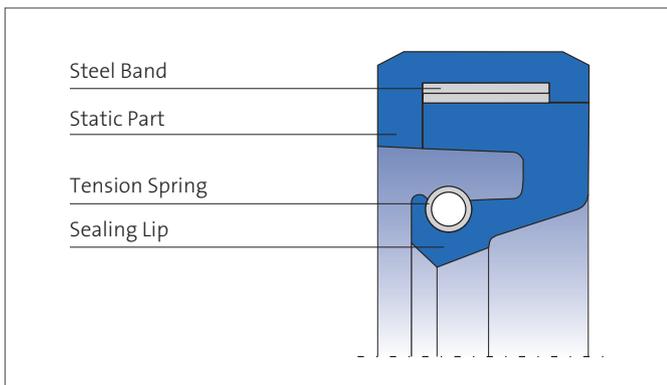


# MERKEL RADIAMATIC RS85



Merkel Radiamatic RS85 is a self-retaining shaft seal consisting of two different rubber compounds and an integrated steel band. The tension spring supports the radial force on to the shaft.



## VALUE TO THE CUSTOMER

- Secure, self-retaining fit
- Constant radial force of the sealing lip assuring steady performance
- Highly wear resistant

### Applications

Self-retaining shaft seal for rolling mills and large gear boxes in heavy duty machine designs.

### Material

Sealing lip	Adhesive part	Steel band	Tension spring
80 NBR B241	NBR	ST 1.4310	ST 1.4571
75 HNBR U467	HNBR	ST 1.4310	ST 1.4571
80 FKM K670	FKM	ST 1.4310	ST 1.4571

Further material combinations on request.



## TECHNICAL PROPERTIES

### Operating Conditions

Material	80 NBR B241	75 HNBR U467	80 FKM K670
Mineral Oils	-30 ... +100 °C	-20 ... +120 °C	-10 ... +150 °C
Water	+5 ... +100 °C	+5 ... +100 °C	+5 ... +80 °C
Lubricating Greases	-30 ... +100 °C	-20 ... +120 °C	-10 ... +150 °C
Rolling Oil Emulsion	on request	on request	on request
Pressure	0,05 MPa	0,05 MPa	0,05 MPa
Sliding Speed	20 m/s	25 m/s	25 m/s

Other media on demand. The figures given are maximum values and must not be applied simultaneously.

### Surface Finish

Roughness	$R_a$	$R_{max}$
Sliding Surface	$\leq 0,6 \mu\text{m}$	$\leq 2,5 \mu\text{m}$
Housing	$\leq 4 \mu\text{m}$	$\leq 15 \mu\text{m}$

The counter surface is suitably machined by plunge grinding, i.e. without feed. The recommended surface hardness is approx. 60 HRC (hardening depth min. 0,5 mm). As the circumferential speed increases, the counter surface should be finished with a decreasing roughness depth  $R_a$ . The surface must not get too smooth in order to ensure sufficient lubricant film formation.

Standard value:  $R_a$  min. = 0,1  $\mu\text{m}$ . Profile bearing length ratio  $t_p > 50\%$  up to max. 90% at average depth  $c = R_z/2$  and reference line  $C_{ref} = 0\%$ . Abrasive surfaces, ridges, scratches and blow-holes are to be avoided.

### Installation Chamfers

Diameter d [mm]	C [mm]
<200	8
>200 ... 500	10
>500 ... 800	13
>800 ... 1.200	16
>1.200	20

### Design Notes

When pressurized within the application, the sealing lip has to be axially supported on the pressure-free side.

Please also note the general design-related remarks in our Technical manual.

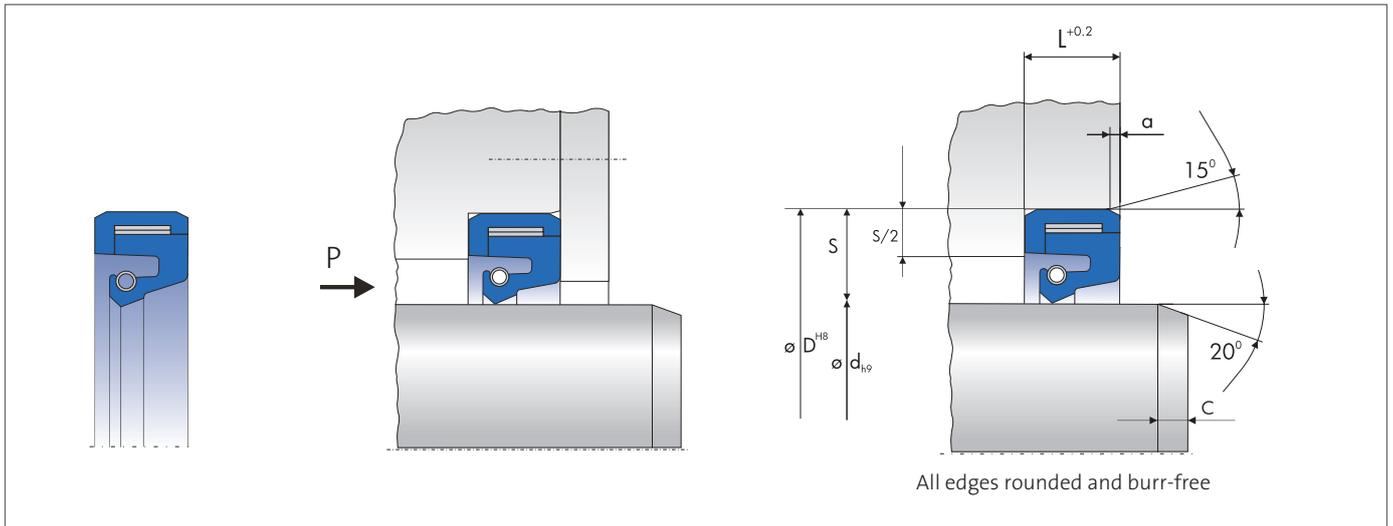
### Installation & Assembly

For installation purposes an open housing design is required. Self-retaining shaft seals Merkel Radiamatic RS85 are supplied as endless versions. A joining on site e. g. with our bonding set RK15 is not possible. Please also consult our Technical Manual.



## FEATURES AND BENEFITS

### Housing recommendations for new designs



Diameter [mm]	S (Profile) [mm]	L [mm]	a [mm]
200 ... 450	20	20	4
	22	20	4
>450 ... 750	22	22	4
	25	22	4
>750	25	25	5
	30	25	5
	32	25	5

The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.

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