SYSTEM FILLING

To speed up system filling, we suggest setting the regulating knob of the thermostatic mixer to the MAX position, in order to achieve the maximum inlet opening. Once filled,the system will discharge any air in the return pipe via the manual air vent valve (N°6 on the drawing). To fill the heating circuits it is necessary to close each valve on the return manifold and then open them one by one. We recommend cleaning the system to prevent any impurities obstructing the waterways, or even causing a malfunction of the regulating controls.

TECHNICAL FEATURES

Nominal pressure:	10 bar
Max. initial flow temperature at mixer inlet:	95°C
Mixer setting range:	18°C-55°C
Center distance of the pump to install:	130mm
Connection for safety thermostat:	1/2”

flow evolution

SET POINT REGULATING UNIT FOR UNDERFLOOR HEATING SYSTEMS

Art.3493

VF337 ENG - EDIZIONE N° 1: 18/03/19

SET POINT REGULATING UNIT FOR LOW TEMPERATURE SYSTEMS

The set point regulating unit is suitable for use in underfloor heating systems for low temperature distribution. It is designed for connection to both flow and return lines with provision for an integral pump.
Temperature is controlled by means of the thermostatic mixer, which, depending on the preset value blends water from the return circuit with hot water coming direct from the boiler.

The unit consists of the following devices (see picture):

1- **Connection piece of the return manifold:** a percentage of water enters the mixer and a percentage returns to the boiler.

2- **Thermostatic mixer for low temperature systems.**

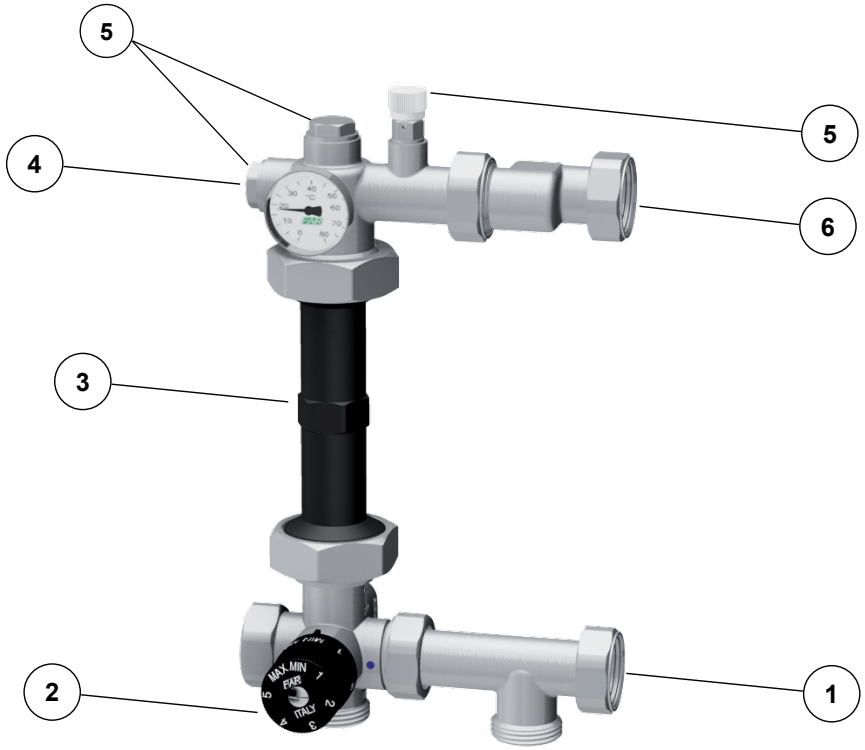
3- **130mm template where the circulator will be placed.**

4- **Connection piece with 0-80 °C thermometer and suitable for connection to a safety thermostat with 1/2”connection.**

5- ½ Plugs: suitable for installation of a safety thermostat and/or other accessories.

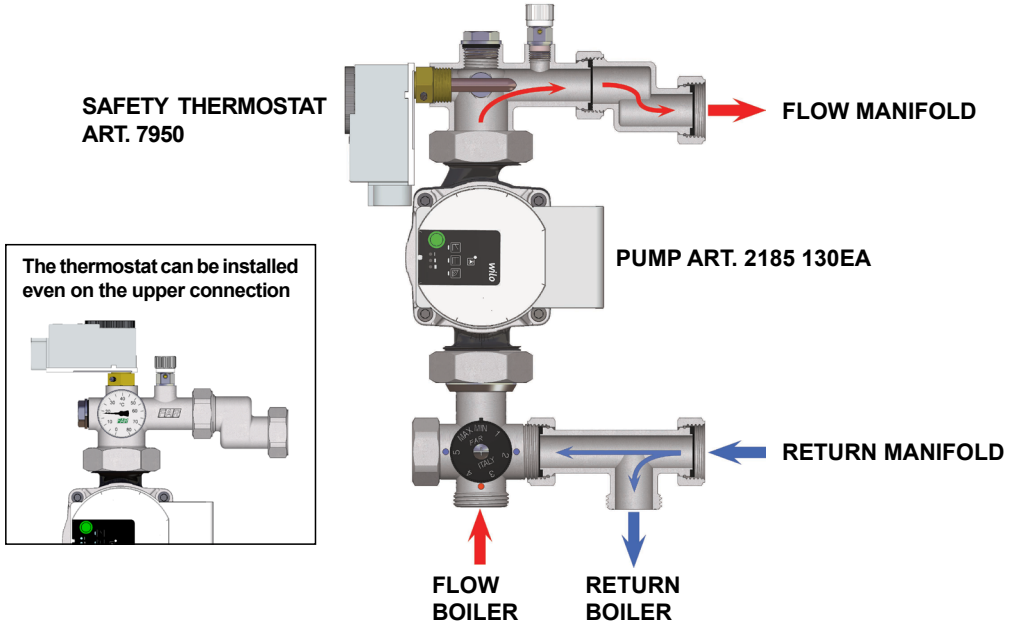
6- **Manual air vent valve.**

7- **Eccentric fitting for connection of the flow manifold**



OPERATION

The circulation takes place as follow: water leaves the mixer unit (2) and is pumped to the flow side of the manifolds from whence it is distributed to the individual underfloor heating loops. Water coming back from the loops enters the return side of the manifolds and through the return connection (1) goes back to the mixer. In case the flow temperature is lower than that set one, the mixer shutter allows high temperature water to enter the circuit to rebalance the system. The high temperature fluid coming from the boiler reaches the mixer unit (2), simultaneously an equal quantity of water coming back from panels through the connection piece (1) is diverted to the boiler.



THERMOSTATIC MIXER

The thermostatic mixer is designed to keep constant the water supply for the low temperature system. The supply temperature setup must be carried out when starting up the system, making reference to the design temperature. An initial set-up can be achieved based on the relationship between the setting on the mixer and the flow water temperature.

POSITION	t[°C]
MIN	18 ± 2
1	20 ± 2
2	22 ± 2
3	30 ± 2
4	40 ± 2
5	50 ± 2
MAX	55 ± 2

The temperature value can be read on the unit’s temperature gauges. Once the control knob of the mixer is set, the system is regulated. The temperature values at the different positions will not correspond exactly to the values in the table. Tolerance is built in to match the features of the individual system served by the unit. Temperature regulation must be carried out with reference to the value on the temperature gauge located on the supply manifolds.