



## MECHANICAL SEALS FOR OIL & GAS INDUSTRY

In oil and gas applications safety and reliability are essential. To support the industry's highly regulated and critical operations, Sealmatic offers a wide range of innovative products and engineering solutions. Our experienced application engineering staff help select, design and apply sealing systems for even the most challenging conditions, and Sealmatic products meet the highest industry standards for containment of fugitive emissions. We also have dedicated test rigs available to ensure mechanical seals can operate with maximum reliability when subjected to specific environmental conditions. And with more than 25 application engineers available whenever and wherever our customers need it.

### Upstream — Oil & Gas Extraction

Offshore platforms and onshore oil and gas extraction facilities often operate in remote locations where storage space is limited and application conditions are extreme. And because the equipment failure can have dire consequences — jeopardizing costs, environmental safety and energy resources — these critical operations require reliable engineered mechanical seals that can withstand extreme temperatures, high pressures, corrosion and erosion over a long period of time. Sealmatic offers engineered products with proven long-term success under these conditions; that help maximize product reliability.

### Midstream/Downstream — Processing, Piping & Refining

Due to the volatile and hazardous nature of midstream and downstream oil and gas materials, every pump, compressor, turbine and mixer depends on innovative engineered mechanical seals to optimize safety and emission containment. Sealmatic designs mechanical seals specific to abrasive conditions, pressure changes, and multi-phase fluid properties to maximize uptime and minimize emissions.

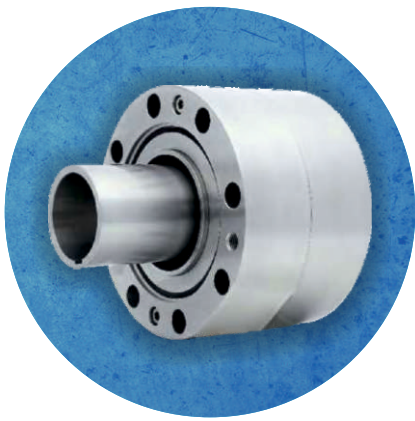
### Specialized Products:

Our portfolio of oil & gas application-specific mechanical seals spans all industry sectors:

### Engineered Mechanical Seals:

**Type SBF(V)-D / SBP(V) - D for Crude Oil Pumps:** Designed specifically to meet the demanding requirements of pipeline pumping station duties.

#### SBF(V)-D / SBP(V) - D



#### Product Description

1. Dual 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

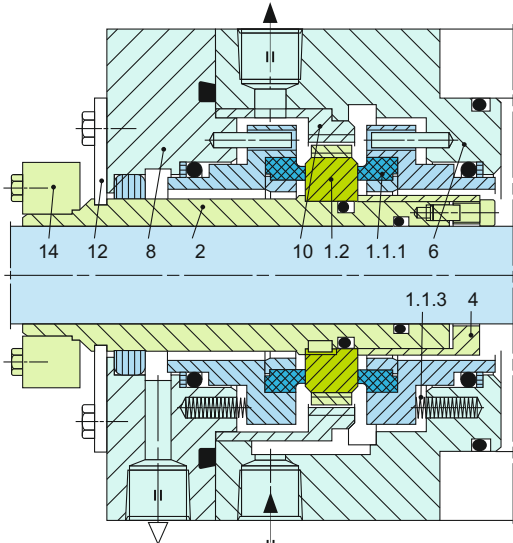
#### Performance Capabilities

Sizes:  $d_1 =$  Upto 110 mm (Upto 4.250")\*  
 Pressure:  $p_1 = 40$  bar (580 PSI)  
 Temperature:  $t = -40$  °C...+220 °C (-40 °F...+428 °F)  
 Speed = 23 m/s (75 ft/s)  
 Permissible axial movement:  $\pm 2.0 \dots 4.0$  mm depending on diameter and installation situation  
 \* Other sizes on request

#### 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
7. Can be adopted for use in compliance with API 682, type ES
8. Versatile application for various kinds of heavy duty applications

Item	Description
1.1.1	Seal face
1.1.3	Spring
1.2	Seat
2	Shaft sleeve
4	Clamping sleeve
6	Housing
8	Cover
10	Pumping sleeve
12	Assembly fixture
14	Shrink disk

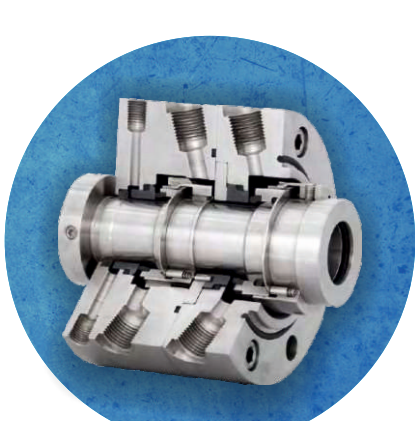


### O-Ring Pusher Seals:

**Type B750VK Dual Seals:** Designed to attain the compliance in light hydrocarbons and other VOCs.

**Type CTX API-DN:** Rugged and available in a wide variety of elastomers for handling a wide range of industrial fluids

#### B750VK Dual Seals



#### Product Description

1. Dual seal configuration
2. Balanced design
3. Independent of direction of rotation
4. Cartridge construction
5. Bi-directional design available
6. Category 2 and 3, Type A, Arrangement 2 or 3
7. Design in accordance to API 682 / ISO 21049
8. Pumping device available for increased efficiency in circulation
9. Rotary unit with multiple springs
10. Can accommodate reverse pressure

#### Performance Capabilities

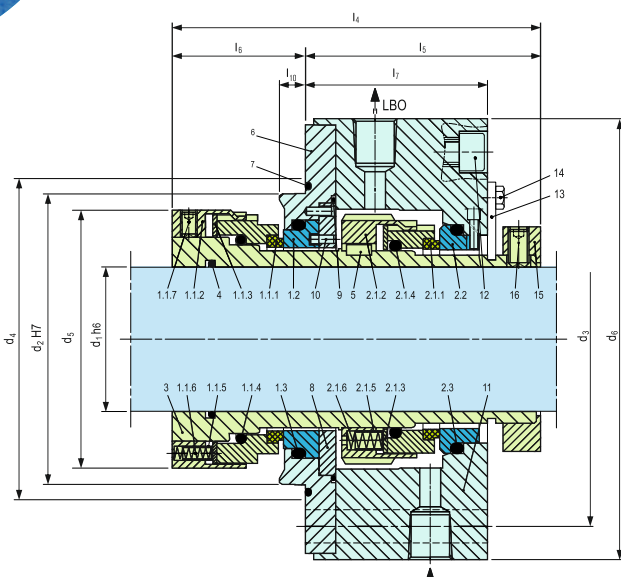
Sizes:  $d_1 =$  Upto 110 mm (Upto 4.250")\*  
 Pressure:  $p_1 = 40$  bar (580 PSI)  
 Temperature:  $t = -40$  °C...+220 °C (-40 °F...+428 °F)  
 Speed = 23 m/s (75 ft/s)  
 Permissible axial movement:  $\pm 2.0 \dots 4.0$  mm depending on diameter and installation situation  
 \* Other sizes on request

#### Technical Features

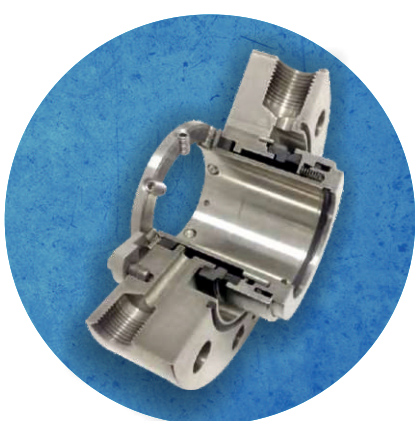
1. Can handle extensive applications in various temperatures and pressures
2. Versatile in design to fit various seal chambers
3. Material of construction available in special metallurgy
4. Special torque transmission design for high performance
5. Operation reliability due to rugged metal torque transmission at the rotating seal face

Item	Description
1.1.1, 2.1.1	Seal face
1.1.2, 2.1.2	Driver
1.1.3, 2.1.3	Thrust ring
1.1.4, 2.1.4, 1.3, 2.3	O-ring
1.1.5, 2.1.5	Spring Sleeve
1.1.6, 2.1.6	Spring
1.1.7	Set screw
1.2, 2.2	Seat
3	Shaft sleeve
4	O-ring
5	Key

Item	Description
6	Adapter
7	O-ring
8	Washer
9	O-ring
10	Pin
11	Housing
12	HSH cap screw
13	Assembly fixture
14	Hexagon bolt
15	Set ring
16	Set screw



#### CTX API-DN



#### Product Description

1. Single and Dual seal configuration
2. Balanced design
3. Independent of direction of rotation
4. Cartridge construction
5. Seal design in accordance with API 682 / ISO 21049
6. Conforming to Category 1, Type A, Arrangement 1, 2 or 3
7. Single seal with API Plan 11 and 61
8. Dual seals with API Plan 52 / 53
9. Robust construction with shrink-fitted seal faces
10. Heavy duty solid seat design
11. Also available in design variation for independent of direction of rotation
12. Additional flushing plans available on request

#### Performance Capabilities

Sizes:  $d_1 =$  Upto 110 mm (Upto 4.250")  
 other sizes on request  
 Pressure:  $p_1 = 22$  bar (319 PSI)  
 Temperature:  $t = -40$  °C...+260 °C (-40 °F...+500 °F)  
 Speed = 23 m/s (75 ft/s)

#### Technical Features

1. Designed to accommodate shaft deflections and process fluctuations
2. Efficient construction for heat dissipation
3. Compact installation design
4. Factory assembled cartridge unit for easy installation
5. Springs are product protected to avoid contamination
6. Can accommodate reverse pressure
7. Can handle extensive applications in various temperatures and pressures
8. Versatile in design to fit various seal chambers

Item	Description
1, 9	Seal face
2, 5, 7, 10, 13, 15, 16, 17	O-ring
3, 11	Spring
4, 12	Seat
6	Shaft sleeve
8	Adapter
14	Driver
19	Housing
18	HSH cap screw
20	Set ring
21	Set screw
22	Assembly fixture
23	Hexagon bolt
24	Set screw

