

# ISOMIX-HC

Control unit for panel heating/cooling systems  
including Weather Compensation Control

## Technical Data Sheet



## Description and application

The **ISOMIX-HC** is a control unit with weather-compensated control in radiant panel heating/cooling systems. The supply temperature is regulated by the integrated HEATING/COOLING controller in accordance with the external temperature by means of a selectable heating/cooling curve.



### Control unit ISOMIX-HC

Ready-to-mount, compact, weather-compensated control unit for radiant panel heating/cooling systems up to 14 kW heat demand. Pump 130 mm, mixing valve with 3-position actuator, temperature limiter, CC-HC climate controller with supply and outdoor temperature sensors. The climate controller is pre-wired to the pump, temperature limiter and actuator. 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.	Circulation pump	Weight
ISOMIX-HC	10084160	Wilo Para SCU/6	4.72 kg
ISOMIX-HC	10084634	Grundfos UPM3A7	4.95 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:	5 - 100 °C
Heat demand:	approx. 14kW, $\Delta T=10K$
Voltage:	230 V - 50 Hz
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 3-position actuator
- 3 Mixing valve
- 4 Plastic insert check valve
- 5 Climatic controller CC-HC
- 6 Outdoor sensor
- 7 Supply temperature sensor connection 1/8" (in scope of delivery)
- 8 Temperature limiter
- 9 Return temperature sensor connection 1/8" (option)
- 10 Thermometer

- 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)

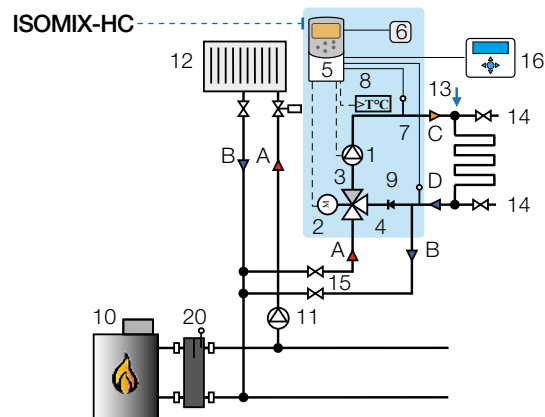


## Operation

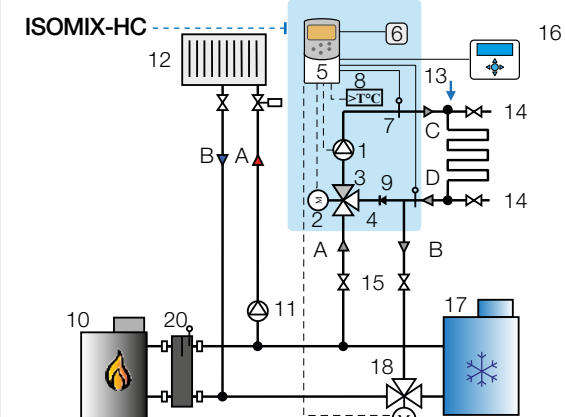
The supply temperature setpoint determined by the climatic controller (5) based on the outdoor temperature and heating curve is constantly monitored by the supply temperature sensor (7). In case of temperature fluctuations, the controller (5) causes the 3-position actuator (2) to open or close the mixing valve (3) or to maintain the valve position, when the setpoint is reached. The hot water from the primary circuit (A) supplied via the mixing valve (3) mixes with the water from the return of the radiant panel heating (D). The mixed water is distributed via the circulation pump (1) to the heating circuit manifold and from there to the connected floor heating circuits. The supply temperature can be read off the climatic controller (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. Optionally, a room thermostat or radio hygostat (16) can be used to monitor room temperature and humidity in a reference room. The outdoor temperature sensor is optionally available as a radio version. Watts offers a 433 MHz antenna as an accessory for communication of the radio hygostat or radio outdoor sensor with the climatic controller.

## Examples of applications

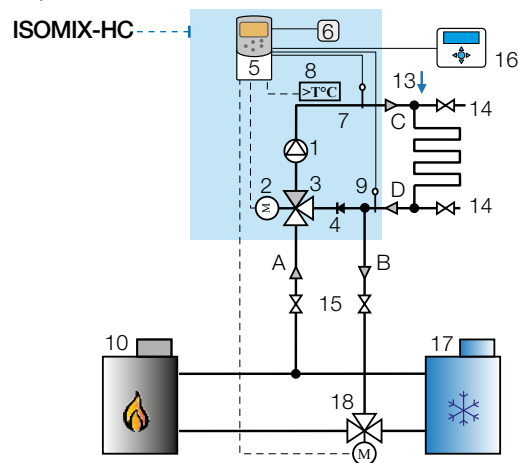
**System diagram of radiator and radiant panel heating**  
Heat generator. Separated ascending pipes.



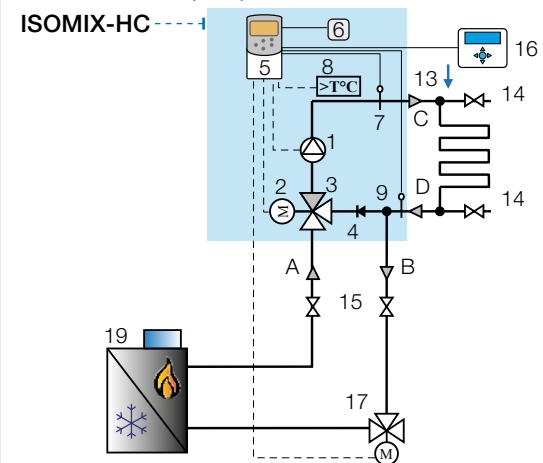
**System diagram of radiator and radiant panel heating/cooling**  
Separated boiler and chiller. Separated ascending pipes.



**System diagram of radiant panel heating/cooling**  
Separated boiler and chiller.



**System diagram of radiant panel heating/cooling**  
Reversible heat pump.

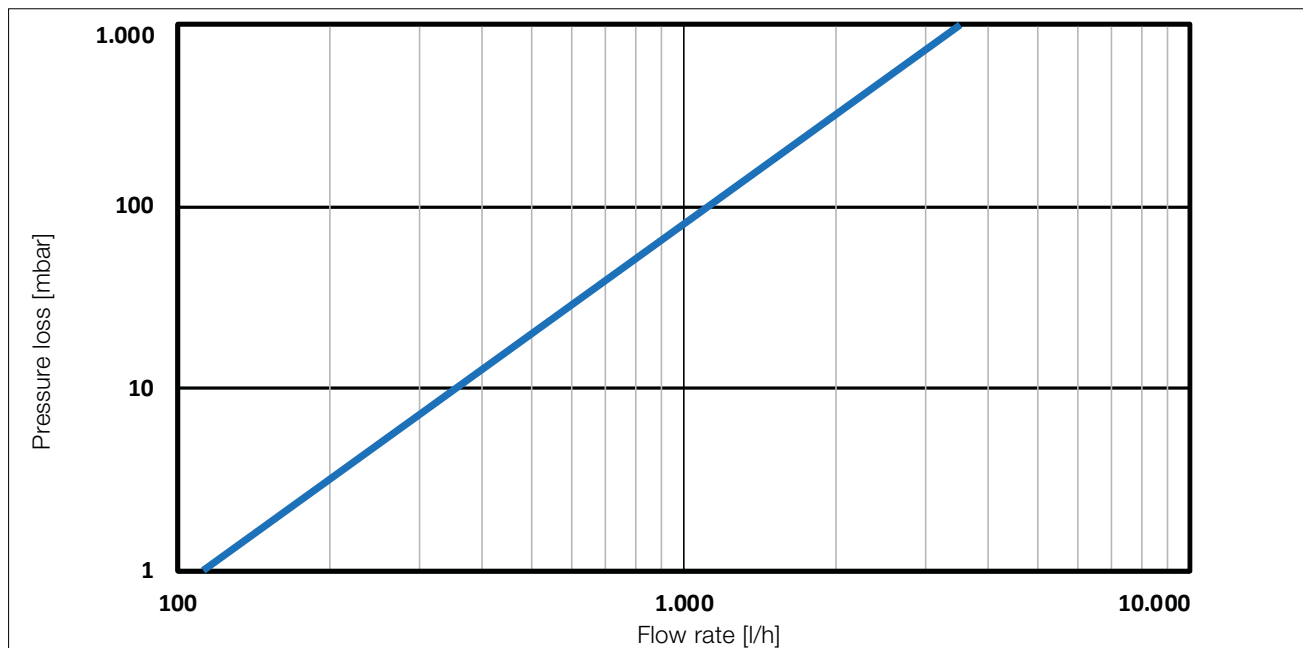


- 1 Circulation pump for panel heating/cooling
- 2 3-position actuator
- 3 Mixing valve
- 4 Check valve
- 5 Climatic controller CC-HC
- 6 Outdoor temperature sensor
- 7 Supply temperature sensor
- 8 Temperature limiter
- 9 Return temperature sensor (option)

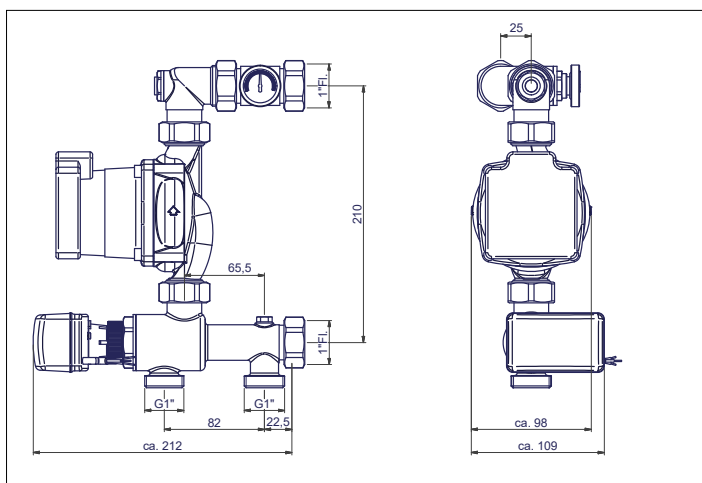
- 10 Heat generator
- 11 Primary circulation pump
- 12 Heating element / radiator
- 13 Heating manifold (e.g. HKV2013AF)
- 14 Fill and drain cocks
- 15 Shut-off valves (recommendable)
- 16 Room thermostat or optional Radio-Hygostat
- 17 Chiller
- 18 Zone valve

- 19 Reversible heat pump (heating and cooling)
- 20 Hydraulic separator
- A Primary supply
- B Primary return
- C Panel heating/cooling supply
- D Panel heating/cooling return

## Pressure loss curve



## Overall dimensions [mm]



## Specification text

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