
		>7,5.....≤ 10	max. 0,6
		> 10	max. 0,8

fitting & installation

Careful fitting is a prerequisite for the correct function of the seal. The A11-SA for small cylinders can be snapped by hand into the housing grooves provided, with the piston rod removed. Initial lubrication is the prerequisite for very long operational life.

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.