

MERKEL GUIDE RING EKF



PRODUCT DESCRIPTION

Slit, non-metallic Merkel Guide Ring EKF.

PRODUCT ADVANTAGES

Non-metallic guide element for pistons.

APPLICATION

- Mobile hydraulics
- Injection moulding machines
- Standard cylinders

MATERIAL

Material	Code
Polyamide	PA 4201

OPERATING CONDITIONS

Running speed v	1 m/s
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Loading (permitted specific surface pressure*)	$\leq 25 \text{ N/mm}^2$ at 20 °C; $\leq 15 \text{ N/mm}^2$ at 100 °C
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* For the simple determination of the loading, a constant surface pressure is calculated using the projected area (D x H). The actual surface pressure is clearly greater in the centre of the surface than the calculated surface pressure. This is taken into account in the value for the permissible specific surface pressure.

Medium/ Temperature	PA 4201
Hydraulic oils HL, HLP	-30 °C ... +100 °C
HFA fluids	+5 °C ... +50 °C
HFB fluids	+5 °C ... +50 °C
HFC fluids	-30 °C ... +50 °C
HFD fluids	-
Water	+5 °C ... +50 °C
HETG (rapeseed oil)	-30 °C ... +60 °C
HEES (synthetic ester)	-30 °C ... +80 °C
HEPG (glycol)	-30 °C ... +50 °C
Mineral greases	-30 °C ... +100 °C

DESIGN NOTES

Please observe our general design notes in → Technical Manual.

Surface quality

Peak-to-valley heights	R_a	R_{max}
Sliding surface	0,05 ... 0,3 μm	$\leq 2,5 \mu\text{m}$
Groove base	$\leq 2 \mu\text{m}$	$\leq 10,0 \mu\text{m}$
Groove flanks	$\leq 3 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Percentage contact area $M_r > 50\%$ to max. 90% at cutting depth $c = Rz/2$ and reference line $C_{ref} = 0\%$.

Tolerances

D	d_f	d_{f1}
H8	h8	h9

The tolerances give are recommended values. The usage of the guide and tolerance definition are to be considered in connection with the seal employed. The diameter d_{f1} given in the table of dimensions is to be considered exclusively in relation to the guide ring. The corresponding diameter for the adjacent seal housing is to be matched to the sealing component. → Technical Manual.

FITTING & INSTALLATION

Merkel Guide Ring EKF can be easily snapped into the housing groove. Careful fitting is a prerequisite for correct function. → Technical Manual.