

Merkel Guide Ring FRI

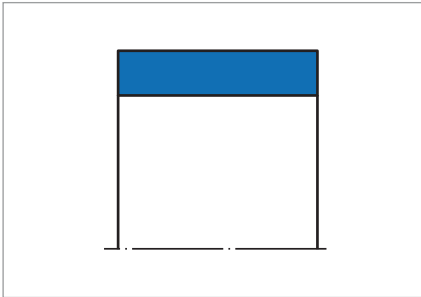


Fig. 1 Merkel Guide Ring FRI

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

Material	PA 4112 (filled polyamide)
	Temperature range in °C
Hydraulic oils HL, HLP	-30 ... +100
HFA fluids	+5 ... +50
HFB fluids	+5 ... +50
HFC fluids	-30 ... +50
HFD fluids	-
Water	+5 ... +50
HETG (rapeseed oil)	-30 ... +60
HEES (synthetic ester)	-30 ... +80
HEPG (glycol)	-30 ... +50
Mineral greases	-30 ... +100
Running speed in m/s	1
Load (permitted specific surface pressure*)	≤40 N/mm ² at 20 °C ≤30 N/mm ² at 100 °C

* For the simple determination of the load, 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.

Surface quality

Surface roughness	R _a	R _{max}
Sliding surface	0,05 ... 0,3 µm	≤2,5 µm
Groove base	≤2 µm	≤10,0 µm
Groove flanks	≤3 µm	≤15,0 µm

Percentage contact area M_v >50% to max. 90% at cutting depth c = Rz/2 and reference line C ref = 0%.

Design notes

Please observe our general design notes in → Technical Manual.

Tolerance recommendation

d	D _F	D _{F1}
f8	H8	H9

The tolerances given 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.

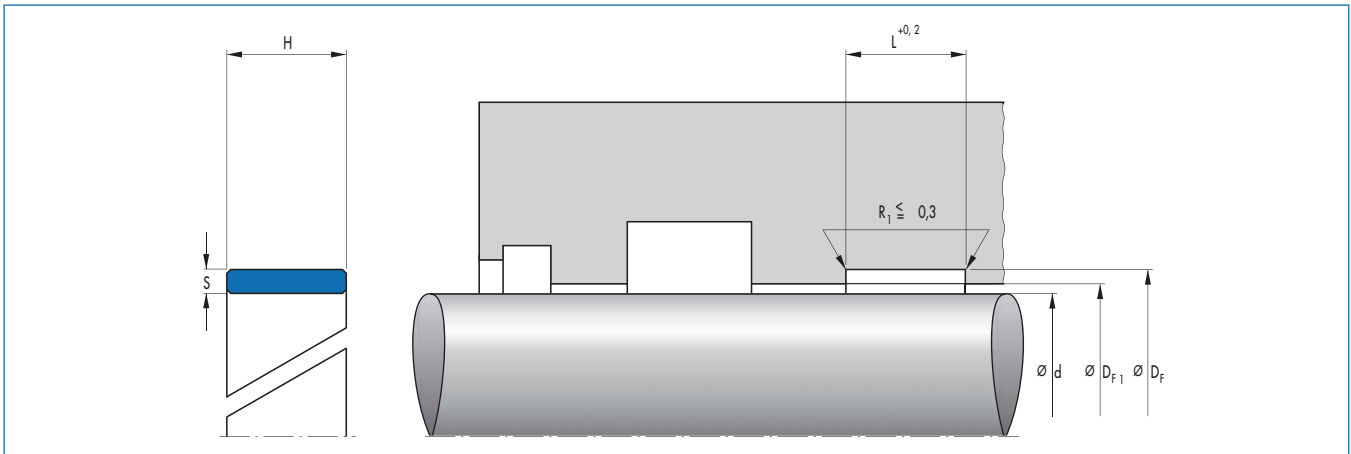
Manufacturing tolerance

Production tolerance profile thickness S
-0,1

Fitting & installation

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

Article list



d	D _F	L	H	D _{F1}	Profile	Material	Article No.	
20	23,1	4	3,9	20,4	1,55	PAGF Q04112	434219	●
25	28,1	4	3,9	25,4	1,55	PAGF Q04112	434220	●
30	33,1	4	3,9	30,4	1,55	PAGF Q04112	434221	●
32	35,1	4	3,9	32,4	1,55	PAGF Q04112	434222	●
36	41	5,6	5,4	36,4	2,5	PAGF Q04112	426463	●
40	45	5,6	5,4	40,4	2,5	PAGF Q04112	426464	●
45	50	5,6	5,4	45,4	2,5	PAGF Q04112	426465	●
50	55	9,7	9,5	50,4	2,5	PAGF Q04112	428805	●
56	61	9,7	9,5	56,4	2,5	PAGF Q04112	429273	●
60	65	9,7	9,5	60,5	2,5	PAGF Q04112	429318	●
63	68	9,7	9,5	63,5	2,5	PAGF Q04112	432260	●
65	70	9,7	9,5	65,5	2,5	PAGF Q04112	432261	○
70	75	9,7	9,5	70,5	2,5	PAGF Q04112	432262	●
80	85	9,7	9,5	80,5	2,5	PAGF Q04112	432264	●
90	95	9,7	9,5	90,6	2,5	PAGF Q04112	432266	●
100	105	9,7	9,5	100,6	2,5	PAGF Q04112	432267	●

● Available from stock ○ On request: Tool is available, delivery at short notice