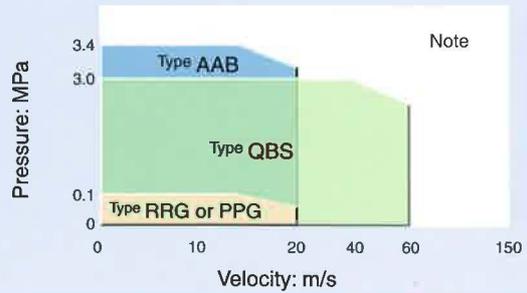


Selection of seal for pump



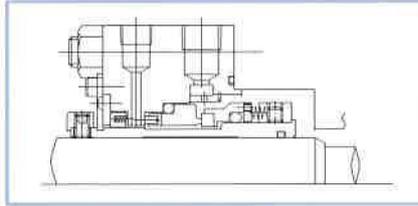
Mechanical Seals

Type AAB

Rotating multi-spring seal



SIC (Tungsten Carboide) vs Carbon & Flouro Elastomer, 316 SS



Features & Benefits

The mechanical seal of this type is a typical balance seal of Pillar seals, used for any industries since olden times. It uses the standardized rotating seal to be compatible to the dimension, construction and application of equipment used, and used multi-spring to demonstrate the stabilized performance in a wide range of application. This model is categorized in API 682. Seal type A

Performance

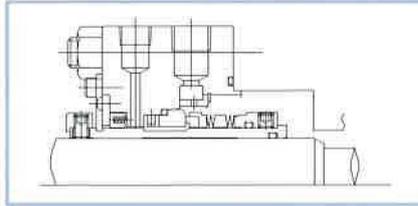
Pressure: 4.2MPa (610psi), Velocity: 20m/s, Nom.size: ϕ 20-250
Application: Process pump, Mixer, Blower

Type WQR

Rotating welded metal bellows Seal



SIC vs Carbon & Flouro Elastomer, 316 SS



Features & Benefits

The bellows pack is a rotary type metal bellows seal that can be also attached to the pump compatible to ISO or DIN, and can provide the effect for countermeasure against operation failure of shaft packing type. Since the inconel is used for bellows material, it can be applicable to a wide of fluid. This model is categorized in API 682. Seal type B

Performance

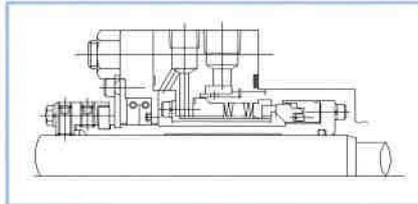
Pressure: 2.0MPa (290psi), Velocity: 25m/s, Nom.size: ϕ 20-100
Application: Utility pump, Middle pressure pump

Type QBS

Welded metal bellows Seal



SIC vs Carbon, 316 SS



Features & Benefits

The mechanical seal of this type is a stationary type seal, using a double bellows of welded metal without no shaft packing, which provides the excellent resistance against pressure. Since it provides the excellent follow-up performance and does not require any consideration for heat resistance limit of packing material, it is suitable to high-temperature use. This model is categorized in API 682. Seal type C

Performance

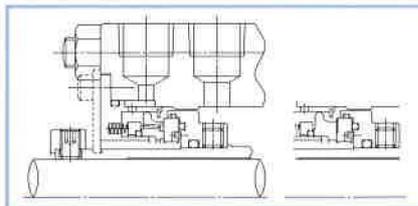
Pressure: 3.0MPa (435psi), Velocity: 60m/s, Nom.size: ϕ 23-180
Application: High temperature liquid

Type RRG.PPG

dry contact seal / dry gas seal



SIC vs. Premium Carbon & Fluoro Elastomer, 316 SS



Features & Benefits

These mechanical seal is used in tandem seal as containment seal. RRG: This is a dry contact seal. The seal ring is grooved for reduction of load and is impregnated with special lubricant, it can assure the stable sealing performance for a long time. PPG: This is a dry gas seal. The seal surface of rotating ring is uniquely grooved, to use the hydro dynamic pressure effectively by the multi-independent grooves. These arrangement are 2CW-CS in API 682.

Performance

Pressure: 0.1MPa (14.5psi), Velocity: 20m/s, Nom.size: ϕ 20-130
Application: Process pump

Type Phoenix Seal®

Non-Contact dry gas seal



Features & Benefits

Bi-directional type non-contact dry gas seal

Multi-independent hydrodynamic pressure distribution generated by multi-independent grooves gives more stable seal performance.

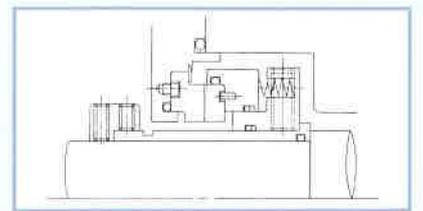
(US 5664748, 5529318 EU Pending)

Performance

Pressure: 10MPa (1450psi), Velocity: 150m/s, Nom.size: ϕ 50-200
Application: Turbine, Blower, Compressor



Carbon vs Sic & Fluoro Elastomer, 316 SS



Note: When selecting the mechanical seal for range exceeding the conditions shown above, consult NIPPON PILLAR.

It is advised to select the mechanical seal of proper type carefully, as the pressure and peripheral speed limits indicate the maximum value respectively.