

R586HPI

Hydronic unit for heat pump



Renewable
Sources



Energy
Management

Datasheet
1113EN 04/2025



R586HPI

 **NOTE.** Completion codes in light gray.

Interface hydronic unit for heat pumps, designed for optimal control of heating/cooling services and hot domestic water (HDW).

- Metal frame for wall fitting.
- Preassembled solution to cut down the time required for installation and prevent execution errors.
- Connection to HDW storage.
- Control of thermal storage tank to decouple the heating/cooling system from the heat pump status - HDW production during cooling or execution of defrosting cycle during heating.
- Diverting valve to change over the control modes of both the HDW storage and the heating/cooling services.
- Magnetic dirt separator with high filtering capacity.
- The unit can be completed with a relaunching pump, an insulation and a diverting valve actuator.



 VIDEO

Frame the QR code with your smartphone or tablet to view the video tutorial.

➤ Versions and product codes

With insulation included

PRODUCT CODE	CONNECTIONS	DIVERTING VALVE	COMPLETION CODES
R586HPIY015	G 1" F	40-sec. diverting valve (R279D)	• K270Y101: actuator 230 V, for 40-sec diverting valve (R279D) • K270Y102: actuator 24 V, for 40-sec diverting valve (R279D) • R540FY012: contact thermometer, red color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • R540FY032: contact thermometer, blue color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • P76WHPIY001: Wilo Para 25/7 pump kit, center distance 130 mm, with ball valve and check valve • P76WHPIY002: Wilo Para 25/7 pump kit, center distance 180 mm, with ball valve and check valve • R197HPIY001: spacer kit for pump installation, center distance 130 mm, with ball valve and check valve • R197HPIY002: spacer kit for pump installation, center distance 180 mm, with ball valve and check valve
R586HPIY115	G 1" F	8-sec. diverting valve (R279B)	• K270Y211: actuator 230 V, for 8-sec diverting valve (R279B) • R540FY012: contact thermometer, red color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • R540FY032: contact thermometer, blue color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • P76WHPIY001: Wilo Para 25/7 pump kit, center distance 130 mm, with ball valve and check valve • P76WHPIY002: Wilo Para 25/7 pump kit, center distance 180 mm, with ball valve and check valve • R197HPIY001: spacer kit for pump installation, center distance 130 mm, with ball valve and check valve • R197HPIY002: spacer kit for pump installation, center distance 180 mm, with ball valve and check valve

Without insulation

PRODUCT CODE	CONNECTIONS	DIVERTING VALVE	COMPLETION CODES
R586HPIY005	G 1" F	40-sec. diverting valve (R279D)	• K270Y101: actuator 230 V, for 40-sec diverting valve (R279D) • K270Y102: actuator 24 V, for 40-sec diverting valve (R279D) • R540FY012: contact thermometer, red color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • R540FY032: contact thermometer, blue color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • P76WHPIY001: Wilo Para 25/7 pump kit, center distance 130 mm, with ball valve and check valve • P76WHPIY002: Wilo Para 25/7 pump kit, center distance 180 mm, with ball valve and check valve • R197HPIY001: spacer kit for pump installation, center distance 130 mm, with ball valve and check valve • R197HPIY002: spacer kit for pump installation, center distance 180 mm, with ball valve and check valve • R586HPIW005: insulation
R586HPIY105	G 1" F	8-sec. diverting valve (R279B)	• K270Y211: actuator 230 V, for 8-sec diverting valve (R279B) • R540FY012: contact thermometer, red color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • R540FY032: contact thermometer, blue color, dual scale 0÷120 °C and 32÷240 °F, Ø 40 mm (to be installed on the T-handles of the ball valves instead of the colored plates) • P76WHPIY001: Wilo Para 25/7 pump kit, center distance 130 mm, with ball valve and check valve • P76WHPIY002: Wilo Para 25/7 pump kit, center distance 180 mm, with ball valve and check valve • R197HPIY001: spacer kit for pump installation, center distance 130 mm, with ball valve and check valve • R197HPIY002: spacer kit for pump installation, center distance 180 mm, with ball valve and check valve • R586HPIW105: insulation

Technical data

Performance

- Fluid: water, glycol-based solution (max 30 % of glycol)
- Temperature range: 5÷90 °C
- Max working pressure: 10 bar
- Dirt separator filter: 300 µm
- Magnetic induction of dirt separator: 13000 Gauss
- Time required for diverting valve rotation:
40 sec. or 8 sec. based on version

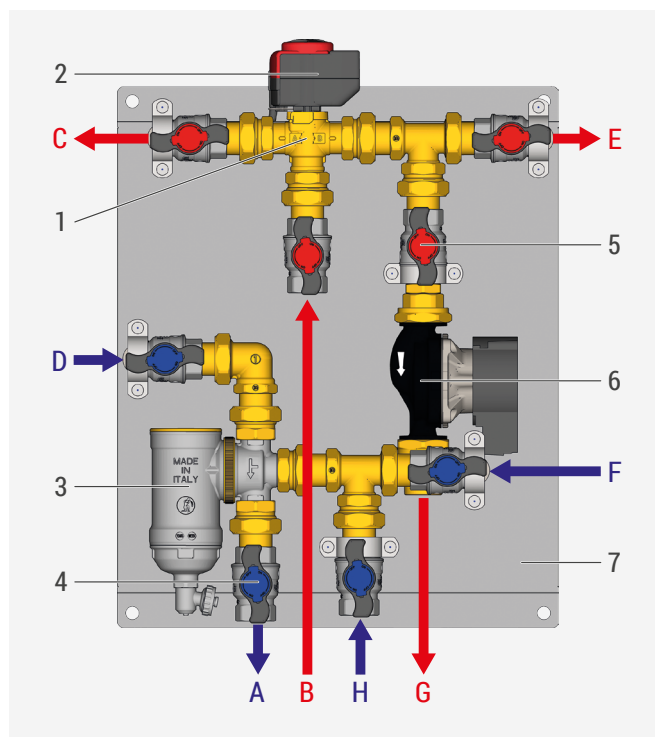
Loss of pressure

PRODUCT CODE	DIVERTING VALVE Kv	DIRT SEPARATOR Kv
R586HPIY015	11,0	6,7
R586HPIY005		
R586HPIY115	8,0	6,7
R586HPIY105		

Materials

- Main components: brass
- Ball valve extended T-handles: plastic with red or blue plate
- Dirt separator filter: AISI 304 stainless steel
- Dirt separator magnet: neodymium (N42H)
- Gaskets: EPDM

Components and hydraulic connections



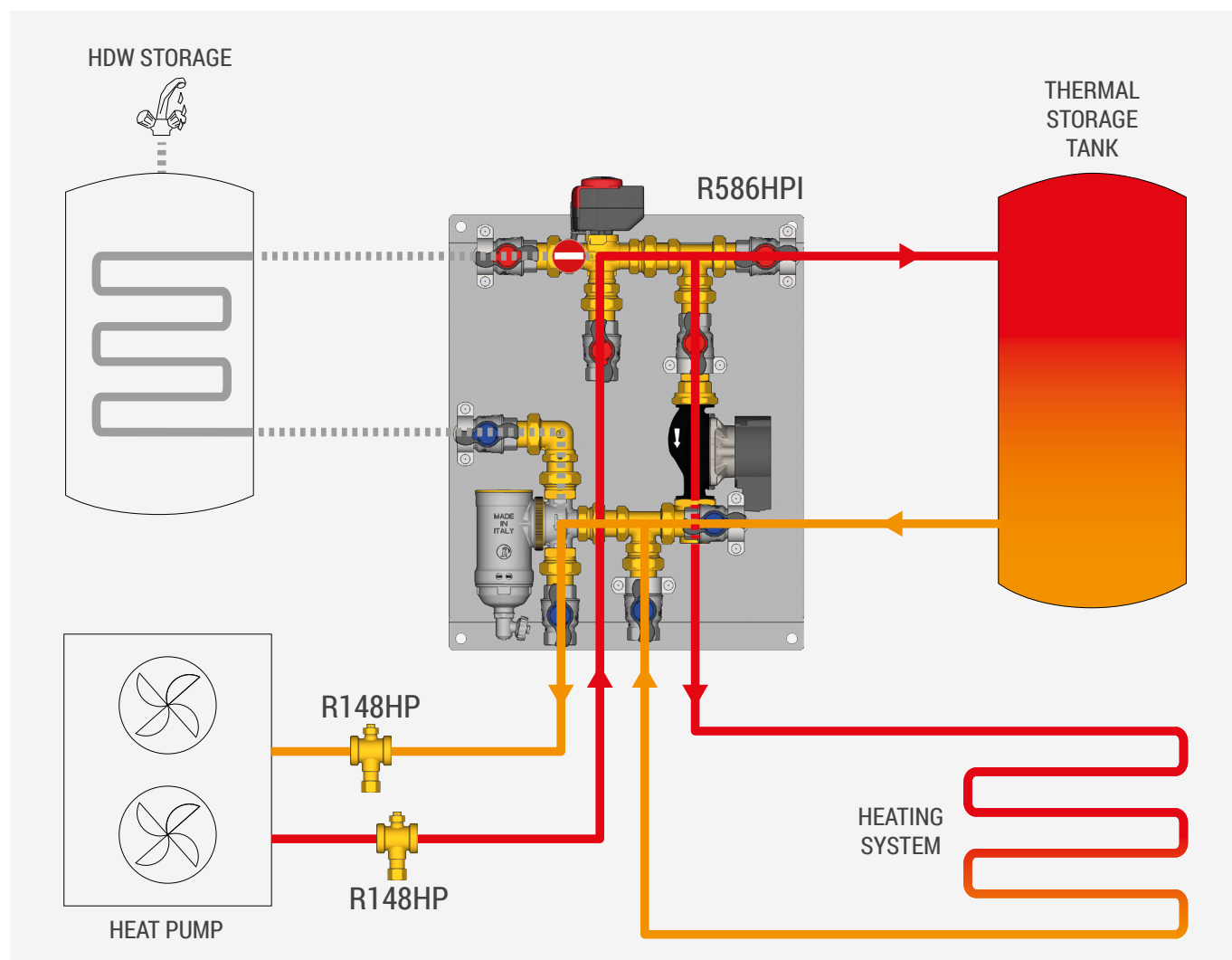
- | | |
|---|---|
| 1 | Diverting valve |
| 2 | Diverting valve actuator (Completion code) |
| 3 | Magnetic dirt separator |
| 4 | Shut-off ball valves on return circuits |
| 5 | Shut-off ball valves on delivery circuits |
| 6 | Pump kit with check valve / Spacer kit for pump with check valve (Completion codes) |
| 7 | Metal frame for wall fitting |
| A | Return to heat pump |
| B | Delivery from heat pump |
| C | Delivery to domestic water storage |
| D | Return from domestic water storage |
| E | Delivery to thermal storage tank of HVAC system |
| F | Return from thermal storage tank of HVAC system |
| G | Delivery to heating system |
| H | Return from heating system |

► Winter operation

Heating only

In winter, the main flow rate coming from the heat pump enters the hydronic unit then is diverted towards the heating system. The exceeding part is directed to the thermal storage tank.

🔧 **NOTE.** The thermal storage tank must feature a minimum capacity suitable for the system power.



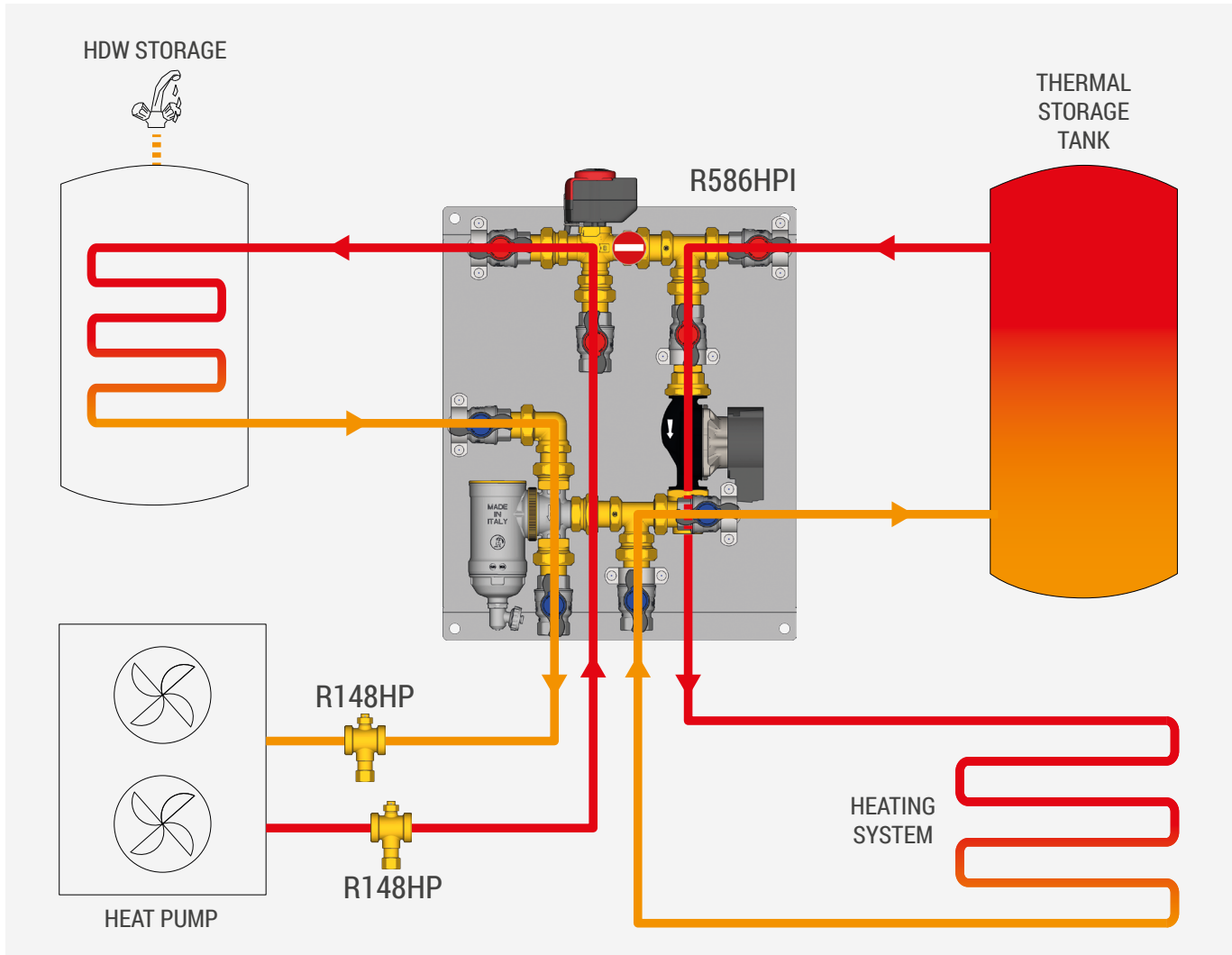
Winter operation

Heating and hot domestic water

In winter, the main flow rate coming from the heat pump enters the hydronic unit then is diverted towards the HDW storage for HDW production.

The heating system is supplied by the thermal storage tank.

 NOTE. The thermal storage tank must feature a minimum capacity suitable for the system power.

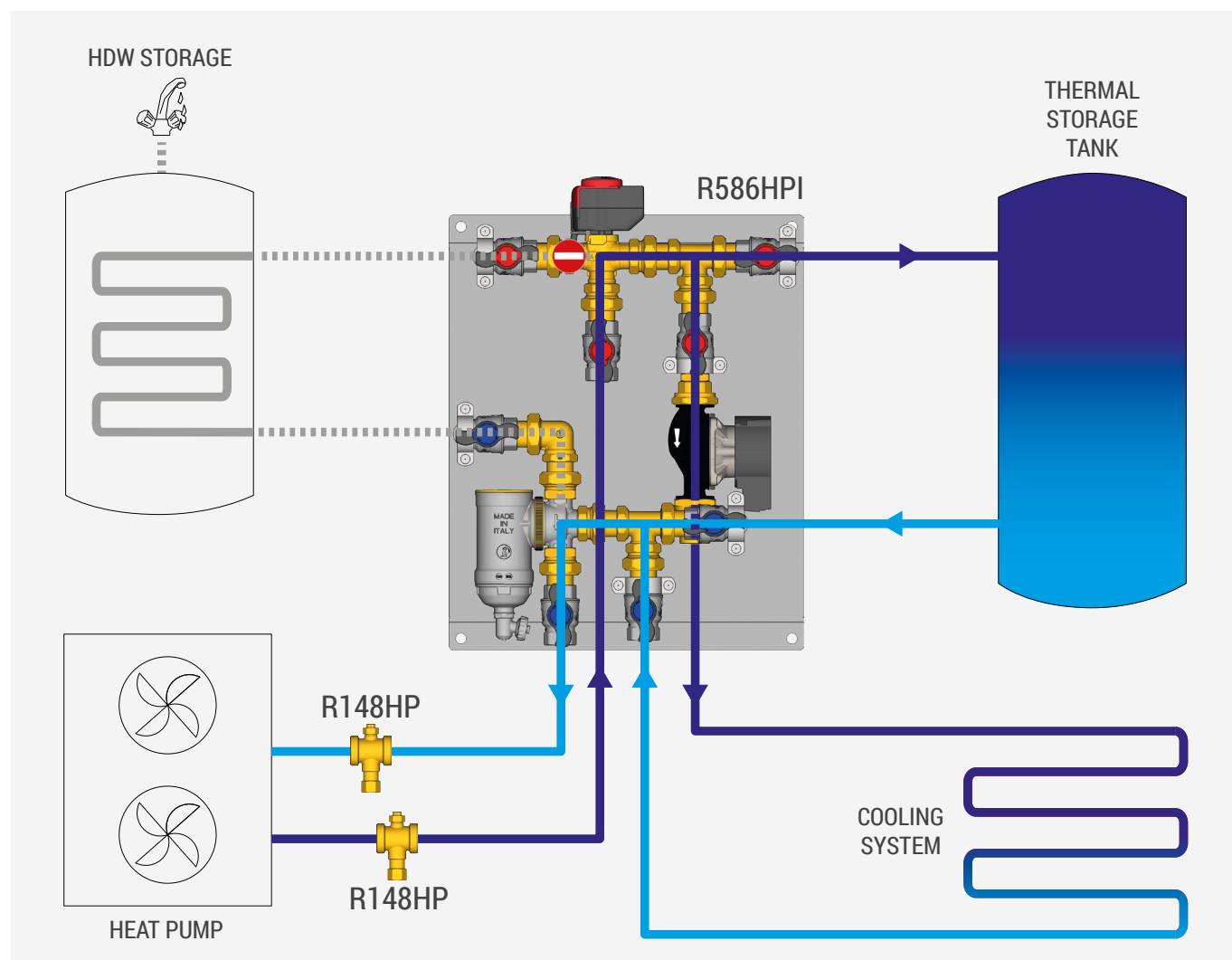


► Summer operation

Cooling only

In summer, the main flow rate coming from the heat pump enters the hydronic unit then is diverted towards the cooling system. The exceeding part is directed to the thermal storage tank.

🔧 **NOTE.** The thermal storage tank must feature a minimum capacity suitable for the system power.



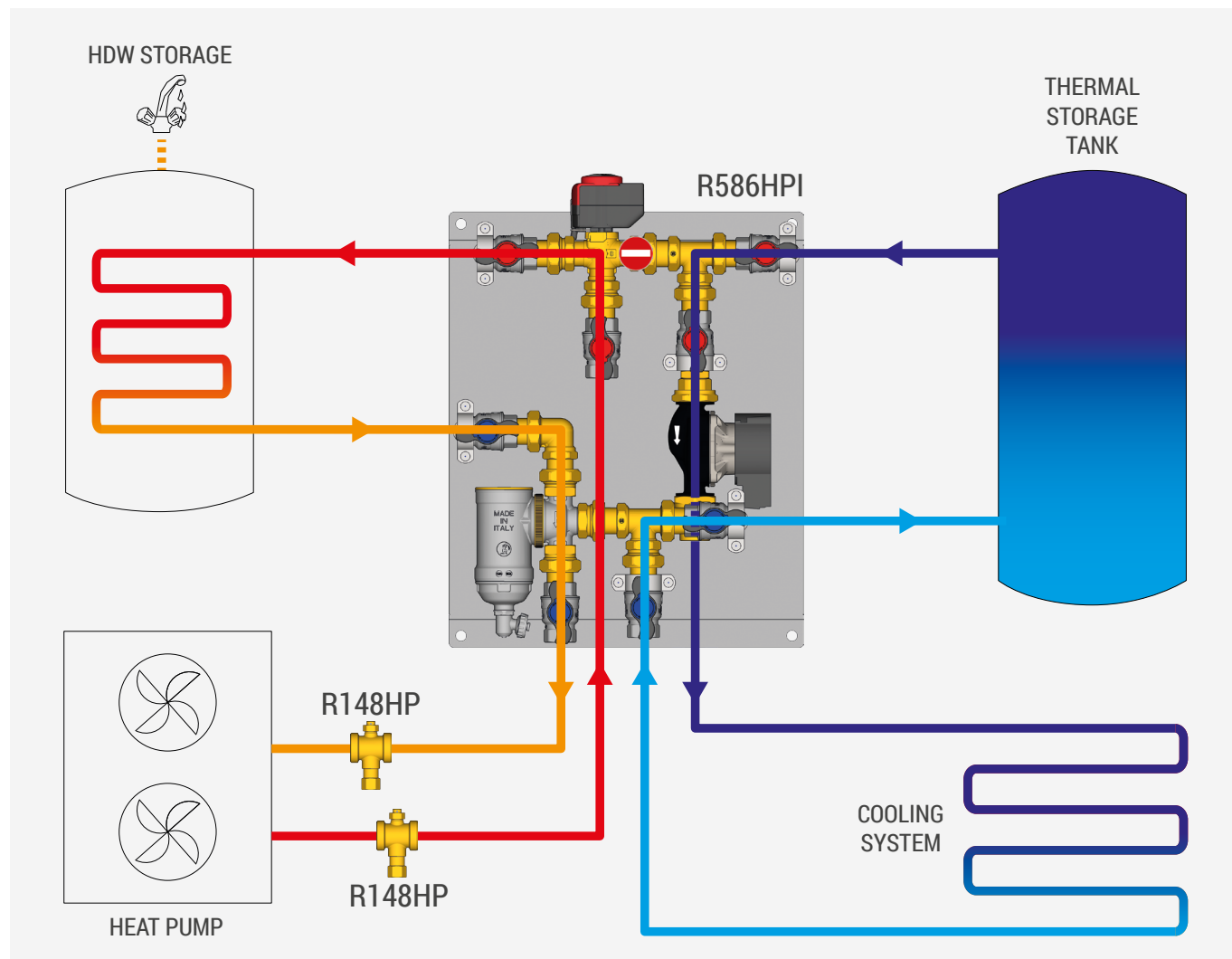
➤ Summer operation

Cooling and hot domestic water

In summer, the main flow rate coming from the heat pump enters the hydronic unit then is diverted towards the HDW storage for HDW production.

The cooling system is supplied by the thermal storage tank.

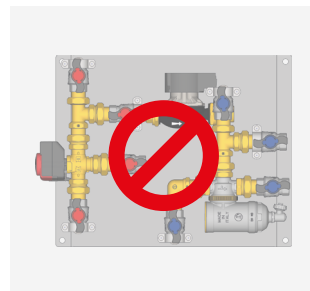
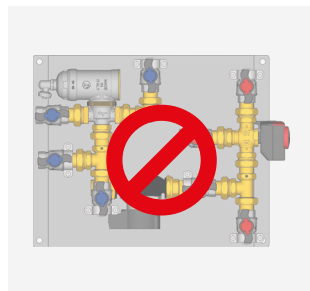
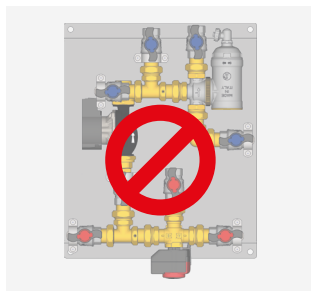
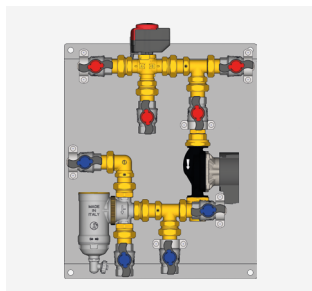
🔧 **NOTE.** The thermal storage tank must feature a minimum capacity suitable for the system power.



➤ Installation

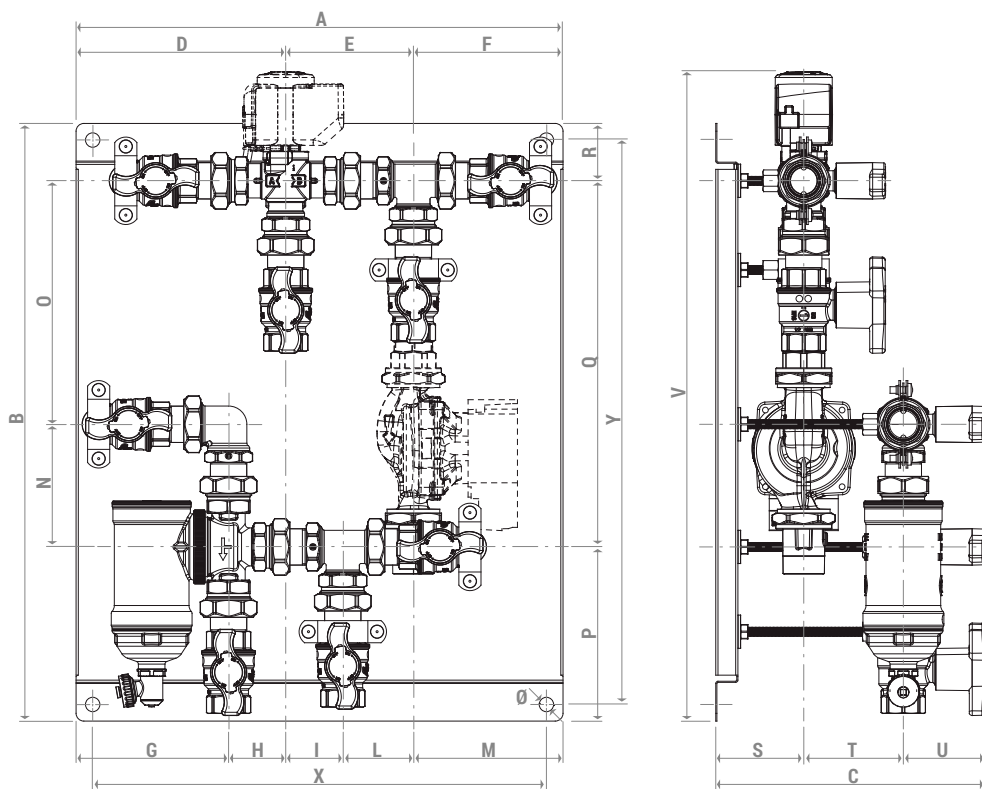
⚠ WARNING. Before installing the unit, check the system working conditions, such as pressure and temperature, to make sure they are within the working range. Access to the unit must be unencumbered to perform maintenance.

The R586HPI hydronic unit must be installed vertically on wall, by using screw anchors suitable to the type of wall and weight of the devices to be supported.



⚠ WARNING. The dirt separator is provided with a magnet that generates magnetic fields  that may damage electronic devices (including pacemakers ) nearby.

➤ Dimensions



PRODUCT CODE	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	U	V	Ø	X	Y
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
R586HPIY015																							
R586HPIY005																							
R586HPIY115	440	540	244	190	115	135	138	52	52	64	135	111	220	157	331	52	80	94	74	588	13	410	510
R586HPIY105																							

NOTE. The dashed components (actuator and pump kit) are completion codes.

► Maintenance

Cleaning the magnetic dirt separator

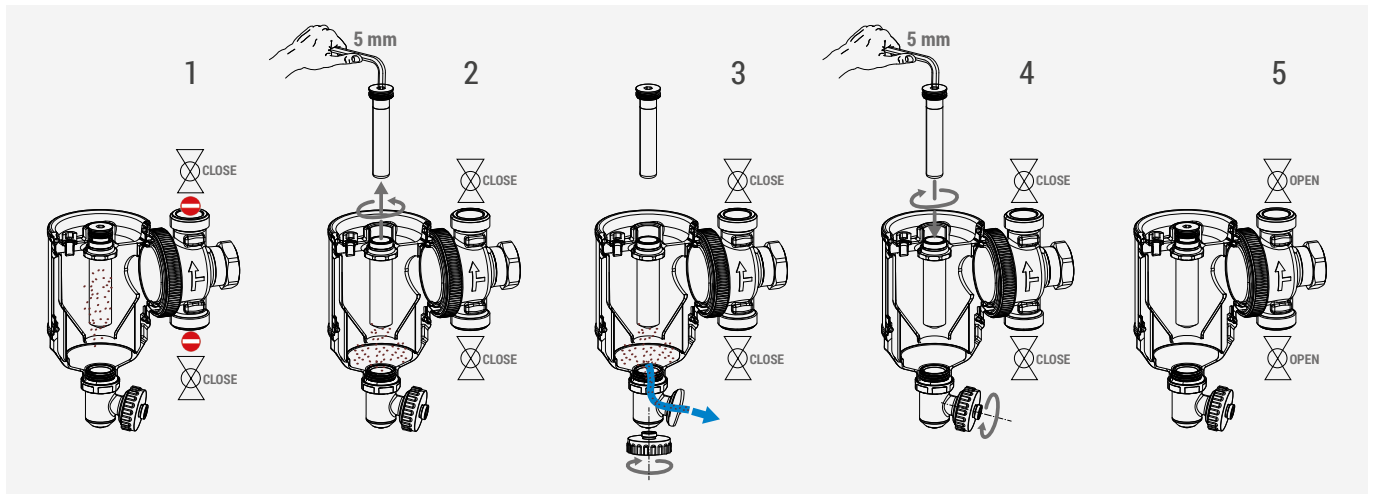
The R586HPI hydronic unit includes a magnetic dirt separator (Components - Ref.3) that removes the debris from the HVAC system water before it flows back to the heat pump.

The debris collects on the surface of the housing containing the magnet and on the bottom of the dirt separator.

There is no need to turn off the system and disassemble the dirt separator to clean it; **however, for ideal cleaning, the operations below should be carried out when there is no water running through the dirt separator.**

Follow these steps to clean the dirt separator and remove any debris:

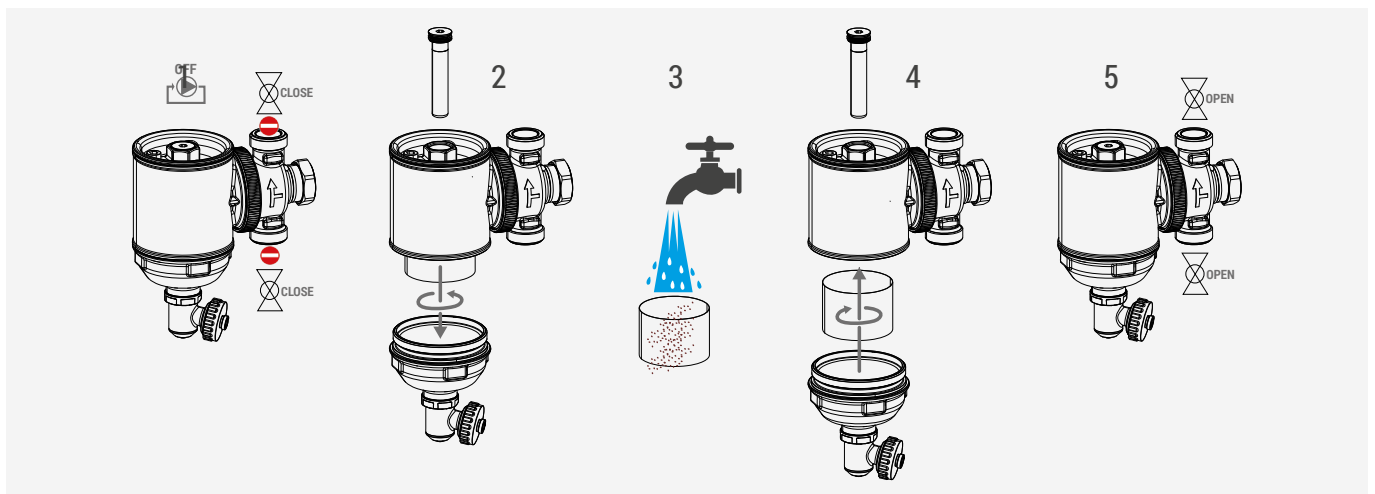
- 1) close the shut-off ball valves upstream and downstream of the dirt separator;
- 2) remove the magnet from its housing by rotating it in counterclockwise direction with a 5-mm Allen wrench; the ferrous debris collected on the housing surface will rest inside the dirt separator;
- 3) wait a few minutes then place the drain cock cap on the bottom of the cock, turn the cock in counterclockwise direction to open it and remove the debris from the dirt separator;
- 4) once the debris has been removed, close the drain cock, replace the magnet in its housing and tighten it in clockwise direction.
- 5) open the shut-off ball valves upstream and downstream of the dirt separator, then resume regular operation.



Cleaning the dirt separator metal filter

To properly clean the dirt separator, remove the filter following the steps below:

- 1) turn off the system and close the shut-off ball valves upstream and downstream of the dirt separator;
- 2) loosen the dirt separator base by turning it in counterclockwise direction;
- 3) remove the filter and rinse it under running water;
- 4) replace the filter and retighten the dirt separator base;
- 5) open the shut-off ball valves upstream and downstream of the dirt separator, then resume regular operation.



▲ WARNING. Install an air vent valve on the system circuit to release the air after servicing and cleaning the components.

Product specifications

R586HPI

Interface hydronic unit for heat pumps, designed for optimal control of heating/cooling services and hot domestic water (HDW). G 1" F connections. Available with diverting valve featuring a movement time of 40 or 8 seconds. Metal frame for wall fitting. Preassembled solution to cut down the time required for installation and prevent execution errors. Connection to HDW storage. Control of inertial thermal storage tank to decouple the heating/cooling system from the heat pump status - HDW production during cooling or execution of defrosting cycle during heating. Diverting valve to change over the control modes of both the HDW storage and the heating/cooling services. Inspectionable magnetic dirt separator with high filtering capacity (300 µm, 13000 Gauss). Fluids: water, glycol-based solution (max 30 % of glycol). Temperature range: 5÷90 °C. Max working pressure: 10 bar. Main components: brass. Ball valve extended T-handles: plastic with red or blue plate. Dirt separator filter: AISI 304 stainless steel. Dirt separator magnet: neodymium (N42H). Gaskets: EPDM. The unit can be completed with a relaunching pump, an insulation and a diverting valve actuator.

 **Safety Warning.** Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

 **Package Disposal.** Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

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 **Product Disposal.** Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.