



Max. Operating Conditions	
Compressive strength (N/mm ²)	≤ 40
Temperature (°C)	- 40 / + 100
Speed (m/s)	≤ 0,8
Media: Hydraulic fluids upon oil-basis, hardly inflaming hydraulic fluids, HFA-, HFB-Liquids	

Recommended Surface Finish		
Surface roughness	R _a	R _t
Groove bottom	≤ 1,6 µm	≤ 16 µm
Groove flanks	≤ 1,6 µm	≤ 16 µm
Running surface	≤ 0,3 µm	≤ 3 µm

Material	
Polyacetal with glass fiber	POM

Technical Description

The guide rings type **FRS** are made of polyacetal with glass fiber reinforcement, and are used to guide plunger cylinders.

Due to the longitudinal grooves on the outside diameter, an overflow of the fluid is assured.

Other characteristics:

- good sliding characteristics
- high bearing capacity
- wear-resistant, therefore long operating life
- easy installation by snapping in the groove

The indicated dimensions of the guide rings type **FRS** as well as individual dimensions may also be manufactured in the modified laminated fabric materials with best bearing capacity.

Type designation	∅ D	∅ d	L	Gap A
FRS - 40 - 34	40	34	9,6	2,0
FRS - 25 - 16	25	16	12,0	2,0
FRS - 30 - 20	30	20	12,0	2,0
FRS - 35 - 25	35	25	12,0	2,0
FRS - 40 - 30	40	30	12,0	2,0
FRS - 45 - 35	45	35	12,0	2,0
FRS - 50 - 41	50	41	12,0	2,0
FRS - 54,5 - 45	54,5	45	19,0	2,0
FRS - 55 - 46	55	46	12,0	2,0
FRS - 60 - 51	60	51	12,0	2,0
FRS - 65 - 56	65	56	12,0	2,0
FRS - 70 - 59	70	59	12,0	2,0
FRS - 72 - 61	72	61	12,0	2,0
FRS - 75 - 66	75	66	12,0	2,0
FRS - 60 - 54	60	54	12,7	2,0
FRS - 70 - 64	70	64	12,7	2,0
FRS - 75 - 69	65	69	12,7	2,0
FRS - 80 - 74	80	74	12,7	2,0
FRS - 90 - 84	90	84	12,7	2,0
FRS - 95 - 89	95	89	12,7	2,0
FRS - 110 - 104	110	104	12,7	2,0
FRS - 125 - 119	125	119	12,7	2,0
FRS - 55 - 46	55	46	15,0	3,0
FRS - 50 - 40	50	40	15,0	2,0
FRS - 55 - 45	55	45	15,0	3,0
FRS - 60 - 45	60	45	15,0	3,0
FRS - 60 - 50	60	50	15,0	3,0
FRS - 65 - 55	65	55	15,0	3,0
FRS - 70 - 60	70	60	15,0	3,0
FRS - 75 - 65	75	65	15,0	3,0

	Guide Ring	Dimension	Width	Material
Ordering example:	Guide Ring	∅ D 55 x 45	x 15	POM glass fiber
Order designation:	FRS - 55 x 45 x 15			

Designation of material: **POM** - Polyacetal with glass fiber

Type designation	∅ D	∅ d	L	Gap A
FRS - 85 - 76	85	76	15,0	3,0
FRS - 97 - 86	97	86	15,0	3,0
FRS - 100 - 92	100	92	20,0	2,0
FRS - 130 - 122	130	122	20,0	2,0
FRS - 160 - 152	160	152	20,0	2,0

Further dimension and in-between sizes upon request.