

# Double-acting piston seal

## Type: PS 04



The double-acting piston seal type PS 04 is a two-piece seal consisting of a profile ring and an O-ring as preload element. It is excellent for applications in the low-pressure range and is used primarily in truck loader cranes and standard cylinders.

Low friction and a small installation height are the decisive advantages of this seal. It is also extremely wear resistant, has a long service life and very good chemical stability and thermal resistance.

While the PTFE profile ring provides dynamic sealing against the cylinder surface, the elastic O-ring ensures even pressure distribution of the PTFE profile ring against the cylinder surface and at the same time secures static sealing between profile ring and groove base.

The piston seal shows good sealing performance even at low pressures due to the PTFE profile ring's inherent prestress force and the contact force of the preloaded O-ring. At elevated system pressures, the medium increases the load on the O-ring which then presses the PTFE seal with additional force against the cylinder surface.

Various combinations of materials ensure that the rod seal can be used reliably across the whole pressure, speed and temperature range.

### Operating media

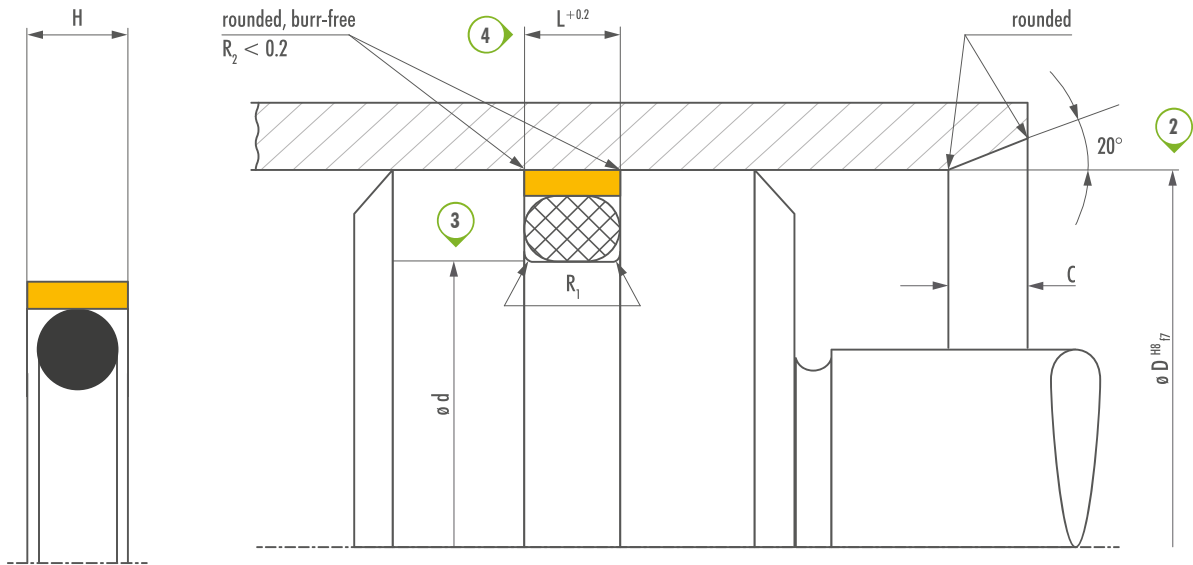
Mineral oil-based hydraulic fluids	Environment-friendly bio-oils
Water	Flame-resistant hydraulic fluids
Air	Other media acc. to O-ring material

### Operating range

Pressure	up to 16 MPa (160 bar)
Speed	up to 2 m/s
Temperature	- 30 °C to + 100 °C (acc. to O-ring material)

### Surface quality

Roughness	Ra	Rt
Contact surface	≤ 0.3 μm	≤ 2.5 μm
Groove base	≤ 1.6 μm	≤ 6.3 μm
Groove flank	≤ 3.0 μm	≤ 15.0 μm



### Installation dimensions

Cylinder ø D		Groove base ø D	Groove width L +0.2
from	to		
9	22	ø d + 6.1	3.2
22	55	ø d + 7.2	4.0
55	150	ø d + 12.2	7.5

### Material PTFE profile ring

PTFE + bronze Standard for hydraulic applications, good sliding behavior, particularly pressure and abrasion resistant, not for use in aqueous media or acids

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

### Selection of materials O-ring

Nitrile rubber NBR Temperature range – 30 °C to + 120 °C

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

SYSTEM: PS 04 Cylinder D x Groove base diameter d x Groove width L » Material

① ② ③ ④ ⑤

EXAMPLE: PS04 45 x 37.8 x 4 CCN-BRR60

① Double-acting coMPact seal ② Cylinder diameter D 45 mm  
 ③ Groove base diameter d 37.8 mm ④ Groove width L 4 mm ⑤ PTFE + 60% bronze