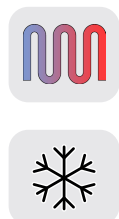


MIXED MODULE WITH FIXED POINT MIXING VALVE AND INSULATION DESIGNED FOR COOLING APPLICATIONS



SAFETY: Read the installation and commissioning instructions carefully before operating the device in order to avoid accidents and system failure caused by improper use of the product. Installation, inspection and maintenance must be carried out by qualified personnel in accordance with local regulations in force. Before carrying out any work, disconnect the power supply. Keep this manual at the place of installation for future reference.

Installation and Commissioning Instructions



Features

Mixed unit with two-way fixed point mixing valve for heating and cooling systems, with insulation specifically designed for cooling applications.

- Nominal size: DN25
- Connections: 1" Female union
- Threads: according to ISO 228
- Centre distance: 125 mm
- 1" (180 mm) circulating pumps
- Component finish: yellow brass
- Application fluids: Water (glycol max. 50%)
- Maximum working pressure: 10 bar (PN10)
- Maximum fluid temperature: 95 °C

Materials

- Fittings and components: copper alloy CW617N
- Insulation: EPP 70 g/L ; thermal conductivity 0.040 W/mK
- Gaskets: EPDM Peroxide
- Ball valve sealing seats: PTFE

Declarations of Conformity

The product is manufactured in accordance with the ISO 9001:2015 certified Quality System, Icim / IqNet

Installation orientation

In cooling applications, installation in a vertical position is imperative for the proper evacuation of any residual condensation.



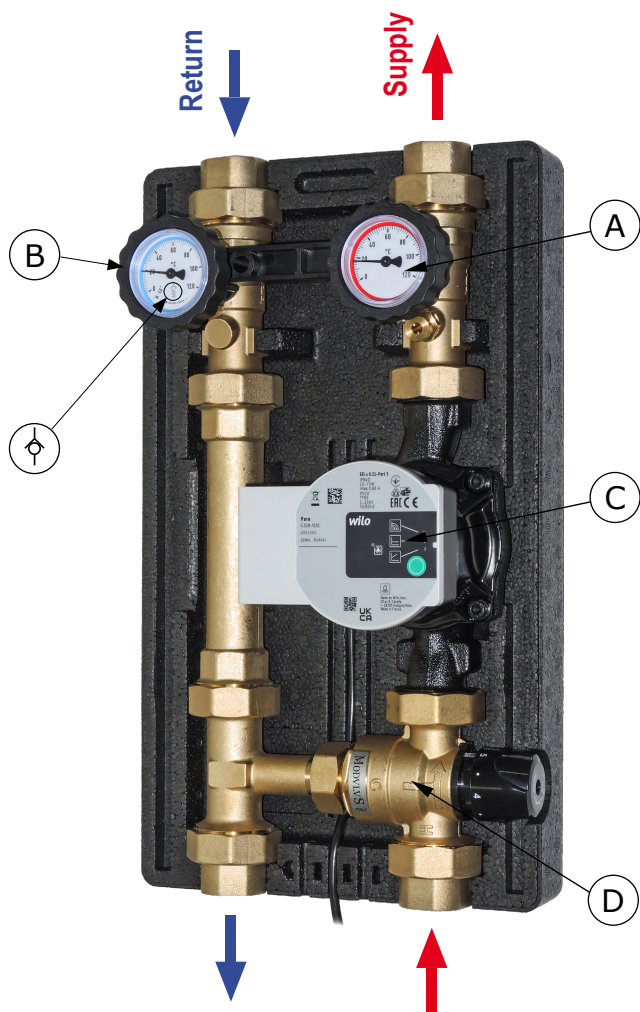
SAFETY

It is recommended to always install a safety thermostat on the supply pipe to prevent overheating.

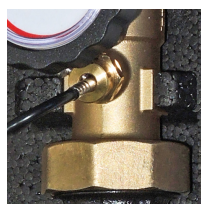


MIXED MODULE WITH FIXED POINT MIXING VALVE AND INSULATION DESIGNED FOR COOLING APPLICATIONS

Components and Functionality

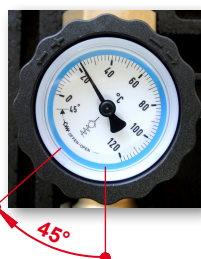


A. Flanged ball valve with sensor holder $\varnothing$ 6 mm and thermometer handle (thermometer with red ring; 0°C-120°C).



Sensor box on the delivery branch.

B. Flanged ball valve with thermometer handle (thermometer with blue ring; 0°C-120°C), with check valve 20 mbar.



The check valve prevents natural circulation of the fluid (radiator effect); it can be momentarily excluded by turning the knob 45° clockwise from the open position.

C. Pre-wired high-efficiency synchronous circulator.

CIRCULATING PUMP MAINTENANCE

For any maintenance or replacement of the circulating pump, close the ball valves (A) and (D) by turning the respective knobs clockwise. When maintenance is complete, reopen the two ball valves and restore system pressure.

Perform maintenance when the system is cold.

D. Thermostatic mixing valve.

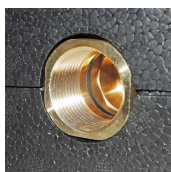
Insulation

Insulation designed for use in cooling systems. Hermetic insulation made of high-density EPP prevents the formation of internal condensation, preventing unwanted air circulation from bringing moisture inside. The use of cooling-specific insulation prevents condensation and dripping. It protects the system and its surroundings, ensures efficiency and reliability over time, facilitates maintenance and improves hygiene. Dimensions: 250x428x154 mm



Insulation with openings adhered to component profiles.

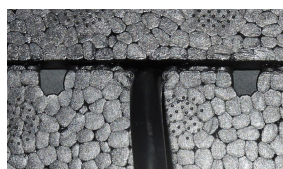
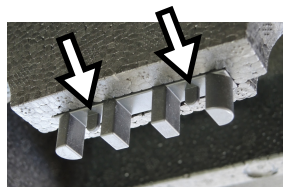
All connections are glanded and aligned to the insulation, for ease of installation and pipe insulation.



The special design within the insulation directs any residual condensation away from critical points and wiring.



Circulating pumps with cataphoresis-treated body.



Between the lid and the tank, a plastic plug has the function of ensuring the correct coupling between the parts and obstructing the cable outlets that are not in use. If necessary, it is sufficient to remove the tabs (with pliers or another tool) in order to free the necessary outlet. Slots are provided inside the tank to securely hold wiring of different sections.

MIXED MODULE WITH FIXED POINT MIXING VALVE AND INSULATION DESIGNED FOR COOLING APPLICATIONS

Field of use

Indicative data for heating applications in underfloor and radiator systems

Model	Adjustment range	Δt	Kvs	Indicative system power and flow rate	Recommended circulating pump	Residual head	Indicative underfloor system size
F1(**)	20-45°C	8 K	2.2	4,5 kW - 500 l/h	Wilo Para 25/6 SC	5 mH ₂ O	Up to 50 m ²
F2	45-70°C	20 K	2.2	11 kW - 500 l/h	Wilo Para 25/6 SC	5 mH ₂ O	-
F3(**)	20-45°C	8 K	3.3	14 kW - 1500 l/h	Wilo Para 25/8 SC	5 mH ₂ O	From 50 m ² to 150 m ²
F4	45-70°C	20 K	3.3	35 kW - 1500 l/h	Wilo Para 25/8 SC	5 mH ₂ O	-

Thanks to the **MultiMix** thermostatic mixing valve, the unit can deliver the maximum supply temperature, equal to that of the incoming hot water. When lower temperatures are required, to ensure smooth and continuous mixing, the temperature of the incoming hot water must be 3-5 K higher than the desired mixed outlet temperature. Reference temperatures: **Models F1 and F3**: Th: 55°C ; Tc: 24°C ; Tmix: 32°C - **Models F2 and F4**: Th: 75°C ; Tc: 40°C ; Tmix: 55°C

Indicative data for underfloor cooling system applications

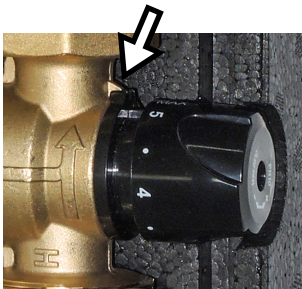
Model	Δt	Kvs	Indicative system power and flow rate	Circulating pump	Residual head
F3	5 K	3.3	6 kW - 1000 l/h	Wilo Para 25/6 SC	5 mH ₂ O
F4	5 K	3.3	9 kW - 1500 l/h	Wilo Para 25/8 SC	5 mH ₂ O

Thermostatic mixing valve

IMPORTANT

Mixing occurs exclusively within the adjustment range. When the system operates in cooling mode, the unit does not perform any mixing due to the low temperature, which keeps the thermostatic mixing valve constantly open on the supply side. Therefore, in this application, the functionality is equivalent to that of a direct unit: the supply temperature from the energy source is fully transferred to the user circuit.

Temperature setting. Adjustment is carried out by rotating the knob until the position corresponding to the desired temperature aligns with the reference index (indicated in the image). The reference positions are marked on the knob profile: the corresponding temperature, shown in the table alongside, is valid for the mixing valve under the standard conditions indicated below.

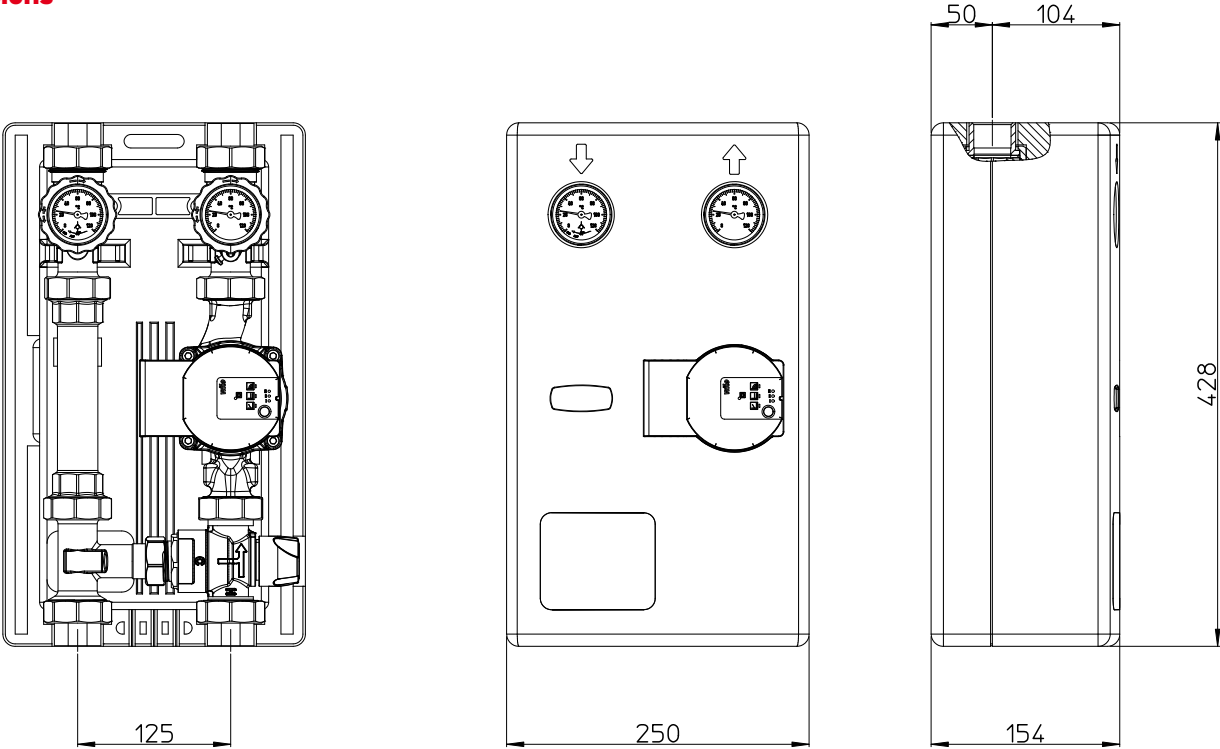


Knob reference temperatures (under test conditions *)								
Mod.	T°	MIN	1	2	3	4	5	MAX
F1 / F3	20-45°C	(24)	24	26	31	36	41	46
F2 / F4	45-70°C	42	46	52	58	63	68	70

(*) Tests carried out in our laboratory under the test conditions specified below, with a differential pressure of 1 bar: F1/F3: Th:55°C, Tc:24°C, Tmix:32°C ; F2/F4: Th:75°C, Tc:40°C, Tmix:55°C

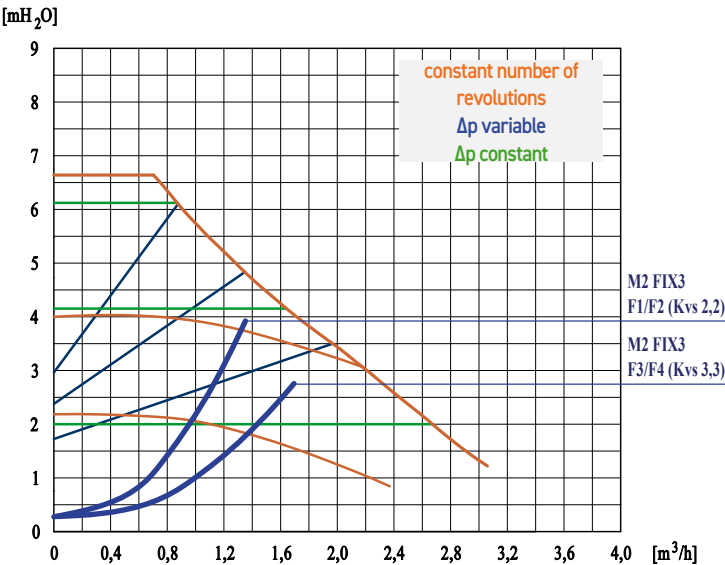
MIXED MODULE WITH FIXED POINT MIXING VALVE AND INSULATION DESIGNED FOR COOLING APPLICATIONS

Dimensions

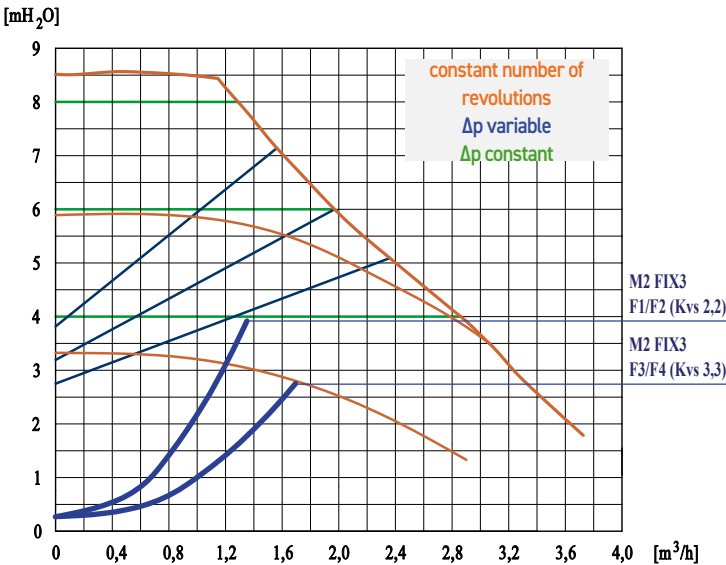


Circulating pumps and module characteristic curves

Wilo Para 25/6 SC
 Δp_v / Δp_c / constant number of revolutions; PN10 - max. 95 °C
 3-43 W - I_{max} 0.44 A ; 230 VAC, 50/60 Hz ; EEI ≤ 0.20



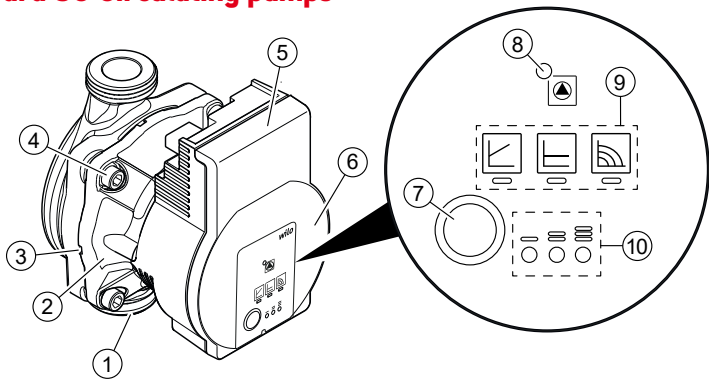
Wilo Para 25/8 SC
 Δp_v / Δp_c / constant number of revolutions; PN10 - max. 95 °C
 10-75 W - I_{max} 0.66 A ; 230 VAC, 50/60 Hz ; EEI ≤ 0.21



ELECTRICAL CONNECTION
 Mains connection: Voltage: 230 VAC ± 10%. Only have electrical connections carried out by an electrical fitter in accordance with the applicable local regulations. The type of current and voltage must correspond to the information on the data plate of the circulator.

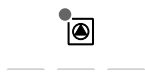
MIXED MODULE WITH FIXED POINT MIXING VALVE AND INSULATION DESIGNED FOR COOLING APPLICATIONS

Wilo Para SC Circulating pumps



1. Pump housing with screwed connections
2. Glandless motor
3. Condensation drain openings (4x around circumference)
4. Housing screws
5. Control module
6. Rating plate
7. Operating button for pump adjustment
8. Run/fault signal LED
9. Display of selected control mode
10. Display of selected pump curve (I, II, III)

Indicator lights (LEDs)



- Signal display
- LED is lit up in green in normal operation
- LED lights up/flashes in case of fault



- Display of selected control mode Δp -v, Δp -c and constant speed



- Display of selected pump curve (I, II, III) within the control mode



- LED indicator combinations during pump venting function, manual restart and key lock



Operating button

Press

- Select control mode
- Select pump curve (I, II, III) within the control mode

Press and hold

- Activate the pump venting function (press for 3 seconds)
- Activate manual restart (press for 5 seconds)
- Lock/unlock button (press for 8 seconds)

Functions

Venting

The pump venting function is activated by pressing and holding the operating button (for 3 seconds) and automatically vents the pump.

The top and bottom LED rows flash in turn at 1 second intervals. To cancel, press and hold the operating button for 3 seconds.

The heating system is not vented.

Manual restart

A manual restart is initiated by pressing and holding the operating button (for 5 seconds) and unblocks the pump if required

(e.g. after long standstill period in summer).

Lock/unlock the button

The key lock is activated by pressing and holding the operating button (for 8 seconds) and locks the pump's current settings. It protects against undesired or unauthorised adjustment of the pump.

Control modes

- The LED selection of control modes and corresponding pump curves takes place in clockwise succession.
- Press the operating button briefly (approx. 1 second).
- LEDs display the set control mode and pump curve.

	LED display	Control mode	Pump curve
1		Constant speed	II
2		Constant speed	I
3		Variable differential pressure Δp -v	III
4		Variable differential pressure Δp -v	II

	LED display	Control mode	Pump curve
5		Variable differential pressure Δp -v	I
6		Constant differential pressure Δp -c	III
7		Constant differential pressure Δp -c	II
8		Constant differential pressure Δp -c	I
9		Constant speed	III