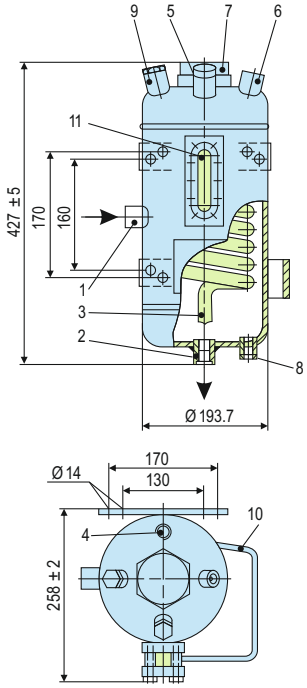
Product Description

BFS 2000 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 BFS 2000 system is available in standard sizes with flat ends, sight-glasses for level monitoring and with or without cooling coil. BFS 2000 system is equipped as a standard with all the necessary system connections and brackets. 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.
Circulation in accordance with API 682 / ISO 21049: Plan 52, Plan 53A

Technical Features

1. Available with or without cooling coil
2. Optimum draining and venting is achieved because of the design of cooling water connections at top (OUT) and bottom (IN)
3. Sockets are designed with recessed gasket to avoid contamination of the circuit by thread sealant
4. Construction of the BFS 2000 is designed for demanding operating conditions up to 30 bar / 200°C
5. Design allows for varied applications due to construction in stainless steel with borosilicate sight-glasses



Item	Description
1	Buffer/barrier fluid IN (G1/2")
2	Buffer/Barrier fluid OUT (G1/2")
3	Cooling water IN (G1/2")
4	Cooling water OUT (G1/2")
5	Filling connection with plug (G1/2")
6	Pressure gas connection (G1/2")
7	Connection for level switch or level indicator (G2")
8	Connection for hand refill pump (G1/2")
9	Universal connection (G1/2") for safety valve, flare,etc.)
10	Bracket for hand refill pump
11	Sight-glass

Typical Industrial Applications

Chemical industry
Oil and gas industry
Petrochemical industry
Refining technology

Standards

PED 2014/68/EU (Design and production in accordance with EU Pressure Equipment Directive)
ASME VIII, Div.1 (Design, calculation and production)

Functional Description

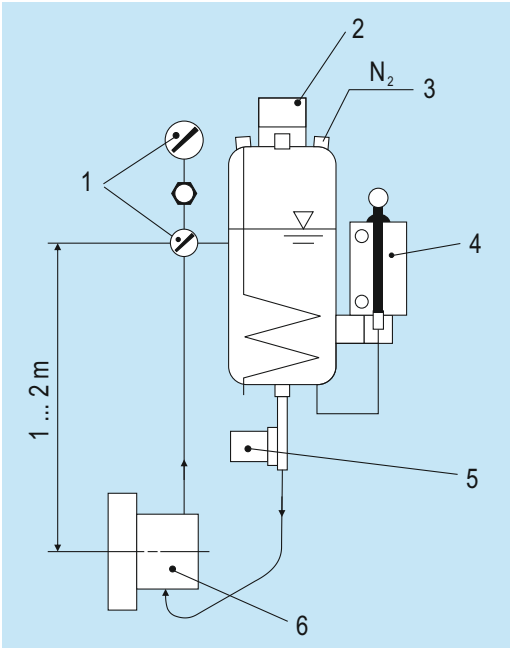
The BFS system performs all the basic functions of a buffer/barrier system for the operation of double seals:

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

Technical Features

Designation	BFS2000
Pressure Equipment Directive	PED
Integrated cooling coil	Yes
Volume, vessel (litres)	9
Volume, tube (litres)	0.5
Allowable pressure[1]	30 bar (435 PSI)
Allowable temperature[1]	-60 ... +200 °C (-76 ... +392 °F)
Working volume, MAX-MIN (litres)	1.8
Cooling capacity – without cooling water (kW)[3]	0.5

[1] Higher values on request
[2] Other materials on request
[3] Valid for thermosiphon system without cooling water with natural circulation resp. forced circulation)



Operating and Installation Schematic

The BFS vessel must always be installed higher than the mechanical seal. The buffer/barrier fluid flows via the return pipe into the vessel and is cooled. The exchange of fluid takes place by the thermosiphon principle or by forced circulation, e.g. with a pumping screw. Connection pipes to the seal should be designed with as little resistance as possible.

1. Measuring unit
2. Level Switch
3. From PCV, we recommend using a reverse controlled pressure control valve (PCV)
4. Hand Refill Pump
5. Circulating Pump
6. Mechanical seal