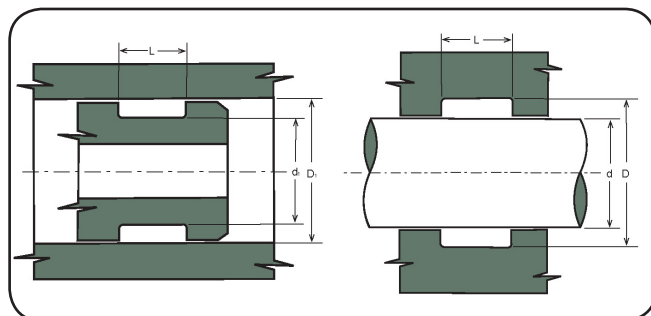




ROD AND PISTON GUIDE RING



MAIN FEATURES

The GR-type guide ring is developed to replace the traditional bronze guide in the hydraulic cylinder. The rod and piston guide prevents metallic contact with the cylinder head, there being a radial force that ensures the perpendicular direction to the motion. The material used in this guide is a medium viscosity acetal resin with glass fibre, characterised by its high resistance, stiffness, hardness, stability at high or low temperature.

- ° Long operating life
- ° Excellent extrusion and wear resistance
- ° Simple coupling in the housing design
- ° Low burst and high friction coefficient (between 0.05 and 0.1 on steel, when lubricated)
- ° Good mechanical stability at high temperature
- ° The bevelled profile edges prevent edge pinching on the radii of the mounting gap edges

GR

DESCRIPTION

Cut piston and piston rod guide ring.

DYNAMIC SURFACE MATERIAL

Acetal resin with glass fibre.

OPERATING CONDITIONS

Speed: < 1 m/seg.

Temperature: - 40 a + 110°C

Permissible Loads: < 40 N/mm² a 20 °C

< 30 N/mm² a 100 °C

Fluid: Hydraulic oil

(mineral based)

Hydraulic oil HL, HLP

Pressure fluids

HFA, HBF, HFC, HFD

•Radial load: Under normal lubrication conditions and speed is up to 30 m/min.

The maximum radial load can be calculated by the formula: $P = D \times E \times PS$

P (Kg) maximum radial load

D (cm) diameter of the guide subject to motion

E (cm) guide width

PS (Bar) 370 Bar (ASTM D.695)

maximum permissible load for the material

RECOMMENDED TOLERANCES

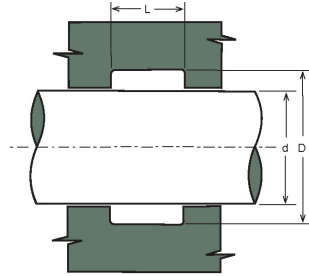
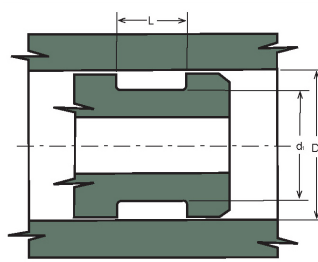
d	D	L
h11	0.05+	0.25+

SURFACE ROUGHNESS

Dynamic surface $R_a < 0.3 \mu\text{m}$ $R_t < 2.5 \mu\text{m}$

Static surface $R_a < 2 \mu\text{m}$ $R_t < 10 \mu\text{m}$

GR



Size	Piston Rod	d 1-0.05 d f 7	D 1 H8 D + 0.05	L + 0.25
GR 16		16.00	19.10	4.00
GR 20		20.00	25.00	5.60
GR 25		25.00	30.00	5.60
GR 25A		25.00	30.00	9.70
GR 27		27.00	32.00	5.60
GR 30		30.00	35.00	5.60
GR 30A		30.00	35.00	9.70
GR 30B		30.00	35.00	19.40
GR 35		35.00	40.00	5.60
GR 35A		35.00	40.00	9.70
GR 36		36.00	41.00	5.60
GR 40		40.00	45.00	5.60
GR 40A		40.00	45.00	9.70
GR 45		45.00	50.00	5.60
GR 45A		45.00	50.00	9.70
GR 45B		45.00	50.00	19.40
GR 46		46.00	50.00	10.20
GR 50		50.00	55.00	5.60
GR 50A		50.00	55.00	9.70
GR 55		55.00	60.00	5.60
GR 55A		55.00	60.00	9.70
GR 56		56.00	60.00	10.20
GR 58		58.00	63.00	5.60
GR 58A		58.00	63.00	9.70
GR 60		60.00	65.00	5.60
GR 60A		60.00	65.00	9.70
GR 60B		60.00	65.00	19.40
GR 65		65.00	70.00	5.60
GR 65A		65.00	70.00	9.70

Size	Piston Rod	d 1-0.05 d f 7	D 1 H8 D + 0.05	L + 0.25
GR 66		66.00	70.00	10.20
GR 67		67.00	72.00	5.60
GR 70		70.00	75.00	5.60
GR 70A		70.00	75.00	9.70
GR 75		75.00	80.00	5.60
GR 75A		75.00	80.00	9.70
GR 75B		75.00	80.00	19.40
GR 80		80.00	85.00	5.60
GR 80A		80.00	85.00	9.70
GR 85		85.00	90.00	5.60
GR 85A		85.00	90.00	9.70
GR 90		90.00	95.00	5.60
GR 90A		90.00	95.00	9.70
GR 90B		90.00	95.00	19.40
GR 92A		92.00	97.00	9.70
GR 95		95.00	100.00	5.60
GR 95A		95.00	100.00	9.70
GR 100		100.00	105.00	5.60
GR 100 A		100.00	105.00	9.70
GR 105 A		105.00	110.00	9.70
GR 105 B		105.00	110.00	19.40
GR 110 A		110.00	115.00	9.70
GR 115 A		115.00	120.00	9.70
GR 120		120.00	125.00	5.60
GR 120 A		120.00	125.00	9.70
GR 122 A		122.00	127.00	9.70
GR 122 B		122.00	127.00	19.40
GR 130 A		130.00	135.00	9.70
GR 135 B		135.00	140.00	15.00