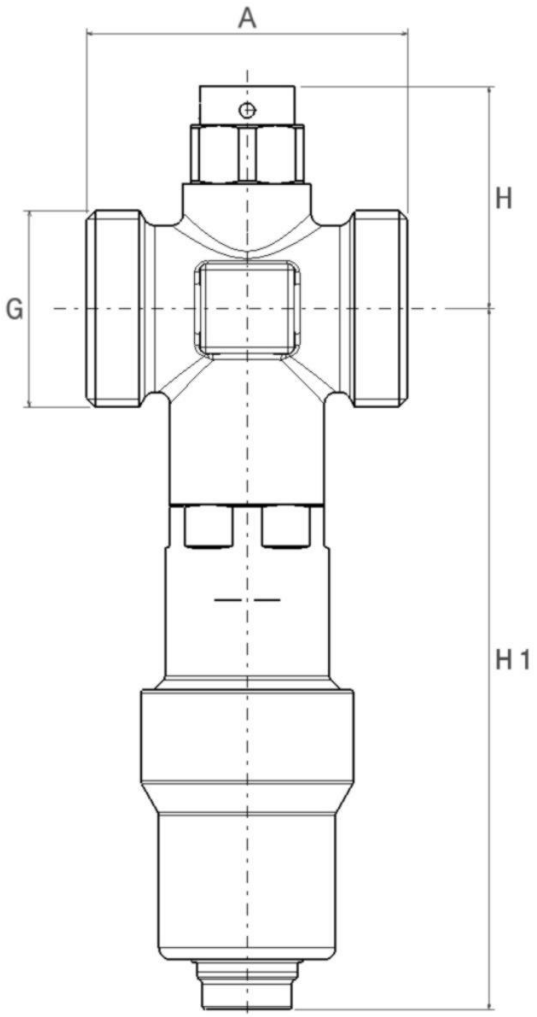
HERZ Anti freeze valve

Safety element for heat pumps

Datasheet for **2623**, Issue 0625

Dimensions



Order Nr.*	DN	Cu [mm]	G* [in]	A [mm]	H [mm]	H1 [mm]
1 2623 13	25	-	1	54	37	118

* external thread acc. to ISO 228-1

Material and construction

Body:	Forged brass acc. to EN 12165, CW17N
Internal components:	Machined brass acc. to EN 12164, CW17N
Gaskets:	EPDM
Springs:	Stainless steel
External G threads:	Acc. to ISO 228-1

Operating data

Nominal pressure:	PN10
Max. operating temperature:	90°C
Ambient temperature range:	from -30 to 60°C
Opening temperature (medium):	3°C
Closing temperature (medium):	4°C
Accuracy:	± 1°C
Version G 1˝ Kv	55 m3/h
Discharge flow rate (3 bar):	1 l/h

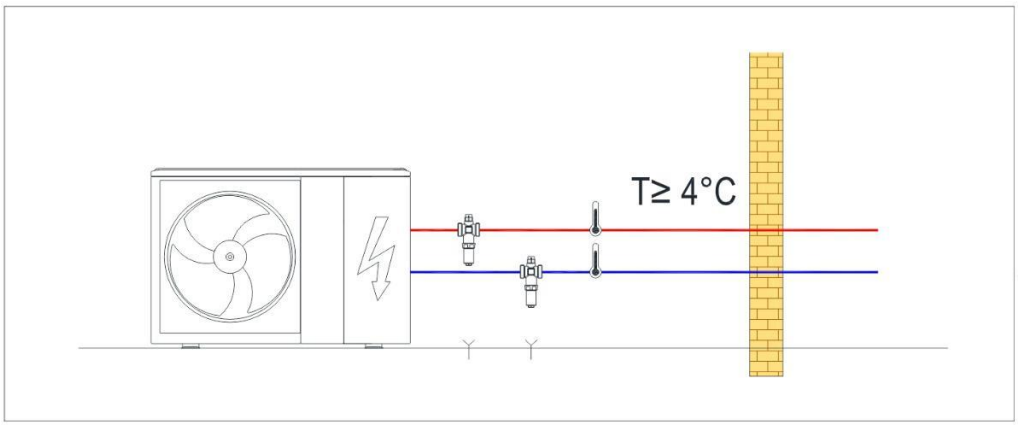
Medium:
Heating water purity in accordance to ÖNORM H 5195 and VDI- Standard 2035. The use of ethylene in a mixing ratio of 25- 50% is allowed. EPDM gaskets will be affected by Mineral oils lubricants and thus lead to failure of the EPDM seals. Please refer to the manufacturer's documentation when using ethylene glycol products for frost and corrosion protection.

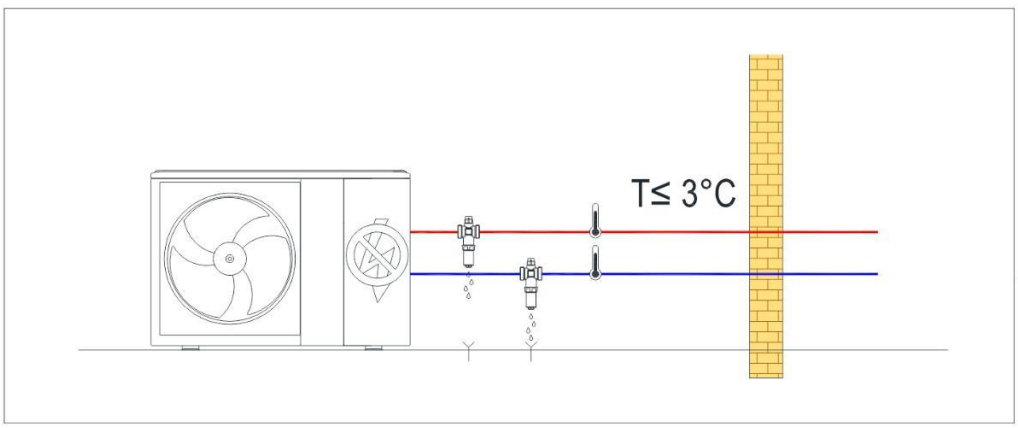
Brass

HERZ Anti freeze valve is made from brass due to its good strength and excellent corrosion resistance.
Under Article 33 of the REACH Regulation (EC No. 1907/2006), we are obliged to point out that the material lead is listed on the SVHC list and that all brass components manufactured in our products exceed 0.1 % (w / w) lead (CAS: 7439-92-1 / EINECS: 231-100-4). Since lead is a component part of an alloy, actual exposure is not possible and therefore no additional information on safe use is necessary.

Field of application

HERZ Antifreeze Valve prevents the formation of ice in heat pump circuit by discharging the water when the medium temperature falls down to 3°C, avoiding potential damage to the system.



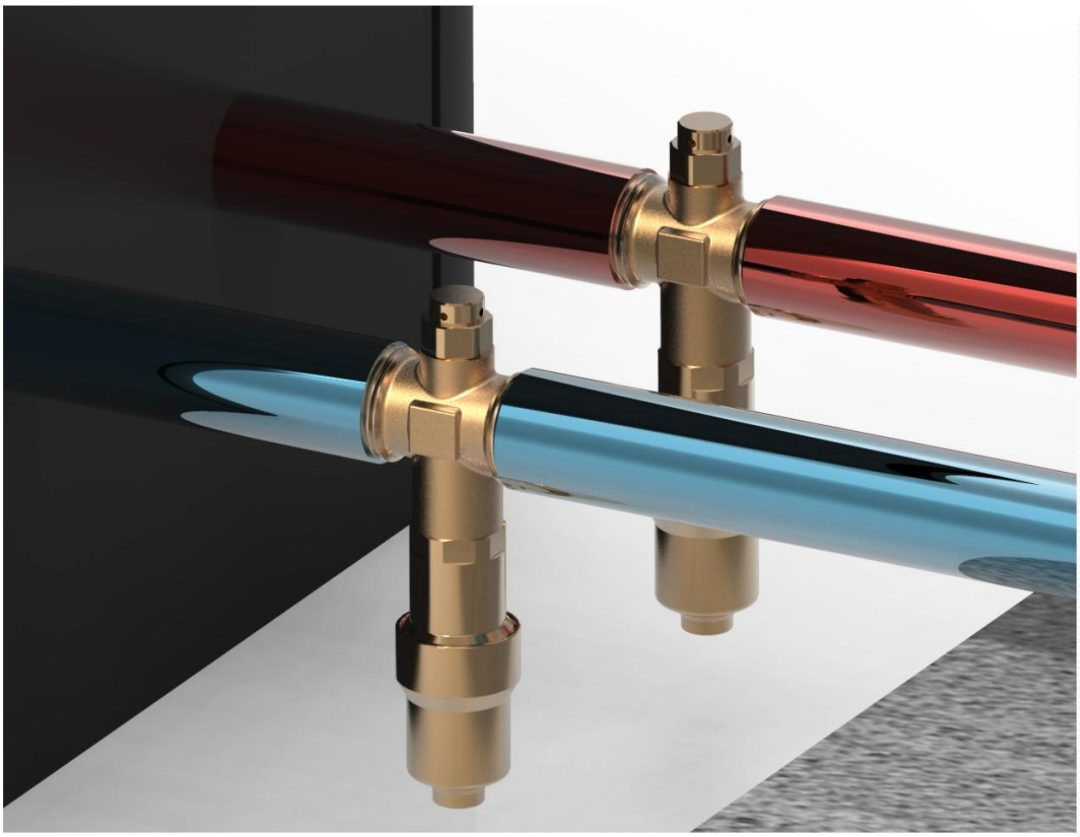


Function principle

The thermal element is allocated in direct contact with water, so the system drain is activated only when it is really necessary.
The thermal element cartridge can be replaced as a spare part. An integrated stop valve allows the replacement of the cartridge while keeping the system pressurized.
The vacuum breaker permits the drainage of the water by allowing external air to flow into the pipe during the discharge operation. The vacuum breaker can be replaced as a spare part.

Installation

HERZ Antifreeze valve must be installed in a vertical position only, with the outlet facing downwards, to allow the proper drainage of the discharged water free from obstructions.

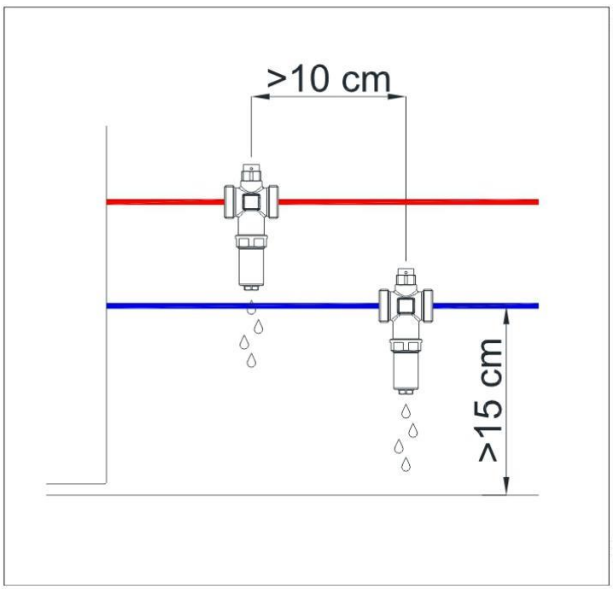


HERZ Antifreeze Valve must be installed outdoors, where the lowest temperatures can be reached in the event that the heat pump is locked.
The device must be positioned well away from heat sources (both natural or artificial), to ensure the correct working. The device must be shielded and protected from direct sunrays, rain and snow.
The Antifreeze Valve must not be insulated.

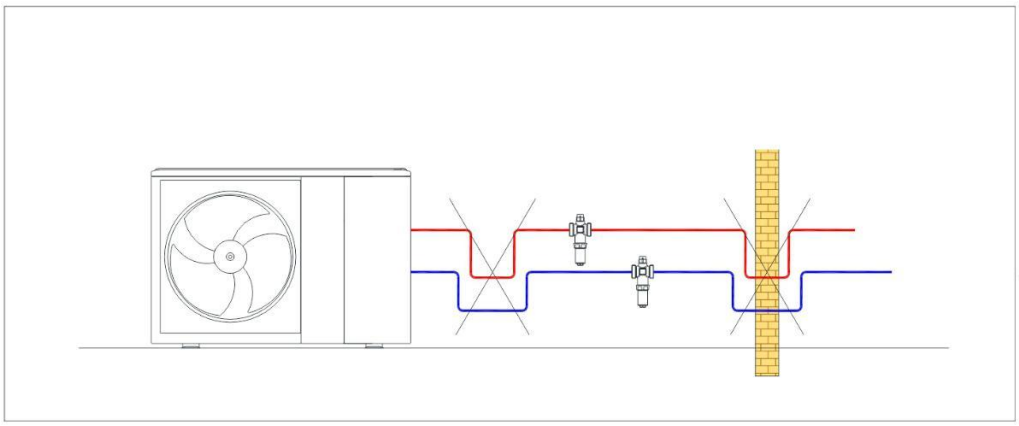
It is recommended to install the Antifreeze Valves on both flow and return pipes, to be sure to drain all the water present in both pipes of the circuit.
To ensure the proper working of the device, it is recommended to keep the system pressurized also during the draining phase.

Antifreeze Valves must be installed at least 15cm above the ground, to ensure that the discharged water does not freeze itself thus blocking the valve.
Drained water must be collected by a suitable collection point.

A minimum distance of 10cm must be kept from each Antifreeze Valve.



Trap connection must be avoided: if the pipes have the potential to create a trap effect, the water could not be drained and ice protection will be not guaranteed.



A system where the HERZ Antifreeze valve is installed must be flushed to remove any dirt or debris that may have accumulated during installation. Failure to remove dirt or debris may affect performance and the manufacturer's guarantee. The installation of filters of appropriate capacity at the inlet of the water from the main supply is always advisable. In areas that are subject to highly aggressive water, arrangements must be made to treat the water before it enters the valve.

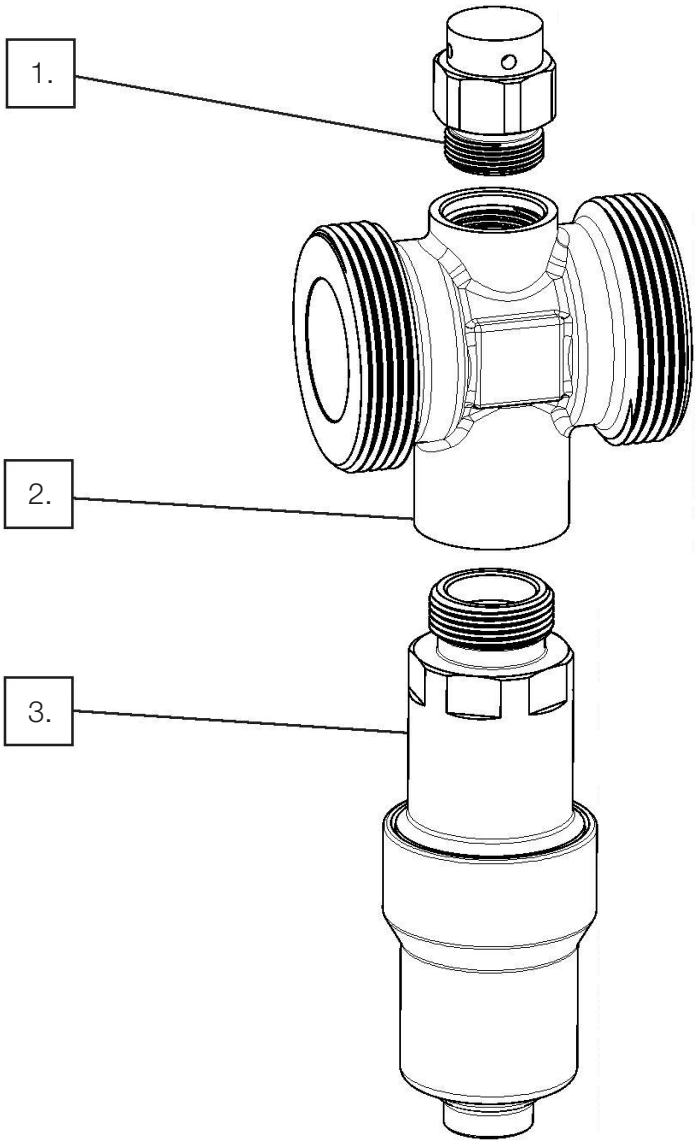
Access to the HERZ Antifreeze valve must be unobstructed for any maintenance that may be required to the Antifreeze valve or valve connections. The pipework from/to the HERZ Antifreeze valve must not be used to support the weight of the Antifreeze valve itself.

When connecting the HERZ Antifreeze valve to the system components use suitable sealing material (spinning material, Teflon ribbon, sealing paste) to coat the pipes. There should not be an excess of sealing material on the pipe because it can damage the thread. All the connecting pipes have to be correctly aligned, so the pump group is not loaded with a bending moment. When using copper or plastic pipes take into account the pressure and temperature limits of used material.

When assembling, use a suitable assembly tool that adapts to pump group end connections. Following assembly, the connections of the ball valve must be checked for water-tightness by the installer. All engineering standards and recognized regulations must be adhered to by these specialist staff.

Components of Antifreeze valve

1. Vacuum breaker
2. Valve body
3. Cartridge



Important warnings

WARNING

HOT WATER / LIQUID

Pay attention while installing / commissioning / servicing the Anti freeze valve because the temperature of medium can exceed 90°C. Exposure to this high temperature medium can cause death, serious injury or damage of the other components in the system. Make sure that when works are being carried out on the HERZ Anti freeze valve the system is cooled down and it is unpressurised. Before any disassembly make sure that the system is drained.

Maintenance instructions

If the product is used properly, no special maintenance is required in normal operation. Repairs on the device must be carried out by authorized persons only.
Make sure, that regular maintenance is done periodically at least twice a year, according to the procedures written below:

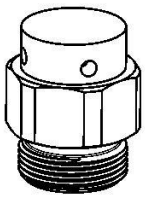
1. Check and clean the system filters.
2. Check that the non-return valves are operating normally, without problems caused by impurities.
3. Limescale can be removed from internal components by immersion in a suitable de-scaling liquid.
4. When the components which can be maintained have been checked, commissioning should be carried out again.

In-service tests should be carried out regularly to monitor the valve performance, as deterioration of performance could indicate that the valve and/or the system require maintenance. If, during these tests, the performance of the valve has changed significantly in comparison to the previous tests, the details given in the installation sections should be checked and maintenance carried out.

Disposal instructions

The disposal of HERZ Antifreeze valve must not endanger the health or the environment. National legal regulations for the proper disposal of the HERZ Antifreeze valve have to be followed.

Spare parts

Sketch	Description	Article Nr.	Pc.
	Vacuum breaker	1 2623 31	1
	Cartridge	1 2623 30	1

System example