

WRS

Mechanical seals | Compressor seals | Oil-lubricated seals



Features

- Oil-lubricated
- Bi-directional
- Externally pressurized
- Ready-to-fit cartridge unit
- Single, face bushing and double seal available
- Suitable for high speed
- Hydrodynamic grooves for increased operating capabilities and stabilized low leakage

Advantages

- Low oil consumption
- Rugged seat with bandage ensures reliable operation
- Wear-free operation by use of lift-off-design
- Does not open if oil pressure drops

Operating range

Shaft diameter:
25 ... 195 mm (1" ... 7.7")
Process gas pressure: up to 40 bar (580 PSI)
Required oil pressure: $P_{\text{product}} + \Delta p$ (1-3 bar, depending on sliding velocity)
Gas temperature:
 $t = -20\text{ °C} \dots +200\text{ °C}$ ($-4\text{ °F} \dots +392\text{ °F}$)
Oil temperature:
 $t = 30\text{ °C} \dots 60\text{ °C}$ ($86\text{ °F} \dots 140\text{ °F}$)
Sliding velocity: $v_g = 5 \dots 100\text{ m/s}$ ($16 \dots 328\text{ ft/s}$)
Oil viscosity: ISO VG32 + 46

Materials

Seal face: Silicon carbide
Seat: Silicon carbide
Secondary seals: FKM
Metal parts: 1.4006 or other stainless steels

Standards and approvals

- NACE

Notes

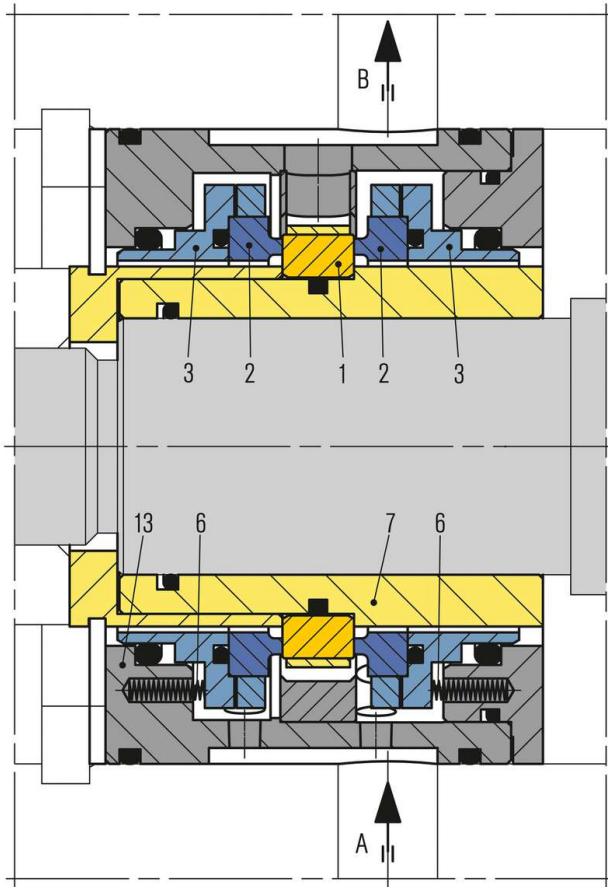
The WRS is an oil-lubricated seal that safely seals various types of compressors and organic media. With its rugged design, low life-cycle costs and long service life, the WRS can be found in thousands of applications. The design is optimized by using the finite element method and computational fluid dynamics.

Dimensions on request.

Recommended applications

- Oil and gas industry
- Refining technology
- Petrochemical industry
- Refrigerants
- Screw compressors
- Centrifugal compressors
- Geared compressors

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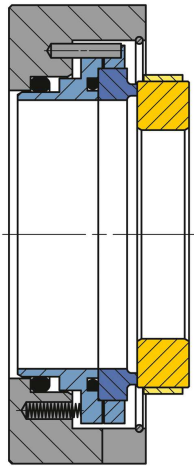


Drawing shows WRS dual seal

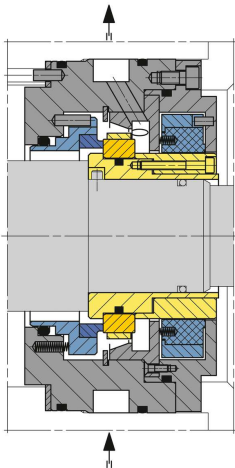
Item	Description
1	Seat, rotating
2	Seal face, stationary
3	Face housing
6	Spring
7	Shaft sleeve
13	Housing
A	Oil IN
B	Oil OUT

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Product variants



WRS single seal



WRS single seal with face bushing