

Data sheet

Labowater HAS combi heating refill station

Soft water filling station

Type HAS	combi I	Item no. 82.0900.100.001
	combi II	Item no. 82.0900.100.002
Replacement cartridge		Item no. 82.0910.200.002

Full desalination station (without water meter)

Type HAS	combi VE I	Item no. 82.0900.100.003
	combi VE II	Item no. 82.0900.100.004
Replacement cartridge with colour indicator		Item no. 82.0910.200.003



Area of application

The HAS combi and HAS combi VE are compact filling stations for softening or complete demineralisation of make-up water for heating circuits in accordance with DIN EN 12828.

Design

It is installed in the cold water supply line after a system separator that complies with EN 1717.

The system should only be supplied with water that complies with drinking water regulations. If used with non-potable water, damage to the high-quality ion exchange resin is to be expected.

Softening the heating water prevents blockages and damage caused by a layer of limescale in the heating system and pipes always means higher energy consumption. Installing a water softener therefore contributes to the energy efficiency of a heating system.

Desalination is necessary for special heating materials. Chemical reactions with the heating water can cause damage to the heating system.

When operating the system, please note that the capacity of the special resin filling is limited. When exhausted, the resin cartridge is easy to replace.

All HAS type systems are only suitable for horizontal installation in the pipeline.



Scope of delivery

Heating water station consisting of:

- 1 x plastic filter container
- 1 x filter container head with plastic screw connection 1 x resin cartridge:
 - HAS combi I Cation exchange resin
 - HAS combi VE I Mixed bed exchanger resin with colour indicator
- 1 x water meter – only for soft water filling station
- 2 x ball valve

- 2 x plastic filter containers
- 2 x filter container head with plastic screw connection 2 x resin cartridge:
 - HAS Combi II Cation exchange resin
 - HAS Combi VE II Mixed bed exchanger resin with colour indicator
- 1 x water meter – only for soft water filling station
- 2 x ball valve

Notes / Installation conditions

Technical data and general technical guidelines as well as local installation regulations must be observed.

Install the heating water station in accordance with EN 1717.

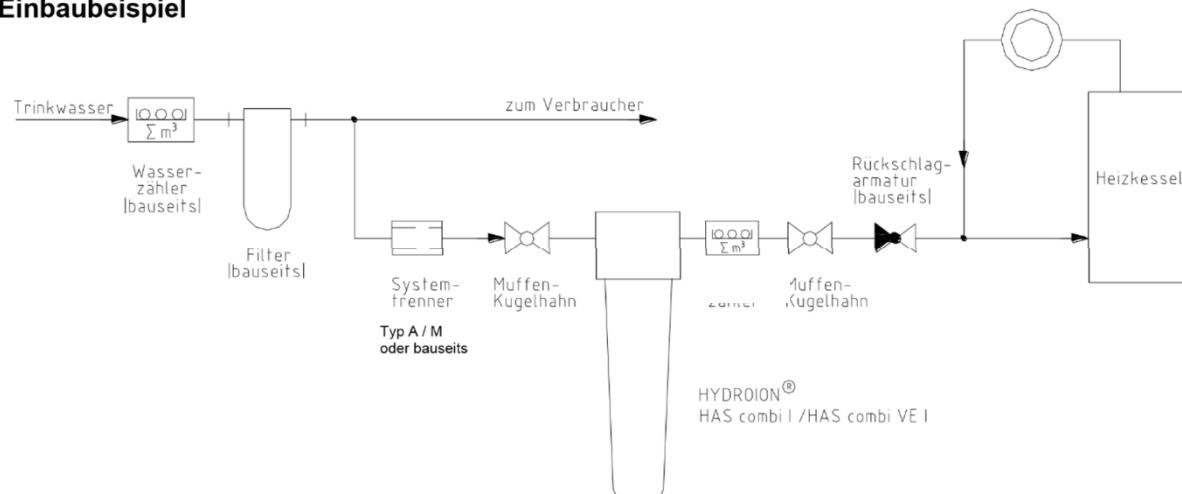
The ambient temperature and any radiant heat may not exceed 40 °C.

The installation location must be frost-proof.

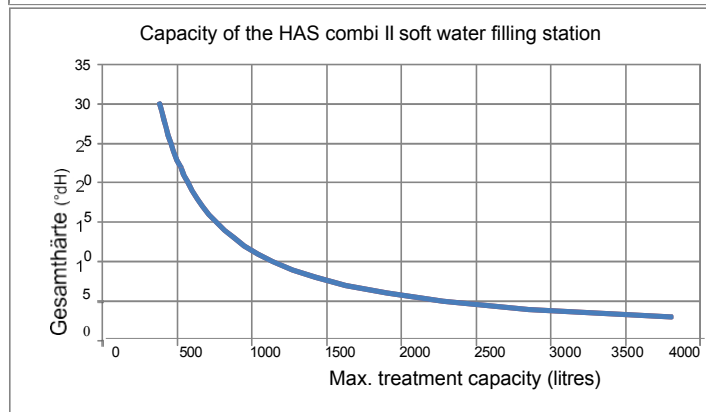
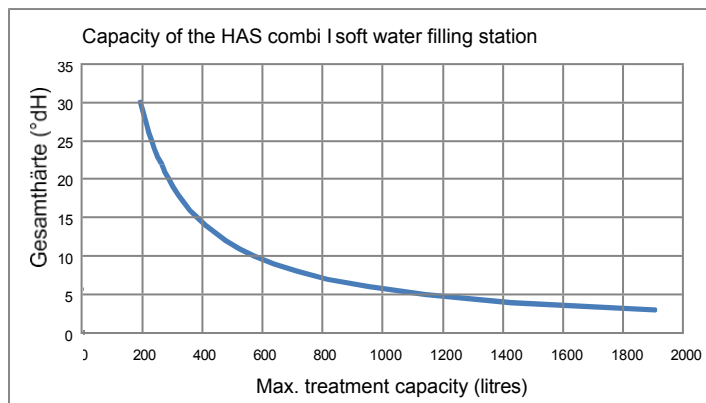
The installation room must be free of solvent, paint, varnish and chemical vapours. Set the pressure in accordance with the system-specific requirements.

There must be sufficient space available for changing the resin cartridges.

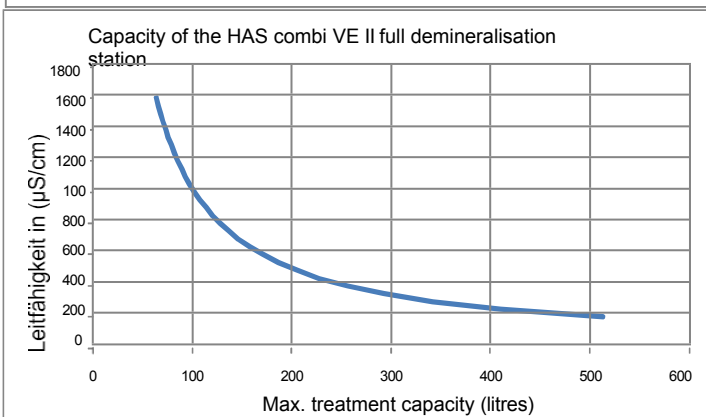
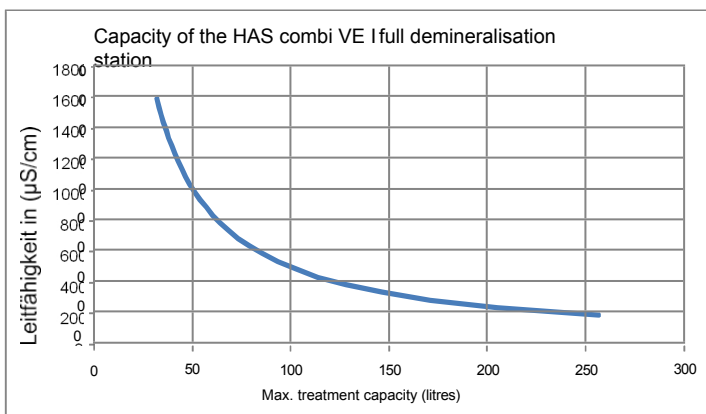
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Performance curve HAS combi



Performance curve HAS combi VE



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Technical data	HAS combi I	HAS combi VE - I
Ion exchanger	High-performance cation exchange resin	High-performance mixed bed exchanger resin with colour indicator
Operating pressure	max. 8 bar	max. 8 bar
Operating temperature	+5 to +40 °C	+5 to +40 °C
Volume flow (max. perm.) *	200 l/h	120 l/h
Connections	Inlet DN 20, outlet DN 20	Inlet DN 20, outlet DN 20
Capacity	6 m³ x°dH	1.8 m³ x GSG (1 GSG = 30 µS/cm)

* Volume flow limited by orifice plate at the outlet of the system between the water meter and ball valve

Technical data	HAS combi II	HAS combi VE - II
Ion exchanger	High-performance cation exchange resin	High-performance mixed bed resin with colour indicator
Operating pressure	max. 8 bar	max. 8 bar
Operating temperature	+5 to +40 °C	+5 to +40 °C
Volume flow (max. perm.) *	400 l/h	240 l/h
Connections	Inlet DN 20, outlet DN 20	Inlet DN 20, outlet DN 20
Capacity	12 m³ x°dH	3.6 m³ x GSG (1 GSG = 30 µS/cm)

Accessories:

