

# UFL650

API 682 4th Edition Category 2 & 3  
Seal type C (Stationary)  
Configuration 1CW-FL (Contacting Wet – Floating throttle bushing)

## Product Description

1. API 682 Category 2 and 3, Type C, Arrangement 1 seal
2. Single seal configuration
3. Balanced
4. Cartridge unit
5. Stationary metal bellows
6. Shrink fitted seal ring and solid mating ring

## Technical Features

1. Design construction for higher speeds
2. Design accommodates run-out, squareness or vibration of the shaft
3. Compact construction
4. Balanced bellows design allows installation on plain sleeve
5. Elimination of seal face hang up due to absence of dynamic O-Ring
6. Face load variation is minimised due to bellows design on account of shaft expansion or face wear
7. Resistance to abrasive particles in the medium, no shaft or sleeve fretting
8. Narrow seal face width leads to low heat generation and power consumption
9. Extended seal life

## Typical Industrial Applications

- API 610/ISO 13709 pumps
- Refining technology
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Power plant technology
- LPG plants
- Process pumps

## Performance Capabilities

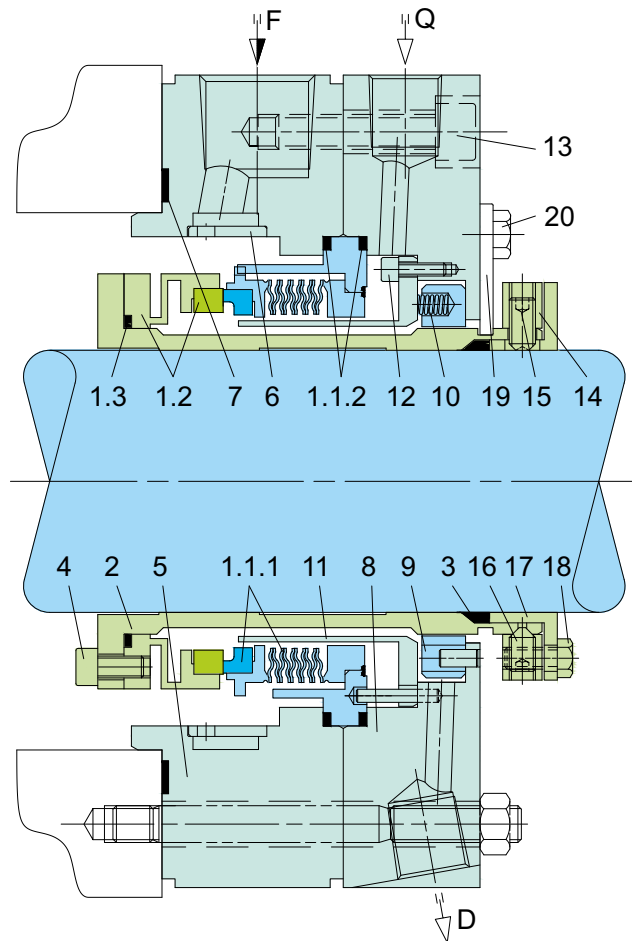
Shaft diameter:  $d_1 = 20 \dots 110 \text{ mm}$  (0.79" ... 4.33")  
Pressure:  $p = \text{vacuum} \dots 20 \text{ bar}$  (... 290 PSI)  
Temperature:  $t = -130 \text{ }^\circ\text{C} \dots +400 \text{ }^\circ\text{C}$  (-202 °F ... +752 °F)  
Sliding velocity:  $v_g \dots 50 \text{ m/s}$  (... 164 ft/s)

## Materials

Seal ring: Blister resistant carbon, Silicon carbide SSiC (Q1), RBSiC (Q2)  
Mating ring: Silicon carbide SSiC (Q1), RBSiC (Q2)  
Bellows: Inconel® 718 (M6)  
Secondary seals: Graphite (G)  
Metal parts: CrNiMo steel 316 (G), Carpenter® 42 (T4)

## Recommended piping plans

Process side:  
01, 02, 03, 11, 12, 13, 14, 21, 22, 23, 31, 32, 41  
Atmospheric side: 51, 61, 62, 65A, 65B, 66A, 66B



Item	Description
1.1.1	Seal ring with Bellows Unit
1.1.2, 1.3, 7	Gasket
1.2	Mating ring
2	Shaft sleeve
3	Sealing ring
4, 12, 13	HSH cap screw
5	Gland
6	Multi-flow distributor
8	Cover
9	Throttle bushing
10	Spring
11	Quench Baffle
14	Drive collar
15,16	Set screw
17	Pusher ring
18, 20	Hexagon bolt
19	Setting plate
F	Flush
Q	Quench
D	Drain