EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

TS1000

Seal Supply Systems | Thermosiphon systems

Features

With the EagleBurgmann TS1016 thermosiphon system it is possible to supply buffer/barrier fluid to double and tandem mechanical seals for a broad range of applications. The TS1016 thermosiphon vessel is available with flat ends, sight-glasses for level monitoring and with cooling coil. TS vessels are equipped as standard with all the necessary system connections and brackets. The modular system allows the TS1016 vessels to be combined with a wide range of system components such as, e.g. level switch, circulation pump, hand refill pump, thermometer, base frame, etc.

Circulation based on API 682 / ISO 21 049: Plan 52, Plan 53A

Functional description

The TS 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

Advantages

- Modular system: combination with a wide range of system components possible
- Vessel made of 1.4571 stainless steel / borosilicate sight-glasses: suitable for universal applications
- All system connections on the face sides
- Low space requirements because of compact design

Standards and approvals

- PED 2014/68/EU (Design and production in accordance with EU Pressure Equipment Directive)
- SELO, TR CU on request
- Compliant to TA Luft (German Clean Air Act)

Recommended applications

- Chemical industry
- Petrochemical industry
- Pulp and paper industry
- Food and beverage industry
- Water and waste water technology

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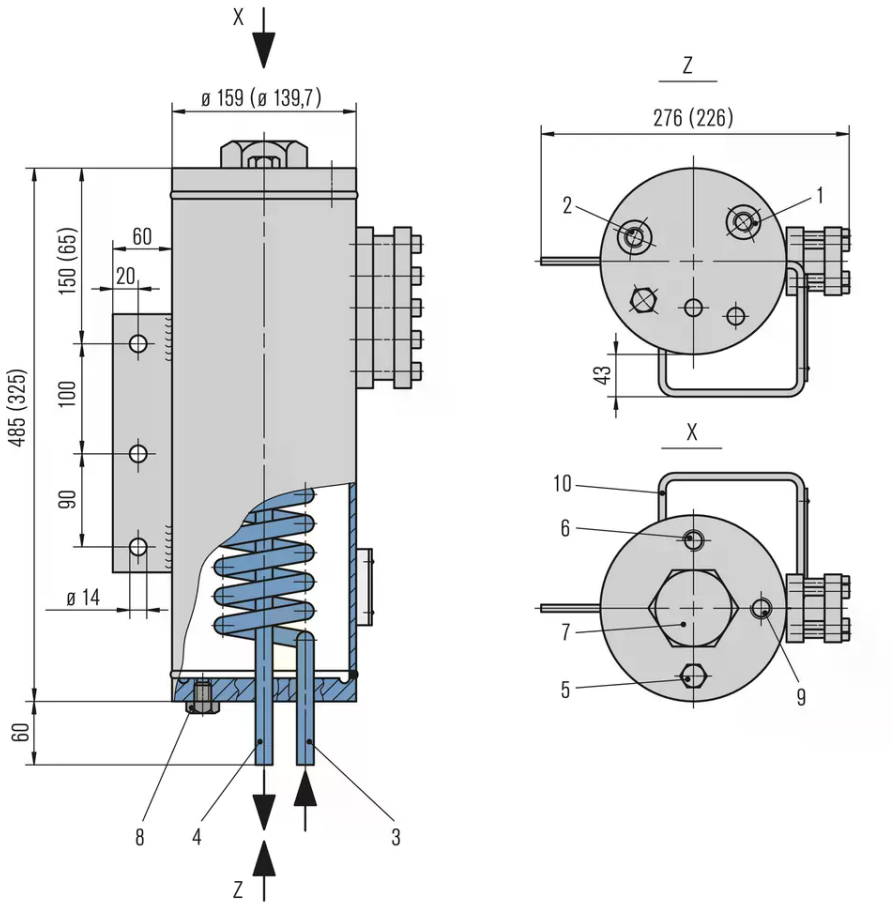
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. Subject to change.

- to cool the seal
- to selectively absorb product leakage and prevent dry running (tandem arrangement)

Use compressed air or nitrogen for pressurization.



Item	Description
1	Buffer/barrier fluid IN (G1/2")
2	Buffer/barrier fluid OUT (G1/2")
3	Cooling water IN (pipe 12 x 1.5 mm)
4	Cooling water OUT (pipe 12 x 1.5 mm)
5	Filling connection with cap (G1/2")
6	Pressure gas connection (1/4" NPT)
7	Connection for level switch (G2")
8	Connection for refill unit (G1/8")
9	Connection for pressure gauge (1/4" NPT)
10	Bracket for refill unit

Dimensions for TS1016/A007
Values in brackets: TS1016/A003.

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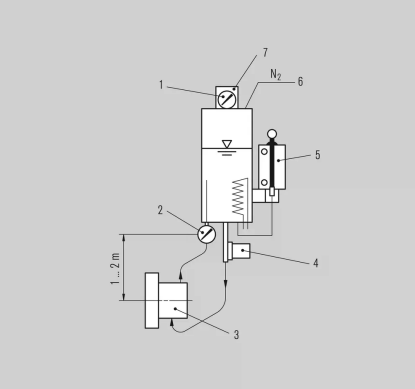
Installation, details, options



Operating and installation diagram for a TS1000 system.

The TS 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 SPU
5 SPN
6 From PCV, we recommend using a reverse controlled pressure control valve (PCV)
5 Level switch

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Product variants

Designation	TS1016/A007
Standard design	■
Design code	PED 2014/68/EU
Integrated cooling coil	■
Volume of vessel (liters)	8
Volume of tube (liters)	0.2
Allowable pressure[1]	16 bar (232 PSI)
Allowable temperature[1]	-60 °C ... +200 °C (-67 °F ... +392 °F)
Working volume, MAX-MIN (liters)	1.3
Cooling capacity depending on process medium	(low flow / high flow)
Water	1.4 kW2) / 1.9 kW3)
Ethylene glycol water (30:70)	1.1 kW2) / 1.5 kW3)
Oil ISO VG10	0.3 kW2) / 0.4 kW3)
Metal parts	1.4571
Sight-glass	Reflex Borosilicate
Seal	PTFE

Other versions on request.

1)Design data, permissible working values depend on the actual conditions of service.
2)Low Flow: 8 l/min (process fluid), 10 l/min (cooling water), △T = 40 K
3)High Flow: 15 l/min (process fluid), 20 l/min (cooling water), △T = 40 K

TS1016/A003

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TS1016/A007

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