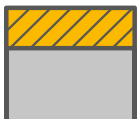
Piston guide ring

Type: PG



The piston guide ring type PG prevents contact between sliding metal surfaces and also absorbs any resulting shear forces. As a standard it is made of the compounds PTFE + carbon or PTFE + bronze. Yet other materials are also possible.

Due to the good media stability of the piston guide ring, any medium ranging from mineral oil-based hydraulic fluids, environment-friendly hydraulic fluids, and water-oil emulsions up to flame-resistant hydraulic fluids can be used.

Piston guide rings offer very good sliding behavior, good fail-safe properties and also high wear resistance. In addition, they help to attentuate mechanical vibration.

Operating media

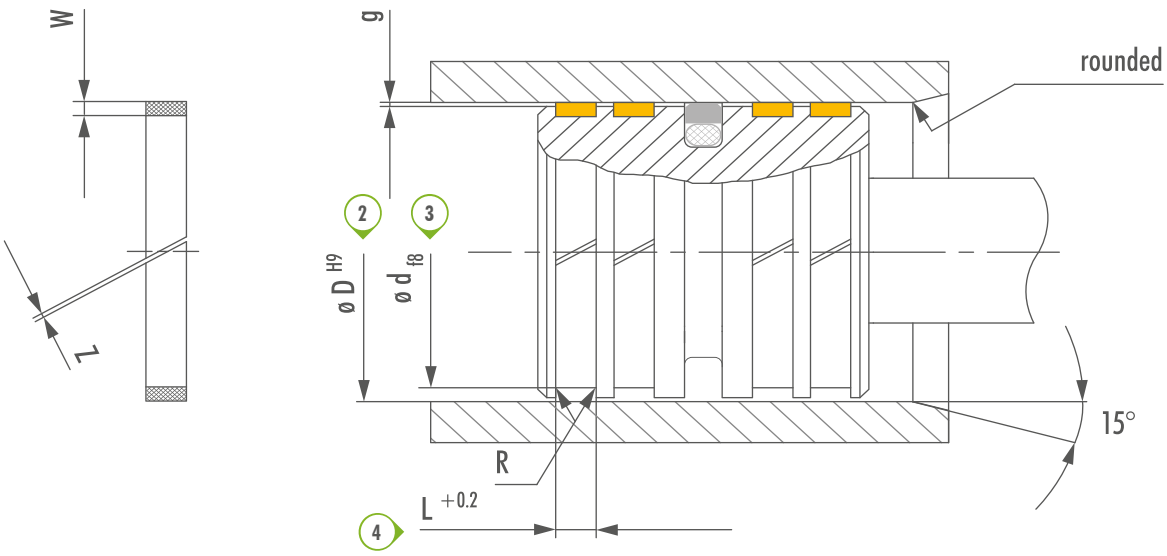
Mineral oil-based hydraulic fluids	Environment-friendly hydraulic fluids
Water-oil emulsions	Flame-resistant hydraulic fluids

Operating range

Pressure resistance	max. 15 N/mm² at 25°C max. 12 N/mm² at 80°C max. 8 N/mm² at 120°C
Speed	up to 15 m/s
Temperature	– 30°C to + 200°C

Surface quality

Roughness	Ra	Rt
Contact surface	≤ 0.3 µm	≤ 3.0 µm
Groove base	≤ 1.6 µm	≤ 16.0 µm
Groove flank	≤ 1.6 µm	≤ 16.0 µm



Installation dimensions

Cylinder ø D	Gap Z	Gap dimension g	Radius $R_{max.}$
< 40.0	1.0 - 3.0	0.25 - 0.4	0.2 for ø D ≤ 250.0 0.4 for ø D ≤ 250.0
< 80.0	3.0 - 6.0	0.25 - 0.5	
< 140.0	5.0 - 10.0	0.3 - 0.6	
< 340.0	7.0 - 14.0	0.4 - 0.6	

Material selection PTFE profile ring

PTFE + bronze	Preferred use on hard counterfaces, standard material in hydraulic systems
PTFE + carbon/graphite	Used on softer counterfaces, such as e.g. stainless steel, aluminum and bronze and also preferred when the media water and steam are involved

Find additional materials in our PTFE materials overview in the technical information section.

To place a quick order for the correct product, please use the order information system below.

SYSTEM: PG Cylinder ø D x Groove base diameter ø d x Groove width L » Material

(1) (2) (3) (4) (5)

EXAMPLE: PG 80 x 75 x 9.7 CCN-BRR40

(1) Guide ring, piston (2) Cylinder diameter ø D 80 mm

(3) Groove base diameter ø d 100 mm (4) Groove width L 9.7 mm (5) Material PTFE + 40% bronze