

Steam-Powered Condensate-Return Unit KH

Description

The condensate flows into the upright cylindrical tank, displacing the air through a solenoid valve.

The tank is equipped with the compact level system type NRGS 11-1 / NRGS 16-1. As soon as the water level reaches the upper electrode tip the solenoid valve in the vent line is closed and simultaneously the solenoid valve in the booster-steam line (introduced from above into the tank) is opened. The flowing steam pushes the condensate via the condensate main into the condensate tank. The condensate level sinks and when the lower electrode tip emerges, the solenoid valve in the booster-steam line is closed and the solenoid valve in the vent line opened. The cycle repeats itself.

Before entering the condensate-return unit the condensate is collected in a condensate header to be provided on site. This condensate header should be equipped with a vent.

Condensate inlet and outlet are provided with GESTRA DISCO non-return valves type RK. The condensate-return unit is equipped with a pressure-gauge and the booster-steam line with a stop valve with characterized valve cone which permits the adjustment of the booster-steam pressure in accordance with the length of the condensate discharge line and the prevailing back pressure.

As the condensate-return unit operates without a float it is unaffected by waterhammer.

Continuous drainage of the booster-steam line upstream of the solenoid valve is ensured by a GESTRA steam trap.

The steam traps, non-return valves and compact systems are described in separate data sheets.

Pressure / Temperature Rating

Max. service pressure	12 barg (174 psig)
Max. temperature	200 °C
Discharge head	Booster-steam pressure in bar x 0.7
Mains supply	230 V, 50 Hz
Protection*)	IP 65

*) Explosion-proof design on request.

Materials

P 265 GH
1.4541 and 1.4571 on request

Capacity Range

Standard design for hot condensate flowrates up to 10 t/h.
For higher flowrates we recommend GESTRA condensate recovery and return systems.

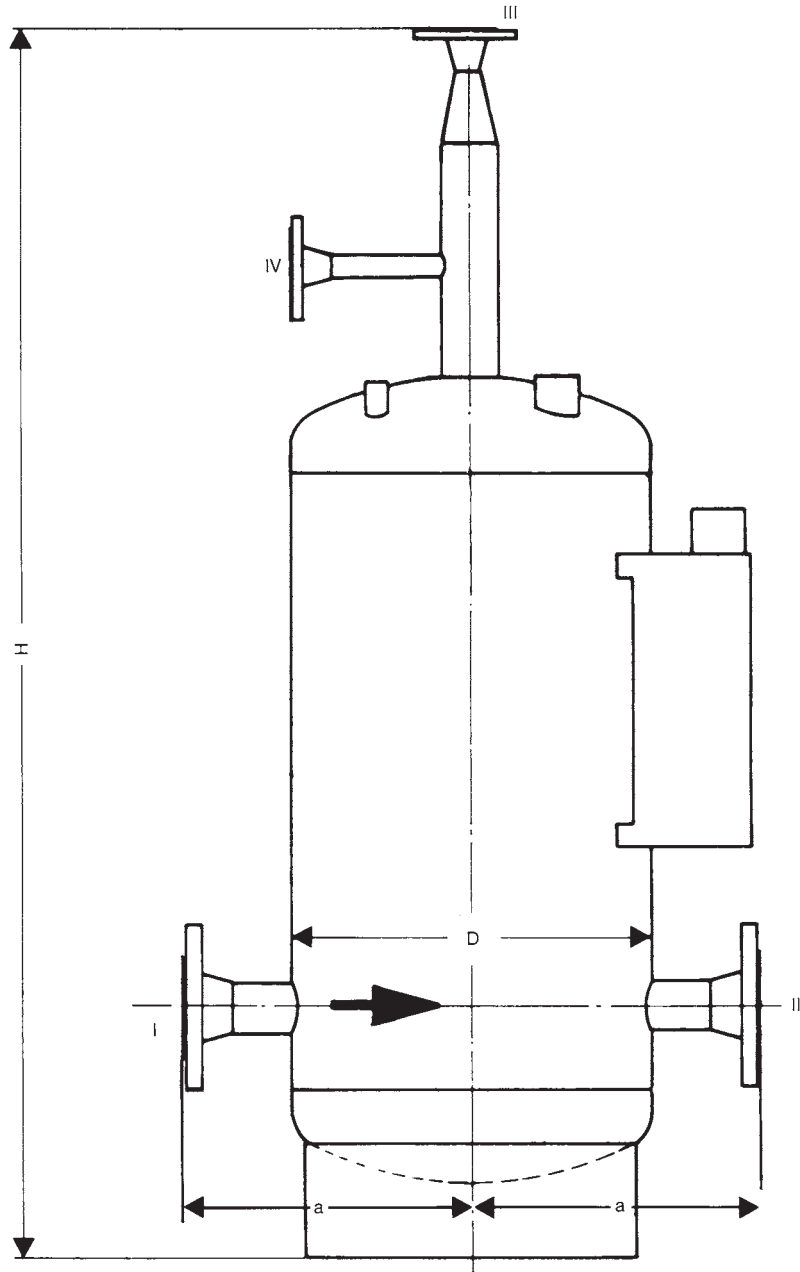
Supply

Vessel with equipment completely mounted and inter-connected, inclusive of counterflanges, bolts and gaskets.

Design

Vessel of steel plate in welded construction. Inside untreated, outside provided with an antirust paint. The equipment is supplied with all necessary connections on a round support.

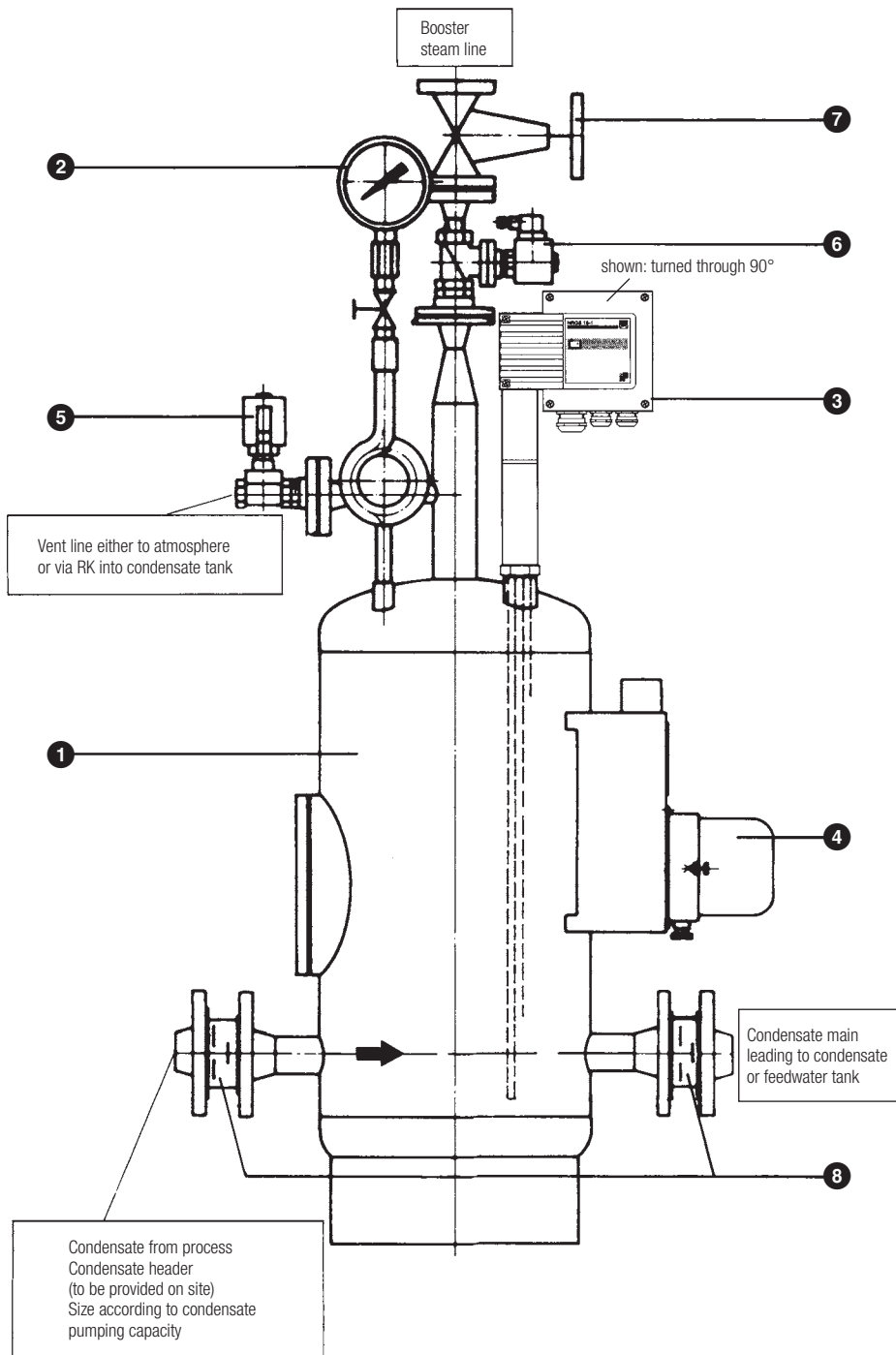
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Type		KH 13-2	KH 13-3	KH 13-5*)	KH 13-10*)
Capacity	t/h	2	3	5	10
Volume	l	50	75	100	390
Dimensions [mm]	D	324	324	400	600
	H	1100	1400	1190	2240
	H ₁ **)	1540	1750	1570	2580
	a	260	260	300	450
Connections					
I Condensate inlet		40	40	50	80
II Condensate outlet	DN	40	40	50	80
III Booster-steam inlet	[mm]	15	20	20	25
IV Vent		15	20	20	25
Material		P 265 GH	P 265 GH	P 265 GH	P 265 GH
Max. service pressure	barg	12	12	12	12
	psig	174	174	174	174
Max. temperature	[°C]	200	200	200	200
Approx. weight	[kg]	250	265	300	450

*) TÜV inspection required in Germany

***) H₁ Total height inclusive of valves



Key

- 1 Condensate tank
- 2 Pressure gauge
- 3 Multiple level control electrode
- 4 Terminal box KH-NRGS
- 5 Solenoid valve in vent line
- 6 Solenoid valve in booster-steam line
- 7 Stop valve
- 8 DISCO non-return valves RK 86

Steam-Powered Condensate-Return Unit **KH**

Equipment for Steam-Powered Condensate-Return Unit KH

Pressure gauge assembly ½" BSP consisting of
pressure gauge ½" BSP,
(case diameter 100 mm, indicating range 0 – 16 bar),
pressure-gauge isolating valve ½" BSP,
syphon ½" BSP, coil-type

Compact system NRGS 16-1,
connection 1" BSP

GESTRA Terminal box KH NRGS

Solenoid valve for booster-steam line and solenoid valve
for vent line, positions "OPEN" / "CLOSED".

Solenoid valve type 85720,
screwed connections,
body material: brass,
normally closed, 0 – 16 bar, max. 200 °C, 230 V, 50 Hz,
sealing material: Teflon

Isolating valve type GAV 24F.
PN 16, material: GGG 40.3, maintenance-free,
with regulating cone.

GESTRA DISCO non-return valve type RK 86,
wafer-type valve, body material: 1.4317,
valve disc material: stainless steel.

When ordering please state:

Steam pressure, back pressure, quantity of condensate,
connections.

All inspection requirements have to be stated with the order.
After supply of the equipment certification cannot be estab-
lished. For tests and inspection charges please consult us.

Prices on request.

Supply in accordance with our general terms of business.

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