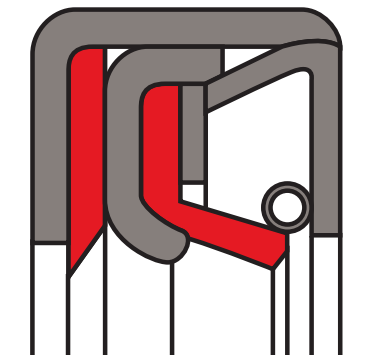


# oil seal R101

## seal spec



### description

rotary shaft seal with a spring energized elastomer sealing lip clamped between two metal cages and with additional protective lip. non mould production

### application



### category of profile

molded/standard/trade product only.

### single acting rotary shaft seal

### area of application

sealing of rotating machine elements, such as shafts, hubs and axles at high pressure. good chemical resistance and higher temperature resistance is achieved with a sealing lip made of FKM. as a result of its greater rigidity the R100 is particularly suitable for larger dimensions as well as difficult installation conditions and severe operation conditions.

### function

the R101 is a single action rotary shaft seal for rotating or pivoting shafts. the elastomers sealing lip with its prestressed spring guarantees for higher pressure load up to 5/10 bar. the additional metal insert provides greater rigidity. tight and accurate fitting is achieved by the metal outer casing. the R101 model has limited sealing action with thin fluid or gaseous media and with split housings. to guarantee a high degree of static sealing on the outer surface, better surface treatment of the housing bore is required or an additional coat of paint should be applied to the outer casing.

### media

s-mart NBR: good chemical resistance to many mineral oils and greases.

s-mart FKM: mineral oils and greases, synthetic oils and greases, engine, transmission and ATF oils, fuels, aromatic and chlorinated hydrocarbons, broad chemicals and solvents resistance.

### operating parameters & material

material			temperature	max. surface speed	max. pressure <sup>1</sup>
sealing element	energised spring	metal housing			
s-mart NBR 75	non-alloy spring steel	steel 1.4404 (AISI 316L)	-40 °C ... +100 °C	12 m/s	10 bar (1 MPa)
s-mart FKM 75			-30 °C ... +200 °C	15 m/s	10 bar (1 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.

<sup>1</sup> pressure ratings are dependent on the size of the extrusion gap.

**surface quality**

surface roughness	Rtmax [ $\mu\text{m}$ ]	Rz ( $\mu\text{m}$ )	Ra ( $\mu\text{m}$ )
shaft	$\leq 6,3$	$\leq 1,0-5,0$	$\leq 0,2-0,8$
bottom of groove	$\leq 25$	$\leq 10-25$	$\leq 1,6-6,3$

hardness 45 ... 60 HRC

**tolerance recommendation**

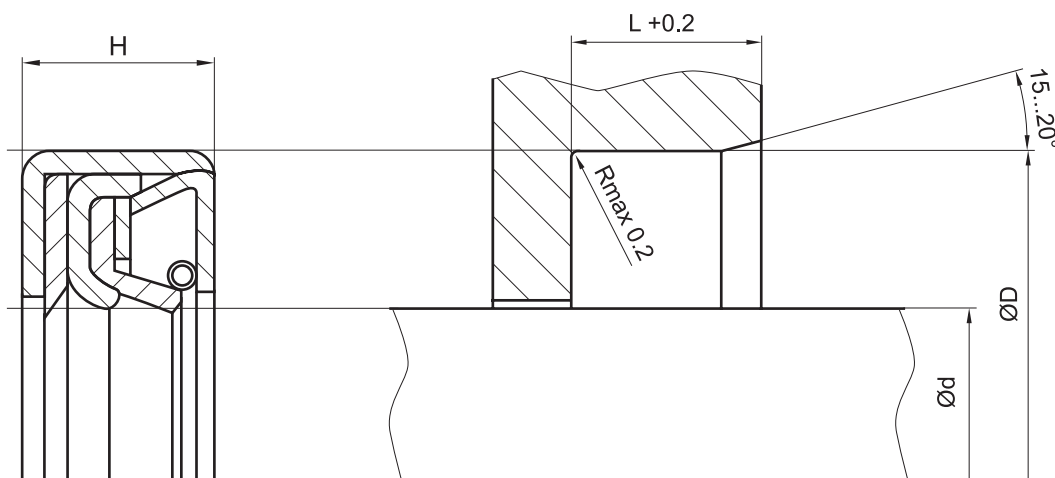
seal housing tolerances	
$\varnothing d$	f8/h11
$\varnothing D$	H8

**fitting & installation**

the outer diameter of the metal outer casing is centralised in the housing by press-fitting. the installation housing tolerances are in accordance with those in DIN 3760. suitable tools should be used for installation. it is recommended that the installation housing is designed to provide the rotary shaft seal with axial support. the elastomers sealing lip must not be damaged during installation. for this reason, we recommend using an installation cone.

**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.