

# ISOMIX-F

Control unit for panel heating/cooling systems

Constant temperature maintenance

## Technical Data Sheet



## Description and application

The **ISOMIX-F** is a control unit designed for use in systems with combined panel heating/cooling. In heating mode, the control unit ensures fixed value control of the flow temperature and circulation of the hot water in heating circuits. In cooling mode, **ISOMIX-F** is used to provide the circulation of cooling water in the cooling circuits.



### Control unit ISOMIX-F

Ready-to-mount, compact control unit to control supply temperature in radiant panel heating systems up to 14 kW heat demand.

Supply temperature setting range: 20–70 °C, temperature limiting and locking facility on thermostatic head. Pre-wired pump and temperature limiter. Can be mounted on the right or left side of the manifold. Suitable for all Watts 1" M heating circuit manifolds. Nickel plated.

Type	Part no.	Pump	Weight
ISOMIX-F	10084161	Wilo Para SCU/6	4,10 kg
ISOMIX-F w/o pump	10082500	without pump	2,02 kg

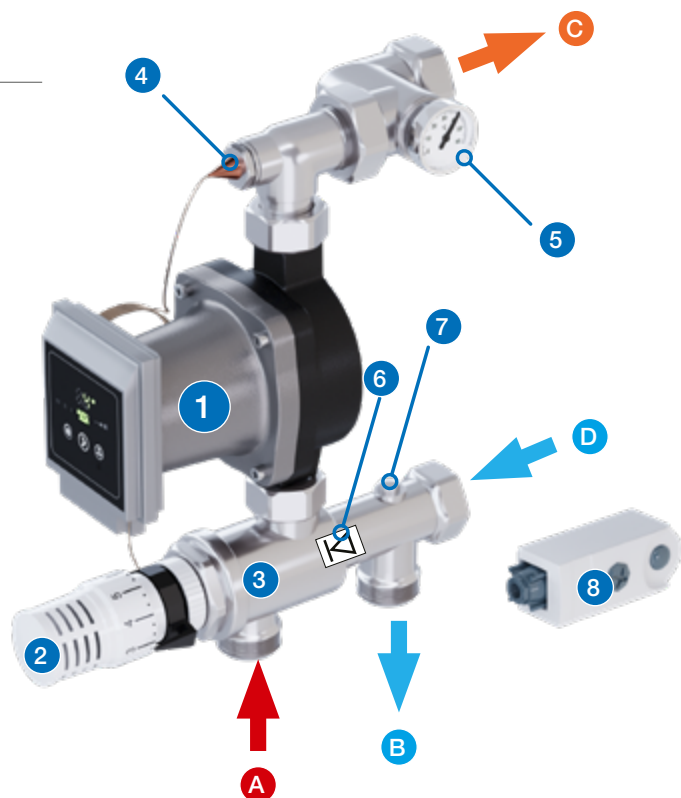
## Technical characteristics and materials

Technical characteristics	
Operating ambient temperature:	0 - 40 °C
Operating medium temperature:	0 - 80 °C
Max. operating pressure:	10 bar
Setting range of supply temperature:	20 - 70 °C
Heat demand:	appr. 14 kW, $\Delta T = 10K$
Voltage:	230 V - 50Hz
Kvs value:	3,2
Differential pressure:	max. 500 mbar
Connections primary circuit:	1" M with flat seals
Connections secondary circuit:	1" union nut with flat seals

Materials	
Fittings:	brass CW617 N, nickel plated
Plastics:	impact and temperature resistant
Flat seals:	AFM 34/2
O-rings:	EPDM

## Structure

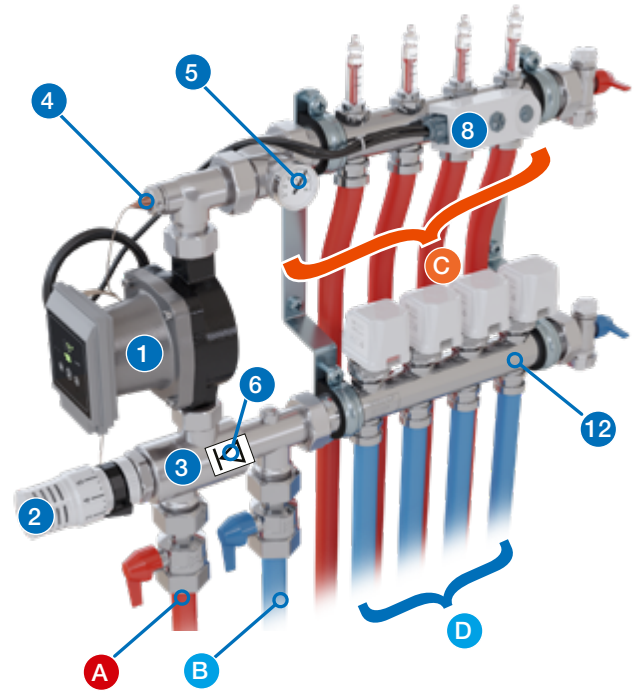
- 1 Circulation pump 130 mm
  - 2 Thermostatic head
  - 3 Mixing valve
  - 4 Immersion sleeve for capillary tube and supply temperature sensor
  - 5 Eccentric screw fitting with thermometer 0-60 °C
  - 6 Plastic insert check valve
  - 7 Connection for return flow sensor 1/8" (option)
  - 8 Temperature limiter
- A Primary supply 1" M, flat seals  
 B Primary return 1" M, flat seals  
 C Surface heating/cooling supply (1" union nut)  
 D Surface heating/cooling return (1" union nut)



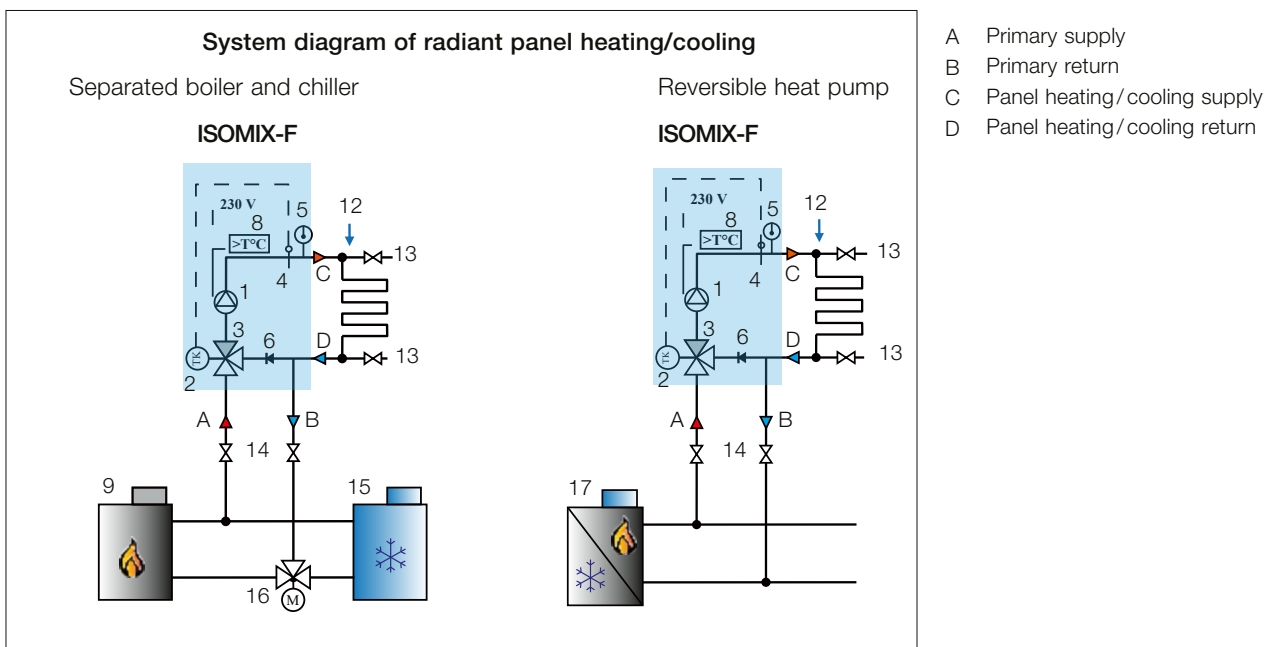
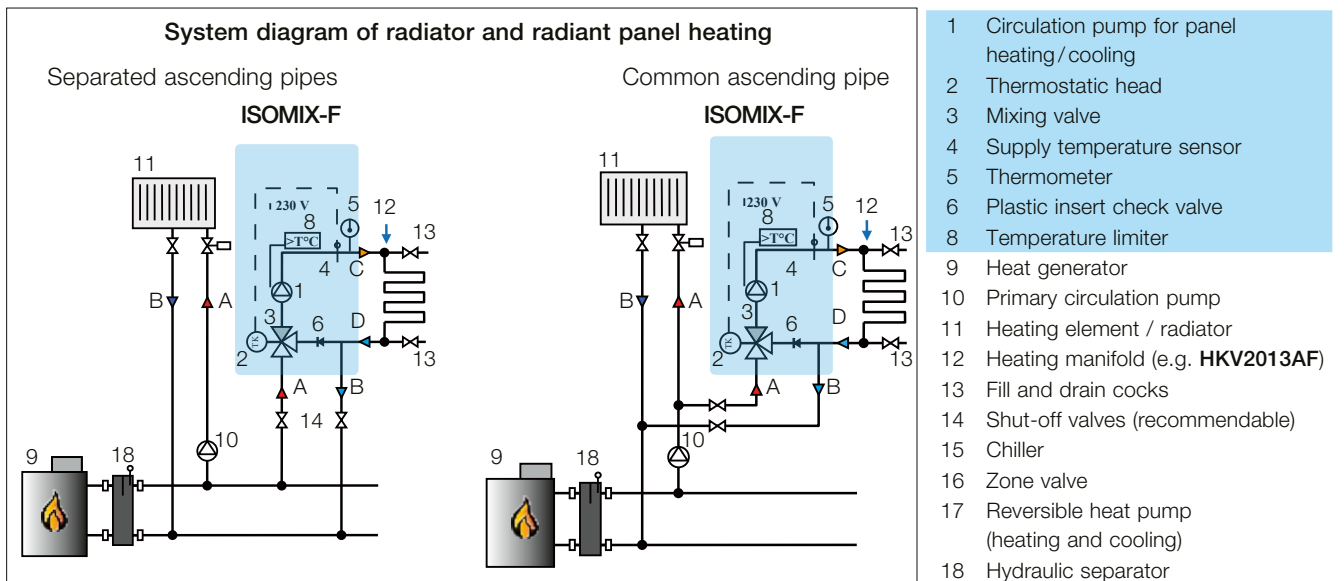
## Operation

The mixing valve (3) of the control unit **ISOMIX-F** is designed as a proportional regulator and is controlled by a thermostatic head (2) with capillary tube and supply temperature sensor (4) on the floor heating circuit flow. Deviations from the set point set on the thermostatic head (2) immediately cause a change in the valve stroke, so that the volume of hot water injected from the primary flow (A) changes accordingly. The injected water volume is mixed with the return water (D) from the manifold (12) at the inlet to the circulation pump and, in this way, keeps the supply temperature constant within a narrow temperature range. The actual value can be checked on the thermometer (5). Check valve (6) prevents a short-circuit of the primary circuit.

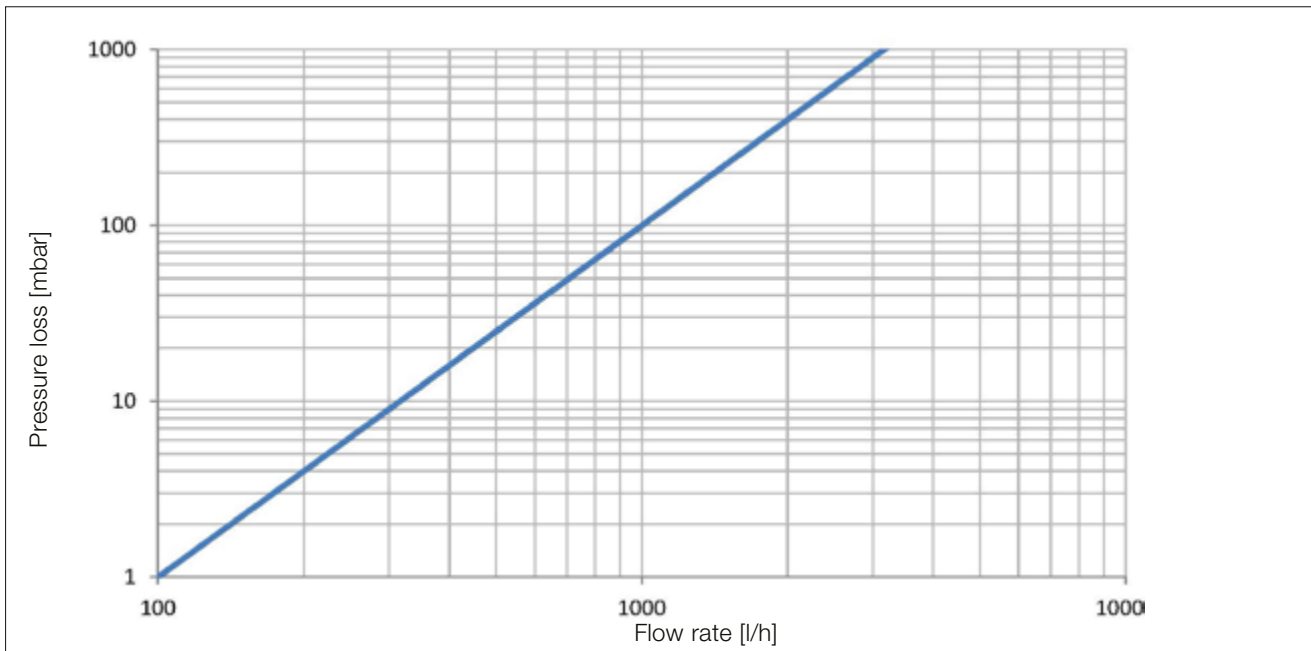
The temperature limiter (8) switches off the circulating pump (1), when the supply temperature is exceeded, thus preventing the panel heating system from overheating. The thermostatic head (2) opens the mixing valve (3) in cooling mode.



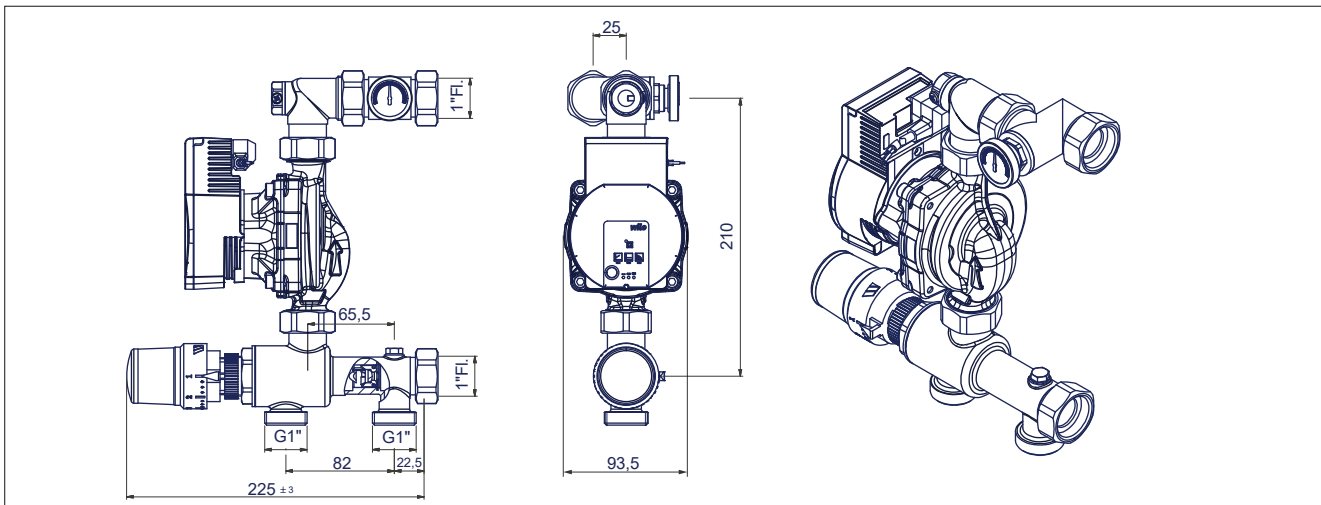
## Examples of applications



## Pressure loss curve



## Overall dimensions [mm]



## Specification text

Ready-to-mount, compact control unit to control supply temperature in radiant panel heating systems up to 14 kW heat demand. Supply temperature setting range: 20–70 °C, temperature limiting and locking facility on thermostatic head. Pre-wired pump and temperature limiter. Can be mounted on the right or left side of the manifold. Suitable for all Watts 1" M heating circuit manifolds. Nickel plated.

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