

Heat Pumps

MEHP-iB-G09

Air to water reversible heat pump
for Comfort applications.
From 12 to 38 kW, single unit
Up to 160kW with modular approach



MEHP-iB-G09

Naturally Excellent

The MEHP-iB-G09 is the air to water reversible heat pump with R290 from Mitsubishi Electric, designed for comfort applications in the light commercial segment, with capacities ranging from 12 to 38 kW and a completely renewed aesthetic that supports integration in contemporary building environments.

Designed for outdoor installation, the unit is supplied as a monoblock plug and play solution with integrated pump and safety devices, supporting simplified installation and reliable operation in applied HVAC systems.

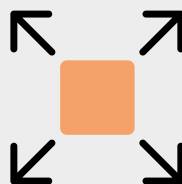


The MEHP-iB-G09 range introduces a new approach to comfort heat pump design, combining the adoption of the natural refrigerant R290 with advanced performance control and refined design, delivering a future-ready solution for comfort applications.



Propane natural refrigerant

The MEHP-iB-G09 uses R290, a natural refrigerant with very low global warming potential, supporting environmentally responsible comfort solutions aligned with European decarbonisation goals.



Wide operating map

The wide operating map allows the MEHP-iB-G09 to operate reliably across almost all comfort application conditions, including hot water production up to 75°C, ensuring high flexibility at system level.



Constant Heating Capacity

The Constant Heating Capacity function allows the MEHP-iB-G09 to maintain nominal heating output even as outdoor air temperature decreases, ensuring stable and reliable comfort delivery during colder conditions.



New chassis and refined design

The range introduces a new standardised and harmonised chassis concept, featuring a completely renewed aesthetic and a rational cabinet architecture that enhances compactness and consistency across all unit sizes.

The Modern Comfort



The MEHP-iB-G09 differentiates itself through a highly compact and efficient design combined with practical system integration. The very compact chassis allows the unit to deliver up to 40 kW of heating capacity while maintaining a small footprint, making it ideal for installations with limited available space. This is combined with a full monoblock Plug and Play configuration, with all main components integrated within the unit, supporting simplified installation and reduced on-site complexity. In parallel, the range introduces a redesigned and standardised chassis concept, with three cabinet configurations covering all unit sizes. This approach supports consistent installation principles and a more rational product architecture across the entire range.

13Y 16Y
from 12 to 18kW

22Y 27Y
from 21 to 29kW

30Y 35Y 38Y
from 29 to 38kW



Zero Impact



The use of R290 refrigerant positions the range as a concrete response to the European transition towards decarbonised heating, supporting compliance with current and future regulations while enabling designers and end users to reduce the environmental impact of comfort applications through a natural low GWP solution.



Reliability



Performance
& Envelope



Reduced
Environmental Impact

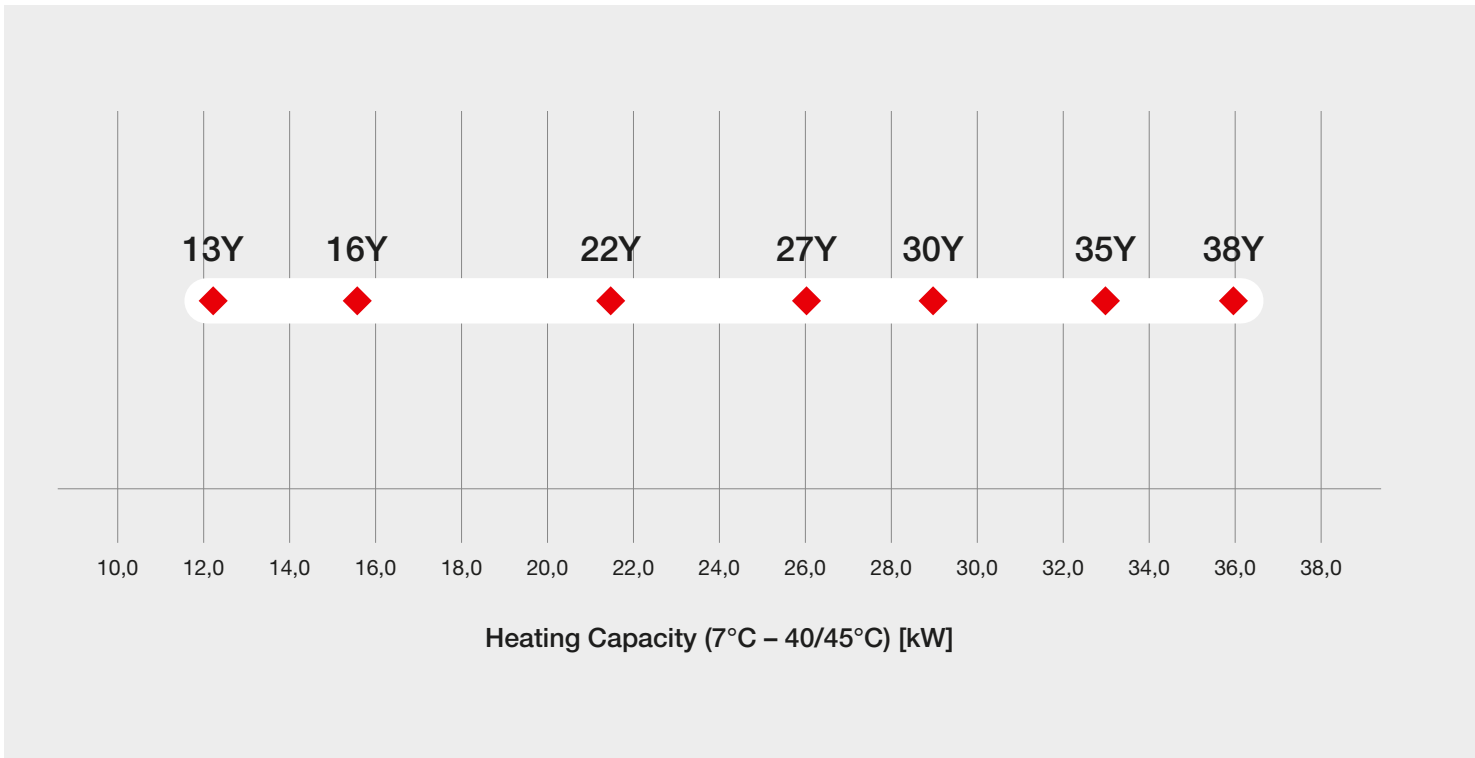
R290
Refrigerant

Low GWP



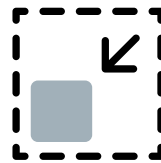
	GWP	VS other refrigerant
R290	3	
R32	675	-99,6%
R410A	2088	-99,9%

Range Features



High Seasonal Efficiency

Reaching SCOP (LT) up to 4,95, MEHP-iB-G09 is the perfect solution for enjoying comfort and saving energy

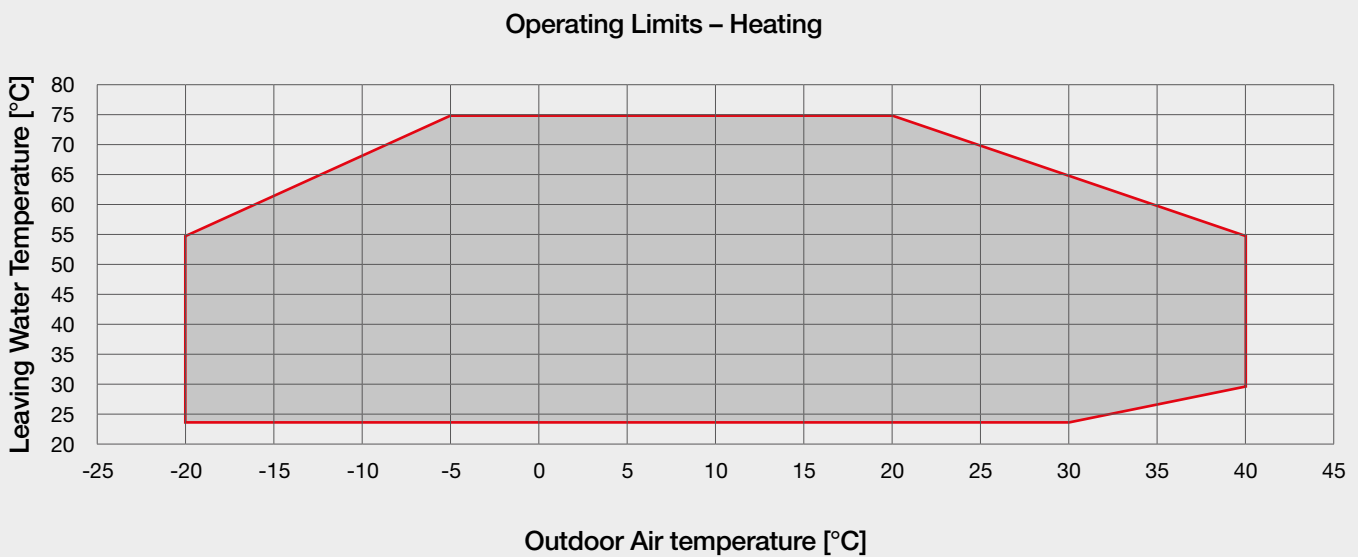


Small Footprint

The unit design allow to save space in installation thanks to the reduced footprint. The smallest chassis enhance the flexibility as it is only 1m high!

Hot Water Production Up to 75°C

The wide operating map allows the MEHP-iB-G09 to operate reliably across almost all comfort application conditions, including hot water production up to 75°C, ensuring high flexibility at system level.



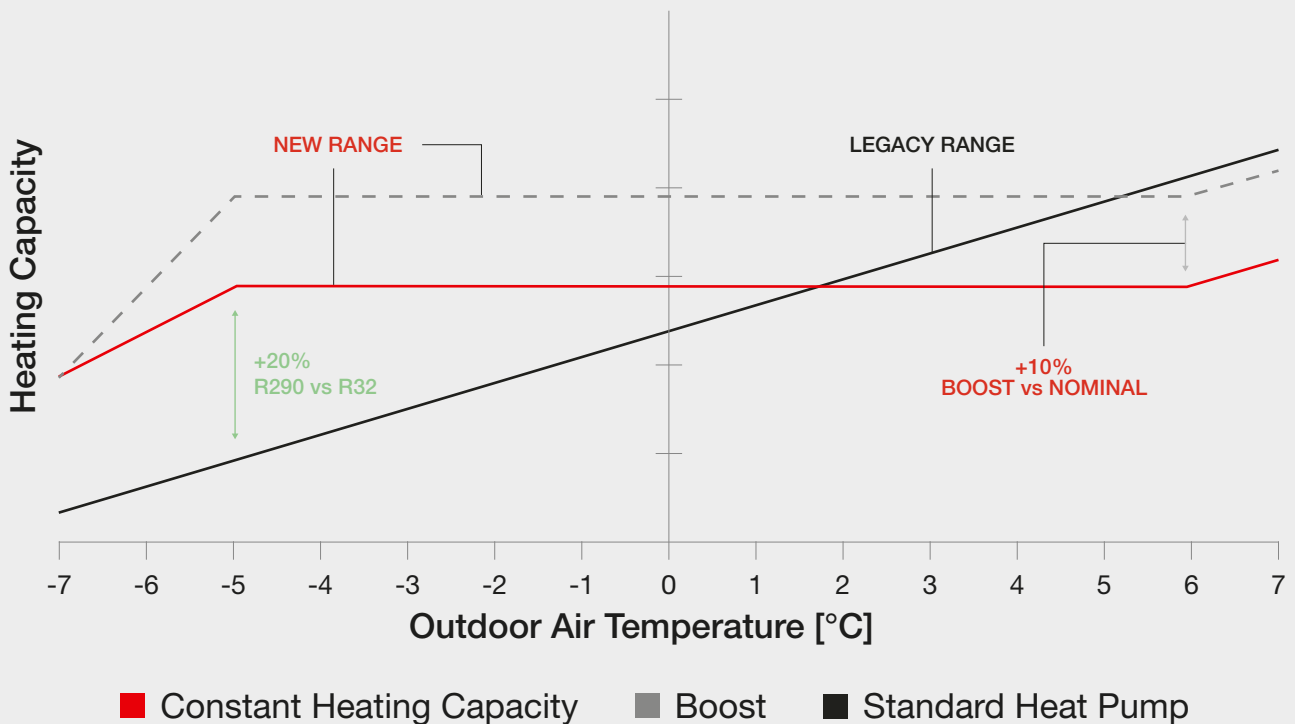
Energy Monitoring capabilities are also embedded within the W3000+ platform, allowing energy data, efficiencies and electrical power consumption to be visualised and stored, supporting performance evaluation and energy awareness at system level.

W3000+ Control Platform

**Embedded functions,
always available, no
additional price!**

Key innovations of the range include advanced control functions developed to optimise heating performance.

The Constant Heating Capacity function allows heating output to remain stable as outdoor air temperature decreases, while the Boost function provides additional heating capacity at positive temperatures when required.



MASTER-CLIENT Modular approach

For multi unit installations, W3000+ integrates the Master Client function, enabling coordinated control of up to four units within the same system and allowing modular configurations with a total installed capacity of up to approximately 160 kW, while maintaining centralised management and operational consistency.



Constant Heating Capacity

In the MEHP-iB-G09, the Constant Heating Capacity function allows heating output to remain stable as outdoor air temperature decreases, supporting reliable comfort delivery under variable climatic conditions.

Boost function

The Boost function available on the new R290 reversible heat pump enables a temporary increase of nominal heating capacity under positive temperature conditions, supporting enhanced performance when required by the application.

Technological Choices

Air heat exchanger

The air heat exchanger of the new R290 reversible heat pump is based on a copper aluminium coil with hydrophilic treatment supplied as standard, supporting improved condensate drainage. Defrost efficiency is enhanced through hot fluid injection in the lower part of the coil, while an additional electric heater, available as an option and installed below the coil, further supports operation in cold climate conditions.

Control platform

Operation of the MEHP-iB-G09, is managed by the proprietary W3000 plus control platform, which includes advanced functions such as Constant Heating Capacity and Boost.

Compressors

The MEHP-iB-G09 integrates Mitsubishi Electric inverter driven scroll compressors, specifically optimised for the use of R290 refrigerant, supporting stable and efficient operation across the full operating range, reliable comfort delivery during colder conditions.

Hydraulic group

The new R290 reversible heat pump features a fully integrated hydraulic group, including an inverter driven pump supplied within the monoblock configuration, supporting simplified installation and effective system integration in comfort applications.



Fans

The MEHP-iB-G09 is equipped with high efficiency EC fans, selected to ensure low electrical consumption and reliable operation across the full operating range.



Water heat exchanger

In the MEHP-iB-G09, heat exchange on the water side is performed by an insulated plate heat exchanger combined with antifreeze protection, ensuring reliable performance and operational safety in comfort applications.

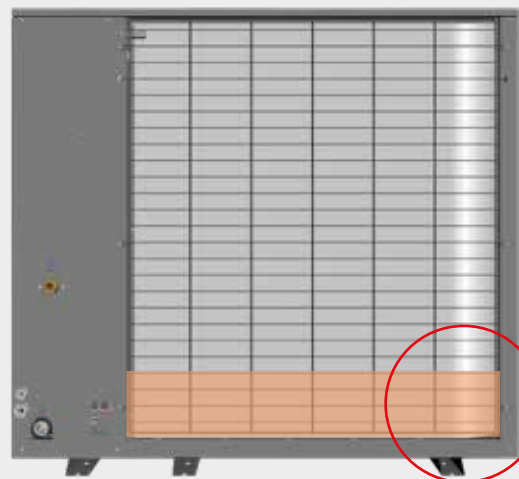


Bi-phase fluid circuit

This solution is based on subcooling bi phase fluid flowing in the lower section of the air cooled heat exchanger, specifically intended to enhance defrost cycles. The copper aluminium heat exchanger is designed with a dedicated base section that incorporates bi phase fluid, allowing the lower part of the coil to remain warm during defrost operation and providing a clear functional advantage compared to conventional solutions. By preventing ice formation in the lower section of the heat exchanger, defrost behaviour is more effective and reliable, particularly in cold and humid climates where frost accumulation is more critical.

This approach improves performance in demanding climatic conditions and supports suitability for cold climate applications. Dedicated options are available for these scenarios, including additional electric heaters to further support operation under severe conditions.

Warm part of the exchanger, thanks to the hot bi-phase fluid circuit



R290 Refrigerant and Safety Measures

Although propane is a natural refrigerant with a very low environmental impact, its flammability requires specific precautions that must be addressed from the earliest stages of the product lifecycle, starting from manufacturing processes.



R290

Refrigerant



To ensure safe handling of R290 charged units, our plants have been upgraded to manage propane throughout all production phases. These upgrades include adapted production lines, end of line testing carried out in dedicated test cabins with specific operator clothing and controlled access procedures, as well as finished product storage in dedicated areas.

This production approach is reflected in the way safety is implemented at unit level. R290 management is based on a comprehensive set of embedded devices and safety features specifically intended to meet the requirements associated with A3 refrigerants. All safety components are fully integrated within the unit, eliminating the need for additional devices to be installed on site and supporting a controlled and simplified system integration process.

Compliance with applicable regulations is combined with Mitsubishi Electric design practices focused on safety, reliability and consistency in applied HVAC solutions.



Many Options for Many Solutions





Room control

An intuitive and user friendly touch screen room control is available, specifically suited for comfort applications where the end user is not necessarily a technical operator. The interface features clear graphics and straightforward navigation, supporting ease of use in everyday operation. Through the dedicated HMI, it is possible to remotely control the MEHPiB- G09 and manage key room parameters such as temperature, relative humidity and scheduling, ensuring comfortable indoor conditions with simple and accessible interaction.



Buffer tank

Buffer tanks are available to support system stability and hydraulic optimisation, a complete range of buffer tank solutions is available for comfort applications.



Serial card and KIPlink

Connectivity accessories are available to support integration with building management systems and to enable local and remote monitoring. Serial communication cards and KIPlink provide flexible options for system supervision and connectivity in applied HVAC installations.



DHW tank and valves

Dedicated equipment is available to support domestic hot water production in comfort applications. The three way valve required for DHW management is directly controlled by the MEHP-iB-G09 through embedded control logic, ensuring coordinated operation and simplified system configuration.

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