

4131-42 Series

Fan coil valves

Technical Data Sheet



Description

4131-42 Series control valves for fan coils are used to control the flow of hot and cold water in 4-pipe fan coil heating and air conditioning systems that use the same heat exchanger block for both heating and cooling. They are operated by ON/OFF actuators with effective stroke of 2.5 mm, like **22C, 22CX and 26LC Series** electrothermal actuators.

The valve is available with 3/4" male thread and 4 ports with built-in bypass.

The valve disc is operated by the aforementioned electrothermal actuators, which are available in the following versions:

- NO (normally open), 2 wires (standard) or 4 wires (with auxiliary microswitch contact);
- NC (normally closed), 2 wires (standard) or 4 wires (with auxiliary microswitch contact).

All the actuators are easy to fix to the valve body by means of a threaded ring-nut (M30x1.5).



4131-42

4-port brass valve for fan coils equipped with a single heat exchanger block. ON/OFF operation by means of electrothermal actuators. Max. operating temperature: 110°C. Disc stroke: 2.5 mm. Can be used both as a mixing valve and diverter valve. PN 16 bar.

The Kvs and Kvs bypass values apply to use of the valve as a diverter.

Type	Part No.	DN	Kvs	Kvs bypass	Weight (g)
4131-42	41313440P42	3/4"	2.2	2.2	550

Technical features

Nominal Pressure (PN)	16 bar
Minimum fluid temperature	4°C
Maximum fluid temperature	110°C
Usable fluids	water (with glycol ≤ 50%)
Disc stroke	2.5 mm
Bypass leakage	< 0.02 % Kvs
Actuator connection	M30x1.5

Design characteristics

Body	CW617N brass
Stem	chemical nickel-plated brass
Spring	stainless steel
Disc rubber	EPDM

Hydraulic characteristics

Valve part No.	DN	DN mm	Connection size	Max. operating pressure PN [bar]	Kvs	Kvs bypass	ΔP_{max} Max. operating pressure differential (noise < 38 dBA) [bar]	ΔP_s Closure with 22C NO/NC actuator [bar]
3-way 4-port valve								
41313440P42	3/4"	20	3/4"G	16	2.2	2.2	0.5	1

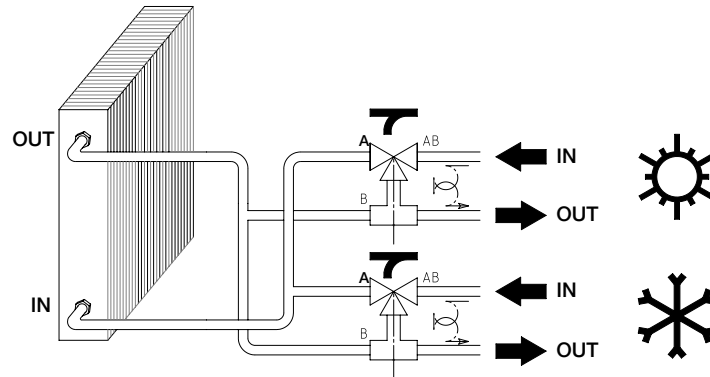
- KVs = nominal flow rate of the main way of the valve in m³/h with the valve fully open at a pressure of 1 bar and water temperature of 20°C.
- ΔP_{max} = maximum dynamic differential pressure at the ends of the fully open valve, without risk of noise (< 38 dBA).
- ΔP_s = maximum static differential pressure at the ends of the valve against which the valve can open (by means of its internal spring in 3-way versions; by means of the actuator in 2-way versions).

Application

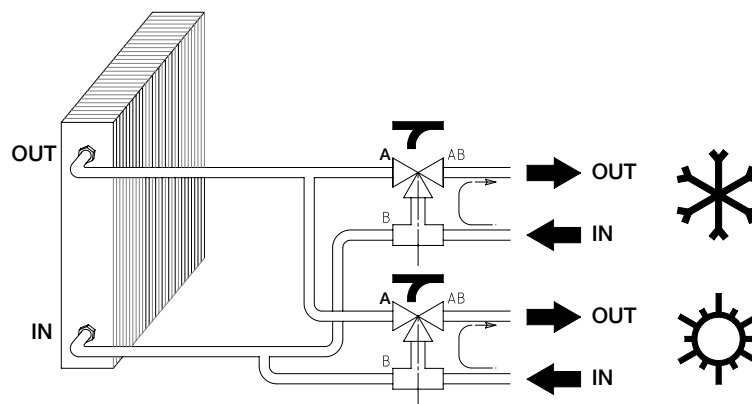
The valves are used for diverting or mixing the heat carrier fluid in a heating or air conditioning system as required by the room thermostat (or programmable thermostat). Thanks to their compact size, **4131-42 Series** control valves are designed for installation on groups of individual terminal units (fan coils, fan units). Due to the special configuration of the discs, **4131-42 Series** fan coil valves can be used as either diverter or mixing valves, thus optimising the various plumbing requirements in assembly.

The fan coil unit must be equipped with two **4131-42 Series** valves: one for the heating circuit and one for the cooling circuit. Both valves must be connected to a single block as per the diagrams shown below:

Diverter valve



Mixing valve



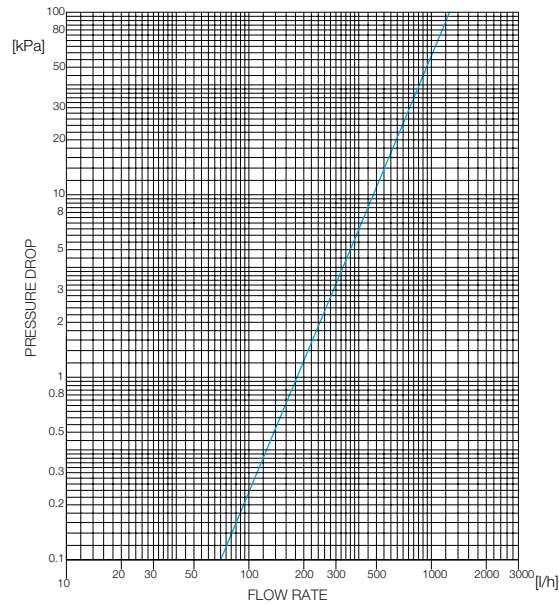
Operation

The valves are of Normally Open type (without actuator fitted) and can be adjusted or fully closed by manually turning the threaded plastic cap, which controls the valve stem.

When used in conjunction with an ON/OFF NC electrothermal actuator, in rest conditions (actuator not energised), the valve becomes normally closed (NC) (straight way closed and bypass open): if the actuator is energised, the valve opens, closing the bypass. When used in conjunction with an ON/OFF NO electrothermal actuator, in rest conditions (actuator not energised), the valve remains normally open (NO) (straight way open and bypass closed): if the actuator is energised, the valve closes, opening the bypass. The fluid flow rate and pressure drop of the valve can be determined from the flow curve shown below. Observe the maximum operating pressure P_{max} shown in the table to avoid possible malfunctions and/or noise. The reliability of the **4131-42 Series** fan coil control valves is guaranteed by the fact that every single product is tested to ensure the outward pressure tightness of the valve body and its components, and the pressure tightness of the disc when it shuts off the flow.

Flow curve

4131-42
DN 3/4"

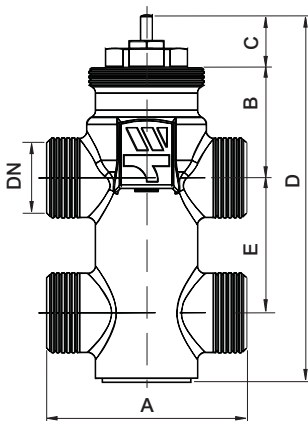


Installation

Selection of **4131-42 Series** fan coil control valves is based on system type. Before fitting the valves, make sure the pipes are clean and free from welding slag or other foreign matter. Do not install the valve with the **22C Series** actuator facing down.

Overall dimensions (mm)

4131-42



PART NO.	DN	A	B	C	D	E
41313440P42	3/4"	68	38	14.4	116.8	40

Specification text

4131-42 Series

4-way brass valve for fan coils equipped with a single heat exchanger block **4131-42 Series** – WATTS brand.

ON/OFF operation by means of WATTS brand electrothermal actuators. Max. operating temperature: 110°C.

Disc stroke: 2.5 mm. PN16 bar.

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding.

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