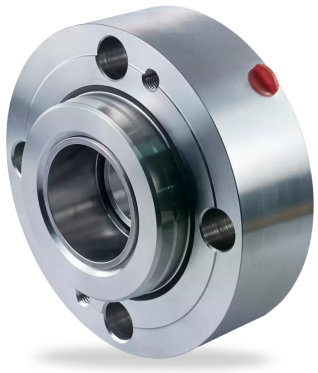
RELY ON EXCELLENCE

SHI366

Mechanical Seals | Mechanical seals for pumps | Engineered seals



Features

- Robust seal design – especially for demanding crude oil applications
- Compact cartridge seal for small seal chambers
- Single unpressurized seal with containment high-pressure throttle design
- Stationary spring loaded unit
- Balanced seal faces in materials with high thermal conductivity and strength
- Inserted seal face
- Multi-point injection of the flush fluid optional
- Seal faces can be equipped with lubrication enhancing hydropads and/or DiamondFace technology

Advantages

Operational Excellence

- High performance seal design for alternating media properties and operating conditions with high pressures and sliding velocities
- Low amount of heat generation, hence minimal temperature rise in the seal faces
- Seal faces have soft torque transmission
- Seal faces are shrouded in steel colars so that hey cannot break apart in pieces in an emergency case
- Resistant to alignment issues between the pump case and shaft because of stationary springs
- Atmosphere side high pressure double throttle design suitable for full product pressure
- Seal face materials are resitant to solids in the pumped fluid
- Optimized for operation also with sand or particles

Technical Excellence

- Simple installation due to pre-assembled cartridge
- Seal faces are designed with FEA & CFD and qualified & tested in the lab
- Can be fitted in older pumps with small seal chambers or stuffing boxes
- High degree of standardization ensures fast deliveries and smart part inventories

Sustainability Excellence

- Zero emission seal design for sustainable environmental protection
- Minimized friction and energy consumption

Operating range

Materials

Seal face:
Silicon impregnated carbon (Q3), DiamondFace
Stationary seat: Silicon carbide (Q2), DiamondFace
Secondary seals: FKM (V), FFKM (K)
Springs: Hastelloy® C-4 (M)
Metal parts: CrNiMo steel (G), Duplex (G1), Super Duplex (G4), Titan (T2), Hastelloy® C-4 (M)

Recommended applications

- Pipeline systems
- Tank farms / storage tanks
- Oil & gas production

Recommended piping plans

API Plan 11
API Plan 12
API Plan 13
API Plan 32
API Plan 65A
API Plan 65B
API Plan 66A
API Plan 66B

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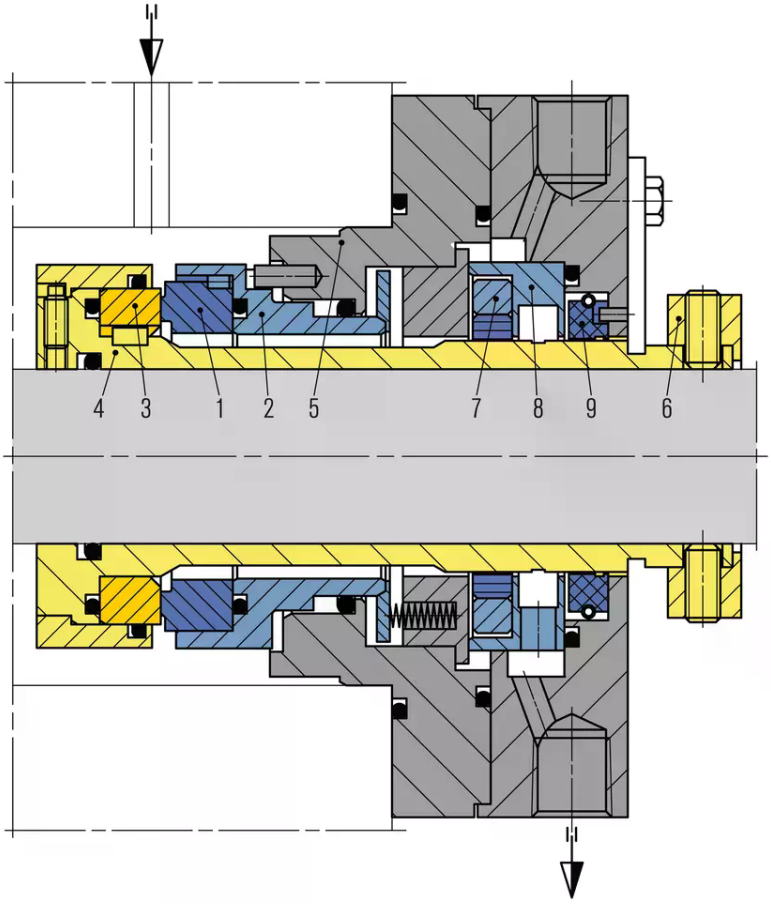
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case.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

Shaft diameter:
d1* = 50 ... 150 mm (1.97" ... 5.91")
Pressure: p1 = 100 bar (1,450 PSI),
Static: up to 150 bar (2,175 PSI),
Dynamic: up to 100 bar (1,450 PSI)
Temperature: t = -20 ... +100 °C (-4 ... 212 °F)
Sliding velocity: vg = 50 m/s (164 ft/s)
Axial movement: ±1 mm

* Additional sizes upon request



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Item	Description
1	Seal face
2	Face housing
3	Seat
4	Shaft sleeve
5	Housing
6	Set ring
7	High pressure throttle ring
8	Leakage collection
9	Throttle ring

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Installation, details, options

Fluid Groups	
Raw products	Non-Flashing Hydrocarbons
Crude oil, Bitumen, Diluent, etc.	Gasoline, Jet Fuel, Diesel Fuel, Kerosene, etc.

Typical fluids in crude oil applications

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