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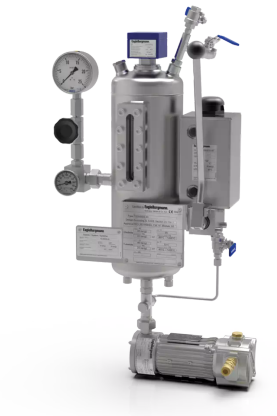
RELY ON EXCELLENCE

TSA2

Seal Supply Systems | Thermosiphon systems



Features

- Successor of product lines TS2000, TS1020
- For ANSI pumps in chemical applications
- Pressure rating up to 25 bar(g) (362 psi)
- 40 % increased working volume compared to previous version
- Sight glass for level monitoring
- Cooling coil is supplied as standard
- All necessary system connections and brackets are provided as standard for optional components
- 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 dual seal operation:

- Pressure-build-up in the seal chamber
- Leakage compensation
- Circulation of the buffer/barrier fluid by thermosiphon effect or forced circulation
- Cooling of the seal
- Selective absorption of product leakage and prevention of dry running (tandem

Advantages

- Improved heat dissipation
- Material of construction 316/316L – 1.4401/1.4404 stainless steel; sight glass made of borosilicate glass
- Modular system design, many pre-configured variants available
- Sleeves with recessed gasket prevent contamination of circuit by thread sealant
- Very short delivery time
- Attractive pricing

Standards and approvals

- ASME VIII, Div. 1 (Design, calculation and production)
- PED 2014/68/EU (optional)
- SELO, TR CU on request
- Compliant to TA Luft (German Clean Air Act)

Recommended applications

- Chemical industry
- Petrochemical industry
- Oil and gas industry
- Refining technology

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arrangement). When pressurized, this is provided via compressed air or nitrogen.

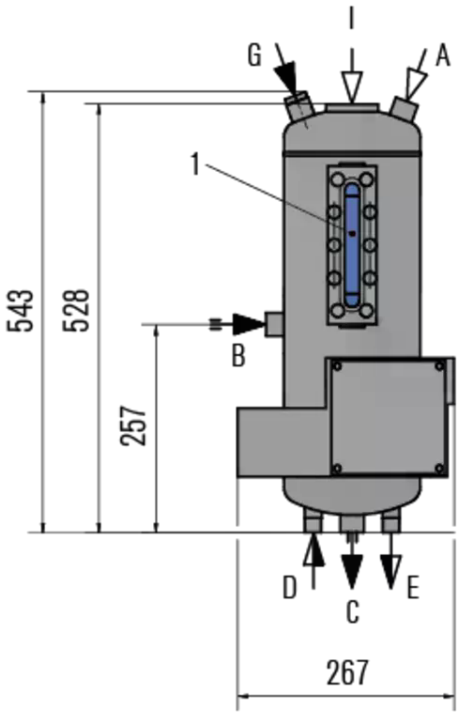
Technical Data
Vessel volume: 9 liters
Pressure rating (1): max. 25 bar(g) (362 psi); variant with up to 40 bar(g) (580 psi) possible
Temperature rating (1): -60 °C ... +200 °C (-76 °F ... + 392 °F)
Working volume MAX-MIN: 2,5 liters

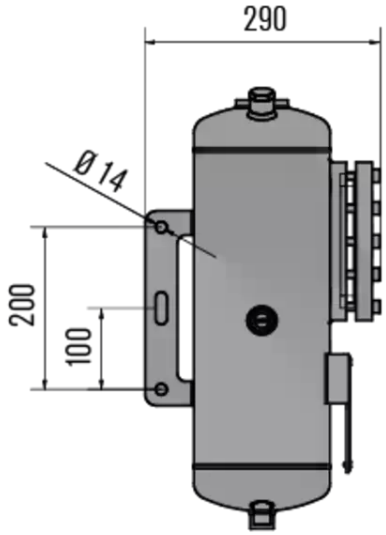
Cooling capacity depending on medium (low flow / high flow)

Water	2.9 kW2) / 4 kW3)
Ethylene glycol water (30:70)	2.2 kW2) / 3 kW3)
Oil ISO VG10	0.6 kW2) / 0.9 kW3)

Material (wetted parts): stainless steel 316 / 316L - 1.4401 /1.4404
Sight glass: Reflex Borosilicate Glass
Gaskets: PTFE
Net weight (w/o accessories): 15 kg (33 lb.)

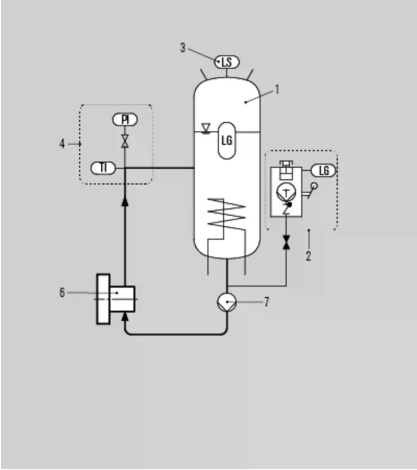
1) Design data, permissible working values depend on the operation conditions.
2) Low Flow: 8 l/min (process fluid), 10 l/min (cooling water), △T = 40 K
3) High Flow: 15 l/min (process fluid), 20 l/min (cooling water), △T = 40 K





Item	Description
A	N2 Connection / Vent
B	From the mechanical seal
C	To the mechanical seal
D	Cooling water IN
E	Cooling water OUT
G	Filling connection
1	Sight class

Installation, details, options



Operating and installation diagram

The TSA2 vessel must always be installed above the mechanical seal.

The buffer/barrier fluid flows into the vessel via the return line for cooling. The fluid exchange takes place according to the thermosiphon principle or by forced circulation e.g., with a pumping screw.

The connection piping to the seal should have as little resistance as possible.

1 Thermosiphon vessel
2 Refill unit
3 Level switch
4 Pressure and temperature measuring unit
6 Mechanical seal
7 Circulation pump

Product variants

Configurable components	Vessel	Level switch	Measuring unit	Circulation unit	N2 Connection and vent	Funnel	Refill pump	Drain device	Base frame
For professional selection and configuration of your TSA2 thermosiphon system, please contact our Technical Sales Support experts.									