

DESCRIPTION

Split rod and piston guide ring

MATERIAL

Type: Acetal resin with glass fibre
Designation: BEARITE

MAIN FEATURES

The FR type guide rings have been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod or the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier.

The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterized by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

- Extended service life
- Dimension suitable for both rod and piston
- Excellent wear-resistance
- Simple design of groove and assembly
- Reduce vibrations
- Low friction
- Good resistance to loads
- Good mechanical stability at high temperature
- Easy installation without expensive auxiliaries

FIELD OF APPLICATION

Speed	≤ 1 m/s
Temperature	-40°C ÷ +110°C
Fluid	Hydraulic oils (mineral oil based). <i>For other fluids contact our technical department</i>

SURFACE ROUGHNESS

Dynamic surface	Ra ≤ 0.3 µm	Rt ≤ 2.5 µm
Static surface	Ra ≤ 2 µm	Rt ≤ 10 µm

CHOICE OF GUIDE RING WIDTH

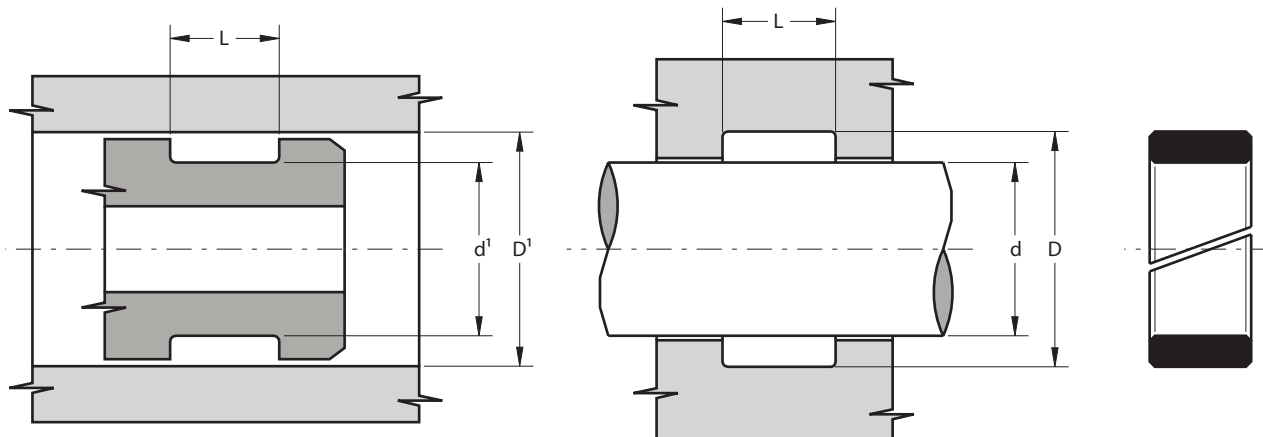
A rough estimate of guide width can be calculated with the following formula:

$$h_{mm} \geq \frac{F_N \times k}{p_{N/mm^2} \times d_{mm}}$$

where

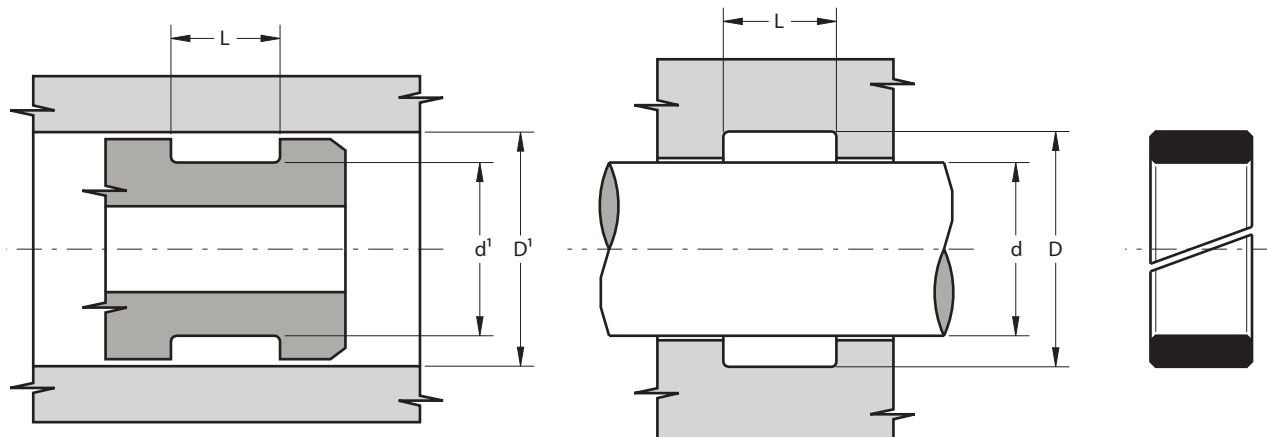
h_{mm}	• guide ring width in mm
F_N	• radial load in N
k	• safety factor (<i>generally 2</i>)
d_{mm}	• diameter in mm
p_{N/mm^2}	• surface pressure N/mm ²
	40 a 20 °C
	30 a 70 °C

- Before assembly good cleanliness and guide lubrication are recommended.



Part.	$d^{1-0.05}$ d^{f7}	D^{1H8} $D^{+0.05}$	$L^{+0.25}$
FR 16 19 6.3	16	19	6.3
FR 16 19.1 4	16	19.1	4.0
FR 20 25 5.6	20	25	5.6
FR 25 30 5.6	25	30	5.6
FR 25 30 9.7	25	30	9.7
FR 27 32 5.6	27	32	5.6
FR 27.3 32 9.82	27.3	32	9.82
FR 30 35 5.6	30	35	5.6
FR 30 35 9.7	30	35	9.7
FR 30 35 19.4	30	35	19.4
FR 32 37 9.7	32	37	9.7
FR 35 40 4.5	35	40	4.5
FR 35 40 5.6	35	40	5.6
FR 35 40 9.7	35	40	9.7
FR 36 41 5.6	36	41	5.6
FR 40 45 5.6	40	45	5.6
FR 40 45 9.7	40	45	9.7
FR 45 50 5.6	45	50	5.6
FR 45 50 9.7	45	50	9.7
FR 45 50 19.4	45	50	19.4
FR 45.4 50 6.7	45.4	50	6.7
FR 46 50 9.7	46	50	9.7
FR 46 50 10.2	46	50	10.2

Part.	$d^{1-0.05}$ d^{f7}	D^{1H8} $D^{+0.05}$	$L^{+0.25}$
FR 50 55 5.6	50	55	5.6
FR 50 55 9.7	50	55	9.7
FR 50 55 15	50	55	15.0
FR 55 60 5.6	55	60	5.6
FR 55 60 9.7	55	60	9.7
FR 56 60 10.2	56	60	10.2
FR 57.18 62.18 19.8	57.18	62.18	19.8
FR 58 63 5.6	58	63	5.6
FR 58 63 9.7	58	63	9.7
FR 59 63 10	59	63	10.0
FR 60 65 5.6	60	65	5.6
FR 60 65 9.7	60	65	9.7
FR 60 65 15	60	65	15.0
FR 60 65 19.4	60	65	19.4
FR 65 70 5.6	65	70	5.6
FR 65 70 9.7	65	70	9.7
FR 66 70 10.2	66	70	10.2
FR 67 72 5.6	67	72	5.6
FR 70 75 5.6	70	75	5.6
FR 70 75 9.7	70	75	9.7
FR 71.2 76.2 20	71.2	76.2	20.0
FR 75 80 5.6	75	80	5.6
FR 75 80 9.7	75	80	9.7



Part.	$d^{1-0.05}$ d^{f7}	D^{1H8} $D^{+0.05}$	$L^{+0.25}$
FR 75 80 19.4	75	80	19.4
FR 76 80 10	76	80	10.0
FR 80 85 5.6	80	85	5.6
FR 80 85 9.7	80	85	9.7
FR 80 85 15	80	85	15.0
FR 85 90 5.6	85	90	5.6
FR 85 90 9.7	85	90	9.7
FR 88.9 93.9 19.8	88.9	93.9	19.8
FR 90 95 5.6	90	95	5.6
FR 90 95 9.7	90	95	9.7
FR 90 95 19.4	90	95	19.4
FR 92 97 9.7	92	97	9.7
FR 95 100 5.6	95	100	5.6
FR 95 100 9.7	95	100	9.7
FR 96 100 10	96	100	10.0
FR 100 105 5.6	100	105	5.6
FR 100 105 9.7	100	105	9.7
FR 103 108 20	103	108	20.0
FR 105 110 9.7	105	110	9.7
FR 105 110 15	105	110	15.0
FR 105 110 19.4	105	110	19.4
FR 110 115 9.7	110	115	9.7
FR 115 120 9.7	115	120	9.7

Part.	$d^{1-0.05}$ d^{f7}	D^{1H8} $D^{+0.05}$	$L^{+0.25}$
FR 120 125 5.6	120	125	5.6
FR 120 125 9.7	120	125	9.7
FR 122 127 9.7	122	127	9.7
FR 122 127 19.4	122	127	19.4
FR 130 135 9.7	130	135	9.7
FR 135 140 15	135	140	15.0
FR 145 150 19.4	145	150	19.4
FR 145 150 20	145	150	20.0
FR 155 160 15	155	160	15.0
FR 175 180 15	175	180	15.0
FR 176 180 25	176	180	25.0
FR 195 200 15	195	200	15.0