

# TCQW/TCGW Single Seals Mechanical Seals For Pumps - Engineered Seals



## Product Description

1. Single seal configuration
2. Balanced design
3. Independent of direction of rotation
4. Cartridge construction
5. Stationary design with multiple springs
6. Designed with integrated pumping device for increased efficiency in circulation
7. Robust construction with shrink-fitted seal face
8. Heavy duty design of solid stationary seat

## Technical Features

1. Accommodates shaft deflections due to stationary design
2. Can be designed for individual pump application with corresponding connection parts to be adopted to the pump seal chamber
3. Optimum heat dissipation due to integrated pumping device available for increased efficiency in circulation and optimized seat design
4. Cartridge unit factory assembled for easy installation, which reduces down-time
5. Trouble-free long-term operation due to heavy duty single seat design with bandage
6. Can operate under high sliding velocities and high pressures

## Typical Industrial Applications

Amines	Injection pumps
Caustic soda	Multi-phase pumps
Chemical industry	Oil and gas industry
Crude oil	Process water
Crystallizing media	Refining technology
Crude oil feed pumps	Sour water
Hot water	

## Standards

API 682 / ISO 21049

## Performance Capabilities

Sizes:  $d_1^*$  = Upto 250 mm (Upto 10.000")

Pressure:  $p_1$  = 150 bar (2,175 PSI)

Temperature:  $t$  = 300 °C (572 °F)

Speed = 60 m/s (197 ft/s)

Permissible axial movement:  $\pm$  3 mm

\* Other sizes on request

## Materials

Seal face: SiC-C-Si Silicon impregnated carbon (Q3), Carbon graphite antimony impregnated (A)

Seat: Silicon carbide (Q)

Secondary seals: FKM (V), EPDM (E), FFKM (K)

Springs: Hastelloy® C-4 (M)

Metal parts: CrNiMo steel (G), Duplex (G1),

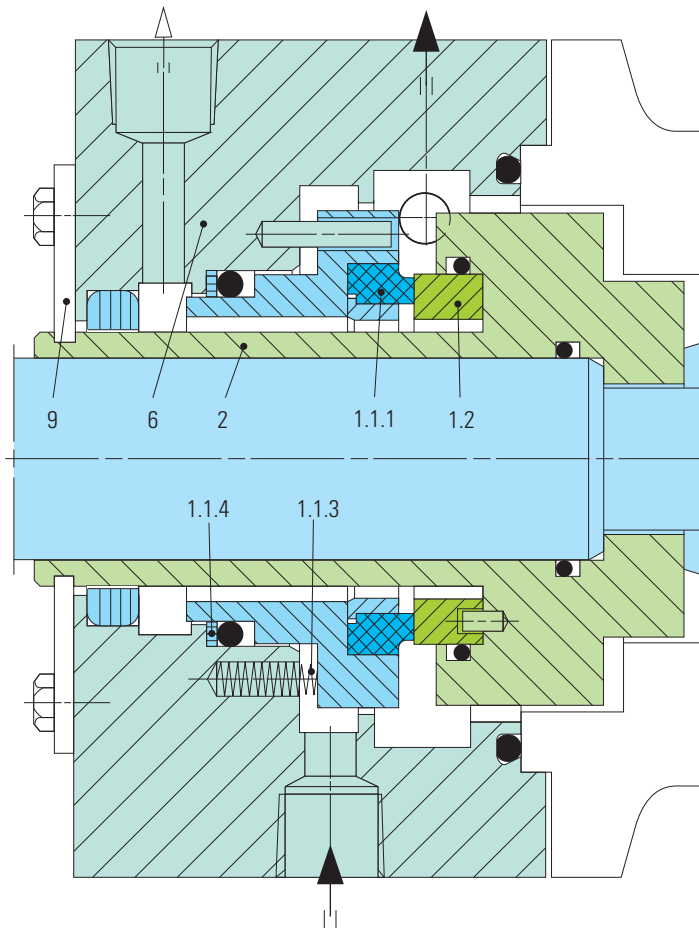
Super Duplex (G4), Titanium (T2),

Hastelloy® C-4 (M)

## Design Variations

### SBFV

Same design as SBPV but with pumping screw



Item	Description
1.1.1	Seal face pressure-stabilized
1.1.3	Spring
1.1.4	Back-up ring
1.2	Seat
2	Seat housing with pumping screw (F) or pumping ring (P)
6	Cover
9	Assembly fixture