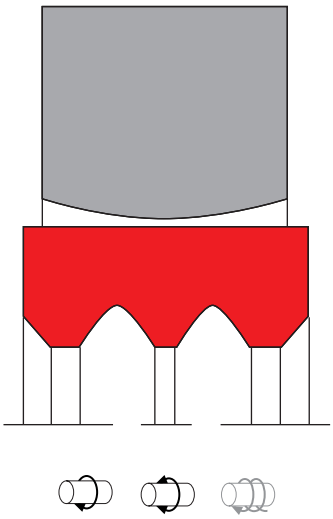
SEAL SPEC
R09-FS



description

as profile R09-F, but with a profile ring energizer instead of the o-ring. for heavy duty applications and non standard housings.

+ short
+ highly resistance to hydraulic fluid
+ low friction, free of stick-slip

category of profile

machined product only

double acting rotary seal

the R09-FS seal is designed for use as a rotary seal

area of application; hydraulics & pneumatics

the R09-FS is the preferably used as a double acting rotary seal for hydraulic and pneumatic equipment in sectors such as:

- rotary distributors
- high pressure valve stems
- manipulator
- hydraulic motors
- pivoting motors in mobile hydraulic and machine tools
- excavators, grippers, rotary joints.

function

the R09-FS is a double acting seal which can be implemented with double-sided or reciprocal pressure admission. it is for internal sealing and is often used in a twin configuration. the seal face is particulary designed for use at high pressure and low speed. the peripheral grooves in the dynamic seal face provide for the formation of a lubricant depot. this results in decreased friction and good emergency running properties.

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operating parameter & material

sealing element	material energizer	back-up ring	temperature	max surface speed	max pressure[1]
PTFE glass	NBR	-	-30 °C ... +100 °C	-	350 bar (35 MPa)
PTFE glass	FKM	-	-20 °C ... +200 °C	-	350 bar (35 MPa)
PTFE bronze	NBR	-	-30 °C ... +100 °C	-	350 bar (35 MPa)
PTFE bronze	FKM	-	-20 °C ... +200 °C	-	350 bar (35 MPa)
PTFE carbon	NBR	-	-30 °C ... +100 °C	-	350 bar (35 MPa)
PTFE carbon	FKM	-	-20 °C ... +200 °C	-	350 bar (35 MPa)
UHMWPE	NBR	-	-30 °C ... +80 °C	-	350 bar (35 MPa)

[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

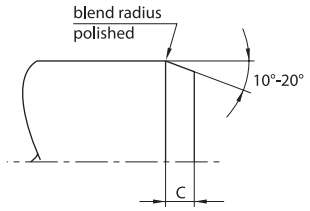
surface roughness	Rtmax (µm)	Ra (µm)
sliding surface	≤3	≤0,3
bottom of groove	≤10	≤1,8
groove face	≤16	≤3

tolerance recommendation

seal housing tolerance	
Ød	f7
ØD	H8

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.



mode of installation

with small diameters, the seal requires split housing. with larger diameters, closed housing can be planned. subsequent calibration 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...