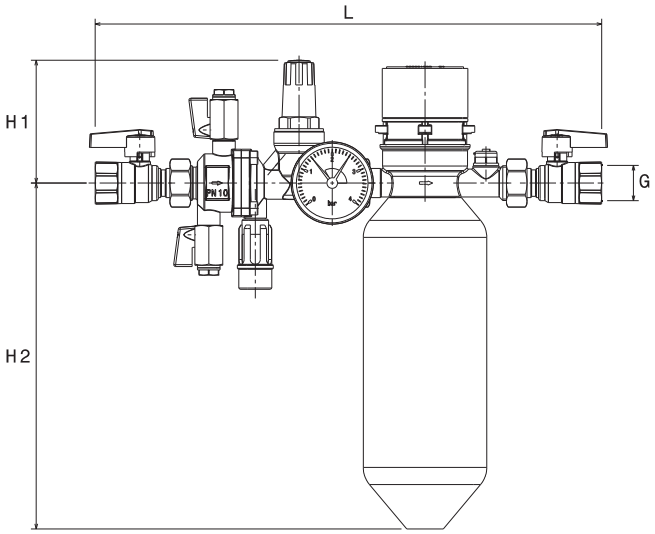
HERZ heating top-up station I 0321
HERZ heating cartridge for first filling I 0322

Data sheet **I 0321 / I 0322**, Issue 0215

Installation dimensions, top-up station in mm



Article no.	G	L [mm]	H1 [mm]	H2 [mm]
I **0321** 01	1/2"	382	93	536
I **0321** 02	3/4"	382	93	536

Technical data, heating system top-up station I 0321

Nominal pressure	PN 10
max. operating temperature	65 °C
max. permissible temperature	80 °C (short-term)
Medium	water (without steam)
Cartridge capacity	4000° dh x litre
Installation position	horizontal

Technical data, heating cartridge for first filling I 0322

Capacity	5000° dh x litre
max. operating temperature	50 °C
max. supply pressure	6 bar
max. flow	8 l/min
Connection thread	DN 20
Installation position	arbitrary

Accessories

I **0321** 10	Refill cartridge for heating system top-up station
I **0322** 00	System separator for retrofitting drain cocks

Application area

If a heating system is operated with water that is of inadequate quality, corrosion, calciferous deposits, sludge and the formation of gas will result. Defects and faults with pumps and thermostatic valves, right through to the generation of noise and boiler damage are the ultimate consequences.
Lime deposits form in hot water systems in particular as boiler scale. A 1 mm thick layer of scale on the heating surfaces is sufficient for increasing the power consumption in hot water heating by up to 10%. VDI 2035, part I, therefore stipulates the filling and operation of heating systems with soft water in almost all plants.
Part II of VDI 2035 is concerned with corrosion. Various materials used in the heating installation, as well as salts in the water, result in corrosion and malfunctions at the heat exchangers and in the heating installation.
In order to achieve optimum filling water according to VDI 2035, it is possible to use the first filling cartridge I **0322** 00 initially and then the top-up station I **0321** 01 or I **0321** 02, in a two-stage process.
It is necessary to take into account local standards and regulations governing the filling of heating systems or the heating up of heating system water (e.g.: ÖNORM H 5195).

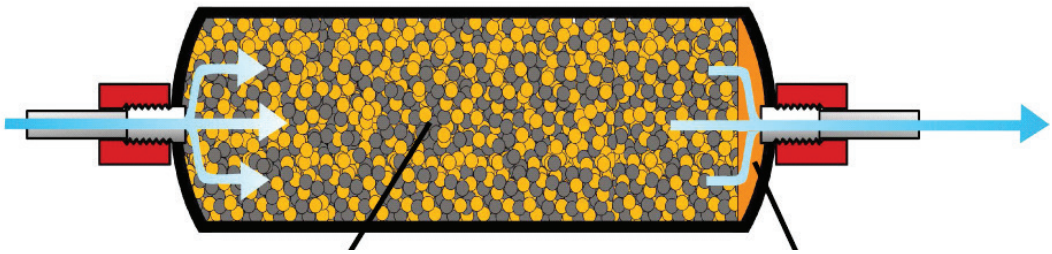
Design of heating cartridges for first filling I 0322

The first filling cartridge I **0322** 00 is a disposable demineralisation unit for the treatment of heating system top-up water according to VDI 2035. The first filling cartridge, which contains a mixture of selected ion exchange resins and a pH stabiliser, largely demineralises the water and simultaneously alkalizes it to a pH value of between 8.2 and 8.7, whereby the hardness is reduced to less than 0.5° d with a residual conductivity of below 100 µS/cm. Because corrosive ions such as chloride and sulphate are also removed, permanent corrosion protection is also provided without chemical inhibitors. Additional connection of the system separator I **0302** xx is also recommended for first filling.
The treatment capacity of the first filling cartridge is 5000° dH x litre, i.e. one divides 5000 by the existing water hardness and obtains the maximum treatment capacity in this way. It is possible to desalinate 5000/14 = 350 litres with a hardness of 14° dH in this way.

Design of heating system top-up station I 0321 xx

The heating system top-up station I **0321** xx consists of the heating system top-up unit complete with system separator of type BA and heating water demineralisation cartridge with integrated water meter in the connection head.
This can be simply used after filling with the first filling cartridge.
With the top-up station I **0321** xx the pH value stabiliser is omitted and fully demineralised water is produced.

Function of the heating cartridge for first filling



Note: All schematics are purely symbolic in nature and do not claim to be complete.
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