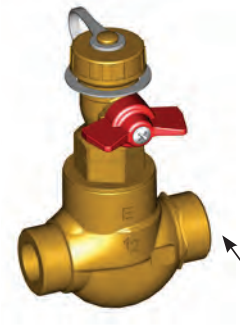
www.herz.eu

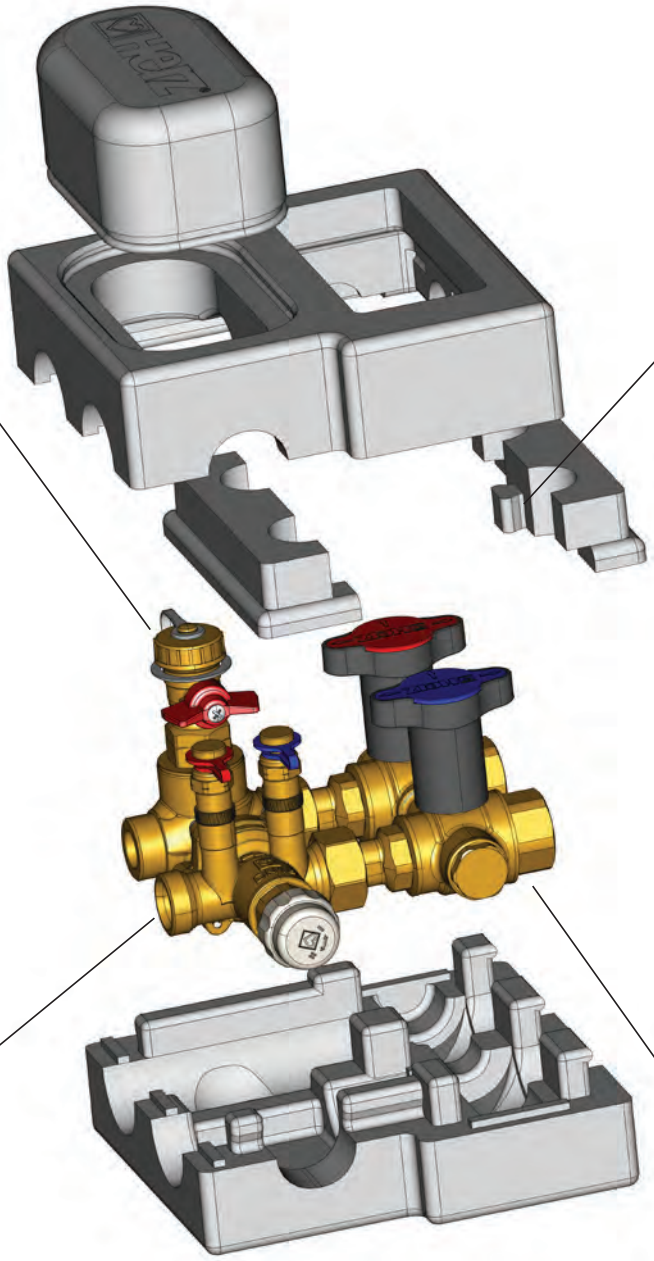
HerzCON-Operation & Maintenance

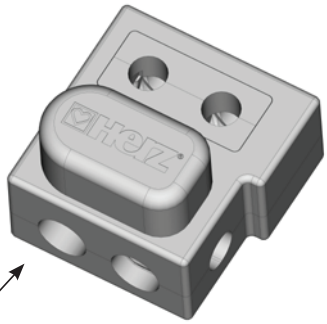
Direct connection for fan coils

Assembling parts



The drain valve fitted to the strainer allows flushing without the need to remove the strainer basket.





Isolation box

Fire behavior for insulation box

Method	Class
DIN 4102-16	B1
BS 476- 6/7	0
FMVSS 302	Fulfilled
UL 94	HF 1

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

Manual Air Vent

High Energy Efficiency.
Perfect control.
Very easy and fast commissioning.
One valve replaces three (DPCV, Balancing, Control) Optimization of pump head No required calculation and verification of the valve authority. Lower operational or maintenance costs due to less complaints/longer life-span of actuator.

HERZ-Multifunction Ball Valve Block with red and blue "T'' Handle Three-Port-Ball Valves.

T port of ball with full bore allows the draining or filling of full systems or part of the systems.

HerzCON is a simple and reliable direct connection for Fan Coil Units.

Features & Benefit

- DN15 to DN32 versions are available for connection to FCU.
- Allows regulating, flushing and isolating operations to be undertaken
- Flushing bypass included as recommended by BSRIA BG29/2011
- Fully assembled and tested at the factory
- All components constructed from DZR Brass
- 5 year HERZ warranty
- Known envelope dimensions
- Reduction in on-site labour, time and cost
- Fast connection (only four connections are required)
- Reduces need for pre-fabrication area
- Reduced possibility of incorrect installation
- No differentiation between heating and chilled systems
- Insulation box included

Modern system designers are always looking for cost effective ways to improve commissioning and maximize efficiency. Valve manufacturers have developed various products over the years aimed at improving energy efficiency and saving installation costs. Installers have also adopted various methods of pre-fabrication in a bid to reduce installation and commissioning costs.

With today's emphasis on saving energy, designers are looking to cut costs to a minimum by utilising variable volume heating and cooling systems. The use of Dynamic Balancing Valves such as Pressure Independent Balancing Control Valves, ensures that these issues are overcome and flow rates are controlled constantly, as required by modern room temperature control systems.

The BSRIA guide to Energy Efficient Pumping Systems BG 12 / 2011 clearly indicates that significant energy savings can be made by utilizing Pressure Independent Balancing Control Valves (PIBCV) on terminal units in Variable Volume Systems.

HerzCON has been designed to give a simple connection to fan-coils, or other terminal units, and utilises the HERZ 4006 SMART Pressure Independent Balancing Control Valve with HERZ Multifunctional Ball Valve and a HERZ strainer with HERZ Drain valve 2512. On/off, 3-Point or modulating 0 – 10 V DC Actuating or Motoric drives can be fitted and integrated to a BMS if required.

The unit allows pressure independent control ensuring full stroke regardless of pressure fluctuations, while guaranteeing a constant flow rate to the terminal unit maximising energy efficiency for the system. The HerzCON unit also permits flushing and isolating operations to be undertaken.

This means there is no product differentiation between heating and chilled systems, one unit does both applications. The drain cock fitted to the strainer allows flushing without the need to remove the strainer basket and also allows the strainer basket to be cleaned in-situ.

HerzCON technical data

Max. operating pressure	16/25 bar
Min. operating temperature	- 20 °C
Max. operating temperature	130 °C
Lift	4 mm

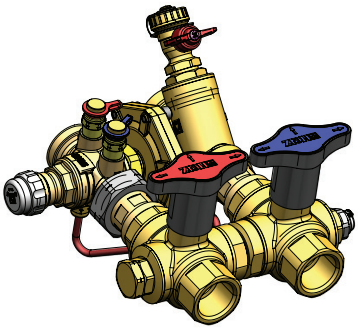
The integrated control unit together with the actuating drive is responsible for modular control. Various actuating drives might be used.

Materials

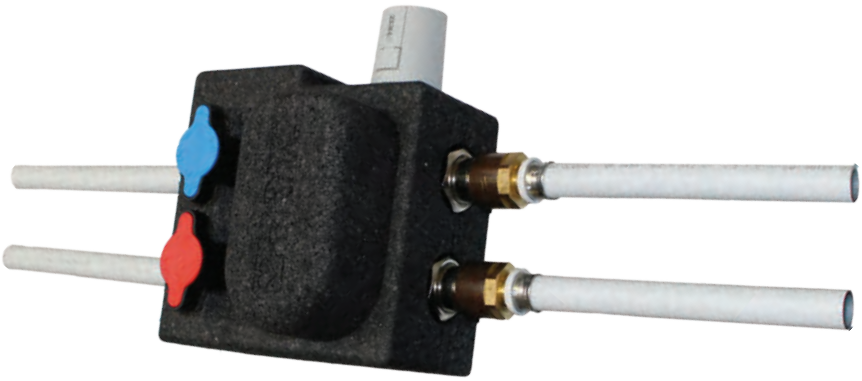
Body: dezincification-resistant brass
Membranes and O-rings: EPDM

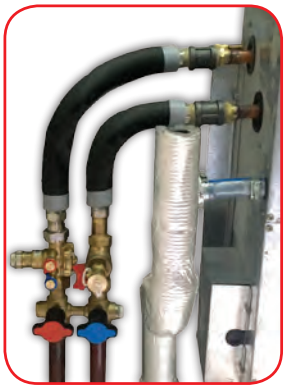
Water purity in accordance with the ÖNORM H 5195 and VDI 2035 standards.
Ethylene and propylene glycol can be mixed to a ratio of 25 - 50 vol. [%].

Order number	Valve size
1 4600 51	DN 15
1 4600 52	DN 20

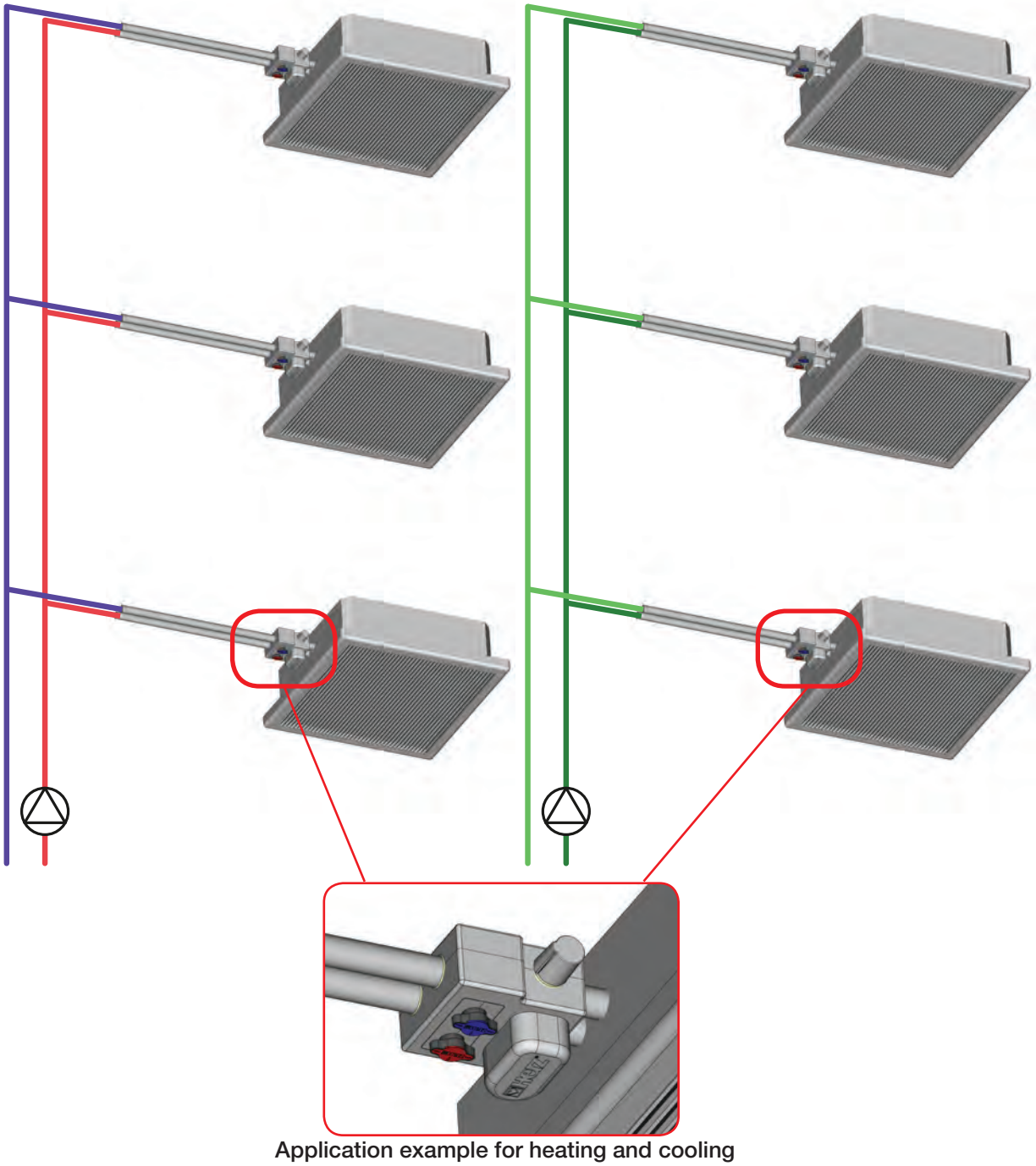


Order number	Valve size
1 4600 53	DN 25
1 4600 54	DN 32





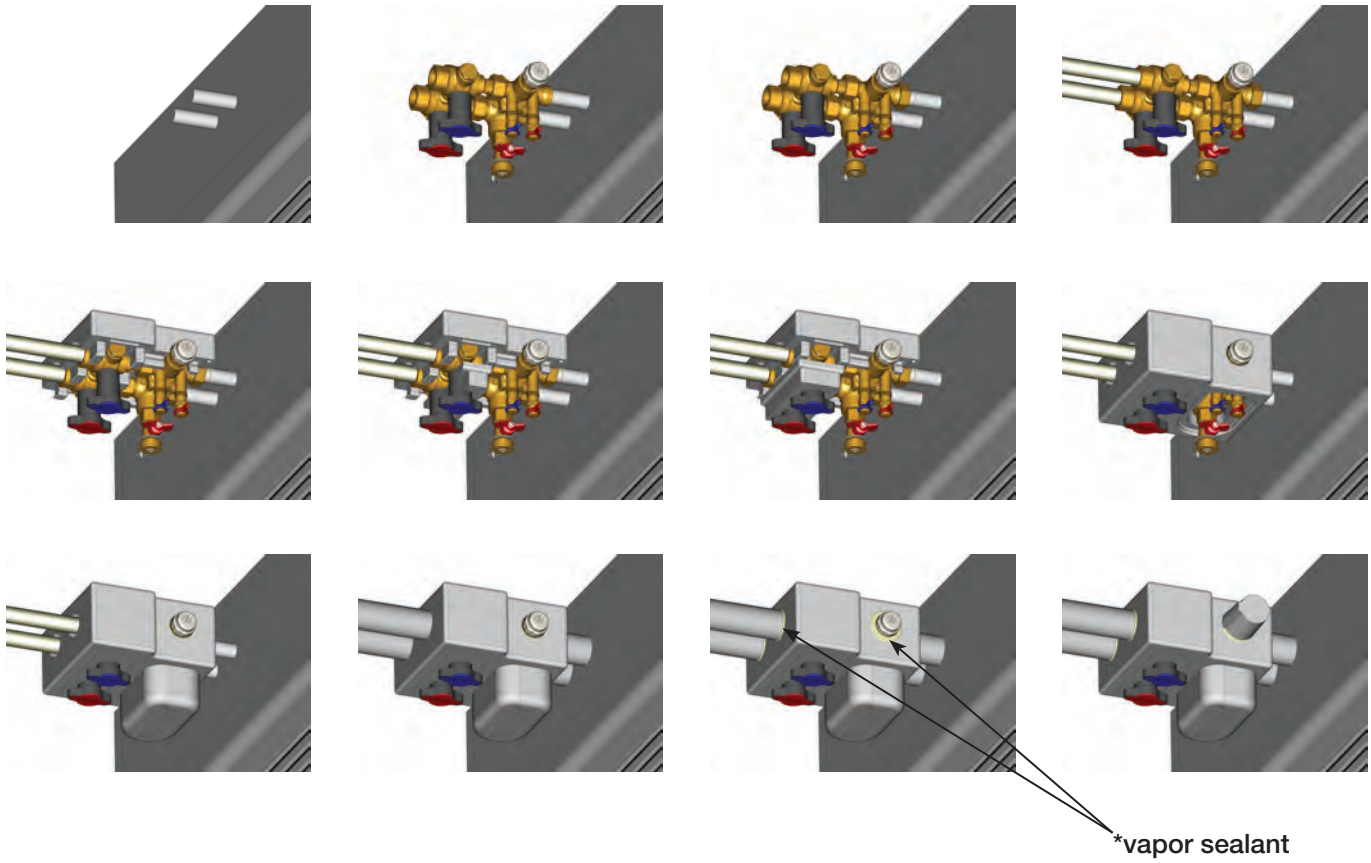
Example for installation



Application example for heating and cooling

Installation

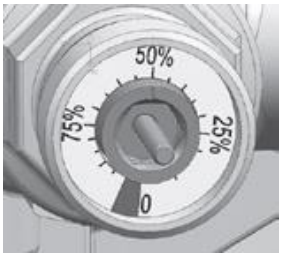
The unit is supplied in an insulated box, totally vapor sealed for chilled water circuits. Install the Insulation box, as shown in the following figures.



Pre-setting

The valve setting is clearly shown in percent. The pre-set value can be easily adjusted using the PICV key: 1 4006 02.

- The valve setting is clearly shown in percent. The pre-set value can be easily adjusted using the PICV key: 1 4006 02.
- To find the required pre-setting percentage, the required flow rate is taken and read across the Herz standard pre-setting diagram.
  For eg: for a flow rate 0.44, Herz PICV 1 4006 13 is selected.



Differential Pressure Required

To ensure that the PICV operates effectively, a minimal differential pressure is required. If the differential pressure is too low, the flow rate and differential pressure controller will not work properly.

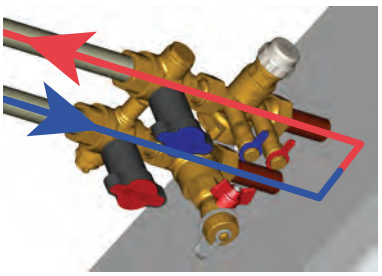
It is advised to check the least favoured / index PICV. By verifying that the least favoured PICV is receiving the required differential pressure, all other PICVs must have higher differential pressure.

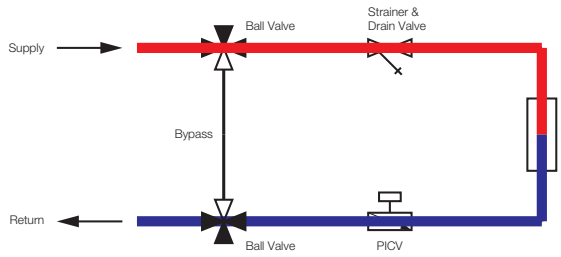
It should also be ensured that the maximum differential pressure is never above 6 bar. This may even cause damage to the PICV unit.

Operations

Normal Operation

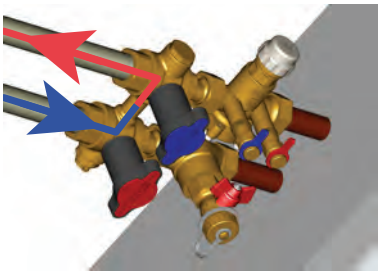
For normal operation the bypass is closed, strainer drain valve is closed, Ball valves are in the position as showed in the scheme, PIBCV preset to flow rate.

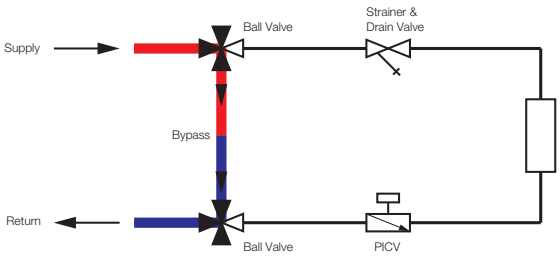




Bypass Operation

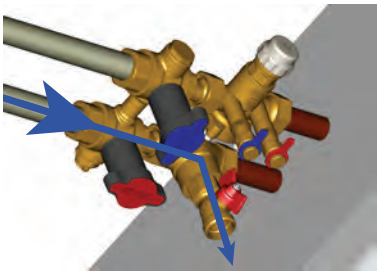
For the normal flushing method the bypass is open, PIBCV is closed, strainer drain valve closed, Ball valves are in the position as showed in the scheme.

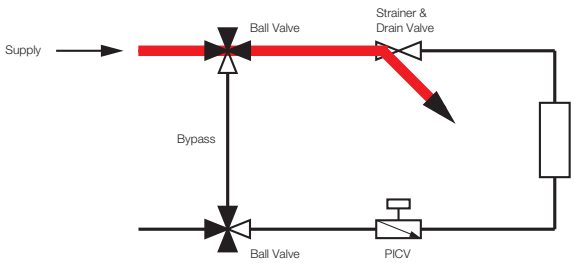




Forward flush Operation

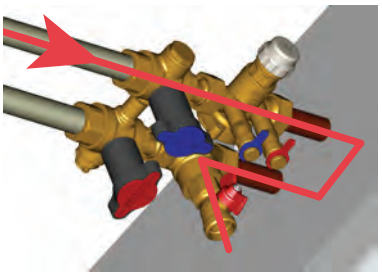
For forward flushing operation the bypass is closed, ball valve in the supply is open, strainer drain valve is open, ball valves are in the position as showed in the scheme and flushing through the strainer to atmosphere.

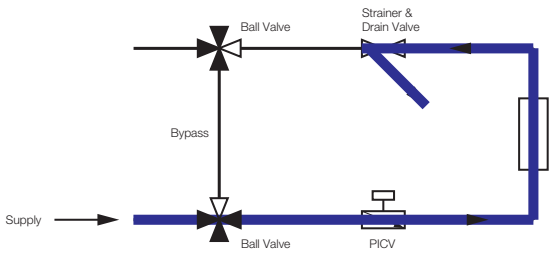




Backflush Operation

For Backflush operation the bypass is closed, strainer drain valve is open, ball valves are in the position as showed in the scheme and PIBCV is open. Flushing through ball valve, PIBCV, FCU and strainer to atmosphere.

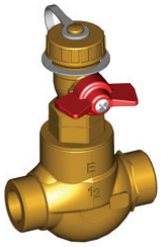




☑ Accessories And Spare Parts

- Multi-Functional Ball Valve, with red & blue handles.
  Article Number: 1 2206 81 - DN15
  1 2206 82 - DN20
  1 2206 83 - DN25
  1 2206 84 - DN32

- Pressure Independant Control Valve
  Article Number: 1 4006 21 - DN15
  1 4006 22 - DN20
  1 4006 13 - DN25
  1 4006 14 - DN32



- Strainer
  Article Number: 1 2662 21 - DN15
  1 2662 22 - DN20
  1 4111 13 - DN25
  1 4111 14 - DN32

- Drain Valve
  Article Number: 1 2512 01 - DN15
  1 2512 02 - DN20

- Flexible Connectors
  Article Number: H F200 15 - DN15
  H F200 20 - DN20
  H F200 25 - DN25
  H F200 32 - DN32

- PICV Key
  Article Number: 1 4006 02

HERZ Middle East FZE
P.O.Box: 121310
SAIF Zone, Sharjah, UAE
Tel.: +971 (0)6 55 28 108, Fax: +971 (0)6 55 28 109
E-Mail: office@herz.ae
www.herz.ae

International Headquarters
HERZ Armaturen GmbH
Richard-Strauss-Str. 22, A-1230 Vienna, Austria
Tel.: +43 (0)1 616 26 31-0, Fax: +43 (0)1 616 26 31-227
E-Mail: office@herz.eu

www.herz.eu

HERZCON_ME-EN-1116-3