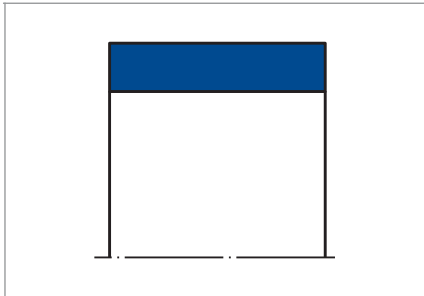


MERKEL GUIDE RING FRI



PRODUCT DESCRIPTION

Slit, non-metallic Merkel Guide Ring FRI.

PRODUCT ADVANTAGES

Non-metallic guide element for rods; for standardised housings amongst others, according to ISO 10766.

- No seizure due to metal/plastic materials combination
- Medium load-bearing capacity
- Chamfered profile edges prevent pressing of edge into the corner radii of the housing groove
- Simple snap-in fitting

APPLICATION

- Earth moving equipment
- Industrial vehicles
- Agricultural machinery
- Cranes

MATERIAL

Material	Code
Filled polyamide	PA 4112

OPERATING CONDITIONS

Running speed v	1 m/s
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Load ing (permitted specific surface pressure *)	$\leq 40 \text{ N/mm}^2$ at $20 \text{ }^\circ\text{C}$; $\leq 30 \text{ N/mm}^2$ at $100 \text{ }^\circ\text{C}$
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* For the simple determination of the load, a constant surface pressure is calculated using the projected area ($d \times H$). 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 4112
Hydraulic oils HL, HLP	$-30 \text{ }^\circ\text{C} \dots +100 \text{ }^\circ\text{C}$
HFA fluids	$+5 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$
HFB fluids	$+5 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$
HFC fluids	$-30 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$
HFD fluids	-
Water	$+5 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$
HETG (rapeseed oil)	$-30 \text{ }^\circ\text{C} \dots +60 \text{ }^\circ\text{C}$
HEES (synthetic ester)	$-30 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$
HEPG (glycol)	$-30 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$
Mineral greases	$-30 \text{ }^\circ\text{C} \dots +100 \text{ }^\circ\text{C}$

DESIGN NOTES

Please observe our general design notes in → Technical Manual.

Surface quality

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

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

Tolerances

D_F	d	D_{F1}
H8	f8	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.

FITTING & INSTALLATION

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

SPECIALITIES

Manufacturing tolerance

Production tolerance profile thickness S
$-0,1 \text{ mm}$