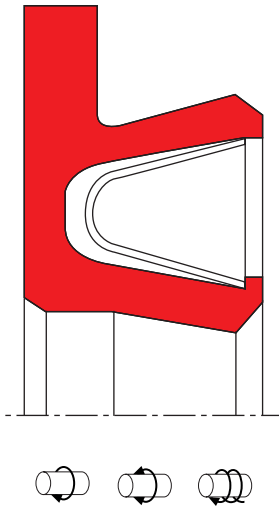


SEAL SPEC R19-F

seal-mart | 



description

fingerspring activated PTFE seal with integrated clamping flange on the back of seal for clamping fixation, acting as anti-twist device. excellent chemical and thermal resistance. suitable for relatively high pressure and high speed, however, allowable pressure and speed depend on each other, it is not recommended to use all maximum values simultaneously.

- + rotary, reciprocating and static service
- + good scraping effect
- + stick-slip-free operating for precise control
- + high abrasion resistance and dimensional stability
- + can handle rapid changes in temperature
- + no contamination in contact with foodstuffs, pharmaceutical and medicinal fluids
- + sterilisable

category of profile

machined or molded/standard/trade product.

single acting PTFE rotary seal

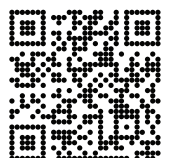
the R19-F seal is designed for use as a rotary seal

area of application; hydraulics & pneumatics

diverse applications in all branches of general mechanical and apparatus engineering, hydraulics and pneumatics, chemical and processing technology. rotating, swivelling, reciprocating and combined (lifting and rotating) movements.

function

the R19-F is a single function, inside sealing U-ring with a clamp fitting which prevents simultaneous turning. the sealing lips are of varying design which optimizes the sealing power and reduces friction with the result of the seal having an exceptionally good service life. the metal spring permanently activates the sealing lips which guarantees zero leakage even in an unpressurised state.



operating parameter & material

sealing element	material	spring	temperature	max surface speed	max pressure ¹
PTFE glass		14.310	-200 °C ... +260 °C	15 m/s	300 bar (30 MPa)
PTFE glass		14.310	-200 °C ... +260 °C	15 m/s	300 bar (30 MPa)
PTFE bronze		14.310	-200 °C ... +260 °C	15 m/s	300 bar (30 MPa)
all material possible		14.310	choice is dependent upon application (preload, ...)		

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

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.

surface quality

surface roughness	Rtmax (µm)	Ra (µm)
rotating	≤ 1-2,5	≤ 0,1-0,2
linear	≤ 2,5-4	≤ 0,2-0,4

tolerance recommendation

seal housing tolerance		(D1-d)/2	spring
Ød	f8/h9	3 ... 4.6 mm	6,35 x 0,15
ØD	H10	>4.6 ... 6 mm	9,8 x 0,18
ØD1	H9	>6 ... 8 mm	14,1 x 0,22
ØL1 ≤ 1,35	-0,1		
ØL > 1,35 ... ≤ 1,8	-0,15		
ØL > 1,8	-0,2		

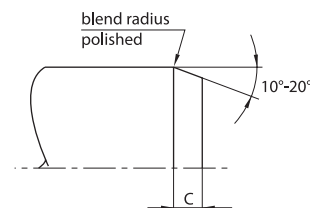
mode of installation

the following points should be observed before installation of the seals:

- check whether housing or rod has a lead-in chamfer; if not, use an installation sleeve
- deburr and chamfer or round sharp edges, cover the tips of any screw threads
- remove machining residues such as chips, dirt and other foreign particles and carefully clean all parts
- if the seals are installed with grease or oil, attention must be paid to the compatibility of the seal materials with these lubricants. use only grease without solid additives (e.g. molybdenum disulphide or zinc sulphide)
- do not use installation tools with sharp edges

lead-in chamfers

in order to avoid damage during installation, lead-in chamfers and rounded edges must be provided on the rod (figures below). if this is not possible for design reasons, a separate installation tool is recommended.



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...

