

VU02-VU3-VU4 Series

2-way and 3-way zone valves

Technical Data Sheet



Description

VU Series zone valves are normally used for controlling hot and cold water flows in heating and/or air conditioning systems by means of an electrical ON/OFF or modulating control. Made of brass, these valves are available in a configuration with DN 3/4" e 1" female connections in the following versions:

- **VU02 Series** 2-way;
- **VU3 Series** 3-way;
- 3-way 4-port if the **VU3 Series** is used with the **VU4 Series** bypass.

They can be controlled by the following types of electrothermal actuator:

- **ETE Series** ON/OFF;
- **ETM Series** modulating.

They are easy to fix to the valve body by means of a bayonet fitting.



VU02

2-way brass zone valve, normally closed (NC).

Type	Part No.	DN	Kvs	Kvs bypass	Weight (g)
VU02	VU0220	3/4"F	4.3	--	450
VU02	VU0225	1"F	6.5	--	600



VU3

3-way brass zone valve, normally closed (NC).

Type	Part No.	DN	Kvs	Kvs bypass	Weight (g)
VU3	VU320	3/4"F	4.3	2.8	450
VU3	VU325	1"F	6.5	3.3	600



VU4

T-fitting for creating a bypass in VU3 Series valves.

Type	Part No.	DN	Weight (g)
VU4	VU400	3/4"F	250
VU4	VU401	1"F	400

Technical features

Nominal pressure	16 bar
Maximum differential pressure	1.5 bar
Maximum operating temperature	110°C
Discstroke	4mm
Usable fluids	water (with glycol max 50%)

Features

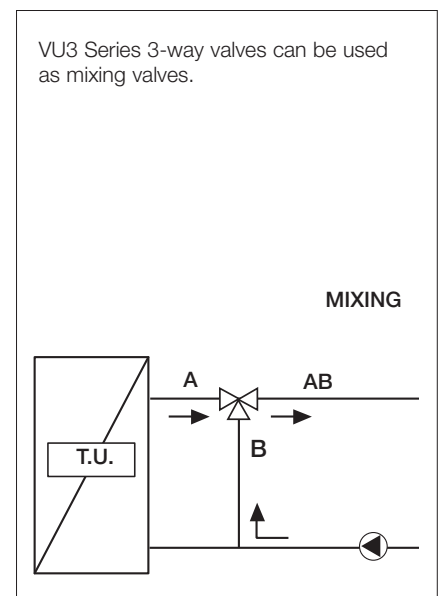
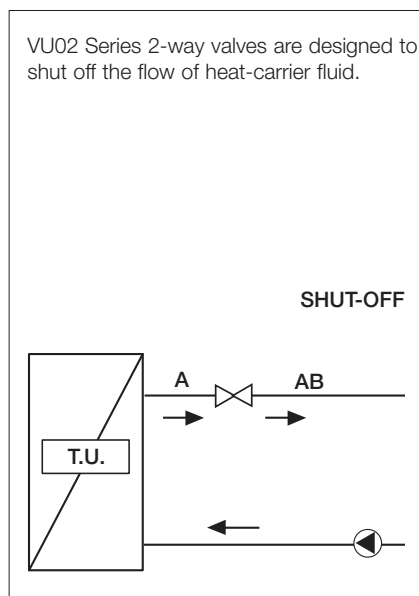
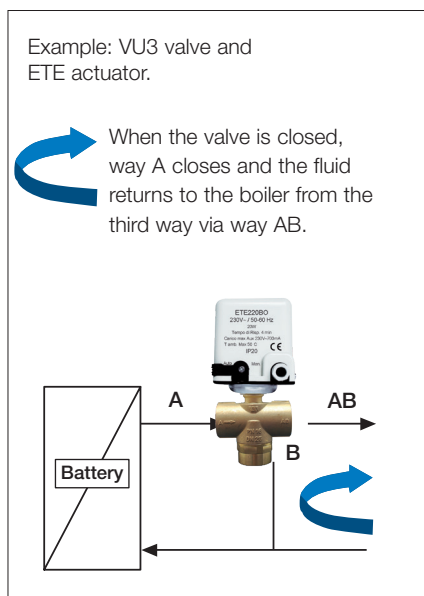
Valve body	CW617N brass (UNI EN 12165)
Disc	EPDM
Spring	stainless steel
O-ring	EPDM

Application

The valves are used for shutting off (**VU02 Series** - 2-way) or mixing (**VU3 Series** - 3-way) the heat carrier fluid in a heating or air conditioning system as required by the room thermostat (or programmable thermostat). Thanks to their extremely compact size, **VU02-VU3 Series** valves are particularly suitable for installation on groups of individual terminal units (fan coils, fan units).

Operation

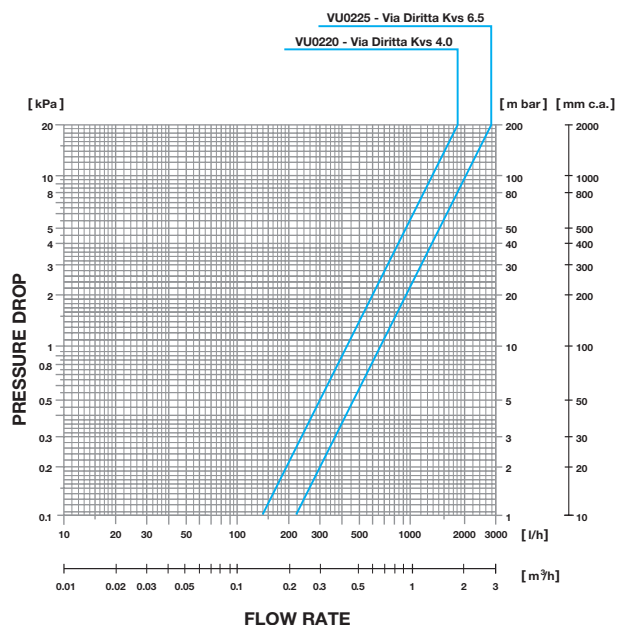
VU Series zone valve operation is controlled by the movement of the disc that shuts off the heat carrier fluid. In the rest position, the valves are normally closed. The valve disc is operated by a wax thermostatic element located inside the **ETE Series** or **ETM Series** actuators, activated by an electrical resistor in response to a signal emitted by a room thermostat (or programmable thermostat). When it receives the permissive from the control device (room thermostat or programmable thermostat), the electrical resistor heats up as a result of the current passing through it, causing the sensing element inside it to expand and exert a force on the moving stem, which in turn causes the valve disc to move, thus opening **VU220**, **VU225**, **VU320** and **VU325 Series** normally closed valves. If no power is available, **VU Series** normally closed valves can be opened by turning the knob of the **ETE** or **ETM Series** actuator to the manual position. When the stem reaches its travel limit, the limit microswitch shuts off the power supply. This solution prevents damage to the actuator if normal movement of the valve disc is impeded for any reason (foreign bodies on the seat, etc.). **ETE Series** actuators are also equipped with an auxiliary contact (suffix **BO**) for supplementary controls (metering, pump control, fan or other devices). The fluid flow rate and pressure drop of the valves can be determined from the appropriate flow curves.



Charts

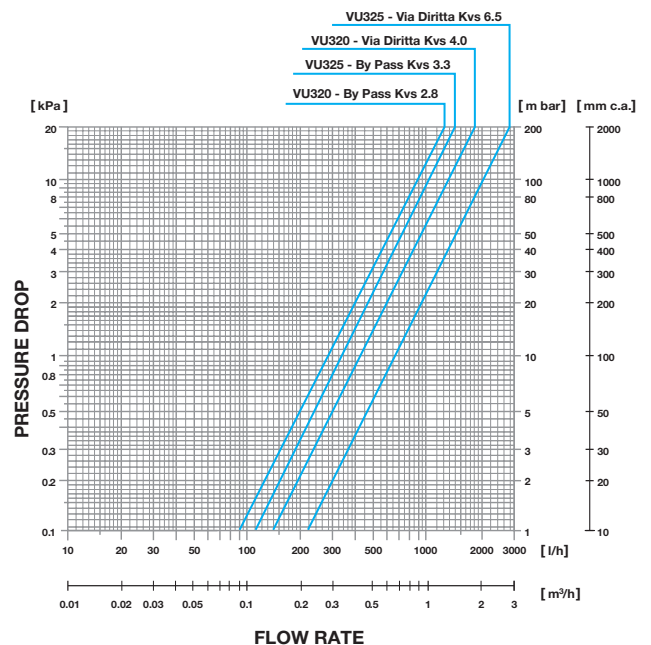
Flow rate - pressure drop

VU0220 DN 3/4" - VU0225 DN 1"



Flow rate - pressure drop

VU320 DN 3/4" - VU325 DN 1"

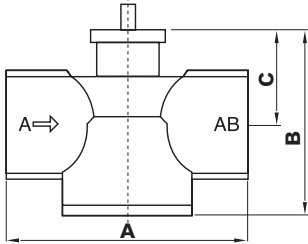


Installation

The zone valve is selected on the basis of the pipe diameter and the heating and air conditioning system. The valves can be connected to both copper and plastic pipes. We recommend that **VU02 Series** 2-way valves be used with a **466 Series** bypass valve. **For obvious reasons (infiltration, condensation, etc.), you are advised not to install the valve with the actuator facing down.**

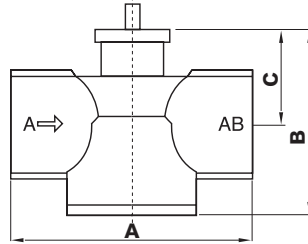
Overall dimensions (mm)

VU02



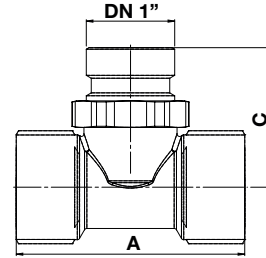
DN	A	B	C
3/4"	78	61	30
1"	83	61	30

VU3



DN	A	B	C
3/4"	78	77	30
1"	83	77	30

VU4



DN	A	C
3/4"	80	42
1"	86	52,5

Specification text

VU02 Series

2-way brass zone valve, normally closed (NC) **VU02 Series** – WATTS brand.
Bayonet fitting for **ETE** and **ETM Series** actuators. Disc stroke: 4mm. Differential pressure: 1.5 bar. PN16.

VU3 Series

3-way brass zone valve, normally closed (NC) **VU3 Series** – WATTS brand.
Bayonet fitting for **ETE** and **ETM Series** actuators. Disc stroke: 4mm. Differential pressure: 1.5 bar. PN16.

VU4 Series

T-fitting **VU4 Series** – WATTS brand – for creating a bypass in **VU3 Series** valves.

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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