

Changes for the Better



Wrap Yourself in Comfort and Quiet Eco-conscious Technologies from Japan

Air to Water Catalogue



Doing Our Part to Create a Better Future for All...

Core Environmental Policy

The Mitsubishi Electric Group promotes sustainable development and is committed to protecting and restoring the global environment through technology, through all its business activities, and through the actions of its employees.

Environmental Vision 2021



Preventing Global Warming

- Reduce CO₂ emissions from product usage by 30%
 Reduce total CO₂ emissions from production by 30%
- Aim to reduce CO₂ emissions from power generation

Creating a Recycling-Based Society

- Reduce, reuse and recycle "3Rs" products reduce resources used by 30%
- Zero emissions from manufacturing reducing the direct landfill of waste to zero

Ensuring Harmony with Nature Fostering Environmental Awareness

The New Refrigerant R32

The new R32 refrigerant has a global warming potential approximately 1/3*1 that of our current refrigerant, R410A; thereby dramatically reducing the negative impact more than ever. Actively introducing the new R32 refrigerant to suppress global warming, Mitsubishi Electric continues to promote manufacturing while considering the environment.



Mitsubishi Electric reflects the essence of this policy and vision in all aspects of its air conditioner business as well.

Preventing Global Warming Heat pump technology inspires Mitsubishi Electric to design air conditioners that harmonize comfort and ecology.



Mitsubishi Electric develops technologies to balance comfort and ecology, achieving greater efficiency in heat pump operation.

	Comfort	Ecology
1. Inverter	Faster start-up and more stable indoor temperature than non-inverter units.	Fewer On/Off operations than with non-inverter, saving energy.
2. 3D i-see Sensor	Since the positions of people can be detected, airflow can be set to personal taste, such as in airflow path or protected from the wind. The ability to adjust to individual preferences realizes more comfortable air conditioning.	Since the number of people in a room can be detected, energy-saving operation is adjusted or the power is turned off automatically. Efficient air conditioning with less waste is realized.
3. Flash Injection	Achieves high heating capacity even at low temperatures, plus faster start-up compared to conventional inverters.	Expands the region covered by heat pump heating system.

Creating a Recycling-Based Society

All models are designed for RoHS and WEEE compliance.*
 Mitsubishi Electric develops downsizing technology to reduce materials use.

2. WITSUDISHIFLIEUTRIC developed extension of Hazardous Substances (ROHS) Directive is a recycling directive for the type of equipment, while the Restrictions of Hazardous Substances (ROHS) Directive is an EU directive restricting the use of s specified substances in electronic and electrical devices. In the EU, it is no longer possible (from July 2006) to sell product containing any of the six substances.

Ensuring Harmony with Nature / Fostering Environmental Awareness

In striving to heighten the eco-awareness of its employees, Mitsubishi Electric provides education in RoHS, WEEE and other environmental regulations, along with environmental education targeting second and third-year workers.

ONTENTS

SPECIFICATION 031-043















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



New Eco-design Directive

What is the ErP Directive?

The Eco-design Directive for Energy-related Products (ErP Directive) established a framework to set mandatory standards for ErPs sold in the European Union (EU). The ErP Directive introduces new energy efficiency ratings across various product categories. It affects how products such as computers, vacuum cleaners, boilers and even windows are classified in terms of environmental performance. Labelling regulations that apply to our ATW heat pumps came into effect from September 26, 2015, and then revised from September 26, 2019.

New energy label and measurements

Under directive 2009/125/EC, ATW heat pumps of up to 70kW are required to show their heating efficiency on the energy label. The purpose of the energy label is to inform customers about the energy efficiency of a heating unit. The efficiency for space heating is ranked from A^{+++} to D (from September 2019). In the case of domestic hot water, it is from A^+ to F (from September 2019).

Product label

This label is for individual heating units, such as an ecodan heat pump. Typically, the space heater label is used for ecodan systems with a hydro box, and the combination heater label is used for ecodan systems with a cylinder unit.



These labels are delivered with all ecodan outdoor units.

What is the package label?

A heating system can use several energy-related products, such as a controller or solar thermal system. Therefore, a label showing the efficiency of the total heating system is required. The category range is defined from A⁺⁺⁺ to G.

Creating the package label is the responsibility of the installers and distributors. A useful tool on the Mitsubishi Electric website is available to easily create the labels for ecodan products and controllers.

http://erp.mitsubishielectric.eu/erp/options

Package label

This label is for heating systems that use several energy-related products, such as a controller or a solar thermal system.



Customised package labels including ecodan heat pumps and the FTC6 controller can be created on the Mitsubishi Electric website.

New R32 Eco Inverter Line-up

Energy Efficient and Environmentally Friendly Heating

- Wide variety of product line with R32 refrigerant
- More energy efficient than conventional eco inverter models



High Performance

All models have achieved the "RANK A+++" for SCOP at low temperature.



Low Noise

Compared with conventional outdoor unit, New R32 eco inverter achieved lower noise level, assuring the flexibility of installation in dense residential areas.



*Compared SUZ-SWM40/60/80VA with SUHZ-SW45VA/PUHZ-SW50VKA/PUHZ-SW75VHA *Rated condition (According to EN12102)

Guaranteed Operating Range Expansion

Guaranteed heating operating range is extended to -20°C.



60°C Flow Temperature

Along with it's increased lower operating range the New R32 range is capable of delivering a higher flow rate of 60°C, 5°C higher than the conventional model.



Reducing Refrigerant Amount

<R410A vs R32> CO₂ equivalent emission



*Source: IPCC 4th Assessment Report, global warming potential (GWP) 100-year value. Comparison of 2088 (R410A) and 675 (R32).

Dedicated Heat Pump for Residence

Stylish and Compact

The Stylish Design and Compact Size Harmonises Residential Application

- ullet Simple and elegant design by rounding left and right corners of the unit.
- Concealing the fan by matching the panel and the grille in dark colour.
- ullet Unified shape and safety by setting the fan whole backwards and matching
- the grille on the same level of the front panel.
 Wider lineup with environmental-friendly R32 refrigerant.

High Performance

New Compressor



Compact
 High performance
 Flash injection*
 *ZUBADAN (SHWM) only

ErP Lot 1 Compliant with Highest Seasonal Space Heating Energy Efficiency Class A+++

All models have achieved the "RANK A+++" for SCOP at low temperature.

Heating



PUD-SWM60VAA PUD-SWM80VAA PUD-SWM100VAA PUD-SWM120VAA PUD-SHWM140VAA PUZ-WM60VAA PUZ-WM85VAA PUZ-WM112VAA

60°C Flow Temperature at Low Ambient Temperature

 $60^\circ C$ max flow temprature can be maintained up to Ambient –7°C. (For PUD-S(H)WM models)



Reducing Refrigerant Amount

<R410A vs R32> CO2 equivalent emission



193

191

Model name	PUHZ-W112VAA	PUZ-WM112VAA	PUD-SWM120VAA
Refrigerant amount	3.3kg	3.0kg	1.6kg
GWP	2088 (R410A)	675 (R32)	675 (R32)
t-CO2 eq	6.890	2.025	1.080

*Source: IPCC 4th Assessment Report, global warming potential (GWP) 100-year value. Comparison of 2088(R410A) and 675 (R32).



100

480mm



1,050mm

Compact with Silence

Noise Reduction-10dB(A)

Mitsubishi Electric heat pumps are designed to give you highly efficient and eco-friendly heating with 10dB(A) less in PWL. Compared with conventional models. * Rated condition (According to EN12102)

Fh Ambulance Siren PUD-S(H)WM60 achieved 120dB **55dB**(A) 2 100dB Vacuu Clean Ó. Norma 80dB Library interior 60dB 40dB 20dB

Enclosing Noise

Shutting Out Noise from Compressor

• The structure of double enclosing

Primary: enclosing a compressor (the structure is patented.) Secondary: enclosing machine room.



New Control for Eco-friendly Heating Defrost Improvement

Conventional models often switch to defrost operation even when there is not much frost on outdoor units. By defecting frost more precisely, it is possible to prevent frequent on/off for defrosting and to give you more comfort.



*Comparison between prior PUHZ-SHW-AA model and new PUD-S(H)WM-AA model. Maximum number of operational hours at our Company's laboratory (external temperature –15°C). Hours of continuous operation may differ depending on external temperature conditions.

Blowing Air

To Reduce Fan Noise

- Optimising fan position
- Optimising bell mouth shape
- Bigger fan diameter



Avoiding Vibration and Resonance

- Dedicated soft rubber mount for the compressor to avoid vibration.
- Optimising piping structure to avoid vibration and resonance.



New Compressor Frequency Control

By reducing frequency changes (from 17 to 4 times per hour), hunting is prevented. Reducing fluctuation improves efficiency and prolongs compressor life.



D generation Indoor Unit

All-in-one Compact Indoor Unit

- All-in-one: Key functional components are incorporated
- Compact cylinder unit: 1,400~2,050mm in height
- Compact hydro box: Only 530×360mm footprint
- Easy installation: Factory fitted pressure relief valve
- Easy service: Relevant parts are located at the front of the unit for easy maintenance
- Easy transport: Handles attached on front and back (cylinder unit)





Line-up

ecodan's line-up has many types of indoor units to satisfy diverse customers' needs, requests and local regulations.

It includes various capacity units, with/without booster heater, with/ without an expansion vessel, etc.

In addition, a reversible hydro box and a reversible cylinder unit are available.







Available options

- Packaged or Split type
- With/without booster heater
- With/without expansion vessel
- Cylinder unit has an integrated 170L/200L/300L stainless steel tank
- Hydro box is control ready for domestic hot water with a stand-alone tank (locally supplied)

Reversible Models (for heating/cooling)

Perfect Comfort in Winter and Summer Time, Thanks to Our Reversible Models.

Reversible models are now available for both hydro box and cylinder units (Both for split type and cylinder unit for packaged type). The new reversible cylinder is now able to produce cold water for cooling use and can alternatively produce domestic hot water in summer time.



Easy Installation and Low Maintenance

Simple Piping Arrangement

All water piping is aligned at the rear side of the unit for easy connection and neat finish.



Built-in Drain Pan for Reversible Cylinder Models

Reversible models now include a built-in space saving drain pan and the drain socket is positioned at the back of the unit. With use of the adjuster bolt, the outlet height can be higher than 50mm, allowing 5m drainage.



Easy Adjustment

Adjust bolt capable of 50mm expansion for easy installation on uneven surfaces.



Initial Setting Wizard

In addition to language, date and time, you can set up hot water and heating/cooling operation, pump speed, flow rate range initial setting much simpler than previous models.



Hydro Box Piping Arrangement Improvement

Through structural innovation related to the space around the pipes, the area where the spanner can be moved has been increased, thus improving pipe work and enabling it to be completed smoothly.



Minimum Additional Water Required

In average/warmer conditions, minimum additional water is required for outdoor unit. If there is enough water amount inside water pipe, radiator, or underfloor heating no buffer tank is required. *Refer to the indoor unit installation manual for specific outdoor unit models.

Operation Data Monitoring

Time, operation mode, flow/return/tank temperature, can be displayed on main remote controller.

	,	0	0						
26 Feb 2019 10:00									
	THW1	THW2	THW5	Flow					
10:00 - \	41°C	38 °C	54°C	20L					
9:55 -×	38 °C	38 °C	54°C	20L					
9:50 - \/ -	48°C	48°C	54°C	20L					
9:45 👗	60 °C	56°C	54°C	15L					
9:40 ـ	59°C	55°C	52°C	15L					
i				(1/5)					

2 Zone Kit

 You can select from 3 types of pump operations, 1. Fixed speed mode, 2. Fixed pressure mode, 3. Energy saving mode, depending on your preference.



- All-in-one kit: Key functional components are incorporated in 2 zone kit.
- Easy installation: G1 screw type flexipiping to avoid brazing.
- Compact size: Just to fit on the top of cylinder unit, also wall mountable.

High Performance

Improved Efficiency

With additional thermistor (THW5A), nwh [%] rating is improved by more than 40% compared to previous C generation 200L models allowing 170L and 200L to achieve A+, the highest possible domestic hot water efficiency rank.

Excellent DHW efficien

Δ

	170L	200L	300L	
	ባwh [%]	ባwh [%]	ባwh [%]	
Conventional	-	96~104	-	
New	120~148	135~159	118~128	
Load Profile	L	L	XL	
DHW Rank	A+	A+	A/A+	

Thermistor Position of Cylinder

The thermistor position is now selectable allowing the unit to accommodate for different water demands in order to maximise the efficiency of the unit for any size of household or application

Using two thermistors equipped with all sizes of tanks, you can now select the DHW recharge amount from two options (Standard/Large). It helps accomodate for different water demands in order to maximise the efficiency of the unit for any size of household or application. This mode can be selected from main remote controller



Settings can l

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

Unique Technology of ecodan

Auto Adaptation

Maximise Energy Savings While Retaining Comfort at All Times

Regarding the relation of flow temperature and unit performance, 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 a conventional system controller, the flow temperature is determined based on the pre-set heat curve depending on the actual outdoor temperature. However, this requires a complicated setting to achieve the optimal heat curve.



Auto Adaptation Improvement

Mitsubishi Electric's Auto Adaptation Function Automatically Tracks Changes in the Actual Room Temperature and Outdoor Temperature and Adjusts the Flow **Temperatures Accordingly.**

Aiming to realise further comfort and energy savings, Mitsubishi Electric has already introduced a revolutionary new controller. 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 settinas

For Mitsubishi Electric ecodan, by introducing improved control logic, we acheived faster heating and more energy saving.



<1> Fast heating with improved accuracy in learning building heat load

<2> Energy saving by avoiding over heating and capacity fluctuation with better control response, i.e. control interval and resolution

Smart Grid Ready Function

In recent years renewable energy generation has become popular. However, this rapid growing causes the problem of supply and demand gap of electricity. The aim of "SG Ready" is to make the electricity demand response more flexible by creating a uniform interface for the smart grid integration of heat pumps. Air-to-Water units need to be able to change the operation pattern when the signal is received from the Smart Grid Controller.

New ecodan Cylinder, Hydro box and FTC have been modified to communicate with Smart Grid Controller. The communication protocol is based on "SG Ready" label regulation. (Version 1.1; gültig ab 01.01.2013)



Pattern	Input 1	Input 2	Operation	
1	OFF	OFF	Normal operation	
2	ON	OFF	Switch ON recommendation	
3	OFF	ON	Switch OFF command	SG
4	ON	ON	Switch ON command	

Pattern 1: Normal operation

When there is no signal from the Smart Grid Controller, DHW and Heating operate according to user settings.

Pattern 2: Switch ON recommendation

When set to the "Switch ON" recommendation, the target temperature of DHW is increased a specified amount and the heating "Thermo ON" condition range is extended.

Pattern 3: Switch OFF command

When the "Switch OFF" command is received, both DHW and Heating are turned off.

Pattern 4: Switch ON command

When the "Switch ON" command is received, the target temperature of DHW is increased to the maximum target temperature and Heating continues.

Improved Smart Grid Ready

SG ready icon on main remote controller indicates that SG ready is active and its setting can be easily operated with main remote controller. Improved SG ready function enables you to choose the target temperature in unit of 1°C. Also, when PV manager is interlocked with ecodan and ecodan receivers its signal, heat is stored as much as possible while heat pump and/or electric heater running. Heat storage in large buffer tank will be made available for zone2 as well when peak cut signal is on. As long as a mixing valve keeps its control,

Heat storage in large buffer tank will be made available for zone2 as well when peak cut signal is on. As long as a mixing valve keeps its control, zone2 flow temperature is maintained.





Intelligent Hybrid Control (boiler interlock) An Existing Boiler Can Be Used for Extra Heating Capacity in an Efficient Way

The flexibility of ecodan's intelligent control allows the system to be combined with the boiler currently in use. Additionally, this control can judge which heating source to use either ecodan or the existing boiler, based on various conditions*.

In the event of one heating unit not working due to some unforeseen problem, the other heating system can be used as a back-up, thereby preventing the heating system operation from stopping completely.

*Please see below "Heat source switchover".

Intelligent system combining a boiler with ecodan



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

Heat source switchover - Choose appropriate system based on needs

4 types of heat source switchover logic

- ① Switchover based on actual outdoor temperature
- Heat source switchover occurs when the outdoor temperature drops below a pre-set temperature.
- ② Switchover based on running cost
- Heat source switchover occurs by judging optimal operation based on running cost.

*Pre-registration of the energy price of electricity, and gas or oil per 1kWh is necessary.

- ③ Switchover based on CO2 emission level
 - Heat source switchover occurs to minimise CO₂ emission.
 *Pre-registration of CO₂ emission amount from electricity and gas or oil is necessary.
- ④ Switchover can also be activated via external input
 - For example, the peak cut signal from electric power company.



2 Zone Control (for heating/cooling)

Improved Simultaneous Control of Two Different Zones

Using ecodan, it is possible to control two different flow temperatures, thereby managing two different heating load requirements. The system can adjust and maintain two flow temperatures when different temperatures are required for different rooms; for example, controlling a flow temperature of 40°C for the bedroom radiators and another flow temperature of 30°C for the living room floor heating. Moreover, mixing valve control is advanced for improving zone 2 comfort by using heat storage in buffer tank. Also, new controller monitors the

temperature inside buffer tank and prioritizes using the heat inside the tank to avoid frequent on/off operation when using 2 zone control.

Two temperature zones



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

Multiple Unit Control

Connect up to 6 Units – Automatic Control of Multiple Units for Bigger Capacity and Better Efficiency

A maximum of 6 units* can be configured according to the 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 enables each unit to run for an equal time period.

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

*Only same models (same capacity) can be used.



Multiple unit control

Remote Controllers

Smart User-friendly Controller with Stylish Design

Main remote controller

- Large screen and backlight for excellent visibility, even in dark environment
- Multi-language support (supports 15 languages)
- Can be removed from main unit and installed in a remote location (up to 500m)
- Quick reading of operation data (7.5 times faster than previous model)
- Wide range of convenient functions in response to user demand
 - Function settings
 - Energy monitoring
 - Two-zone control (cooling and heating)
 - Two separate schedulesSummer time setting
- Floor drying mode
 Weekly timer
 Holiday mode
- s
 - Legionella prevention
- Built-in room temperature sensors Error codes
- Hybrid control (boiler interlock)

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

Energy Monitoring

View Electricity Consumption and Heat Output on the Remote Controller

Every end user can now easily check the energy data of the ecodan heat pump.

Other features

- Daily, monthly and yearly data are stored and can be displayed using the main Heating capacity produced
- External power meter and heat meter can be connected for accurate measurement.
- SD card is also available for storing data.
- *Using pre-set values on the main remote controller, estimated energy consumption/output can be shown without external power and a heat meter.
- Depending on operating condition and system configuration, there is some possibility to show different data from the reality. *This function is available depending on the version of the outdoor unit model.

Summer Time Setting Easy Adjustment for Summer Time

Just switch the summer time mode 'on' using the main remote controller and the clock in the main remote controller is adjusted to summer time hours.

This function can release the end user from clock setting tasks.



Two Separate Schedules Pre-setting Two Different Schedules



for Winter and Summer Seasons

Two different schedule settings are available for use via the main remote controller.

These schedules can be pre-set and changed depending on the season. For example, from November to March, space heating and domestic hot water are used; however, during warm months such as from April to October, only domestic hot water is used.







ALC: NO

PAR-WR51R-E (Option)

Receiver





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⊠∎ **∄21**℃

Main controller

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13:41

Easy Commissioning

Pump for Primary Water Circuit* Speed Setting Possible Using ecodan's Main **Remote Controller**

Even when the system is running, pump output can be set to one of five different settings using the main remote controller.

The person commissioning the system can adjust this speed much more easily.

*Speed setting of pump for domestic hot water is not available through the main remote controller when the system is running.

Flow sensor newly incorporated

The flow sensor is key for monitoring energy output and can also be used to detect flow error as well. - Flow rate can be checked on the main remote controller.

- Flow rate can also be shown as graphs using the SD card tool.

ANTENE FUMP SPEED 0 F E 0 .



Settings can be

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

Run indoor unit* without outdoor unit

During installation or situations such as an outdoor unit malfunction, the indoor unit can be operated using a heater. While using this mode, flow and tank temperature are selectable.

Fixing and maintenance of the outdoor unit can be done without stopping heating and domestic hot water operation*.

* Models with electric heater only.

*When the indoor unit operation stops, please check all settings after the outdoor unit is connected.

SD* Card For Easier Settings and Data Logging

The 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. The 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 the installation site, a remarkable reduction in set-up time has been achieved. Thus, it is ideal for busy installers.

*SD card function is only used at the time of installation.

Items that can be pre-set

Simply copying pre-set data to an SD card,

the same settings can input into another unit using the SD card. • Initial settings (time display, contact number, etc.)

- · Heating settings
 - Auto adaptation
 - Heat curve
- Two different temperature zones (heating and cooling)
- · Interlocked boiler operation settings
- Holiday mode settings
- Schedule timer settings (two separate schedules)
- · Domestic hot water settings
- Legionella prevention settings

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

Hydro box operation panel

Settings can be performed easily and the logging of operation data saved to an SD card can be confirmed via a personal computer -2. SD card SD card slot SD card

Data that can be stored

Operation data up to a month long can be stored on

- a single SD card
- Consumed electrical energy
- Delivered energy
- Flow rate
- Operation time
- Defrost time
- Actual temperature
- Room temperature
- Flow temperature
- Return temperature
- Domestic hot water temperature
- Outdoor temperature
- Error record
- Input signal
- Etc.

ZUBADAN SERIES

The ZUBADAN Series incorporates an original Flash Injection technology that improves the already high heating capacity of the system. This new member of the series line-up ensures comfortable heat pump-driven heating performance in cold regions.



Units in photo are Japanese models. European model specifications are different.

Improved Heating Performance

Mitsubishi Electric's unique "Flash Injection" circuit achieves remarkably high heating performance. This technology has resulted in an excellent heating capacity rating in outdoor temperatures as low as -15°C, and the guaranteed heating operation range of the heating mode has been extended to -25°C. Accordingly, the heat-pump units of the ZUBADAN Series are perfect for warming homes in the coldest of regions.



Enhanced Comfort

The Flash Injection circuit improves start-up and recover from the defrosting operation. A newly introduced defrost operation control also improves defrost frequency. These features enable the temperature to reach the set temperature more quickly, and contribute to maintaining it at the desired setting.

Quick Start-up



ZUBADAN Defrost Control and Faster Recovery from Defrost Operation Field Test Results: Office building in Asahikawa, Hokkaido, Japan





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





The ZUBADAN Series is equipped with Mitsubishi Electric's original Flash Injection Circuit, which is comprised of a bypass circuit and heat interchanger (HIC). The HIC transforms rerouted liquid refrigerant into a gas-liquid state to lower compression load. This process ensures excellent heating performance even when the outdoor temperature drops very low.

In traditional units, when the outdoor temperature is low, the volume of refrigerant circulating in the compressor decreases due to the drop in refrigerant pressure and the protection from overheating caused by high compression, thereby reducing heating capacity. The Flash Injection Circuit injects refrigerant to maintain the refrigerant circulation volume and compressor operation load, thereby maintaining heating capacity.



A Heat Interchanger (HIC)

HIC cross-sectional view



The compressor is subjected to a heavy load when compressing liquid refrigerant, and the result is lower operation efficiency. The addition of HIC supports refrigerant heat exchange at two different pressure levels. The heat-exchange process transforms the injected liquid refrigerant into a gas liquid state, thereby decreasing the load on the compressor during the compression process. **B** Injection Compressor



Purpose: To increase the volume of refrigerant being circulated

Effect: Improves heating capacity at low outdoor temperatures, and enables higher indoor-air outlet temperature adjustment and higher defrost operation speed

Refrigerant passes from the HIC into the compressor through the injection port. Having two refrigerant inlets makes it possible to raise the volume of refrigerant being circulated when the outdoor temperature is low and at the start of heating operation. To ensure full capacity in cold and snowy regions...

3 Important Points to Remember When Installing the Outdoor Unit



* RAC/PAC (inc. Air to Water) /MXZ

Wind and snow can significantly reduce capacity. Be sure to check the infomation below and install the outdoor unit correctly.



Installation Location

Be aware of the prevailing wind direction in winter and install the outdoor unit where it is as sheltered as possible.





Measures for Drainage of Water

Case 1: Unit is installed close to passage (walkway)

Do not install the unit close to passage as drainage water from the unit may freeze and cause a slipping hazard.







Case 2: Multiple units are installed

Do not install units on top of one another as it may cause frozen drainage water on the bottom unit.





B Measures for Snow

Unit is installed on the ground

To avoid the adverse effects of snow and frozen drainage water, install the unit on a stand to ensure a sufficient height from the ground.



Use a stand to add sufficient height to protect the unit heat exchanger from snow and prevent icicles forming during defrost operation.

Install snow protection hood as necessary



Necessity of accessories (drain socket & centralised drain pan, stand, snow protection hood, base heater)

	Snowy region	Cold region				
	Countermeasures for snow	Countermeasures for freezing	Remarks			
Drain socket, Centralised drain pan	Not used	Not used	Prevents freezing			
Stand	Needed	Needed	 1. Install so as to prevent the unit being buried in snow (at a height greater than the highest snowfall depth). Be sure that the stand does not obstruct drainage. 2. Install so as to prevent damage to the unit due to frozen drainage water (icicles). 			
Snow protection hood	Needed *When the installation position is subject to snowfall.	_	 Prevents heat exchanger from being covered in snow. Prevents snow accumulating inside the air duct. 			
Base heater	_	Needed	Outdoor units equipped with a heater for cold regions are those with an "H" in the model name. For the cold-climate zone, use of a unit with a heater is strongly recommended. Even for the moderate-climate zone use of a unit with a heater is recommended for regions subject to high humidity in winter.			

⚠ CAUTION About disposal of drainage water

When the unit is installed in cold or snowy regions :

Drainage water may freeze in the drain socket/hose and prevent the fan from rotating.



Do not attach a drain socket packaged as an accessory to the unit.

In the case that fitting a drain socket is absolutely necessary, steps must be taken so that the drainage water does not freeze. For more information, please consult Mitsubishi Electric or one of its dealers/resellers.

Mr.SLIM+

A Smart Air Conditioning and Hot Water Supply System Conceived from Eco-conscious Ideas

Mr. SLIM+ has a heat recovery function, which uses waste heat from air conditioners to heat water. Thanks to heat recovery, the Mr. SLIM+ model can achieve a COP of 7.0*, resulting in intelligent systems with amazing efficiency.

*Conditions for air-to-air cooling: Indoor 27°C (dry bulb), 19°C (wet bulb); Outdoor 35°C (dry bulb)

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, domestic hot water supply and hot water heating)

Mr. SLIM for Air-to-Air

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

- ecodan for Air-to-Water ✓Domestic hot water (DHW) supply
- Heating for multiple rooms



Various Operations



Specifications

Indoor u	init				PLA-ZM71EA	PKA-M71KAL	PCA-M71KA	PSA-RP71KA	PEAD-M71JA	PEAD-M71JA	
Outdoo	unit				PUHZ-FRP71VHA2	PUHZ-FRP71VHA2	PUHZ-FRP71VHA2	PUHZ-FRP71VHA2	PUHZ-FRP71VHA2	PUHZ-FRP71VH	
Refriger	ant						R410	DA*1			
Power s	upply	Outdoor (V / P	'hase / Hz)				230 / Sir	ngle / 50			
Air-to-Air	Cooling	Capacity	Rated	kW	7.1	7.1	7.1	7.1	7.1	7.1	
ATA)	-		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	
		Total input	Rated	kW	1.88	1.93	1.93	2.15	2.10	2.04	
		EER			3.77	3.67	3.67	3.30	3.38	3.48	
		Design load		kW	7.1	7.1	7.1	7.1	7.1	7.1	
		-	city consumption *2	kWh/a	376	386	384	409	444	427	
		SEER *4	only concumption		6.6	6.4	6.4	6.0	5.5	5.8	
		OLLI	Energy-efficiency class		A ⁺⁺	A ⁺⁺	A++	A ⁺	A	A+	
	Heating	Capacity	Rated	kW	8.0	8.0	8.0	8.0	8.0	8.0	
	(average	Cupucity	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	
	season)	Tatalingut		kW							
		Total input	Rated	ĸvv	2.11	2.29	2.29	2.42	2.11	2.11	
		COP			3.80	3.50	3.50	3.30	3.79	3.79	
		Design load		kW	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)	4.9 (–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)	4.9 (-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)	3.7 (–20°C)	3.7 (–20°C)	
		Back-up hea	ting capacity	kW	0	0	0	0	0	0	
		Annual elect	tricity consumption *2	kWh/a	1,509	1,564	1,556	1,699	1,791	1,791	
		SCOP *4			4.3	4.2	4.2	3.8	3.8	3.8	
			Energy-efficiency class		A+	A ⁺	A ⁺	A	A	A	
ir-to-Water	Nominal	flow rate (for	heating)	L/min			22	.90			
ATW)	Heating *5	g*5 A7W35	Capacity	kW	8.00	8.00	8.00	8.00	8.00	8.00	
			Input	kW	1.98	1.98	1.98	1.98	1.98	1.98	
			COP		4.05	4.05	4.05	4.05	4.05	4.05	
		A2W35	Capacity	kW	7.50	7.50	7.50	7.50	7.50	7.50	
			Input	kW	2.67	2.67	2.67	2.67	2.67	2.67	
			COP		2.81	2.81	2.81	2.81	2.81	2.81	
	Heat	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	
	recovery (ATA cooling &		Input	kW	1.90	1.93	1.95	2.02	2.15	2.13	
			COP		7.95	7.82	7.74	7.48	7.02	7.09	
	ATW) *6	W55	Capacity (ATA cooling + ATW)	kW	7.1+9.0	7.1+9.0	7.1+9.0	7.1+9.0	7.1+9.0	7.1+9.0	
			Input	kW	2.97	3.00	3.02	3.09	3.22	3.20	
			COP		5.42	5.37	5.33	5.21	5.00	5.03	
	ATW ind				Cylinder unit or Hydro box (see previous page)						
Jutdooi		Dimensions	HxWxD	mm			943-950-				
		Weight		kg	73	73	73	73	73	73	
		Air volume	Cooling	m³/min	50	50	50	50	50	50	
			Heating	m³/min	50	50	50	50	50	50	
		Sound pressure	Cooling	dB(A)	47	47	47	47	47	47	
		level (SPL)					47	47		47	
			Heat recovery	dB(A) dB(A)	47 49	47 49	47	47	47 49	47	
			ATA Heating	dB(A) dB(A)							
		Council and	ATW Heating		49	49	49	49	49	49	
		Sound power level (PWL)	Cooling	dB(A)	67	67	67	67	67	67	
			Heat recovery	dB(A)	67	67	67	67	67	67	
			ATA Heating	dB(A)	68	68	68	68	68	68	
			ATW Heating	dB(A)	68	68	68	68	68	68	
		Operating cur	rent (max)	A	19.0	19.0	19.0	19.0	19.0	19.0	
		Breaker size		Α	25	25	25	25	25	25	
xt.pipi	ng	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	
		Max. length	Out-In	m			30 (for ATA) +	- 30 (for ATW)			
		Max. height	Out-In	m	20	20	20	20	20	20	
		ating range	Cooling *3	°C	-15~+46	-15~+46	-15~+46	-15~+46	-15~+46	-15~+46	
outdoo	r)		Heating	°C	-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	

*1 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute 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 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO₂, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R410A is 2088 in the IPCC 4th Assessment Report.
*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 Air-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); Outdoor 35°C (dry bulb).

PUMY+ecodan

Air-to-Air and Air-to-Water Hybrid Multi Split 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, domestic hot water supply and hot water heating) ecodan for Air-to-Water PUMY for Air-to-Air

PUMY utilises various indoor units, enabling the air conditioning or heating of multiple rooms, and controls each unit individually.

✓Domestic hot water (DHW) supply

✓Heating for multiple rooms



Main Operation Patterns



*When using optional simultaneous operation, there are some restrictions, such as connectable indoor units, operation range and DHW flow temp.

Usage Pattern All-in-one System Solution

Summer 2-in-1 Operation

In summer ATA cooling and DHW are utilised. Keep your room comfortable with ATA cooling during high temperature daytime. Heat pump operates to heat up water stored in the DHW tank when ATA is not operated. The hot water can be utilised for shower and washing dishes during daytime.



Spring & Autumn 2-in-1 Operation

In spring and autumn, ATA heating and DHW are utilised. ATA heating can warm up each room quickly during the low temperature morning and evening. Heat pump operates to heat up water stored in the DHW tank when ATA is not operated. The hot water can be utilised for shower and washing dishes during daytime.



Winter ecodan

In winter ATW heating and DHW are utilised. ATW heating warms home all the day in severe cold weather. ATW heating stops temporarily only when the heat pump operates to heat up water stored in the DHW tank.



PUMY+ecodan

Model name	I					PUMY- P112VKM5(-BS)	PUMY- P125VKM5(-BS)	PUMY- P140VKM5(-BS)	PUMY- P112YKM(E)4(-BS)	PUMY- P125YKM(E)4(-BS)	PUMY- P140YKM(E)4(-B
Power suppl	У					1-phas	se 220 - 230 - 240	/, 50Hz	3-pha	se 380 - 400 - 415	/, 50Hz
Air-to-Air	Cooling	Cooling Capacity			kW	12.5	14.0	15.5	12.5	14.0	15.5
(ATA)	(nominal)*1	Power input			kW	2.79	3.46	4.52	2.79	3.46	4.52
		EER				4.48	4.05	3.43	4.48	4.05	3.43
	Temp. range	Indoor temp.			W.B.			15 -	24°C		
	of cooling	Outdoor temp.	*2		D.B.			-5 -	52°C		
	Heating	Capacity			kW	14.0	16.0	18.0	14.0	16.0	18.0
	(nominal)*1	Power input			kW	3.04	3.74	4.47	3.04	3.74	4.47
		COP				4.61	4.28	4.03	4.61	4.28	4.03
	Temp. range	Indoor temp.			W.B.			15 -	27°C		
	of heating	Outdoor temp.			D.B.			-20 -	15°C		
Air-to-Water	Nominal flow	rate (for heatin	g)		L/min			35	5.8		
(ATW)	Heating*3	A7W35	Capacity		kW			12	2.5		
		-	Power input		kW	3.06					
			COP			4.08					
		A2W35	Capacity		kW	10.0					
			Power input		kW	3.50					
			COP			2.86					
	Guaranteed	ATW	ATW Heating					-20 -	+21°C		
	operating range		DHW		D.B.	−20 - +35°C					
		ATA + ATW	ATA heating + DHW		D.B.	7 - +21°C					
			ATA heating + ATW heating *4		D.B.	-10 - +21°C					
	Maximum Ou	tlet water temp			°C	55					
Outdoor	Indoor unit connectable	ATA Total capaci			50 to 130% of outdoor unit capacity				y		
unit		only	Model/	Branch box system		15-100/8	15-100/8	15-100/8	15-100/8	15-100/8	15-100/8
			Quantity	Mixed system*12		15-140*5/10	15-140*5/10*6	15-140*5/10*6	15-140*5/10	15-140*5/10*6	15-140*5/10*6
		ATA + ATW								ST20C or EHSC) *	7
		individual operation	Model/Quantity	Branch box system		15-100/8	15-100/8	15-100/8	15-100/8	15-100/8	15-100/8
			(including ATŴ)	Mixed system*12		15-140*5/10	15-140*5/10*6	15-140*5/10*6	15-140*5/10	15-140*5/10*6	15-140*5/10*6
		ATA + ATW								ST20C or EHSC) *	
		simultaneous operation	Model/Quantity	ATA*12		15/1*8	15-25/2*9	15-42*11/3*10	15/1*8	15-25/2*9	15-42*11/3*10
				ATW				ATW (EHST20	C or EHSC) / 1		
	<u> </u>		red in anechoic ro		dB <a>	49 / 51	50 / 52	51 / 53	49 / 51	50 / 52	51 / 53
			d in anechoic roor	· · · · · · · · · · · · · · · · · · ·	dB <a>	69 / 71	70 / 72	71 / 73	69 / 71	70 / 72	71 / 73
	Refrigerant p	iping diameter		Liquid pipe	mm				flare		
				Gas pipe	mm				flare		
	Fan	Type × Quantit	У						r fan × 2		
		Airflow rate			m³/min				10		
					L/s			1,8			
					cfm	3,884					
		Motor output			kW				+ 0.074		
	Compressor	Type × Quantit	,					Scroll hermetic			
		Starting metho	d					Inve		1	
		Motor output			kW	2.9	3.5	3.9	2.9	3.5	3.9
		ensions (H × W >	< D)		mm			1,338 × 1,05	0 × 330 (+40)		
	Weight				kg		122		YI	KM: 125 / YKME: 1	36

*1

	Indoor	Outdoor	Piping length	Level difference
Cooling	27°C DB / 19°C WB	35°C DB	7.5m	0m
Heating	20°C DB	7°C DB / 6°C WB	7.5m	0m

 *2 10 to 52°C D.B.: When connecting PKFY-P15/20/25VBM, PFFY-P20/25/32VKM, PFFY-P20/25/32VLE(R)M, PEFY-P*VMA3 or M, S and P series indoor unit.
 *3 In the case of ATW single connection. Input to circulation pump is not included.
 *4 In the case of simultaneous operation of ATA heating and ATW heating, target flow temperature range is restricted to 45-55°C and when the ambient temp is under 7°C, the flow temp is lowered. *5 Up to P100 when connecting via branch box.

*6 Up to 11 units when connecting via 2 branch boxes.
*7 Only one ecodan unit can be connected.

' Unity one ecodan unit can be connected.
 *8 Exceptionally, one MSZ-SF15VA or MSZ-AP15VF can be connected.
 *9 Exceptionally, two MSZ-SF15VA or MSZ-AP15VF can be connected.
 *10 Exceptionally, three MSZ-SF15VA or MSZ-AP15VF can be connected.
 *11 In the case of City Multi connection, maxmum is P32.
 *12 PKFY and PFFY series are not connectable.

Piping specifications

Total piping length	m	150*	a+b+c+d+e+f
Farthest piping length	m	80	a+b+d or a+c+e
		85	a+f
Total piping length betwen outdoor unit and branch box	m	55	a+b+c
Total piping length between branch boxes and indoor units	m	95	d+e
Farthest piping length from the first joint	m	30	b or c or f
Farthest piping length after branch box	m	25	d or e
Height difference (Outdoor upside / Outdoor downside)	m	50 / 40	



*When an ecodan is connected, the maximum piping length is 150m.

PUMY+ecodan Compatibility Table

ATW branch box connection compatibility table

Series	Туре	Model name	Compatibility	Туре	Model name	Compatibility	Туре	Model name	Compatibility
ATW	Cylinder	EHST20C-VM2/6D	•	Hydro	EHSC-VM2/6D	•	Branch	PAC-MK53BC	•
	unit	EHST20C-YM9D	•	box	EHSC-YM9D	•	box	PAC-MK33BC	

Connectable indoor unit capacity

For individual operation ATA+ATW (no simultaneous operation) ATA: Max 130% of outdoor unit capacity + ATW (EHST20C or EHSC)

Outdoor capacity 12.5kW			
ATW indoor unit (Cylinder or Hydro box) 11.2kW	Connectable AT	A indoor ur	it total capacity: Max.16.2kW (130%)
Outdoor capacity 14.0kW			
ATW indoor unit (Cylinder or Hydro box) 11.2kW	Connectable AT	A indoor ur	it total capacity: Max.18.2kW (130%)
Outdoor capacity 15.5kW]
ATW indoor unit (Cylinder or Hydro box) 11.2kW	Connectable AT	A indoor ur	it total capacity: Max.20.2kW (130%)
or simultaneous operation of ATA+ATW Max 100% of Outdoor capacity 12.5kW		ty: ATA + A	TW (EHST20C or EHSC)
•	ATA		TW (EHST20C or EHSC) Z-SF15VA or MSZ-AP15VF can be connected.
Outdoor capacity 12.5kW	ATA capacity Max. *Exception		
Outdoor capacity 12.5kW ATW indoor unit (Cylinder or Hydro box) 11.2kW	ATA capacity Max. *Exception	nally, one MS	
Outdoor capacity 12.5kW ATW indoor unit (Cylinder or Hydro box) 11.2kW Outdoor capacity 14.0kW	ATA capacity Max. 1.3kW *Exception	nally, one MS	Z-SF15VA or MSZ-AP15VF can be connected.

Indoor unit

it (Heating only)

<cylinder th="" ι<=""><th>ınit (Heati</th><th>ng only)></th><th></th><th colspan="4">Small capacity</th></cylinder>	ınit (Heati	ng only)>		Small capacity				
Model nam	е			EHST17D- VM2D	EHST20D- VM2D	EHST20D- YM9D	EHST30D- YM9ED	
		Туре			Heat	ting only		
		Expansion vessel		V	V	レ	-	
		Booster heater (2/6/9 kW)		V	V	V	V	
Dimensions		HxWxD	mm	1400x595 x680	1600×5	95×680	2050x595x680	
Weight (em	pty)		kg	93	99	102	117	
Control Boa	rd Power su	ıpply (Phase / V / Hz)		~ /N,230V, 50Hz	~ /N,230V, 50Hz	~ /N,230V, 50Hz	~ /N,230V, 50Hz	
Heater	Booster	Power supply (Phase / V / Hz)		~ /N,230V, 50Hz	~ /N,230V, 50Hz	3 ~ ,400V, 50Hz	3 ~ ,400V, 50Hz	
	heater	Capacity	kW	2	2	3+6	3+6	
		Current	A	9	9	13	13	
		Breaker size	A	16	16	16	16	
Domestic hot water tank	Volume / I	Material	L/-	170 / Stainless steel	200 / Stair	300 / Stainless steel		
Guranteed	Ambient		°C		0 - 35	(≦80%RH)		
operating range *1	Outdoor	Heating	°C	See outdoor unit spec table				
range - i		Cooling	°C			-		
Target	Heating	Room temperature	°C		1	0 - 30		
temperature range		Flow temperature	°C		2	0 - 60		
range	Coolimg	Room temperature	°C	_				
Flow temperature				-				
DHW tank		Max. hot water temperature	°C		70			
performanc	e	Water heater energy efficiency	/ class	A+ A - A+				
Sound pres	sure level (F	WL)	dB (A)			41		

Г

*1 The indoor environment must be frost-free *2 For the model without booster heater and immersion heater, the maximum allowable hot water temperature is 3°C lower than maximum outlet water of outdoor unit. For the maximum outlet water of outdoor unit, refer to outdoor unit data book.

Cylinder ι	unit (Heati	ing only)>			M	edium capac	ity	
Model nam	e			EHST20C- VM2D	EHST20C- VM6D	EHST20C- YM9D	EHST30C- VM6ED	EHST30C YM9ED
		Туре				Heating on l y		
		Expansion vessel		V	V	V	-	-
		Booster heater (2/6/9 kW)		レ	V	レ	レ	レ
Dimensions	;	HxWxD	mm	1	1600x595x68)	2050×5	95×680
Weight (em	pty)		kg	110	110	112	122	124
Control Boa	rd Power s	upply (Phase / V / Hz)		~ /N,230V, 50Hz	~ /N,230V, 50Hz	~ /N,230V, 50Hz	~/N,230V, 50Hz	~ /N,230V 50Hz
Heater	Booster	Power supply (Phase / V / Hz)		~ /N,230V, 50Hz	~ /N,230V, 50Hz	3 ~ ,400V, 50Hz	~/N,230V, 50Hz	3 ~ ,400V 50Hz
	heater	Capacity	kW	2	2+4	3+6	2+4	3+6
		Current	A	9	26	13	26	13
		Breaker size	A	16	32	16	32	16
Domestic hot water tank	Volume / I	Material	L/-	200 / Stainless steel 300 / Stainless			nless steel	
Guranteed	Ambient		°C		0	- 35 (≦80%R	H)	
operating	Outdoor	Heating	°C		See ou	tdoor unit sp	ec table	
range *1		Cooling	°C			-		
Target	Heating	Room temperature	°C			10 - 30		
temperature		Flow temperature	°C			20 - 60		
range	Coolimg	Room temperature	°C			-		
		Flow temperature	°C			-		
DHW tank		Max. hot water temperature	°C			70		
performanc	е	Water heater energy efficiency	, class		A+			A
Sound pres	sure level (f	PWL)	dB (A)			40		

*1 The indoor environment must be frost-free *2 For the model without booster heater and immersion heater, the maximum allowable hot water temperature is 3°C lower than maximum outlet water of outdoor unit. For the maximum outlet water of outdoor unit, refer to outdoor unit data book.

<hydro box<="" th=""><th>k (Heating</th><th>only)></th><th></th><th>Small c</th><th>apacity</th><th>Mee</th><th>dium capa</th><th>city</th><th>Large capacity</th></hydro>	k (Heating	only)>		Small c	apacity	Mee	dium capa	city	Large capacity
Model name	e			EHSD- VM2D	EHSD- YM9D	EHSC- VM2D	EHSC- VM6D	EHSC- YM9D	EHSE- YM9ED
		Туре				ŀ	leating on	ly	
		Expansion vessel		V	V	V	V	V	-
Booster heater (2/6/9kW)				V	V	V	V	V	レ
Dimensions		HxWxD	mm		8	00x530x36	50		950x600x360
Weight (em	pty)		kg	43	44	47	48	48	63
Control Boa	rd Power su	ıpply (Phase / V / Hz)		~/N,230V, 50Hz	~ /N,230V, 50Hz				
Heater	Booster	Power supply (V / Phase / Hz)		~/N,230V, 50Hz	3~,400V, 50Hz	~ /N,230V, 50Hz	~ /N,230V, 50Hz	3~,400V, 50Hz	3 ~ ,400V, 50Hz
	heater	Capacity	kW	2	3+6	2	2+4	3+6	3+6
		Current	A	9	13	9	26	13	13
		Breaker size	A	16	16	16	32	16	16
Guranteed	Ambient		L/-			0 - 3	5 (≦80%R	H)	
operating range *1	Outdoor	Heating	°C		:	See outdo	or unit spe	ec table	
range - i		Cooling	°C	_					
Target	Heating	Room temperature	°C				10 - 30		
temperature		Flow temperature	°C				20 - 60		
range	Coolimg	Room temperature	°C	_					
		Flow temperature	°C				-		
Sound press	sure level (F	• •WL)	dB (A)	4	1		40		45

*1 The indoor environment must be frost-free.

Indoor unit

<cylinder th="" u<=""><th>unit (Reve</th><th>rsible)></th><th></th><th colspan="4">Small capacity</th></cylinder>	unit (Reve	rsible)>		Small capacity				
Model nam	е			ERST17D-VM2D	ERST20D-VM2D	ERST30D-VM2ED		
		Туре		н	eating and Coolin	ıg		
		Expansion vessel		L	レ			
		Booster heater (2/6/9 kW)		V	V	L		
Dimensions	3	HxWxD	mm	1400x595x680	1600x595x680	2050x595x680		
Weight (em	pty)		kg	94	100	115		
Control Boa	ard Power s	upply (Phase / V / Hz)		~/N, 230V, 50Hz	~/N, 230V, 50Hz	~/N, 230V, 50Hz		
Heater	Booster	Power supply (V / Phase / Hz)		~/N, 230V, 50Hz	~/N, 230V, 50Hz	~/N, 230V, 50Hz		
	heater	Capacity	kW	2	2	2		
		Current	A	9	9	9		
		Breaker size	A	16	16	16		
Domestic hot water tank	Volume / I	Material	L/-	170 / Stainless steel	200 / Stainless steel	300 / Stainless steel		
Guranteed	Ambient		°C		0 - 35 (≦80%RH)			
operating range *1	Outdoor	Heating	°C	See o	outdoor unit spec	table		
range "I		Cooling	°C	See ou	itdoor unit spec ta	able *2		
Target	Heating	Room temperature	°C		10 - 30			
temperature range		Flow temperature	°C		20 - 60			
range	Coolimg	Room temperature	°C		-			
	Flow temperature °C				5 - 25			
DHW tank		Max. hot water temperature	°C		70			
performanc	e	Water heater energy efficiency	y class	A ⁺ A - A				
Sound pres	sure level (PWL)	dB (A)		41			

*1 The indoor environment must be frost-free. *2 During cooling operation at low outdoor temperature (10°C or lower), frozen water may cause damage on plate heat exchanger.

		ersible)>		Medium capacity ERST20C-VM2D ERST30C-VM2			
Model nam	e			ERST20C-VM2D	ERST30C-VM2ED		
		Туре		Heating ar	nd Cooling		
		Expansion vessel		L			
		Booster heater (2/6/9 kW)		レ	レ		
Dimensions	;	HxWxD	mm	1600x595x680	2050x595x680		
Weight (em	pty)		kg	110 122			
Control Boa	rd Power s	upply (Phase / V / Hz)		~/N, 230V, 50Hz	~/N, 230V, 50Hz		
Heater	Booster	Power supply (V / Phase / Hz)		~/N, 230V, 50Hz	~/N, 230V, 50Hz		
	heater	Capacity	kW	2	2		
		Current	А	9	9		
		Breaker size	А	16	16		
Domestic hot water tank	Volume / I	Material	L/-	200 / Stainless steel	300 / Stainless steel		
Guranteed	Ambient		°C	0 - 35 (≦80%RH)			
operating range *1	Outdoor	Heating	°C	See outdoor u	unit spec table		
range i		Cooling	°C	See outdoor ur	nit spec table *2		
Target	Heating	Room temperature	°C	10	- 30		
temperature range		Flow temperature	°C	20	- 60		
lange	Coolimg	Room temperature	°C	-	-		
		Flow temperature	°C	5 - 25			
DHW tank		Max. hot water temperature	°C	7	0		
water heater energy efficient				A ⁺ A			
Sound pres	sure level (PWL)	dB (A)	4	0		

*1 The indoor environment must be frost-free. *2 During cooling operation at low outdoor temperature (10°C or lower), frozen water may cause damage on plate heat exchanger.

Hydro bo	x (Revers	ible)>		Small capacity	Medium capacity	Large capacity				
Model nam	e			ERSD-VM2D	ERSC-VM2D	ERSE-MED	ERSE-YM9ED			
		Туре		Heating and Cooling						
		Expansion vessel		レ	V	-	-			
		Booster heater (2/6/9 kW)		レ	V	-	V			
Dimensions	;	HxWxD	mm	800	<530x360	950x60	00x360			
Weight (em	pty)		kg	44	48 62 64					
Control Boa	rd Power s	upply (Phase / V / Hz)		~/N, 230V, 50Hz	0Hz ~/N, 230V, 50Hz ~/N, 230V, 50Hz ~/N, 230V,					
Heater	Booster	Power supply (V / Phase / Hz)		~/N, 230V, 50Hz	~/N, 230V, 50Hz	-	3~, 400V, 50Hz			
	heater	Capacity	kW	2	2	-	3+6			
		Current	А	9	9	-	13			
		Breaker size	А	16	16	-	16			
Guranteed	Ambient		°C	0 - 35 (≦80%RH)						
operating range *1	Outdoor	Heating	°C		See outdoor unit	spec table				
range i		Cooling	°C		See outdoor unit spec table *2					
Target	Heating	Room temperature	°C		10 - 30					
temperature range		Flow temperature	°C		20 - 60					
range	Coolimg	Room temperature	°C		-					
		Flow temperature	°C	5 - 25						
Sound pres	sure level (PWL)	dB (A)	41 40 45						

*1 The indoor environment must be frost-free *2 If you use our system in cooling mode at the low ambient temperature (10°C or below), there are some risks of plate heat exchanger breaking by frozen water.



Outdoor unit

Julaoor	um			Eco Inverter					
Model name				SUZ-SWM40VA	SUZ-SWM60VA	SUZ-SWM80VA			
Refrigerant					R32*1	·			
Dimensions		H×W×D	mm	880×840×330	880×840×330	880×840×330			
Weight			kg	54	54	54			
Power supply	/ (V / Phase / H	z)		230 / 1-ph / 50	230 / 1-ph / 50	230 / 1-ph / 50			
Heating A7W35*2		Nominal	kW	4.0	6.0	7.5			
		COP		5.20	4.86	4.70			
	A2W35*2	Nominal	kW	4.0	5.0	6.5			
		COP		3.90	3.33	3.40			
Average clim		Class		A+++	A+++	A+++			
outlet 35°C*3		η _s		180	181	182			
Average clim		Class		A++	A++	A++			
outlet 55°C*3		η _s		129	130	131			
DHW 200L(L)		Class		A+	A+	A+			
(Average clim	nate)*4	ηwh		159	148	148			
Max outlet w	ater temperatu	ure (°C)		60	60	60			
Cooling	A35W7*2	^{•2} Nominal		4.5	5.0	5.4			
		EER		3.29	3.03	3.00			
	A35W18*2	Nominal	kW	5.6	6.0	6.3			
		EER		4.97	4.88	4.80			
PWL (Heating	g)* ⁵		dB(A)	58	60	62			
Max operatin	g current		А	13.9	13.9	13.9			
Breaker size			А	16	16	16			
Piping	Diameter	Liquid/Gas	mm	6.35 / 12.7	6.35 / 12.7	6.35 / 12.7			
	Length	Out-In	m	5-30	5-30	5-30			
	Height	Out-In	m	Max 30	Max 30	Max 30			
Guaranteed	Heating		°C	-20°C~24°C	-20°C~24°C	-20°C~24°C			
Operating Range	DHW		°C	–20°C~35°C	-20°C~35°C	-20°C~35°C			
Cooling			°C	10°C~46°C	10°C~46°C	10°C~46°C			

Outdoor unit

outuooi					r Inverter, Heatir	ig only	ZUBADAN, Heating only				
Model name				PUD- SWM80V/YAA	PUD- SWM100V/YAA	PUD- SWM120V/YAA	PUD- SHWM80V/YAA	PUD- SHWM100V/YAA	PUD- SHWM120V/YAA	PUD- SHWM140V/YAA	
Refrigerant				R32*1							
Dimensions	imensions H×W×D mm		mm	1020×1050×480	1020×1050×480	1020×1050×480	1020×1050×480	1020×1050×480	1020×1050×480	1020×1050×480	
Weight			kg	101/114	105/118	105/118	102/115	108/121	108/121	110/122	
Power supply	/ (V / Phase / H	z)				VAA: 230 /	1-ph / 50, YAA: 40	0 / 3-ph / 50			
Heating	A7W35*2	Nominal	kW	6.0	8.0	10.0	6.0	8.0	10.0	12.0	
		COP		4.76	5.00	4.70	5.03	5.00	4.80	4.70	
	A2W35*2	Nominal	kW	8.0	10.0	12.0	8.0	10.0	12.0	14.0	
		COP		3.55	3.30	3.24	3.75	3.45	3.30	3.05	
Average clim		Class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	
outlet 35°C*3		ηs		178/176	178/177	177/176	181/179	180/178	179/177	179/177	
Average clim		Class		A++	A++	A++	A++	A++	A++	A++	
outlet 55°C*3		η _s		131/130	131/130	129/128	135/134	136/135	135/134	134/134	
DHW 200L(L)/		Class		A+ / A	A+ / A	A+ / A	A+ / A	A+ / A	A+ / A	A+ / A	
Profile (Averag	ge climate)*4	ηwh		148/121	148/121	148/121	148/121	148/121	148/121	145/121	
Max outlet w	ater temperatu	ire (°C)		60	60	60	60	60	60	60	
PWL (Heating	g)*5		dB(A)	56	59	60	56	59	60	62	
Max operatin	g current		А	22/8	26/10	28/12	22/8	26/10	28/12	35/12	
Breaker size			А	25/16	30/16	32/16	25/16	30/16	32/16	40/16	
Piping	Diameter	Liquid/Gas	mm	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	
	Length	Out-In	m	2 - 30	2 - 30	2 - 30	2 - 30	2 - 30	2 - 30	2 - 25	
	Height	Out-In	m	Max. 30	Max. 30	Max. 30	Max. 30	Max. 30	Max. 30	Max. 25	
Guaranteed	Heating		°C	-25°C~24°C	–25°C~24°C	–25°C~24°C	-28°C~24°C	-28°C~24°C	-28°C~24°C	-28°C~24°C	
Operating Range	DHW		°C	–25°C~35°C	–25°C~35°C	–25°C~35°C	–28°C~35°C	–28°C~35°C	-28°C~35°C	–28°C~35°C	

*1 Refrigerant leakage contribute to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant fluid with higher GWP, if leaked to the atomosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO₂, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R32 is 675 in the IPCC 4th Assessment Report.
*2 Air-to-Water values are measured based on EN14511 (Circulation pump input is not included.).
*3 Ns values are measured based on EN14825. *4 Nwh values are measured based on EN16147. *5 Sound power levels are measured based on EN12102.

R32 Split type Small capacity (Under 5kW)* Medium capacity (8.0kW-14kW)* BADAN PUD-SHWM80/100/120/140 PUD-SWM80/100/120 Eco Inverter SUZ-SWM40/60 SUZ-SWM80



Outdoor unit

Julaoor	unit					Power Inverter						
Model name				PUHZ-	PUHZ-	PUHZ-	PUHZ-	PUHZ-				
				SW75V/YAA(-BS)	SW100V/YAA(-BS)	SW120V/YHA(-BS)	SW160YKA(-BS)	SW200YKA(-BS				
Refrigerant						R410A*1						
Dimensions		H×W×D	mm	1020×1050×480	1020×1050×480	1350×950×330	1338×1050×330	1338×1050×330				
Weight			kg	92/104	114/126	118/130	136	136				
Power supply	y (V / Phase / H	z)			VAA, VHA: 230 / 1-ph / 50, YAA, YHA, YKA: 400 / 3-ph / 50							
Heating	A7W35*2 Nominal		kW	8.0	11.2	16.0	22.0	25.0				
		COP		4.40	4.46	4.10	4.20	4.00				
	A2W35*2	Nominal	kW	7.5	10.0	12.0	16.0	20.0				
		COP		3.40	3.32	3.24	3.11	2.80				
Average clim		Class		A++	A++	A++	A++	A++				
outlet 35°C*3	5	η _s		162/160	167/165	162/162	161	163				
Average clim		Class		te water Class		A++	A++	A++	A++	A++		
outlet 55°C*3	-3 ηs			129/128	130/129	125/125	125	127				
	300L(XL) Load	Class		A+ / A	A+ / A	A+ / A	-	-				
Profile (Avera	ge climate)*4	ηwh		145/120	145/120	138/118	-	-				
Max outlet w	ater temperatu	re (°C)		60	60	60	-	-				
Cooling	A35W7*2	Nominal	kW	7.1	10.0	12.5	16.0	20.0				
		EER		2.70	2.83	2.32	2.76	2.25				
	A35W18*2	Nominal	kW	7.1	10.0	14.0	18.0	22.0				
		EER		4.43	4.47	4.08	4.56	4.1				
PWL (Heating	g)* ⁵		dB(A)	58	60	72	78	78				
Max operatir	ng current		Α	22.0/11.5	28.0/12.0	29.5/13.0	19.0	21.0				
Breaker size			А	25/16	32/16	32/16	25	32				
Piping	Diameter	Liquid/Gas	mm	9.52/15.88	9.52/15.88	9.52/15.88	9.52/25.4	12.7/25.4				
	Length	Out-In	m	40	75	75	80	80				
	Height	Out-In	m	10	10	30	30	30				
Guaranteed Operating	Heating		°C	-20°C~21°C	-20°C~21°C	-20°C~21°C	-20°C~21°C	-20°C~21°C				
Range	DHW		°C	-20°C~35°C	-20°C~35°C	-20°C~35°C	-20°C~35°C	-20°C~35°C				
	Cooling		°C	-15°C~46°C	-15°C~46°C	-15°C~46°C	-15°C~46°C	-15°C~46°C				

				ZUBADAN							
Model name				PUHZ- SHW80V/YAA(-BS)	PUHZ- SHW112V/YAA	PUHZ SHW140YHA	PUHZ- SHW230YKA2				
Refrigerant					R41	0A*1					
Dimensions		H×W×D	mm	1020×1050×480	1020×1050×480	1350×950×330	1338×1050×330				
Weight	eight kg		kg	116/128 116/128 134		143					
Power supply	/ (V / Phase / H	z)			VAA, VHA: 230 / 1-ph / 50, YAA, YHA, YKA: 400 / 3-ph / 50						
Heating	A7W35*2	Nominal	kW	8.0	11.2	14.0	23.0				
		COP		4.65	4.40	4.22	3.65				
	A2W35*2	Nominal	kW	8.0	11.2	14.0	23.0				
		COP		3.55	3.22	2.96	2.37				
Average clim	ate water	Class		A++	A++	A++	A++				
outlet 35°C*3		η _s		169/167	171/169	163	164				
Average clim	ate water	Class		A++	A++	A++	A++				
outlet 55°C*3		η _s		133/132	135/135	127	127				
	300L(XL) Load	Class		A+ / A	A+/A	A+ / A	-				
Profile (Averag	ge climate)*4	ηwh		145/120	145/120	138/118	-				
Max outlet w	ater temperatu	ire (°C)		60	60 60 60		60				
Cooling	A35W7*2	Nominal	kW	7.1	10.0	12.5	20.0				
		EER		3.31	2.83	2.17	2.22				
	A35W18*2	Nominal	kW	7.1	10	12.5	20.0				
		EER		4.52	4.74	4.26	3.55				
PWL (Heating)* ⁵		dB(A)	59	60	70	75				
Max operatin	g current		А	22/13	28/13	13	20				
Breaker size			А	25/16	32/16	16	25				
Piping	Diameter	Liquid/Gas	mm	9.52/15.88	9.52/15.88	9.52/15.88	12.7/25.4				
	Length	Out-In	m	75	75	75	80				
	Height	Out-In	m	30	30	30	30				
Guaranteed	Heating		°C	-28°C~21°C	-28°C~21°C	-28°C~21°C	-25°C~21°C				
Operating Range	DHW		°C	-28°C~35°C	-28°C~35°C	-28°C~35°C	-25°C~35°C				
0	Cooling		°C	-15°C~46°C	-15°C~46°C	-15°C~46°C	-15°C~46°C				

*1 Refrigerant leakage contribute to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atomosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO2, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R410A is 2088 in the IPCC 4th Assessment Report.
 *2 Air-to-Water values are measured based on EN14825.
 *4 Nwh values are measured based on EN14825.
 *4 Nwh values are measured based on EN14825.

R410A	Split type	Medium capacity (7.5kW-14kW)	Large capacity (≧16kW)		
		PUHZ-SHW80/112AA	PuHZ-SHW230		
	POWER INVERTER	PUHZ-SW75/100AA	PUHZ-SW160/200		



Packaged Type Specifications

<Cylinder unit (Reversible)>

., .				1				
Model name						ERPT17X- VM2D	ERPT20X- VM2D	ERPT30X- VM2ED
			Туре			Heating and cooling		
			Immersion heater			-	-	-
			Expansion vessel			1	1	-
			Booster heater			1	1	1
Dimensi	ons		H×V	V×D	mm	1400×595×680	1600×595×680	2050×595×680
Weight (empty)					kg	86	94	107
Control board power supply (Phase / V / Hz)						~/N, 230V, 50Hz		
Heater	Booster heater		Pov	ver supply (Phase / V /	Hz)	~/N, 230V, 50Hz	~/N, 23	0V, 50Hz
			Сар	acity	kW	2	2	2
			Current		A	9	9	9
			Breaker size		A	16	16	16
	Immersion heater* ²		Pov	ver supply (Phase / V /	Hz)	-	-	-
			Сар	acity	kW	-	-	-
			Cur	rent	A	-	-	-
			Breaker size		A	-	-	-
Domesti hot wate	Volume / Material			L/-	170 / Stainless steel	200 / Stainless steel	300 / Stainless steel	
Guaranteed operating range*1		Ambient			°C	0 - 35 (≦80%RH)		
		Outo	loor	Heating	°C	See o	See outdoor unit spec table	
				Cooling	°C	See outdoor unit spec table*4		
Target temperature range		Heat	ing	Room temperature	°C	10~30		
				Flow temperature	°C	20~60		
		Cooling		Room temperature	°C	-		
				Flow temperature	°C	5~25		
DHW tank performance		Max. hot water temperature			°C	70		
		Water heater emergy efficiency			class	A+ A		
Sound pressure level (PWL)					dB (A)	40		

 Sound pressure level (PWL)
 dB (A)
 40

 *1 The indoor environment must be frost-free.
 *2 Do not fit immersion heaters without thermal cut-out. Use only Mitsubishi Electric service parts as a direct replacement.

 *3 For the model without booster heater and immersion heater, the maximum allowable hot water temperature is 3°C lower than maximum outlet water of outdoor unit.

 For the maximum outlet water of outdoor unit.

 *4 During cooling operation at low outdoor temperature (10°C or lower), frozen water may cause damage on plate heat exchanger.




Packaged Type Specifications

<hydro< th=""><th>box</th><th>(Rev</th><th>ersil</th><th>ole)></th><th></th><th>NEW</th></hydro<>	box	(Rev	ersil	ole)>		NEW
Model n	ame					ERPX- VM2D
			Тур	e		Heating and cooling
			lmn	nersion heater		-
			Exp	ansion vessel		1
			Boo	ster heater		1
Dimensi	ons		H×V	V×D	mm	800×530×360
Weight (empty)					kg	33
Control I	Control board power supply (Phase / V / Hz)					~/N, 230V, 50Hz
Heater	Boost		Pow	/er supply (Phase / V /	Hz)	~/N, 230V, 50Hz
	heater	r	Cap	acity	kW	2
			Cur	rent	А	9
			Brea	aker size	А	16
Guarant	eed	Amb	ient		°C	0~35 (≦80%RH)
operatin range*1	g	Outo	loor	Heating	°C	See outdoor unit spec table
range -				Cooling	°C	See outdoor unit spec table *2
Target		Heat	ing	Room temperature	°C	10~30
tempera	ture			Flow temperature	°C	20~60
range		Cool	ing	Room temperature	°C	-
				Flow temperature	°C	-
Sound p	ressure	level	(PWI	_)	dB (A)	40

Sound pressure revents were, *1 The indoor environment must be frost-free. *2 If you use our system in cooling mode at the low ambient temperature (10°C or below), there are some risks of plate heat exchanger breaking by frozen water.

R32	Packaged type	Small capacity (Under 5kW)*	Medium capacity (6.0kW-14kW)*
			PUZ-HWM140
	*Rated capacity is at condition	ns A2W35. (according to EN14511)	·
	Packaged type	Small capacity (Under 5kW)*	Medium capacity (8.0kW-11.2kW)*
	POWER INVERTER	PUZ-WM50	PUHZ-WM85/112

*Rated capacity is at conditions A2W35. (according to EN14511)

Outdoor unit

Dutdoor	unit						(NEW)		
Model name				PUZ- WM50VHA	PUZ- WM85V/YAA	PUZ- WM112V/YAA	PUZ- HWM140V/YHA		
Refrigerant					R3	2* ¹			
Dimensions		H×W×D	mm	943×950×330	1020×1050×480	1020×1050×480	1350×1020×330		
Weight			kg	71	98/111	119/132	132/143		
Power supply	/ (V / Phase /	Hz)		VHA • VAA	: 230 / 1-ph / 50	, YHA •YAA: 400) / 3-ph / 50		
Heating	A7W35*2	Nominal	kW	5.0	8.5	11.2	14.0		
		COP		5.00	4.80	4.70	4.46		
	A2W35*2	Nominal	kW	5.0	8.5	11.2	14.0		
		COP		3.70	3.51	3.44	3.15		
	Average climate water Clas		5	A+++	A+++	A+++	A+++		
outlet 35°C*3	outlet 35°C*3 ηs			183	193/190	191/189	176/175		
Average climate water Class			;	A++	A++	A++	A++		
outlet 55°C*3		ηs		129	139/138	134/133	132/131		
DHW 200L(L) I		Class	;	A+	A+	A+	A+		
Profile (Averag	ge climate)*4	٩wh		135	145	148	130		
Max outlet w	ater tempera	ature (°C)		60	60	60	60		
Cooling	A35W7*2	Nominal	kW	4.5	7.5	10.0	11.9		
		EER		3.40	3.15	3.30	3.00		
	A35W18*2	Nominal	kW	4.5	7.5	10.0	11.1		
		EER		5.00	4.90	4.90	4.10		
PWL (Heating)* ⁵		dB(A)	61	58	60	67		
Max operatin	g current		A	13.0	22.0/11.5	28.0/13.0	35.0/13.0		
Breaker size			A	16	25/16	32/16	40/16		
Piping	Diameter	Liquid/Gas	mm	-	-	-	-		
	Length	Out-In	m	-	-	-	-		
Height		Out-In	m	-	-	-	-		
Guaranteed	Heating		°C	-20°C~21°C	-20°C~21°C	-25°C~21°C	-28°C~21°C		
Operating Range	DHW		°C	-20°C~35°C	-20°C~35°C	-25°C~35°C	-28°C~35°C		
nange	Cooling		°C	10°C~46°C	10°C~46°C	10°C~46°C	10°C~46°C		

- *1 Refrigerant leakage contribute to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atomosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO₂, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R32 is 675 in the IPCC 4th Assessment Report.
 *2 Air-to-Water values are measured based on EN14511 (Circulation pump inout is not included).
- *2 Air-to-Water values are measured based on EN145 input is not included.).
 *3 ηs values are measured based on EN14825.
 *4 ηwh values are measured based on EN16147.
 *5 Sound power levels are measured based on EN12102.

Optional Parts

Split type </br>

Parts name	Model name	Cylinder	Hydrobox	Remarks
Wireless remote controller	PAR-WT50R-E	V	V	
Wireless receiver	PAR-WR51R-E	V	L	
Thermistors	PAC-SE41TS-E	V	V	For room temp.
	PAC-TH011-E	V	V	For buffer and zone (flow and return temp.)
	PAC-TH011TK2-E	-	L	For tank temp. (5m)
	PAC-TH012HT-E	V	V	For boiler and buffer (5m)
Immersion heater	PAC-IH01V2-E	V	-	1Ph 1kW
	PAC-IH03V2-E	V	-	1Ph 3kW
Wi-Fi interface	MAC-567IF-E	V	V	
2 Zone kit	PAC-TZ02-E	L	V	

<Outdoor unit>

Parts name	Model name	R	R32 (Eco Inverter) IUZ-SWM40VA SUZ-SWM80VA SUZ-SWM80VA - - -			ng only (Powe	er Inverter)	F	R32 Heating only (ZUBADAN)						
		SUZ-SWM40VA	SUZ-SWM60VA	SUZ-SWM80VA	PUD-SWM80V/YAA	PUD-SWM100V/YAA	PUD-SWM120V/YAA	PUD-SHWM80V/YAA	PUD-SHWM100V/YAA	PUD-SHWM120V/YAA	PUD-SHWM140V/YAA				
Connector for drain hose heater signal output	PAC-SE60RA-E	-	-	-	レ	L	r	v	L	v	r				
Air discharge guide	MAC-886SG-E	V	V	V	-	-	-	-	-	-	-				
	PAC-SG59SG-E	-	-	-	-	-	-	-	-	-	-				
	PAC-SH96SG-E*1	-	-	-	レ*1	V*1	V*1	V*1	レ*1	V*1	V*1				
Air protection guide	PAC-SH63AG-E	-	-	-	-	-	-	-	-	-	-				
	PAC-SH95AG-E*1	-	-	-	レ*1	V*1	V*1	V*1	レ*1	V*1	V*1				
Attachement	PAC-SJ82AT-E	-	-	-	V	V	V	V	V	V	V				
Drain socket*2	PAC-SG61DS-E	-	-	-	V	V	V	V	V	V	V				
Centralized drain pan*2	PAC-SG64DP-E	-	-	-	-	-	-	-	-	-	-				
	PAC-SH97DP-E	-	-	-	-	-	-	-	-	-	-				
	PAC-SJ83DP-E	-	-	-	V	V	V	V	V	V	V				
Base heater	MAC-642BH-U1	V	V	V	-	-	-	-	-	-	-				
Control/Service tool	PAC-SK52ST	-	-	-	V	V	レ	レ	V	レ	V				

*1 Attachment (PAC-SJ82AT-E) is necessary for the Air guide *2 Cannot be used for cold climate.

Parts name	Model name		R41	0A (Power Inv	erter)			R410A (ZUBADAN)							
		PUHZ-SW75V/YAA	PUHZ-SW100V/YAA	PUHZ-SW120V/YHA	PUHZ-SW160YKA	PUHZ-SW200YKA	PUHZ-SHW80V/YAA	PUHZ-SHW112V/YAA	PUHZ-SHW140YHA	PUHZ-SHW230YKA2					
Connector for drain hose heater signal output	PAC-SE60RA-E	~	r	v	V	L	v	V	V	v					
Air discharge guide	MAC-886SG-E	-	-	-	-	-	-	-	-	-					
	PAC-SG59SG-E	-	-	V	-	-	-	-	V	-					
	PAC-SH96SG-E	V	V	V	V	V	V	V	-	V					
Air protection guide	PAC-SH63AG-E	-	-	V	-	-	-	-	V	-					
	PAC-SH95AG-E	V	V	-	V	V	V	V	-	V					
Attachement	PAC-SJ82AT-E	V	V	-	-	-	V	V	-	V					
Drain socket*2	PAC-SG61DS-E	V	V	V	V	V	V	V	-	-					
Centralized drain pan*2	PAC-SG64DP-E	-	-	V	-	-	-	-	-	-					
	PAC-SH97DP-E	-	-	-	V	V	-	-	-	-					
	PAC-SJ83DP-E	V	V	-	-	-	V	V	-	-					
Base heater	MAC-642BH-U1	-	-	-	-	-	-	-	-	-					
Control/Service tool	PAC-SK52ST	V	V	V	V	V	V	V	V	V					

*1 Attachment (PAC-SJ82AT-E) is necessary for the Air guide *2 Cannot be used for cold climate.

Interface/Flow Temperature Controller

Split type

Parts name	Model name	Description
Capacity step control interface	PAC-IF011B-E	1 PC board w/ Case
Flow temperature controller	PAC-IF032B-E	1 PC board w/ Case
	PAC-IF033B-E	1 PC board w/ Case
	PAC-IF033PCB-E	10 PC board w/o case
System Controllers	PAC-IF071B-E	1 PC board w/ Case
Pressure sensor	PAC-PS01-E	For SUZ-SWM40/60/80VA
Flow sensor	PAC-FS01-E	
Thermistor	PAC-TH011-E	

Optional Parts

Packaged type

<indoor< td=""><td>unit></td><td></td></indoor<>	unit>	

Parts name	Model name	Cylinder	Hydrobox	Remarks
Wireless remote controller	PAR-WT50R-E	~	V	
Wireless receiver	PAR-WR51R-E	۲ ۲	V	
Thermistors	PAC-SE41TS-E	۲ ۲	V	For room temp.
	PAC-TH011-E	~	V	For buffer and zone (flow and return temp.)
	PAC-TH011TK2-E	-	V	For tank temp. (5m)
	PAC-TH012HT-E	~	V	For boiler and buffer (5m)
Immersion heater	PAC-IH01V2-E	✓ (Except EHPT20X-MHEDW)	-	1Ph 1kW
	PAC-SE41TS-E PAC-TH011-E PAC-TH011TK2-E PAC-TH012HT-E PAC-IH01V2-E	✓ (Except EHPT20X-MHEDW)	-	1Ph 3kW
Wi-Fi interface	MAC-567IF-E	<i>۲</i>	V	
2 Zone kit	PAC-TZ02-E	~	V	

<Outdoor unit>

Parts name	Model name		R32 (Powe	er Inverter)	
		PUZ-WM50VHA	PUZ-WM85V/YAA	PUZ-WM112V/YAA	PUZ-HWM140V/YHA
Connector for drain hose heater signal output	PAC-SE60RA-E	L	L	r	r
Air discharge guide	PAC-SG59SG-E	V	-	-	V
	PAC-SH96SG-E	-	V*	レ*	-
Air protection guide	PAC-SH63AG-E	レ	-	-	~
	PAC-SH95AG-E	-	レ*	レ*	-
Attachement	PAC-SJ82AT-E	-	V	V	-
Drain socket	PAC-SG61DS-E	~	V	V	-
Centralized drain pan	PAC-SG64DP-E	~	-	-	-
	PAC S 192DP E		1.4		

PAC-SJ83DP-E – *Attachment (PAC-SJ82AT-E) is necessary for the Air Guide.

Interface/Flow Temperature Controller

Packaged type

Parts name	Model name	Description
Flow temperature controller	PAC-IF033B-E	1 PC board w/ Case
	PAC-IF033PCB-E	10 PC board w/o case
System Controllers	PAC-IF072B-E	
Flow sensor	PAC-FS01-E	
Thermistor	PAC-TH011-E	



D Generation

Combination Table

Split Indoor/outdoor unit

Split indoor/ou combination	utdoor unit						R	32							R	410	A				A Hyb	TA/A rid s		
			Pov	ver	inve	ertei		zı	JBA	DA	N	Po	owe	r in	vert	er	Z	UBA	٩DA	N	Mr. SLIM+	Р	UM	iΥ
		SUZ-SWM40VA	SUZ-SWM60VA	SUZ-SWM80VA	PUD-SWM80V/YAA	PUD-SWM100V/YAA	PUD-SWM120V/YAA	PUD-SHWM80V/YAA	PUD-SHWM100V/YAA	PUD-SHWM120V/YAA	PUD-SHWM140V/YAA	PUHZ-SW75V/YAA	PUHZ-SW100V/YAA	PUHZ-SW120V/YHA	PUHZ-SW160YKA	PUHZ-SW200YKA	PUHZ-SHW80V/YAA	PUHZ-SHW112V/YAA	PUHZ-SHW140YHA	PUHZ-SHW230YKA2	PUHZ-FRP71VHA2	PUMY-P112V/YKM(E)4	PUMY-P125V/YKM(E)4	PUMY-P140V/YKM(E)4
Heating only	EHST17D-VM2D	•	•	\bullet	•			ullet				\bullet												
Cylinder	EHST20D-VM2D	•	•	•	٠	٠	•		•	٠	٠	•												
	EHST20D-YM9D	•	•	٠	٠	٠	٠	٠	٠	٠	٠	٠												
	EHST30D-YM9ED	•	•	•	•	•	٠	٠	•	٠	٠													
	EHST20C-VM2D												٠	٠				۲	•		٠	٠	•	٠
	EHST20C-VM6D												۲	٠			٠	۲	٠		٠	٠		٠
	EHST20C-YM9D													٠				۲	٠		٠	٠		•
	EHST30C-VM6ED												•	•				•	٠					
	EHST30C-YM9ED												•	•				•	٠					
Reversible	ERST17D-VM2D	•	•	•	٠			•																
Cylinder	ERST20D-VM2D	•	•	•	•	٠	٠	٠	•	٠	٠													
	ERST30D-VM2ED	•	•	٠	•	•	٠	٠	•	٠	٠	•												
	ERST20C-VM2D												٠	٠				٠	٠					
	ERST30C-VM2ED												•	٠			•	٠	٠					
Heating only	EHSD-VM2D	•	•	٠	٠	٠	٠	٠		٠	٠													
Hydro box	EHSD-YM9D	•	•	٠	٠	٠	٠	٠	٠	٠	٠	٠												
	EHSC-VM2D												٠	٠			•	•	٠		٠			
	EHSC-VM6D												٠	٠			•	٠	٠		٠	٠		•
	EHSC-YM9D												٠	٠			•	٠	٠		٠	٠		•
	EHSE-YM9ED														٠	٠				٠				
Reversible	ERSD-VM2D	•	•	•	•	•	•	•	•	•	•	•												
Hydro box	ERSC-VM2D												•	•			•	٠	٠					
	ERSE-MED															•				٠				
	ERSE-YM9ED														•	•				•				

Packaged indoor/outdoor unit

Packaged indo combination	R32						
		'ow ver		ZUBADAN			
		PUZ-WM50VHA	PUZ-WM85V/YAA	PUZ-WM112V/YAA	PUZ-HWM140V/YHA		
Reversible	ERPT17X-VM2D	٠	٠				
Cylinder	Cylinder ERPT20X-VM2D						
	ERPT30X-VM2ED		•	•			
Reversible Hydro box	ERPX-VM2D	•	•	•	•		

MELCloud (Wi-Fi Interface) for ecodan

MELCloud for Fast, Easy Remote Control and Monitoring of Your ecodan

MELCloud is a new Cloud-based solution for controlling ecodan either locally or remotely by computer, tablet or smartphone via the Internet. Setting up and remotely operating your ecodan heating system via MELCloud is simple and straight forward. All you need is wireless computer connectivity in your home or the building where the ecodan is installed and an Internet connection on your mobile or fixed terminal. To set up the system, the router and the ecodan WiFi interface must be paired, and this is done simply and quickly using the WPS button found on all mainstream routers.

You can control and check ecodan via MELCloud from virtually anywhere an Internet connection is available.

That means, thanks to MELCloud, you can use ecodan much more easily and conveniently.



Key Control and Monitoring Features

- **1** Turn system on/off
- **2** See status of each of your heating zones & adjust set points
- 3 See the status of your hot water cylinder & boost remotely
- 4 Live weather feed from ecodan location

Holiday mode - Set system parameters while away Schedule timer - Set 7 day weekly schedule Frost protection - Set system to run at minimum temperature Error status

6 Check energy usage report* *Additional metering hardware is required.



All A⁺⁺ or Above!!

			For n	nedium-	temperatu	re applic	ation			For	low-ten	nperature	applicatio	on	
				s	2						s	s			
Outdoor unit	Indoor unit	Seasonal space heating energy efficiency class	Water heating energy efficiency class	Rated heat output under average climate conditions	Seasonal space heating energy efficiency under average climate conditions	Water heating energy efficiency under average climate conditions	Sound power level LwA indoor	Sound power level Lwa outdoor	Seasonal space heating energy efficiency class	Water heating energy efficiency class	Rated heat output under average climate conditions	Seasonal space heating energy efficiency under average climate conditions	Water heating energy efficiency under average climate conditions	Sound power level LwA indoor	Sound power level LwA outdoor
				kW	%	%	dB	dB			kW	%	%	dB	dB
SUZ-SWM40VA	EHST17D-***D	A++	A+	4.6	129	148	41	58	A+++	A+	5.1	180	148	41	58
	ERST17D-***D	A++	A+	4.6	132	148	41	58	A+++	A+	5.1	187	148	41	58
	EHST20D-***D	A++	A+	4.6	129	159	41	58	A+++	A+	5.1	180	159	41	58
	ERST20D-***D	A++	A+	4.6	132	159	41	58	A+++	A+	5.1	187	159	41	58
	EHST30D-***D ERST30D-***D	A++ A++	A+ A+	4.6	129	128	41	58	A+++ A+++	A+ A+	5.1	180	128	41	58
	EHSD-***D	A++	- A.	4.6 4.6	132 129	128	41	58 58	A+++	-	5.1 5.1	187 180	128	41 41	58 58
	ERSD-***D	A++	_	4.6	132	_	41	58	A+++	_	5.1	187	_	41	58
SUZ-SWM60VA	EHST17D-***D	A++	A+	6.0	130	144	41	60	A+++	A+	6.6	181	144	41	60
	ERST17D-***D	A++	A+	6.0	133	144	41	60	A+++	A+	6.6	187	144	41	60
	EHST20D-***D	A++	A+	6.0	130	148	41	60	A+++	A+	6.6	181	148	41	60
	ERST20D-***D	A++	A+	6.0	133	148	41	60	A+++	A+	6.6	187	148	41	60
	EHST30D-***D	A++	A+	6.0	130	128	41	60	A+++	A+	6.6	181	128	41	60
	ERST30D-***D	A++	A+	6.0	133	128	41	60	A+++	A+	6.6	187	128	41	60
	EHSD-***D	A++	-	6.0	130	-	41	60	A+++	-	6.6	181	-	41	60
	ERSD-***D	A++	-	6.0	133	-	41	60	A+++	-	6.6	187	-	41	60
SUZ-SWM80VA	EHST17D-***D	A++	A+	7.1	131	144	41	62	A+++	A+	7.1	182	144	41	62
	ERST17D-***D	A++	A+	7.1	133	144	41	62	A+++	A+	7.1	187	144	41	62
	EHST20D-***D	A++	A+	7.1	131	148	41	62	A+++	A+	7.1	182	148	41	62
	ERST20D-***D	A++	A+	7.1	133	148	41	62	A+++	A+	7.1	187	148	41	62
	EHST30D-***D	A++	A+	7.1	131	128	41	62	A+++	A+	7.1	182	128	41	62
	ERST30D-***D	A++	A+	7.1	133	128	41	62	A+++	A+	7.1	187	128	41	62
	EHSD-***D	A++	-	7.1	131	-	41	62	A+++	-	7.1	182	-	41	62
	ERSD-***D	A++	-	7.1	133	-	41	62	A+++	-	7.1	187	-	41	62
PUD-SWM80V/YAA(-BS)	E*ST17D-***D	A++	A+	8.0	131/130	136	41	56	A+++	A+	8.0	178/176	136	41	56
	E*ST20D-***D	A++	A+	8.0	131/130	148	41	56	A+++	A+	8.0	178/176	148	41	56
	E*ST30D-***D	A++	A	8.0	131/130	121	41	56	A+++	A	8.0	178/176	121	41	56
	E*SD-***D	A++	-	8.0	131/130	-	41	56	A+++	-	8.0	178/176	-	41	56
PUD-SWM100V/YAA(-BS)	E*ST20D-***D	A++	A+	10.0	131/130	148	41	59	A+++	A+	10.0	178/177	148	41	59
	E*ST30D-***D	A++	A	10.0	131/130	121	41	59	A+++	A	10.0	178/177	121	41	59
	E*SD-***D	A++	-	10.0	131/130	-	41	59	A+++	-	10.0	178/177	-	41	59
PUD-SWM120V/YAA(-BS)	E*ST20D-***D	A++	A+	12.0	129/128	148	41	60	A+++	A+	12.0	177/176	148	41	60
	E*ST30D-***D	A++	A	12.0	129/128	121	41	60	A+++	A	12.0	177/176	121	41	60
	E*SD-***D E*ST17D-***D	A++ A++	- A+	12.0	129/128	-	41	60 56	A+++ A+++	– A+	12.0	177/176	-	41	60 E6
PUD-SHWM80V/YAA(-BS)	E*ST17D-***D E*ST20D-***D	A++ A++	A+ A+	8.0 8.0	135/134	136	41	56 56	A+++	A+ A+	8.0 8.0	181/179	136	41	56
	E*ST20D-***D	A++ A++	A	8.0	135/134 135/134	148 121	41 41	56	A+++	A	8.0	181/179 181/179	148	41	56
	E*ST30D-***D	A++ A++		8.0	135/134	-	41	56	A+++	A _	8.0	181/179	121	41 41	56 56
Note: F**T17/20*-***D use "Loa		A	_	0.0	130/134	_	41	50	A	-	0.0	101/179	_	41	50

Note: E**T17/20*_***D use "Load profile L". E**T30*_***D use "Load profile XL".

		For medium-temperature application			For low-temperature application										
Outdoor unit	Indoor unit	Seasonal space heating energy efficiency class	Water heating energy efficiency class	Rated heat output under average climate conditions	Seasonal space heating energy efficiency under average climate conditions	Water heating energy efficiency under average climate conditions	Sound power level LwA indoor	Sound power level LwA outdoor	Seasonal space heating energy efficiency class	Water heating energy efficiency class	Rated heat output under average climate conditions	Seasonal space heating energy efficiency under average climate conditions	Water heating energy efficiency under average climate conditions	Sound power level LwA indoor	Sound power level LwA outdoor
	E*ST20D-***D	A++	A.+	kW	%	%	dB	dB		A.+	kW	%	%	dB	dB
PUD-SHWM100V/YAA(-BS)		A++	A+	10.0	136/135	148	41	59	A+++	A+	10.0	180/178	148	41	59
	E*ST30D-***D	A++	A	10.0	136/135	121	41	59	A+++	A	10.0	180/178	121	41	59
	E*SD-***D	A++	-	10.0	136/135	-	41	59	A+++	-	10.0	180/178	-	41	59
PUD-SHWM120V/YAA(-BS)	E*ST20D-***D	A++	A+	12.0	135/134	148	41	60	A+++	A+	12.0	179/177	148	41	60
	E*ST30D-***D	A++	A	12.0	135/134	121	41	60	A+++	A	12.0	179/177	121	41	60
	E*SD-***D	A++	-	12.0	135/134	-	41	60	A+++	-	12.0	179/177	-	41	60
PUD-SHWM140V/YAA(-BS)	E*ST20D-***D	A++	A+	14.0	134/134	145	41	62	A+++	A+	14.0	179/177	145	41	62
	E*ST30D-***D	A++	A	14.0	134/134	121	41	62	A+++	A	14.0	179/177	121	41	62
	E*SD-***D	A++	-	14.0	134/134	-	41	62	A+++	-	14.0	179/177	-	41	62
PUHZ-SW75V/YAA(-BS)	EHST17D-***D	A++	A+	7.1	129/128	136	41	58	A++	A+	7.2	162/160	136	41	58
	ERST17D-***D	A++	A+	7.1	132/132	136	41	58	A++	A+	7.2	166/165	136	41	58
	EHST20D-***D	A++	A+	7.1	129/128	145	41	58	A++	A+	7.2	162/160	145	41	58
	ERST20D-***D	A++	A+	7.1	132/132	145	41	58	A++	A+	7.2	166/165	145	41	58
	EHST30D-***D	A++	Α	7.1	129/128	120	41	58	A++	А	7.2	162/160	120	41	58
	ERST30D-***D	A++	А	7.1	132/132	120	41	58	A++	А	7.2	166/165	120	41	58
	EHSD-***D	A++	-	7.1	129/128	-	41	58	A++	-	7.2	162/160	-	41	58
	ERSD-***D	A++	-	7.1	132/132	-	41	58	A++	-	7.2	166/165	-	41	58
PUHZ-SW100V/YAA(-BS)	EHST20C-***D	A++	A+	10.0	130/129	145	40	60	A++	A+	10.6	167/165	145	40	60
	ERST20C-***D	A++	A+	10.0	132/132	145	40	60	A++	A+	10.6	170/169	145	40	60
	EHST30C-***D	A++	А	10.0	130/129	120	40	60	A++	А	10.6	167/165	120	40	60
	ERST30C-***D	A++	А	10.0	132/132	120	40	60	A++	А	10.6	170/169	120	40	60
	EHSC-***D	A++	-	10.0	130/129	-	40	60	A++	-	10.6	167/165	-	40	60
	ERSC-***D	A++	-	10.0	132/132	-	40	60	A++	-	10.6	170/169	-	40	60
PUHZ-SW120V/YHA(-BS)	EHST20C-***D	A++	A+	12.1	125/125	138	40	72	A++	A+	12.9	162/162	138	40	72
	ERST20C-***D	A++	A+	12.1	127/127	138	40	72	A++	A+	12.9	164/164	138	40	72
	EHST30C-***D	A++	А	12.1	125/125	118	40	72	A++	А	12.9	162/162	118	40	72
	ERST30C-***D	A++	А	12.1	127/127	118	40	72	A++	А	12.9	164/164	118	40	72
	EHSC-***D	A++	_	12.1	125/125	_	40	72	A++	-	12.9	162/162	-	40	72
	ERSC-***D	A++	-	12.1	127/127	-	40	72	A++	_	12.9	164/164	-	40	72
PUHZ-SW160YKA(-BS)	EHSE-***D	A++	-	13.5	125	_	45	78	A++	_	15.3	151	-	45	78
	ERSE-***D	A++	_	13.5	126	_	45	78	A++	-	15.3	152	-	45	78
PUHZ-SW200YKA(-BS)	EHSE-***D	A++	_	15.5	127	_	45	78	A++	_	17.3	147	-	45	78
	ERSE-***D	A++	_	15.5	129	_	45	78	A++	-	17.3	148	_	45	78
PUHZ-SHW80V/YAA(-BS)	EHST20C-***D	A++	A+	9.0	133/132	145	40	59	A++	A+	9.6	169/167	145	40	59
	ERST20C-***D	A++	A+	9.0	135/134	145	40	59	A++	A+	9.6	172/172	145	40	59
	EHST30C-***D	A++	A	9.0	133/132	120	40	59	A++	A	9.6	169/167	120	40	59
	ERST30C-***D	A++	A	9.0	135/132	120	40	59	A++	A	9.6	172/172	120	40	59
	EHSC-***D	A++	_	9.0	133/132	-	40	59	A++	_	9.6	169/167	-	40	59
	ERSC-***D	A++	_	9.0	135/132	_	40	59	A++	_	9.6	172/172	_	40	59
PUHZ-SHW112V/YAA(-BS)	EHST20C-***D	A++	_ 	12.7	135/134	145	40	60	A++	_ A+	13.9	171/169	145	40	60
. SHE SHWITEV/TAA(-DS)	ERST20C-***D	A++	A ⁺	12.7	135/135				A++	A+		173/173	145		
	EHST20C-***D	A++				145	40	60			13.9		145	40	60
			A	12.7	135/135	120	40	60	A++	A	13.9	171/169		40	60
	ERST30C-***D EHSC-***D	A++ A++	A	12.7	137/137	120	40	60	A++	A	13.9	173/173	120	40	60
			-	12.7	135/135	-	40	60	A++	-	13.9	171/169	-	40	60
	ERSC-***D	A++	-	12.7	137/137	-	40	60	A++	-	13.9	173/173	-	40	60

All A⁺⁺ or Above!!

			For n	nedium-	temperatu	re applic	ation			For	low-ten	nperature a	applicatio	on	
				s	s						s	s			
Outdoor unit	Indoor unit	Seasonal space heating energy efficiency class	Water heating energy efficiency class	Rated heat output under average climate conditions	Seasonal space heating energy efficiency under average climate conditions	Water heating energy efficiency under average climate conditions	Sound power level Lwa indoor	Sound power level Lwa outdoor	Seasonal space heating energy efficiency class	Water heating energy efficiency class	Rated heat output under average climate conditions	Seasonal space heating energy efficiency under average climate conditions	Water heating energy efficiency under average climate conditions	Sound power level Lwa indoor	Sound power level Lwa outdoor
				kW	%	%	dB	dB			kW	%	%	dB	dB
PUHZ-SHW140YHA	EHST20C-***D	A++	A+	15.8	127	138	40	70	A++	A+	17.0	163	138	40	70
	ERST20C-***D	A++	A+	15.8	128	138	40	70	A++	A+	17.0	165	138	40	70
	EHST30C-***D	A++	A	15.8	127	118	40	70	A++	A	17.0	163	118	40	70
	ERST30C-***D	A++	А	15.8	128	118	40	70	A++	Α	17.0	165	118	40	70
	EHSC-***D	A++	-	15.8	127	-	40	70	A++	-	17.0	163	-	40	70
	ERSC-***D	A++	-	15.8	128	-	40	70	A++	-	17.0	165	-	40	70
PUHZ-SHW230YKA2	EHSE-***D	A++	-	23.0	127	-	45	75	A++	-	25.0	164	-	45	75
	ERSE-***D	A++	-	23.0	128	-	45	75	A++	-	25.0	165	-	45	75
PUZ-WM50VHA(-BS)	EHPT17X-***D(W)	A++	A+	5.0	129	120	40	61	A+++	A+	5.0	183	120	40	61
	ERPT17X-***D(W)	A++	A+	5.0	133	120	40	61	A+++	A+	5.0	190	120	40	61
	EHPT20X-***D(W)	A++	A+	5.0	129	135	40	61	A+++	A+	5.0	183	135	40	61
	ERPT20X-***D(W)	A++	A+	5.0	133	135	40	61	A+++	A+	5.0	190	135	40	61
	EHPX-***D	A++	-	5.0	129	-	40	61	A+++	-	5.0	183	-	40	61
	ERPX-***D	A++	-	5.0	133	-	40	61	A+++	-	5.0	190	-	40	61
PUZ-WM85V/YAA(-BS)	EHPT17X-***D(W)	A++	A+	8.5	139/138	120	40	58	A+++	A+	8.5	193/190	120	40	58
	ERPT17X-***D(W)	A++	A+	8.5	141/141	120	40	58	A+++	A+	8.5	197/197	120	40	58
	EHPT20X-***D(W)	A++	A+	8.5	139/138	145	40	58	A+++	A+	8.5	193/190	145	40	58
	ERPT20X-***D(W)	A++	A+	8.5	141/141	145	40	58	A+++	A+	8.5	197/197	145	40	58
	EHPT30X-***D(W)	A++	А	8.5	139/138	120	40	58	A+++	А	8.5	193/190	120	40	58
	ERPT30X-***D(W)	A++	А	8.5	141/141	120	40	58	A+++	А	8.5	197/197	120	40	58
	EHPX-***D	A++	-	8.5	139/138	-	40	58	A+++	_	8.5	193/190	-	40	58
	ERPX-***D	A++	-	8.5	141/141	-	40	58	A+++	_	8.5	197/197	-	40	58
PUZ-WM112V/YAA(-BS)	EHPT20X-***D(W)	A++	A+	10.0	134/133	148	40	60	A+++	A+	10.0	191/189	148	40	60
	ERPT20X-***D(W)	A++	A+	10.0	136/136	148	40	60	A+++	A+	10.0	195/195	148	40	60
	EHPT30X-***D(W)	A++	A	10.0	134/133	120	40	60	A+++	A	10.0	191/189	120	40	60
	ERPT30X-***D(W)	A++	А	10.0	136/136	120	40	60	A+++	A	10.0	195/195	120	40	60
	EHPX-***D	A++	-	10.0	134/133	_	40	60	A+++	-	10.0	191/189	_	40	60
	ERPX-***D	A++	-	10.0	136/136	-	40	60	A+++	_	10.0	195/195	_	40	60
PUZ-HWM140V/YHA(-BS)	EHPT20X-***D(W)	A++	A+	14.0	132/131	130	40	67	A+++	A+	14.0	176/175	130	40	67
	ERPT20X-***D(W)	A++	A+	14.0	133/133	130	40	67	A+++	A+	14.0	178/177	130	40	67
	EHPT30X-***D(W)	A++	А	14.0	132/131	118	40	67	A+++	A	14.0	176/175	118	40	67
	ERPT30X-***D(W)	A++	A	14.0	133/133	118	40	67	A+++	A	14.0	178/177	118	40	67
	EHPX-***D	A++	-	14.0	132/131	-	40	67	A+++	_	14.0	176/175	-	40	67
	ERPX-***D	A++	-	14.0	133/133	_	40	67	A+++	_	14.0	178/177	_	40	67
PUHZ-FRP71VHA2	EHST20C-***D	A+	A+	7.5	121	138	40	68	A++	A+	7.5	163	138	40	68
	EHSC-***D	A+	-	7.5	121	-	40	68	A++	_	7.5	163	-	40	68
PUMY-P112VKM5/YKM(E)4(-BS)	EHST20C-***D	A+	A	11.2	121/121	106	40	69	A++	A	11.2	168/168	106	40	69
	EHSC-***D	A+	_	11.2	121/121	-	40	69	A++	_	11.2	168/168	-	40	69
PUMY-P125VKM5/YKM(E)4(-BS)	EHST20C-***D	A+	– A	11.2	121/121			69	A++		11.2				
1 GIWIT-1 123 V KIVI3/ 1 KIVI(E/4(-BS)	EHST20C-***D	A+ A+				106	40		A++			168/168	106	40	69
PUMY-P140VKM5/YKM(E)4(-BS)	EHSC-***D	A ⁺	– A	11.2	121/121	-	40	69	A++ A++	– A	11.2	168/168	-	40	69
1 OIWT -F 140 V KIVI3/ 1 KIVI(E/4(-BS)				11.2	121/121	106	40	69			11.2	168/168	106	40	69
	EHSC-***D	A+	-	11.2	121/121	-	40	69	A++	-	11.2	168/168	-	40	69

Note: E**T17/20*_***D use "Load profile L". E**T30*_***D use "Load profile XL".



Refrigerant Amount

M/S/P/Multi/Zubadan/ATW

	Model Name		erant		charged Iantity	Max. added quantity		
	Model Name		GWP	Weight [kg]	CO2 equivalent [t]	Weight [kg]	CO2 equivalent [t]	
	PUMY-SP112VKM(-BS)	R40A	2088	3.5	7.31	9.0	18.79	
	PUMY-SP112YKM(-BS)	R410A	2088	3.5	7.31	9.0	18.79	
	PUMY-SP125VKM(-BS)	R410A	2088	3.5	7.31	9.0	18.79	
	PUMY-SP125YKM(-BS)	R410A	2088	3.5	7.31	9.0	18.79	
	PUMY-SP140VKM(-BS)	R410A	2088	3.5	7.31	9.0	18.79	
PUMY	PUMY-P112VKM5(-BS)	R410A	2088	4.8	10.02	13.8	28.81	
	PUMY-P125VKM5(-BS)	R410A	2088	4.8	10.02	13.8	28.81	
	PUMY-P140VKM5(-BS)	R410A	2088	4.8	10.02	13.8	28.81	
	PUMY-P112YKM(E)4(-BS)	R410A	2088	4.8	10.02	13.8	28.81	
	PUMY-P125YKM(E)4(-BS)	R410A	2088	4.8	10.02	13.8	28.81	
	PUMY-P140YKM(E)4(-BS)	R410A	2088	4.8	10.02	13.8	28.81	
	PUZ-WM50VHA	R32	675	2.0	1.35	-	-	
ATW Packaged	PUZ-WM85V/YAA	R32	675	2.2	1.49	-	-	
	PUZ-WM112V/YAA	R32	675	3.0	2.03	-	-	
	PUZ-HWM140V/YHA	R32	675	3.3	2.2275	-	-	
	SUZ-SWM40VA	R32	675	1.2	0.81	0.4	0.27	
	SUZ-SWM60VA	R32	675	1.2	0.81	0.4	0.27	
	SUZ-SWM80VA	R32	675	1.2	0.81	0.4	0.27	
	PUD-SWM80V/YAA	R32	675	1.3	0.8775	0.3	0.20	
	PUD-SWM100V/YAA	R32	675	1.6	1.08	0.23	0.16	
	PUD-SWM120V/YAA	R32	675	1.6	1.08	0.23	0.16	
	PUD-SHWM80V/YAA	R32	675	1.4	0.945	0.3	0.20	
	PUD-SHWM100V/YAA	R32	675	1.7	1.1475	0.13	0.09	
ATW	PUD-SHWM120V/YAA	R32	675	1.7	1.1475	0.13	0.09	
Split	PUD-SHWM140V/YAA	R32	675	1.7	1.1475	0.13	0.09	
	PUHZ-SW75V/YAA	R410A	2088	3.0	6.27	1.8	3.76	
	PUHZ-SW100V/YAA	R410A	2088	4.2	8.77	1.6	3.76	
	PUHZ-SW120V/YHA	R410A	2088	4.6	9.61	2.9	6.06	
	PUHZ-SW160YKA	R410A	2088	7.1	14.83	4.0	8.36	
	PUHZ-SW200YKA	R410A	2088	7.7	16.08	5.2	8.36	
	PUHZ-SHW80V/YAA	R410A	2088	4.6	9.61	1.4	2.93	
	PUHZ-SHW112V/YAA	R410A	2088	4.6	9.61	1.4	2.93	
	PUHZ-SHW140YHA	R410A	2088	5.5	11.49	2.4	5.02	
	PUHZ-SHW230YKA2	R410A	2088	7.1	14.83	8.4	17.54	
Mr. Slim+	PUHZ-FRP71VHA2	R410A	2088	3.8	7.94	1.8	3.76	



- Do not install indoor units in areas (e.g. mobile phone base stations) where the emission of VOCs such as phthalate compounds and formaldehyde is known to be high as this may result in a chemical reaction.
- Our air-conditioning equipments and heat pumps contain a fluorinated greenhouse gas, R410A (GWP: 2088) or R32 (GWP: 675). *These GWP values are based on Regulation (EU) No.517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP: 1975), R32 (GWP: 550)
- When installing or relocating or servicing our air-conditioning equipment, use only the specified refrigerant (R410A or R32) to charge the refrigerant lines.

Do not mix it with any other refrigerant and do not allow air to remain in the lines.

If air is mixed with the refrigerant, then it can be the cause of abnormal high pressure in the refrigerant lines, and may result in an explosion and other hazards.

The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.

MITSUBISHI ELECTRIC CORPORATION

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> Heating Catalogue E-2105260(16911)



