

RELY ON EXCELLENCE

RigiSeal

Mechanical Seals | Compressor seals | Gas-lubricated seals



MAN Energy Solutions **MAN**

Features

Developed in cooperation with MAN Energy Solutions, based on the extremely robust EagleBurgmann RoTechSeal

- Modular design
- As upgrade of MAN centrifugal compressors or for new projects
- Available as single, double, or tandem seal
- Gas-lubricated
- Uni- or bi-directional
- Ready-to-install unit
- Optionally with separation seal such as labyrinths, carbon rings or EagleBurgmann CobraSeal

Notes

One of the biggest challenges in operating centrifugal compressors with dry gas seals is contamination from the supply gas. Liquids or particles in the supply gas are the main causes of shortened seal life. Thanks to special features, the RigiSeal extends the lifetime of a normal seal in a particularly wet and dirty environment or in very difficult applications.

Dimensions on request.

Advantages

The RigiSeal is the efficient sealing solution when the supply gas is particularly contaminated (e.g., by particles/liquids). Due to the modular design principle, the seal can be adapted on a case-by-case basis for existing machines as well as for new projects. For this purpose, the respective seal features are defined according to the prevailing operating conditions and/or the result of the failure analysis.

RigiSeal Features

- "Smart Labyrinth"
- DiamondFace coating
- Self-cleaning 3D gas grooves
- Soft torque transmission
- Debris resistant dynamic sealing element
- Leakage optimization
- CobraSeal (co-axial separation seal)

Additional RigiSeal Features

- Improved seal gas extraction (Subsea Compressor Technology)
- Seal washing system
- Simplified support system
- Labyrinth as back-up seal (PTFE labyrinth)

Operating range

Shaft diameter:

d = up to 410 mm (16.14")

Pressure:

p = up to 450 bar (6,525 PSI) and more

Design-temperature:

t = -200 °C ... +230 °C (-328 °F ... +446 °F)

Sliding velocity:

vg = up to 227 m/s (744 ft/s)

Project specific special designs possible

Materials

Seal face: Silicon carbide with DLC- or DiamondFace-coating

Seat: Silicon carbide with DLC- or DiamondFace-coating

Secondary seals: PTFE or FKM

Metal parts: 1.4006, 1.4313-QT650, 1.4418, 1.4542,

Inconel® or other stainless steels

Other materials on request

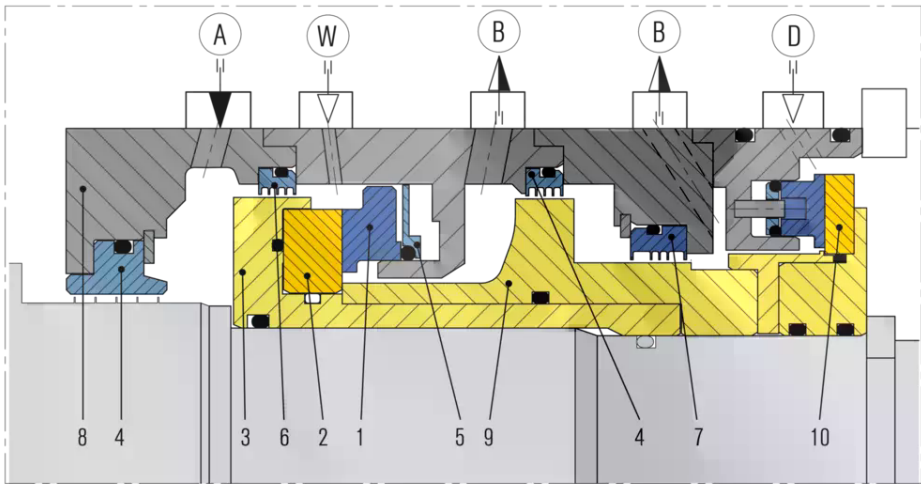
Standards and approvals

- NACE
- API 617
- API 692

Recommended applications

- Hydrocarbon gas
- Ammonia
- Nitrogen
- Oil and gas industry
- Refining technology
- Petrochemical industry
- Applications with upstream gas treatment (glycol)
- Air

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| Item | Description |
|------|--|
| 1 | Seal face, stationary Option: Primary seal face with DiamondFace coating |
| 2 | Seat, rotating Option: Primary seat with DiamondFace coating |
| 3 | Shaft sleeve |
| 4 | Labyrinth |
| 5 | Trust ring |
| 6 | Option: "Smart labyrinth" |
| 7 | Option: Labyrinth as back-up seal (PTFE labyrinth) |
| 8 | Housing (size matched to installation space) |
| 9 | Adapter Sleeve |
| 10 | Separation seal Option: CobraSeal |

- A Seal gas supply | Option: Improved seal gas extraction
- W Seal washing system
- B Vent
- D Separation gas supply