MITSUBISHI HEAVY INDUSTRIES

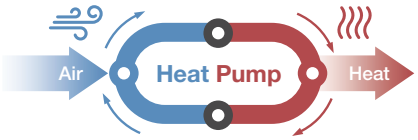
Residential Air to Water Heat Pump Catalogue

HYDROLUTION EZY

Platinum
A' Design Award

MOVE THE WORLD FORWARD MITSUBISHI HEAVY INDUSTRIES GROUP

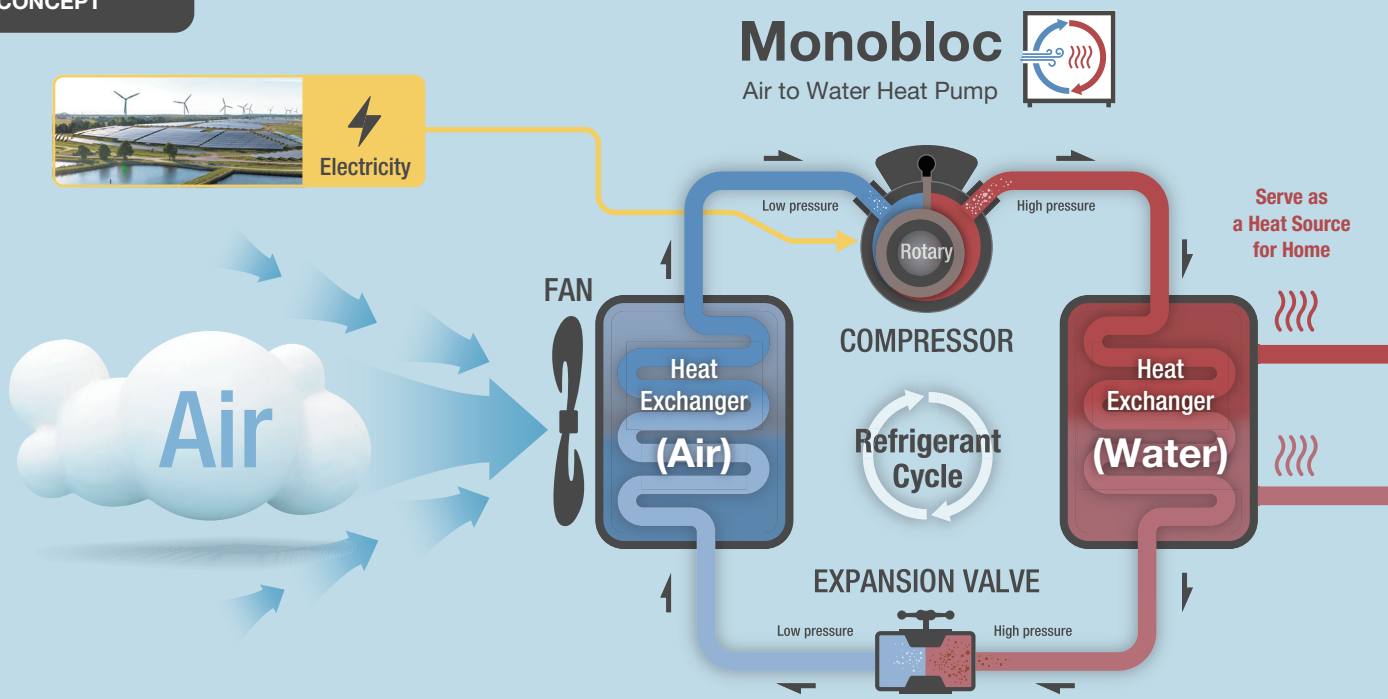
What is air to water heat pump?



Air-to-water heat pump absorbs heat from the outside air and transfers it into a building for heating and hot water. It's an energy-efficient and eco-friendly solution that uses renewable energy to reduce electricity consumption.

HYDROLUTION EZY

CONCEPT



1. Absorb Heat from Air

It utilises an electrically driven compressor to compress refrigerant, raising its pressure and temperature to heat water. The refrigerant then passes through an expansion valve, which reduces its pressure and temperature, allowing it to absorb heat from the surrounding air.

2. To Warm your Home

It provides heating for your home via radiators, underfloor heating, and hot water systems. Installing a heat pump is a key step in reducing dependence on fossil fuels.

Outdoor units: FDCM

A'DESIGN AWARD & COMPETITION WINNER 2026 PLATINUM

Platinum A' Design Award

Mitsubishi Heavy Industries has been awarded the A' Design Award Platinum 2026 in the `Heating, Ventilation, and Air Conditioning Products Design' category for Hydrolution EZY Series (6kW and 7.1kW) air to water heat pump.

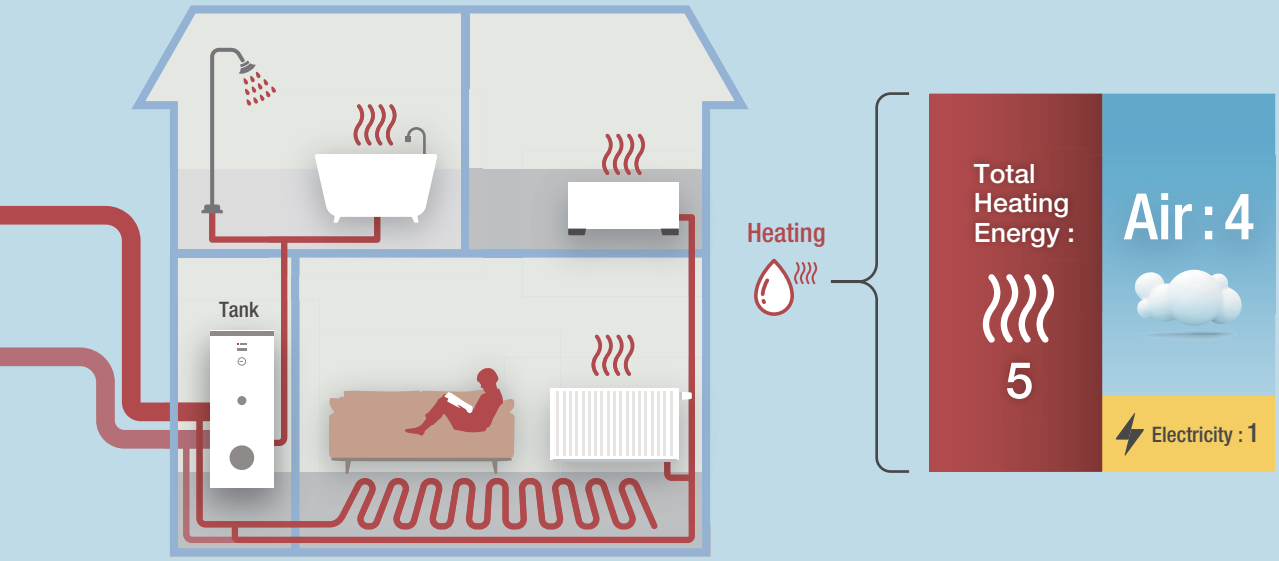
- FDCM60VNX-P
- FDCM71VNX-P

R290

- FDCM100VNX-P / VSX-P
- FDCM140VNX-P / VSX-P

R290

Your home can be heated using mostly natural energy



3. A Sustainable Alternative to Fossil Fuel

A heat pump uses just 1 unit of energy to power the compressor or fan, while extracting an additional 3-4 units from the air, making it far more energy-efficient than traditional boilers. It offers a sustainable alternative to fossil fuel-burning heating systems.

4. Natural Energy

If the electricity is sourced from renewables, heating can be powered almost entirely by natural energy.

System Lineup

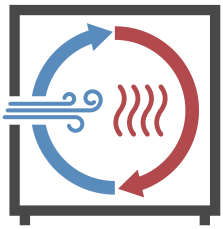
Indoor units
- All in one - HMM100
- Hydrobox HBM140 / HBM140H

Hot water tanks
- PT300 / PT300-V2 / PT500

Controllers
- RC-HY20-W / RC-HY40-W

Benefits of a Monobloc Heat Pump

Simplicity and Ease of Installation

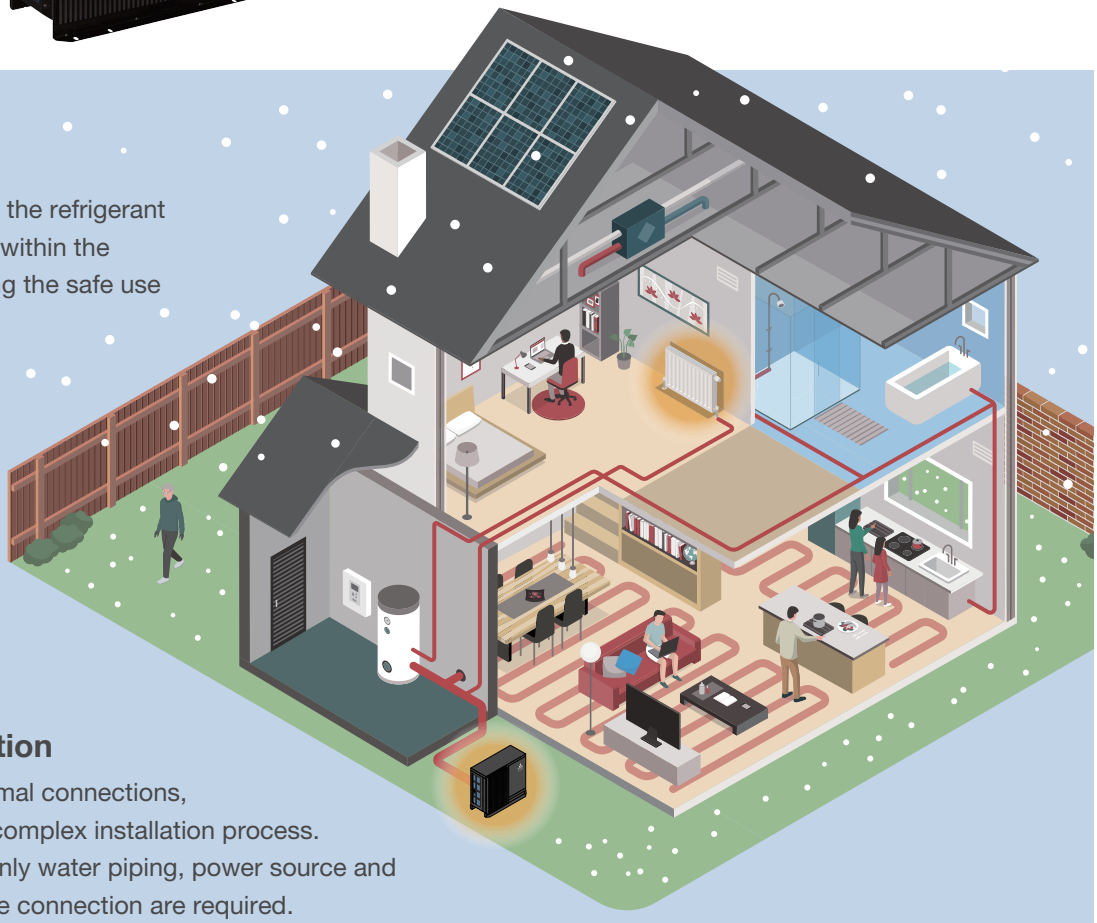


Monobloc

The key advantage of a monobloc heat pump is its simplicity and quick installation. As a single, self-contained unit, it requires minimal plumbing and electrical connections. Compared to split systems, it offers a faster installation process and occupies less indoor space, with the entire unit installed outdoors.

1. Safe to Use

With this integration, the refrigerant is contained entirely within the outdoor unit, ensuring the safe use of A3 refrigerant.



2. Easy Installation

Single unit with minimal connections, often requiring less complex installation process. During installation, only water piping, power source and communication cable connection are required.

Water piping, power source and communication connections

3. Time-saving Installation

Generally quicker to install than split systems due to simplified setup.

4. Space-saving

Entire unit is placed outdoors, freeing up indoor space.

5. Simple Maintenance

Only one unit to service and maintain.

Why R290 Refrigerant?

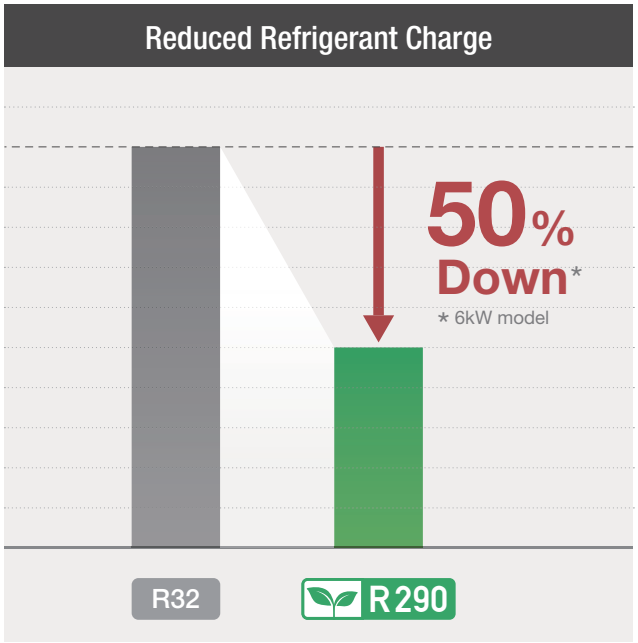
R290 – The Natural, Low-Carbon Refrigerant Solution

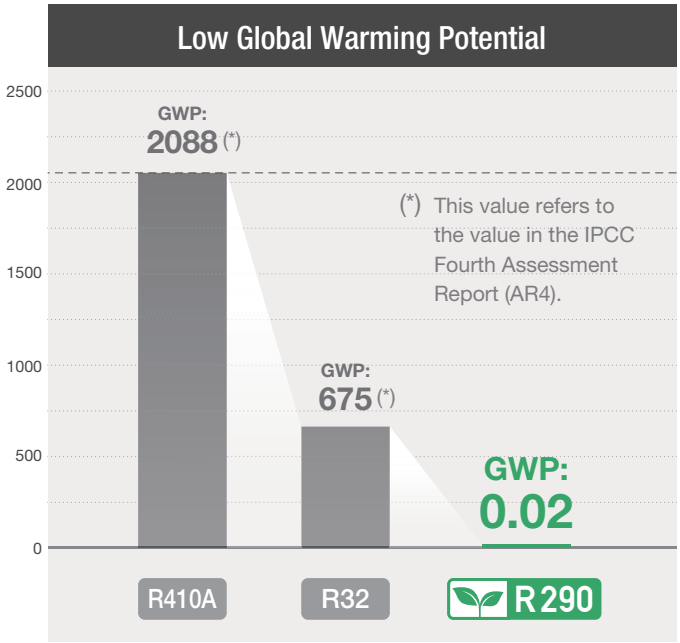
R290

Unlike many traditional refrigerants, R290 has a significantly lower GWP of only 0.02 (*), making it a far more sustainable and low-carbon choice. Additionally, R290 has zero Ozone Depletion Potential (ODP), further enhancing its environmental benefits.

Refrigerant system requires smaller quantity of refrigerant compared to the previous R32, further minimizing its environmental impact.

(*) The Sixth Assessment Report (AR6) reported by the Intergovernmental Panel on Climate Change (IPCC)





Superior Thermodynamic Properties:

With its advanced thermodynamic properties and MHI technology, our new units can achieve hot water outlet temperatures of up to 75°C, making them compatible with existing, conventional heating systems such as radiators.

75°C Fit for high hot water temperature usage

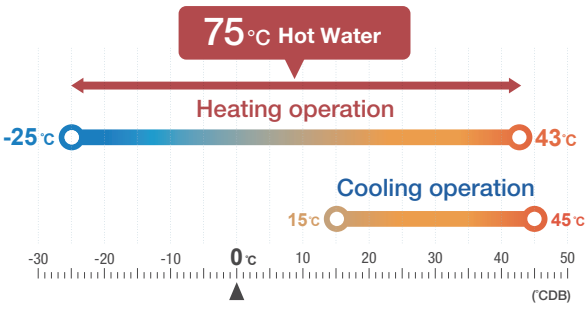
Key Benefits of R290 Refrigerant:

Its thermodynamic properties enable efficient heat transfer and lower energy consumption, resulting in a higher Coefficient of Performance (COP) compared to many other refrigerants. This leads to reduced operating costs and a smaller carbon footprint, allowing for greater heating output with less energy input.

Key Features

75°C Hot Water Down to -25°C

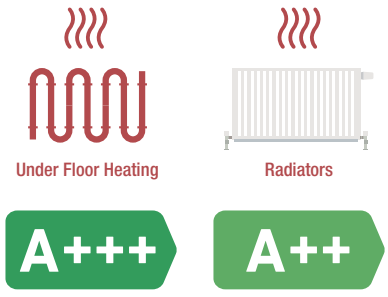
The MHI Hydrolution EZY can produce hot water at an outlet temperature of up to 75°C, even when the ambient air temperature drops to as low as -25°C, providing reliable warmth even in cold climate regions.
Our new advanced technology has expanded the heating and cooling operation range from -25°C to 43°C in heating and 15°C to 45°C in cooling mode. With the refinement of the proprietary compressor, the unit reliably delivers hot water at up to 75°C and operates within a wide temperature range of -25°C to 43°C, ensuring hygienic use in all seasons.



High SCOP of 5.00 (Seasonal Coefficient of Performance)

(*) 10kW model, Low temp application, Average climate condition

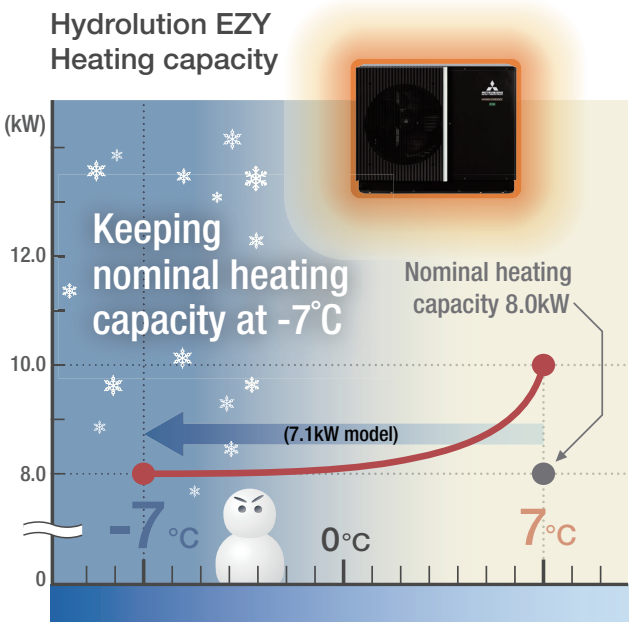
The MHI Hydrolution EZY boasts a SCOP of 5.00, meaning it can produce (extract) 5.00 units of heat energy from just 1 unit of electrical energy input making it a efficient sustainable way to heat your home.



ErP35°C / 55°C
Energy efficiency class up to A+++ / A++

Powerful Heating

The unit can operate at its nominal heating capacity even when the temperature drops to -7°C, ensuring reliable and a powerful performance on cold days.

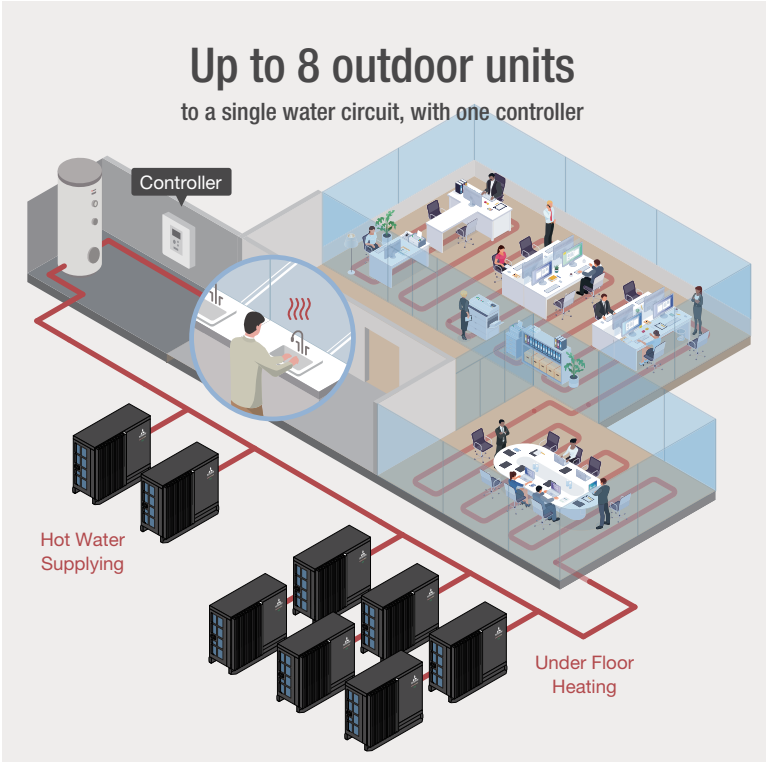


Reversible Heat Pump

The MHI Hydrolution EZY is a versatile, reversible system that delivers both hot and cold water, making it ideal for year-round comfort. Engineered for high efficiency, it ensures reliable cooling performance even when outdoor temperatures reach up to 45°C.

Cascade System

Up to 8 outdoor units can be connected to a single water circuit and controlled with one controller. Rotation operation ensures equal runtime for all units offering heating and hot water solutions to buildings that requires larger capacities, which covers multi-room application or light-commercial use.



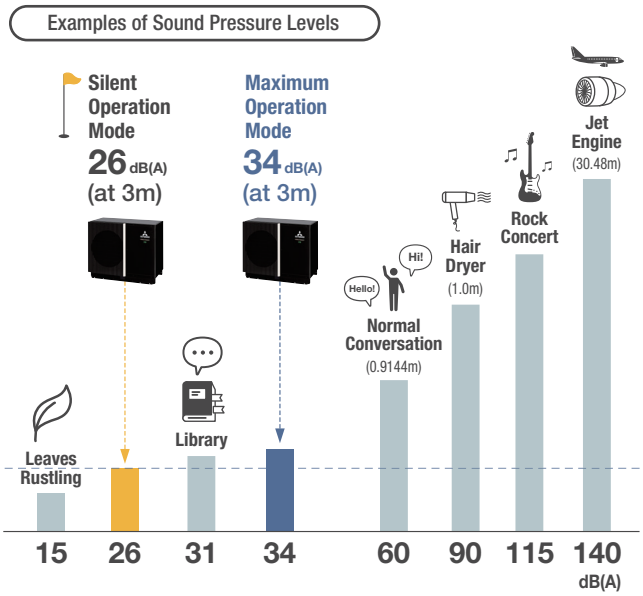
Silent Operation

26dB(A) in Silent Operation Mode

In the EU, strict noise regulations are in place to ensure the comfort and well-being of residents, particularly in densely populated residential areas. Outdoor units must meet these standards to avoid noise pollution.

MHI's Hydrolution EZY series is designed to comply fully with these regulations while providing reliable heating solutions that maintain peace and quiet in your living environment.

With its silent operation mode, the sound pressure level at a distance of 3 meters is as low as 26 dB(A), equivalent to the quietness of a recording studio. Even during maximum operation, the sound power level measured directly from the unit is limited to just 58 dB(A).



Difference Between Sound Power Level and Sound Pressure Level

Sound Power Level (PWL):

The total sound energy **produced by the unit itself,** regardless of distance or surroundings.

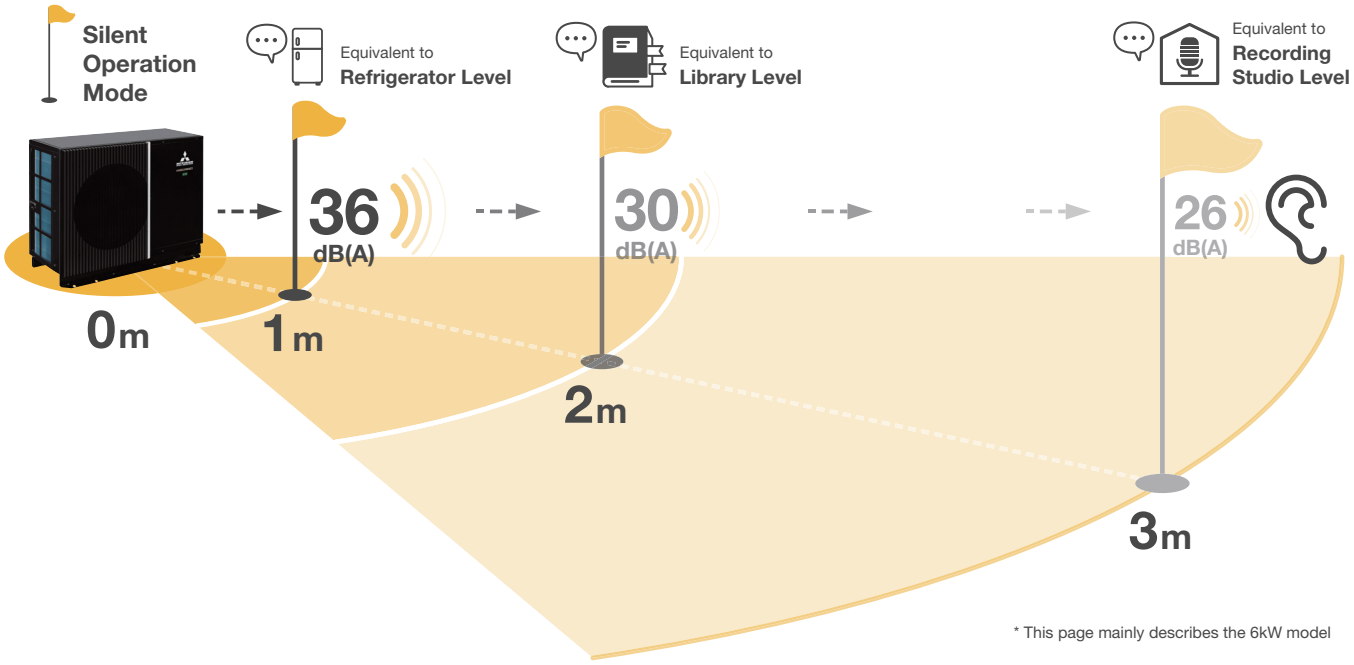
Maximum Operation
(measured directly from the unit)
58 dB(A)

Sound Pressure Level (SPL):

The sound **heard at a specific distance,** which changes depending on location and environment.

Silent Operation Mode
(at a distance of 3 meters)
26 dB(A)

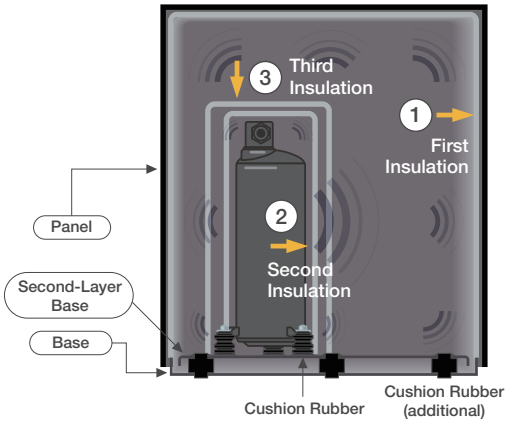
Sound Pressure Level (SPL) of 6kW model



* This page mainly describes the 6kW model

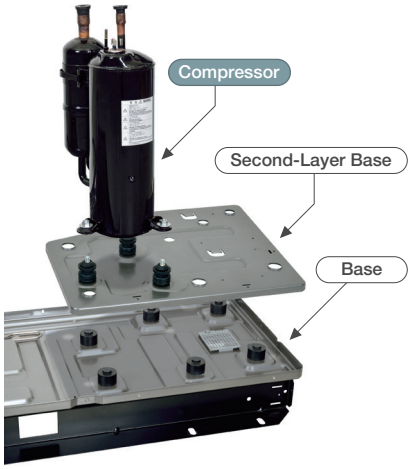
MHI Technology Features:

- The compressor is elevated with a cushion rubber, separating it from the base to prevent noise caused by contact with the base metal.
- Additionally, it is enclosed in two layers of anti-vibration insulation, effectively reducing the noise level.
- The insulation applied all over the back surface of the panel also functions as a sound absorber, contributing to the unit's silent operation.

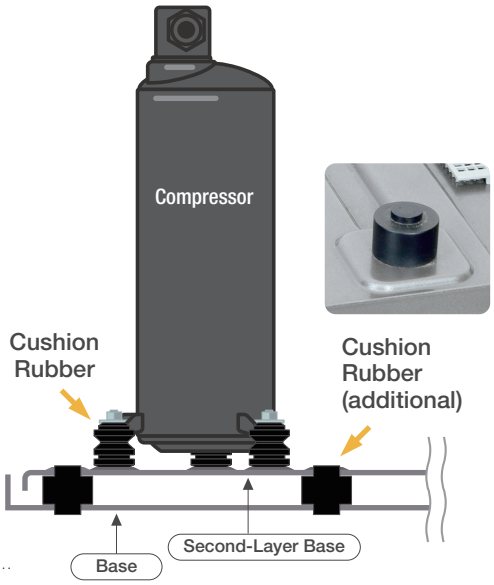


Anti Vibration Technology

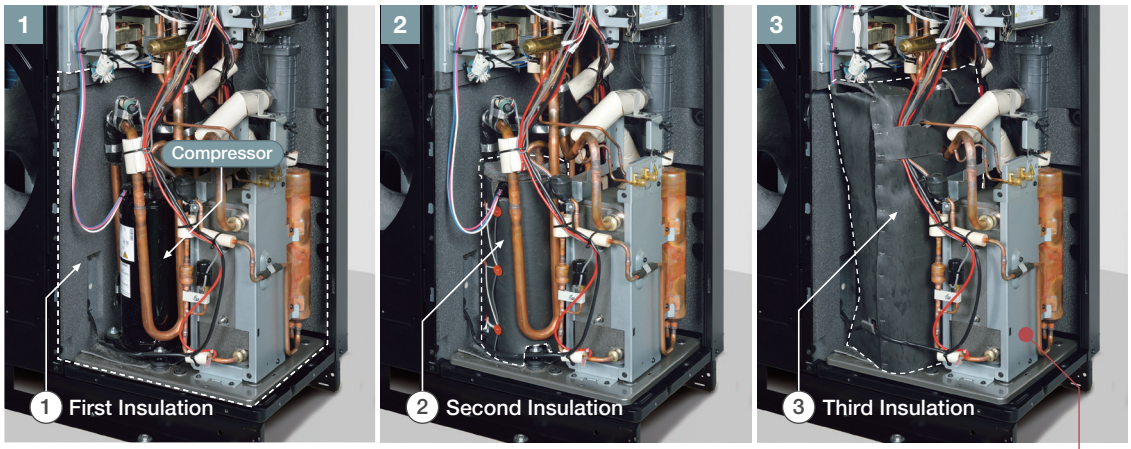
Vibration Control Cushion Rubber



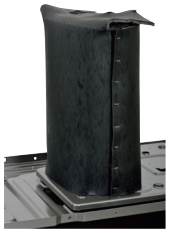
The compressor is elevated with a cushion rubber. The second-layer base is also elevated with an additional cushion rubber from the base.



Noise Reduction Three Insulations Applied



Second Insulation



Third Insulation

Additionally, the system includes silent operation, which further reduces operational noise, ensuring compliance with EU noise regulations, delivering a solution that is considerate for your neighbours as it is efficient for your home.

Water Heat Exchanger

How Safety is Ensured

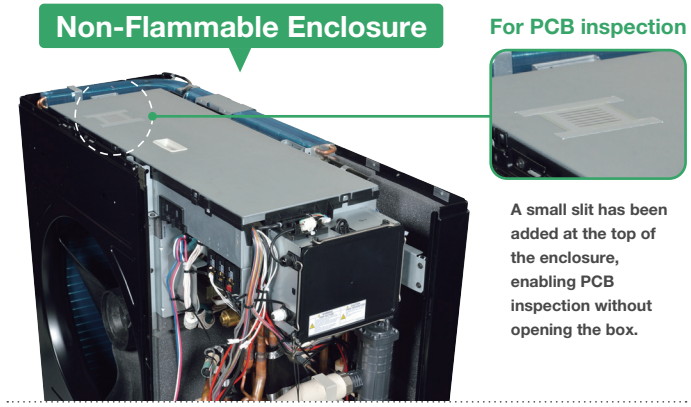
Safety Features of Hydrolution EZY

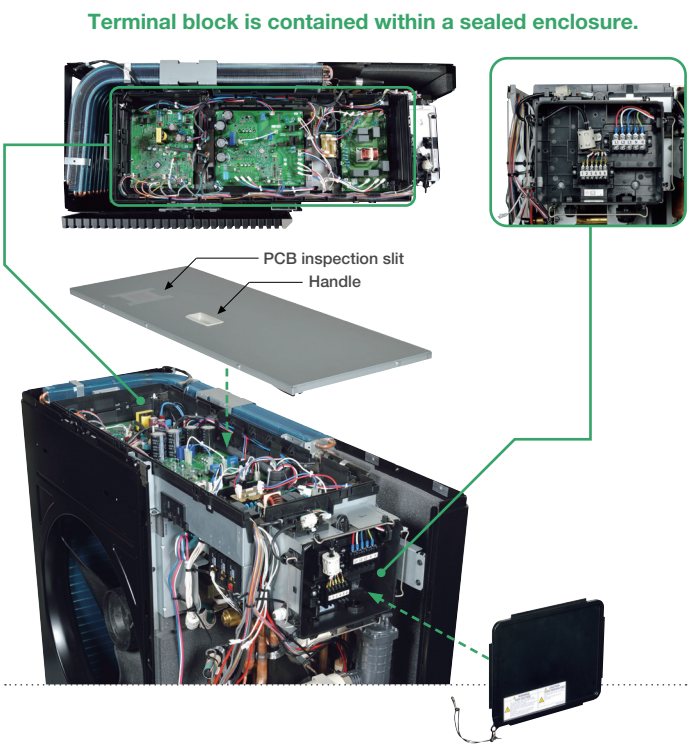
R290

Hydrolution EZY is equipped with robust, multi-step safety measures to safeguard against any malfunctions, even in the unlikely event of a refrigerant leak from the circuit.
This ensures customer safety while utilizing the full performance potential of R290 refrigerants.

1. Non-Flammable Enclosure at The Top

The PCB and terminal block are housed in a non-flammable enclosure, strategically placed at the top of the outdoor unit, while additionally the robust relay cable, enhances safety further. This design minimizes the risk of refrigerant entering these components.



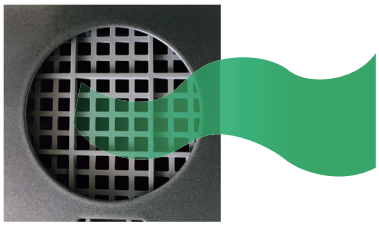


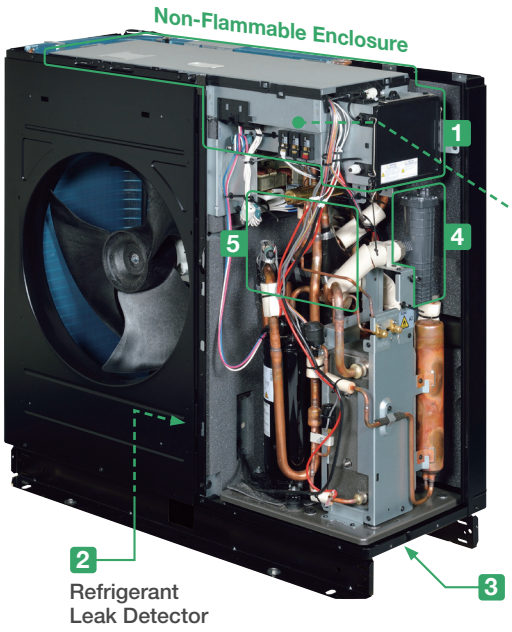
2. Refrigerant Leak Detector

The unit is equipped with a refrigerant leak detector. In the unlikely event of a leak occurring, the unit automatically shuts down, and an alarm is triggered on the indoor controller to alert the homeowner. Additionally, the fan is automatically activated to disperse the leaked refrigerant around the outdoor unit for safety.

3. Leak Checks Bottom Hole

A vent hole is located at the bottom of the unit to ensure the effective removal of any leaked refrigerant. This also enables qualified service engineers to easily check for leaks through the hole.





Outside DIP-Switch

Easy and safe maintenance. No need to touch or access the refrigerant circuit or the electrical box to change the settings during installation or when servicing.

4. Gas Separator with Pressure Relief Valve

A gas separator within the unit prevents refrigerant from reaching the indoor unit in the event of a refrigerant leak through the water piping, adding an extra layer of safety.

5. Pressure Sensor

The unit is equipped with two pressure sensors and a high-pressure switch to monitor pressure levels during operation, ensuring the prevention of any malfunctions.

Exterior

Platinum A' Design Award

Mitsubishi Heavy Industries has been awarded the A' Design Award Platinum 2026 in the `Heating, Ventilation, and Air Conditioning Products Design' category for Hydrolution EZY Series (6kW and 7.1kW) air to water heat pump.

Jet-black Exterior

The Hydrolution EZY series features a sleek, jet-black exterior to compliment its environment. Its design effortlessly blends into various external settings, while standing out with a bold and impactful presence.

6kW / 7.1kW model

6kW / 7.1kW model

10kW / 14kW models

Design Elements

The following design elements were carefully considered to shape the overall appearance of the unit.

1. Silver Lining

The design of the unit features a striking jet-black panel, complemented by a sleek silver lining. This carefully considered detail not only enhances the overall look but also contributes to a refined, contemporary aesthetic. The combination of bold black with the subtle silver accents adds a touch of elegance, ensuring the unit seamlessly blends into its surroundings.

2. Fan Guard Design

The fan guard is meticulously crafted with a smooth matte finish, designed to enhance aerodynamics while effectively concealing the fan from full view.

Positioned just above the panel, at the same height as the front panel, it adds a sense of dynamism and structure to the overall design.

The top of the fan guard is indented, aligning perfectly with the vertical lines of the front panel. This thoughtful design choice not only ensures a cohesive and unified appearance but also avoids creating a flat, monotonous look, contributing to a visually pleasing and sophisticated unit.

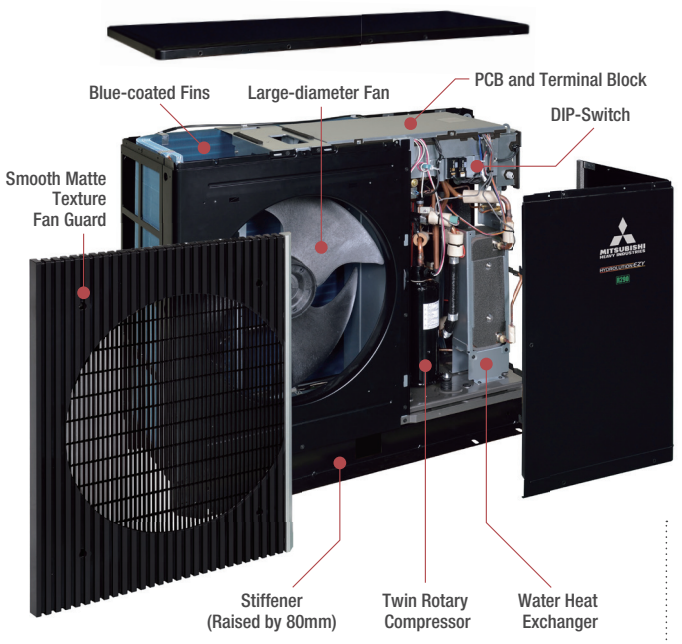
10kW / 14kW model

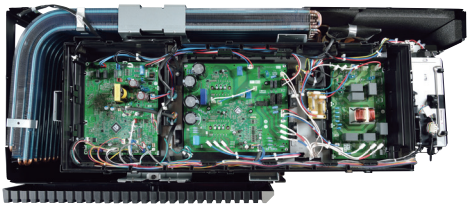
10kW / 14kW model

Key Components

MHI products deliver outstanding efficiency through advanced engineering expertise developed over decades of innovation across a wide range of industries. This legacy of manufacturing excellence ensures each component is carefully designed to optimise performance while reducing energy consumption, reflecting a commitment to sustainable and high-performing solutions.

• FDCM60VNX-P • FDCM71VNX-P

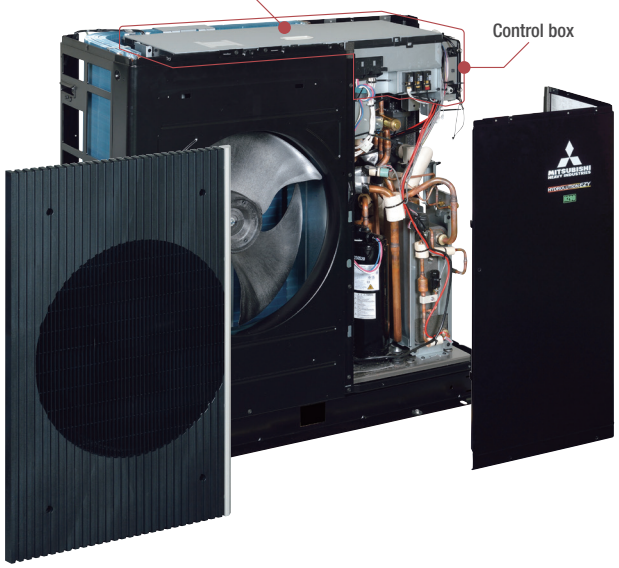




• FDCM100VNX-P / VSX-P • FDCM140VNX-P / VSX-P

1. Easy Removal Using a Handle-Equipped Cover (*1)

The control box cover is designed with a handle, allowing for easy removal.



2. Controller with Significantly Reduced Harmonic Noise (*2)

Newly developed three-phase active converter control significantly reduces harmonic noise while fully complying with EMC standards and power quality requirements. By suppressing harmonic components in the input current, the load on the power grid is minimized, ensuring high reliability and a stable power environment.

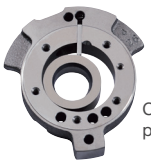
(*1) : Available only on the FDCM100VNX-P / VSX-P and FDCM140VNX-P / VSX-P models. (*2) : Available only on the FDCM100VSX-P and FDCM140VSX-P models.

MHI Proprietary Compressor

Compact DC Twin Rotary Compressor

The highly efficient compressor, featuring a twin rotary structure, is expertly crafted for R290 refrigerant.
The compressor's rotation speed ranges from 12 to 130 rps, enabling precise performance control.

Precise performance control with wide rotation speed range



Compression part

Concentrated winding motor

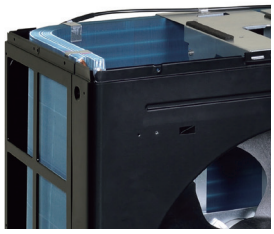
Compared to previous models, the compressor has been downsized for greater versatility. The compressor operates efficiently due to the optimization of refrigerant oil, the enhanced designed blade, with a special coating for low friction and high wear resistance. With this the unit reliably delivers hot water at up to 75°C and operates within a wide temperature range of -25°C to 43°C.

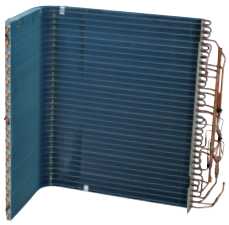
With the concentrated winding motor, seasonal efficiency has been improved. Manufactured with advanced abrasive machining techniques to achieve micron-scale precision by MHI.

Corrosion Resistance

Blue-coated Fins

The new outdoor unit features blue-coated fins on the heat exchanger, providing enhanced protection against corrosion. Since the unit functions as both an evaporator and a condenser, the blue coating also helps manage moisture that forms during heat exchange, ensuring long-lasting performance and durability in varying environmental conditions.





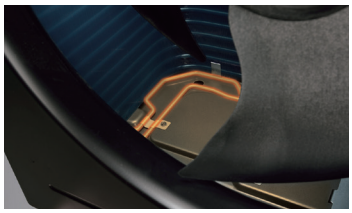
Steel Base

Steel sheet hot-dip galvanized primarily composed of zinc (Zn) with aluminum (Al) and magnesium (Mg). Providing excellent corrosion resistance. The sheet is also coated with a paint, making it highly resistant to rust.

For Extremely Cold Regions

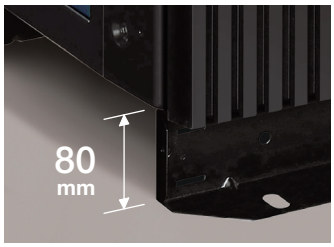
Drain Pan Heater

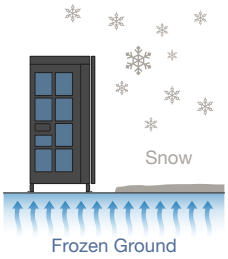
A drain pan heater is provided to prevent accidents during operation in extremely cold regions. It prevents icicles forming on the drain pan, coming into contact with the fan and causing damage.



Stiffener

With the stiffener, the base of the unit has been raised by 80mm, preventing the unit from freezing due to direct contact with frozen ground and snow accumulation.





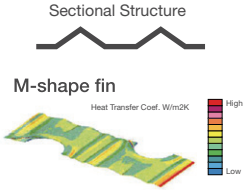
Efficiency

DC Motor & Fan

A high-performance DC motor combined with a newly designed large-diameter fan delivers exceptional efficiency while maintaining quiet operation. This combination enhances airflow and reduces noise levels, contributing to the unit's overall energy performance and acoustic comfort.

Heat Exchanger

The M-shaped fins are engineered to optimize both heat transfer and airflow resistance, delivering high performance and efficiency across a wide range of climate conditions. This design ensures consistent operation and reliable comfort year-round.



Coated PCB

The coated Printed Circuit Board (PCB) is built for durability, offering enhanced resistance to humidity and environmental factors. This protective design ensures long-lasting, reliable performance even in challenging conditions.

Specifications

HYDROLUTION EZY

Air to water heat pump outdoor unit

A'DESIGN AWARD & COMPETITION WINNER 2026 PLATINUM

R290

6kW / 7.1kW models
• FDCM60VNX-P • FDCM71VNX-P

R290

10kW / 14kW models
• FDCM100VNX-P / VSX-P • FDCM140VNX-P / VSX-P

Hydrolution EZY Key Benefits:

- Uses environmentally friendly R290 refrigerant
- Low noise level of 26dB(A) (*1)(*4) in silent operation mode
- High energy efficiency with ERP energy class A+++
- High SCOP of 5.00 (*5)
- 100% hydraulic connections with water pipe
- Remote monitoring via myUplink platform
- Compatible with photovoltaic (PV) solar panel integration (*2)
- Supports connection of up to 8 outdoor units (*2)
- Pool and solar heating compatibility (*2)
- Connectable to external monitoring systems via Modbus® (*2)(*3)
- Smart Grid Ready (SG Ready) (*2)

(*1) : measured from 3m (*2) : Accessory required (*3) : Modbus is a registered trademark of Schneider Electric and is used herein for reference purposes only
(*4) : for 6kW model (*5) : for 10kW model

Model			FDCM60VNX-P	FDCM71VNX-P	FDCM100VNX-P / VSX-P	FDCM140VNX-P / VSX-P
Power source			1 phase 230V 50Hz		1 phase 230V 50Hz / 3 phase 400V 50Hz	
Heating nominal capacity (**1)	Condition 1	kW	5.50	8.00	10.20	12.50
	Condition 2	kW	5.50	8.00	10.00	11.00
COP	Condition 1	–	3.77	3.79	3.70	3.60
	Condition 2	–	5.14	4.49	4.70	4.75
Cooling nominal capacity (**1)	Condition 1	kW	5.30	7.00	9.00	10.30
	Condition 2	kW	7.50	9.00	13.00	14.60
EER	Condition 1	–	3.03	3.11	3.00	3.00
	Condition 2	–	3.66	4.09	3.62	3.62
Seasonal Space Heating Energy Efficiency class (W35 / W55)		–	A+++ / A++	A+++ / A++	A+++ / A++	A+++ / A++
Seasonal Space Heating Energy Efficiency (W55) SCOP, ηs(%)		–	3.60, 141%	3.60, 141%	3.71, 146%	3.60, 141%
Seasonal Space Heating Energy Efficiency (W35) SCOP, ηs(%)		–	4.75, 187%	4.61, 181%	5.00, 197%	4.68, 184%
Operation range (Ambient temperature)	Heating	°C	-25 – 43	-25 – 43	-25 – 43	-25 – 43
	Cooling	°C	15 – 45	15 – 45	15 – 45	15 – 45
Operation range (Water outlet temperature)	Heating	°C	25 – 75	25 – 75	25 – 75	25 – 75
	Cooling	°C	5 – 25	5 – 25	5 – 25	5 – 25
Max. current		A	13	16	21 / 11	28 / 11
Sound power level (**2)	Condition 2	dB(A)	55	60	56	57
Sound power level (Max.)	Condition 2	dB(A)	58	62	65	65
Sound pressure level Nom. at 1m	Condition 2	dB(A)	41	49	50	51
Refrigerant (GWP)		–	R290, 0.02			
Refrigerant volume, CO_2 Eq.		kg/t	0.65 / 0.000013	0.85 / 0.000017	1.30 / 0.000026	1.60 / 0.000032
Dimensions (H × W × D)		mm	916 × 1160 × 440		1120 × 1160 × 440	
Weight		kg	82	90	122 / 127	132 / 137
Water pipe connection			G1" external thread		G1" external thread	

(**1) : Condition 1 and 2 correspond to the specifications in the "Test conditions" table. (**2) : Measured in accordance with EN12102, water conditions of EN14825

Test conditions		Water Temperature	Ambient Temperature
Heating	Condition 1	45°Cout / 40°Cin	7°CDB / 6°CWB
	Condition 2	35°Cout / 30°Cin	
Cooling	Condition 1	7°Cout / 12°Cin	35°CDB
	Condition 2	18°Cout / 23°Cin	

HMM100

HBM140

HBM140H

Indoor units

• All in one - HMM100 • Hydrobox HBM140 / HBM140H

Model		HMM100	HBM140	HBM140H
Power source	kg	1 phase 230V 50Hz 3 phase 400V 50Hz	1 phase 230V 50Hz	1 phase 230V 50Hz 3 phase 400V 50Hz
Dimensions (H × W × D)	mm	1670 × 600 × 610	800 × 440 × 380	
Weight (without water in the system)	kg	150	31	37
Tank surface	–	Enamel Coated	–	–
Tank volume total	liter	180	–	–
Volume expansion vessel	liter	10	10	10
Dimensions, climate system pipe	mm	22	28	28
Water pipe connections	–	Compression fittings	G1” external thread	G1” external thread
Immersion heater	kW	Max. 9kW (6kW for 1 phase 230V)	N/A	Max. 9kW (6kW for 1 phase 230V)
Max. operating current	A	26 (230V) / 13 (400V)	2 (230V)	26 (230V) / 13 (400V)

PT300 / 500

PT300-V2

Hot water tanks

• PT300 • PT300-V2 • PT500

Model		PT300	PT300-V2	PT500
Power source	–	–	–	–
Volume	liter	279	285	476
Volume of coil	liter	9.4	16	13
Immersion heater	kW	Not included		
Dimensions (H × W × D)	mm	1634 × 673 × 743	1705 × 673 × 785	1835 × 832 × 897
Weight	kg	115	133	156
Dimensions, climate system pipe	inch	G1” external thread		
Dimensions, hot water pipe	inch	G1” external thread		
Inner surface	–	Enamel		
Design pressure tank	Bar	10		
Design pressure coil	Bar	16		
Energy class	–	C	C	C

RC-HY20-W / RC-HY40-W

Controllers

• RC-HY20-W • RC-HY40-W

Model		RC-HY20-W	RC-HY40-W
Power source	–	1 phase 230V 50Hz	
Dimensions (H × W × D)	mm	400 × 354 × 123	
Weight	kg	4.3	4.4
Ambient temperature	–	5 – 35 °C	
Max. number of air/water heat pumps	–	1	8
Max. number of sensors	–	8	8
Max. number of charge pumps with internal accessory cards	–	1	4
Max. number of charge pumps with external accessory cards	–	–	8
Max. number of outputs for additional heat step	–	3	3
Internet connection function	–	Included (myUplink)	
Language	–	English, Swedish, German, French, Spanish, Finnish, Lithuanian, Czech, Polish, Dutch, Danish, Estonian, Latvian, Russian, Italian, Slovenian, Romanian, Portuguese, Croatian, Icelandic, Hungarian, Norwegian, Turkish	

Accessories

ECS40M / ECS41M

Extra mixing valve set, including a room sensor, for adjusting temperature in several climate systems. (e.g. A radiator system and an underfloor heating)

Contents

- 4 × Cable ties
- 1 × Circulation pump
- 1 × Shunt motor
- 1 × 3-way valve
- 1 × Kit for accessory card
- 2 × Heating pipe paste
- 2 × Aluminium tape
- 1 × Insulation tape
- 2 × Replacement gasket
- 2 × Temperature sensor
- 1 × Room sensor

ECS40M for maximum 80m² floor heating
ECS41M for 80-250 m² floor heating

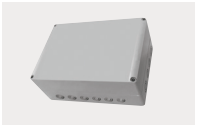
HMM100	RC-HY40-W
HBM140	
HBM140H	

RTS40M

Room sensor
RC-HY40, HMM and HBM include one sensor

HMM100	RC-HY20-W
HBM140	RC-HY40-W
HBM140H	

AXC30M



Accessory card

HMM100	RC-HY40-W
HBM140	
HBM140H	

RMU40M

Room sensor / controller with multi colour display

HMM100	RC-HY40-W
HBM140	
HBM140H	

VST05M / VST11M / VST20M

Reversing valve for using hot water accessories and prioritising hot water demand.

VST05M
(Ø 22mm, Max.electric charge output : 11kW)

VST11M
(Ø 28mm, Max.electric charge output : 17kW)

VST20M
(DN32, (1¼''), Max.electric charge output : 40kW)

RC-HY20-W
RC-HY40-W

POOL40M

Enables pool heating with the heat pump.
Max. output - 17 kW

HMM100	RC-HY40-W
HBM140	
HBM140H	

EME20M

Enables communication and control between the inverter for solar cells and heat pump / indoor module / control module.

HMM100	RC-HY20-W
HBM140	RC-HY40-W
HBM140H	

SOLAR42M

Enables solar heating with the heat pump.

HMM100	RC-HY40-W
HBM140	
HBM140H	

VCC05M / VCC11M

Reversing valve for changing operation of cooling and heating.

VCC05M (Ø 22mm)
VCC11M (Ø 28mm)

RC-HY20-W
RC-HY40-W

MODBUS40M

Control and monitor the heat pump system by external Modbus-equipped equipment.

HMM100	RC-HY40-W
HBM140	
HBM140H	

EMK300M / EMK500M

Energy measurement kit for measuring the flow and temperature differences in the charge circuit. Information can be shown on RC-HY40's display.

HMM100	RC-HY40-W
HBM140	
HBM140H	

EMK300M
(Measurement range 5.0-85 l/min)

EMK500M
(Measurement range 9.0-150 l/min)

Anode M300 / M500

Magnesium anode chain

Anode M300 for PT300, PT300-V2
(Ø26 × 8 pieces (G1''))

Anode M500 for PT500
(Ø33 × 5 pieces (G1 ¼''))

PT300
PT300-V2
PT500

Anode T300 / T500

Anode titanium complete

Anode T300 for PT300 and PT300-V2
(Length : 200mm, G ¾'', 230V)

Anode T500 for PT500
(Length : 400mm, G ¾'', 230V)

PT300
PT300-V2
PT500

HR10M

Relay for ME1030M
Used to control external 1 to 3phase loads such as oil burners, immersion heaters and pumps.

PT300
PT300-V2
PT500

ME1030M

Immersion heater designed to heat up domestic hot water installations.
(3kW, G1½'', 230V)

PT300
PT300-V2
PT500

CPD11-25M / 65, 75

DC Motor controlled water pump.

RC-HY20-W
RC-HY40-W

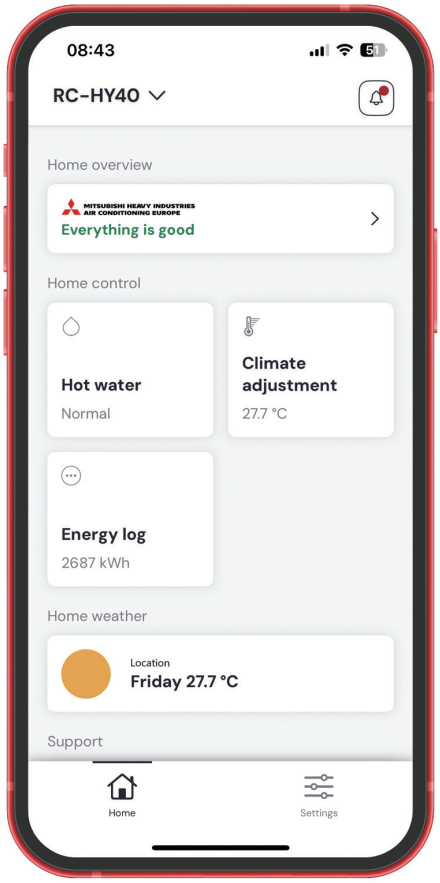
ELK9M1

Immersion heater that can be used to supplement the heating capacity of heat pumps.
Power source : 1 - 230V 50Hz or 3 - 400V 50Hz
Output : 4.5 or 9 kW

RC-HY20-W
RC-HY40-W

Remote Monitoring

Stay in Control with myUplink



The Ultimate App for remote monitoring

The Hydrolution EZY air-to-water unit seamlessly interfaces with an independent remote monitoring system via the myUplink platform, a dedicated application tailored for users.

myUplink

Independent Remote Monitoring System:

This sophisticated system empowers users to remotely oversee and control the Hydrolution EZY unit, enabling real-time monitoring of its performance, identification of maintenance requirements, and ensuring optimal efficiency.

Download the App today

Download on the App Store*

GET IT ON Google Play*

*App Store and the App Store logo are trademarks of Apple Inc.
*Google Play and the Google Play logo are trademarks of Google LLC.

Experience enhanced control and monitoring with myUplink:

Status Overview:
Get a quick and comprehensive view of your heat pump's status.

Heating Level Control:
Easily manage and adjust the heating and hot water production to your desired comfort level.

Instant Notifications:
Receive push notifications and emails if your system is impacted, ensuring you're always in the know and can take prompt action.

myUplink Key Benefits:

- Real time monitoring and control of heating, hot water, pool, solar and heat pump operation
- Real time alarm information
- Cloud based software update
- Clear and intuitive heating and hot water temperature monitoring
- Easy-to-use control system for maximum comfort, no matter where you are - Weather forecast compensation

Before starting use

Heating performance

The heating performance values (kW) described in the catalogue are the values obtained by operating at an outdoor temperature of 7°C as set forth in the ISO Standards.
Heating performance is reduced as the temperature drops. If the outdoor temperature is too low and the heating performance is insufficient, use other heating appliances as well.

Indication of sound values

The sound values are the values (A scale) measured in a chamber such as an anechoic chamber following the ISO Standards. In the actual installation state, the value is normally larger than the values given in the catalogue due to the effect of surrounding noise and echo. Take this into consideration when installing.

Installing in environments where oil is present

Avoid installing this unit in an atmosphere where oil particles may be present in the water system, such as in a kitchen or machine factory.
If oil adheres to the heat exchanger, the performance will reduce, mist may be generated, which may affect some components of the closed system.

Installing in acidic or alkaline atmospheres

If this unit is operated in acidic environments such as hot spring locations which has high levels of sulfuric gases or in alkaline environments including ammonia or calcium chloride, places where the exhaust of the heat exchanger is sucked in, or at coastal areas where the unit is subject to salt breezes, the outer plate or heat exchanger, etc., will corrode.
Please ask a dealer or specialist when you use an air-conditioner in locations differing from a general atmosphere.

Refrigerant leakage

The refrigerant (R290) is non-toxic but flammable.
Please consult with a dealer about the installation place.

Use in snowy locations

Take the following precautions when installing the outdoor unit in snowy areas.

- **Snow prevention**
  Install a snow-prevention hood so that the snow does not obstruct the air intake port or enter and freeze in the outdoor unit.
- **Snow piling**
  In locations with heavy snow fall, the piled snow could block the air intake port. In this case, a frame that is 50cm or higher than the estimated snow fall must be installed underneath the outdoor unit.

Automatic defrosting device

When the ambient temperature is low and humidity is high, frost will adhere on the outdoor unit heat exchanger. If the unit continues to operate under these conditions, heating performance will reduce, frost buildup will persist and defrosting will be required.
The defrost process can take from 3 to 10 minutes and during this period heating is paused. Once this process is finished, the unit will return to normal operation.

Servicing

After the heat pump has been used for several seasons, dirt will build-up in the unit causing the performance to reduce. In addition to regular servicing, a maintenance contract by a specialist is recommended.

Safety Precautions

Target use

The heat pump described in this catalogue is a dedicated cooling/heating device for human use.
Do not use it for special applications such as the storage of food items, animals or plants, precision devices or valuable art, etc.
This could cause the quality of the items to drop, etc.
Do not use this for cooling vehicles or ships. Water leakage or current leaks could occur.

Before use

Always read the "User's Manual" thoroughly before starting use.

Places

Do not install in places where combustible gas could leak or where there are sparks. Keep away from places where combustible gas could be generated, flow or accumulate, or locations containing carbon fibres, otherwise there is a danger of fire.

Installation

Installation must be carried out in accordance with current norms and directives. Current regulations require the inspection of installation before commissioning. The inspection must be carried out by a suitable qualified operative and this should also be documented. Improper installation will lead to refrigerant leakage, electric shocks, fires and other serious complications. Make sure the indoor unit and the outdoor unit are installed correctly and fixed on a stable base.

Certified ISO 9001

JQA-0709

Mitsubishi Heavy Industries - Mahajak Air Conditioners Co., Ltd. has been certified of Quality Management System in Accordance with ISO 9001 by TUV NORD (Thailand) Ltd.

Certified ISO 14001

Mitsubishi Heavy Industries - Mahajak Air Conditioners Co., Ltd. has been certified of Environmental Management System in accordance with ISO 14001 by TUV NORD (Thailand) Ltd.

Accreditation only applies to the following models:

FDCM60VNX-P
FDCM71VNX-P

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https://www.mhi-mth.co.jp/en/

Because of our policy of continuous improvement, we reserve the right to make changes in all specifications without notice.

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