
**DESCRIPTION**

Split rod guide ring

**MATERIAL**

Type: Acetal resin with glass fibre

Designation: BEARITE

**MAIN FEATURES**

The FI type guide rings have been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder head 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
- 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	
Fluids	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**

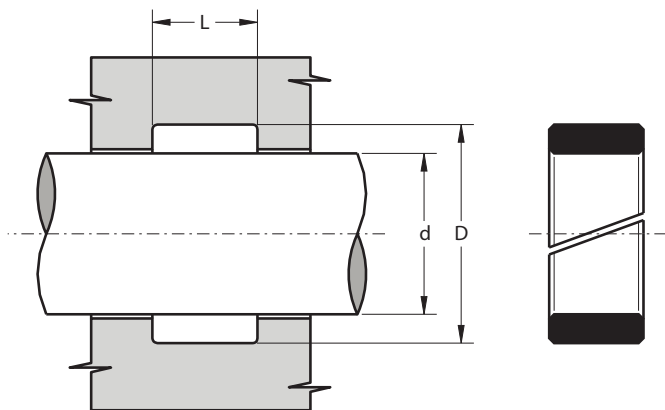
A rough estimate of guide width can be calculated with the following formula:

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

where

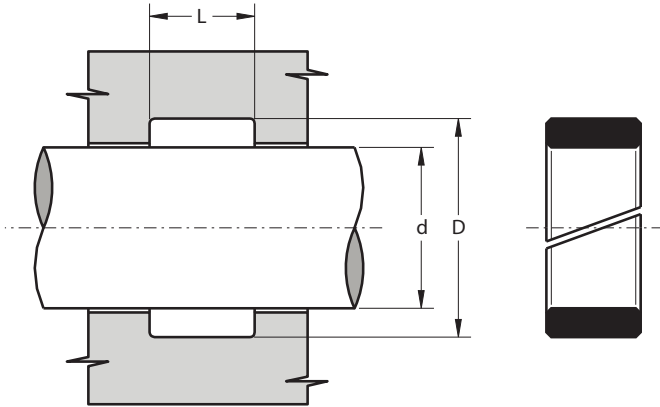
$h_{mm}$	• guide ring width in mm
$F_N$	• radial load in N
$k$	• safety factor ( <i>generally 2</i> )
$d_{mm}$	• rod diameter in mm
$p_{N/mm^2}$	• surface pressure N/mm <sup>2</sup>
	40 a 20 °C
	30 a 70 °C

- Before assembly good cleanliness and guide lubrication are recommended.



Part.	d <sup>f7</sup>	D <sup>+0.05</sup>	L <sup>+0.25</sup>
FI 12	12	16	9.6
FI 14	14	18	9.6
FI 15	15	19	9.6
FI 16	16	20	9.6
FI 16 20 5.6	16	20	5.6
FI 16 20 8	16	20	8.0
FI 18	18	22	9.6
FI 20	20	24	9.6
FI 20 26 9.6	20	26	9.6
FI 22	22	26	9.6
FI 25	25	29	9.6
FI 25 31 9.6	25	31	9.6
FI 26	26	30	9.6
FI 28	28	32	9.6
FI 28 31 5.6	28	31	5.6
FI 30	30	34	9.6
FI 30 33 5.6	30	33	5.6
FI 30 36 9.6	30	36	9.6
FI 32	32	36	9.6
FI 32 35.1 4	32	35.1	4.0
FI 32 38 10	32	38	10.0
FI 34	34	38	9.6
FI 35	35	39	9.6
FI 35 39 12.8	35	39	12.8

Part.	d <sup>f7</sup>	D <sup>+0.05</sup>	L <sup>+0.25</sup>
FI 35 41 9.6	35	41	9.6
FI 36	36	40	9.6
FI 36 42 9.6	36	42	9.6
FI 38	38	42	9.6
FI 40	40	44	9.6
FI 40 46 9.6	40	46	9.6
FI 40 46 12.8	40	46	12.8
FI 42	42	46	9.6
FI 45	45	51	9.6
FI 45 51 12.8	45	51	12.8
FI 46	46	52	9.6
FI 47.62 53.97 19.05	47.62	53.97	19.05
FI 48	48	54	9.6
FI 50	50	56	9.6
FI 50 56 12.8	50	56	12.8
FI 52	52	58	9.6
FI 53	53	59	9.6
FI 55	55	61	9.6
FI 55 61 12.8	55	61	12.8
FI 56	56	62	12.8
FI 60	60	66	12.8
FI 63	63	69	12.8
FI 63.5 69.85 12.7	63.5	69.85	12.7
FI 63.5 69.85 19.05	63.5	69.85	19.05
FI 65	65	71	12.8
FI 66	66	72	12.8
FI 70	70	76	12.8
FI 72	72	78	12.8
FI 73	73	79	12.8
FI 75	75	81	12.8
FI 76	76	82	12.8
FI 76.2 82.55 12.8	76.2	82.55	12.8
FI 78	78	84	12.8
FI 80	80	86	12.8
FI 80 86 19.2	80	86	19.2
FI 85	85	91	12.8
FI 86	86	92	12.8
FI 90	90	96	12.8
FI 90 96 19.2	90	96	19.2
FI 95	95	101	12.8



Part.	d <sup>f7</sup>	D <sup>+0.05</sup>	L <sup>+0.25</sup>
FI 100	100	106	12.8
FI 105	105	111	12.8
FI 110	110	116	12.8
FI 115	115	121	12.8
FI 120	120	126	12.8
FI 120 126 19.2	120	126	19.2
FI 120 126 25.4	120	126	25.4
FI 123	123	129	12.8
FI 125	125	131	12.8
FI 130	130	136	12.8
FI 130 136 25.4	130	136	25.4
FI 135	135	141	12.8
FI 140	140	146	12.8
FI 143	143	149	12.8
FI 145	145	151	12.8
FI 150	150	156	12.8
FI 150 156 19.2	150	156	19.2
FI 154	154	160	19.2
FI 155	155	161	19.2
FI 160	160	166	19.2
FI 165	165	171	19.2
FI 170	170	176	19.2
FI 175	175	181	19.2
FI 180	180	186	19.2

Part.	d <sup>f7</sup>	D <sup>+0.05</sup>	L <sup>+0.25</sup>
FI 185	185	191	19.2
FI 190	190	196	19.2
FI 195	195	201	19.2
FI 200	200	206	19.2
FI 205	205	211	19.2
FI 210	210	216	19.2
FI 215	215	221	19.2
FI 220	220	226	19.2
FI 225	225	231	19.2
FI 230	230	236	19.2
FI 235	235	241	19.2
FI 240	240	246	19.2
FI 245	245	251	19.2
FI 250	250	256	19.2
FI 255	255	261	19.2
FI 260	260	266	19.2
FI 265	265	271	19.2
FI 270	270	276	19.2
FI 275	275	281	19.2
FI 280	280	286	19.2
FI 285	285	291	19.2
FI 290	290	296	19.2
FI 295	295	301	19.2