# AIR TO WATER

# ECODAN

"ecodan" can heat rooms and supply domestic hot water, realising greater comfort and energy saving.

"ecodan" – Economic, eco conscious next generation heating system

Both energy-saving and safe for the environment, the Mitsubishi Electric ecodan incorporates a highly efficient heat pump system that captures "the heat in the air", a renewable energy resource. Equipped with advanced inverter control, meticulous temperature control assures comfortable heating, and its space-saving "All-in-one" indoor unit is easy to install. These energy-saving, high comfort and simple installation characteristics have drawn the ecodan heating system into the spotlight centre stage.

## Excellent ecodan's heating performance, even at low outdoor temperature!

## INDOOR UNIT

**Cylinder unit**

EHST20C/EHPT20X

**Hydro box**
**(Reversible)**

ERSC

**Hydro box**

EHSC/EHPX

ecodan
Renewable Heating Technology

## OUTDOOR UNIT

**Split type**

SHW230 SW100/120 SW75 SW40/50

**Packaged type**

HW112/140 W85 W50

# Unique technology of ecodan

## Auto Adaptation

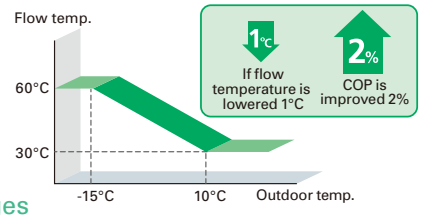
### ecodan – Maximize energy savings while keeping comfort at all times

Settings can be performed using an SD card.

Aiming to realise further comfort and energy savings, Mitsubishi Electric is proud to introduce a revolutionary new system control. This is based on data indicating that a 1°C drop in the flow temperature improves the coefficient of performance (COP) of the ATW system by 2%. This means that energy savings are dramatically affected by controlling the flow temperature in the system.

In conventional system control, the flow temperature is determined based on the preset heat curve depending on the actual outdoor temperature. However, this requires a complicated setting to achieve the optimal heat curve.

■ Heat curve setting (Example)



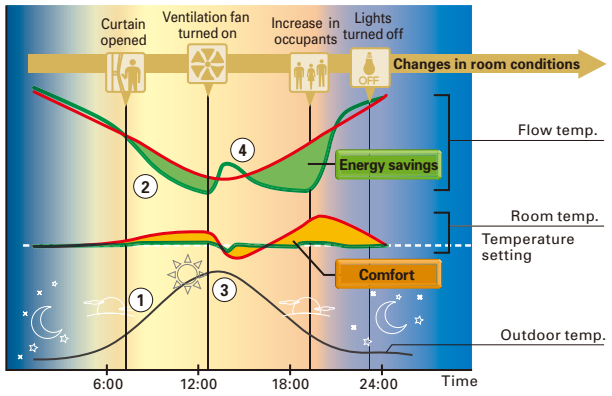

### Mitsubishi Electric's Auto Adaptation function automatically tracks changes of the actual room temperatures and outdoor temperatures and adjusts the flow temperature accordingly.

Our more evolutionary Auto Adaptation function measures the room temperature and outdoor temperature, and then calculates the required heating capacity for the room. Simply stated, the flow temperature is automatically controlled according to the required heating capacity, while optimal room temperature is maintained at all times, ensuring the appropriate heating capacity and preventing energy from being wasted. Furthermore, by estimating future changes in room temperature, the system works to prevent unnecessary increases and decreases in the flow temperature. Accordingly, Auto Adaptation maximises both comfort and energy savings without the need for complicated settings.

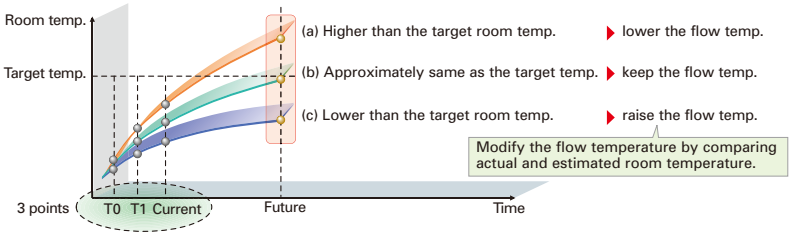
■ Two Controls simulation on a day

1. Room temperature slightly increases
2. Flow temperature decreases
3. Room temperature decreases
4. Flow temperature slightly increases

The flow temperature through the system controlled via conventional heat curve
The flow temperature through the system controlled via Mitsubishi Electric's Auto Adaptation function




■ Future room temperature estimation

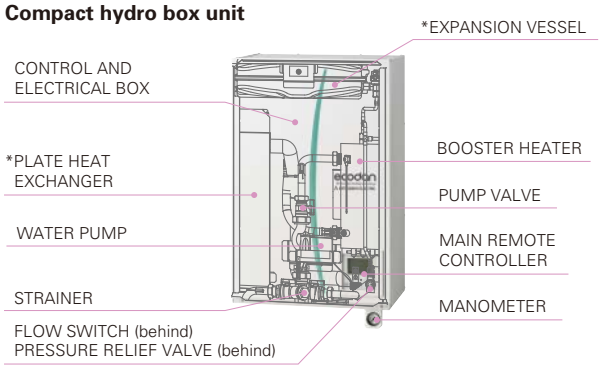



## All-in-one & compact

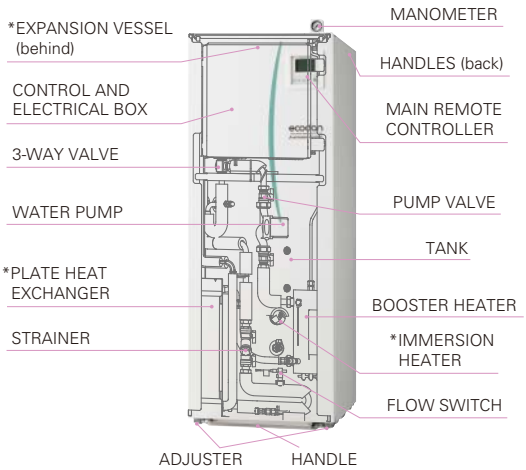
### Small overall size contributes to easy transportation, installation and maintenance

- Simplified: All key functional components are incorporated into the unit.
- Easy servicing: Relevant parts are located at the front of the unit to access easily.
- Easy to transport and install using the attached handle both at front and at back (cylinder unit) and also back plate (hydro box unit).
- Easy to open the packaging without using knife.

**Compact hydro box unit**




**Compact cylinder unit**



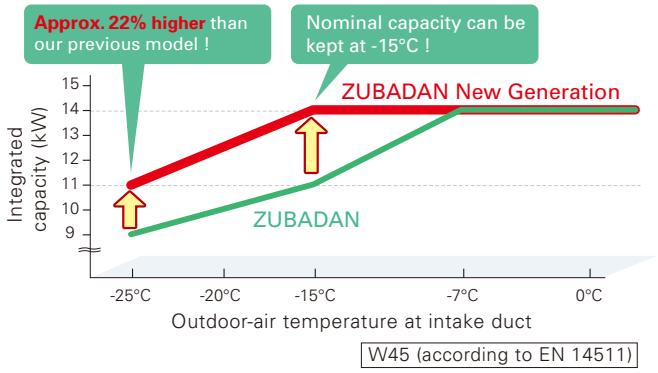

*Depending on model

# Designed for Optimal Heating

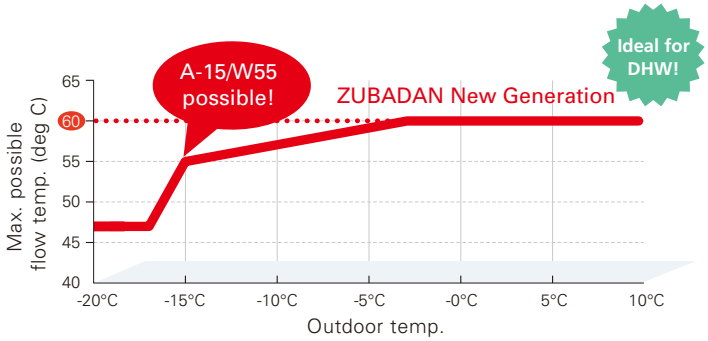
## ZUBADAN New Generation (Split type)

### Improved heating performance more efficiently

ZUBADAN is equipped with a unique "Flash Injection Circuit" that enables the system to provide powerful heating in cold regions during the winter months. And more evolved "ZUBADAN New Generation" incorporates a new compressor that is more efficient, further improving heating performance when outdoor temperatures is low. The rated heating capacity can now be maintained at -15°C even including defrost, making it possible to supply comfortable heating in ever more severe environments.



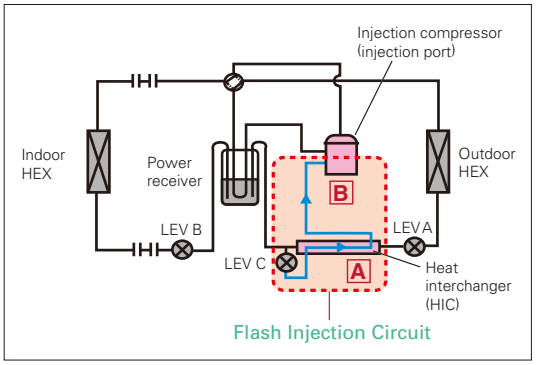

W45 (according to EN 14511)

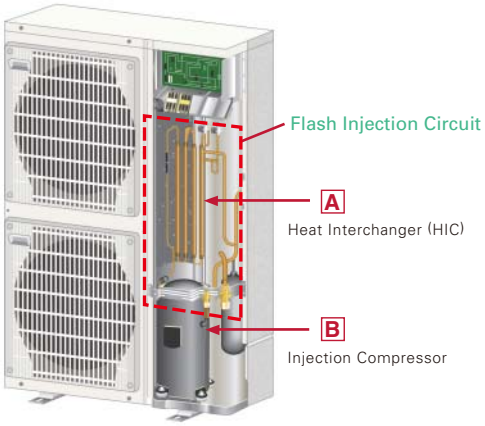



## Mitsubishi Electric's Flash Injection Technology
## The Key to High Heating Performance at Low Outdoor Temperatures

### ■Flash Injection Circuit

ZUBADAN New Generation




The Flash Injection Circuit is an original technology developed by Mitsubishi Electric. A heat exchange process at point A (heat interchanger) transforms liquid refrigerant into a two-phase, gas-liquid state and then compresses the gas-liquid refrigerant at point B (injection compressor). This circuit secures a enough flow rate of refrigerant for heating when outdoor temperatures are very low.
In the ZUBADAN New Generation, the Flash Injection Circuit is more powerful by improving the heat interchanger to increase the heat-exchange-efficiency and incorporating new injection compressor to increase the compression-efficiency.
These two improvements of ZUBADAN New Generation ensure reliable, efficient heating operation when outdoor temperatures are very low.

# SD* CARD

NEW

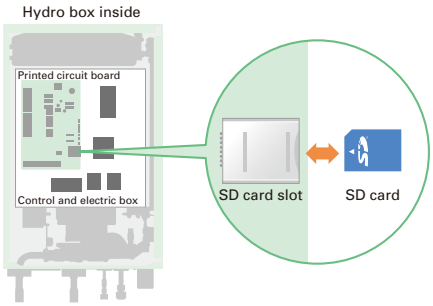
*SD logo is a trademark of SD-3C, LLC

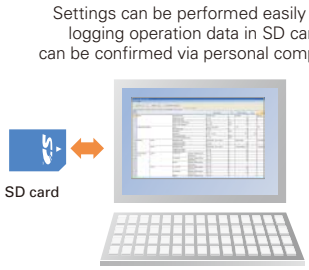
Settings can be performed using an SD card.

## The ecodan evolution continues! For easier settings and for data loggings

Initial setting for ecodan is now simpler than ever before. The special software enables the required initial settings to be saved to an SD card using a personal computer. System set-up is as easy as moving the SD card from the computer to the SD card slot in the indoor unit. Compared to the previous procedure of inputting settings using the main controller at a installation field, a remarkable reduction in set-up time has been achieved. Thus, it is ideal way for busy installers.

*SD card fanction is only used by installer.




### Items that can be preset

Simply copying the preset data to SD card, same settings are complete in multiple units easily.

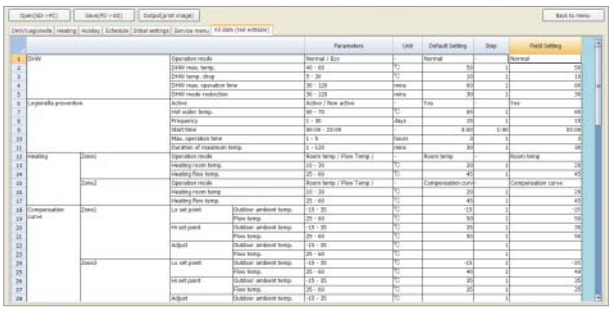
- Initial settings (time display, contact number, etc)
- Heating settings
  - Auto Adaptation
  - Heat curve
  - Two different temperatures zones
- Interlocked boiler operation settings
- Holiday mode settings
- Schedule timer settings
- Domestic hot water settings
- Legionella prevention settings

All items that are set by the main controller can be set via a personal computer.

### Data that can be stored

Operation data up to a month long can be stored on a SD card (2GB).

- Operation time
- Defrost time
- Actual temperature
  - Room
  - Flow temperature
  - Return temperature
  - Domestic hot water temperature
  - Outdoor temperature
- Error record
- Input signal etc.




# Remote controller

## Stylish, easy-to-read bright LCD with ergonomically designed intuitive interface

### Main controller

- Large screen and backlight for excellent visibility, even in dark environment
- Multilanguage support (11 languages)
- Can be removed from main unit and installed in remote location (up to 500m)
- Wide range of convenient functions in response to user demand
  Functions settings
  - Weekly timer -Holiday mode -Legionella prevention -Error codes and data for serving
  NEW - Two zone control -Boiler interlock -Floor drying up
- Quick reading of operation data (7.5 times faster than previous model)

Main controller

### Wireless remote controller (optional)

- Built-in room temperature sensor; easy to place in the best position to detect room temperature
- Wiring work eliminated
- Simple design that is easy to operate
- Remote control from any room without needing to choose an installation location
- Backlight and big buttons that are easy to operate
- Domestic hot water boost and cancellation
- Simplified holiday mode
- Up to 8 controllers allowed (can be set for zone 1 or 2 individually)

PAR-WR51R-E (optional)
Receiver

PAR-WT50R-E (optional)
Wireless remote controller

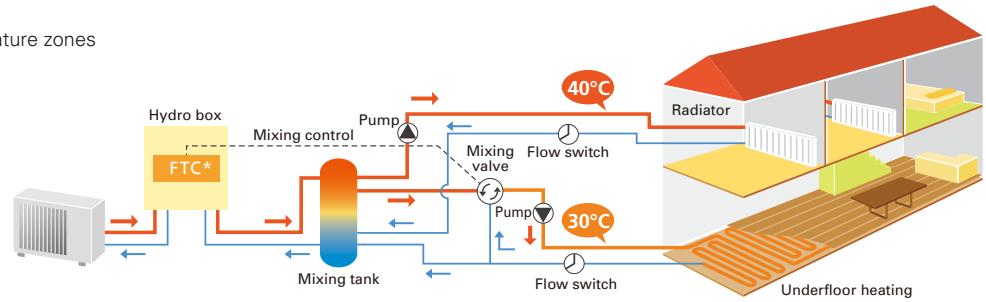
## Two zone control NEW

### Simultaneously making two different temperature zones assures more comfortable, highly convenient heating

Settings can be performed using an SD card.

ecodan makes it possible to set two temperatures which are used in two different types heat emitters in a system. The system allows adjustment of temperatures when different room temperatures are required, such as a temperature of 40°C for the living room radiator and temperature of 30°C for floor heating. Additionally, the scheduling for each zone can be set separately by main controller.

■ Two temperature zones




*FTC = Flow temperature controller

*Items such as mixing tank, mixing valve, flow switch and pumps are not included and need to be purchased locally.

## Intelligent boiler interlock NEW

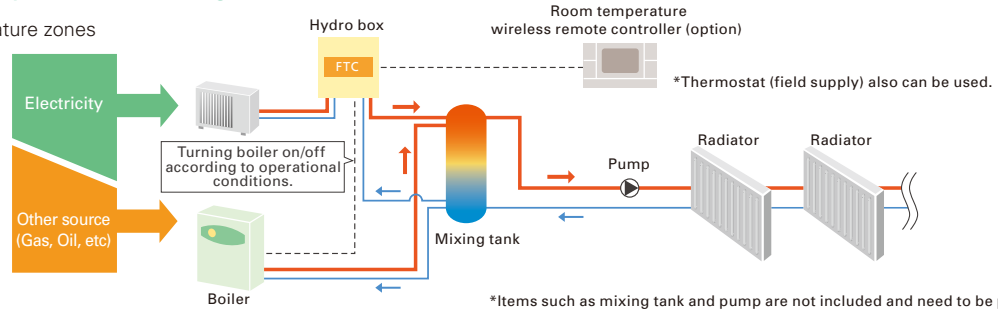
### No need to replace existing boiler!
### Automatic switchover enables even more efficient operation

Settings can be performed using an SD card.

The flexibility of ecodan's intelligent control allows the system to be combined with boiler currently in use. Additionally, this control can judge which heating source (ecodan, or boiler) to be operated according to situations (outdoor temperature, running cost, $CO_2$ emission level etc.). Customers using a boiler can receive the energy-saving performance of ecodan.

### Intelligent system combining a boiler with ecodan

■ Two temperature zones




*Items such as mixing tank and pump are not included and need to be purchased locally.

## Multiple unit control NEW

### Connect up to 6 units
### Automatic control of multiple units to supply bigger capacity

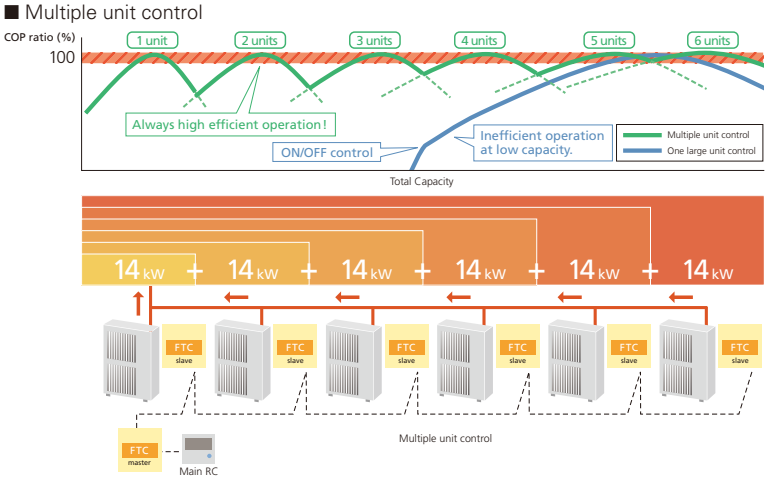
Settings can be performed using an SD card.

A maximum of 6 ecodan units* can be configured according to the required heating/cooling load of the building. The most efficient number of operating units is determined automatically based on heating/cooling load. This enables ecodan to provide optimal room temperature control, and thus superior comfort for room occupants. Also incorporated is a rotation function that works to balance the running hours without depending on the operation of any one specific unit.

If one of the units malfunctions when using Multiple Unit Control, another unit can be automatically operated for back-up, thereby preventing system operation from stopping completely.

*Only same models (same capacity) are available.

■ Multiple unit control



# Split type specifications

## Indoor unit

<Cylinder unit>

| Model name | | | | EHST20C-VM6HB | EHST20C-YM9HB | EHST20C-TM9HB | EHST20C-VM2B | EHST20C-VM6B | EHST20C-YM9B | EHST20C-VM6EB | EHST20C-YM9EB | EHST20C-VM6SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Type | | Heating only | | | | | | | | |
| | | Immersion heater | | × | × | × | - | - | - | - | - | - |
| | | Expansion vessel | | × | × | × | × | × | × | - | - | × |
| | | Solar circuit | | - | - | - | - | - | - | - | - | × |
| Dimensions | | H×W×D | mm | 1600×595×680 | | | | | | | | |
| Product weight (empty) | | | kg | 128 | 128 | 128 | 125 | 127 | 127 | 122 | 122 | 128 |
| Type of installation | | | - | Floor standing | | | | | | | | |
| Power supply (V / Phase / Hz) | | | | 230/Single/50 | | | | | | | | |
| Heater | Booster heater | Power supply (V / Phase / Hz) | | 230/Single/50 | 400/Three/50 | 230/Three/50 | 230/Single/50 | 230/Single/50 | 400/Three/50 | 230/Single/50 | 400/Three/50 | 230/Single/50 |
| | | Capacity | kW | 6 (2/4/6) | 9 (3/6/9) | 9 (3/6/9) | 2 | 6 (2/4/6) | 9 (3/6/9) | 6 (2/4/6) | 9 (3/6/9) | 6 (2/4/6) |
| | | Current | A | 26 | 13 | 23 | 9 | 26 | 13 | 26 | 13 | 26 |
| | | Breaker | A | 32 | 16 | 30 | 16 | 32 | 16 | 32 | 16 | 32 |
| | Immersion heater | Power supply (V / Phase / Hz) | | 230/Single/50 | 230/Single/50 | 230/Single/50 | - | - | - | - | - | - |
| | | Capacity | kW | 3 | 3 | 3 | - | - | - | - | - | - |
| | | Current | A | 13 | 13 | 13 | - | - | - | - | - | - |
| | | Breaker | A | 16 | 16 | 16 | - | - | - | - | - | - |
| Domestic hot water tank | Volume (net) | | L | 200 | | | | | | | | |
| | Material | | - | Stainless steel | | | | | | | | |
| Operating ambient condition* | | | ℃ | 0~35 | | | | | | | | |
| Target temperature range | Heating | Room temperature | ℃ | 10~30 | | | | | | | | |
| | | Flow temperature | ℃ | 25~60 | | | | | | | | |
| | DHW | | ℃ | 40~60 | | | | | | | | |
| | Legionella prevention | | ℃ | Max 70 | | | | | | | | |
| Sound level (SPL) | | | dB (A) | 28 | | | | | | | | |

*The environment must be frost-free.

<Hydro box>

| Model name | | | | | EHSC-VM2B | EHSC-VM6B | EHSC-YM9B | EHSC-TM9B | EHSC-VM6EB | EHSC-YM9EB | ERSC-VM2B |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Type | | | Heating only | | | | | | Heating and Cooling |
| | | Expansion vessel | | | × | × | × | × | - | - | × |
| Dimensions | | H×W×D | | mm | 800×530×360 | | | | | | 860×530×360 |
| Product weight (empty) | | | | kg | 51 | 53 | 53 | 53 | 49 | 49 | 54 |
| Type of installation | | | | - | Wall mounted | | | | | | |
| Power supply (V / Phase / Hz) | | | | | 230/Single/50 | | | | | | |
| Heater | Booster heater | Power supply (V / Phase / Hz) | | | 230/Single/50 | 230/Single/50 | 400/Three/50 | 230/Three/50 | 230/Single/50 | 400/Three/50 | 230/Single/50 |
| | | Capacity | | kW | 2 | 6 (2/4/6) | 9 (3/6/9) | 9 (3/6/9) | 6 (2/4/6) | 9 (3/6/9) | 2 |
| | | Current | | A | 9 | 26 | 13 | 23 | 26 | 13 | 9 |
| | | Breaker | | A | 16 | 32 | 16 | 32 | 32 | 16 | 16 |
| Domestic hot water tank | Volume (net) | | | L | - | | | | | | |
| | Material | | | - | - | | | | | | |
| Operating ambient condition*1 | | | | ℃ | 0~35 | 0~35 | 0~35 | 0~35 | 0~35 | 0~35 | 0~35*2 |
| Target temperature range | Heating/ Cooling | Room temperature | Heating | ℃ | 10~30 | | | | | | |
| | | | Cooling | ℃ | - | - | - | - | - | - | N/A |
| | | Flow temperature | Heating | ℃ | 25~60 | | | | | | |
| | | | Cooling | ℃ | - | - | - | - | - | - | 5~25 |
| | DHW | | | ℃ | 40~60 | | | | | | |
| | Legionella prevention | | | ℃ | Max 70 | | | | | | |
| Sound level (SPL) | | | | dB(A) | 28 | | | | | | |

*1 The environment must be frost-free.

*2 Low outdoor temperature cooling is not allowed (minimum 10°C).

## Outdoor unit

| Model name | | | | PUHZ-SW40VHA (-BS) | PUHZ-SW50VHA (-BS) | PUHZ-SW75VHA (-BS) | PUHZ-SW100V/YHA(-BS) | PUHZ-SW120V/YHA(-BS) | PUHZ-SHW80VHA | PUHZ-SHW112V/YHA | PUHZ-SHW140YHA | PUHZ-SHW230YKA*1*2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions | H×W×D | | mm | 600×800×300 | 600×800×300 | 943×950×330 | 1350×950×330 | 1350×950×330 | 1350×950×330 | 1350×950×330 | 1350×950×330 | 1338×1050×330 |
| Product weight | | | kg | 42 | 42 | 75 | 118/130 | 118/130 | 120 | 120/134 | 134 | 148 |
| Power supply (V / Phase / Hz) | | | | VHA : 230/Single/50 YHA : 400/Three/50 | | | | | | | | |
| Heating (A7/W35) | Capacity | | kW | 4.10 | 6.00 | 8.00 | 11.20 | 16.00 | 8.00 | 11.20 | 14.00 | 23.00 |
| | COP | | | 4.80 | 4.42 | 4.40 | 4.45 | 4.10 | 4.65 | 4.46 | 4.22 | 3.65 |
| | Power input | | kW | 0.854 | 1.357 | 1.819 | 2.517 | 3.903 | 1.721 | 2.512 | 3.318 | 6.310 |
| Heating (A2/W35) | Capacity | | kW | 4.00 | 5.00 | 7.50 | 10.00 | 12.00 | 8.00 | 11.20 | 14.00 | 23.00 |
| | COP | | | 3.24 | 2.97 | 3.40 | 3.32 | 3.24 | 3.55 | 3.34 | 2.96 | 2.37 |
| | Power input | | kW | 1.235 | 1.684 | 2.206 | 3.009 | 3.704 | 2.254 | 3.354 | 4.730 | 9.690 |
| Sound level (SPL) | Heating | | dB (A) | 45 | 46 | 51 | 54 | 54 | 51 | 52 | 52 | 59 |
| Sound level (PWL) | Heating | | dB (A) | 62 | 63 | 69 | 70 | 72 | 69 | 70 | 70 | 76 |

Note: based on EN 14511 (Circulation pump input is not included.).
It may differ according to the system configuration.

*1 PUHZ-SHW230YKA can not be connected to ecodan indoor unit.

*2 The performance data is obtained when plate heat exchanger (ACH 70-40)×2 are connected.

## Optional parts

<Indoor unit>

| Parts name | Model name | Specification | Cylinder unit | | | | | | | | | Hydro box | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | EHST20C-VM6HB | EHST20C-YM9HB | EHST20C-TM9HB | EHST20C-VM2B | EHST20C-VM6B | EHST20C-YM9B | EHST20C-VM6EB | EHST20C-YM9EB | EHST20C-VM6SB | EHSC-VM2B | EHSC-VM6B | EHSC-YM9B | EHSC-TM9B | EHSC-VM6EB | EHSC-YM9EB | ERSC-VM2B |
| Wirelss remote controller | PAR-WT50R-E | | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |
| Wirelss receiver | PAR-WR51R-E | | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |
| Thermistors | PAC-SE41TS-E | For room temp. | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |
| | PAC-TH011-E | For buffer and zone (flow and return temp.) | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |
| | PAC-TH011TK-E | For tank temp. | - | - | - | - | - | - | - | - | - | × | × | × | × | × | × | × | × |
| | PAC-TH011HT-E | For boiler (flow and return temp.) | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |
| Immersion heater | PAC-IH03V-E | 1Ph 3kW | - | - | - | × | × | × | × | × | × | - | - | - | - | - | - | - | - |
| Joint pipe | PAC-SH30RJ-E | For PUHZ-SW40/50VHA (-BS) ø9.52→ ø6.35 | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |
| | PAC-SH50RJ-E | For PUHZ-SW40/50VHA (-BS) ø15.88→ ø12.70 | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |
| Wi-Fi INTERFACE | PAC-WF010-E | | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × |

<Outdoor unit>

| Parts name | Model name | Power inverter | | | | | ZUBADAN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | PUHZ-SW40VHA(-BS) | PUHZ-SW50VHA(-BS) | PUHZ-SW75VHA(-BS) | PUHZ-SW100V/YHA(-BS) | PUHZ-SW120V/YHA(-BS) | PUHZ-SHW80VHA | PUHZ-SHW112V/YHA | PUHZ-SHW140YHA | PUHZ-SHW230YKA*1 |
| Connector for drain hose heater signal output | PAC-SE60RA-E | × | × | × | × | × | × | × | × | × |
| Air discharge guide | PAC-SG58SG-E | × | × | - | - | - | - | - | - | - |
| | PAC-SG59SG-E | - | - | × | × | × | × | × | × | - |
| | PAC-SG96SG-E | - | - | - | - | - | - | - | - | × |
| Air protection guide | PAC-SG56AG-E | × | × | - | - | - | - | - | - | - |
| | PAC-SH63AG-E | - | - | × | × | × | × | × | × | - |
| | PAC-SH95AG-E | - | - | - | - | - | - | - | - | × |
| Drain socket | PAC-SG61DS-E | - | - | × | × | × | - | - | - | - |
| | PAC-SH71DS-E | × | × | - | - | - | - | - | - | - |
| Centralised drain pan | PAC-SG63DP-E | × | × | - | - | - | - | - | - | - |
| | PAC-SG64DP-E | - | - | × | × | × | - | - | - | - |
| Control/Service tool | PAC-SK52ST | × | × | × | × | × | × | × | × | × |

*1 PUHZ-SHW230YKA can not be connected to ecodan indoor unit.

<Interface/Flow temperature controller>

| Parts name | Model name | Description | Power inverter | | | | | ZUBADAN | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | PUHZ-SW40VHA(-BS) | PUHZ-SW50VHA(-BS) | PUHZ-SW75VHA(-BS) | PUHZ-SW100V/YHA(-BS) | PUHZ-SW120V/YHA(-BS) | PUHZ-SHW80VHA | PUHZ-SHW112V/YHA | PUHZ-SHW140YHA | PUHZ-SHW230YKA |
| Capacity step control interface | PAC-IF010-E*1 | 10 PC boards w/o case | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 |
| | PAC-IF011B-E | 1 PC board w/ case | × | × | × | × | × | × | × | × | × |
| Flow temperature controllers | PAC-IF020-E*1 | 10 PC boards w/o case | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 |
| | PAC-IF021B-E | 1 PC board w/ case | × | × | × | × | × | × | × | × | × |
| | PAC-IF032B-E | 1 PC board w/ case | × | × | × | × | × | × | × | × | × |
| System controllers | PAC-IF051B-E | 1 PC board w/ case | × | × | × | × | × | × | × | × | × |
| | PAC-SIF051B-E | 1 PC board w/ case | × | × | × | × | × | × | × | × | × |
| Thermistors | PAC-TH011-E | | × | × | × | × | × | × | × | × | × |

*1 PAC-IF010-E and PAC-IF020-E are only for manufacturer's preloading.
*2 PAC-TH011-E is required.

## Contents

| Parts name | Model name | Contents | Q'ty |
|---|---|---|---|
| Air discharge guide | PAC-SG58SG-E | Air discharge guide | 1 |
| | | Support (For the upper and lower sides) | 2 |
| | | Support (For right and left) | 2 |
| | | Attachment screw (5×10) | 4 |
| | | Attachment screw (4×10) | 8 |
| | | Spacer | 4 |
| Air discharge guide | PAC-SG59SG-E | Air discharge guide | 1 |
| | | Attachment screw (5×35) | 4 |
| | | Spacer | 4 |
| | PAC-SG96SG-E | Air discharge guide | 1 |
| | | Support | 1 |
| | | Screw (5×15) | 12 |
| | | Washer | 12 |
| | | Spring washer | 12 |
| Air protection guide | PAC-SG56AG-E | Front plate | 1 |
| | | Side plate | 2 |
| | | Side plate | 2 |
| | | Connecting plate | 2 |
| | | Mounting screw (4×10) | 14 |
| | | Mounting screw (4×12) | 4 |
| | | Washer (for screw 4×12) | 4 |
| | PAC-SH63AG-E | Air guide | 1 |
| | | Mounting screw (5×15) | 4 |
| | | Washer | 4 |
| | | Spring washer | 4 |
| | PAC-SH95AG-E | Air guide | 1 |
| | | Mounting screw (5×15) | 6 |
| | | Washer | 6 |
| | | Spring washer | 6 |
| Drain socket | PAC-SG61DS-E | Drain socket | 1 |
| | | Drain cap (ø33) | 5 |
| | | Heat insulator | 2 |
| | | Band | 8 |
| | PAC-SH71DS-E | Drain socket | 1 |
| | | Drain cap (ø33/ø12) | 7 |
| | | Heat insulator | 2 |
| | | Band | 8 |

| Parts name | Model name | Contents | Q'ty |
|---|---|---|---|
| Centralised drain pan | PAC-SG63DP-E | Centralised drain pan | 1 |
| | PAC-SG64DP-E | Centralised drain pan | 1 |
| Control/Service tool | PAC-SK52ST | Control/Service Tool | 1 |
| Capacity step control interface | PAC-IF010-E | PC board | 10*1 |
| | PAC-IF011B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| Flow temperature controllers | PAC-IF020-E | PC board | 10*1 |
| | PAC-IF021B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| | | Remote controller | 1 |
| | | Remote controller cable (5m) | 1 |
| | PAC-IF032B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 3 |
| | | Remote controller | 1 |
| | | Remote controller cable (5m) | 1 |
| System controllers | PAC-IF051B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| | | Remote controller | 1 |
| | | Remote controller cable (10m) | 1 |
| | | SD memory card | 1 |
| | PAC-SIF051B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| | | Remote controller cable (10m) | 1 |
| | | SD memory card | 1 |
| Thermistors | PAC-TH011-E | Thermistor for buffer and zone (flow and return temp.) | 20*2 |
| | PAC-TH011HT-E | Thermistor for tank temp. | 20*2 |
| | PAC-TH011TK-E | Thermistor for boiler (flow and return temp.) | 10*3 |

*1 One carton contains 10 PC boards.
*2 Two thermistors per package: 10 packages per carton
*3 One thermistor per package: 10 packages per carton

# Packaged type specifications

## Indoor unit

<Cylinder unit>

| Model name | | | | EHPT20X-VM2HB | EHPT20X-VM6HB | EHPT20X-YM9HB | EHPT20X-TM9HB | EHPT20X-VM6B | EHPT20X-YM9B |
|---|---|---|---|---|---|---|---|---|---|
| | | Type | | Heating only | | | | | |
| | | Immersion heater | | × | × | × | × | - | - |
| | | Expansion vessel | | × | × | × | × | × | × |
| Dimensions | | HxWxD | mm | 1600×595×680 | | | | | |
| Product weight (empty) | | | kg | 113 | 115 | 115 | 115 | 114 | 114 |
| Type of installation | | | - | Floor standing | | | | | |
| Power supply (V / Phase / Hz) | | | | 230/Single/50 | | | | | |
| Heater | Booster heater | Power supply (V / Phase / Hz) | | 230/Single/50 | 230/Single/50 | 400/Three/50 | 230/Three/50 | 230/Single/50 | 400/Three/50 |
| | | Capacity | kW | 2 | 6 (2/4/6) | 9 (3/6/9) | 9 (3/6/9) | 6 (2/4/6) | 9 (3/6/9) |
| | | Current | A | 9 | 26 | 13 | 23 | 26 | 13 |
| | | Breaker | A | 16 | 32 | 16 | 30 | 32 | 16 |
| | Immersion heater | Power supply (V / Phase / Hz) | | 230/Single/50 | 230/Single/50 | 230/Single/50 | 230/Single/50 | - | - |
| | | Capacity | kW | 3 | 3 | 3 | 3 | - | - |
| | | Current | A | 13 | 13 | 13 | 13 | - | - |
| | | Breaker | A | 16 | 16 | 16 | 16 | - | - |
| Domestic hot water tank | Volume (net) | | L | 200 | | | | | |
| | Material | | - | Stainless steel | | | | | |
| Operating ambient condition* | | | °C | 0~35 | | | | | |
| Target temperature range | Heating | Room temperature | °C | 10~30 | | | | | |
| | | Flow temperature | °C | 25~60 | | | | | |
| | DHW | | °C | 40~60 | | | | | |
| | Legionella prevention | | °C | Max 70 | | | | | |
| Sound level (SPL) | | | dB (A) | 28 | | | | | |

*The environment must be frost-free.

<Hydro box>

| Model name | | | | EHPX-VM2B | EHPX-VM6B | EHPX-YM9B |
|---|---|---|---|---|---|---|
| | | Type | | Heating only | | |
| | | Expansion vessel | | × | × | × |
| Dimensions | | HxWxD | mm | 800×530×360 | | |
| Product weight (empty) | | | kg | 39 | 41 | 41 |
| Type of installation | | | - | Wall mounted | | |
| Power supply (V / Phase / Hz) | | | | 230/Single/50 | | |
| Heater | Booster heater | Power supply (V / Phase / Hz) | | 230/Single/50 | 230/Single/50 | 400/Three/50 |
| | | Capacity | kW | 2 | 6 (2/4/6) | 9 (3/6/9) |
| | | Current | A | 9 | 26 | 13 |
| | | Breaker | A | 16 | 32 | 16 |
| Domestic hot water tank | Volume (net) | | L | - | | |
| | Material | | - | - | | |
| Operating ambient condition* | | | °C | 0~35 | | |
| Target temperature range | Heating | Room temperature | °C | 10~30 | | |
| | | Flow temperature | °C | 25~60 | | |
| | DHW | | °C | 40~60 | | |
| | Legionella prevention | | °C | Max 70 | | |
| Sound level (SPL) | | | dB (A) | 28 | | |

*The environment must be frost-free.

## Outdoor unit

| Model name | | | | PUHZ-W50VHA (-BS) | PUHZ-W85VHA2 (-BS) | PUHZ-HW112YHA2 (-BS) | PUHZ-HW140VHA2 (-BS) | PUHZ-HW140YHA2 (-BS) |
|---|---|---|---|---|---|---|---|---|
| Dimensions | | HxWxD | mm | 740×950×330 | 943×950×330 | 1350×1020×330 | 1350×1020×330 | 1350×1020×330 |
| Product weight | | | kg | 64 | 79 | 148 | 134 | 148 |
| Power supply (V / Phase / Hz) | | | | VHA : 230/Single/50 YHA : 400/Three/50 | | | | |
| Heating (A7/W35) | Capacity | | kW | 5.00 | 9.00 | 11.20 | 14.00 | 14.00 |
| | COP | | | 4.10 | 4.18 | 4.42 | 4.25 | 4.25 |
| | Power input | | kW | 1.220 | 2.153 | 2.533 | 3.294 | 3.294 |
| Heating (A2/W35) | Capacity | | kW | 5.00 | 8.50 | 11.20 | 14.00 | 14.00 |
| | COP | | | 3.13 | 3.17 | 3.11 | 3.11 | 3.11 |
| | Power input | | kW | 1.597 | 2.681 | 3.601 | 4.501 | 4.501 |
| Sound level (SPL) | Heating | | dB (A) | 46 | 48 | 53 | 53 | 53 |
| Sound level (PWL) | Heating | | dB (A) | 61 | 66 | 67 | 67 | 67 |

Note: based on EN 14511 (Circulation pump input is included.).
It may differ according to the system configuration.

## Optional parts

<Indoor unit>

| Parts name | Model name | Specification | Cylinder unit | | | | | | Hydro box | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | EHPT20X-VM2HB | EHPT20X-VM6HB | EHPT20X-YM9HB | EHPT20X-TM9HB | EHPT20X-VM6B | EHPT20X-YM9B | EHPX-VM2B | EHPX-VM6B | EHPX-YM9B |
| Wirelss remote controller | PAR-WT50R-E | | × | × | × | × | × | × | × | × | × |
| Wirelss receiver | PAR-WR51R-E | | × | × | × | × | × | × | × | × | × |
| Thermistors | PAC-SE41TS-E | For room temp. | × | × | × | × | × | × | × | × | × |
| | PAC-TH011-E | For buffer and zone (flow and return temp.) | × | × | × | × | × | × | × | × | × |
| | PAC-TH011TK-E | For tank temp. | - | - | - | - | - | - | × | × | × |
| | PAC-TH011HT-E | For boiler (flow and return temp.) | × | × | × | × | × | × | × | × | × |
| Immersion heater | PAC-IH03V-E | 1Ph 3kW | - | - | - | - | × | × | - | - | - |
| EHPT accessories for UK | PAC-WK01UK-E | | × | - | - | - | - | - | - | - | - |
| Wi-Fi INTERFACE | PAC-WF010-E | | × | × | × | × | × | × | × | × | × |

<Outdoor unit>

| Parts name | Model name | Power inverter | | ZUBADAN | | |
|---|---|---|---|---|---|---|
| | | PUHZ-W50VHA(-BS) | PUHZ-W85VHA2(-BS) | PUHZ-HW112YHA2(-BS) | PUHZ-HW140VHA2(-BS) | PUHZ-HW140YHA2(-BS) |
| Connector for drain hose heater signal output | PAC-SE60RA-E | × | × | × | × | × |
| Air discharge guide | PAC-SG59SG-E | × | × | × | × | × |
| Air protection guide | PAC-SH63AG-E | × | × | × | × | × |
| Drain socket | PAC-SG61DS-E | × | × | - | - | - |
| Centralised drain pan | PAC-SG64DP-E | × | × | - | - | - |

<Interface/Flow temperature control>

| Parts name | Model name | Description | Power inverter | | ZUBADAN | | |
|---|---|---|---|---|---|---|---|
| | | | PUHZ-W50VHA(-BS) | PUHZ-W85VHA2(-BS) | PUHZ-HW112YHA2(-BS) | PUHZ-HW140VHA2(-BS) | PUHZ-HW140YHA2(-BS) |
| Capacity step control interface | PAC-IF010-E*1 | 10 PC boards w/o case | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 |
| | PAC-IF011B-E | 1 PC board w/ case | × | × | × | × | × |
| Flow temperature controllers | PAC-IF020-E*1 | 10 PC boards w/o case | ×*2 | ×*2 | ×*2 | ×*2 | ×*2 |
| | PAC-IF021B-E | 1 PC board w/ case | × | × | × | × | × |
| | PAC-IF032B-E | 1 PC board w/ case | × | × | × | × | × |
| System controllers | PAC-IF051B-E | 1 PC board w/ case | × | × | × | × | × |
| | PAC-SIF051B-E | 1 PC board w/ case | × | × | × | × | × |
| Thermistors | PAC-TH011-E | | × | × | × | × | × |

*1 PAC-IF010-E and PAC-IF020-E are only for manufacturer's preloading.
*2 PAC-TH011-E is required.

## Contents

| Parts name | Model name | Contents | Q'ty |
|---|---|---|---|
| Air discharge guide | PAC-SG59SG-E | Air discharge guide | 1 |
| | | Attachment screw (5×35) | 4 |
| | | Spacer | 4 |
| Air protection guide | PAC-SH63AG-E | Air guide | 1 |
| | | Mounting screw (5×15) | 4 |
| | | Washer | 4 |
| | | Spring washer | 4 |
| Drain socket | PAC-SG61DS-E | Drain socket | 1 |
| | | Drain cap (ø33) | 5 |
| | | Heat insulator | 2 |
| | | Band | 8 |
| Centralised drain pan | PAC-SG64DP-E | Centralised drain pan | 1 |
| Capacity step control interface | PAC-IF010-E | PC board | 10*1 |
| | PAC-IF011B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| Flow temperature controllers | PAC-IF020-E | PC board | 10*1 |
| | PAC-IF021B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| | | Remote controller | 1 |
| | | Remote controller cable (5m) | 1 |
| | PAC-IF032B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 3 |
| | | Remote controller | 1 |
| | | Remote controller cable (5m) | 1 |

| Parts name | Model name | Contents | Q'ty |
|---|---|---|---|
| System controllers | PAC-IF051B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| | | Remote controller | 1 |
| | | Remote controller cable (10m) | 1 |
| | | SD memory card | 1 |
| | PAC-SIF051B-E | PC board | 1 |
| | | Case | 1 |
| | | Thermistor | 2 |
| | | Remote controller cable (10m) | 1 |
| | | SD memory card | 1 |
| Thermistors | PAC-TH011-E | Thermistor for buffer and zone (flow and return temp.) | 20*2 |
| | PAC-TH011HT-E | Thermistor for tank temp. | 20*2 |
| | PAC-TH011TK-E | Thermistor for boiler (flow and return temp.) | 10*3 |

*1 One carton contains 10 PC boards.
*2 Two thermistors per package: 10 packages per carton
*3 One thermistor per package: 10 packages per carton

# Mr.SLIM+

## Using waste heat from air conditioners to heat water

Mr. SLIM+ — The smart air conditioning and hot-water supply system conceived from eco-conscious ideas

## INDOOR UNIT

PLA-ZRP71BA

PKA-RP71KAL

PSA-RP71KA

PCA-RP71KA

PCA-RP71HA

PEAD-RP71JAQ

PEAD-RP71JALQ

## ECODAN AIR-TO-WATER INDOOR UNIT

### Hydro box

EHSC-VM2B
EHSC-VM6B
EHSC-YM9B
EHSC-TM9B
EHSC-VM6EB
EHSC-YM9EB


### Cylinder unit

EHST20C-VM2B
EHST20C-VM6B
EHST20C-YM9B
EHST20C-VM6EB
EHST20C-YM9EB
EHST20C-VM6SB
EHST20C-VM6HB
EHST20C-YM9HB
EHST20C-TM9HB


## OUTDOOR UNIT

PUHZ-FRP71VHA

*2012 B generation split type models
*Reversible model cannot be connected

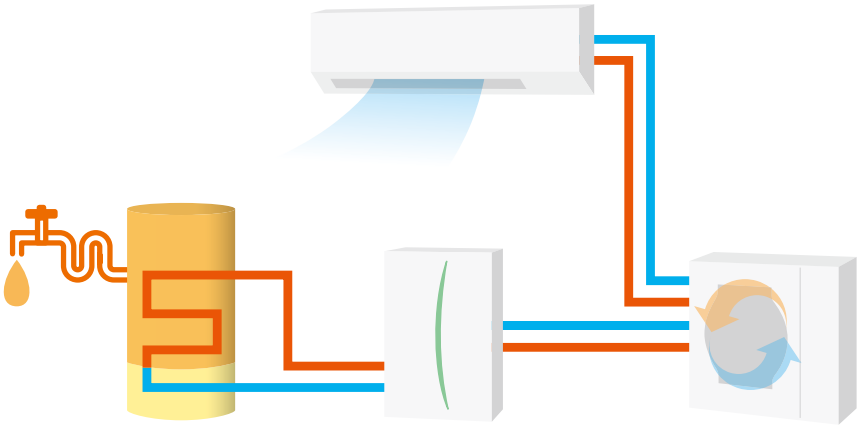
# More ecological

## Heat recovery function recycles waste heat from air conditioners

Air conditioners normally exhaust hot air from the outdoor unit as waste heat in cooling operation. With Mr. SLIM+, however, the heat that is exhausted by conventional air conditioning systems is recycled and simultaneously transferred to the hot-water supply system, where it's used to heat water.

In conventional systems, the air-heat exchanger in the outdoor unit works as a condenser during air conditioning operation.
The heat of the indoor-air is transferred to the outside-air and exhausted as waste heat.
The new circuit in Mr.SLIM+ uses a water-heat exchanger for supplying hot water as the condenser. When the air conditioning and hot-water systems are running at the same time, heat is recycled and used rather than being exhausted as waste heat.
"COP7.0* attained at water temperature of 45°C and standard air conditioning operation conditions"
Traditionally, when using a hot-water supply system where the air-heat exchanger is in the outdoor unit, operation may not be possible when the outside temperature is very high. However, since Mr.SLIM+ uses the Air-to-Air indoor unit for air conditioning operation and there's no heat exchange with outside-air,
it's possible to use the hot-water supply system even if the ambient temperature is very high.
"Hot-water supply is possible (in heat recovery mode) even when the temperature outside is high (outside temperature = 46°C)"

*Conditions for Air-to-Air coolong: Indoor 27°C (dry bulb) / 19°C (wet bulb) ; Outdoor 35°C (dry bulb)  *Water temperrature: 45°C



# Space savings

## Air conditioning and hot-water supply in one system – Installation space reduced

Mr.SLIM+ utilizes an evolutionary "2-in-1" design that combines two original Mitsubishi Electric system technologies (i.e., Air-to-Air and Air-to-Water) using a single outdoor unit.

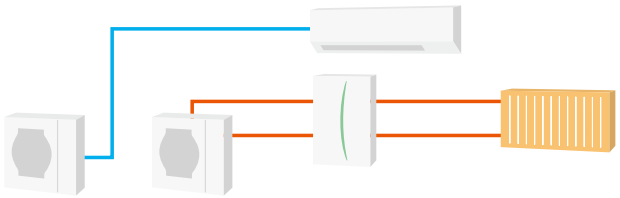
### Save on installation

Mitsubishi Electric's legendary Air-to-Air and Air-to-Water systems have been integrated into a new configuration in which two systems share just one outdoor unit. The installation area required outside is cut in half, realizing a space savings of 50%.

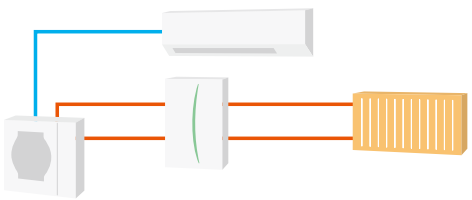
### Save on construction

Previously, two systems including two separate outdoor units were required. But the all-new Mr.SLIM+ simplifies everything into a single system configuration, improving reliability and quality by reducing installation time. That results in savings in both time and money, which are passed on to our customers.

**Conventional system**



**Hybrid heat recovery system**



# 1 Unit, 2 Roles – Total Comfort Year-round

## Air conditioning and hot-water supply matching the needs of each room

### All-in-one outdoor unit
### (air conditioning, hot-water supply and hot-water heating)

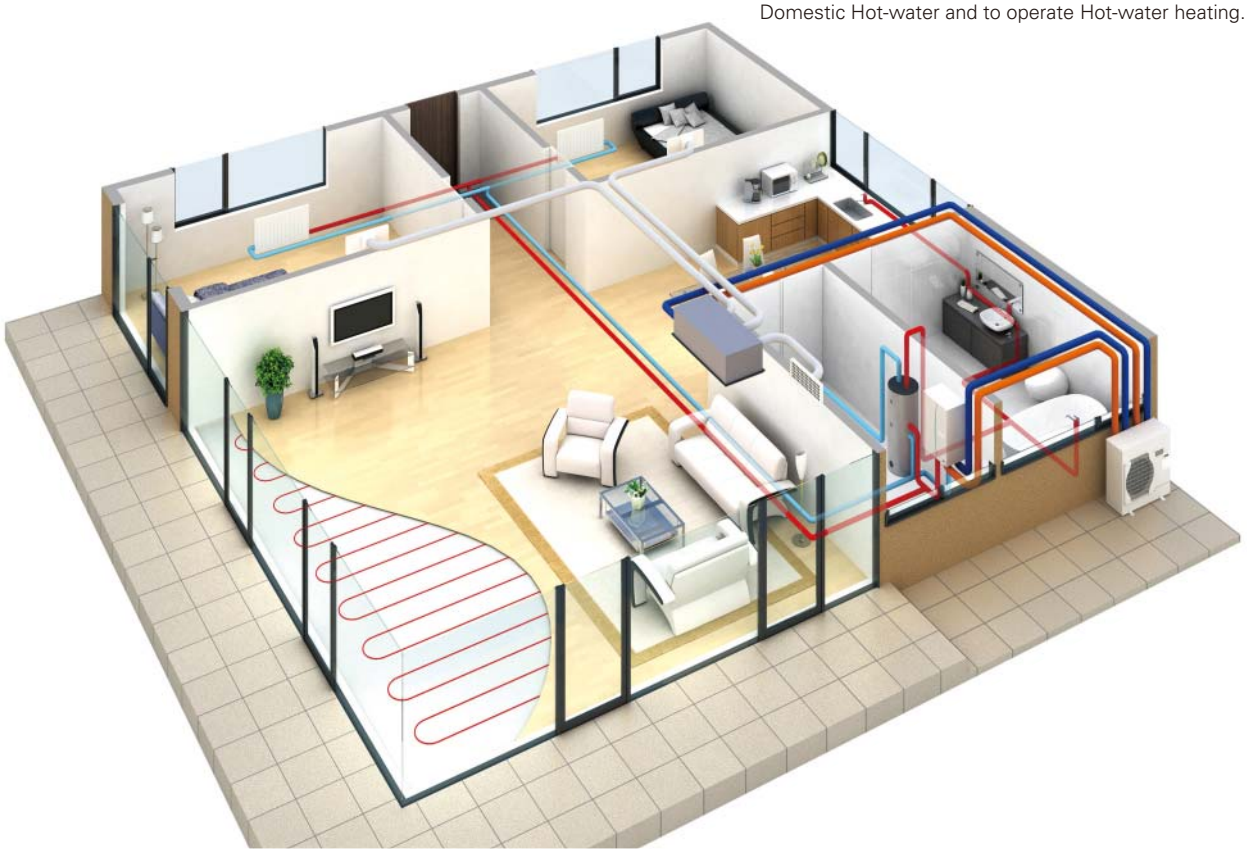
**Mr.SLIM for Air-to-Air**

Mr.SLIM+ utilizes a duct system that enables the air conditioning or heating of multiple rooms, and other indoor unit type systems that is possible to fit various applications.

**ecodan for Air-to-Water**

✓Hot-water supply (Domestic Hot-water supply)
✓Hot-water heating for multiple rooms

Mr.SLIM+ utilizes ecodan system that is possible to make Domestic Hot-water and to operate Hot-water heating.



## Various operations

**Mr.SLIM / Air to Air (Air Cooling)**

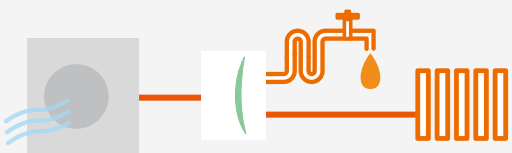
Air-to-Air cooling using Air-to-Air indoor unit

**Mr.SLIM / Air to Air (Air Heating)**

Air-to-Air heating using Air-to-Air indoor unit

**ecodan / Air to Water (Hot-water heating + DHW)**

Air-to-Water operation using Air-to-Water indoor unit



**Mr.SLIM + ecodan / Air to Air (Air Cooling) + DHW**

Heat recovery using both Air-to-Air and Air-to-Water indoor units

# Specifications

| Indoor unit | | | | | | PLA-ZRP71BA | PKA-RP71KAL | PCA-RP71KA | PCA-RP71HA | PSA-RP71KA | PEAD-RP71JAQ | PEAD-RP71JALQ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Outdoor unit | | | | | | PUHZ-FRP71VHA | PUHZ-FRP71VHA | PUHZ-FRP71VHA | PUHZ-FRP71VHA | PUHZ-FRP71VHA | PUHZ-FRP71VHA | PUHZ-FRP71VHA |
| Refrigerant | | | | | | R410A *1 | | | | | | |
| Power supply | | Outdoor (V / Phase / Hz) | | | | 230 / Single / 50 | | | | | | |
| Air-to-Air (ATA) | Cooling | Capacity | Rated | | kW | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| | | | Min-Max | | kW | 3.3-8.1 | 3.3-8.1 | 3.3-8.1 | 3.3-8.1 | 3.3-8.1 | 3.3-8.1 | 3.3-8.1 |
| | | Total input | Rated | | kW | 1.85 | 1.88 | 1.90 | 2.26 | 1.97 | 2.10 | 2.08 |
| | | EER | | | | 3.84 | 3.78 | 3.74 | 3.14 | 3.60 | 3.38 | 3.41 |
| | | Design load | | | kW | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| | | Annual electricity consumption *2 | | | kWh/a | 382 | 393 | 387 | 462 | 408 | 459 | 441 |
| | | SEER *4 | | | | 6.5 | 6.3 | 6.4 | 5.4 | 6.1 | 5.4 | 5.6 |
| | | | Energy-efficiency class | | | $A^{++}$ | $A^{++}$ | $A^{++}$ | A | $A^{++}$ | A | $A^{+}$ |
| | Heating (average season) | Capacity | Rated | | kW | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| | | | Min-Max | | kW | 3.5-10.2 | 3.5-10.2 | 3.5-10.2 | 3.5-10.2 | 3.5-10.2 | 3.5-10.2 | 3.5-10.2 |
| | | Total input | Rated | | kW | 2.05 | 2.26 | 2.26 | 2.42 | 2.28 | 2.09 | 2.09 |
| | | COP | | | | 3.90 | 3.54 | 3.54 | 3.14 | 3.33 | 3.83 | 3.83 |
| | | Design load | | | kW | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.9 | 4.9 |
| | | Declared capacity | at reference design temperature | | kW | 4.7 (–10°C) | 4.7 (–10°C) | 4.7 (–10°C) | 4.7 (–10°C) | 4.7 (–10°C) | 4.9 (–10°C) | 4.9 (–10°C) |
| | | | at bivalent temperature | | kW | 4.7 (–10°C) | 4.7 (–10°C) | 4.7 (–10°C) | 4.7 (–10°C) | 4.7 (–10°C) | 4.9 (–10°C) | 4.9 (–10°C) |
| | | | at operation limit temperature | | kW | 3.5 (–20°C) | 3.5 (–20°C) | 3.5 (–20°C) | 3.5 (–20°C) | 3.5 (–20°C) | 3.7 (–20°C) | 3.7 (–20°C) |
| | | Back-up heating capacity | | | kW | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Annual electricity consumption *2 | | | kWh/a | 1,510 | 1,569 | 1,555 | 1,787 | 1,709 | 1,799 | 1,799 |
| | | SCOP *4 | | | | 4.4 | 4.2 | 4.2 | 3.7 | 3.9 | 3.8 | 3.8 |
| | | | Energy-efficiency class | | | A+ | A+ | A+ | A | A | A | A |
| Air-to-Water (ATW) | Nominal flow rate (for heating) | | | | L/min | 22.90 | | | | | | |
| | Heating *5 | A7W35 | Capacity | | kW | 8.00 | | | | | | |
| | | | Input | | kW | 1.96 | | | | | | |
| | | | COP | | | 4.08 | | | | | | |
| | | A2W35 | Capacity | | kW | 7.50 | | | | | | |
| | | | Input | | kW | 2.65 | | | | | | |
| | | | COP | | | 2.83 | | | | | | |
| | Heat recovery (ATA cooling & ATW) *6 | W45 | Capacity (ATA cooling + ATW) | | kW | 7.1+8.0 | 7.1+8.0 | 7.1+8.0 | 7.1+8.0 | 7.1+8.0 | 7.1+8.0 | 7.1+8.0 |
| | | | Input | | kW | 1.90 | 1.93 | 1.95 | 2.31 | 2.02 | 2.15 | 2.13 |
| | | | COP | | | 7.95 | 7.82 | 7.74 | 6.54 | 7.48 | 7.02 | 7.09 |
| | | W55 | Capacity (ATA cooling + ATW) | | kW | 7.1+9.0 | 7.1+9.0 | 7.1+9.0 | 6.4+9.0 | 7.1+9.0 | 7.1+9.0 | 7.1+9.0 |
| | | | Input | | kW | 2.97 | 3.00 | 3.02 | 3.25 | 3.09 | 3.22 | 3.20 |
| | | | COP | | | 5.42 | 5.37 | 5.33 | 4.74 | 5.21 | 5.00 | 5.03 |
| | ATW indoor unit | | | | | Cylinder unit or Hydro box (see previous page) | | | | | | |
| Outdoor unit | | Dimensions | HxWxD | | mm | 943-950-330 (+30) | | | | | | |
| | | Weight | | | kg | 73 | 73 | 73 | 73 | 73 | 73 | 73 |
| | | Air volume | Cooling | | $m^3$/min | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| | | | Heating | | $m^3$/min | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| | | Sound level (SPL) | Cooling | | dB(A) | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| | | | Heat recovery | | dB(A) | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| | | | ATA Heating | | dB(A) | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| | | | ATW Heating | | dB(A) | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| | | Sound level (PWL) | Cooling | | dB(A) | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| | | | Heat recovery | | dB(A) | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| | | | ATA Heating | | dB(A) | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| | | | ATW Heating | | dB(A) | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| | | Operating current (max) | | | A | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| | | Breaker size | | | A | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Ext.piping | | Diameter | Liquid/Gas | | mm | 9.52/15.88 | 9.52/15.88 | 9.52/15.88 | 9.52/15.88 | 9.52/15.88 | 9.52/15.88 | 9.52/15.88 |
| | | Max.length | Out-In | | m | 30 (for ATA) + 30 (for ATW) | | | | | | |
| | | Max.height | Out-In | | m | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Guaranteed operating range (outdoor) | | | Cooling *3 | | °C | -15~+46 | -15~+46 | -15~+46 | -15~+46 | -15~+46 | -15~+46 | -15~+46 |
| | | | Heating | | °C | -20~+21 | -20~+21 | -20~+21 | -20~+21 | -20~+21 | -20~+21 | -20~+21 |
| | | | ATW | | °C | -20~+35 | -20~+35 | -20~+35 | -20~+35 | -20~+35 | -20~+35 | -20~+35 |
| | | | Heat recovery | | °C | +15~+46 | +15~+46 | +15~+46 | +15~+46 | +15~+46 | +15~+46 | +15~+46 |

*1 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) contributes less to global warming than a refrigerant with higher GWP if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1,975. This means that if 1 kg of this refrigerant fluid leaked to the atmosphere, the impact on global warming would be 1,975 times higher than that of 1 kg of $CO_2$ over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself; always ask a professional.

*2 Energy consumption based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

*3 Optional air protection guide is required where ambient temperature is lower than –5°C.

*4 SEER/SCOP values are measured based on EN14825.

*5 Ait-to-Water values are measured based on EN14511 (Circulation pump input is not included.).

*6 Conditions for Air-to-Air cooling: Indoor 27°C (dry bulb) /19°C (wet bulb); Outdoor 35°C (dry bulb).