

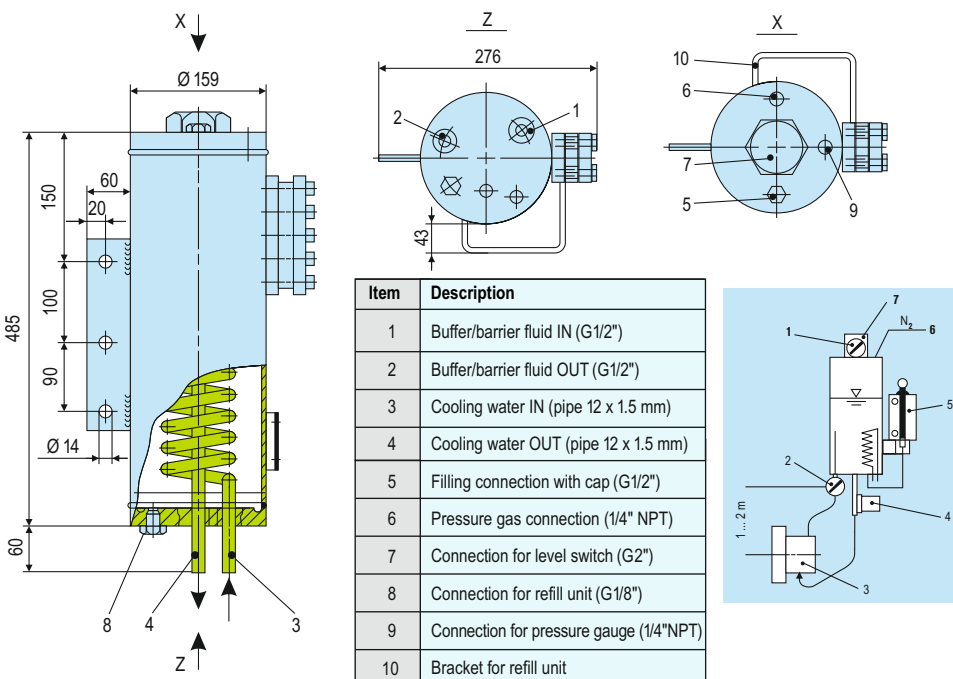


### Product Description

Circulation in accordance with API 682 / ISO 21049: Plan 52, Plan 53A  
 BFS1016 system is employed for applications in sealing systems with a wide variety of operating parameters for supplying buffer/barrier fluid to double and tandem mechanical seals. The BFS1016 system is available in standard sizes with flat ends, sight-glasses for level monitoring and with or without cooling coil. BFS1016 system is equipped as a standard with all the necessary system connections and brackets.

### Technical Features

1. Available with or without cooling coil
2. All connections of the systems are side faced
3. Compact design of the system allows low space requirements
4. Modular design combination available with a wide variety of system components and instruments selection possible such as, level switch, circulation pump, hand refill pump, thermometer, base frame etc.
5. Design allows for varied applications due to construction in stainless steel with borosilicate sight-glasses



### Technical Features

Designation	BFS1016	BFS1010
Pressure Equipment Directive	PED	PED
Integrated cooling coil	Yes	No
Volume of vessel (litres)	8	10
Volume of tube (litres)	0.2	-
Allowable pressure <sup>1)</sup>	16 bar (232 PSI)	16 bar (232 PSI)
Allowable temperature <sup>1)</sup>	-60°C ... +200°C (-76°F ... +392°F)	0°C ... +90°C (32°F ... +194°F)
Working volume, MAX-MIN (litres)	1.3	1.8
Cooling capacity – without cooling water (kW) <sup>3)</sup>	0.3	-
Cooling capacity – natural circulation (kW) <sup>2)</sup>	1.2	-
Cooling capacity – forced circulation (kW) <sup>2)</sup>	2.5	-
Required cooling water quantity (m <sup>3</sup> /h)	0.3	-
Metal parts	1.4571	1.4301
Sight-glass	Reflex sight-glass Borosilicate	-
Seal	PTFE	-

Other versions on request.

<sup>1)</sup> Technical details of BFS1010 will be available on request

<sup>2)</sup> Guidelines with buffer/barrier fluid water 60 °C – cooling water 20 °C

<sup>3)</sup> Guidelines with buffer/barrier fluid water 60 °C – ambient temperature 20 °C (valid for thermosiphon systems without cooling water with natural circulation resp. forced circulation)

### Typical Industrial Applications

Chemical industry  
 Petrochemical industry  
 Pulp and paper industry  
 Food processing industry  
 Water and waste water technology

### Functional description

The BFS system performs all the basic functions of a buffer/barrier system for the operation of double seals:

- to pressurize the buffer chamber
  - leakage compensation
  - buffer/barrier fluid is circulated by thermosiphon effect or forced circulation system
  - to cool the seal
  - to selectively absorb product leakage and prevent dry running (tandem arrangement)
- Use compressed air or nitrogen for pressurization.

### Standards

PED 2014/68/EU (Design and production in accordance with EU Pressure Equipment Directive)

### Installation, Details, Options

Operating and installation diagram for a BFS1016 system.

The BFS vessel must always be installed higher than the mechanical seal. The buffer/barrier fluid flows via the rising pipe into the vessel and is cooled. Particularly with natural circulation, the fluid level must always be higher than the rising pipe to maintain the circulation and to provide the specified cooling capacity. Connection pipes to the seal should be designed with as little resistance as possible.

- 1 Pressure gauge
- 2 Thermometer
- 3 Mechanical seal
- 4 Circulating Pump
- 5 Hand Refill Pump
- 6 From PCV, we recommend using a reverse controlled pressure control valve (PCV)
- 7 Level switch