R32

MITSUBISHI ELECTRIC

# ecodan®

Advanced Air-to-Water Heat Pump Solutions

Next-Generation Environmentally Conscious Central Home Heating, Cooling and Hot Water Combined

# Ecodan and R32 – Next-Generation Heating, Cooling and Hot Water System

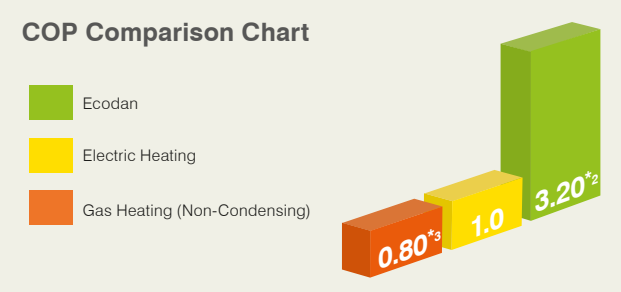
Increasing energy bills, coupled with the need to efficiently regulate the temperature of our homes and heat hot water is driving the demand for innovative and new products. Mitsubishi Electric has utilised their expertise and industry-leading technology to develop the new R32 range of Ecodan – a super energy efficient air-to-water heat pump solution that combines both hot water and room heating in one system.

**On average, hot water and home heating combined account for over 67%*[1] of the overall energy bill in New Zealand homes.**

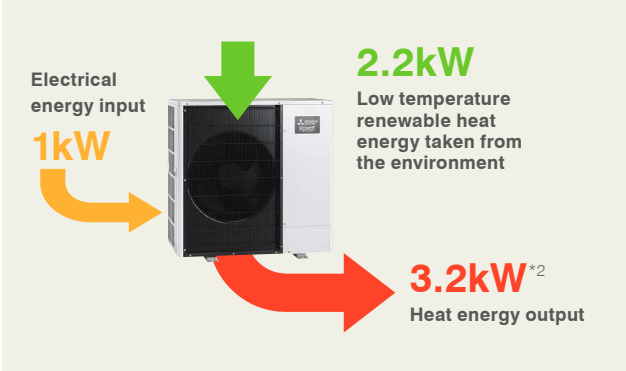
Domestic heating is therefore an obvious area to target in reducing energy bills. This is especially pertinent during the winter months, where a combination of taking longer, hotter showers and the increased need for a warm and dry home, typically drives up power bills. An Ecodan Heat Pump System can help reduce your heating and hot water bill when compared to gas and direct electric systems.

### What is Ecodan?

Ecodan is an advanced air-to-water heat pump system that cleverly combines the hot water heating for a home with energy efficient whole home central heating and cooling. Heat pumps use electricity to draw low grade heat energy from the outdoor air, and transfer it to refrigerant which in turn heats water for domestic use and space heating.




The efficiency of a heat pump is known as the Coefficient of Performance or COP. This is a ratio of the heat delivered to power consumed. For every 1kW of electrical input energy, Ecodan absorbs renewable heat energy from the outdoor air to provide the home with an average of at least 3.2kW*[2] of heat output. Compared to typical gas and direct electric heating systems that can have higher running costs with COPs as low as 0.80*[3], Ecodan provides an energy efficient alternative.




### Heat pumps are super efficient at heating homes, so why not use the same technology to heat water?

Many years ago when heat pumps were first introduced to New Zealand, it did not take long for Kiwis to quickly embrace this super energy efficient technology to keep their homes and families warm all winter long.

So it should come as no surprise that the same heat pump technology that revolutionised home heating in New Zealand can be just as effective and efficient at heating your hot water.

**Savings on your hot water and heating costs could be up to 70%*[4]** when compared to traditional water heating.

*1 Based on data sourced from EECA New Zealand.

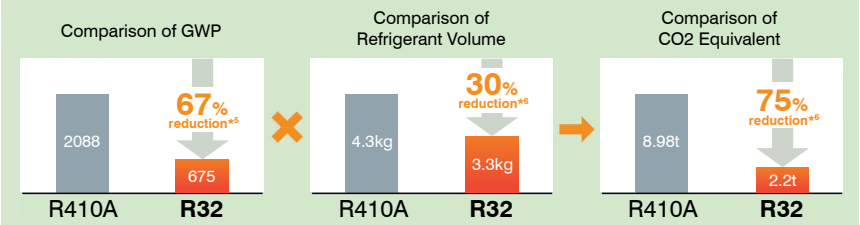
*2 As independently tested by BSRIA based upon BS EN14511 Part 3 standard rating conditions. Due to the method of operation, the performance of heat pumps will vary based upon the temperature of the heat source and the requirements of the heat delivered. The BS EN14511 testing relates to the heat pump performance only and not the entire heating system.

*3 Based on manufacturer information for gas instant hot water heater (non-condensing).

*4 Estimated using COP data based on BS EN14511 standard rating conditions. 7°C outdoor temp, 35°C outlet water temp. The BS EN14511 testing relates to the heat pump performance only and not the entire heating system.

## Reduced Environmental Impact with R32 Refrigerant

R32 has a global warming potential (GWP) one third that of conventional R410A refrigerant. The use of the R32-compatible compressor and advanced control system allows for 30% reduction in refrigerant volume and approximately 75% reduction in $CO_2$ equivalent in some models.

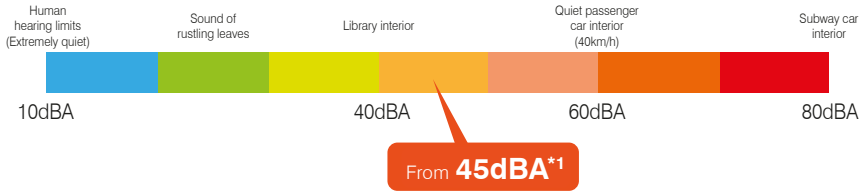



### An Environmentally Conscious Refrigerant!

- One third the GWP of R410A models
- Zero Ozone depletion
- Reduced ETS Levy Charges
- R32 refrigerant has a GWP of only 675

## The New Ultra Quiet Ecodan Outdoor Units Take Hot Water Heat Pumps to the Next Level

Our market-leading Ecodan Hot Water Heat Pumps offer superb style, energy efficiency and low sound levels. Designed especially for residential applications the 6.0kW, 8.5kW and 11.2kW units are up to 3dBA quieter than previous models, making them the perfect choice for high density housing.




*1 Measured at 1m from the front of the outdoor unit and 1.5m from ground level. Applicable to PUZ-WM60VAA and PUZ-WM85VAA.

*4 Estimated using COP data based on BS EN14511 standard rating conditions. 7°C outdoor temp, 35°C outlet water temp. The BS EN14511 testing relates to the heat pump performance only and not the entire heating system.

*5 Source: IPCC 4th assessment report, global warming potential (GWP) 100-year-value. Comparison of R410A and R32 based on Regulation (EU) no 517/2014.

*6 Source: R410A, PUHZ-HW140VHA2 R32: PUZ-HWM140VHA

## Corrosion Proof Outdoor Units

As standard, the Ecodan range of outdoor units comes with Mitsubishi Electric's Coastal Protection Surface Treatment (-BS), providing enhanced protection for outdoor units in New Zealand's harsh environment.

All Coastal Protection models are manufactured to a comprehensive corrosion-proof salt-resistant specification, this protects against corrosion damage experienced throughout New Zealand, with specification including powder coated, galvanized internal/external panels and frames as well as heat exchanger coils with twin-coatings of aqueous heat dried amino alkyd resin.

One **third** the GWP of traditional R410A units, with **zero** ozone depletion.

# Ecodan Central Heating with Domestic Hot Water Systems

Ecodan is a highly energy efficient hot water heat pump system comprised of an outdoor hot water heat pump and an indoor component – either a hydrobox or a cylinder. A reliable total home heating solution, using radiators, fan coils and/or underfloor heating in conjunction with a hot water supply, that provides year-round comfort with advanced control.

**With proven Mitsubishi Electric Technology, Ecodan is designed for New Zealand conditions; maintaining high performance during the winter months when heating is in high demand.**

Whether you need central whole home heating, hot water or both, the Ecodan Hydrobox and Cylinder Systems can provide the perfect solution.

Both the hydrobox and cylinder are compatible with the Ecodan Air-to-Water (ATW) Hydronic outdoor units ranging from 5kW to 14kW, perfect for your home or light commercial applications.

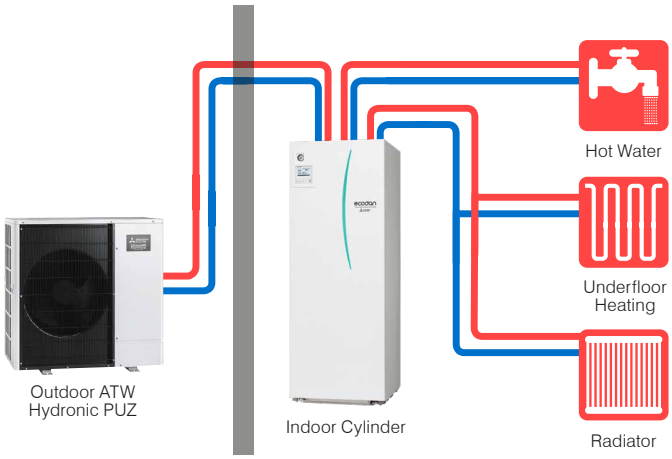
### Packaged Cylinder System

The packaged cylinder offers a highly adaptable heating and cooling solution for retrofit or new builds. With a range of outdoor units from 5kW to 14kW, there is a combination for all regions of New Zealand. Through the use of environmentally conscious R32 refrigerant, FTC6 controls and advanced plate heat exchanger technology, the Ecodan Range provides high performance and fast heat-up times. The cylinders are completely pre-plumbed and wired for ease of installation and can provide space heating as well as cooling and hot water to your home.

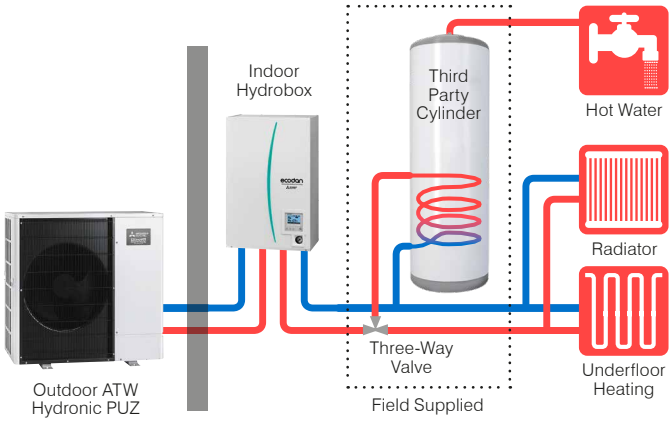
### Packaged Hydrobox System

With options for space heating, domestic hot water production or both, the Ecodan Hydrobox is a small form factor heating and cooling powerhouse. Now through the use of R32 refrigerant, the hydrobox is an environmentally conscious choice for whole home heating and cooling. The hydrobox can be connected to underfloor, fan coils and/or radiators and provide a whole home central heating solution. For users wanting potable hot water, the hydrobox can be connected to a third party coiled cylinder.

**ATW Hydronic Cylinder System**




**ATW Hydronic Hydrobox System**



# Ecodan Technology, Smart Energy Monitoring and System Management

State-of-the-art energy monitoring and management of the Ecodan Heat Pump System means families have the visibility and freedom to efficiently manage their overall household power consumption for heating and hot water. Energy monitoring ensures households can take advantage of off-peak tariffs where available, providing them the opportunity to save even more on their power bill.

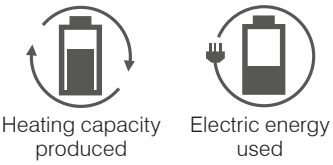
### Smart Energy Monitoring

View electricity consumption and heat output on the remote controller. End users can now easily check the following:

- Consumed electrical energy for space heating, cooling and domestic hot water (kWh).
- Delivered energy for space heating, cooling and domestic hot water (kWh).

### Other Features

- Daily, monthly and yearly data are stored and can be displayed using the main remote controller.
- External power meter and heat meter can be connected for accurate measurement.
- An SD card is included for storing usage data.

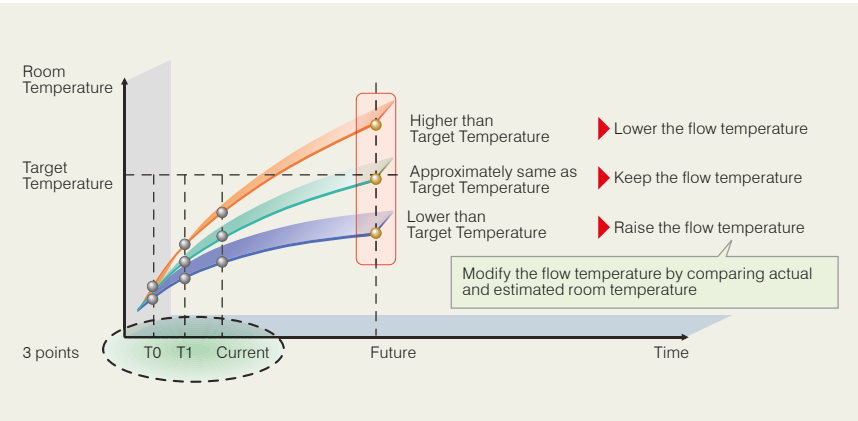




### Auto Adaptation

Our advanced Auto Adaptation Function measures the room temperature and outdoor temperature, calculating the required heating for the room. The flow temperature is automatically controlled according to the required heating, while optimal room temperature is maintained at all times; ensuring appropriate heating capacity and preventing energy wastage.

### Future Room Temperature Estimation



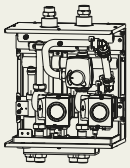

By estimating future changes in room temperature, the system works to prevent unnecessary increases and decreases in the flow temperature. Auto Adaptation maximises both comfort and energy savings.

## 2-Zone Control Allows You to Simultaneously Control Two Different Temperature Zones.

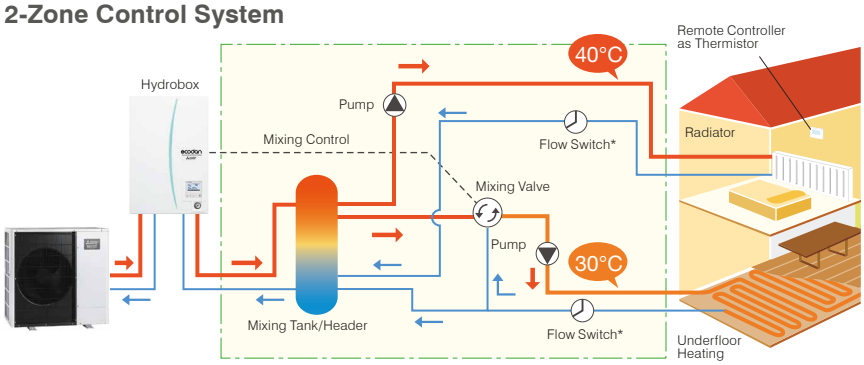
The system can adjust and maintain two flow temperatures when different temperatures are required for different rooms. For example, controlling a flow temperature of 40°C for the bedroom radiators and another flow temperature of 30°C for the living room underfloor heating.

### Optional PAC-TZ02-E 2-Zone Kit

- Easy installation: G1 screw type flexi piping connections
- Compact: fits on top of cylinder or wall mountable with hydrobox
- All in one kit: key functional components are incorporated*



### 2-Zone Control System




*Flow switch not included – field supplied.

### Hot Water and Heating Control with Third Party Heat Exchanger

For hot water and heating systems that require integrating separate heat exchangers with our range of outdoor units.*1

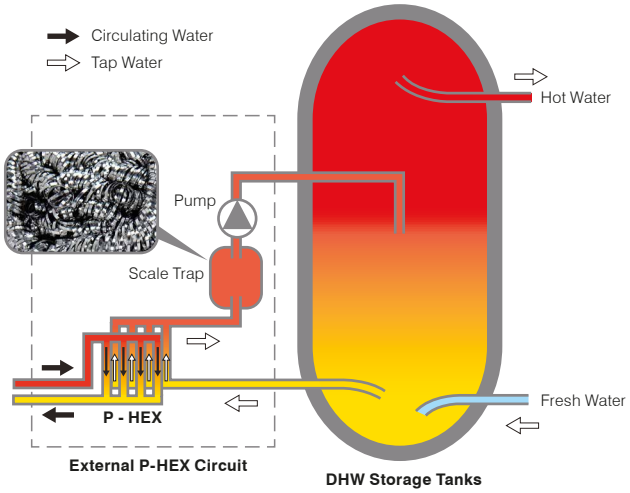
PAC-IF071B-E

| FTC6 | | PAC-IF071B-E |
|---|---|---|
| DIMENSIONS (mm) | Width | 393 |
| | Depth | 86.7 |
| | Height | 422 |
| WEIGHT (KG) | | 3.7 |
| ELECTRICAL DATA | Electrical Supply | Powered by Outdoor Unit (230V) |
| | Phase | Single |

### Plate Heat Exchanger and Patented Scale Trap Technology*2

In conventional systems, there is a risk of calcium scale building up on the plate heat exchanger if it is exposed to tap water directly; therefore making it difficult to heat tap water. To resolve this problem, Ecodan Cylinders and Hydroboxes are equipped with a “Scale Trap” that catches calcium nuclei in the tap water before it has a chance to grow into large scales. In the case of special localised conditions such as very hard tap water, please consult a specialist before installation.

### The Secret Behind Our External Plate Heat Exchanger System




*1 When paired with Hydronic outdoor unit, PAC-FS01-E Flow sensor is required.
*2 Only available on cylinders made by Mitsubishi Electric.

# Zubadan – Reliable Performance in Low Temperature Outdoor Conditions

Zubadan* provides powerful heating in cold regions. The 14.0kW Zubadan models rated heating capacity is maintained even in outdoor temperatures as low as -10°C, guaranteeing total home comfort when you need it most.

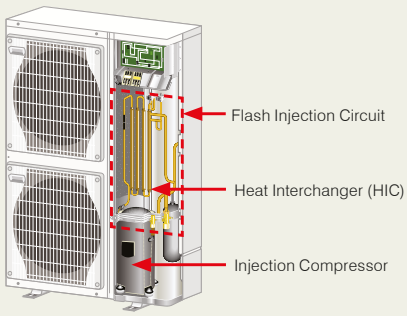
### Zubadan Inverter Technology

New-generation Zubadan* Inverter Technology provides powerful heating in cold regions where heat pump performance can diminish. With Zubadan, rated heating capacity is maintained even in outdoor temperatures as low as -10°C, with guaranteed heating operation at -28°C. Zubadan guarantees a warm, comfortable home when you need it most. Furthermore, Zubadan can provide even faster tank heat-up times in low ambient temperatures compared to standard models.

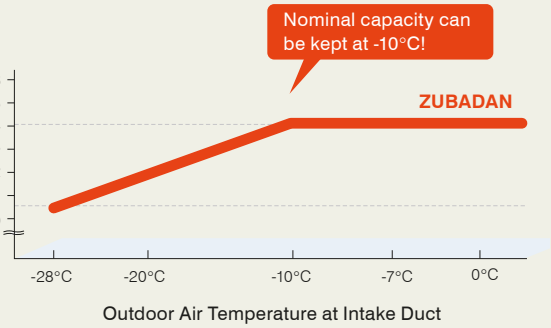
### Flash Injection Technology

The Flash Injection Circuit is an original Mitsubishi Electric Technology. A heat exchange process at the heat interchanger transforms liquid refrigerant into a two-phase, gas-liquid state and then compresses the gas-liquid refrigerant at the injection compressor. This circuit secures a sufficient flow rate of refrigerant for heating when outdoor temperatures are very low.

Thanks to an improved heat interchanger and the introduction of a new injection compressor, the Flash Injection Circuit is now more powerful then ever.




### Benefits of Zubadan




Example: PUZ-HWM140VHA (according to EN 14511)

* Zubadan only available on specific models – see specification tables page 9.

# Ecodan ATW Hydronic Hot Water Heat Pumps

## PUZ-WM OUTDOOR UNITS

Our range of Ecodan ATW (air-to-water) Hydronic Hot Water Heat Pumps are available in 5kW, 6kW, 8.5kW and 11.2kW capacities. Designed to suit a wide range of heating and cooling applications, these models offer a viable solution for the varying requirements that domestic and light commercial applications demand.

### Key Features

- Self-contained unit, only requiring water and electric connections
- Single phase power supply with a low starting current
- Coastal Protection standard across Ecodan outdoor range
- Low maintenance and quiet operation
- Compact single fan design
- Capable of water temperature down to 5°C in Cooling Mode and up to 60°C in Heating Mode

### Domestic Applications

- Heating and domestic hot water
- Suits vast majority of NZ homes

### Commercial Applications

- Small retail outlets
- Dental and doctors' surgeries
- Public sector and commercial buildings

PUZ-WM50VHA-BS

PUZ-WM60VAA-BS

PUZ-WM85VAA-BS

PUZ-WM112VAA-BS

| OUTDOOR UNIT | | | PUZ-WM50VHA-BS | PUZ-WM60VAA-BS | PUZ-WM85VAA-BS | PUZ-WM112VAA-BS |
|---|---|---|---|---|---|---|
| HEATING*1 (A7/W35) | Capacity | [kW] | 5.00 | 6.00 | 8.50 | 11.20 |
| | Power Input | [kW] | 1.00 | 1.19 | 1.77 | 2.38 |
| | COP | | 5.00 | 5.06 | 4.80 | 4.70 |
| HEATING*2 (A2/W35) | Capacity | [kW] | 5.00 | 6.00 | 8.50 | 11.20 |
| | Power Input | [kW] | 1.35 | 1.60 | 2.42 | 3.26 |
| | COP | | 3.70 | 3.75 | 3.51 | 3.44 |
| WATER DATA | Outdoor Connection | | 1" BSP Parallel Thread ISO 228/1-G1B | 1" BSP Parallel Thread ISO 228/1-G1B | 1" BSP Parallel Thread ISO 228/1-G1B | 1" BSP Parallel Thread ISO 228/1-G1B |
| | Heating Flow Rate Range | [L/min] | 6.5 to 14.3 | 8.6 to 17.2 | 10.8 to 24.4 | 14.4 to 32.1*4 |
| | Heating Flow Temperature Range | [°C] | 20 – 60 | 20 – 60 | 20 – 60 | 20 – 60 |
| | Cooling Flow Temperature Range | [°C] | 5 – 25 | 5 – 25 | 5 – 25 | 5 – 25 |
| OPERATING OUTDOOR TEMPERATURE RANGE | Heating | [°C DB] | -20 ~ +24°C | -20 ~ +24°C | -20 ~ +24°C | -25 ~ +24°C |
| | DHW | [°C DB] | -20 ~ +35°C | -20 ~ +35°C | -20 ~ +35°C | -25 ~ +35°C |
| NOISE | SPL at 1M *1 | [dBA] | 52 | 45 | 45 | 47 |
| REFRIGERANT DATA | Type | | R32 | R32 | R32 | R32 |
| | Charge | [kg] | 2.0 | 2.2 | 2.2 | 3.0 |
| DIMENSIONS | Width | [mm] | 950 | 1050 | 1050 | 1050 |
| | Depth | [mm] | 330+30*3 | 480 | 480 | 480 |
| | Height | [mm] | 943 | 1020 | 1020 | 1020 |
| WEIGHT | | [kg] | 71 | 98 | 98 | 119 |
| ELECTRICAL DATA | Electrical Supply | | 1Ph, 230V, 50Hz | 1Ph, 230V, 50Hz | 1Ph, 230V, 50Hz | 1Ph, 230V, 50Hz |
| | Maximum Current | [A] | 13 | 13 | 22 | 28 |
| | Fuse Rating | [A] | 16 | 16 | 25 | 32 |

*1 Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 35°C, inlet water temp 30°C as tested to BS EN14511.
*2 Under normal heating conditions at outdoor temp: 2°CDB / 1°CWB, outlet water temp 35°C, inlet water temp 30°C.
*3 Grille.
*4 When connected to hydrobox/cylinder, max flow rate is limited to 27.7 L/min.

# Zubadan ATW Hydronic Hot Water Heat Pumps

## PUZ-HWM ZUBADAN OUTDOOR UNITS

The new R32 Zubadan ATW (air-to-water) Hydronic Hot Water Heat Pump Range available in 14kW models. Designed to suit a wide range of heating and cooling applications, these models maintain full heat capacity as ambient temperatures drop right down to -10°C. Proven in cold climate areas such as Mount Ruapehu, Zubadan Systems won't let you down in the cold.

### Key Features

- Self-contained unit, only requiring water and electric connections
- Available in single and three phase power supply
- Coastal Protection standard across Ecodan outdoor range
- Low maintenance and quiet operation
- Capable of water temperature down to 5°C in Cooling Mode and up to 60°C in Heating Mode
- Operates in outside temperatures as low as -28°C with Zubadan Technology

PUZ-HWM140VHA-BS

PUZ-HWM140YHA-BS

| | | | ZUBADAN | ZUBADAN |
|---|---|---|---|---|
| **OUTDOOR UNIT** | | | **PUZ-HWM140VHA-BS** | **PUZ-HWM140YHA-BS** |
| HEATING*1 (A7/W35) | Capacity | [kW] | 14 | 14 |
| | Power Input | [kW] | 3.14 | 3.14 |
| | COP | | 4.46 | 4.46 |
| HEATING*2 (A2/W35) | Capacity | [kW] | 14 | 14 |
| | Power Input | [kW] | 4.44 | 4.44 |
| | COP | | 3.15 | 3.15 |
| WATER DATA | Outdoor Connection | | 1" BSP Parallel Thread ISO 228/1-G1B | 1" BSP Parallel Thread ISO 228/1-G1B |
| | Heating Flow Rate Range | [L/min] | 17.9 to 40.1*4 | 17.9 to 40.1*4 |
| | Heating Flow Temperature Range | [°C] | 20 - 60 | 20 - 60 |
| | Cooling Flow Temperature Range | [°C] | 5 - 25 | 5 - 25 |
| OPERATING OUTDOOR TEMPERATURE RANGE | Heating | [°C DB] | -28~+21 | -28~+21 |
| | DHW | [°C DB] | -28~+35 | -28~+35 |
| NOISE | SPL at 1M*1 | [dBA] | 53 | 53 |
| REFRIGERANT DATA | Type | | R32 | R32 |
| | Charge | [kg] | 3.3 | 3.3 |
| DIMENSIONS | Width | [mm] | 1020 | 1020 |
| | Depth | [mm] | 330+30*3 | 330+30*3 |
| | Height | [mm] | 1350 | 1350 |
| WEIGHT | | | 132 | 143 |
| ELECTRICAL DATA | Electrical Supply | | 1Ph, 230V, 50Hz | 3Ph, 400V, 50Hz |
| | Maximum Current | [A] | 35 | 13 |
| | Fuse Rating | [A] | 40 | 16 |

1 Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 35°C, inlet water temp 30°C as tested to BS EN14511.
*2 Under normal heating conditions at outdoor temp: 2°CDB / 1°CWB, outlet water temp 35°C, inlet water temp 30°C.
*3 Grille.
*4 When connected to hydrobox/cylinder, max flow rate is limited to 27.7 L/min.

# Cylinder for Ecodan R32 ATW Hydronic Units

## ECODAN CYLINDER

The Ecodan Cylinder offers a highly adaptable heating solution for retrofit or new builds. Available in 170L*2, 200L and 300L, there is an Ecodan Cylinder to fulfill any household requirements. Designed specifically by Mitsubishi Electric to integrate with the Ecodan ATW (air-to-water) Hydronic Hot Water Heat Pump Range, the cylinder provides improved performance and faster heat-up times through the use of plate heat exchanger technology.
Fast commissioning via an SD card with energy monitoring functions built-in.

### Key Features

- Simple graphical control
- Optional 2-Zone Space Heating Control
- Scale Trap Technology
- Floor Dry-Up Mode
- Pre-plumbed and wired for faster installation
- SD card commissioning
- Energy monitoring as standard
- Compatible with home automation via Modbus
- BMS compatible

ERPT17X-VM2D*2

ERPT20X-VM2D

ERPT30X-VM6ED

| CYLINDER | | | | ERPT17X-VM2D*2 | ERPT20X-VM2D | ERPT30X-VM6ED |
|---|---|---|---|---|---|---|
| CYLINDER TYPE | | | | Hydronic | Hydronic | Hydronic |
| OUTDOOR CAPACITY RANGE (Nominal) | | | [kW] | 5 - 8.5 | 5 - 14 | 8.5 - 14 |
| NOMINAL HOT WATER VOLUME | | | [L] | 170 | 200 | 300 |
| HEATING OPERATING RANGE | | HEATING FLOW TEMP | | 20°C - 60°C | 20°C - 60°C | 20°C - 60°C |
| | | DHW | | 40°C - 60°C | 40°C - 60°C | 40°C - 60°C |
| COOLING OPERATION RANGE | | | | 5°C - 25°C | 5°C - 25°C | 5°C - 25°C |
| SOUND PRESSURE LEVEL AT 1M | | | [dBA] | 28 | 28 | 28 |
| WATER DATA | | Max Flow Rate | [L/min] | 25.8 | 36.9 | 36.9 |
| | | Primary Pump | | UPM3k 15-75 130 | UPM3k 15-75 130 | UPM3k 15-75 130 |
| | | Sanitary Hot Water Pump | | UPSO 15-60 130 CIL2 | UPSO 15-60 130 CIL2 | UPSO 15-60 130 CIL2 |
| | | Connection Size (Heating / DHW) | | 28 / 22 (mm) compression | 28 / 22 (mm) compression | 28 / 22 (mm) compression |
| | | Primary Expansion Vessel | [L] | 12 | 12 | N/A |
| | | Charge Pressure | [Bar] | 1 | 1 | N/A |
| WATER SAFETY DEVICES | Water Circuit | Control Thermistor | [°C] | 1 - 80 | 1 - 80 | 1 - 80 |
| | | Pressure Relief Valve | [Bar] | 3 | 3 | 3 |
| | | Flow Sensor Min Flow Rate | [L/min] | 5.0 | 5.0 | 5.0 |
| | DHW Cylinder | Control Thermistor | [°C] | 0 - 75 | 0 - 75 | 0 - 75 |
| | | Pressure Relief Valve | [Bar] | 10 | 10 | 10 |
| | | Legionella Prevention | [°C] | 60 - 70 | 60 - 70 | 60 - 70 |
| DIMENSIONS | | Width | [mm] | 595 | 595 | 595 |
| | | Depth | [mm] | 680 | 680 | 680 |
| | | Height | [mm] | 1400 | 1600 | 2050 |
| WEIGHT (EMPTY / FULL) | | | [kg] | 87/262 | 94/300 | 108/415 |
| ELECTRICAL DATA | Control Board (Optionally Powered by Outdoor Unit) | Electrical Supply | | 1Ph, 230V, 50 Hz | 1Ph, 230V, 50 Hz | 1Ph, 230V, 50 Hz |
| | | Breaker | [A] | 10 | 10 | 10 |
| | Booster Heater | Electrical Supply | | 1Ph, 230V, 50 Hz | 1Ph, 230V, 50 Hz | 1Ph, 230V, 50 Hz |
| | | Capacity | [kW] | 2 | 2 | 2+4 |
| | | Max Running Current | [A] | 9 | 9 | 26 |
| | | Breaker | [A] | 16 | 16 | 32 |
| MECHANICAL ZONES | | | | DHW and 1 Heating Zone*1 | DHW and 1 Heating Zone*1 | DHW and 1 Heating Zone*1 |

Cylinder includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Pumps & Valves for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, Booster Heater and Expansion Vessel. Expansion vessel not included in ERPT30X-VM6ED.

*1 Optional 2-Zone Accessory Pack available.

*2 Available on special order only.

# Hydrobox for Ecodan R32 ATW Hydronic Units

## ECODAN HYDROBOX

With options for space heating, domestic hot water production or both, the Ecodan Hydrobox is a small form factor heating and cooling powerhouse. Now through the use of R32 refrigerant, the hydrobox is an environmentally conscious choice for whole home heating and cooling. The hydrobox can be connected to underfloor, fan coils and/or radiators and provide a whole home central heating solution. For users wanting potable hot water, the hydrobox can be connected to a third party coiled cylinder.

### Key Features

- Simple graphical control
- Optional 2-Zone Space Heating Control
- Floor Dry-Up Mode
- Pre-plumbed and wired for faster installation
- SD card commissioning
- Energy monitoring as standard
- Compatible with home automation via Modbus
- BMS compatible


ERPX-VM6D

| HYDROBOX | | | | ERPX-VM6D |
|---|---|---|---|---|
| HYDROBOX TYPE | | | | Hydronic |
| OUTDOOR CAPACITY RANGE (Nominal) | | | [kW] | 5-14 |
| HEATING OPERATING RANGE | | Heating Flow Temperature | [°C] | 20 - 60 |
| COOLING OPERATING RANGE | | Cooling Flow Temperature | [°C] | 5 - 25 |
| SOUND PRESSURE LEVEL AT 1M | | | [dBA] | 28 |
| WATER DATA | | Max Flow Rate | [L/min] | 36.9 |
| | | Primary Pump | | Grundfos UPM 3K 15-75 130 |
| | | Connection Size (Heating / DHW) | | 1" BSP Parallel male thread ISO 228/1 - G1A |
| | | Primary Expansion Vessel | [L] | 10 |
| | | Charge Pressure | [Bar] | 1 |
| WATER SAFETY DEVICES | Water Circuit | Control Thermistor | [°C] | 1 - 80 |
| | | Pressure Relief Valve | [Bar] | 3 |
| | | Flow Sensor Min Flow Rate | [L/min] | 5.0 |
| DIMENSIONS | | Width | [mm] | 530 |
| | | Depth | [mm] | 360 |
| | | Height | [mm] | 800 |
| WEIGHT EMPTY / FULL | | | [kg] | 34 / 38 |
| ELECTRICAL DATA | Control Board (Optionally Powered by Outdoor Unit) | Electrical Supply | | 1Ph, 230V, 50Hz |
| | | Breaker | [A] | 10 |
| | Booster Heater (Optionally Powered if Required) | Electrical Supply | | 1Ph, 230V, 50Hz |
| | | Capacity | [kW] | 2+4 |
| | | Max Running Current | [A] | 26 |
| | | Breaker | [A] | 32 |

Hydrobox includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Water Circulation Pump, Flow Sensor, Booster Heater and Expansion Vessel.

## THIRD PARTY CYLINDERS

We offer a range of New Zealand made hot water cylinders manufactured to the highest standards, complete with a heat exchanger coil designed specifically for Mitsubishi Electric Hot Water Heat Pump Hydrobox Systems. Cylinders are supplied as standard with all water connections on the front and include standard electric element, thermostat and TPR valve. Sensor pockets are correctly positioned for the cylinder temperature sensor. There are sizes for mains pressure cylinders or buffer tanks up to 1000 litres. Custom designs are also available.

ecodan®

## Manufactured in the United Kingdom

The Mitsubishi Electric manufacturing facility in Livingston, Scotland produces Ecodan Air Source Heat Pumps, Controls and Cylinders for the UK and European markets and includes a purpose-built Ecodan testing facility.

MITSUBISHI ELECTRIC QUALITY
5 years
Parts | Labour
FIVE YEAR WARRANTY
FOR PEACE OF MIND

## Full 5 Year Warranty

Every Ecodan Air Source Heat Pump comes with a full 5 year warranty as standard, subject to the following conditions:

- The Ecodan purchase and installation is registered with BDT
- The Ecodan must be installed and commissioned by a trained BDT installer

## Home Automation and Commercial

Ecodan Systems are compatible with a range of home automation systems via Modbus using the MelcoBEMS Mini Modbus Interface.

As part of a wider range of applications, commercial Ecodan products are also available. Please contact your local BDT representative or branch nearest you for more details.

NZGBC
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Member 2021–2022

## Member of the NZGBC

The New Zealand Green Building Council (NZGBC) is a non-profit membership organisation that promotes better buildings. Thousands of buildings are being constructed, providing healthier and happier workplaces and homes for thousands of Kiwis.

BDT Black Diamond Technologies Limited

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Exclusive New Zealand Partner Since 1981

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PLEASE LOOK AFTER THE ENVIRONMENT AND RECYCLE

For more information on Ecodan Hot Water Heat Pumps please visit our website or call our Customer Service Team.

**www.mitsubishi-electric.co.nz | 0800 784 382**