MOTORIZED DIVERTING VALVES

Description

The V55 rotary diverting valves (on/off) are devices that allow to control the thermal medium arriving from two heat sources or delivered to two users. The valve works through an obturator rotation from 0° to 90°. The rotary obturator puts into communication the common port (AB) with the other two ports (A, B). The valve can be used to supply two types of users (1 inlet in AB, 2 outlets in A and B, i.e. heating system and domestic water storage) or to control two different generators (2 inlets in A and B, 1 outlet in AB). The valves are equipped with 2 point actuator with fast running time (22 s) and output contact in tension.

Range of articles

Series V55 Motorized rotary diverting valve - F.

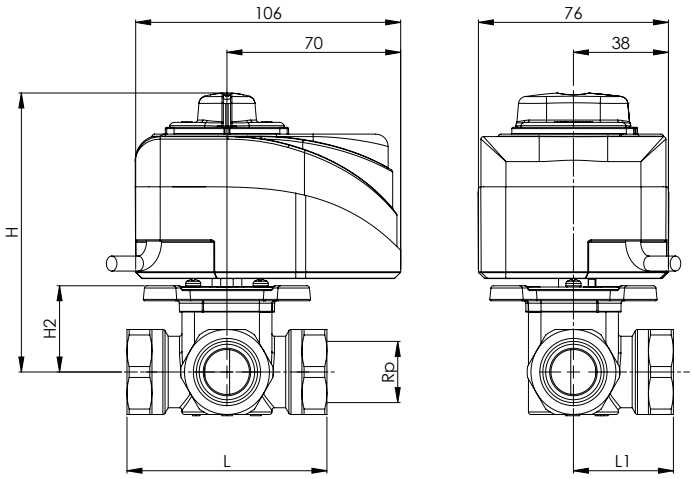
Features

Working temperature range (peaks):
-20 *(see suitable fluids)***–130 °C**
Working temperature range: **0** *(no frost)***–110 °C**
Max working pressure: **10 bar**
Obturator rotation torque: **6 N·m**
Rotation angle: **90°**
Leakage: **<0,1%**
Suitable fluids: **water for thermal systems, glycol solutions (max 50%)**
Threaded connections: **female EN 10226-1**
Tests: **EN 12266-1 §A.3**

Materials

Body, flange: **brass EN 12165 CW617N**
Diverter (rotor): **brass EN 12164 CW614N**
Gaskets: **EPDM**
Graduated plate: **aluminum**
Actuator M030051BDA: **2 points**
Electric supply: **230 Vac/50-60 Hz**
Torque: **6 N·m**
Power consumption: **5 VA**
Output in tension contact rating: **6 (1) A**
Protection class: **IP 44**
Running time: **22 s (rotation 90°)**
Electric supply cable lenght: **1 m, 4 poles**
Ambient temperature of the actuator
Functioning: **-5–50 °C EN 60721-3-3 Cl. 3K4, max. humidity 95% non condensing**
Transport: **-30–70 °C EN 60721-3-2 Cl. 2K3, max. humidity 95% non condensing**
Storage: **-20–70 °C EN 60721-3-1 Cl. 1K2, max. humidity 95% non condensing**

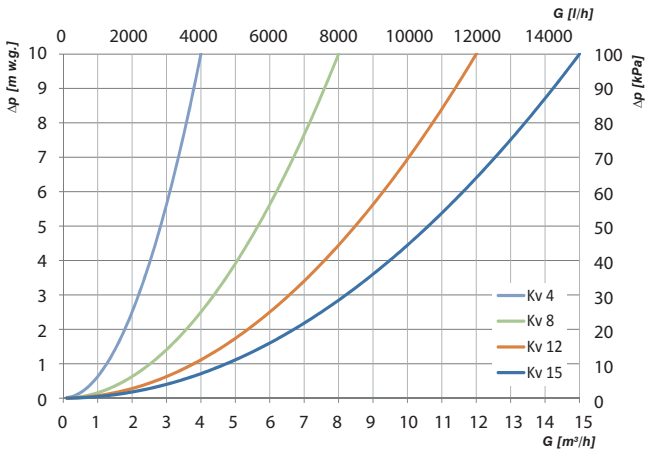
Dimensions



Code	Rp	Kv	L	H	H2	Weight [kg]	N. P/B	N. P/C
V5501500AB	Rp 1/2	4	80	113,5	35	1,10	1	10
V5502000AD	Rp 3/4	8	80	113,5	35	1,13	1	10
V5502500AE	Rp 1	12	82	113,5	35	1,335	1	10
V5503200AF	Rp 1 1/4	15	85	116	37	1,63	1	10

N. P/B: number of pieces in box - N. P/C: number of pieces in carton

Diagrams



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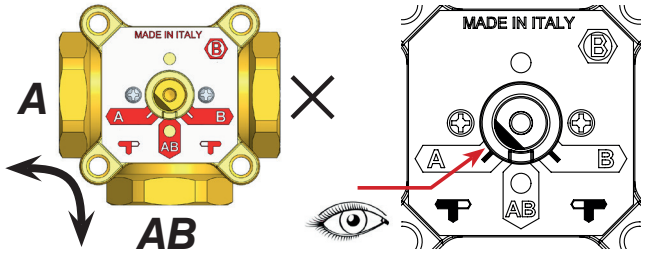
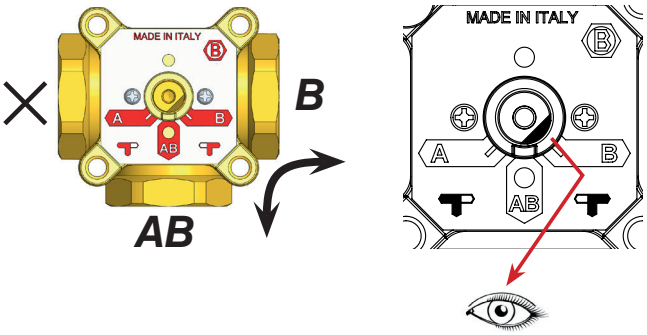
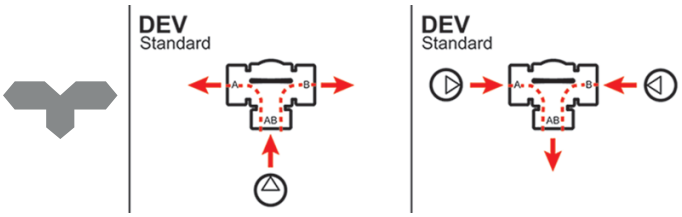
Working way

The motorized diverting valve works through a diverter (rotor) rotation from 0° to 90°. The diverter puts into communication the common port AB with the other two ports A or B. The chamfer on the diverter stem indicates the valve position. Due to the particular shape of the diverter, these valves cannnot be used ad mixing valves but only as diverting valves.
NB: we suggest to verify the diverter position of the valve before installing it on the system to verify the correct functioning.
This table shows the use of the valves in diverting mode (DEV). On the left: 1 inlet in AB and 2 outlets in A and B; on the right: 2 inlets in A and B, 1 outlet in AB.

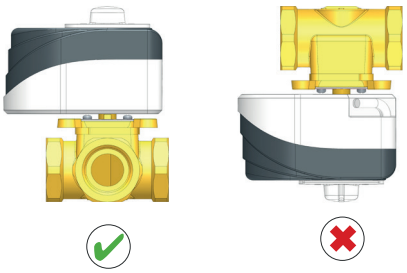






Installation

The motorized diverting valves can be installed according to the following positions. The valves cannot be installed upside down.



Accessories

M03.21

Spare actuator for V55 diverting valves, rotation angle 90°, 2 point type, on/off regulation. Complete with blocking screw, valve adaptor, anti-rotation pin, 1 m integrated cable, output contact in tension.

Torque: ***10 N·m***
Protection class: ***IP 44***
Frequency: ***50 Hz***
Power consumption: ***4 VA***
Aux. microswitch contact rating: ***6 (1) A***

Code	V	Running time [s]	Nr. poles	Cable [m]		
M03 005 1BD A	230	22	4	1	1	10

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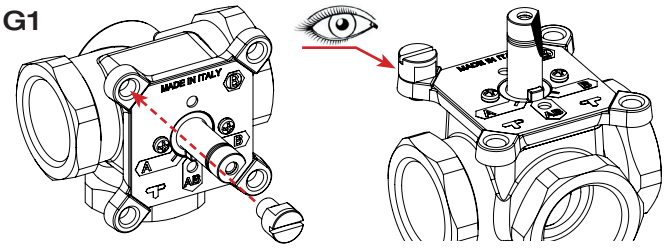
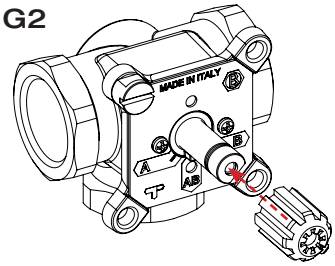
Actuator installation

G1) Screw on the valve body the actuator antirotation pin;
G2) insert the adaptor on the diverter control stem;
G3) rotate the diverter anticlockwise placing the adaptor indicator in position B;
G4) put the actuator knob, pushing and rotating it anticlockwise, fully up to position B;
G5) insert the actuator on the adaptor without rotating the diverter, then tighten the locking screw.
Note: if necessary, it's possible to orient the actuator in different directions by extracting and rotating it by 90° steps.
G6) Manual mode: the valve, equipped with actuator, can be manually activated by pushing and simultaneously rotating the actuator knob. The actuator is supplied in intermediate position at 45° of rotation (factory setting).
H1-H2) Wiring diagram and output contact in tension.

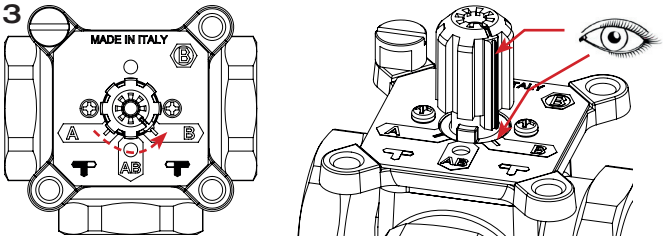
G1



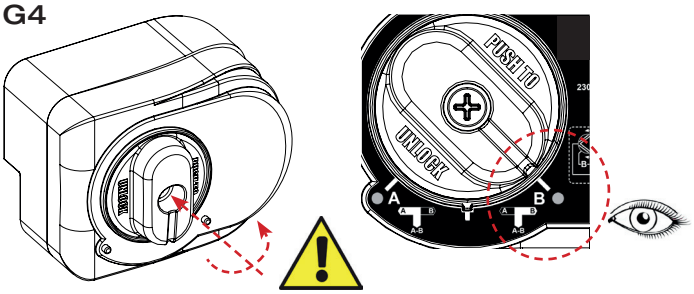
G2



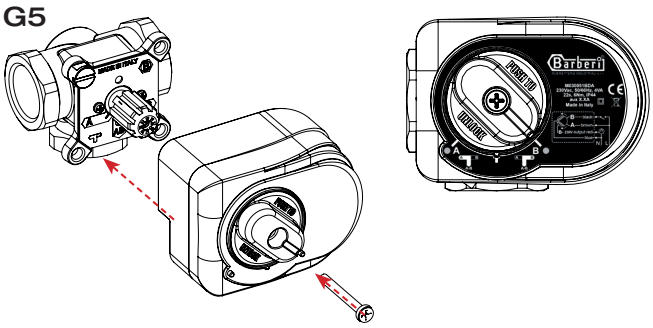
G3



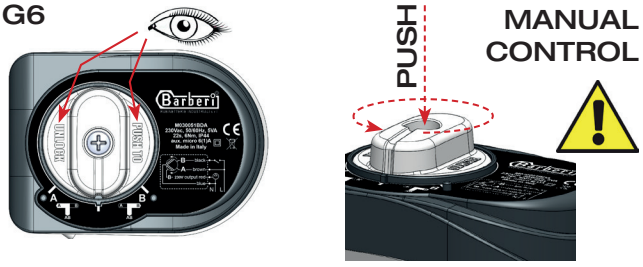
G4



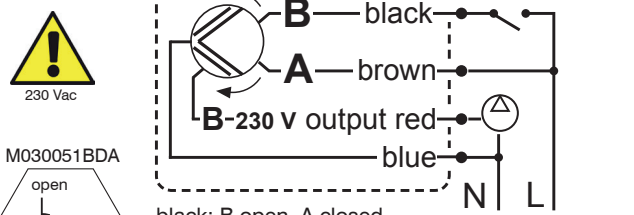
G5



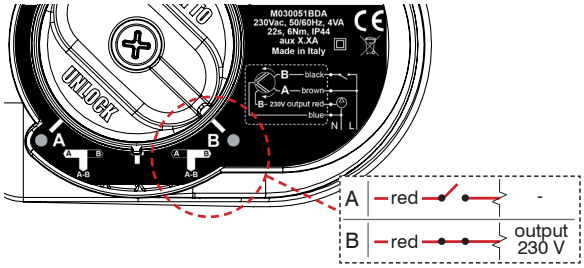
G6



H1



H2



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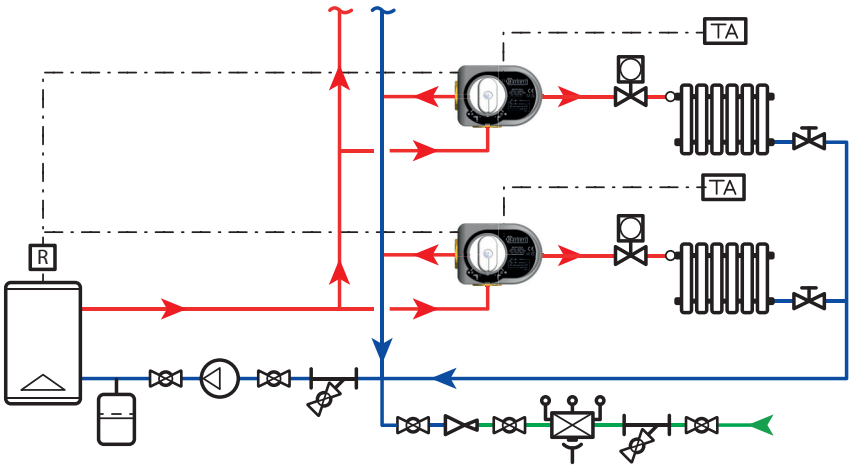
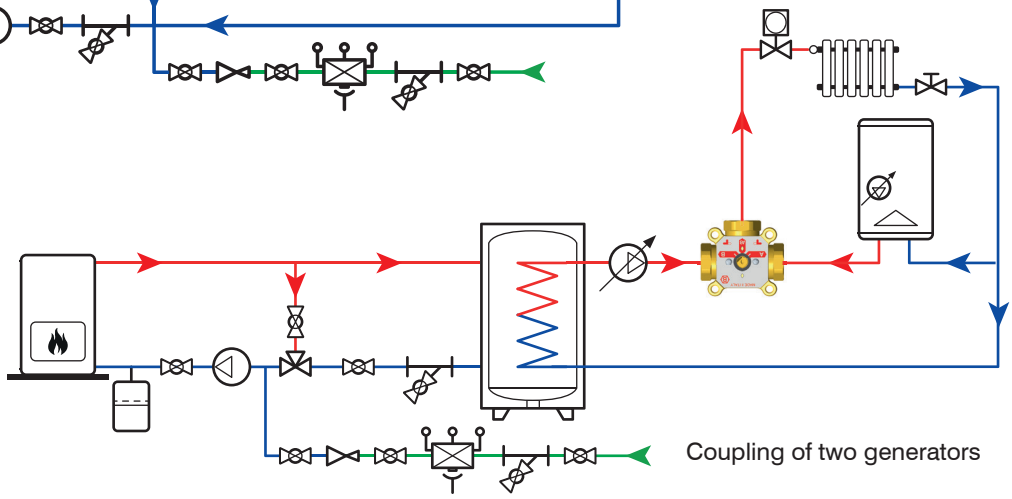
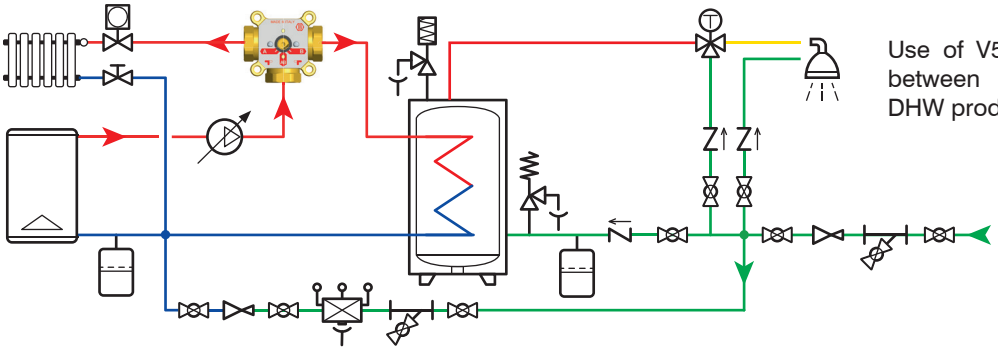
System diagrams

Use of V55 as zone valve





Coupling of two generators



Use of V55 as priority between heating and DHW production

Specifications

Series V55

Motorized rotary diverting valve. Threaded connections Rp 1/2 (from Rp 1/2 to Rp 1 1/4). Body, closing flange and obturator in brass; EPDM gaskets; graduated plate in aluminum. Maximum working pressure 10 bar. Working temperature range 0–110 °C. Obturator rotation torque <5 N·m. Leakege lower than 0,1%. Suitable fluids water for thermal systems, glycol solutions (max 50%). Complete with 2 point actuator M030051BDA, electric supply 230 Vac, output contact in tension, torque 6 N·m, protection class IP 44, running time 22 s (rotation 90°).