Simmerring Radiamatic® R 36

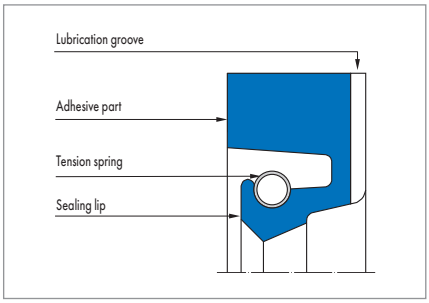

Fig. 1 Simmerring Radiamatic® R 36

Product description

Simmerring with a fabric reinforced static part that is securely joined to the elastomer sealing lip. The sealing lip is also pre-loaded with a garter spring.

Product advantages

Sealing ring is used, in case of adequate lubrication by the medium to be sealed, preferably where shafts pass through walls in mills and large gearboxes in heavy machinery manufacture.

- Particularly robust static part
- Lasting radial contact pressure
- Highly wear-resistant
- With design measures, e.g., metal support for the sealing lip, higher pressures are possible
- Overpressure requires the usage of endless seals
- Back-up ring drawings and installation instructions for open seals are available.

Application

Mills, ship building, steel hydraulics engineering, wind power plants.

Material

Sealing lip	Static part	Tension spring
80 NBR B241	Impregnated cotton fabric B4 B248	ST 1.4571
80 FKM K670	Impregnated aramide fabric	ST 1.4571
75 HNBR U467	Impregnated aramide fabric C2 U464	ST 1.4571

Operating conditions

Material	80 NBR B241	80 FKM K670	75 HNBR U467
	Temperature range in °C		
Mineral oils	−30 ... +100	−10 ... +180	−20 ... +140
Water	+5 ... +100	+5 ... +80	+5 ... +100
Lubricating greases	−30 ... +100	−10 ... +180	−20 ... +140
Rolling oil emulsion	on enquiry		
Pressure p in MPa	0,05		
Running speed v in m/s	20	25	25

Other media on enquiry. Application parameters are recommended values, do not utilise all parameters simultaneously.

Surface quality

Peak-to-valley heights	R_a	R_{max}
Running surface	≤0,6 µm	≤2,5 µm
Housing	≤4 µm	≤15 µm

The contact area is machined by plunge grinding, i.e. without feed. The surface hardness must be approx. 60 HRC (depth of hardening min. 0,5 mm). With increasing circumferential speed the contact area should be manufactured with increasing peak-to-valley heights R_a. The surface should not be too smooth so that an adequate film of lubricant can form. Recommended value: $R_{a\ min}$ = 0,1 µm. Percentage contact area M_r >50% to max. 90% at cutting depth c = Rz/2 and reference line C ref = 0%. Abrasive surfaces, ridges, scratches and blow-holes are to be avoided.

Design notes

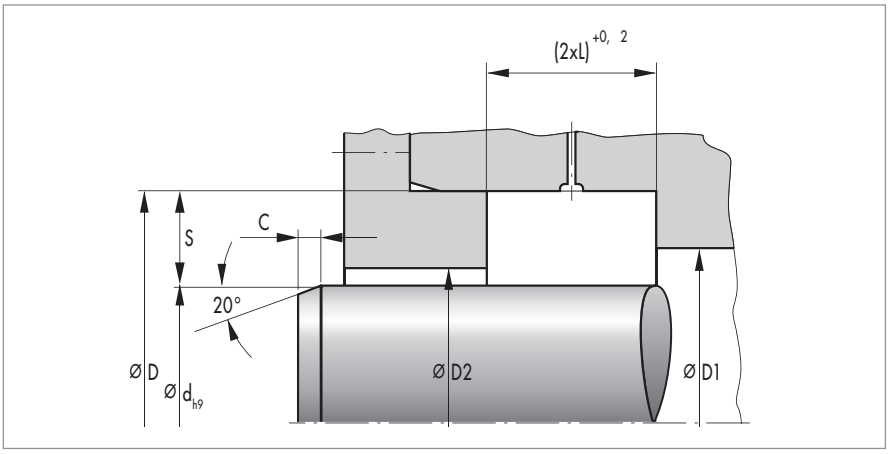

Fig. 2

Lead-in chamfers

See dimension "C" in the article list.

Tolerances

D	Tolerance
<500	H8
>500	+0,0004 x D

Overall eccentricity

The permissible overall eccentricity (static and dynamic eccentricity) between shaft and housing is dependent on the seal profile and circumferential speed. If necessary, we will provide recommended values.

Housing recommendations for new designs

d	S (Profile)	L
>100	20	16
>250	22	20
<450	25	22
>750	32	25

Fitting & installation

For Simmerring Radiamatic R 36 an axially accessible housing is necessary, as the rings must have low inclination. The Radiamatic R 36 rings are supplied with oversize seal width. For reliable function the Radiamatic R rings must be axially compressed to the dimension "L". An open housing with cover plate and tightening screws is necessary. Specific deformation forces are necessary for the compression. The cover plate and the tightening screws are to be designed appropriately. Please request recommended values.