

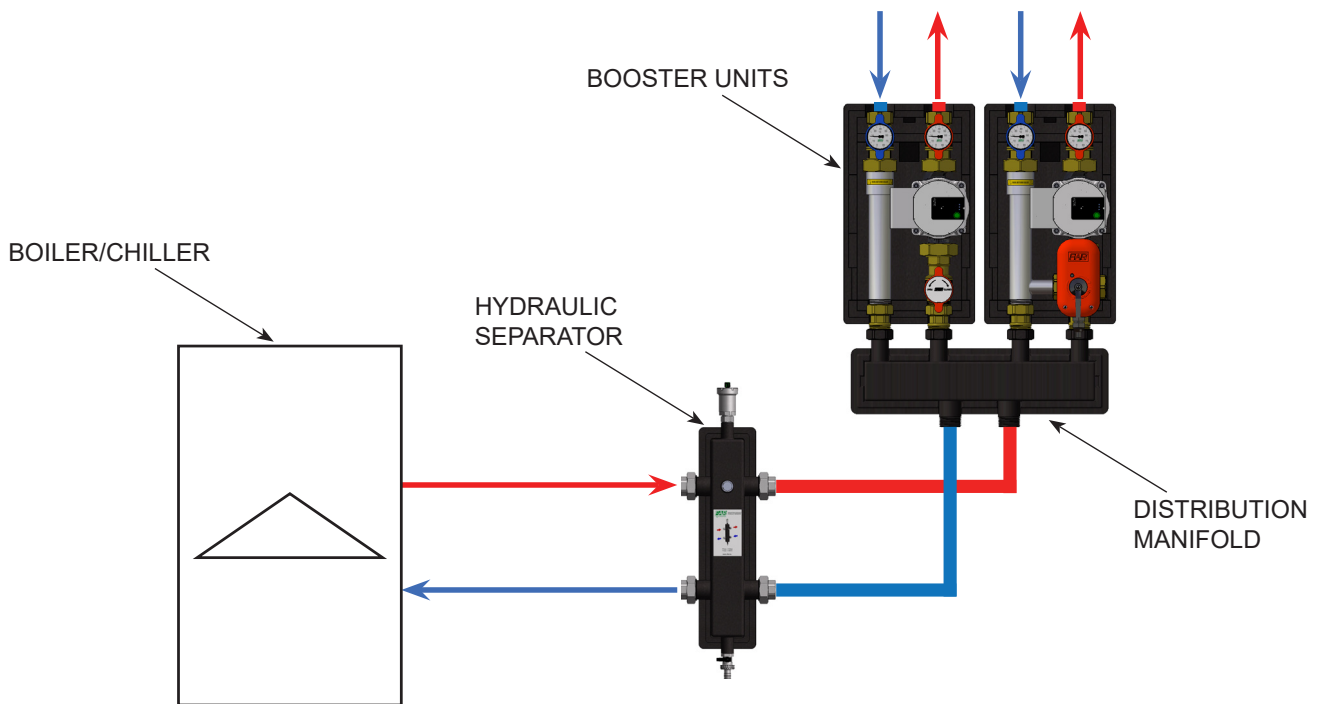


BOOSTER UNITS

Art.216A - Art.216C - Art.216D

DESCRIPTION

The booster units – temperature regulating units – are suitable for temperature control and water distribution. They are usually installed in central heating plant, after the boiler and the hydraulic separator, and can be incorporated into distribution manifolds supplying high and low water temperature systems. The following is an example of the two units installation in the two configurations into a heating (or cooling) system where, from a distribution manifold placed after the hydraulic separator, they leave the connections to the units which will then send the water to the zones to be heated / cooled.



BOOSTER UNITS FOR HIGH WATER TEMPERATURE SYSTEMS (ART.216A)

The booster unit art.216A controls the water distribution at the same temperature as the supply from the boiler or chiller

1. 1" ball valve with 0+80°C temperature gauge and blue handle, for connection to return pipeline.
2. 1" ball valve with 0+80°C temperature gauge and red handle, for connection to supply pipeline.
3. High efficiency pump with 1"1/2 unions.
4. Steel extension with built-in non-return valve for possible pump displacement.
5. 1" ball valve.



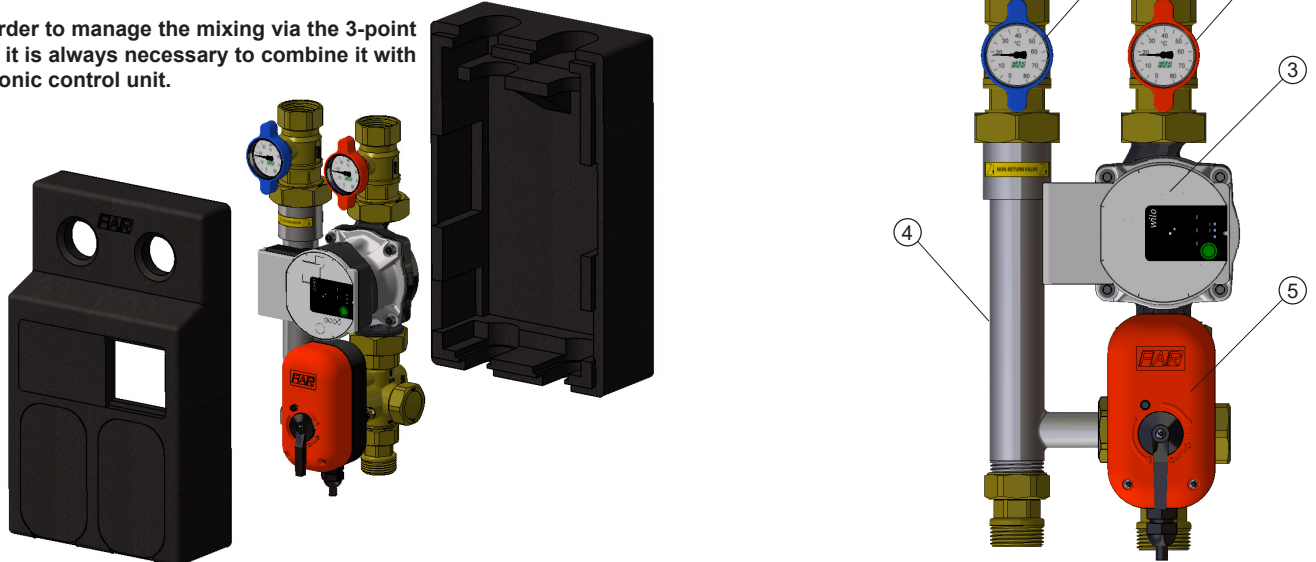
BOOSTER UNIT WITH MIXING VALVE FOR LOW WATER TEMPERATURE SYSTEMS (ART.216C)

The booster unit art.216C controls the water distribution through a regulation:

- **fixed point functioning:** with constant temperature, using the control unit art.9611 complete with supply probe.
- **temperature control:** with variable temperature, using the control unit art.9611 complete with supply and external probe.

1. 1" ball valve with 0+80°C temperature gauge and blue handle, for connection to return pipeline.
2. 1" ball valve with 0+80°C temperature gauge and red handle, for connection to supply pipeline.
3. High efficiency pump with 1"1/2 unions.
4. Steel extension with built-in non-return valve for possible pump displacement.
5. Mixing valve with 1" connections and modulating actuator for automatic regulation.

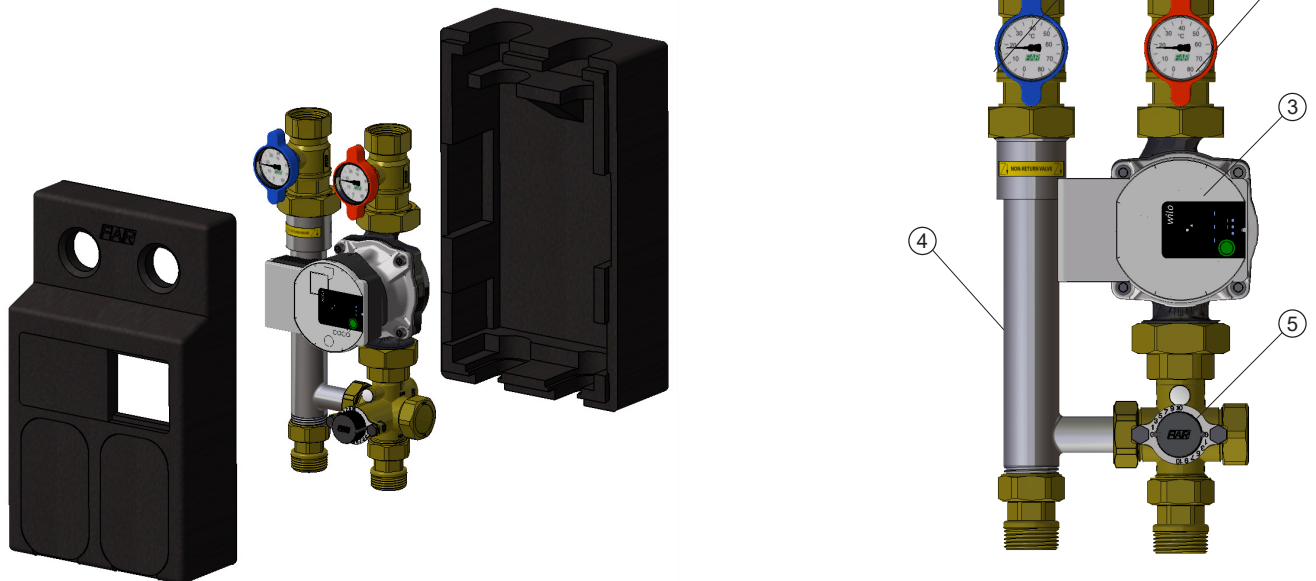
N.B. In order to manage the mixing via the 3-point actuator, it is always necessary to combine it with an electronic control unit.



BOOSTER UNIT WITH MANUAL VALVE FOR LOW WATER TEMPERATURE SYSTEMS (ART.216D)

The booster unit art. 216D controls the water distribution through a manual regulation.

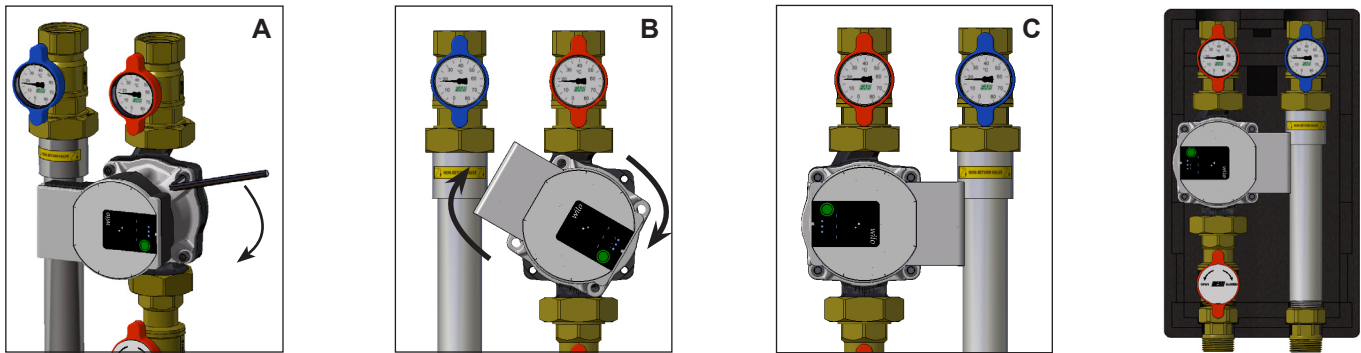
1. 1" ball valve with 0+80°C temperature gauge and blue handle, for connection to return pipeline.
2. 1" ball valve with 0+80°C temperature gauge and red handle, for connection to supply pipeline.
3. High efficiency pump with 1"1/2 unions.
4. Steel extension with built-in non-return valve for possible pump displacement.
5. Manual mixing valve. The valve is motorised, it is possible to install the actuator **art.3010 40**



TECHNICAL FEATURES

- Nominal pressure: 10bar
- Max. temperature : 95°C (without temperature gauges)
- Compatible media: water, water with glycol

PUMP CONFIGURATION WITH LEFT-HAND SIDE SUPPLY

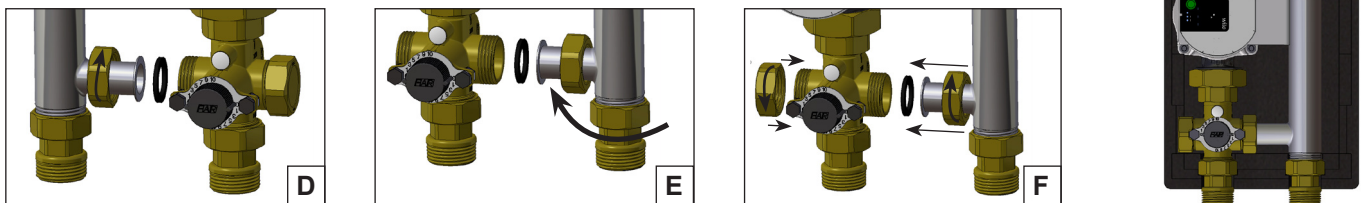


When the pump is installed on the left side, it is also necessary to rotate the electronic part. In order to achieve this arrangement please proceed as follows:

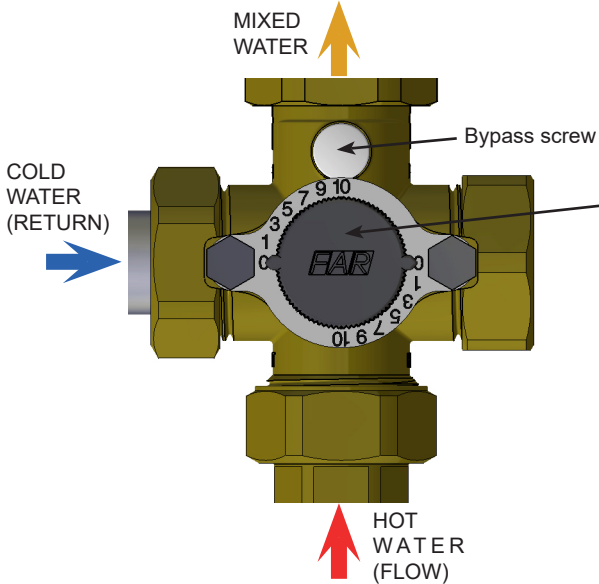
- A-** Unscrew the 4 locking screws.
- B-** Rotate the electronic part of the pump through 180° and tighten the locking screws again.
- C-** Reverse the supply and the return pipelines.

If it is necessary to install the booster units **art.216C-216D** on the left side, the mixing unit must also be rotated:

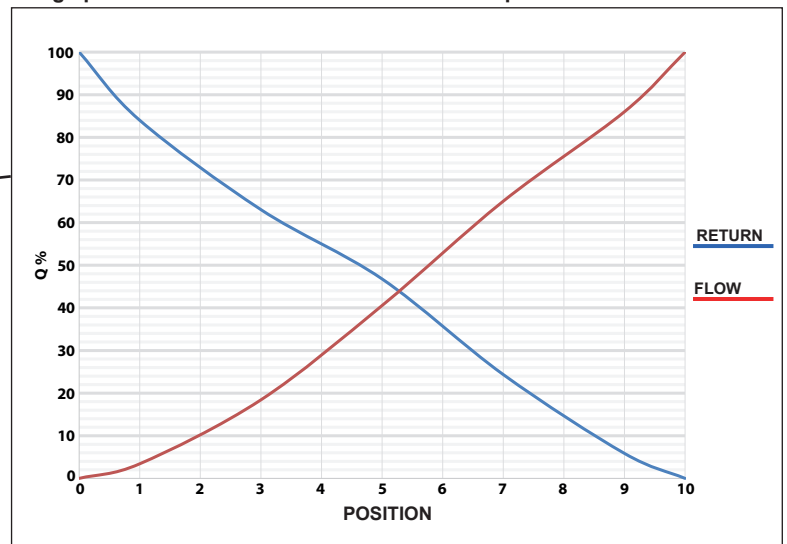
- D-** Unscrew the central nut in order to separate the supply from the return line.
- E-** Move the supply to the right side and rotate the central extension piece through 180°.
- F-** Remove the plug and screw it on the right side of the mixing unit and connect the central extension piece



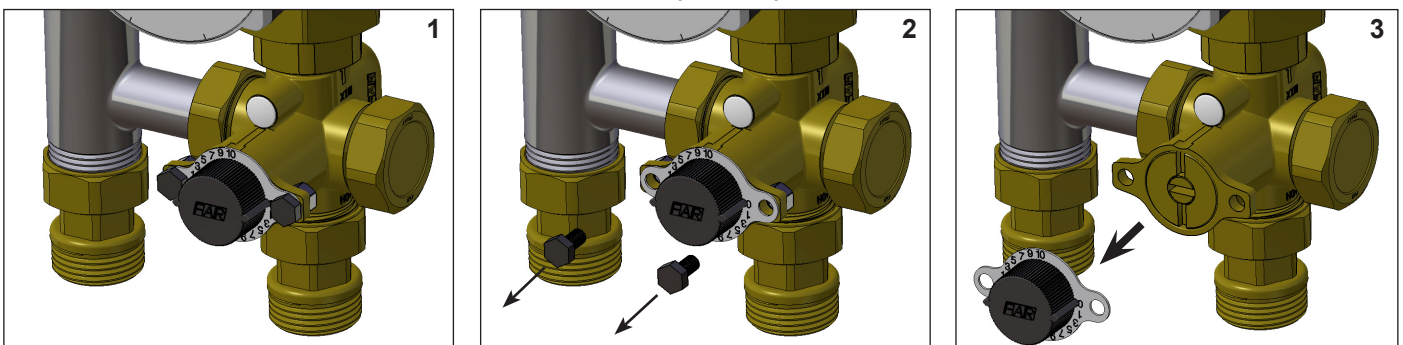
MANUAL MIXING VALVE



The graph shows the flow rates as a function of the position of the selector



To be able to install the electric actuator and switch to automatic operation, proceed as follows:



N.B. In order to manage the mixing via the 3-point actuator, it is always necessary to combine it with an electronic control unit.

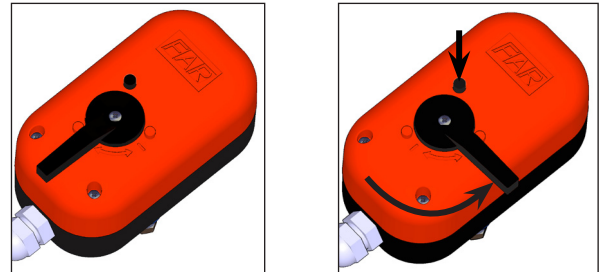
“SMALL” 3 POINTS ACTUATOR

ARTICOLE	VOLTAGE FREQUENCY	ABSORBED POWER	ROTATION ANGLE	ROTATION TIME	TORQUE	ROOM TEMPERATURE	DEGREE OF PROTECTION	COLOUR
3010 40	230 V-50Hz	4,5 VA	90°	180 S	10 Nm	-10° + 50°C	IP54	RED/BLUE

The actuator, incorporating an appropriate servomotor, permits automatic operation of a mixing valve. It operates in response to a signal coming from a temperature control unit.

Manual release use

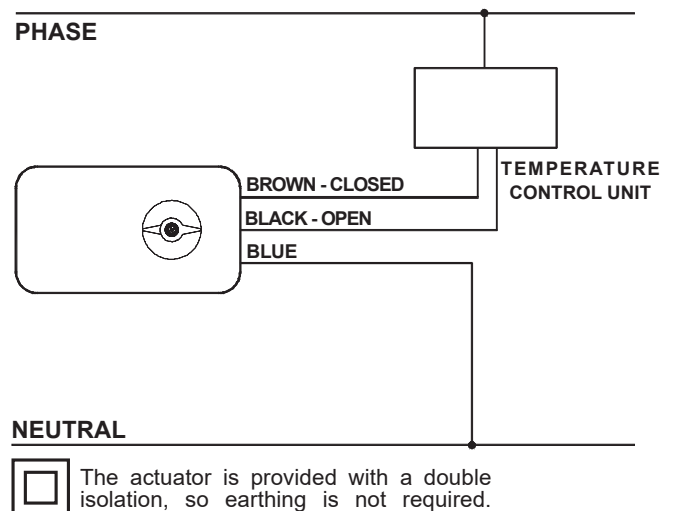
In order to manually open or close the actuator, push the red key and simultaneously turn the position indicator counter-clockwise through 90°. Normal functioning will return automatically.



Electrical Connection

Before connecting the actuator ensure that the selected model is compatible with the available network voltage. All connections must to be made by qualified personnel, with respect for overall electrical system and taking care that the electricity supply is switched off. Incorrect connection may damage both person and equipment. All FAR actuators have been designed with an additional auxiliary microswitch, an exchange contact without voltage, for low-tension signals (max 230 V) and/or to supply applications with low electrical input (max 2A).

N°	COLOUR	CONNECTION	DESCRIPTION
1	GREY	MICROSWITCH COMMON CONTACT	CONNECTED TO THE COMMON CONTACT OF THE MICROSWITCH
2	WHITE	N.O. OF THE MICROSWITCH	CONNECTED TO THE NORMALLY OPEN CONTACT OF THE MICROSWITCH
3		SIGNAL INDICATOR	WITH OPEN VALVE PRESENCE OF PHASE ON TERMINAL
N	BLUE	NEUTRAL	CONNECTION TO THE NEUTRAL OF SYSTEM
5	BROWN	PHASE - CLOSE	VALVE CLOSING
6	BLACK	PHASE - OPEN	VALVE OPENING
7		SIGNAL INDICATOR	WITH CLOSED VALVE PRESENCE OF PHASE ON TERMINAL



Wiring connections:

Actuator with temperature control unit

To control opening and closing of a zone valve via an actuator, connect the blue wire to the neutral one, the brown and the black to the temperature control unit. The valve opens in presence of phase on the black wire, while with phase on the brown the valve closes.

TECHNICAL ASSISTANCE

For any kind of problem apply directly to FAR Rubinetteria S.p.A.
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