

## FLANGED MIXING VALVES



### Description

Barberi flanged mixing valves together with Barberi actuators are used in several applications to regulate heating and cooling systems.

Installations can be set by mixing the water coming from the boiler with water coming back from the system, thus guaranteeing the requested temperature to the user and also an energy saving. 3ways rotor or sectorial flanged mixing valves can also be used as diverters or zone valves. They can be used in heating systems with radiators, underfloor heating, traditional heating installations and cooling systems.

### Product range

Code	Description
<b>P51</b> 040 00MM	3ways flanged sectorial mixing valve, DN40
<b>P51</b> 050 00MN	3ways flanged sectorial mixing valve, DN50
<b>P51</b> 065 00MO	3ways flanged sectorial mixing valve, DN65
<b>P51</b> 080 00MP	3ways flanged sectorial mixing valve, DN80
<b>P51</b> 100 00MQ	3ways flanged sectorial mixing valve, DN100
<b>P51</b> 125 00MR	3ways flanged sectorial mixing valve, DN125
<b>P51</b> 150 00MS	3ways flanged sectorial mixing valve, DN150
<b>P52</b> 040 00MM	4ways flanged rotary mixing valve, DN40
<b>P52</b> 050 00MN	4ways flanged rotary mixing valve, DN50
<b>P52</b> 065 00MO	4ways flanged rotary mixing valve, DN65
<b>P52</b> 080 00MP	4ways flanged rotary mixing valve, DN80
<b>P52</b> 100 00MQ	4ways flanged rotary mixing valve, DN100
<b>P52</b> 125 00MR	4ways flanged rotary mixing valve, DN125
<b>P52</b> 150 00MS	4ways flanged rotary mixing valve, DN150
<b>P88</b> 040 00MM	3ways flanged mixing valve with tee inside, DN40
<b>P88</b> 050 00MN	3ways flanged mixing valve with tee inside, DN50
<b>P88</b> 065 00MO	3ways flanged mixing valve with tee inside, DN65
<b>P88</b> 080 00MP	3ways flanged mixing valve with tee inside, DN80
<b>P88</b> 100 00MQ	3ways flanged mixing valve with tee inside, DN100
<b>P88</b> 125 00MR	3ways flanged mixing valve with tee inside, DN125
<b>P88</b> 150 00MS	3ways flanged mixing valve with tee inside, DN150

## FLANGED MIXING VALVES

### Technical features

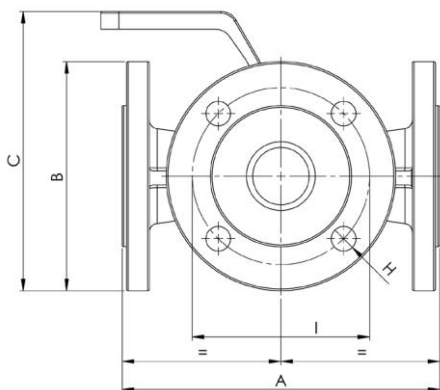
Max. working temp: **110 °C**  
 Min. working temp: **-10 °C (No frost)**  
 Max. working pressure: **6 bar (PN6)**  
 Rotor's rotation angle: **90°**  
 Leakage: **DN40 ... DN100 0,1 % del Kvs**  
           **DN125 - DN150 0,5 % del Kvs**  
 Suitable fluids: **water, glycoled water (max 30%)**  
 Connections: **flanged connections ISO 7005**

### Materials

Flanged valves

- Body: **cast iron EN-GJL-250**
- Rotor:
  - DN40: **Noryl**
  - DN50-DN80 (P51): **Cast iron**
  - DN50-DN80 (P52, P88): **Brass**
  - DN100-DN125: **Cast iron**
  - DN150: **Cast iron**
- Hydraulic tightness: **EPDM**
- Handle: **ABS**

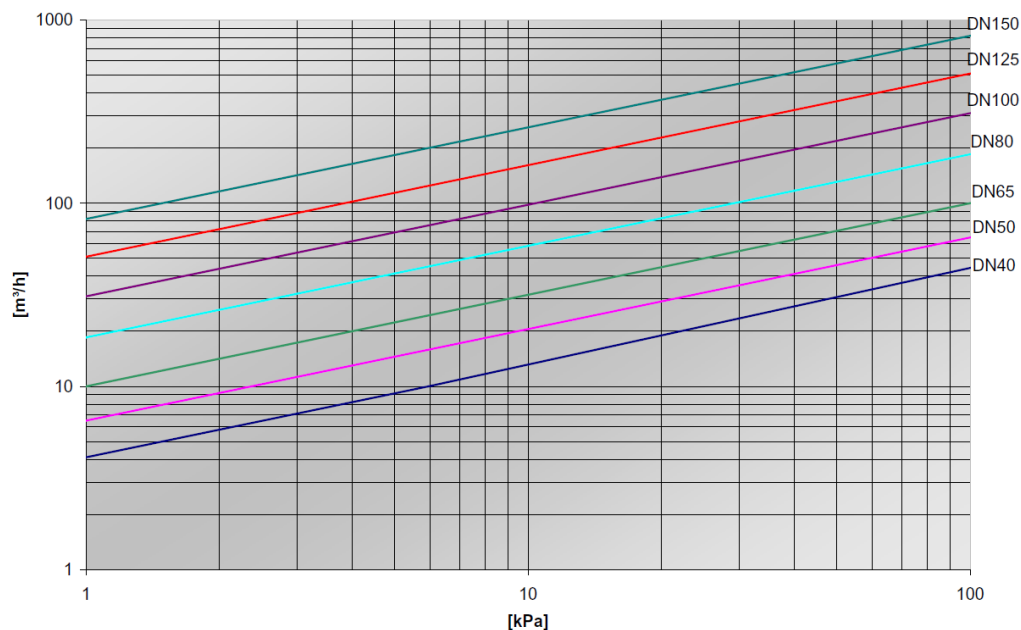
### Dimensions



DN	Kv	A	B	C	H	I	Hole N°	3ways weight [Kg]	4ways weight [Kg]
40	41	180	130	160	14	100	4	6	7,1
50	65	200	140	170	14	110	4	8	9,5
65	100	200	160	190	14	130	4	11	13
80	185	234	190	210	18	150	4	15	18
100	310	260	210	240	18	170	4	22	25
125	510	296	240	270	18	200	8	34	38,5
150	820	350	265	300	18	225	8	50	56

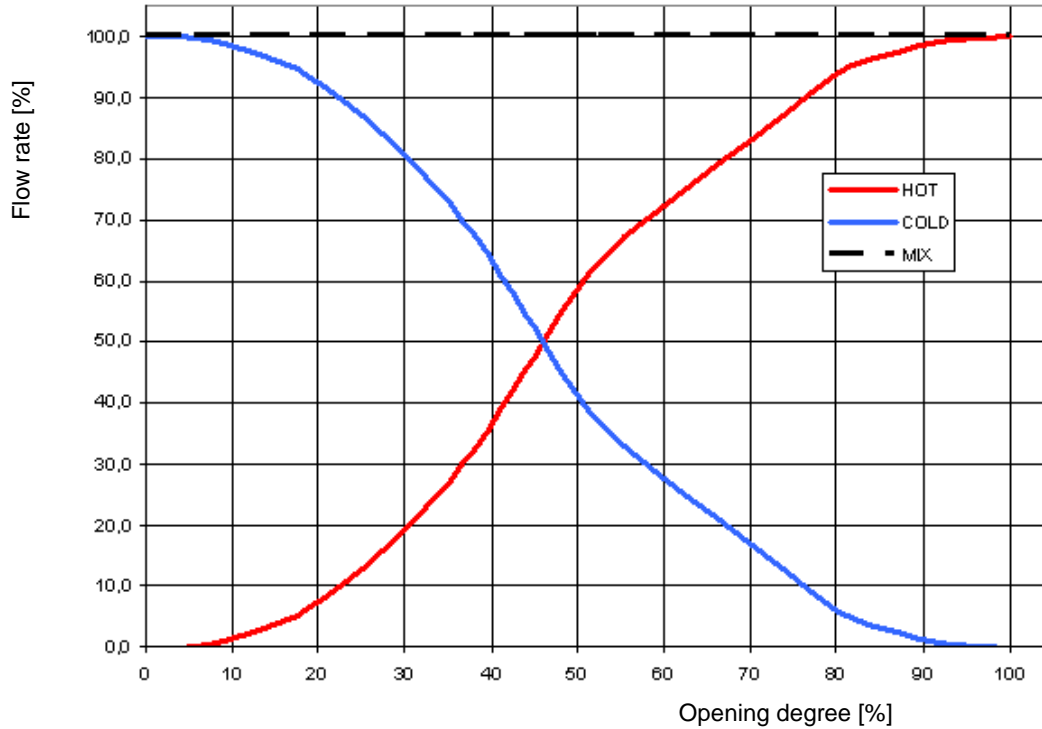
### Diagrams

#### Pressure drop

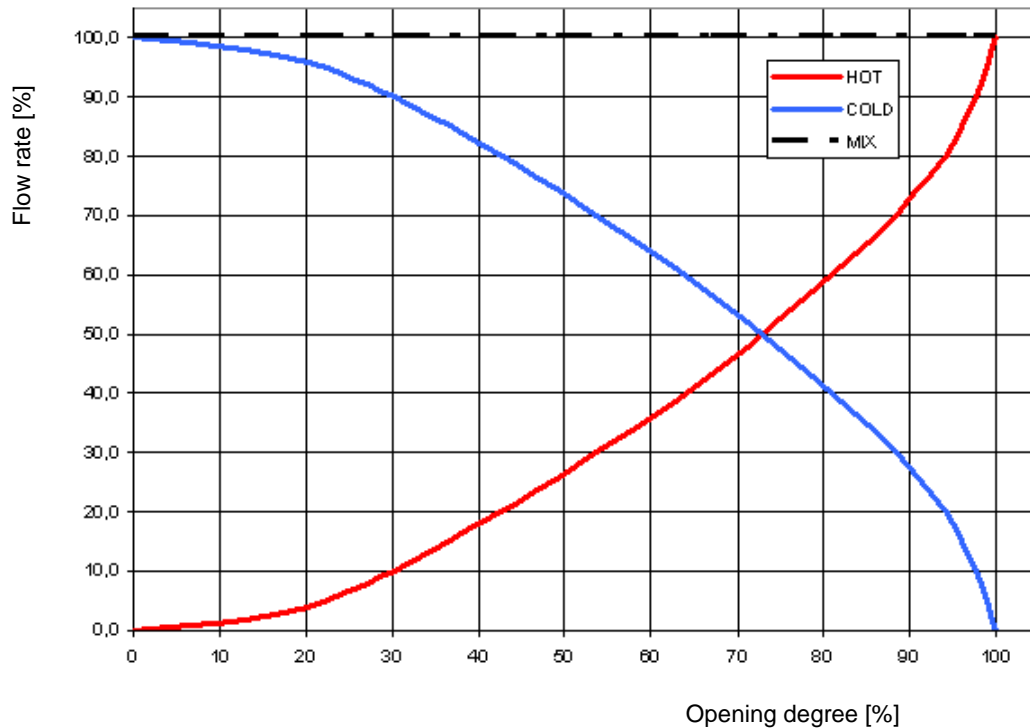


## FLANGED MIXING VALVES

### 3ways valves mixing curve



### 4ways valves mixing curve



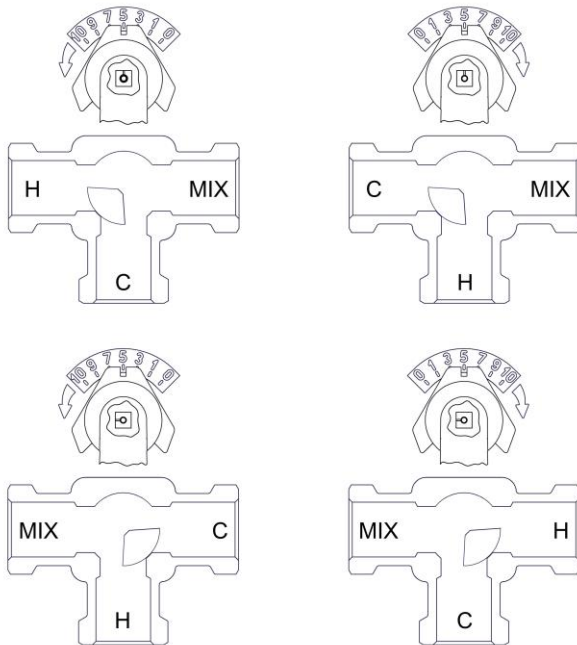
## FLANGED MIXING VALVES

### Installation

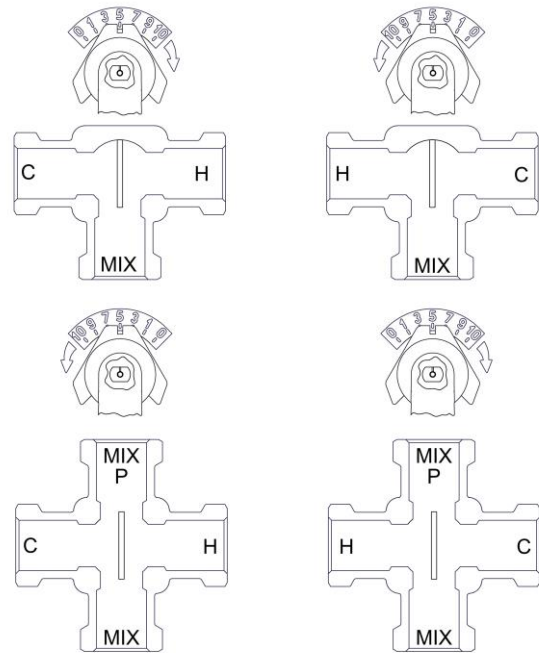
Flanged mixing valves are supplied in a standard configuration (fig.A) but can be installed in different positions, according to the installation's needs (see following examples), by simply changing the graduated plate's position (see enclosed schemes no.1 and 2).

Different configurations of the valve are showed in fig.A, B, C and D. To make the valve suitable for the different versions it is sufficient to unscrew the two screws and the blocking handle that fixes the graduated plate. To correctly set the rotor/sector within the valve, assemble the handle on the stem and turn it until the patch on the handle points toward the graduated numbers. Now it is possible to fix the handle on the stem with the screw.

*Scheme 1 (sectorial type)*



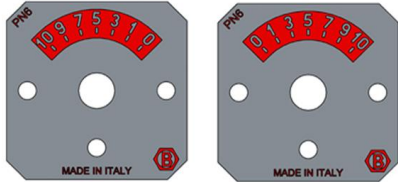
*Scheme 2 (tee type)*



## FLANGED MIXING VALVES

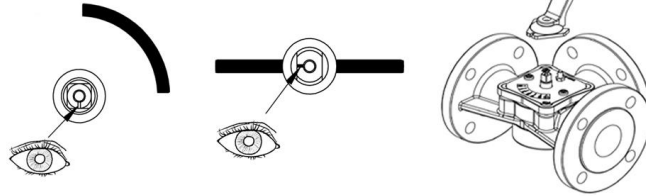
### Installation

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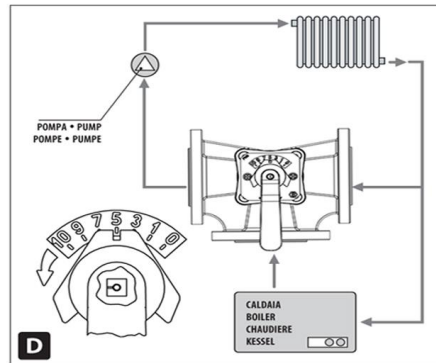
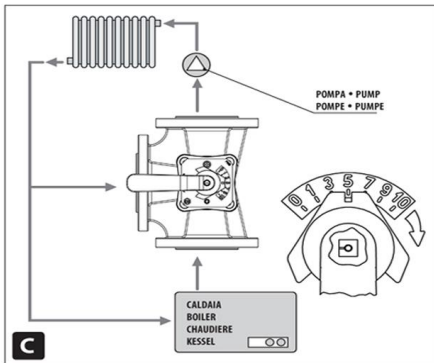
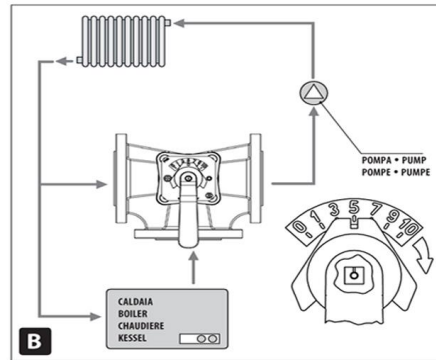
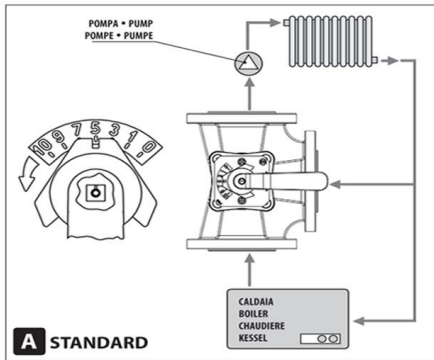


Art: P51

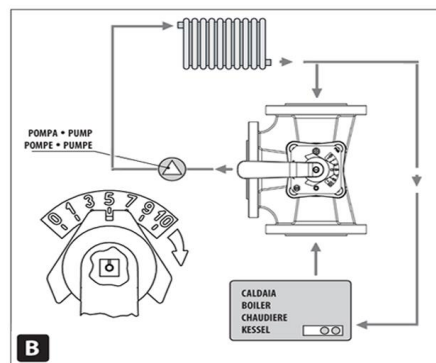
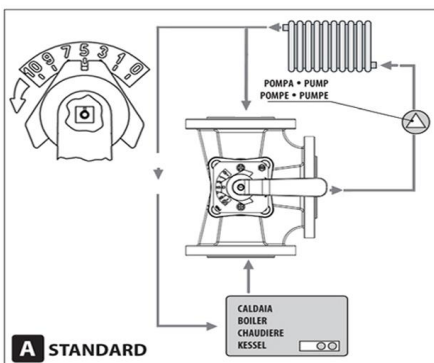
Art: P88 - P52



Art: P51

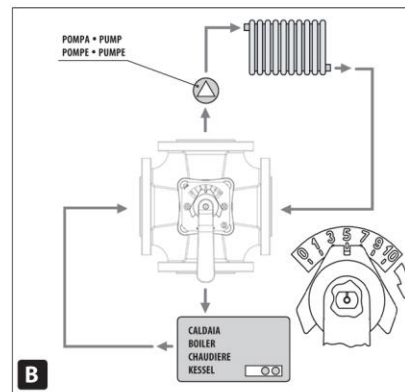
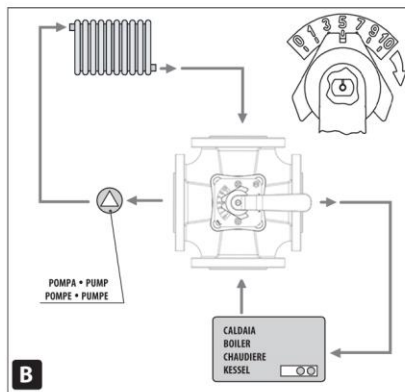
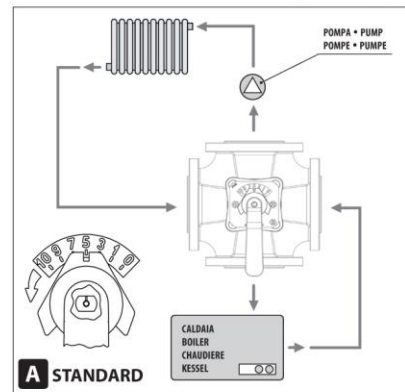
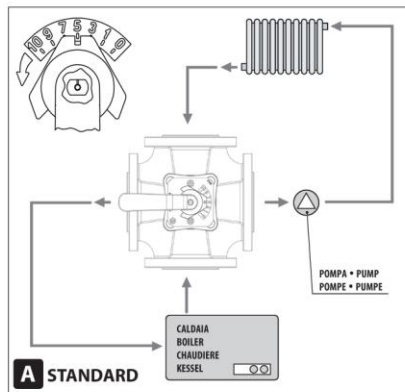
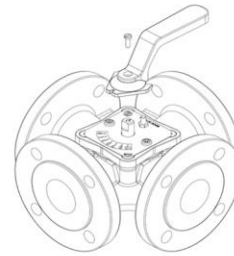


Art: P88



## FLANGED MIXING VALVES

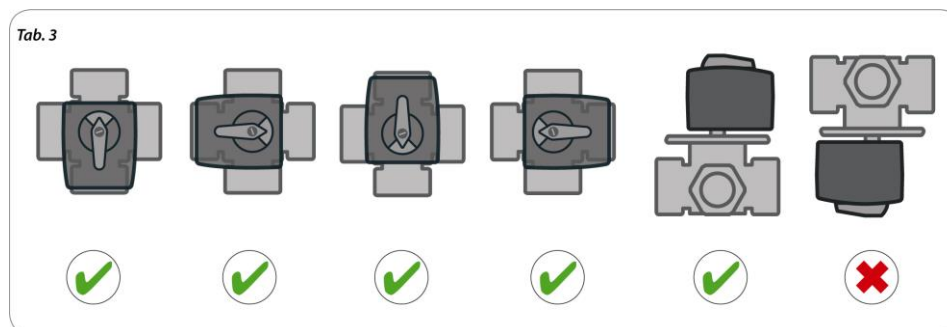
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### Valve's actuation

Barberi M01 actuator can be assembled on the valve in any position, independently from the valve's position and from the chosen installation.

The actuator cannot be assembled if it is directed towards the bottom (see table 3)



## FLANGED MIXING VALVES

Follow these instructions to correctly assemble the M01 actuator:

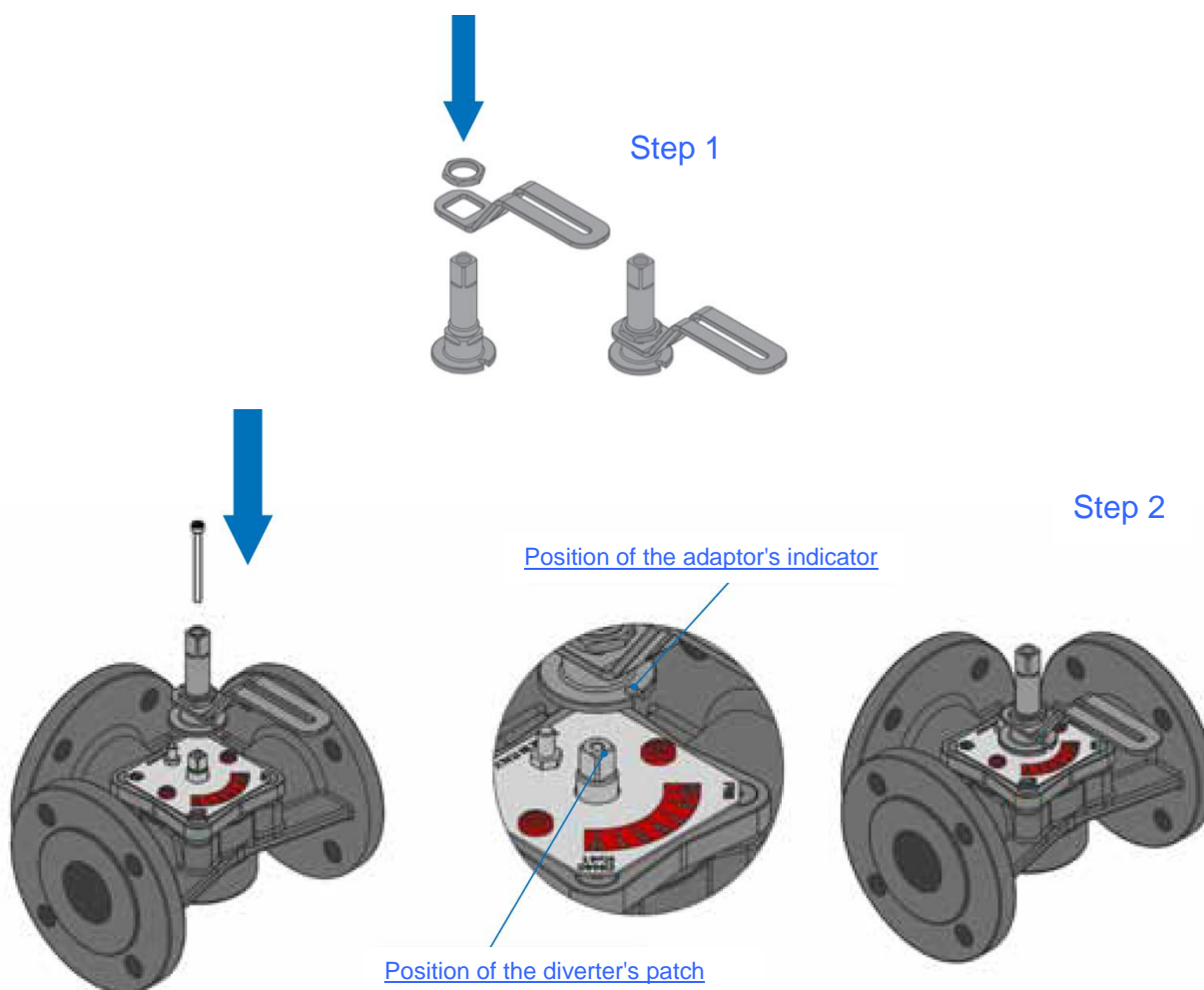
Step 1: if installed, disassemble the handle, by assembling the movement lever as indicated in the instructions and block it on the adaptor with the supplied fitting

Step 2: insert the adaptor on the pin placed on the upper plug, by respecting the different assembling ways according to instructions (the indicator on the lower part of the adaptor must be aligned with the plate's graduation). Block the adaptor by using the M4x50 screw present.

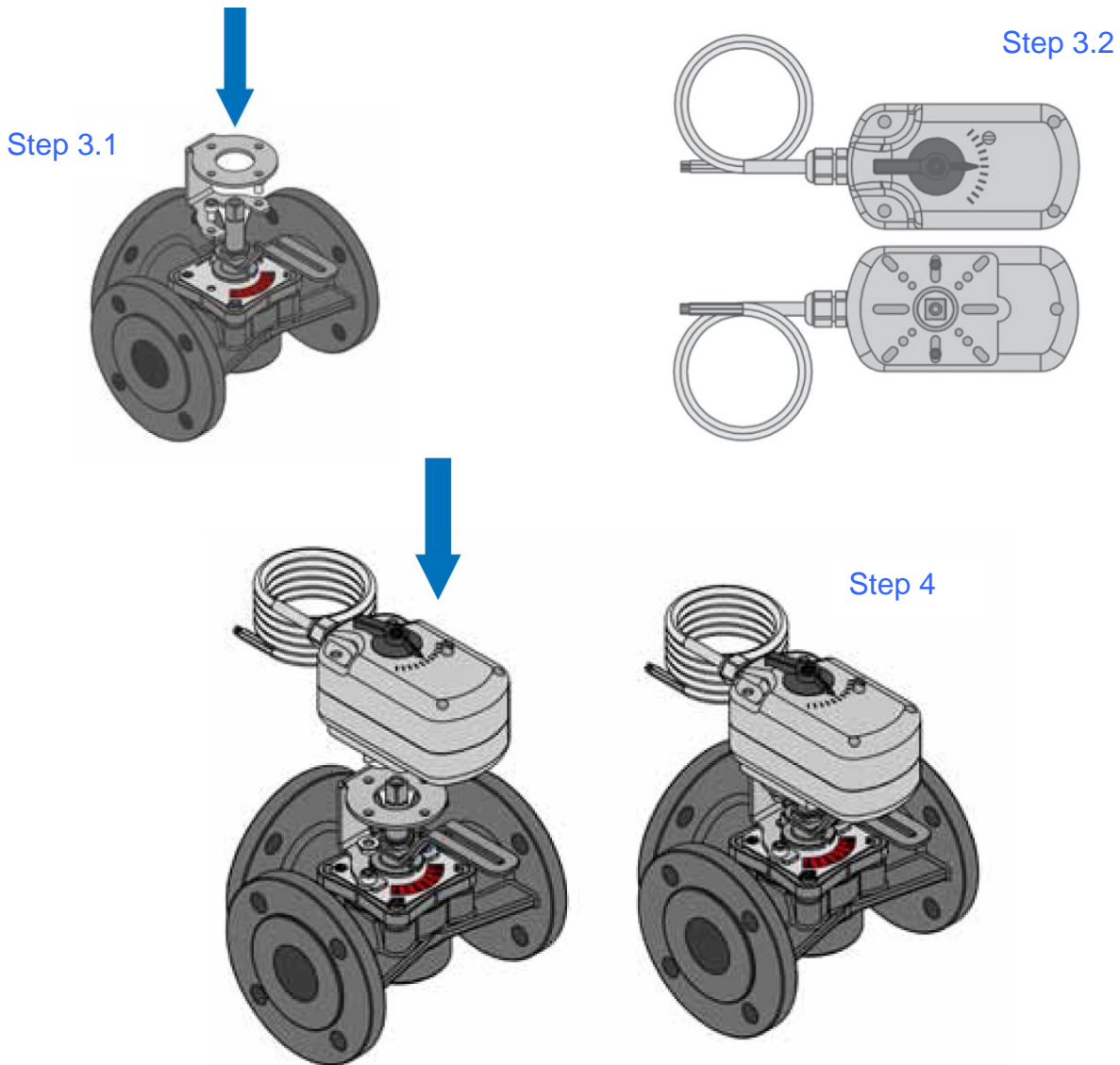
Step 3: remove the two red screws on the plate, assemble the bracket to the actuator as showed in the instructions and block the two M6 screws (it is possible to turn the motor by 90° steps) NOTE: before passing to step4, check if the insert has been assembled by default on the actuator , see step 3.2

Step 4: assemble the actuator on the mixing valve by the dedicated bracket and block it with the two M6 supplied fittings. (see step 4) By unblocking the actuator through the dedicated button, check that the movement of the inner diverter is free and not tied up, if necessary at this point loosen slightly the M6 screws of the brackets and repeatedly move the lever. Block the bracket to the valve.

Note: if the position of the handle should result uncomfortable, it is possible to direct it even with the actuator already assembled



## FLANGED MIXING VALVES



### Specification

Specification text is referred to a specific article ref. Each version of the product obliges the designer to modify the specification's text.

#### Art.ref. P51

3ways sectorial mixing valve, with manual control. Flanged connections Dn40-Dn150. Cast iron body and plug. ABS handle. EPDM tightness. Fluids: water, glycoled water. Max allowed glycole 30%. Temperature range -10+110°C. Max. working pressure 6bar. Could be actuated.



## FLANGED MIXING VALVES

### Art.ref. P88

3ways mixing valve eith tee inside, with manual control. Flanged connections Dn40-Dn150.Cast iron body and plug . ABS handle. EPDM tightness. Fluyds: water, glycoled water. Max allowed glycole 30%. temperature range -10+110°C. Max. working pressure 6bar. Could be actuated.

### Art.ref. P52

4ways mixing valve, with manual control. Flanged connections Dn40-Dn150. Cast iron body and plug. ABS handle. EPDM tightness. Fluyds: water, glycoled water. Max allowed glycole 30%. temperature range -10+110°C. Max. working pressure 6bar. Could be actuated.

### Accessories

#### Art.ref. M010201FAA

Actuator 230v-50/60Hz - 4 VA - 120s/90° - 20Nm - 3points - IP44 - Class II - 6poles wire - micro AUX - manual control - neutral box with instructions inside

#### Art.ref. M010202FAA

Actuator 24v-50/60Hz - 4 VA - 120s/90° - 20Nm - 3points - IP44 - Class II - 5poles wire - micro AUX - manual control - neutral box with instructions inside.

#### Art.ref. M010201FAAK

Actuator 230V-50/60Hz - 4 VA - 120s/90° - 20Nm - 3points - IP44 - Class II - 5poles wire - micro AUX - manual control - neutral box with structions and assembling kit (art.ref.P87) inside.

#### Art.ref. M010202FAAK

Actuator 24v-50/60Hz - 4 VA - 120s/90° - 20Nm - 3points - IP44 - Class II - 5poles wire - micro AUX - manual control - neutral box with instructions and assembling kit (art.ref.P87) inside.

#### Art.ref. P8700000K

Assembling kit for flanged mixing valve's actuator.