

Condensate Recovery and Return Systems SDI / SDs

Use

Condensate tanks collect the condensate coming directly from steam processors or via flash tanks. From the tank, the condensate is returned to the feedwater tank by a level-controlled pump, in most cases via a deaerator. The condensate pump pressure can be adjusted to the pump characteristic with the aid of the shut-off valve and the pressure gauge.

Capacity range

The size of the tank depends on the amount of condensate formed. Our standard range comprises tanks for small flow-rates and tanks up to 14000 litres for maximum condensate flowrates of 60 m³/h (see table). Special versions are available for larger flowrates.

Pressure/temperature ratings

| | | | |
|--|------|-----|-----|
| Maximum pressure | barg | 0.5 | 4.0 |
| Service temperature | °C | 111 | 200 |
| Maximum admissible condensate flowrate as per table. Special tanks can be provided for higher pressures, temperatures and flowrates. | | | |

Materials

SDI/SDs 1.0: S235JRG2
SDI/SDs 4.0: P265GH

Design

Cylindrical, horizontal (SDI) or vertical (SDs) design as shown, content of 10 m³ or more is on a support. Anti-rust coating on an untreated substrate.

Stainless steel tanks can be supplied if required.

See the SDR data sheet for a tank with a rectangular design.

GESTRA condensate tank SDI

Horizontal version for a max. condensate flow rate of 60 m³/h and a max. volume of 14.2 m³.

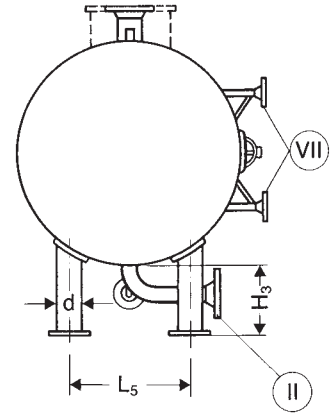
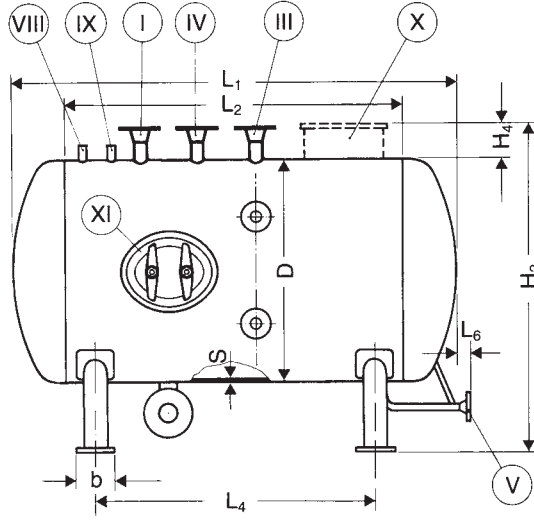
GESTRA condensate tank SDs

Vertical version for a max. condensate flow rate of 16 m³/h and a max. volume of 3.8 m³.

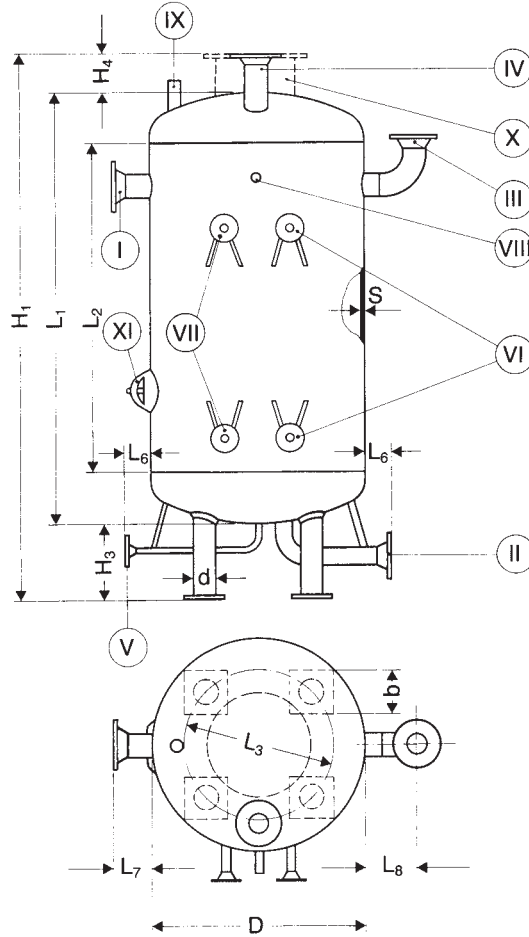
Connections

- I Condensate inlet
- II Condensate outlet or condensate pump connection
- III Safety valve (not applicable to SDI and SDs 1.0, unless the tank is intended for a closed system)
- IV Flash steam outlet
- V Drain
- VI Measuring pot
- VII Fluid level indicator
- VIII Pressure gauge
- IX Connection for multiple electrode (for SDI and SDs 1.0 only)
- X Submersible pump on request only at extra cost (only possible with SDI and SDs 1.0)
- XI Inspection hole or manhole only standard in tanks requiring TÜV inspection in Germany; otherwise on request at extra cost.

GESTRA condensate tank SDI



GESTRA condensate tank SDs



Dimensions and weights

| Tank size | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | | |
|--|-----------|---------------------------------|---------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|--------------------|--------------------|-------------------------|
| For max. condensate flowrate [m ³ /h] | 1 | 2 | 4 | 6 | 9 | 12 | 16 | 20 | 25 | 30 | 35 | 43 | 50 | 60 | | |
| Volume [l] | 250 | 390 | 850 | 1370 | 2100 | 2900 | 3800 | 4500 | 5900 | 6900 | 7900 | 10100 | 12700 | 14200 | | |
| Dimensions [mm] | D | 600 | 600 | 800 | 1000 | 1200 | 1400 | 1400 | 1400 | 1600 | 1600 | 1600 | 1800 | 2000 | 2000 | Larger tanks on request |
| | s | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5(6) ⁴⁾ | 5(6) ⁴⁾ | 5(6) ⁴⁾ | |
| | b | 120 | 120 | 140 | 160 | 160 | 180 | 180 | 180 | 200 | 200 | 200 | 220 ¹⁾ | 220 ¹⁾ | 220 ¹⁾ | |
| | d | 60.3 | 60.3 | 88.9 | 114.3 | 114.3 | 139.7 | 139.7 | 139.7 | 168.3 | 168.3 | 168.3 | – | – | – | |
| | L1 | 1000 | 1500 | 1894 | 1970 | 2050 | 2124 | 2628 | 3128 | 3214 | 3714 | 4214 | 4294 | 4374 | 4872 | |
| | L2 | 700 | 1200 | 1500 | 1500 | 1500 | 1500 | 2000 | 2500 | 2500 | 3000 | 3500 | 3500 | 3500 | 4000 | |
| | L3 | 480 | 480 | 640 | 800 | 960 | 1120 | 1120 | – | – | – | – | – | – | – | |
| | L4 | 540 | 1000 | 1130 | 1130 | 1130 | 1140 | 1600 | 2000 | 2000 | 2200 | 2700 | 2700 | 2700 | 3200 | |
| | L5 | 360 | 360 | 480 | 600 | 720 | 840 | 840 | 840 | 960 | 960 | 960 | 1680 ²⁾ | 1740 ²⁾ | 1740 ²⁾ | |
| | L6 | 100 | 100 | 100 | 100 | 100 | 120 | 120 | 120 | 120 | 120 | 120 | 150 | 150 | 150 | |
| | L7 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | – | – | – | – | – | – | – | |
| | L8 | 140 | 150 | 160 | 165 | 180 | 190 | 190 | – | – | – | – | – | – | – | |
| | H1 | 1400 | 1900 | 2344 | 2420 | 2500 | 2674 | 3178 | – | – | – | – | – | – | – | |
| | H2 | 1000 | 1000 | 1250 | 1450 | 1650 | 1950 | 1950 | 1950 | 2150 | 2150 | 2150 | 2450 | 2750 | 2750 | |
| H3 | 250 | 250 | 300 | 300 | 300 | 400 | 400 | 400 | 400 | 400 | 400 | 500 | 600 | 600 | | |
| H4 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | | |
| Connection dimensions [DN] | I | 32 | 32 | 50 | 50 | 65 | 80 | 100 | 100 | 125 | 125 | 150 | 150 | 150 | 200 | |
| | II | as suitable for pump connection | | | | | | | | | | | | | | |
| | III | 25 | 32 | 40 | 50 | 80 | 100 | 100 | 125 | 125 | 125 | 150 | 150 | 150 | 200 | |
| | IV | 50 | 65 | 65 | 80 | 100 | 125 | 125 | 150 | 150 | 150 | 200 | 200 | 200 | 250 | |
| | V | 25 | 25 | 32 | 32 | 32 | 32 | 32 | 32 | 40 | 40 | 40 | 40 | 40 | 40 | |
| | VI | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |
| | VII | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |
| | VIII | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | G ½ | |
| | IX | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | G 1 | |
| | X | as suitable for pump connection | | | | | | | | | | | | | | |
| XI 3) (a x b) | 100 x 150 | 100 x 150 | 2 x 100 x 150 | 2 x 100 x 150 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | 320 x 420 | |
| Weights | [N] | 1030 | 1073 | 2453 | 3335 | 4120 | 5396 | 6278 | 7161 | 9123 | 10202 | 11282 | 17266 | 19620 | 22073 | |
| | [kg] | 105 | 140 | 250 | 340 | 420 | 550 | 640 | 730 | 930 | 1040 | 1150 | 1760 | 2000 | 2250 | |

Comments:

- 1) Width of support
- 2) Length of support
- 3) For tanks with plastic inner coating DN 500, PN 6 only.
- 4) For SDI/SDs 4.0 only

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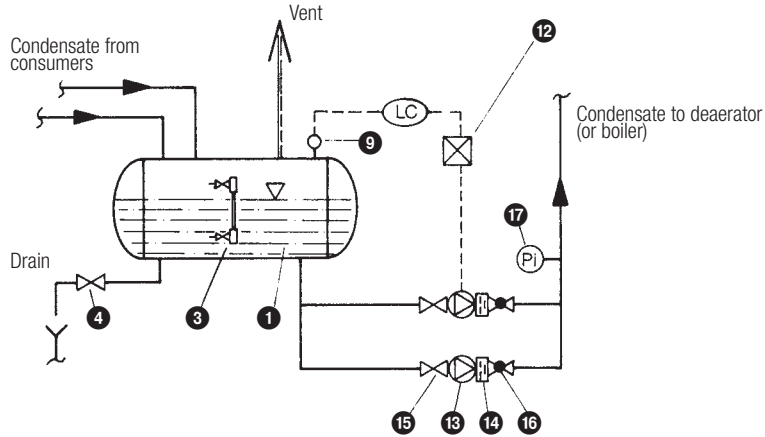
Key

- 2 Pressure gauge assembly
- 3 Water level indicator with valve
- 4 Shut-off valve GAV
- 5 Full-lift spring-loaded safety valve GSV
- 6 Steam trap MK
- 7 DISCO non-return valve RK
- 8 Float trap UNA
- 9 Level electrode NRG/ER
- 10 Measuring pot
- 11 Shut-off valve GAV
- 12 Pump control SR
- 13 Condensate pump
- 14 DISCO non-return valve RK
- 15 Shut-off valve GAV
- 16 Shut-off valve GAV
- 17 Pressure gauge G 1/2

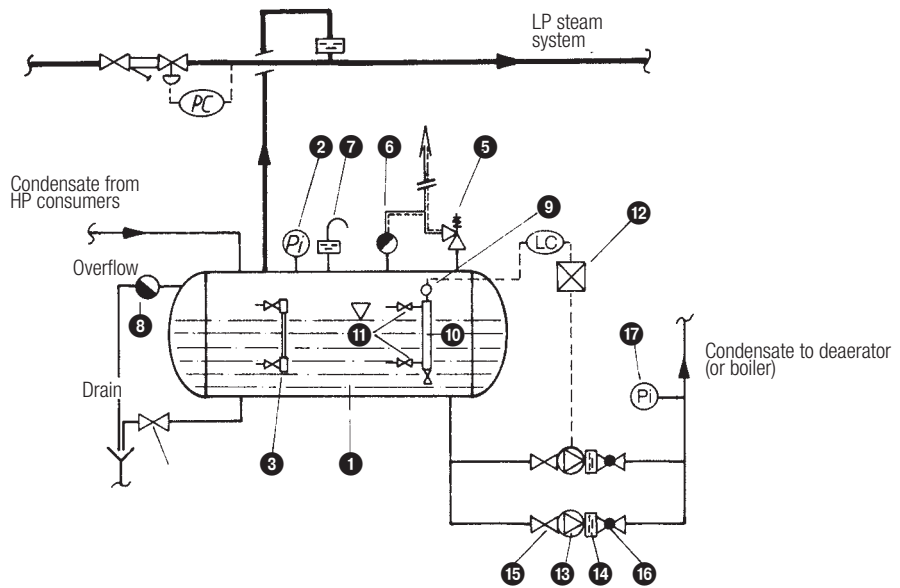
Brief description

GESTRA condensate recovery and return systems consist of a tank with standard equipment, condensate pump(s) with pump equipment and control. Dry run protection for pumps available on request. Time-dependent pump switchover available on request.

Open system



Closed system



When ordering please state

Service pressure and temperature of steam processors.
Type of steam processor, quantity of condensate formed.
Expected back pressure in the pump discharge line.
Electrical connection.

If the equipment must be subject to special test and inspection requirements, please refer to our document entitled "Test and Inspection Charges". Due to regulations, certificates can no longer be issued following delivery.

Please note our terms of sale and delivery.

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