

Steam-Powered Condensate-Return Unit KH

Description

The incoming condensate flows into the upright cylindrical condensate tank, displacing the air through a solenoid valve. The tank is equipped with a type NRGs 16-1 compact system. When the upper electrode tip is reached (maximum set water level), the solenoid valve in the vent line closes while in a booster steam line that enters the tank from above, another solenoid valve opens. The inflowing steam pushes the condensate via the condensate main into the central condensate tank. The condensate level sinks and when the lower electrode tip is no longer immersed, the solenoid valve in the booster steam line closes and the solenoid valve in the vent line opens. The cycle repeats itself.

As the condensate is transported, it is collected in a condensate header, which is provided on site. This tank system must have perfect venting, especially if condensate from different pressure ratings is merged.

The condensate drain and supply lines are fitted with RK non-return valves, and the condensate-return unit features a pressure gauge and stop valve with throttling plug in the booster steam line.

The steam-powered condensate-return unit is unaffected by waterhammer.

Pressure and temperature ratings

Max. service pressure	[bar]	12
Service temperature	[°C]	200
Discharge head	[bar]	Booster steam pressure in bar x 0.7
Mains supply		230 V / 50 Hz
IP rating		IP 65

Materials

- 1.0345 / 1.0425
- 1.4541 and 1.4571 on request

Capacity range

Steam-powered condensate-return units are designed as standard for condensate flowrates of up to 10 t/h.

For higher flowrates, we recommend GESTRA condensate header and return systems.

Scope of supply

Tank with equipment and pipework fitted, ready for connection and wired, including mating flanges, bolts and gaskets.

Design

Tank of welded sheet steel. Inside untreated, outside with anti-rust coating on untreated substrate. Equipped with the necessary connections and sockets. The equipment sits on a support ring.

Scope of supply

Tank with equipment and pipework fitted, ready for connection and wired, including mating flanges, bolts and gaskets.

- ❶ Condensate tank KH
- ❷ Pressure gauge
- ❸ Multiple level control electrode
- ❹ Terminal box KH-NRGS
- ❺ Solenoid valve in vent line
- ❻ Solenoid valve in booster steam line
- ❼ Stop valve
- ❽ Non-return valves RK 86

Equipment for GESTRA steam-powered condensate-return unit KH

Pressure gauge assembly G ½ consisting of pressure gauge G ½, housing Ø 100 mm, indicating range 0 – 16 bar, pressure gauge isolating valve G ½, siphon G ½, trumpet form.

Compact system NRGS 16-1
Connection G 1.

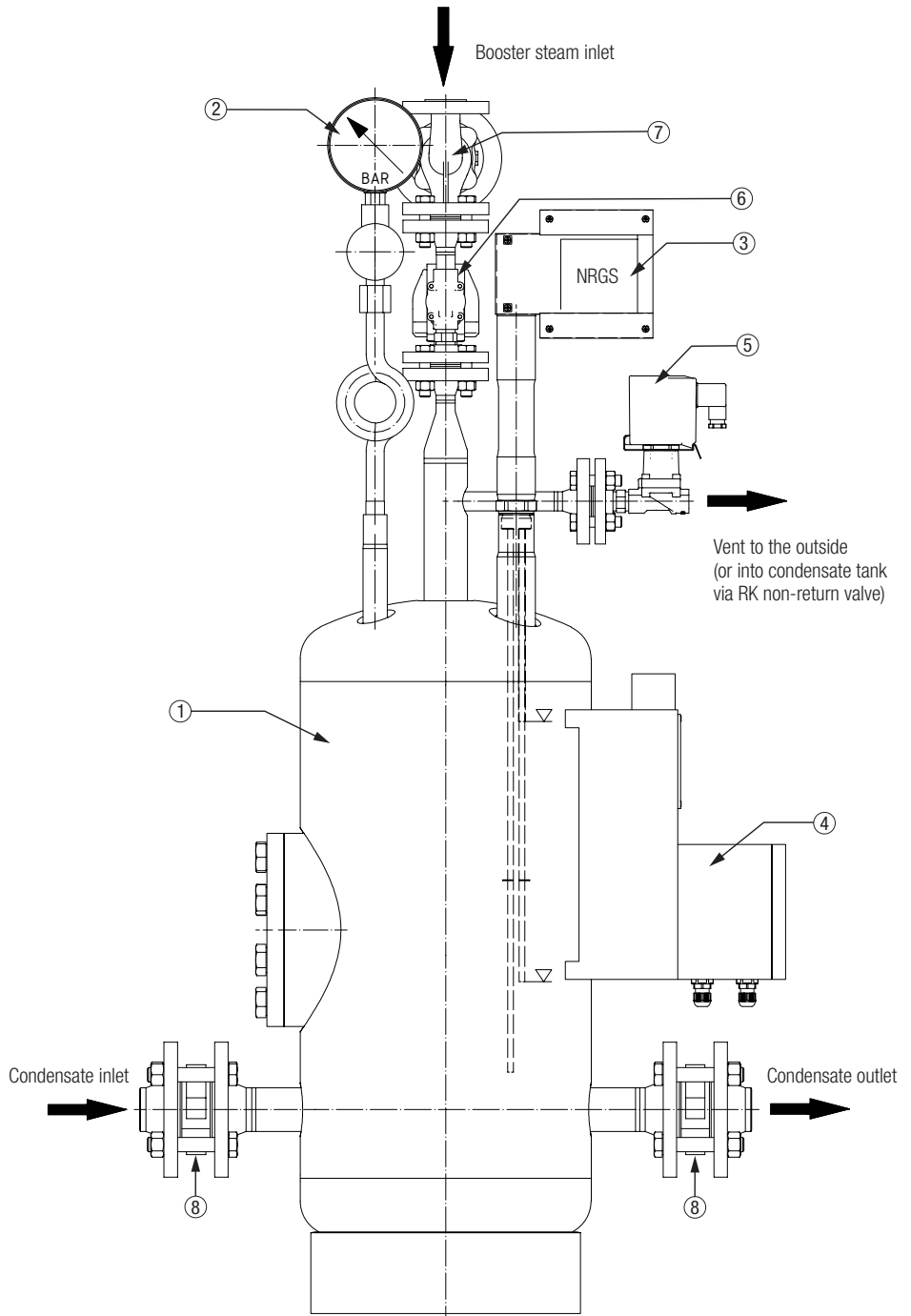
GESTRA terminal box KH-NRGS.
Solenoid valve for booster steam line and solenoid valve for vent line, positions "OPEN" / "CLOSED".

Solenoid valve 86720,
socket-type connection, valve body: brass,
0 – 16 bar, max. 200°C, 230 V, 50 Hz,
normally closed, sealing material Teflon.

Stop valve GAV 63F-T,
PN 16, material 5.1301,
maintenance-free, with throttling plug.

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

Overview of steam-powered condensate-return unit KH



Steam-Powered
Condensate-Return Unit
KH

Flowrate of KH

Type	KH 13-2	KH 13-3	KH 13-5*)	KH 13-10*)
Condensate flowrate [t/h]	2	3	5	10

Application of European Directives

Pressure Equipment Directive

The equipment conforms to this directive and can be used for the following fluids:

- ▶ Group 2 fluids

ATEX Directive

Do not use the equipment in potentially explosive atmospheres.

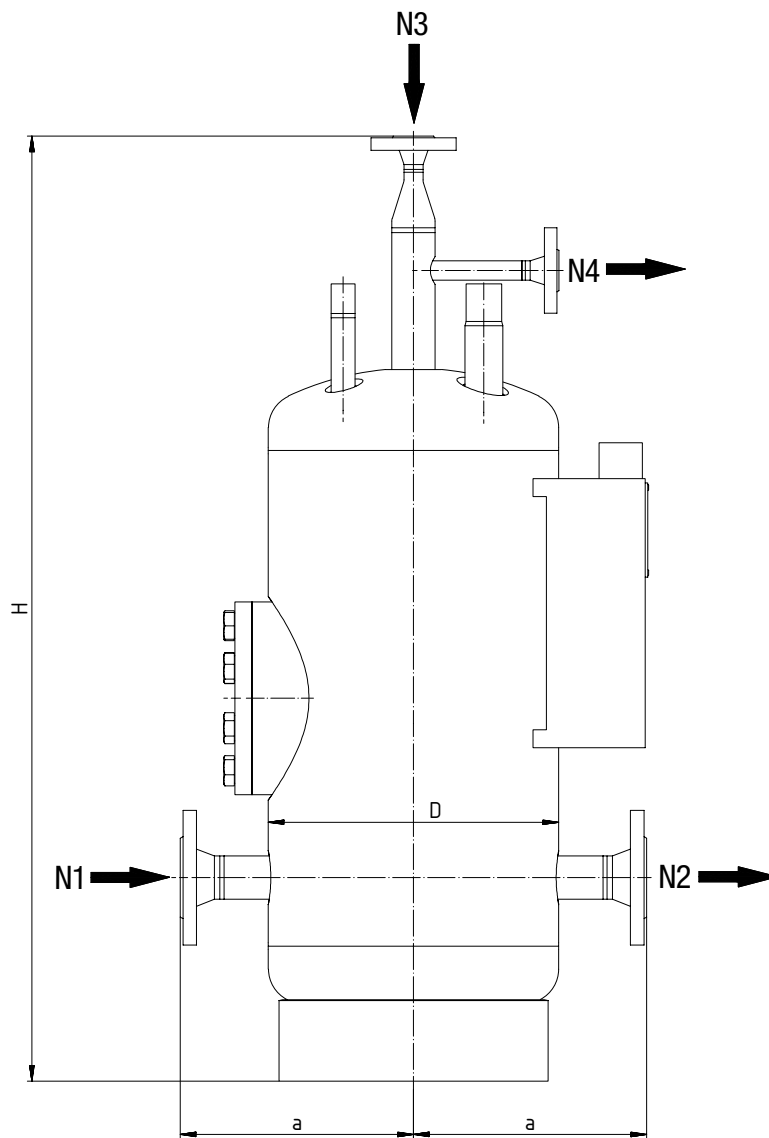
When ordering please state

steam pressure, back pressure, condensate flowrate, type of connection.

All inspection requirements must be stated in the request for a quote or in the order. Inspection certificates can no longer be issued once delivery has been made. The inspection charges as per the conformity assessment module can be found in our price list. If you require a different inspection scope, please request a separate quote.

Please note our general terms of business.

Dimensions and weights



Condensate tank KH

Type		KH 13-2	KH 13-3	KH 13-5*)	KH 13-10*)
Capacity	[l]	50	75	100	390
Dimensions [mm]	D	324	324	400	600
	H	1055	1355	1170	2195
	H ₁ **)	1360	1690	1520	2580
	a	260	260	300	450
N1 Condensate inlet	DN	40	40	50	80
N2 Condensate outlet	DN	40	40	50	80
N3 Booster steam inlet	DN	15	20	20	25
N4 Vent line	DN	15	20	20	25
Material		1.0345 / 1.0425	1.0345 / 1.0425	1.0345 / 1.0425	1.0345 / 1.0425
Max. service pressure	[bar]	12	12	12	12
Service temperature	[°C]	200	200	200	200
Weight, approx.	[kg]	100	115	135	270
Filled weight	[kg]	154	192	228	655

*) TÜV inspection required

***) H₁ overall height incl. valves and fittings

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