

EFFICIENCY UNLEASHED

R148HP



R146C



R279B



R150M



Toward an all-electric future: energy optimization and protection of heat pump HVAC systems

Defined as the key technology of the global transition for safe and sustainable heating, heat pumps - powered by carbon-neutral electricity - represent one of the recommended technologies to decarbonize the building sector.*

Heat pumps **can be key in helping to fight climate change**: according to the International Energy Agency (IEA), they could reduce global CO₂ emissions by at least 500 million tons by 2030, equal to the annual CO₂ emissions of all cars in Europe today.

Looking at 2050 targets, electrification will account for about half of the reduction in direct CO₂ emissions in the sector.

The European heat pump market is growing, with air-water models leading most markets thanks to their lower cost compared to geothermal heat pumps but also for their energy efficiency, reduced noise, and connectivity technologies.

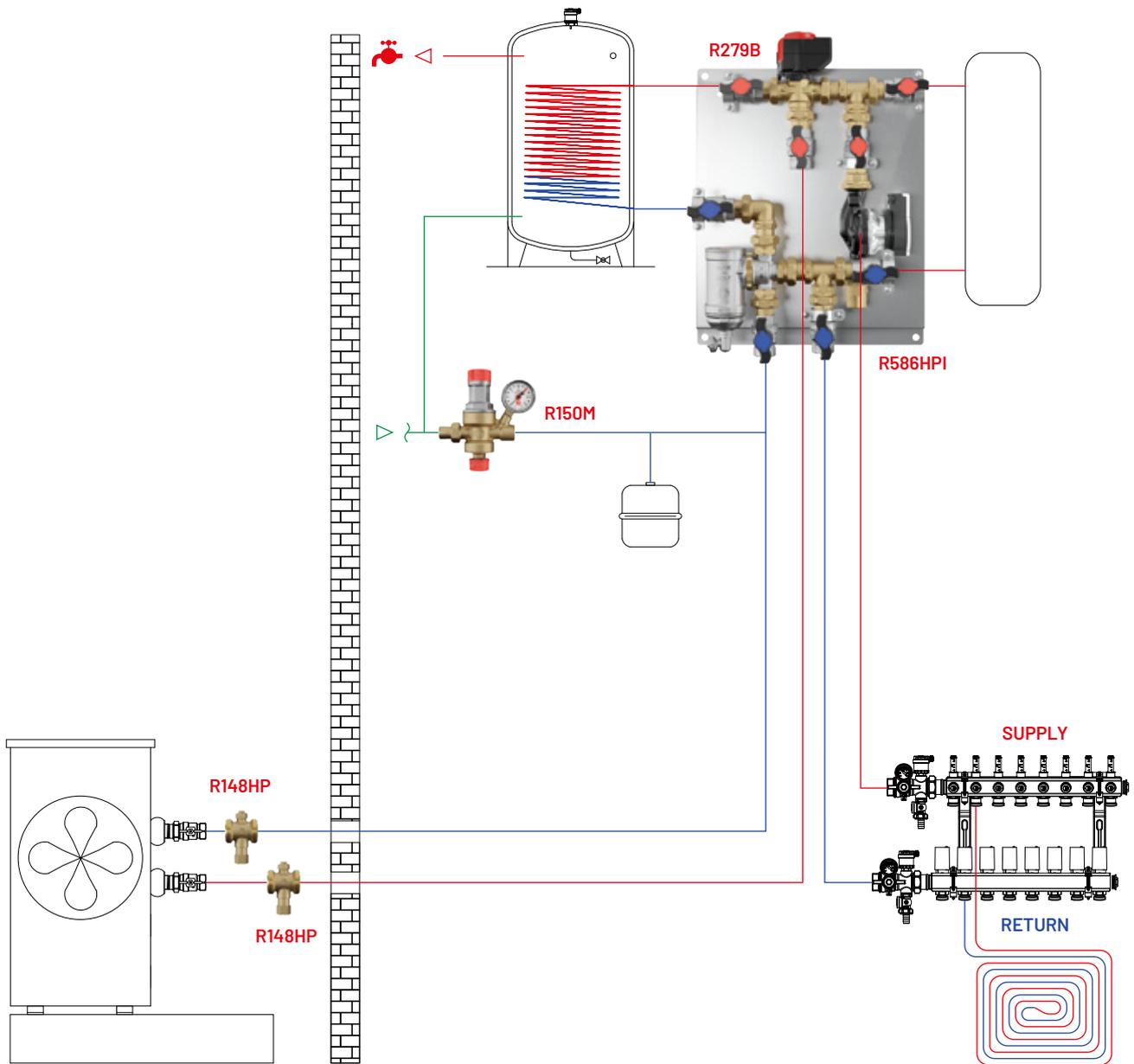
The EU's **REPowerEU** plan aims to diversify gas supply and promote electrification. In particular, **replacing gas boilers with heat pumps** will have a crucial impact on reducing natural gas consumption in buildings.

Several EU countries have already shown political support for heat pump technology, in line with the European Union's commitment to promoting the transition to cleaner and more sustainable energy sources.

* International Energy Agency. IEA (2022). The Future of Heat Pumps, IEA, Paris <https://www.iea.org/reports/the-future-of-heat-pumps>, License: CC BY 4.0



IEA forecasts that **heat pumps will play a key role in reducing gas consumption for heating by 2030**. Based on such scenario, about 2.5-3% of the existing building stock is expected to be renovated yearly, with the **installation of heat pumps in most cases**.



SYSTEM DIAGRAM Single residential heat pump application



R586HPI



The **hydronic heat pump interface module** optimizes heating, cooling and domestic hot water (DHW) production functions.

Thanks to the inertial puffer, it decouples the heating and cooling system from the operating state of the heat pump.

This pre-assembled, compact and unobtrusive solution **simplifies installation** by reducing masonry work, installation time and the possibility of errors.



Compact



Easy to install



Non-invasive

MAIN FEATURES



- **Metal frame for wall installation**
- **Connection to the DHW tank**
- **Inertial puffer to support heating/cooling**
- **Two models of diverter valve to switch between DHW and heating/cooling mode**
- **High-capacity magnetic dirt separator**



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The **freezing protection valve** prevents damage to the system in the event of ice formation.

Designed especially for monobloc heat pump systems, the **valve allows the fluid to drain** when its temperature reaches 1° C.

Thanks to this component **glycol is not needed**. The valve is suitable for **cooling with radiant system and with fan coils**.



System protection



No more glycol



Hot/cold operation

MAIN FEATURES



- **Application fluid: water**
- **Fluid temperature for drain opening: 1° C**
- **Fluid temperature for drain closing: 4° C**
- **Outdoor temperature range: -30÷60° C**



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The **adjustable magnetic dirt separator** simplifies heat pump maintenance and **helps boost its efficiency** preventing malfunctioning caused by impurities in the hydraulic circuit.

Made of **brass** to provide **superior resistance to high temperatures and pressures**, this product exploits a triple filtration action to **effectively remove impurities**. The **special adjustable fitting** enables a wide range of installation possibilities.

The product is available for **small and large dimensions**.



Adjustable connection



Triple filtration action



Extra-strong magnet

MAIN FEATURES



- **Two-way adjustable connection**
- **Adjustable drain cock**
- **13,000 gauss magnet**
- **Preformed and preassembled insulation**



R279B



The **three-way zone valve** ensures **energy optimization** and allows switching between two operating modes: DHW production and heating and cooling.

The product is equipped with a **quick-opening actuator**, switching in as little as **8 seconds**.

MAIN FEATURES

- **Temperature range: 5+90° C**
- **Maximum operating pressure: 10 bar**
- **Kv: 8 (same for both ways)**



Energy optimization



Preformed and preassembled insulation



Quick switch

R150M



The **compact automatic filling unit** regulates system pressure to a preset value, automatically replenishing missing water.

Removable cartridge and filter simplify cleaning and maintenance.

MAIN FEATURES

- **Sealing seat with anti-scale function**
- **Pressure presetting and efficient system loading**
- **Removable cartridge and filter for easy cleaning and maintenance**



Optimized water management



Automatic water integration



Reaction speed





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