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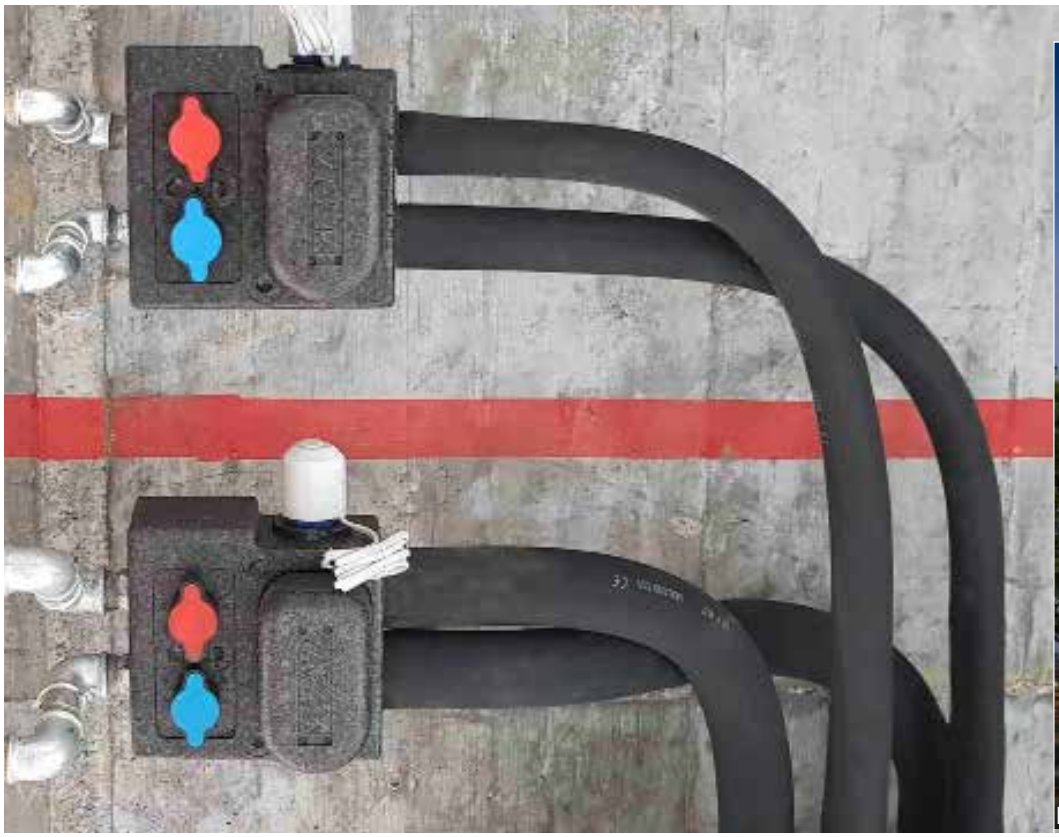
HerzCON

Direct connection for fan coils



Project: Office Unirii View (Bucharest)

HerzCON – innovative direct connection for fan coils

Efficiency, controllability, easy assembly and safety are requirements that are perfectly fulfilled by the HerzCON direct connection from HERZ Armaturen. A special focus was put on the dual use for heating and cooling.

Inner values. The sizes DN15 to DN25 are equipped with a cooling-suitable water vapour-impermeable insulation box. This insulation box features state-of-the-art technology in familiar HERZ quality: the core component is the proven HERZ 4006 SMART PICV. This guarantees a simple, pressure-independent adjustment of the desired volume flow. It can be equipped with various types of actuators, allowing any control to be used - from room thermostat up to building management system.

The all-rounder. A complete system unit with multifunction ball valves, drain valve and strainer has been developed around the HERZ 4006 SMART PICV. All necessary functionalities according to technical standards can be realized with HerzCON: Control and regulation, filling, flushing and draining as well as isolation and filtering are combined in one unit. Six flow ranges give a wide range of applications. All components are made of dezincification-resistant brass which enables operation with heating water according to ÖNORM H 5195-1 as well as antifreeze mixtures based on ethylene glycol or propylene glycol.

Advantages

- Enables processes such as regulation, flushing and isolation
- Large bypass for flushing according to BSRIA BG29/2011
- Dimensions DN 15 and DN 20 with 65 mm, DN 25 with 90 mm and DN 32 with 100 mm pipe centres
- All components made of dezincification-resistant brass
- Suitable for heating and cooling systems
- Complete assembly and testing in the factory
- Reduced amount of work, time and costs on site
- High planning security and installation safety

Field of application

HerzCON was designed for easy connection to fan coil units or other terminal devices and uses the HERZ 4006 SMART PICV with multifunctional HERZ ball valves and a HERZ strainer with HERZ drain valve 2512. Optionally, 2-point, 3-point or modulating 0 - 10 V. DC actuators or motorized drives installed and integrated into a GLT if required. The insulation box (DN 15 - DN 25) is designed water vapour permeable. In addition to fast assembly this means that there are no product differences regarding heating and cooling systems - HerzCON is suitable for both applications.

Material and construction

Package:	dezincification-resistant brass
Diaphragm and O-rings:	EPDM

Water quality according to ÖNORM H 5195-1 and VDI 2035. When using ethylene glycol as anti-freeze agent, a content of 20-50% and with propylene glycol a content of 25-50% is permissible.

In accordance with article 33 of the REACH Regulation (EC No. 1907/2006) we are obliged to point out that the substance lead is listed on the SVHC list and that all components made of brass that are processed in our products exceed 0.1% (w / w) lead (CAS: 7439-92-1 / EINECS: 231-100-4). Since lead is firmly bound as an alloy constituent, no exposures are to be expected and therefore no additional information on safe use is necessary.

Operating data

Max. operating pressure:	25 bar
Min. operating temperature:	- 20 °C
Max. operating temperature:	130 °C
Stroke:	4 mm

The integrated control unit, together with the actuator, is responsible for the modular control. Various actuators can be used.

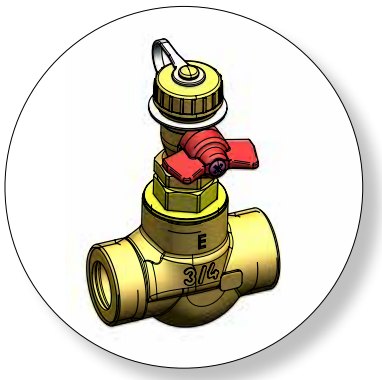
Article overview

Order number	Dimension	Flow rate area (l/h)	Standard operation kvs [m³/h]	Bypass operation kvs [m³/h]
1 **4600** 51	DN 15	80 - 400	0,55	4,8
1 **4600** 50	DN 15LF	20 - 120	0,20	4,8
1 **4600** 59	DN 15MF	40 - 190	0,34	4,8
1 **4600** 52	DN 20	200 - 820	1,26	5,4
1 **4600** 57	DN 20 HF	350 - 1750	3,2	5,4
1 **4600** 58	DN 25	100 - 1900	2,75	10
1 **4600** 53 *)	DN 25	100 - 1900	2,75	10
1 **4600** 54 *)	DN 32	200 - 2500	4,57	14,2

*) Design without isolation box

Drives, screw connections and compression adapters must be ordered separately.

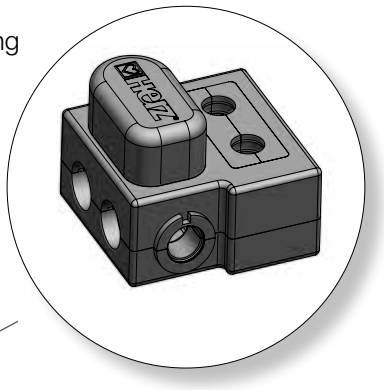
The integrated drain valve in the strainer allows for flushing the system without removing the strainer basket.

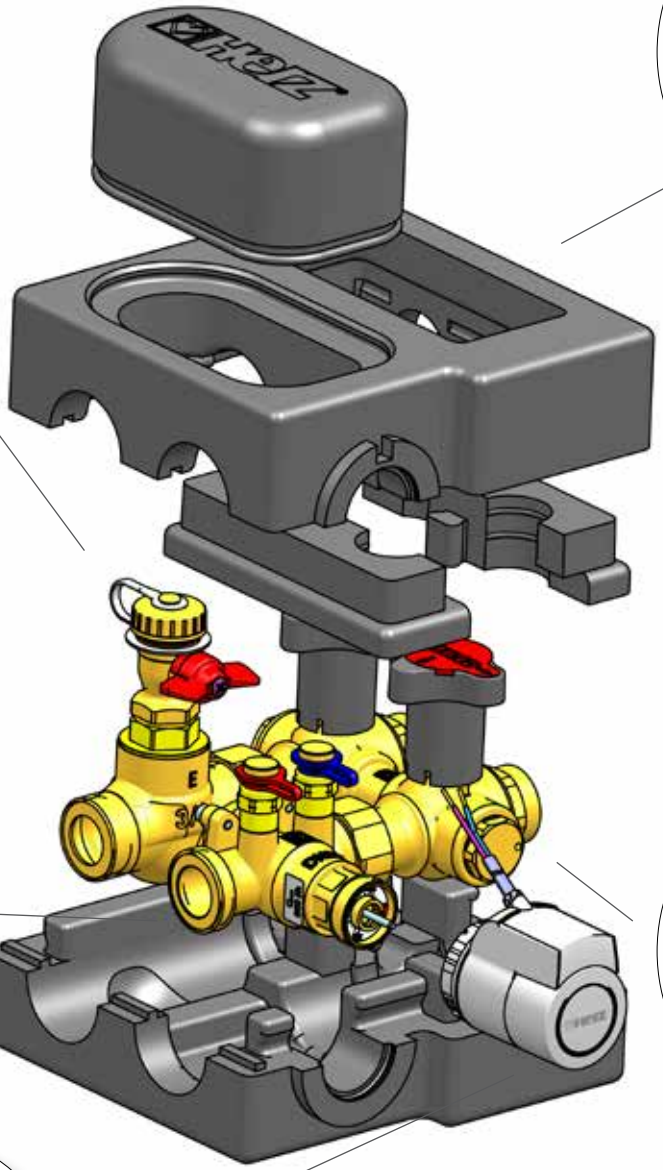


Isolation box (fire resistance)

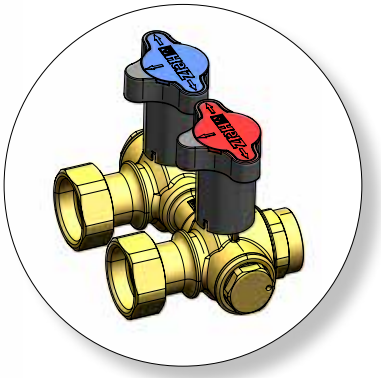
Method	Class
DIN EN ISO 11925-2 [1]	E
DIN 4102-1	E
UL 94	HBF

[1] edge exposure, classification according to EN 13501-1

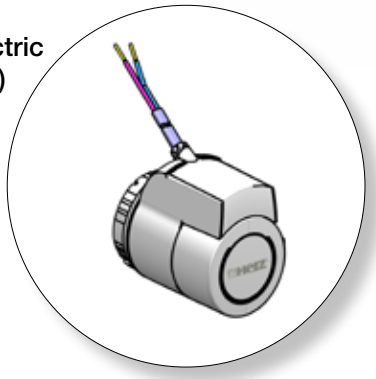




Pressure-independent control valve
One valve for three requirements:
DPCV, balancing, regulation.
No calculation and verification of valve authority required.



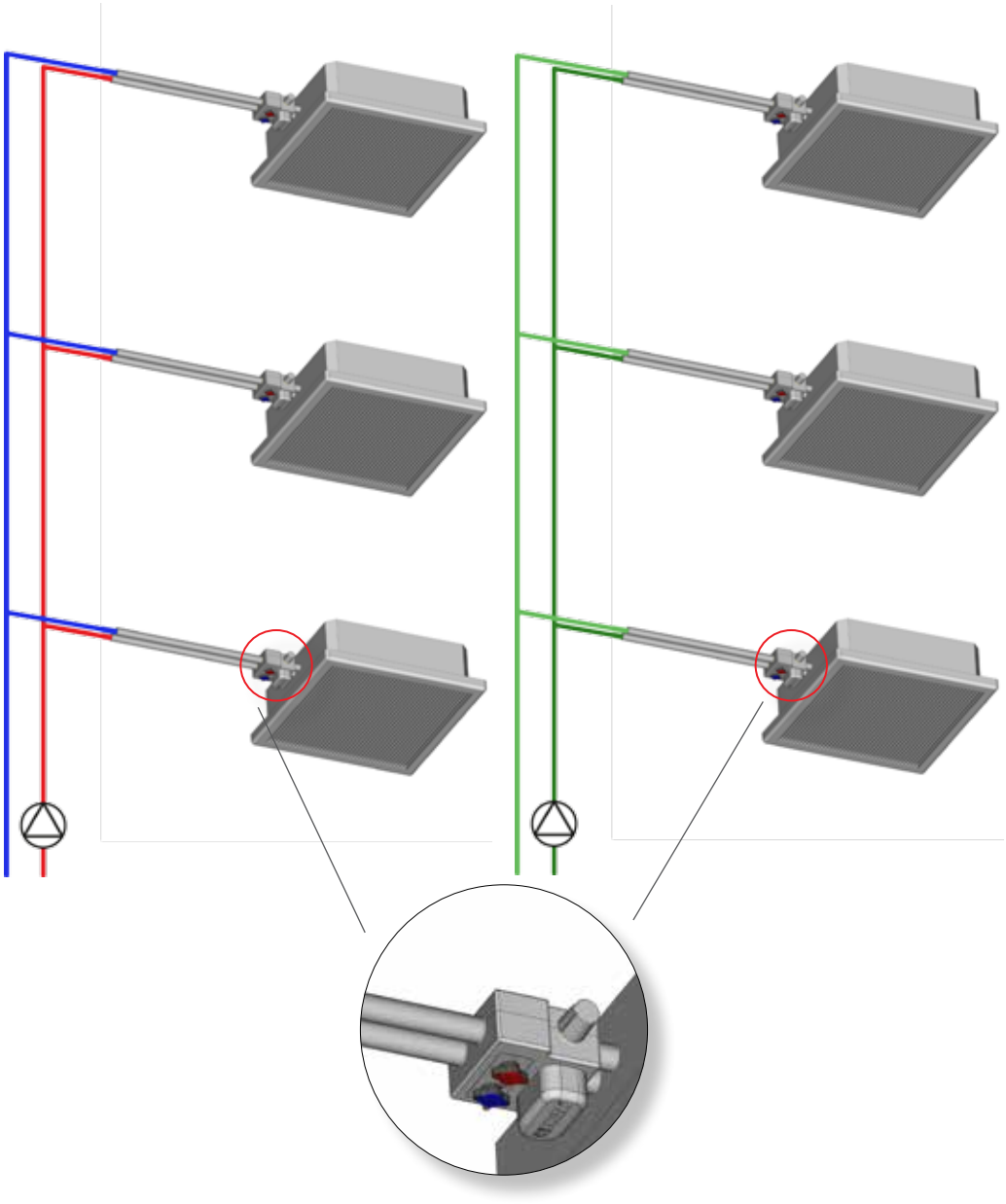
Actuator (Thermo-electric or motorised)



HERZ multifunctional ball valves with red and blue handle, ball with T-bore. Full bore ball valve allows the drainage or filling of complete systems or a subsystem in case of maintenance. The position of the ball valves is indicated by the ball valve handles.

Installation example

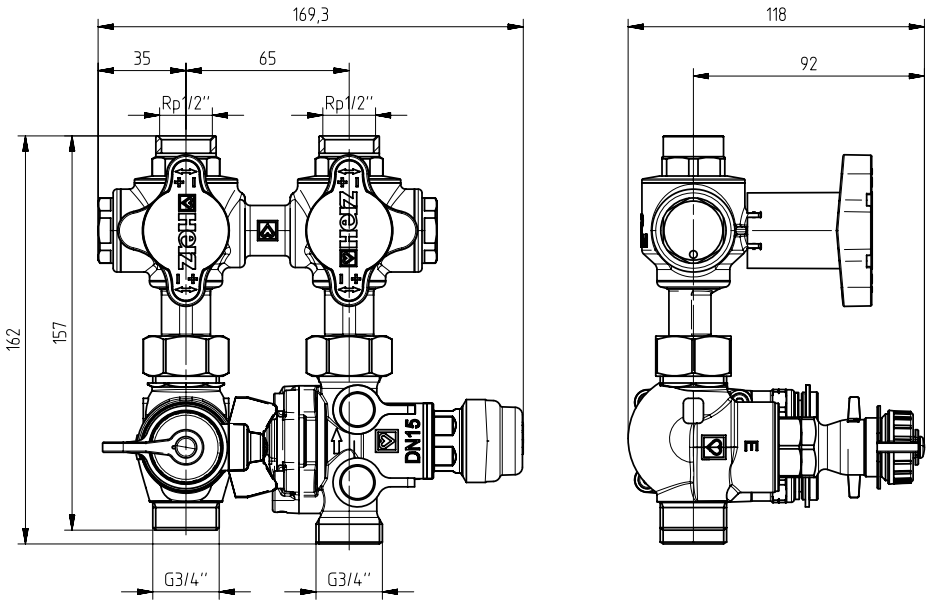
Application example



HerzCON – direct connection for fan coils

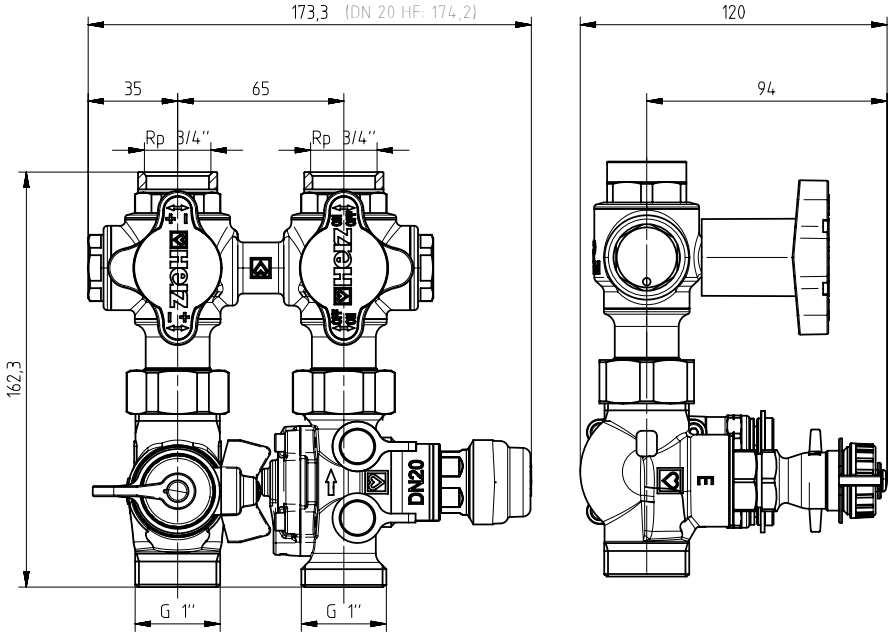
☑ DN 15 | DN 15LF | DN 15 MF

Dimensions in mm



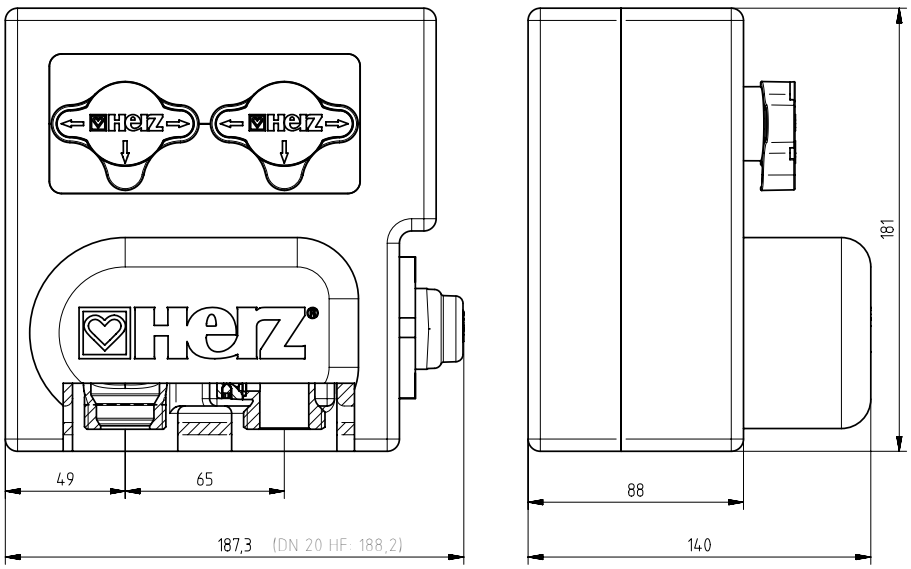
☑ DN 20

Dimensions in mm



☑ Insulation box for DN 15 - 20

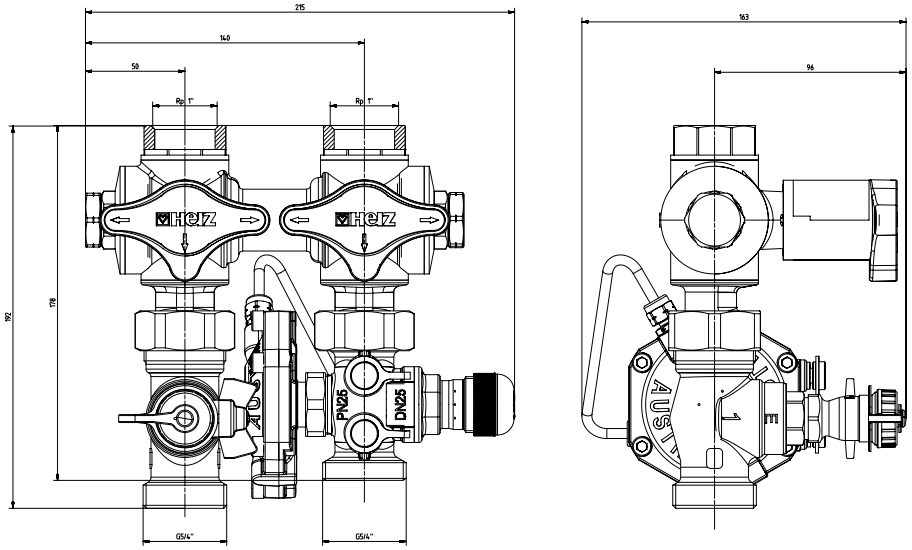
Dimensions in mm



HerzCON – direct connection for fan coils

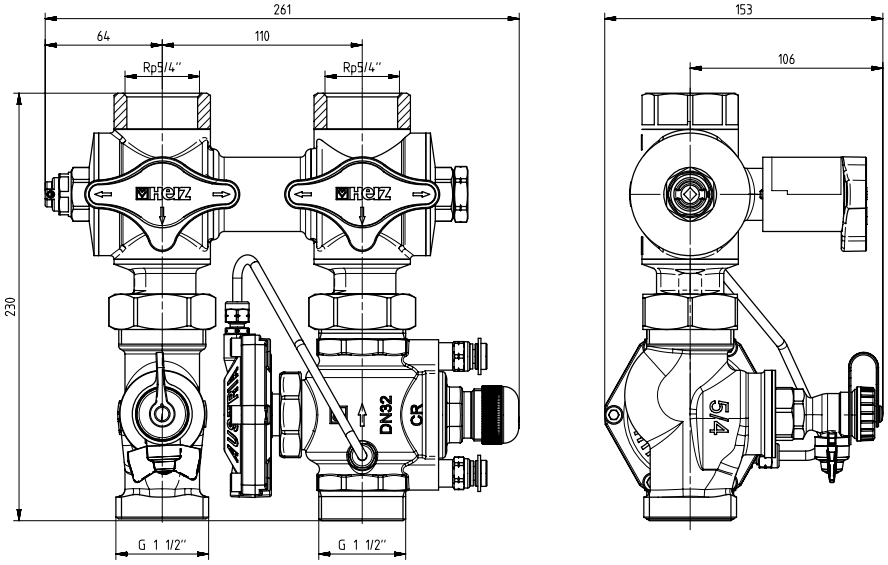
DN 25

Dimensions in mm



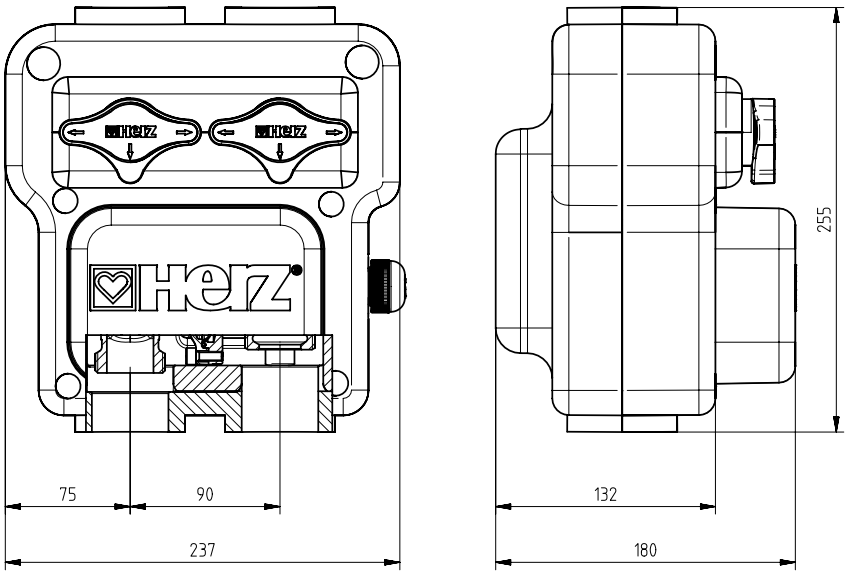
DN 32

Dimensions in mm



Insulation box for DN 25

Dimensions in mm



Default example

To select the correct setting and the required minimum differential pressure for the desired flow, follow the steps shown in the figure. The % setting for a given flow on the left side of the graph can be read off the solid line. The minimum DP value for this setting can be read off the dashed line on the right side of the diagram.

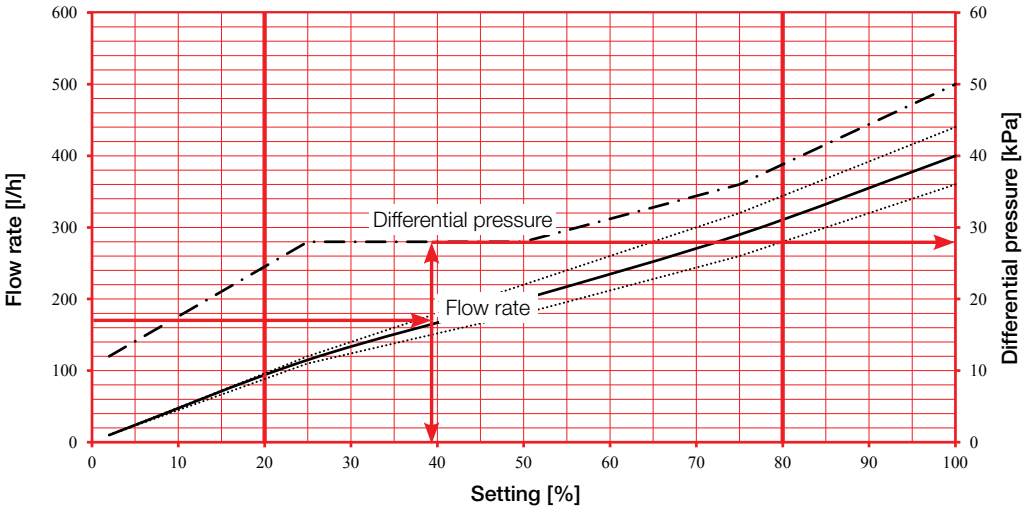
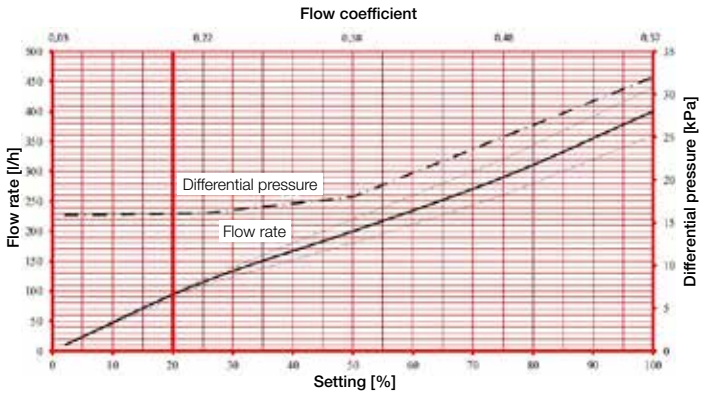
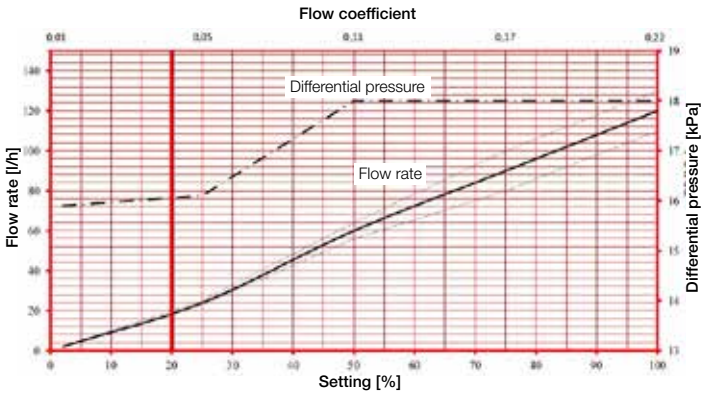


Diagram PICV 4600

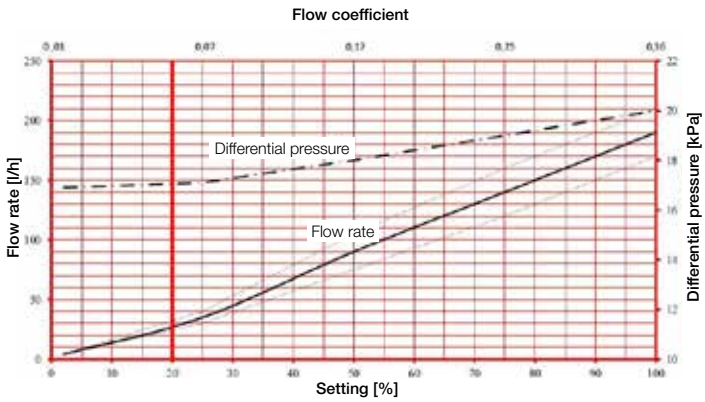
DN 15



DN 15LF



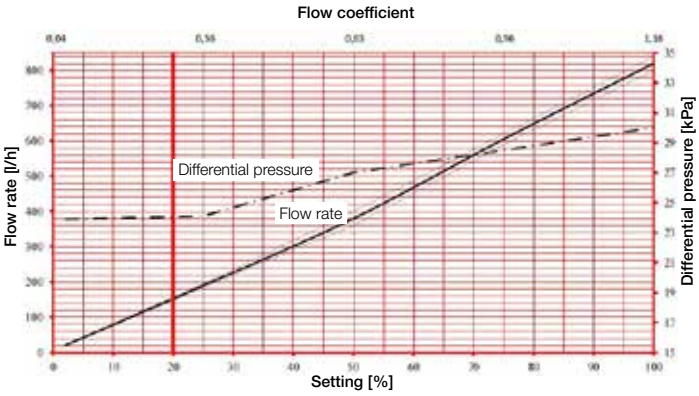
DN 15MF



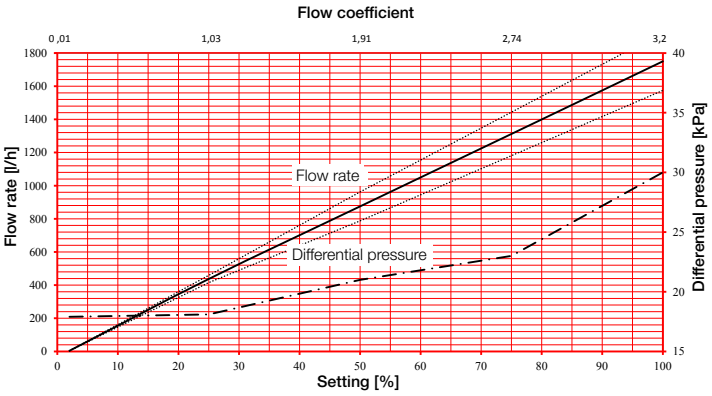
Flow rate: continuous line
Minimum DP value: dashed line
Accuracy < ± 5 %

Diagram PICV 4600

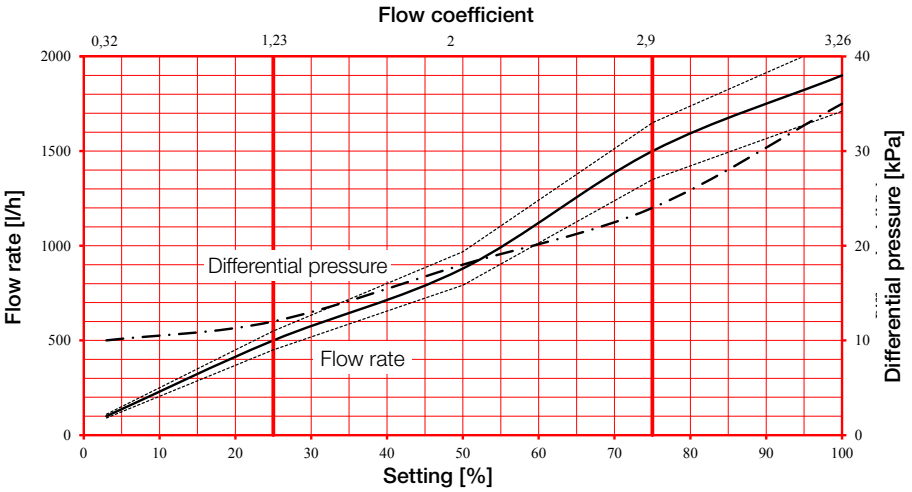
DN 20



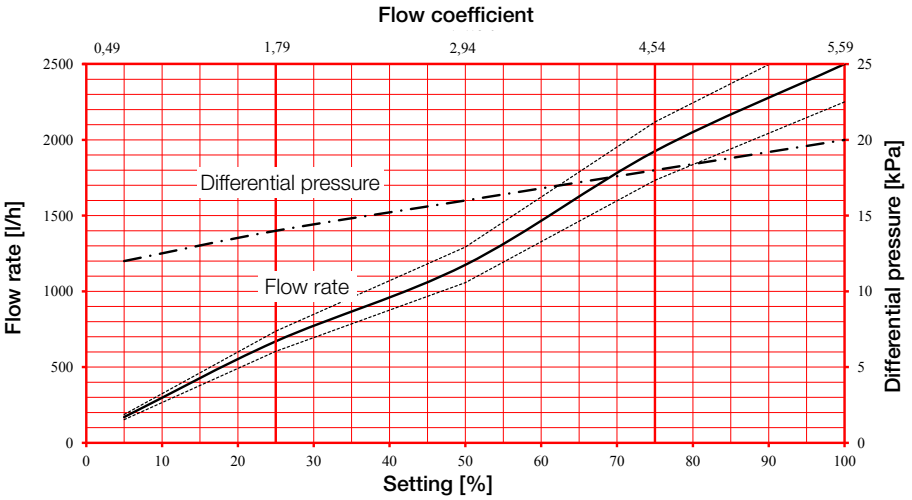
DN 20HF



DN 25

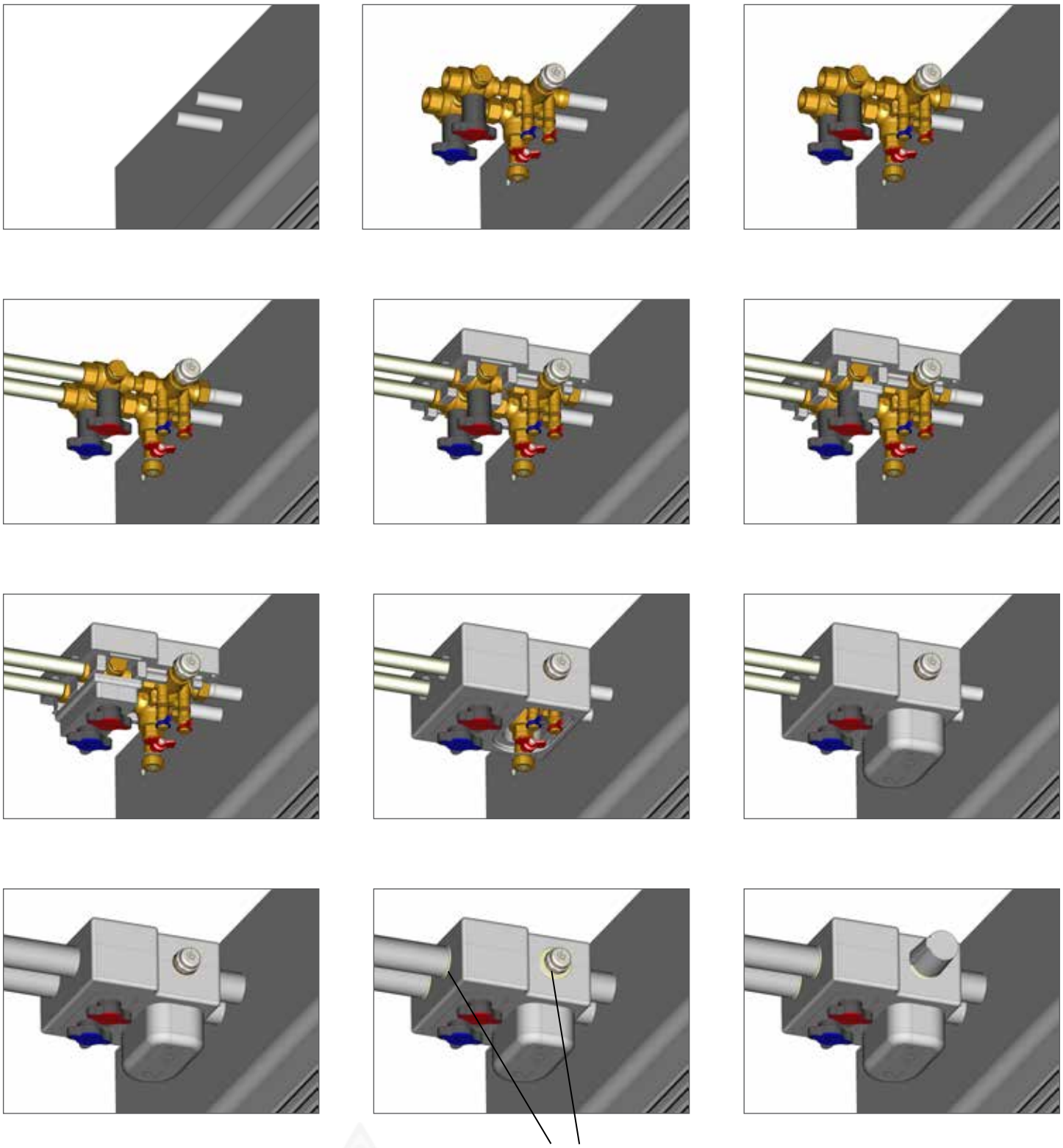


DN 32



Installation

HerzCON in the sizes DN 15 - DN 25 also include a water vapour permeable insulation box. Installation instructions step by step:

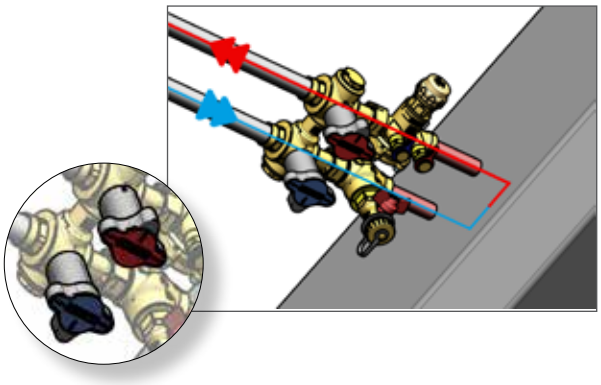


Potential air gaps must be insulated against vapour diffusion.

Operation

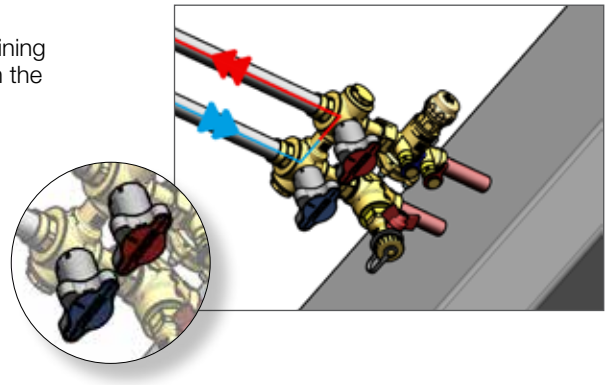
Standard operation

During normal operation the bypass is closed, the drain valve on the strainer is closed, the ball valves are in the position shown on the picture. The PICV 4006 SMART is preset for flow.



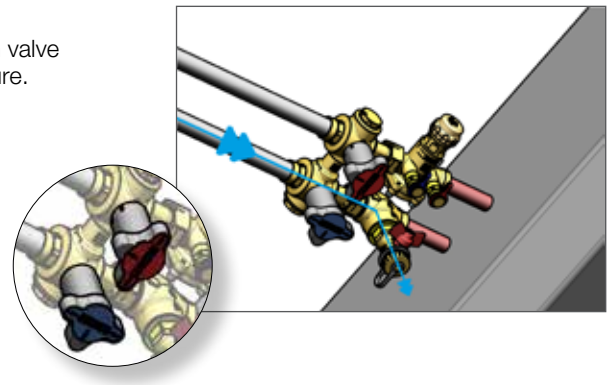
Bypass operation

For normal flushing the bypass is open and the combi valve is closed. The draining valve on the strainer is also closed, the ball valves are in the position shown on the picture.



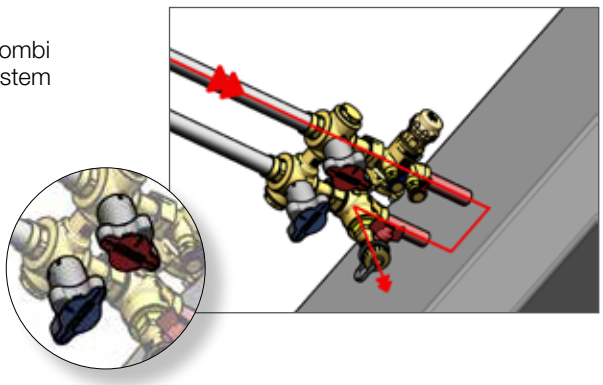
Flushing

For flushing the bypass is closed, the ball valve in the supply line and the drain valve on the strainer are open. The ball valves are in the position shown on the picture. The system is drained by the strainer.



Backflushing

For backflushing the bypass is closed, the drain valve on the strainer and the combi valve are open. The ball valves are in the position shown on the picture. The system is flushed by ball valve, 4006 SMART, fan coil and strainer.



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