EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

TS3016

Seal Supply Systems | Thermosiphon systems

Features

The EagleBurgmann TS3016 thermosiphon system presents a simple and quick way to clean the vessel interior. For this purpose it is designed for easy dismantling. A quick-release coupling should therefore be used to connect the pressure gas to the vessel. The modular system allows the TS3016 vessels to be combined with a wide range of system components.

Circulation based on API 682 / ISO 21049: Plan 52, Plan 53A

Functional description

The TS system performs all the basic functions of a buffer system for the operation of double seals:

- to pressurize the barrier 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)

Advantages

- Vessel can be dismantled: for optimum and simple cleaning of the vessel interior
- Innovative design: Vessel is designed for quick and simple dismantling
- Two sight-glasses fitted on opposite sides enable optimum reading of the fluid level
- Piping system and seal can be flushed without dismantling
- Modular system: combination with a wide range of system components possible

Standards and approvals

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

Recommended applications

- Food and beverage industry
- Pharmaceutical industry
- Chemical industry

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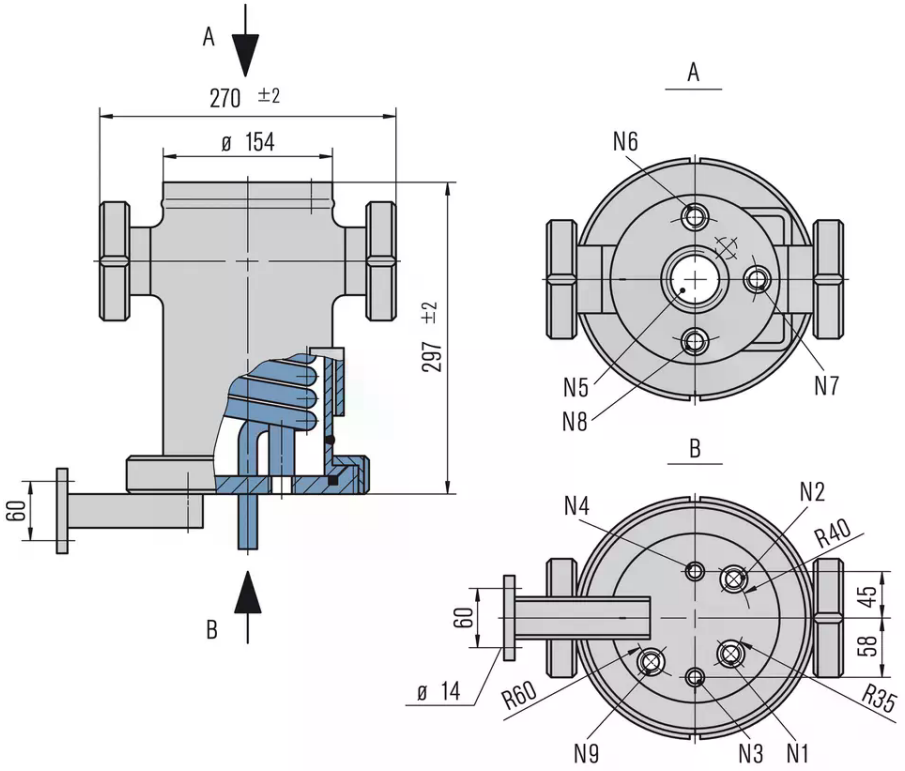
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case.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

Use compressed air or nitrogen for pressurization.

Notes

Cleaning: To clean the inside of the vessel you simply have to open the union nut, disconnect the gas supply and level switch, and lift off the vessel case. There is no need to dismantle the seal and cooler connections or the base.



Item	Description
N1	Buffer/barrier fluid IN, G1/2"
N2	Buffer/barrier fluid OUT, G1/2"
N3	Cooling water IN, pipe 15 x 1.5 mm
N4	Cooling water OUT, pipe 15 x 1.5 mm
N5	Level switch, G 2"
N6	Auxiliary components, G1/2"
N7	Auxiliary components, G1/2"
N8	Filling connection, G1/2"
N9	Drain, G1/2"

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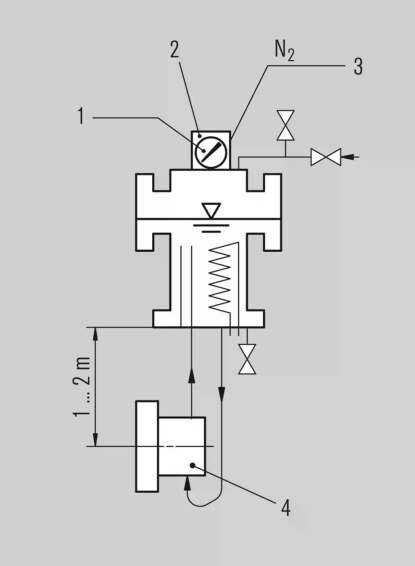
Installation, details, options



Operating and installation diagram for a TS3016 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.

Cleaning:
To clean the inside of the vessel you simply have to open the union nut, disconnect the gas supply and level switch, and lift the vessel case. There is no need to dismantle the seal and cooler connections or the lase.

1 Pressure gauge
2 SPS Level switch
3 From PCV, we recommend using a reverse controlled pressure control valve (PCV)
4 Mechanical seal

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Product variants

Designation	TS3016
Design code	PED 2014/68/EU
Integrated cooling coil	■
Volume, vessel (liters)	4
Volume, tube (liters)	0.4
Allowable pressure1)	16 bar(232 PSI)
Allowable temperature1)	150 °C(302 °F)
Working volume, MAX-MIN (liters)	1.1
Cooling capacity –natural circulation (kW)2)	1.0
Cooling capacity –forced circulation (kW)2)	2.0
Metal parts	1.4404
Sight-glass	Round Borosilicate
Seal	PTFE
Additional welding material	1.4576 / 1.4430
Net weight (approx.)	12 kg(26.5 lb)

1) Design data, permissible working values depend on the actual conditions of service.
2) The cooling performance depends on the available fluids, their temperatures and flow rates. Please contact EagleBurgmann for professionally selecting the correct heat exchanger.

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