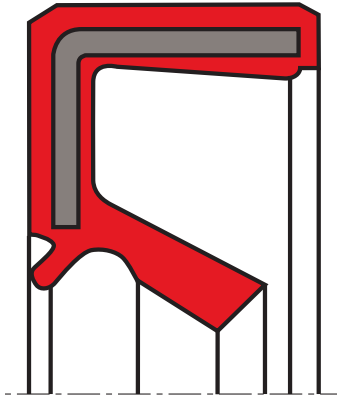


oil seal R81

seal spec



description

rotary shaft seal in standard design with a grooved elastomer outer sheath covering a metal insert without an energised spring on the sealing lip. the additional dust lip protects the main sealing lip against dust and other fine solid contaminants and therefore this type is recommended for use in polluted environments

application



category of profile

molded/standard/trade product or machined with minor design change.

single acting rotary shaft seal

area of application

secondary sealing e.g. as a dust, dirt or spray protection seal in electric engines, as a grease retainer.

- roller bearings
- tooling fixtures (e.g. drilling machines)
- sealing against viscous media (e.g. grease)
- supplementary excluders (shaft ends)
- axle king pin seals

advantages

- good static sealing and thermal expansion compensation
- low friction and low heat generation
- extremely compact design
- low radial force provides a low brake-out torque
- suitable for scraper applications

function

the R81 is a single action rotary shaft seal for rotating or pivoting shafts. the sealing lip design without a spring produces less friction. as a result the sealing action in comparison to rotary shaft seals with energised springs is reduced. the elastomer outer sheath provides good static sealing, good thermal expansion balance e.g. in light-metal housings, better sealing with greater roughness and secure sealing for split housings as well as good static sealing with thin fluid or gaseous media.

media

good chemical resistance to various mineral oil and synthetic lubricants.

**operating parameters & material**

material		temperature	max. surface speed	max. pressure
sealing element*	metal insert**			
s-mart NBR (70 shore A, 72 shore A and 75 shore A)	mild steel DIN 1624 (non-alloy steel DIN EN 10139)	-40 °C ... +100 °C	6 m/s	-
s-mart FKM (75 shore A & 80 shore A)				

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.

* special grades and other materials (ACM, EACM, EPDM, HNBR, VMQ) on request

** metal insert can be supplied in different materials on request.

surface quality

surface roughness	Rtmax [μm]	Rz [μm]	Ra (μm)
shaft	≤6,3	≤1,0-5,0	≤0,2-0,8
bottom of groove	≤25	≤10-25	≤1,6-6,3

hardness 45 ... 60 HRC

tolerance recommendation

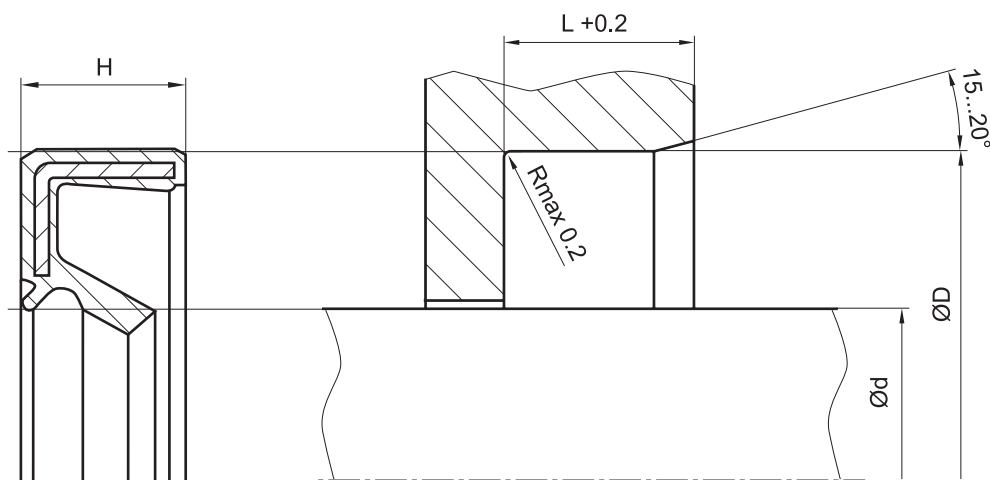
seal housing tolerances	
Ød	f8/h11
ØD	H8

fitting & installation

suitable tool should be used for installation. it is recommended that the installation housing is designed to provide the rotary shaft seal with axial support.

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.