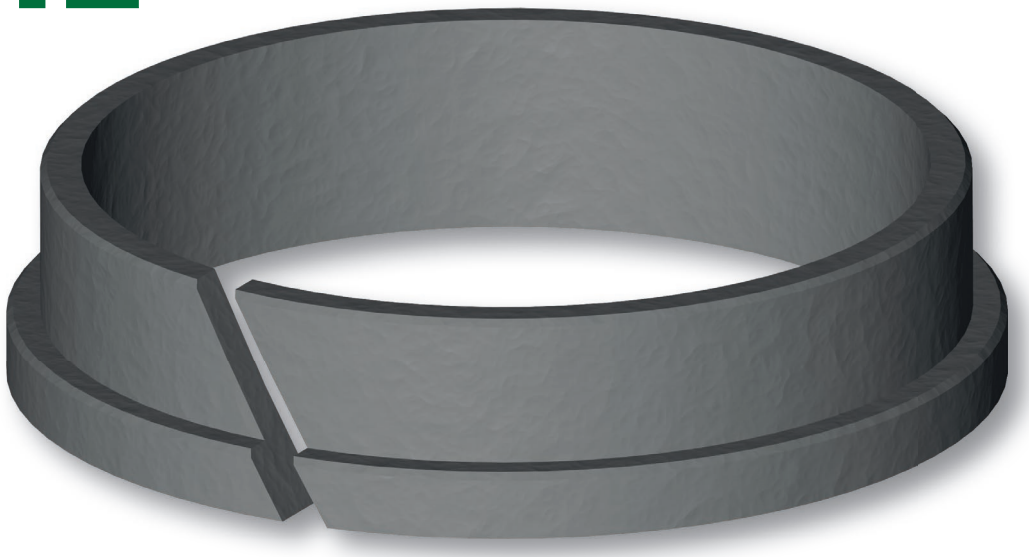
FIL



The Aston Seals FIL 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

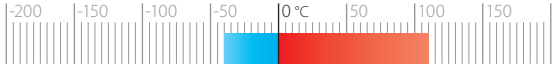
MATERIAL

Type	Acetal resin with glass fibre
Designation	BEARITE

FIELD OF APPLICATION

Speed
≤ 1 m/s

Temperature
–40°C ÷ +110°C



Fluids
Hydraulic oils (mineral oil based)
For other fluids contact our technical department

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:

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

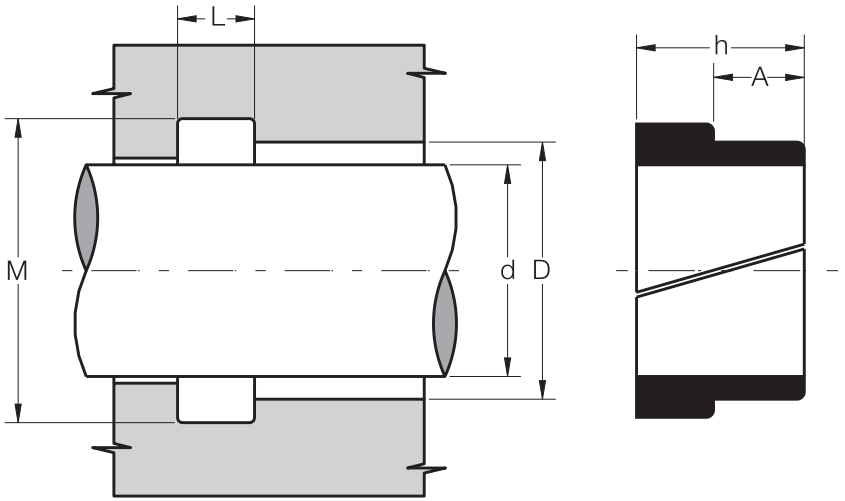
where

- h_{mm} • Guide ring width in mm
- F_N • Radial load in N
- k • Safety factor (generally 2)
- d_{mm} • Rod diameter in mm
- $p_{N/mm2}$ • Surface pressure N/mm2
  40 a 20 °C
  30 a 70 °C

Before assembly good cleanliness and lubrication are recommended.

The above data are maximum values, they may be maintained for short periods and can not be used at the same time simultaneously.

FIL



Part.	d f7	D +0.05	M +0.2	L +0.1	h	A
FIL 45 51 13	45	51	56	5.0	13	8
FIL 55 61 13	55	61	66	5.0	13	8
FIL 60 66 13	60	66	71	5.0	13	8
FIL 60 66 16	60	66	71	5.0	16	11
FIL 65 70 16	65	70	73	5.0	16	11
FIL 65 71 13	65	71	76	5.0	13	8
FIL 70 76 13	70	76	81	5.0	13	8
FIL 72 77 16	72	77	82.4	5.0	16	11
FIL 75 81 13	75	81	86	5.0	13	8
FIL 78 84 16	78	84	89	5.0	16	11
FIL 80 86 13	80	86	91	5.0	13	8
FIL 85 90 16	85	90	93	5.0	16	11
FIL 85 91 13	85	91	96	5.0	13	8
FIL 88 93 16	88	93	98	5.0	16	11
FIL 91 96 16	91	96	101.4	5.0	16	11
FIL 95 101 13	95	101	106	5.0	13	8
FIL 99 105 16	99	105	110	5.0	16	11
FIL 100 106 13	100	106	111	5.0	13	8
FIL 105 111 13	105	111	116	5.0	13	8
FIL 110 115 16	110	115	120.4	5.0	16	11

Part.	d f7	D +0.05	M +0.2	L +0.1	h	A
FIL 110 116 13	110	116	121	5.0	13	8
FIL 115 121 13	115	121	126	5.0	13	8
FIL 120 126 16	120	126	131	5.0	16	11
FIL 125 131 13	125	131	136	5.0	13	8
FIL 129 136 16	129	136	139.4	5.0	16	11
FIL 132 138 13	132	138	143	5.0	13	8
FIL 135 141 13	135	141	146	5.0	13	8
FIL 140 146 13	140	146	151	5.0	13	8
FIL 141 147 16	141	147	152	5.0	16	11
FIL 142 148 13	142	148	153	5.0	13	8
FIL 145 151 13	145	151	156	5.0	13	8
FIL 152 158 13	152	158	163	5.0	13	8
FIL 162 168 16	162	168	173	5.0	16	11
FIL 165 171 13	165	171	176	5.0	13	8
FIL 172 178 13	172	178	183	5.0	13	8
FIL 183 189 16	183	189	194	5.0	16	11
FIL 194 200 13	194	200	205	5.0	13	8
FIL 207 213 16	207	213	218	5.0	16	11
FIL 218 224 13	218	224	229	5.0	13	8