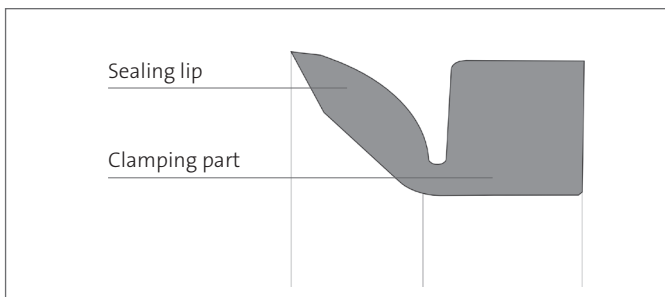


MERKEL ENVIROMATIC EE



Merkel Enviromatic EE is a deflector seal made of elastomeric material featuring an axially acting sturdy sealing lip with a well-defined sealing edge.



Applications

The Merkel Enviromatic EE deflector is used in a variety of heavy duty applications, mainly to protect roller bearings and gears in the iron and steel industry.

The deflector is able to protect against environmental contaminations, like e. g. dust, scale, carbon particles, spray water or rolling oil emulsions.

Material

Material	Designation	Color
Nitrile rubber	85 NBR	black
Hydrogenated acrylonitrile-butadiene rubber	85 HNBR	black / green
Fluoro rubber	85 FKM	black

VALUE TO THE CUSTOMER

- High wiping action against environmental factors over the part's entire lifetime
- Uniform and lasting contact pressure of a small sealing lip area, even when there is a large axial clearance
- Significant extension of the rotary shaft seal's lifetime within a sealing system
- Can be fitted into existing housings



FEATURES AND BENEFITS

Operating conditions

Material	NBR	HNBR	FKM
Mineral oil	-30 ... +100 °C (-22 ... 212 °F)	-20 ... +140 °C (-4 ... 284 °F)	-10 ... +150 °C (14 ... 302 °F)
Water	+5 ... +100 °C (41 ... 212 °F)	+5 ... +100 °C (41 ... 212 °F)	+5 ... +80 °C (41 ... 176 °F)
Mineral grease	-30 ... +100 °C (-22 ... 212 °F)	-20 ... +140 °C (-4 ... 284 °F)	-10 ... +150 °C (14 ... 302 °F)
Pressure	0,03 MPa (4,35 psi)	0,03 MPa (4,35 psi)	0.03 MPa (4,35 psi)
Sliding speed	20 m/s (65 ft/s)*	20 m/s (65 ft/s)*	20 m/s (65 ft/s)*
Axial clearance	±12 mm (±0,47 in)	±12 mm (±0,47 in)	±12 mm (±0,47 in)

The figures stated are maximum values, and must not be applied simultaneously.

* The indication is based on stationary water guards. Rotary seals have different limits.

Surface finish

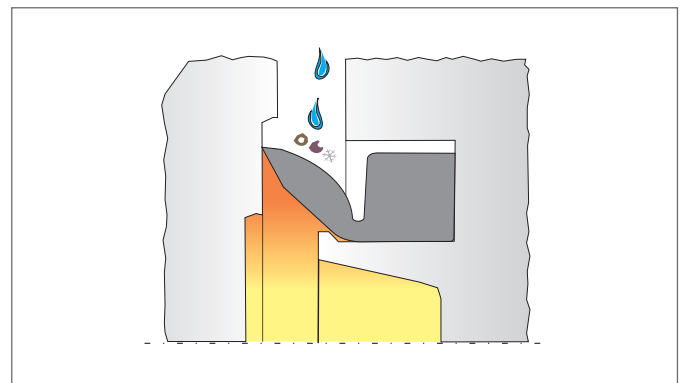
Peak-to-valley heights	R _a	R _{max}
Sliding surface	≤0.8 μm	≤2.5 μm
Housing	≤4.0 μm	≤15.0 μm

The surface hardness shall be approx. 30 HRC. Material content M, >50 % to max. 90% for a cutting depth of c = R_a/2 and reference line C_{ref} = 0%

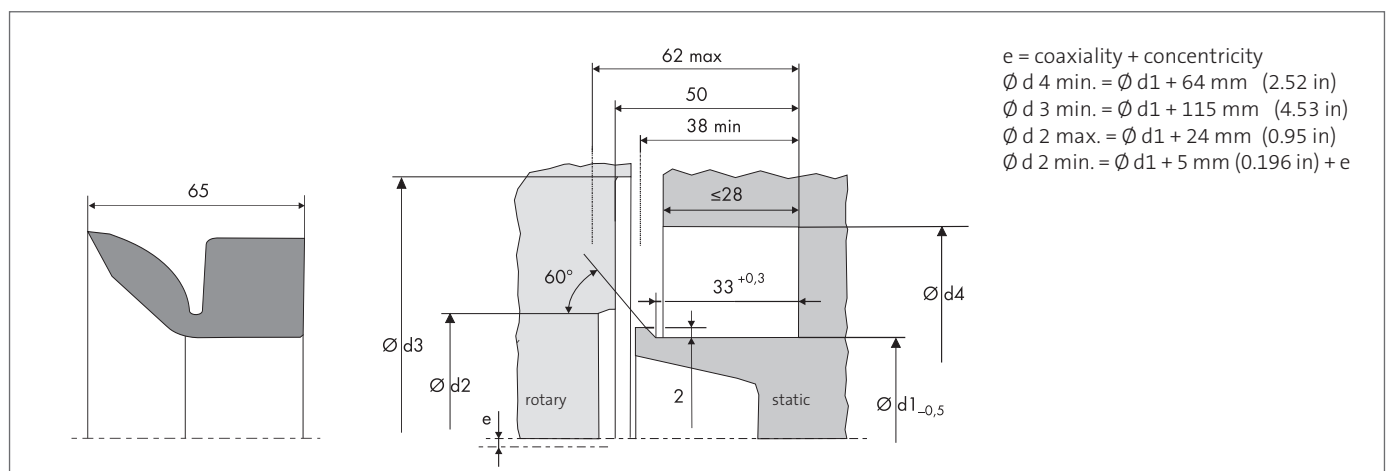
Axial support

An axial support should most definitely be provided for the Enviro-matic deflector. For further information, please get in touch with our applications consultancy services.

Example of assembly – work roll in a steel mill



Housing recommendation



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