



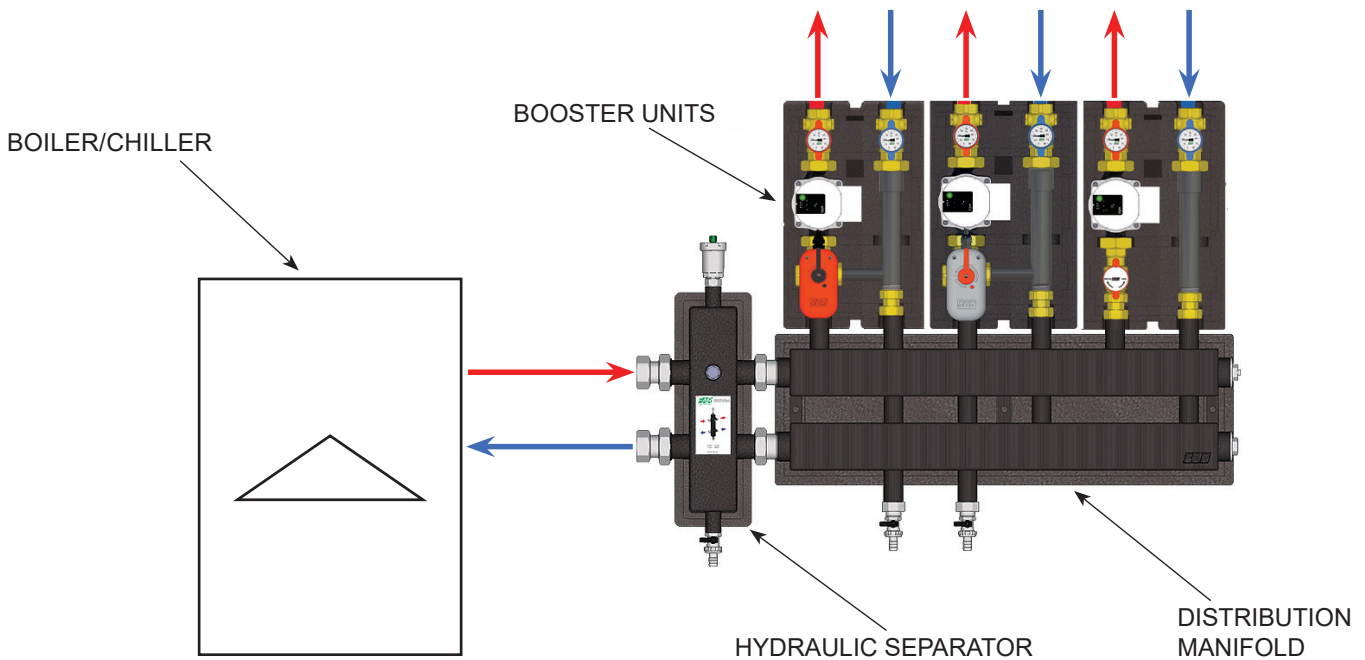
Instruction booklet

Booster unit for hot-cold temperature regulation

Art.2187 - Art.2188 - Art.2189

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 system. The following is an example of the three units installation in the three 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 UNIT FOR DIRECT SYSTEMS - ART.2187

The booster unit art.2187 controls the water distribution at the same temperature as the supply from the hot/cold water generator system.

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



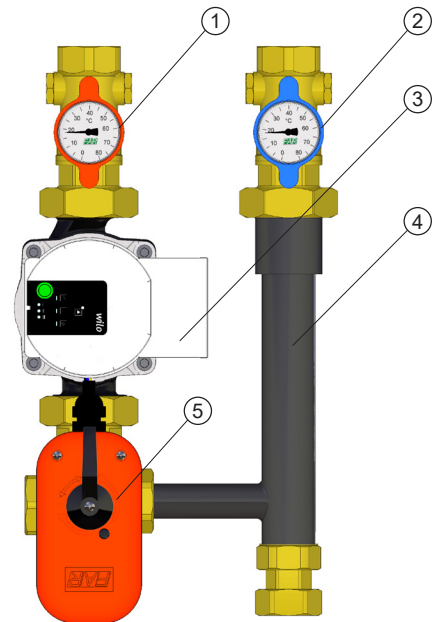
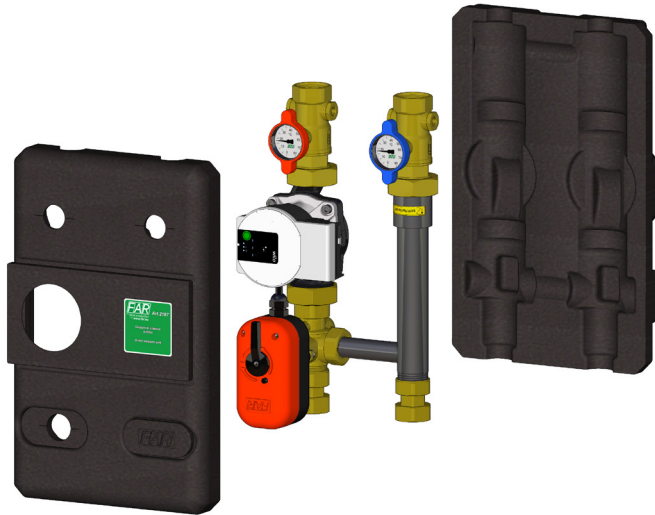
BOOSTER UNIT WITH MIXING VALVE AND ACTUATOR (230V) - ART.2188

The booster unit **Art.2188** permits the regulation of the system flow distribution, by means of an electronic control.

Suitable for heating and mixed systems (heating and cooling systems), the booster unit must be used in association with an electronic control unit, complete with temperature probe, **Art.9614**. For the mixed hot/cold heating and cooling systems, it is available the temperature and humidity probe, **Art.9605**.

1. 1" or 1"1/4 (for 1" 1/4 booster units) ball valve with 0+80°C temperature gauge and red handle, for connection to supply pipeline.
2. 1" or 1"1/4 (for 1" 1/4 booster units) ball valve with 0+80°C temperature gauge and blue handle, for connection to return pipeline.
3. High efficiency pump with 1"1/2 or 2" (for 1" 1/4 booster units) unions.
4. Steel extension with built-in non-return valve for possible pump displacement.
5. Mixing valve with 1" connections and modulating actuator (**230V**) for automatic regulation.

ACTUATOR COLOUR: RED/BLACK



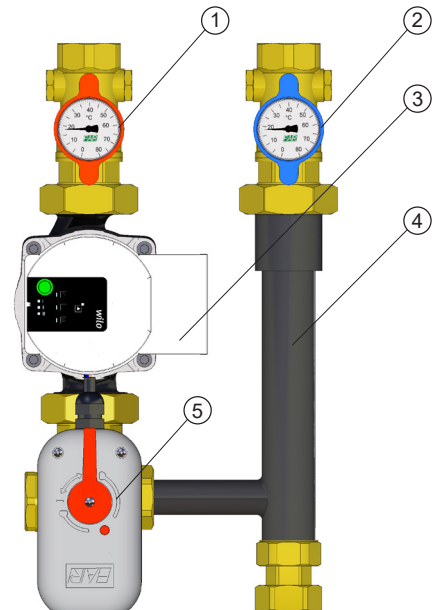
BOOSTER UNIT WITH MIXING VALVE AND ACTUATOR (0-10V) - ART.2189

The booster unit **Art.2189** permits the regulation of the system flow distribution, by means of an electronic control.

Suitable for heating and mixed systems (heating and cooling systems), the booster unit must be used in association with an electronic control unit, complete with temperature probe, **Art.9614**. For the mixed hot/cold heating and cooling systems, it is available the temperature and humidity probe, **Art.9605**.

1. 1" or 1"1/4 (for 1" 1/4 booster units) ball valve with 0+80°C temperature gauge and red handle, for connection to supply pipeline.
2. 1" or 1"1/4 (for 1" 1/4 booster units) ball valve with 0+80°C temperature gauge and blue handle, for connection to return pipeline.
3. High efficiency pump with 1"1/2 or 2" (for 1" 1/4 booster units) unions.
4. Steel extension with built-in non-return valve for possible pump displacement.
5. Mixing valve with 1" connections and modulating actuator (**0-10V**) for automatic regulation.

ACTUATOR COLOUR: GREY/BLUE



TECHNICAL FEATURES

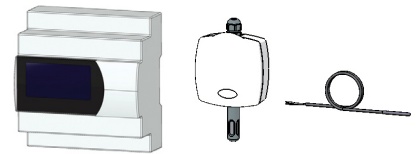
- Nominal pressure: 10bar
- Max. temperature : 95°C (without temperature gauges)
- Compatible media: water, water with glycol

ELECTRONIC CONTROL UNIT FOR BOOSTER UNIT WITH MIXING VALVE (TO BE PURCHASED SEPARATELY)

The booster unit equipped with mixing valve must be used in association with an electronic control unit:

To control the regulation of the mixing valve, it is available the Art. 9614, equipped with an electronic hot/cold unit, a supply probe and an external probe.

The control unit is single zone, i.e. it can control one actuator.



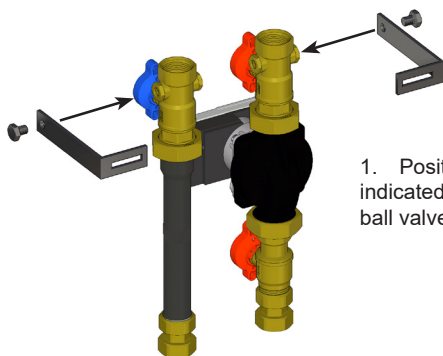
OPTION (TO BE PURCHASED SEPARATELY)

Art. 9605 temperature and humidity probe
(for heating/cooling systems)



WALL INSTALLATION (TO BE PURCHASED SEPARATELY)

Brackets complete with screws, art.7478 can be used for wall installation.

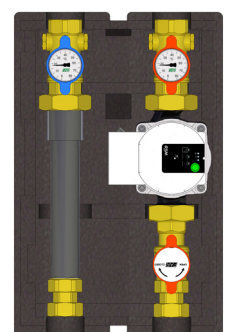
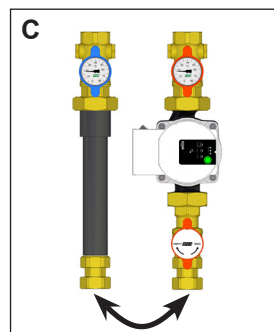
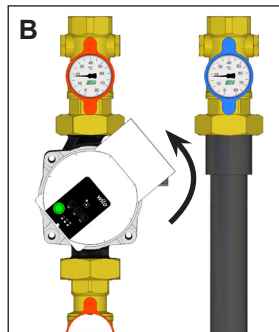
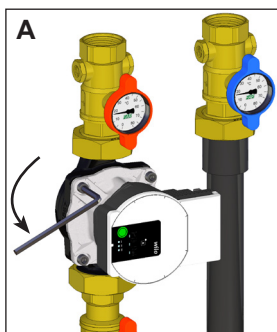


1. Position the bracket as indicated and screw it on the ball valve plug.



2. To insert the brackets in the insulation, cut along the splits on the back shell and fix using two Rawlplugs.

PUMP CONFIGURATION WITH RIGHT-HAND SIDE SUPPLY

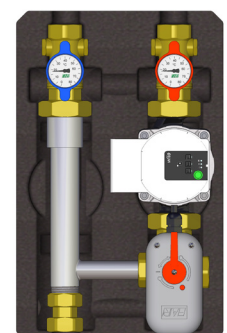
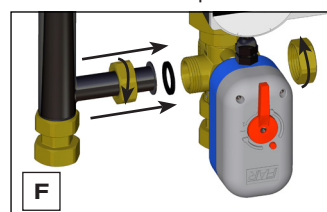
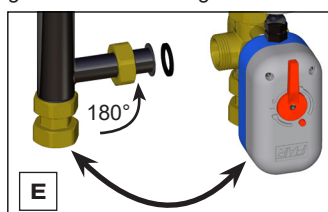
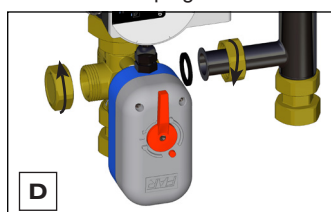


When the pump is installed on the right side, it is also necessary to rotate the electronic part. In order to achieve this arrangement please proceed as follows:

- 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.2188-2189 on the right 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.



3 POINTS 230V ACTUATOR FOR MIXING VALVE

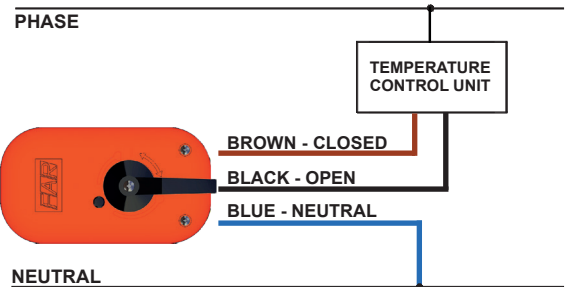
ACTUATOR COLOUR: RED/BLACK



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

ELECTRICAL CONNECTION

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



The actuator is provided with a double isolation, so earthing is not required.

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.

MODULATING ACTUATOR WITH SIGNAL 0-10V

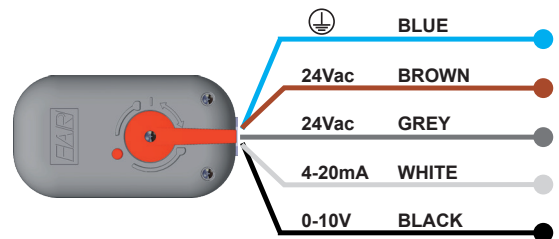
ACTUATOR COLOUR: GREY/BLUE



CODE	VOLTAGE FREQUENCY	ABSORBED POWER	ROTATION ANGLE	ROTATION TIME	TORQUE	ROOM TEMPERATURE	DEGREE OF PROTECTION
3012 180	24 V-50Hz	4,5 VA	90°	180 S	10 Nm	-10° + 50°C	IP54

ELECTRICAL CONNECTION

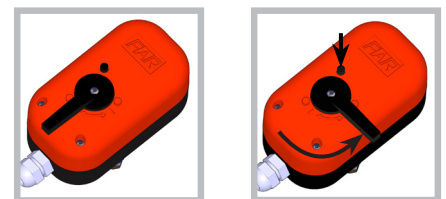
COLOUR	CONNECTION	DESCRIPTION
BLUE	NEUTRAL	NEUTRAL CONNECTION - ACTUATOR POWER SUPPLY
BROWN	PHASE	24Vac PHASE CONNECTION - ACTUATOR POWER SUPPLY
GREY	PHASE	24Vac PHASE CONNECTION - ROTATION POINT INVERSION
WHITE	4-20mA	CONNECTION TO THE CONTROL UNIT WITH 4-20mA CONTROL SIGNAL
BLACK	0-10V	CONNECTION TO THE CONTROL UNIT WITH 0-10V CONTROL SIGNAL



To control the opening and closing of the zone valve through the actuator, simply connect the blue cable to neutral, the brown cable to phase and the black cable to the 0-10V control unit (or the white cable if the regulation is 4-20mA). The grey cable is used to invert the starting point of the actuator and, as far as our applications are concerned, we suggest to leave it always under power.

MANUAL RELEASE

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



TECHNICAL ASSISTANCE

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

E-mail: ufficio.tecnico@far.eu
 Web site: www.far.eu