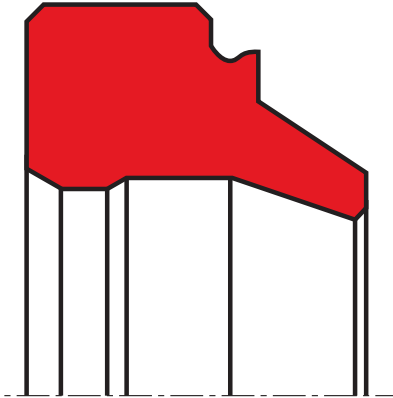


## wiper A04-A

## seal spec



### description

wiper with interference fit on outside diameter, providing a technically accurate closure at the cylinder. special design of wiping lip allows retention of initial lubricating film. back support area prevents tilting of wiper. for housings according ISO 6195 - Type A.

- the seal profile and close machining tolerances provide a good static seal for the outside diameter, assisting in the prevention of ingress of humidity and foreign matter via the outside diameter.
- the design of the wiping lip, with its extremely rounded outline, aids to maintain the initial lubricating film; any dirt is wiped off reliably.
- the provision of a support shoulder, along with relief grooves on the mating seal face, prevents tilting of the wiper and pressure build up on the trailing side, which is to be avoided if possible.

### application



*not bolded symbols; please consult our technical for application limitations*

### category of profile

machined only.

### single acting

### area of application: pneumatics

- reciprocating rods on pneumatic cylinders.
- push rods and valve stems.
- (materials must be selected according to operating requirements).
- the profile is suited for mounting space according to ISO 6195-1986 type A.

### function

A04-A pneumatic wipers are designed to keep dust, dirt, sand and metal chips away from the sealing and guiding elements, thereby avoiding abrasive damage caused by external contamination.

**operating parameters & material**

diameter range: up to 600 mm

material	temperature	max. surface speed	hydrolysis	dry running	wear resistance
s-mart PU	-30 °C ... +110 °C	4 m/s	-	+	++
s-mart HPU	-20 °C ... +110 °C	4 m/s	++	+	++
s-mart LTPU	-50 °C ... +110 °C	4 m/s	-	+	++
s-mart SPU	-20 °C ... +110 °C	5 m/s	++	++	++
s-mart GPU	-30 °C ... +110 °C	4 m/s	++	+	++
s-mart NBR	-30 °C ... +100 °C	4 m/s	-	-	O
s-mart FKM	-20 °C ... +200 °C	4 m/s	-	-	O
s-mart EPDM <sup>2</sup>	-50 °C ... +150 °C	4 m/s	++	-	O
s-mart HNBR	-25 °C ... +150 °C	4 m/s	+	O	+
s-mart XPU	-30 °C ... +110 °C	4 m/s			
s-mart XHPU	-20 °C ... +110 °C	4 m/s			
s-mart XSPU	-20 °C ... +110 °C	5 m/s			

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>2</sup> attention: not suitable for mineral oils!

++ ... particularly suitable

o ... conditional suitable

+ ... suitable

- ... not suitable

for detailed information regarding chemical resistance please refer to our "list of resistance". for increased chemical and thermal resistance rubber materials are to be preferred, polyurethan materials increase wear resistance.

**surface quality**

surface roughness	Rtmax (µm)	Ra (µm)
sliding surface	according to seal data	
bottom of groove	≤6,3	≤1,6
groove face	≤15	≤3

**tolerance recommendation**

seal housing tolerances		cs	R [mm]
L < 10 mm	0,2	≤ 5	max. 0,3
L ≥ 10 mm	0,3	>5.....≤ 7,5	max. 0,4
D1	H11	>7,5.....≤ 10	max. 0,6
D	H11	> 10	max. 0,8

the L1 measurement, which is dependent on the height of the wiper, is selected as follows:

H [mm]	L1 [mm]
≤ 7	1
10	1,5
13	2

**mode of installation**

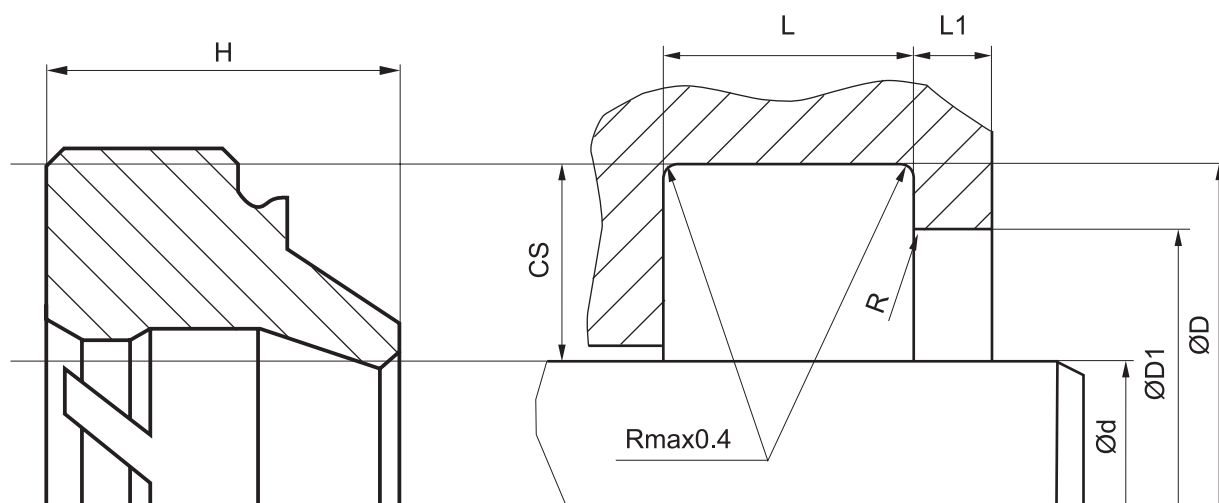
the prerequisites for perfect functioning are careful fitting and an accurately dimensioned mounting space. in general, wipers snap easily into their housings when distorted into a kidney shape (over 20mm diameter). when mounted in cylinders that cannot be dismantled, the rings can also be cut open. in such cases, an approx. 2-3% larger diameter should be chosen.

when the wiper is installed, the two ends are snapped into place first, and then the entire ring is pressed in along the entire circumference. no gluing of the joining ends is required.



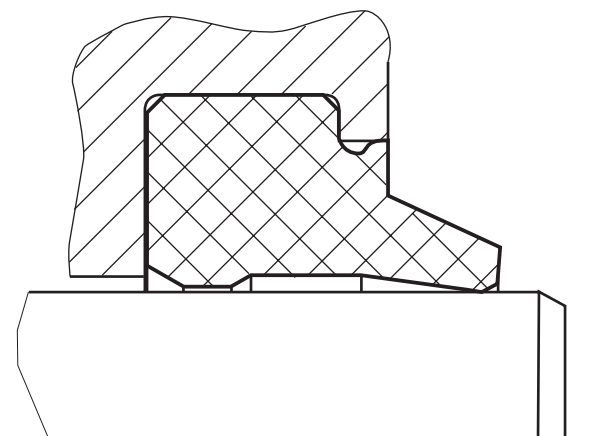
### seal & housing recommendations

*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...*



*suitable for wiper housing according to ISO 6195/A.*

### fitted:



*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.*