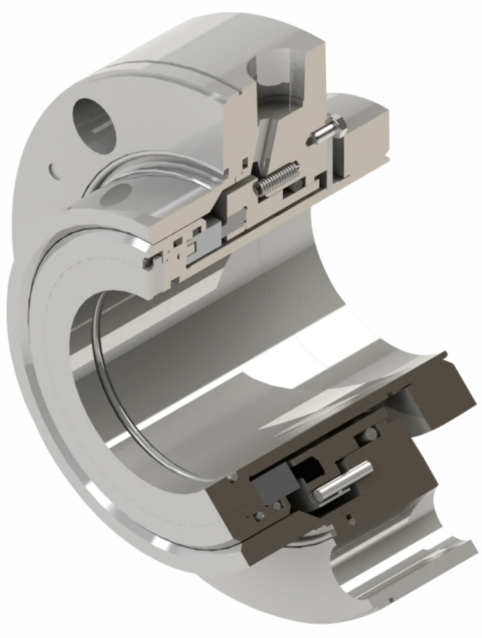




## Sealmatic Successfully Delivers Its SBV Single Mechanical Seals For Sea Water Application In The Antofagasta Region At The Atacama Desert



Sealmatic delivers its Type SBV Single Mechanical Seals for demanding seawater application in the Atacama Desert, within Chile's Antofagasta Region, an environment globally recognized for its extreme aridity, harsh climatic conditions and challenging operating profiles.

The Atacama Desert, located on the Pacific coast of South America, is known as the driest desert in the world, with some weather stations recording decades without measurable rainfall. The terrain is characterized by salt flats, volcanic tephra, lava flows and rugged coastal escarpments. Its inland areas are almost entirely devoid of vegetation, while temperature variations, high solar radiation and abrasive desert winds add substantial stress to any exposed mechanical system. Even the coastal parts of Antofagasta region are classified as extremely arid, offering little climatic relief.

Operating critical pumping equipment in such a setting requires mechanical seals capable of withstanding not only process related stresses but also significant environmental extremes.

The seawater transport system in this region is particularly complex, involving pumping across elevation differences exceeding 1,300 meters. This imposes high pressure variations, significant axial and radial loads and stringent requirements on the sealing interface to maintain integrity under fluctuating conditions.

Operating Parameters of Type SBV Single Mechanical Seals

Sr No.	Mechanical Seal Type	RPM	Media	Temperature (°C)	Stuffing Box Pressure (kg/cm <sup>2</sup> )	Suction Pressure (kg/cm <sup>2</sup> )	Discharge Pressure (kg/cm <sup>2</sup> )	Viscosity (cP)	Specific Gravity
1	91-SBV/125-G911 R4 (DE)	2946	SEA WATER	25°C	0.64 kg/cm <sup>2</sup>	3.8 kg/cm <sup>2</sup>	144.2 kg/cm <sup>2</sup>	1.22	1.030
2	91-SBV/125-G912 R4 (NDE)	2946	SEA WATER	25°C	76.1 kg/cm <sup>2</sup>	3.8 kg/cm <sup>2</sup>	144.2 kg/cm <sup>2</sup>	1.22	1.030
3	91-SBV/125-G913 R4 (DE)	2816	SEA WATER	25°C	9.34 kg/cm <sup>2</sup>	33 kg/cm <sup>2</sup>	137.5 kg/cm <sup>2</sup>	1.22	1.030
4	91-SBV/125-G914 R4 (NDE)	2816	SEA WATER	25°C	72.18 kg/cm <sup>2</sup>	33 kg/cm <sup>2</sup>	137.5 kg/cm <sup>2</sup>	1.22	1.030

As per the above-mentioned operating parameters. The mechanical seals type SBV was engineered and manufactured specifically for one of most critical seawater transport projects, these mechanical seals type SBV are employed in one of the driest and most geologically demanding regions on Earth, undertaking continuous duty under conditions where reliability is crucial.

### Sealmatic Single Mechanical Seal Type SBV For Sea Water Application

Type SBV is a single mechanical seal configuration with a balance design and independent direction of rotation. The said mechanical seal can operate under high sliding velocities and high pressures.

### Technical Features Of Type SBV Single Mechanical Seal

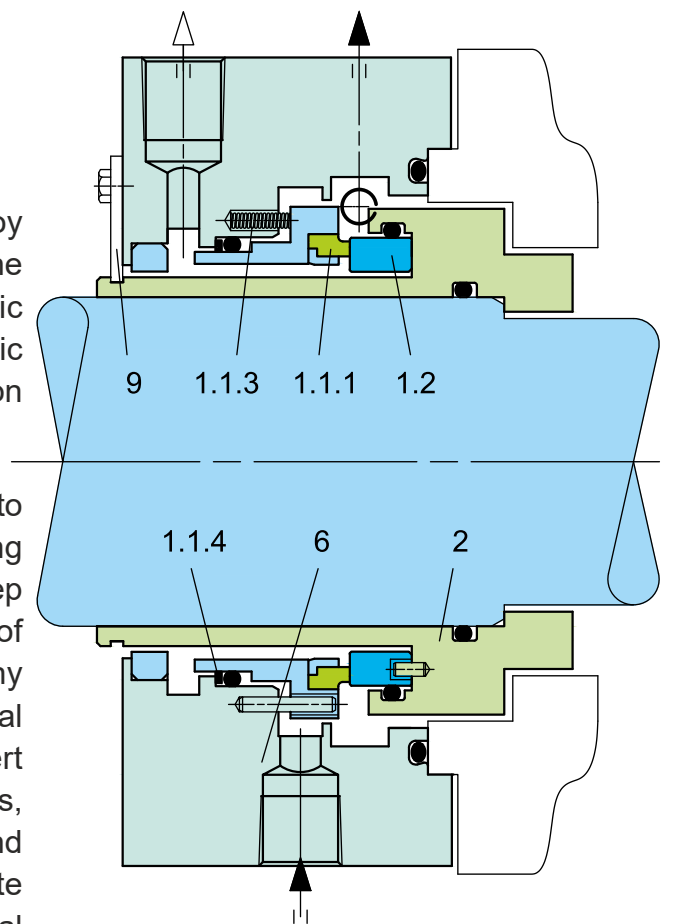
- Accommodates shaft deflections due to stationary design
- Can be designed for individual pump application with corresponding connection parts to be adopted to the pump seal chamber
- Optimum heat dissipation due to integrated pumping device available for increased efficiency in circulation and optimized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

### Performance Capabilities Of Type SBV Single Mechanical Seal

- **Sizes:** d<sub>1</sub>\* = Upto 250 mm (Upto 10.000")
- **Pressure:** p<sub>1</sub> = 150 bar (2,175 PSI)
- **Temperature:** t = 300 °C (572 °F)
- **Speed:** 60 m/s (197 ft/s)

This successful project highlights Sealmatic capabilities and employ high-performance mechanical sealing solutions for some of the world's toughest operating environments. From sub-zero arctic conditions to high arid landscapes like the Atacama Desert, Sealmatic expertise in design and engineering, to maintain continuous operation where challenges are extreme and tolerance for failure is minimal.

For the mining dependent Antofagasta Region which is the home to copper, lithium and other mineral extraction facilities, pumping seawater from the Pacific coast to processing plants located deep within the interior is an operational necessity. The reliability of mechanical sealing systems in these pipelines is crucial, as any unplanned shutdown can result in major production losses, logistical delays and costly maintenance interventions in isolated desert environments. With proven performance across severe climates, from freezing arctic ecosystems to sweltering tropical industries and now one of the driest deserts, Sealmatic continues to demonstrate mechanical sealing solutions and its commitment to technological excellence.



Date: 08<sup>th</sup> December 2025.

