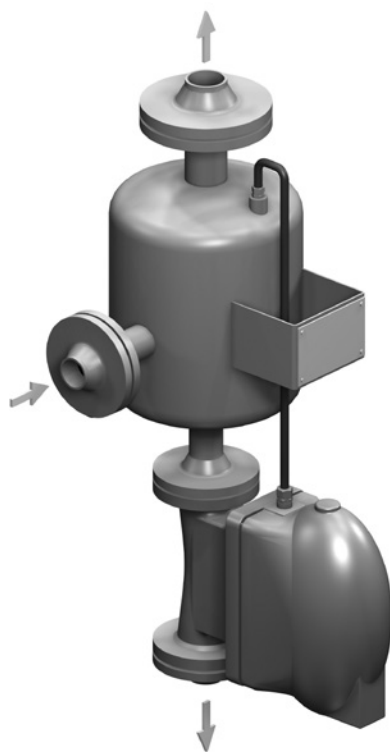


Flash vessel VD...H, horizontal design



Flash vessel VD...V, vertical design

Flash Vessels

VD 23H/V, VD 26H/V

System Description

The flash vessels VD 23 and VD 26 in conjunction with GESTRA float traps type UNA 23 or UNA 26 form a compact system. The flash vessel VD 23 is equipped with the float trap UNA 23. The flash vessel VD 26 is equipped with the float trap UNA 26. Both flash vessels consist of a vessel with a condensate inlet, an outlet for the flash steam and a float trap type UNA. Both versions are available as vertical and horizontal design. Flash vessels are used to separate flash steam from condensate. The flash vessels VD... are sized in accordance with the operating data.

Function

Condensate flows through the condensate inlet into the condensate tank of the flash vessel. Wire drawing effects occurring in the flash vessel are considerably reduced by a deflector plate. The design of the lower part of the flash vessel ensures that the condensate is free of steam bubbles when it enters the float trap.

Design

Flash vessel VD 23, VD 26

Made from steel P265GH or made from steel S235JRG2.

Horizontal flash vessels: VD 23H, VD 26H,
Vertical flash vessels: VD 23V, VD 26V.

The flash vessels are equipped with a float trap type UNA 23 or UNA 26.

The float trap is fitted with an air-balance pipe.

Other designs available on request.

Technical data

Service pressure

VD 23H, VD 23V: 12 bar g
VD 26H, VD 26V: 28 bar g

Service temperature

VD 23H, VD 23V: 200 °C
VD 26H, VD 26V: 250 °C

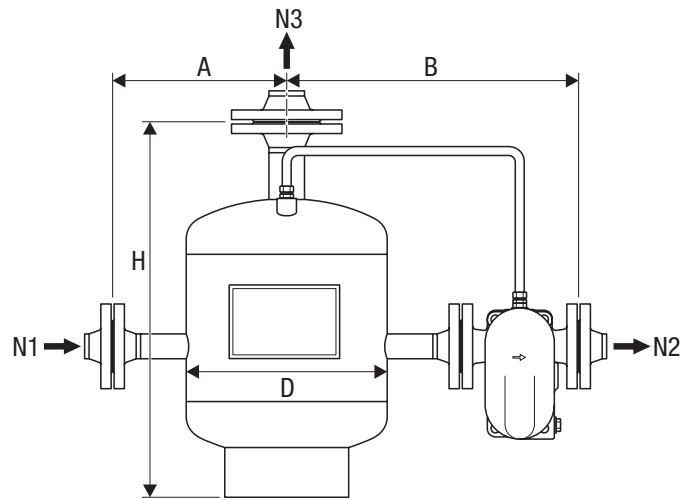
Condensate flowrate

0.2 t/h up to 1 t/h

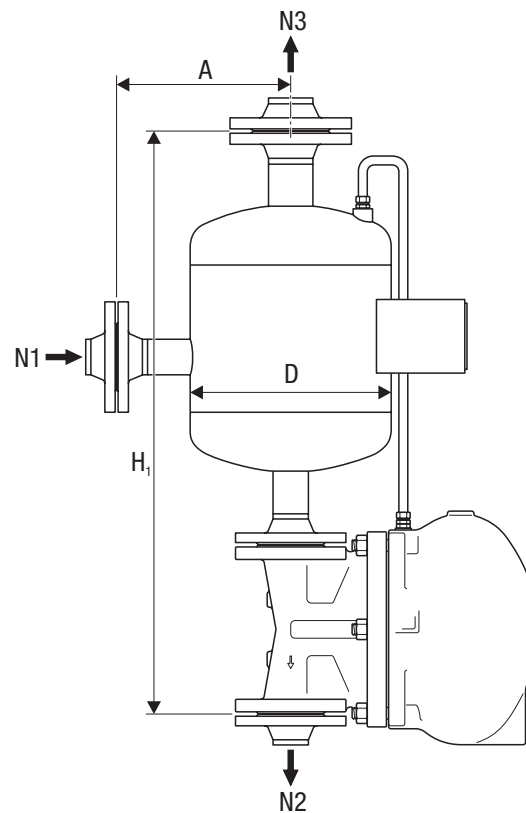
Higher pressures, temperatures and flowrates on request.

Technical data

Flash vessel VD



VD 23 H, PN 16, DN 25



VD 26 V, PN 40, DN 40

Type		VD 23H/V		VD 26H/V	
Volume	[l]	15	15	15	15
Flowrate	[t/h]	0.3	1.0	0.2	0.7
A	[mm]	237	237	237	237
B	[mm]	400	470	400	470
H	[mm]	430	520	430	520
H ₁	[mm]	720	790	720	790
D	[mm]	273	273	273	273
Pressure	PN	16	16	40	40
Condensate inlet N1	DN	25	40	25	40
Condensate outlet N2	DN	25	40	25	40
Flash steam outlet N3	DN	40	50	40	50
Air-balance pipe	DN	10	10	10	10
Weight	[kg]	50	70	50	70

Sizing

Flash vessel VD 23, VD 26

Example: Condensate flowrate for VD 23H/V

Pressure in flash vessel: 0.75 bar

Pressure downstream of steam trap: 0.2 bar

$0.75 \text{ bar} - 0.2 \text{ bar} = \Delta p \text{ } 0.55 \text{ bar}$

Condensate flowrate /

amount of boiler blowdown: 300 kg/h

The chart "Condensate flowrate" indicates a float trap DN 25 with orifice 13. In this case a VD 23H or VD 23V with a condensate flowrate of 300 kg/h is selected.

Example: Amount of flash steam for VD 23H/V

Pressure in steam consumer or continuous blowdown valve: 10 bar

Pressure in flash vessel: 0.75 bar

The chart "Amount of flash steam" indicates the following flashing:

0.1275 kg steam per kg condensate.

This value multiplied by 300 kg/h of condensate makes 38 kg/h of flash steam.

Example: Condensate flowrate for VD 26H/V

Pressure in flash vessel: 14 bar

Pressure downstream of steam trap: 4 bar

$14 \text{ bar} - 4 \text{ bar} = \Delta p \text{ } 10 \text{ bar}$

Condensate flowrate /

amount of boiler blowdown: 500 kg/h

The chart "Condensate flowrate" indicates a float trap DN 25 with orifice 32. In this case a VD 26H or VD 26V with a condensate flowrate of 500 kg/h is selected.

Example: Amount of flash steam for VD 26H/V

Pressure in steam consumer or continuous blowdown valve: 22 bar

Pressure in flash vessel: 14 bar

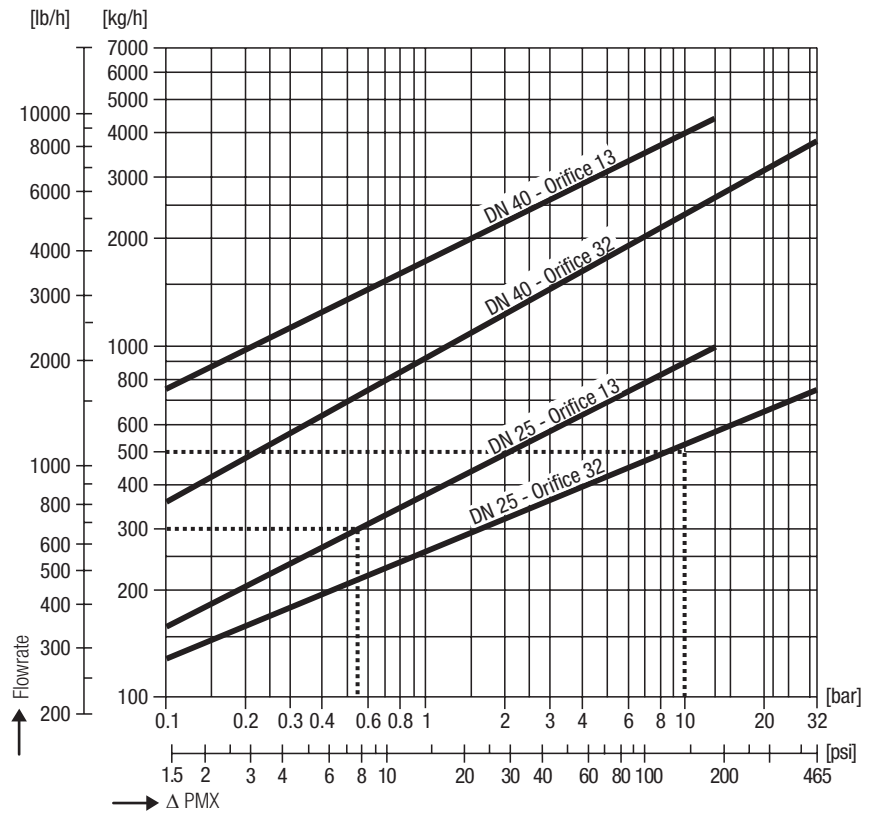
The chart "Amount of flash steam" indicates the following flashing:

0.0475 kg steam per kg condensate.

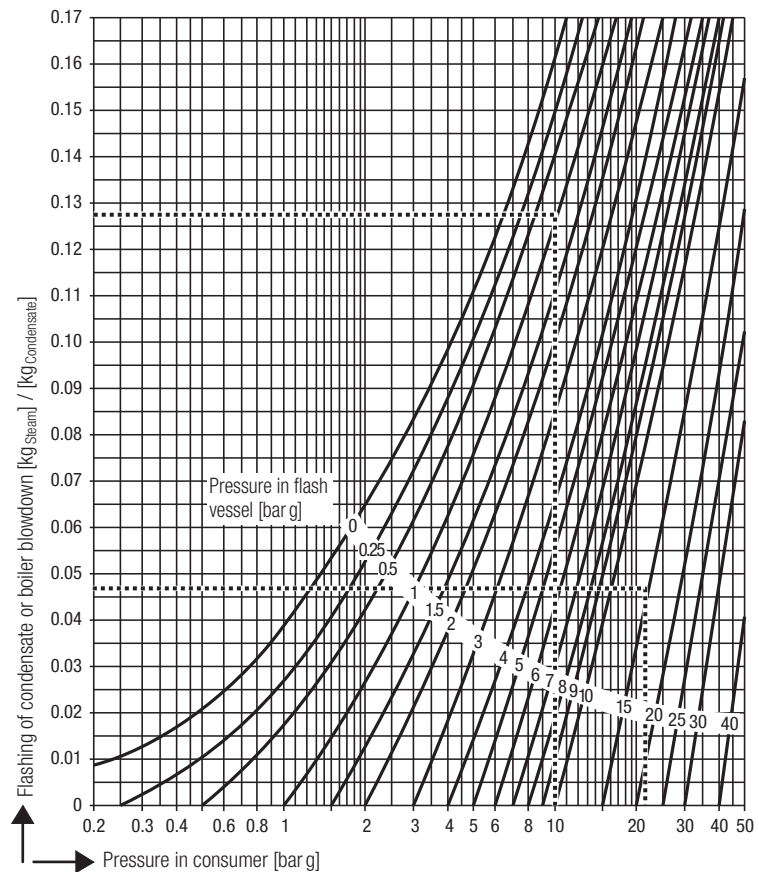
This value multiplied by 500 kg/h of condensate makes 24 kg/h of flash steam.

Technical data

Condensate flowrate



Amount of flash steam



Flash Vessels
VD 23H/V, VD 26H/V

When ordering please state:

GESTRA Flash Vessel

Condensate flowrate..... [kg/h]
 Steam pressure at consumer (P 1)..... [bar]
 Pressure of flash steam (P 2)..... [bar]
 Back pressure at condensate outlet (P 3)..... [bar]
 Material of flash vessel: steel

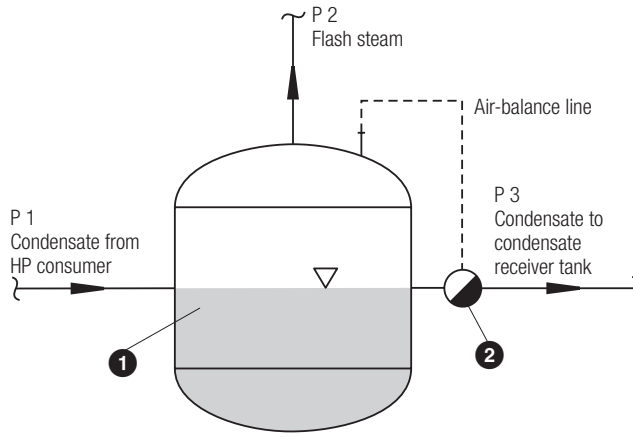
Please enter data and cross off sections that are not applicable.

For more information refer to our Specification Texts.

PED (Pressure Equipment Directive)

These products comply with the requirements of the Pressure Equipment Directive PED 97/23/EC and the AD 2000 Bulletins, taking the conformity assessment into account. Applicable with fluids of group 1 and 2. With CE marking, except for equipment according to section 3.3. For more information refer to our PED Declaration of Conformity.

Schematic representation



Key

- ❶ Flash vessel
- ❷ Float trap UNA...

Supply in accordance with our general terms of business.

GESTRA AG

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GESTRA