EagleBurgmann
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RELY ON EXCELLENCE

# RigiSeal

## Mechanical Seals | Compressor seals | Gas-lubricated seals

### Features

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

- Modular design
- As upgrade of MAN centrifugal compressors or for new projects
- Availabe 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 CobaSeal

### 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
- CobaSeal (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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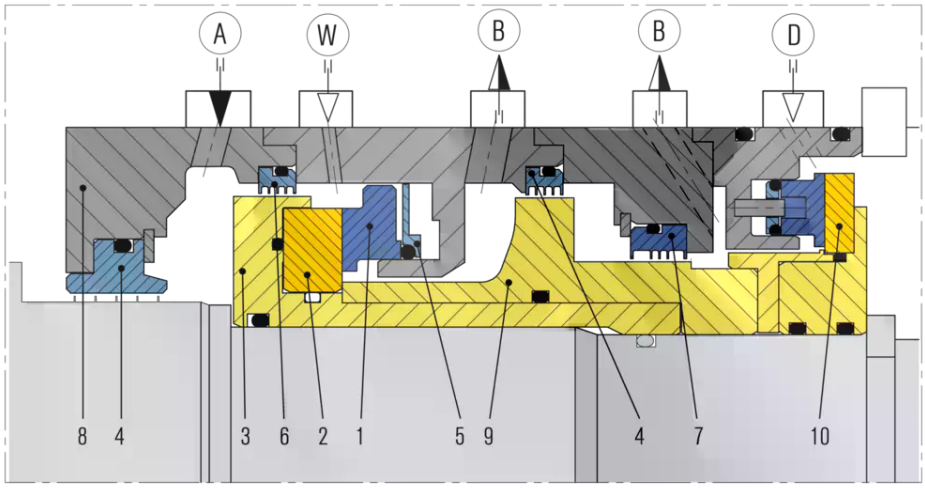
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. Subject to change.




| 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: CobaSeal |

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



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