

2021

# **Heating and Ventilation Product Catalogue**

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# Heating

Ecodan Residential Renewable Heating Systems



**ecodan**<sup>®</sup>  
Renewable Heating Technology

# Ecodan Heat Pumps - Renewable Heating Systems

There is now no doubt that the world is in a climate crisis and that we need to act immediately to avoid catastrophic climate change. The UK Government have reacted by being the first major economy to pass net zero (Greenhouse Gas) emission laws. Renewable technologies, such as heat pumps, have become an integral part of the solution to the problem of reducing carbon emissions generated through heating.

As a market leader in both commercial and domestic heat pumps, Mitsubishi Electric is a pioneer in the development of this renewable technology. Around the world, heat pumps have been utilised for decades and Mitsubishi Electric has refined this technology to produce Ecodan - one of the most advanced, efficient heating systems available on the market today.

The award winning Ecodan heat pumps are available from 4kW up to 960kW, making them suitable for virtually any property, from small flats to large detached houses, from an office block to a school. They are the renewable, low carbon alternative to traditional high carbon heating systems.

- Renewable heating solution capable of reducing emissions and achieving climate targets
- Highly efficient, proven and refined technology that can lower energy bills
- Range of easy to design, install and maintain systems suitable for a variety of property and application types

**Ecodan heat pumps are a renewable heating technology that efficiently and reliably generates sustainable space heating and hot water all year round, delivering a level of comfort that sets the technology apart from other forms of heating.**



**TV presenter, architect, lecturer and writer, George Clarke is a passionate advocate of design excellence and high levels of quality in the construction industry.**

“ The way we design, build, heat, power and recycle our homes needs to change, and change quickly, and renewable heating is an important part of our future.

I’m therefore delighted to associate myself with Ecodan, the market-leading brand of heat pumps built here in the UK and which can help reduce energy bills and lower emissions for almost any home. ”

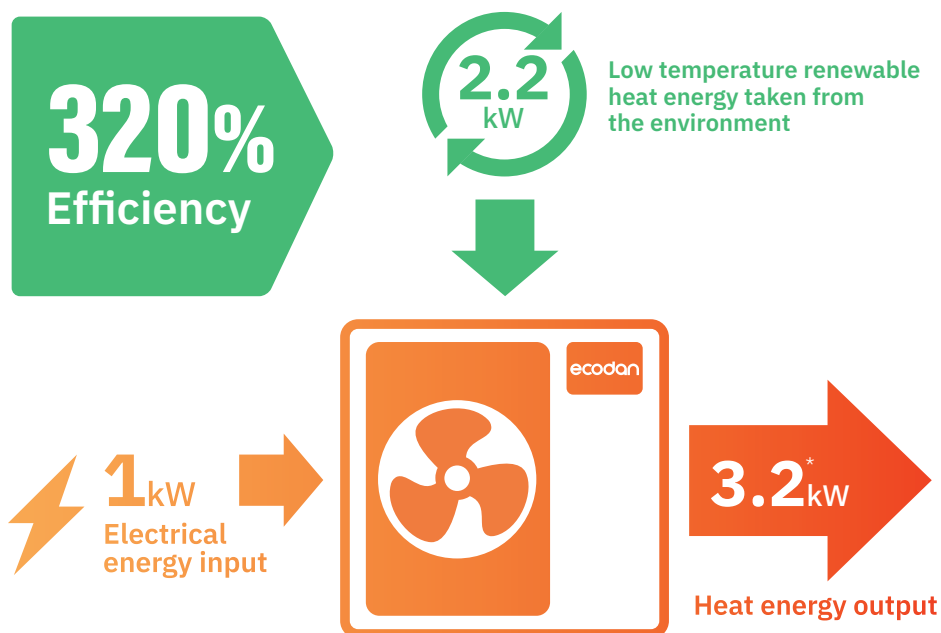
**George Clarke**

Ecodan Brand Ambassador

## How do Ecodan air source heat pumps work?

**Ecodan heat pumps harvest, upgrade and move heat from one location to another.**

Using technology similar to that which is found in a common domestic fridge, heat pumps use the **vapour compression cycle** to generate heat. When used in reverse, this cycle provides the ability to take low temperature renewable heat from the environment and raise it to usable temperatures capable of handling the space and water heating loads required in buildings.

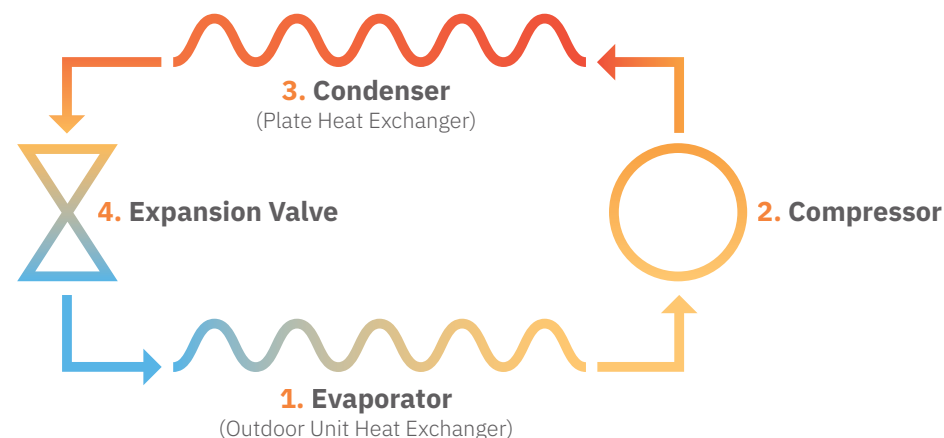


\*As independently tested by BSRIA based upon BSEN14511 Part 3 standard rating conditions. Due to the method of operation, the performance of heat pumps will vary based upon the temperature of the heat source and the requirements of the heat delivered. The BSEN14511 testing relates to the heat pump performance only and not the entire heating system.

### What is the vapour compression cycle?

■ **At the beginning of the first phase the refrigerant is a cold low pressure liquid**

- 1 Refrigerant passes through the evaporator and is exposed to the heat energy of the outside air. As the air flows over the evaporator coil, this heat energy is transferred to the refrigerant, causing it to pressurise into a warm vapour.
- 2 This warm vapour then enters the compressor where its temperature increases as a result of the compression process and turns into a hot gas.
- 3 Hot refrigerant gas passes through the condenser (plate heat exchanger) and transfers its heat energy into the (cooler) water side that is connected to the primary water circuit. The heated water in this circuit is then used to heat up a hot water cylinder inside the property. Due to this energy transfer, the passing hot refrigerant gas cools and transforms back into a cool vapour.
- 4 Although the refrigerant vapour has cooled, in order to return the refrigerant back to its initial state, it is passed through an expansion valve. This lowers the pressure of the cool refrigerant vapour and transforms it back into a low pressure liquid - allowing for the vapour compression cycle to start once again.



■ **This process is repeated**

As the refrigerant boils at  $-46^{\circ}\text{C}$ , there is still plenty of energy in the air on a cold day to make the process work.

## Ecodan Toolbox

### Guidance and Support

With consideration for a multitude of different customers and requirements, Mitsubishi Electric have developed a wide range of advanced Ecodan products suited to satisfy the demands of the market.

Resources that provide guidance and support to optimise the performance and clarify the different types of Ecodan systems are readily available within our online Document Library and supporting digital media sources.

Whether technical product information sheets are required for a design specification, a brochure is required for a prospective customer, or a video that explains how a heat pump is different from a common gas or oil boiler is needed, an archive of useful resources is available at the click of a button.

Please visit the website:

**[library.mitsubishielectric.co.uk/pdf/directory/heating](http://library.mitsubishielectric.co.uk/pdf/directory/heating)**

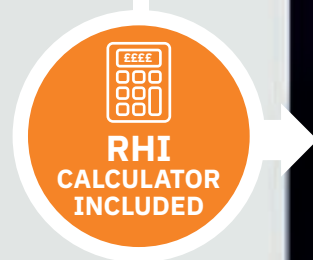
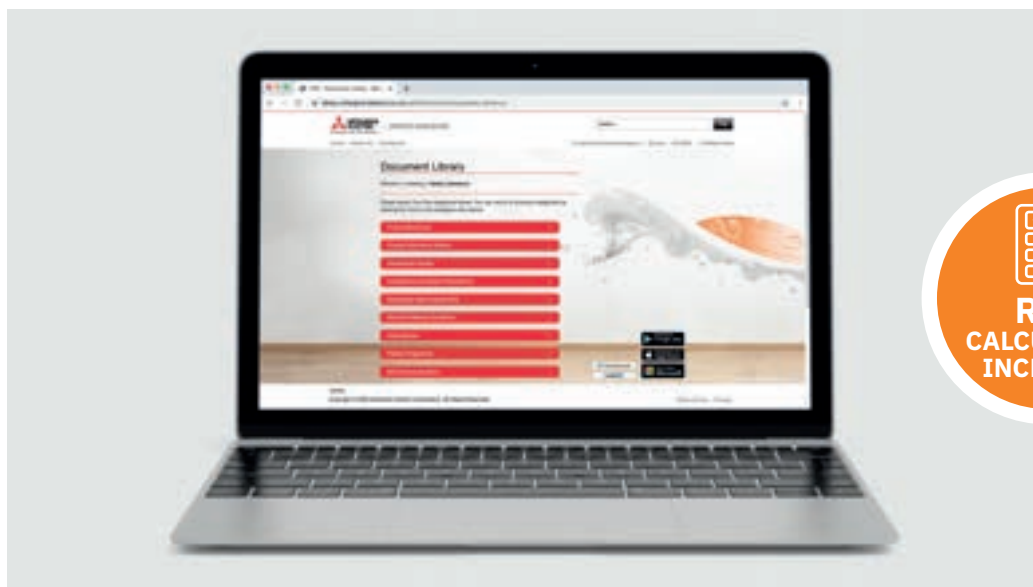
### Ecodan Selection Tool

The Ecodan Heat Pump Selection Tool enables different customer types with varying levels of technical knowledge to obtain an insight into how a property can benefit from the renewable heating that this technology can deliver.

Developed with two selection options to choose from, whether the project is a single domestic dwelling or a large commercial project, the tool will guide the user towards the solution most suited to the needs of the property. Upon completion of the selection process, the tool will generate a bespoke and professional equipment selection report based upon the criteria entered; providing the different user types with the relevant information and resources required to progress to the next stage of design.

Whether the user is a homeowner that wishes to understand the basic estimated costs of operating a renewable heating system or an installer that requires an MCS [MIS3005] standard compliant design for an RHI application, the Ecodan Selection Tool is capable of delivering an informed choice.

Please visit the website: **[ecodanselectiontool.mitsubishielectric.co.uk](http://ecodanselectiontool.mitsubishielectric.co.uk)**





## Range Overview

| System Type                          |                                                                                                                          | Litres | 4kW | 5kW | 6kW | 8.5kW | 11.2kW | 14kW | 40kW | 43kW | 60kW |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------|-----|-----|-----|-------|--------|------|------|------|------|
| <b>Standalone</b>                    |                                         |        |     | ●   | ●   | ●     | ●      | ●    | ●    | ●    | ●    |
| <b>Thermal Store</b>                 |  EHPT20Q-VM2EA                          | 200    | ●   |     |     |       |        |      |      |      |      |
| <b>Packaged Cylinder</b>             |  EHPT20X-MHEDW                          | 200    |     | ●   | ●   | ●     | ●      | ●    |      |      |      |
| <b>Pre-Plumbed Slimline Cylinder</b> |  EHPT15X-UKHLDW                         | 150    |     | ●   | ●   | ●     |        |      |      |      |      |
|                                      |  EHPT17X-UKHLDW                         | 170    |     | ●   | ●   | ●     |        |      |      |      |      |
| <b>Pre-Plumbed Standard Cylinder</b> |  EHPT15X-UKHDW                         | 150    |     | ●   | ●   | ●     |        |      |      |      |      |
|                                      |  EHPT17X-UKHDW                        | 170    |     | ●   | ●   | ●     |        |      |      |      |      |
|                                      |  EHPT21X-UKHDW                        | 210    |     | ●   | ●   | ●     | ●      | ●    |      |      |      |
|                                      |  EHPT25X-UKHDW                        | 250    |     |     |     | ●     | ●      | ●    |      |      |      |
|                                      |  EHPT30X-UKHDW                        | 300    |     |     |     | ●     | ●      | ●    |      |      |      |
| <b>Pre-Plumbed Solar Cylinder</b>    |  EHPT21X-UKHSDW                       | 210    |     | ●   | ●   | ●     | ●      | ●    |      |      |      |
|                                      |  EHPT25X-UKHSDW                       | 250    |     |     |     | ●     | ●      | ●    |      |      |      |
|                                      |  EHPT30X-UKHSDW                       | 300    |     |     |     | ●     | ●      | ●    |      |      |      |
| <b>Approvals</b>                     |  Manufactured in the United Kingdom   |        |     | ●   | ●   | ●     | ●      |      |      |      |      |
|                                      |  Red Dot Award                        |        |     |     | ●   | ●     | ●      |      |      |      |      |
|                                      |  Microgeneration Certification Scheme |        | ●   |     |     |       |        |      |      | ●    | ●    |
|                                      |  Keymark                              |        |     | ●   | ●   | ●     | ●      | ●    |      |      |      |

**Notes:** Microgeneration or Keymark certification qualifies the approved product for the Renewable Heat Incentive (RHI) scheme.



## QUHZ-W40VA

### Monobloc Air Source Heat Pump With Thermal Store



The Ecodan QUHZ system combines a 4kW outdoor unit with a 200 litre Thermal Store and is the ideal plug and play heating and hot water solution for properties with a low space heating requirement.

With very low market leading noise levels for its class and highly efficient hot water generation due to its unique CO<sub>2</sub> (R744) system design, this compact space saving product is capable of providing instantaneous hot water and removes the risk of legionella.

#### Key Features

- Self contained system, only requires water connections and can be powered via the Thermal Store
- No need for gas supply, flues or ventilation
- Low maintenance and very quiet operation
- Operates with outside temperatures as low as -15°C
- Optimised low ambient defrost control and operation
- Capable of being used in domestic hot water generation mode only
- Energy monitoring as standard



| OUTDOOR UNIT                                                 |                    | QUHZ-W40VA               |
|--------------------------------------------------------------|--------------------|--------------------------|
| HEAT PUMP COMBINATION<br>HEATER - 55°C                       | ErP Rating         | A+                       |
|                                                              | $\eta_{s}$         | 117%                     |
|                                                              | SCOP               | 2.90                     |
| HEAT PUMP COMBINATION<br>HEATER - Large Profile <sup>1</sup> | ErP Rating         | A                        |
|                                                              | $\eta_{wh}$        | 129%                     |
|                                                              | COP                | 3.00                     |
| HEATING <sup>2</sup><br>(A-3/W55)                            | Capacity (kW)      | 4.32                     |
|                                                              | Power Input (kW)   | 2.18                     |
|                                                              | COP                | 1.98                     |
| OPERATING AMBIENT TEMPERATURE (°C DB)                        |                    | -15 ~ +35                |
| SOUND PRESSURE LEVEL AT 1M (dBA) <sup>3</sup>                |                    | 43                       |
| SOUND POWER LEVEL (dBA) <sup>4</sup>                         |                    | 53                       |
| WATER DATA                                                   | Pipework Size (mm) | 15                       |
|                                                              | Flow Rate (l/min)  | 3 to 8                   |
| DISTANCE BETWEEN OUTDOOR<br>UNIT AND THERMAL STORE<br>(m)    | Height Difference  | 5                        |
|                                                              | Piping Length      | 15                       |
| DIMENSIONS (mm)                                              | Width              | 809+70 <sup>5</sup>      |
|                                                              | Depth              | 300+20 <sup>5</sup>      |
|                                                              | Height             | 715                      |
| WEIGHT (kg)                                                  |                    | 57                       |
| ELECTRICAL DATA                                              |                    | Powered from indoor unit |
| REFRIGERANT CHARGE (kg)<br>/ CO <sub>2</sub> EQUIVALENT (t)  | R744 (GWP 1)       | 1.15 / 0.0015            |

| THERMAL STORE                                                         |                                          | EHPT20Q-VM2EA                                                              |
|-----------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------|
| NOMINAL THERMAL STORE WATER VOLUME (LITRES)                           |                                          | 200                                                                        |
| WATER TEMPERATURE RANGE                                               | DHW Mode (°C)                            | 40-70                                                                      |
|                                                                       | Space Heating Mode (°C)                  | 25-60                                                                      |
| MECHANICAL ZONES                                                      |                                          | DHW and 1 Heating Zone<br>(2 Zone capability with 3rd party 2-port valves) |
| OPERATING AMBIENT TEMPERATURE (°C DB)                                 |                                          | 0 ~ +35°C (RH<80%)                                                         |
| SOUND PRESSURE LEVEL AT 1M (dBA)                                      |                                          | 30                                                                         |
| SOUND POWER LEVEL (dBA) <sup>4</sup>                                  |                                          | 40                                                                         |
| WATER DATA                                                            | Primary Pump                             | Grundfos Solar PML 25-145 180                                              |
|                                                                       | Sanitary Hot Water Pump                  | Grundfos Solar PML 25-145 180                                              |
|                                                                       | Connection Size (mm) Heating / DHW       | 22 / 22                                                                    |
|                                                                       | Primary Expansion Vessel (Litres)        | 25                                                                         |
|                                                                       | Charge Pressure (MPa (Bar))              | 0.1 (1)                                                                    |
| WATER SAFETY DEVICES                                                  | Pressure relief valve (Mpa (Bar))        | 0.3 (3) - 2 No. devices                                                    |
|                                                                       | Flow sensor (supplied)                   | Min. flow 1.3 L/min                                                        |
|                                                                       | Manual reset thermostat (°C)             | 90                                                                         |
| DIMENSIONS (mm)                                                       | Width                                    | 595                                                                        |
|                                                                       | Depth                                    | 680                                                                        |
|                                                                       | Height                                   | 1600                                                                       |
| WEIGHT EMPTY / FULL (kg)                                              |                                          | 77 / 283                                                                   |
| ELECTRICAL DATA                                                       | Electrical Supply                        | 220-240v, 50Hz                                                             |
|                                                                       | Phase                                    | Single                                                                     |
|                                                                       | Maximum Running Current (A)              | 12.8                                                                       |
|                                                                       | Fuse Rating - MCB Sizes (A) <sup>6</sup> | 20                                                                         |
| OPTIONAL SIMPLIFIED WIRELESS ROOM THERMOSTAT<br>AND WIRELESS RECEIVER |                                          | PAR-WT50-E Controller<br>and PAR-WR51-E Receiver                           |

<sup>1</sup> Combination with EHPT20Q-VM2EA Thermal Store.

<sup>2</sup> Under normal heating conditions at outdoor temp: -3°CDB / -4°CWB, outlet water temp 55°C, inlet water temp 47°C.

<sup>3</sup> Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 55°C, inlet water temp 47°C as tested to BS EN14511.

<sup>4</sup> Sound power level tested to BS EN12102.

<sup>5</sup> Grille or pipe cover.

<sup>6</sup> MCB Sizes BS EN60898-2 & BS EN60947-2.

$\eta_{s}$  is the seasonal space heating energy efficiency (SSHEE)

$\eta_{wh}$  is the water heating energy efficiency



CERTIFIED

Certificate Number: MCS HP0002

Product Type: Heat Pumps

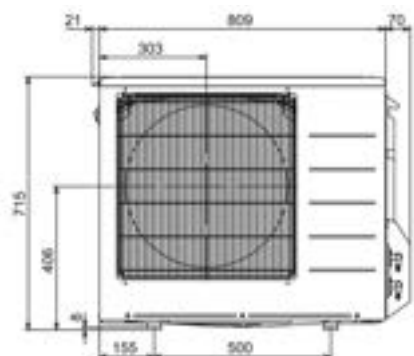
Product Reference: QUHZ-W40VA

## Product Dimensions

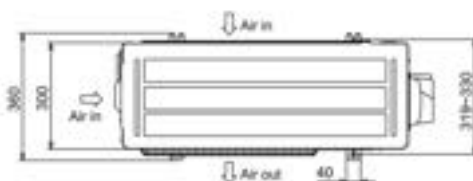
QUHZ-W40VA

All measurement in mm

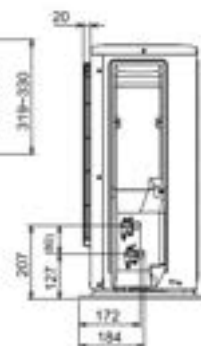
### Front View



### Upper View



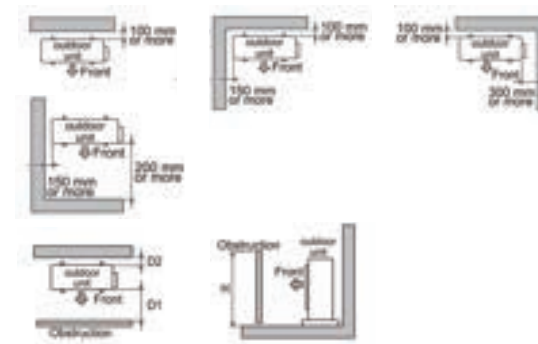
### Side View



**When there is no obstruction at the front  
(Discharge side) (Top view)**  
The area above the unfit must be open  
(clearance of at least 1m or more).

**When there is no obstruction at the back (Suction side) (Top view)**  
The upward direction must be open (clearance of at least 1m or more).

When there is an obstruction at the front  
(Discharge side)



The required clearance (D1 and D2) varies depending on the obstruction height (H). If wind guides are mounted, see the table below. Note that the operating noise levels may increase for certain installation conditions.

| Obstruction height (H) | Required clearance (D1/D2)    |                              |
|------------------------|-------------------------------|------------------------------|
|                        | Without wind guides           | With wind guides             |
| 1200mm or less         | 200mm or more / 100mm or more | 185mm or more / 30mm or more |
| More than 1200mm       | 300mm or more / 100mm or more | 350mm or more / 30mm or more |

\*If discharge air is blown against a wall, the wall can become dirty.  
\*If the area is poorly ventilated and the discharge air becomes sucked in again, heating performance can be reduced by about 10%.  
Mounting of wind guides (product sold separately) can improve heating performance in certain cases.

## Product Dimensions

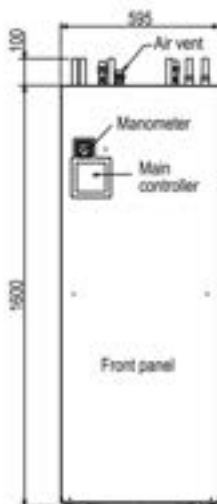
EHPT20Q-VM2EA

All measurement in mm

Left View



### Front View



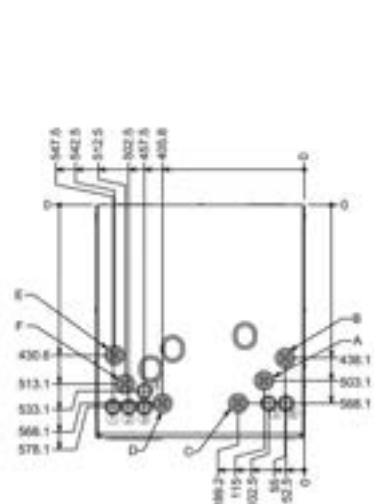
Right View



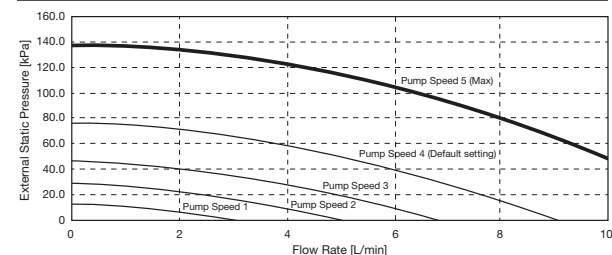
Rear View



### Upper View



### Water Circulation Pump 1 - Characteristics



The performance showing in the graph includes pressure drop of both cylinder unit and outdoor unit. Before installation, please check if the maximum performance of water circulation pump 1 can accommodate the per user drop of external heating circuit.

| Letter | Pipe Description                | Connection size/type |
|--------|---------------------------------|----------------------|
| A      | DHW outlet connection           | 22 mm/Compression    |
| B      | Cold water inlet connection     | 22 mm/Compression    |
| C      | Space heating return connection | 22 mm/Compression    |
| D      | Space heating flow connection   | 22 mm/Compression    |
| E      | Flow from heat pump connection  | 22 mm/Compression    |
| F      | Return to heat pump connection  | 22 mm/Compression    |



## PUZ-WM50VHA

### Monobloc Standalone Air Source Heat Pump



Our range of Ecodan monobloc air source heat pumps includes a 5kW size.

With enhanced performance and efficiencies of the new chassis, combined with the ability to cascade up to six units of the same output, this Ecodan monobloc system can provide a capacity range from 5 through to 30kW. Designed to suit a wide number of applications, this model offers a viable solution for all types of domestic requirements that the UK housing market demands.

#### Key Features

- Self-contained unit, only requiring water and electric connections
- No need for gas supply, flues or ventilation
- Low maintenance and quiet operation
- Operates with outside temperatures as low as -20°C
- Optimised low ambient defrost control and operation down to -7°C
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- Multiple unit cascade function



| OUTDOOR UNIT                                                 |                                                | PUZ-WM50VHA(-BS)    |
|--------------------------------------------------------------|------------------------------------------------|---------------------|
| HEAT PUMP SPACE<br>HEATER - 55°C                             | ErP Rating                                     | A++                 |
|                                                              | $\eta_{s}$                                     | 129%                |
|                                                              | SCOP                                           | 3.33                |
| HEAT PUMP SPACE<br>HEATER - 35°C                             | ErP Rating                                     | A+++                |
|                                                              | $\eta_{s}$                                     | 183%                |
|                                                              | SCOP                                           | 4.58                |
| HEAT PUMP COMBINATION<br>HEATER - Large Profile <sup>1</sup> | ErP Rating                                     | A+                  |
|                                                              | $\eta_{wh}$                                    | 135%                |
| HEATING <sup>2</sup><br>(A-7/W35)                            | Capacity (kW)                                  | 5.0                 |
|                                                              | Power Input (kW)                               | 1.67                |
|                                                              | COP                                            | 3.00                |
| OPERATING AMBIENT TEMPERATURE (°C DB)                        |                                                | -20 ~ +35           |
| SOUND DATA <sup>3</sup>                                      | Pressure Level at 1m (dBA)                     | 47                  |
|                                                              | Power Level (dBA) <sup>4</sup>                 | 61                  |
| WATER DATA                                                   | Pipework Size (mm)                             | 22                  |
|                                                              | Flow Rate (l/min)                              | 14                  |
|                                                              | Water Pressure Drop (kPa)                      | 12.0                |
| DIMENSIONS (mm)                                              | Width                                          | 950                 |
|                                                              | Depth                                          | 330+30 <sup>7</sup> |
|                                                              | Height                                         | 923                 |
| WEIGHT (kg)                                                  |                                                | 71                  |
| ELECTRICAL DATA                                              | Electrical Supply                              | 220-240v, 50Hz      |
|                                                              | Phase                                          | Single              |
|                                                              | Nominal Running Current [MAX] (A) <sup>5</sup> | 4.64 [13]           |
|                                                              | Fuse Rating - MCB Sizes (A) <sup>6</sup>       | 16                  |
| REFRIGERANT CHARGE (kg)<br>/ CO <sub>2</sub> EQUIVALENT (t)  | R32 (GWP 675)                                  | 2.0 / 1.35          |

<sup>1</sup> Combination with E\*PT20X Cylinder

<sup>2</sup> Under normal heating conditions at outdoor temp: -7°CDB / -8°CWB, outlet water temp 35°C, inlet water temp 30°C.

<sup>3</sup> Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 55°C, inlet water temp 47°C as tested to BS EN14511.

<sup>4</sup> Sound power level tested to BS EN12102.

<sup>5</sup> Under nominal heating conditions at outdoor temp: 7°C, outlet water temp: 35°C.

<sup>6</sup> MCB Sizes BS EN60898-2 & BS EN60947-2.

<sup>7</sup> Grille.

$\eta_{s}$  is the seasonal space heating energy efficiency (SSHEE)  $\eta_{wh}$  is the water heating energy efficiency

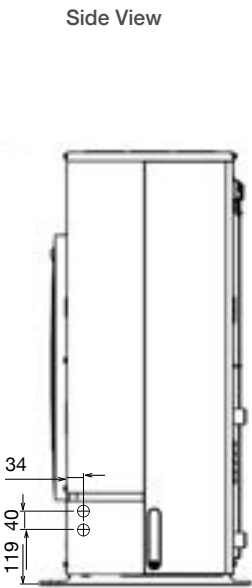
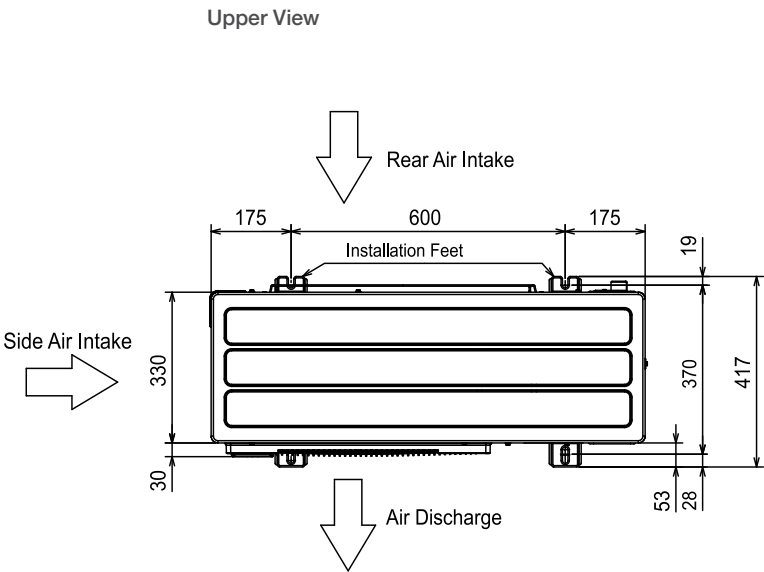
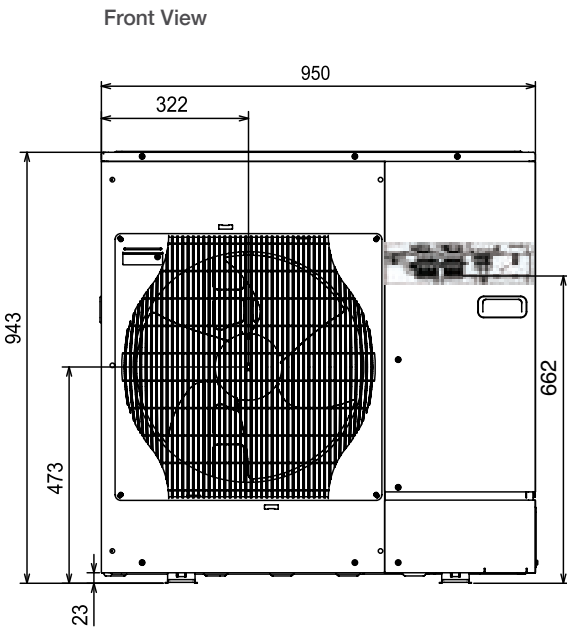


Certificate Number: 037-0032-20  
Product Type: Heat Pumps  
Product Reference: PUZ-WM50VHA(-BS)

# Product Dimensions

PUZ-WM50VHA(-BS)

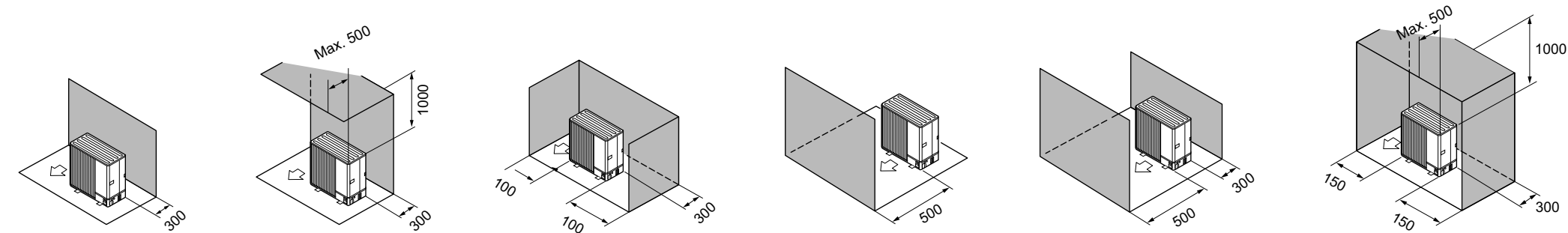
All measurement in mm



# Installation Location

PUZ-WM50VHA(-BS)

All measurement in mm



Please refer to Databook and Installation Manual for further details.



## PUZ-WM(60-112)(V/Y)AA

### Monobloc Standalone Ultra Quiet Air Source Heat Pumps



The multiple award winning range of Ultra Quiet AA chassis Ecodan monobloc air source heat pumps are designed specifically to suit the demands of the UK market and includes 6.0, 8.5 and 11.2kW sizes.

The innovative, stylish and compact single fan outdoor unit utilises advanced technologies to deliver improved efficiencies. Designed for a wide range of applications, the market leading low noise levels virtually eliminate the need for planning permission, maximises installation options and is a viable solution for all types of domestic requirements that the UK housing market demands.

#### Key Features

- Self-contained unit, only requiring water and electric connections
- No need for gas supply, flues or ventilation
- Low maintenance and ultra quiet operation
- Operates with outside temperatures as low as -25°C
- Optimised low ambient defrost control and operation down to -7°C
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- Multiple unit cascade function



| OUTDOOR UNIT                                                |                                                | PUZ-WM60VAA(-BS) | PUZ-WM85VAA(-BS) | PUZ-WM85YAA(-BS) | PUZ-WM112VAA(-BS) | PUZ-WM112YAA(-BS) |
|-------------------------------------------------------------|------------------------------------------------|------------------|------------------|------------------|-------------------|-------------------|
| HEAT PUMP SPACE HEATER - 55°C                               | ErP Rating                                     | A++              | A++              | A++              | A++               | A++               |
|                                                             | $\eta_{L}$                                     | 142%             | 139%             | 139%             | 134%              | 134%              |
|                                                             | SCOP                                           | 3.30             | 3.50             | 3.47             | 3.45              | 3.434             |
| HEAT PUMP SPACE HEATER - 35°C                               | ErP Rating                                     | A+++             | A+++             | A+++             | A+++              | A+++              |
|                                                             | $\eta_{L}$                                     | 190%             | 193%             | 193%             | 191%              | 191%              |
|                                                             | SCOP                                           | 4.62             | 4.57             | 4.79             | 4.58              | 4.78              |
| HEAT PUMP COMBINATION HEATER - Large Profile <sup>1</sup>   | ErP Rating                                     | A+               | A+               | A+               | A+                | A+                |
|                                                             | $\eta_{wh}$                                    | 145%             | 145%             | 145%             | 148%              | 148%              |
| HEATING <sup>2</sup><br>(A-7/W35)                           | Capacity (kW)                                  | 6.0              | 8.5              | 8.5              | 11.2              | 11.2              |
|                                                             | Power Input (kW)                               | 1.88             | 3.27             | 3.27             | 3.73              | 3.73              |
|                                                             | COP                                            | 3.20             | 2.60             | 2.60             | 3.00              | 3.00              |
| OPERATING AMBIENT TEMPERATURE (°C DB)                       |                                                | -20 ~ +35        | -20 ~ +35        | -25 ~ +35        | -25 ~ +35         | -25 ~ +35         |
| SOUND DATA <sup>3</sup>                                     | Pressure Level at 1m (dBA)                     | 45               | 45               | 45               | 45                | 45                |
|                                                             | Power Level (dBA) <sup>4</sup>                 | 58               | 58               | 58               | 60                | 60                |
| WATER DATA                                                  | Pipework Size (mm)                             | 22               | 28               | 28               | 28                | 28                |
|                                                             | Flow Rate (l/min)                              | 17               | 24               | 24               | 32                | 32                |
|                                                             | Water Pressure Drop (kPa)                      | 8.0              | 15.0             | 15.0             | 24.0              | 24.0              |
| DIMENSIONS (mm)                                             | Width                                          | 1050             | 1050             | 1050             | 1050              | 1050              |
|                                                             | Depth                                          | 480              | 480              | 480              | 480               | 480               |
|                                                             | Height                                         | 1020             | 1020             | 1020             | 1020              | 1020              |
| WEIGHT (kg)                                                 |                                                | 98               | 98               | 111              | 119               | 119               |
| ELECTRICAL DATA                                             | Electrical Supply                              | 220-240v, 50Hz   | 220-240v, 50Hz   | 400v, 50Hz       | 220-240v, 50Hz    | 400v, 50Hz        |
|                                                             | Phase                                          | Single           | Single           | Three            | Single            | Three             |
|                                                             | Nominal Running Current [MAX] (A) <sup>5</sup> | 5.68 [13]        | 9.1 [22]         | 2.9 [11.5]       | 10.9 [28]         | 3.6 [13]          |
|                                                             | Fuse Rating - MCB Sizes (A) <sup>6</sup>       | 16               | 25               | 16               | 32                | 16                |
| REFRIGERANT CHARGE (kg)<br>/ CO <sub>2</sub> EQUIVALENT (t) |                                                | R32 (GWP 675)    | 2.2 / 1.49       | 2.2 / 1.49       | 3.0 / 2.03        | 3.0 / 2.03        |

<sup>1</sup> Combination with E\*PT20X Cylinder

<sup>2</sup> Under normal heating conditions at outdoor temp: -7°CDB / -8°CWB, outlet water temp 35°C, inlet water temp 30°C.

<sup>3</sup> Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 55°C, inlet water temp 47°C as tested to BS EN14511.

<sup>4</sup> Sound power level tested to BS EN12102.

<sup>5</sup> Under nominal heating conditions at outdoor temp: 7°C, outlet water temp: 35°C.

<sup>6</sup> MCB Sizes BS EN60898-2 & BS EN60947-2.

$\eta_{L}$  is the seasonal space heating energy efficiency (SSHEE)  $\eta_{wh}$  is the water heating energy efficiency



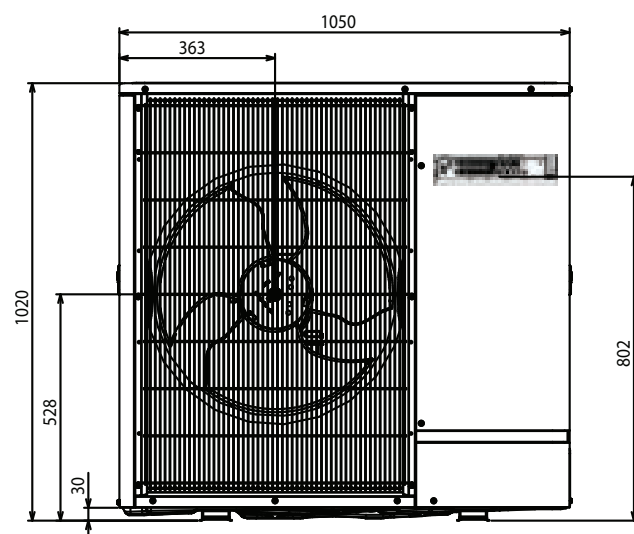
Certificate Number: 037-0033-20 / 037-0034-20  
Product Type: Heat Pumps  
Product Reference: PUZ-WM60/85VAA(-BS) / PUZ-WM112VAA(-BS)

## Product Dimensions

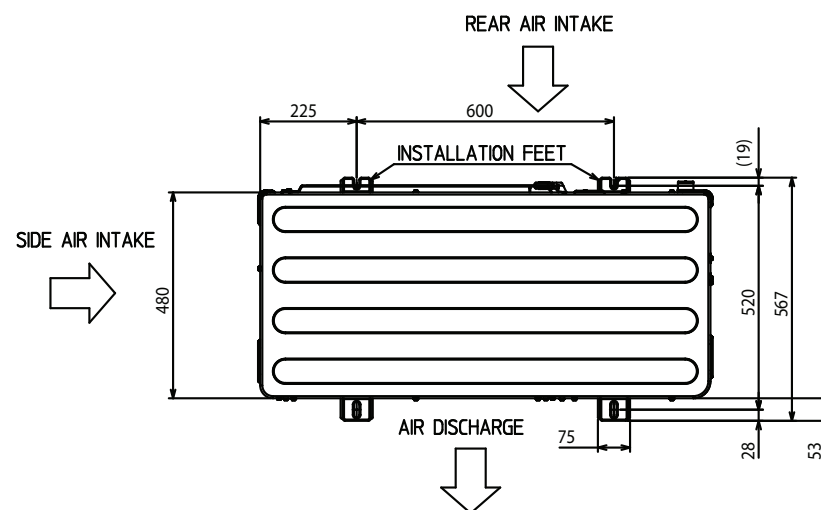
PUZ-WM(60-112)(V/Y)AA

All measurement in mm

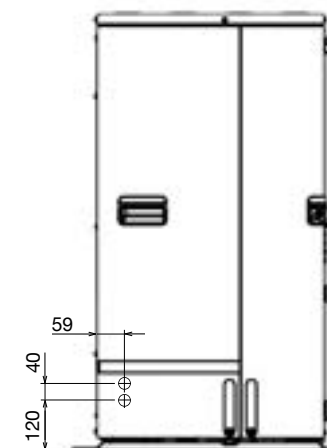
Front View



Upper View



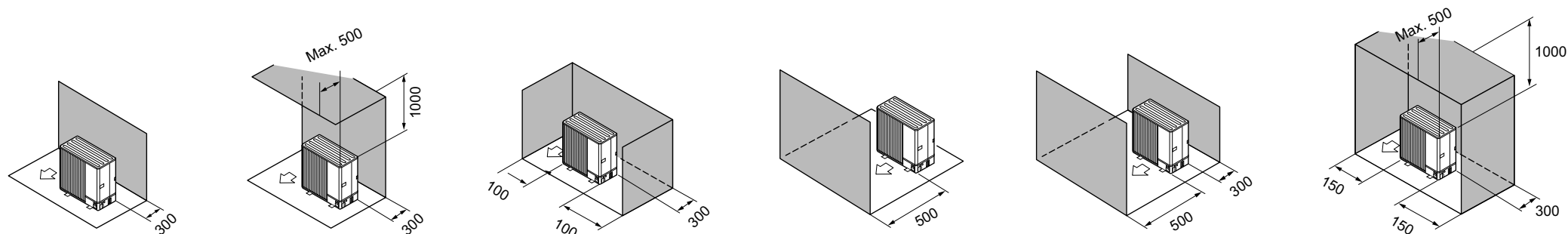
Side View



## Installation Location

PUZ-WM(60-112)(V/Y)AA

All measurement in mm



Please refer to Databook and Installation Manual for further details.



## PUZ-HWM-VHA/YHA

### Monobloc Standalone Air Source Heat Pumps



Certificate Number: 037-0035-20  
Product Type: Heat Pumps  
Product Reference: PUZ-HWM140VHA/YHA(-BS)

Our range of Zubadan chassis Ecodan monobloc air source heat pumps are suitable for properties with large space heating requirements and are available in single or three phase 14kW sizes.

With its advanced flash injection technology, this product provides a solution to low ambient capacity issues common to standard systems and is a viable solution for all types of domestic requirements that the UK housing market demands.

#### Key Features

- Self-contained unit, only requiring water and electric connections
- No need for gas supply, flues or ventilation
- Low maintenance and quiet operation
- Operates with outside temperatures as low as -28°C
- Optimised low ambient defrost control and operation down to -15°C
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- Multiple unit cascade function



| OUTDOOR UNIT                                              |                                                | PUZ-HWM140VHA(-BS)  | PUZ-HWM140YHA(-BS)  |
|-----------------------------------------------------------|------------------------------------------------|---------------------|---------------------|
| HEAT PUMP SPACE HEATER - 55°C                             | ErP Rating                                     | A++                 | A++                 |
|                                                           | $\eta_{s}$                                     | 3.35                | 131                 |
|                                                           | SCOP                                           | 3.34                | 3.35                |
| HEAT PUMP SPACE HEATER - 35°C                             | ErP Rating                                     | A+++                | A+++                |
|                                                           | $\eta_{s}$                                     | 176                 | 176                 |
|                                                           | SCOP                                           | 4.48                | 4.45                |
| HEAT PUMP COMBINATION HEATER - Large Profile <sup>1</sup> | ErP Rating                                     | A+                  | A+                  |
|                                                           | $\eta_{wh}$                                    | 130                 | 130                 |
| HEATING <sup>2</sup> (A-7/W35)                            | Capacity (kW)                                  | 14.0                | 14.0                |
|                                                           | Power Input (kW)                               | 5.72                | 5.72                |
|                                                           | COP                                            | 2.45                | 2.45                |
| OPERATING AMBIENT TEMPERATURE (°C DB)                     |                                                | -28 ~ +35           | -28 ~ +35           |
| SOUND DATA <sup>3</sup>                                   | Pressure Level at 1m (dBA)                     | 53                  | 53                  |
|                                                           | Power Level (dBA) <sup>4</sup>                 | 67                  | 67                  |
| WATER DATA                                                | Pipework Size (mm)                             | 28                  | 28                  |
|                                                           | Flow Rate (l/min)                              | 40                  | 40                  |
|                                                           | Water Pressure Drop (kPa)                      | 20                  | 20                  |
| DIMENSIONS (mm)                                           | Width                                          | 1020                | 1020                |
|                                                           | Depth                                          | 330+30 <sup>7</sup> | 330+30 <sup>7</sup> |
|                                                           | Height                                         | 1350                | 1350                |
| WEIGHT (kg)                                               |                                                | 132                 | 143                 |
| ELECTRICAL DATA                                           | Electrical Supply                              | 220-240v, 50Hz      | 380-415v, 50Hz      |
|                                                           | Phase                                          | Single              | 3                   |
|                                                           | Nominal Running Current [MAX] (A) <sup>5</sup> | xx [35]             | xx [13]             |
|                                                           | Fuse Rating - MCB Sizes (A) <sup>6</sup>       | 40                  | 16                  |
| REFRIGERANT CHARGE (kg) / CO <sub>2</sub> EQUIVALENT (t)  | R32 (GWP 675)                                  | 3.3 / 2.23          | 3.3 / 2.23          |

For information marked with a "-." please consult the databook or speak to your local sales office.

<sup>1</sup> Combination with E\*PT20X Cylinder <sup>2</sup> Under normal heating conditions at outdoor temp: -7°CDB / -8°CWB, outlet water temp 35°C, inlet water temp 30°C.

<sup>3</sup> Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 55°C, inlet water temp 47°C as tested to BS EN14511.

<sup>4</sup> Sound power level tested to BS EN12102. <sup>5</sup> Under nominal heating conditions at outdoor temp: 7°C, outlet water temp: 35°C.

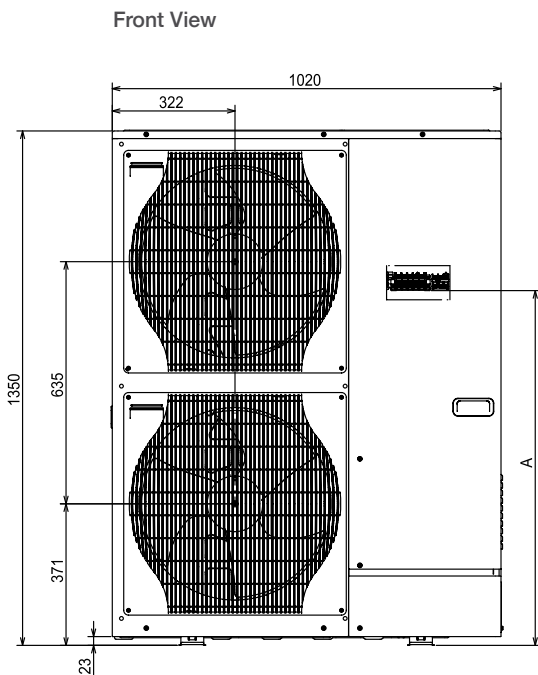
<sup>6</sup> MCB Sizes BS EN60898-2 & BS EN60947-2. <sup>7</sup> Grille.

$\eta_{s}$  is the seasonal space heating energy efficiency (SHEE)  $\eta_{wh}$  is the water heating energy efficiency

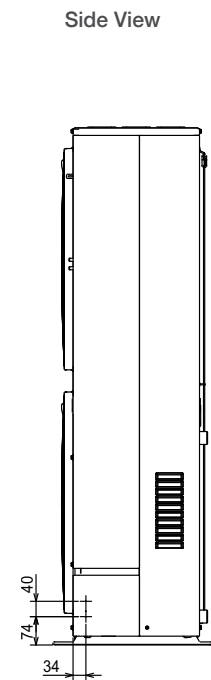
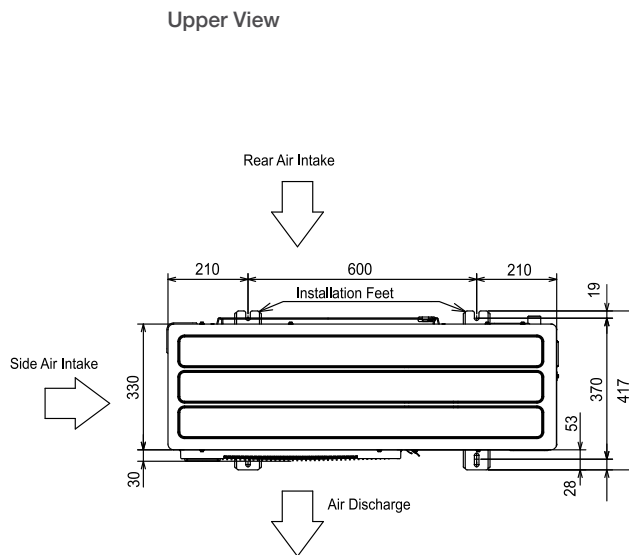
# Product Dimensions

PUZ-HWM140(V/Y)HA(-BS)

All measurement in mm



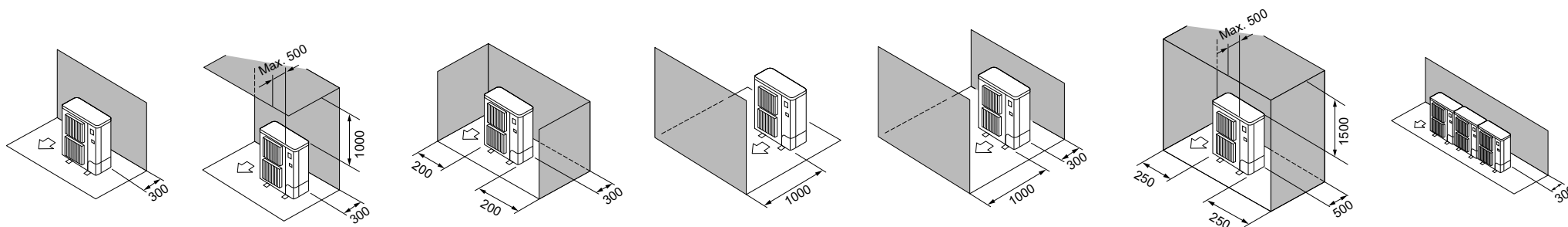
|     | A    |
|-----|------|
| VHA | 1079 |
| YHA | 931  |



# Installation Location

PUZ-HWM140(V/Y)HA(-BS)

All measurement in mm



Please refer to Databook and Installation Manual for further details.



## EHPT20X-MHEDW

### Packaged Cylinder for Ecodan Monobloc Units



The Packaged Cylinder provides a highly adaptable heating solution for all property types.

Designed to optimise performance within a compact white goods footprint, the plug and play packaged cylinder fully integrates with the Ecodan monobloc air source heat pump range. Advanced plate heat exchanger technology delivers superior heat up times and our rapid SD card commissioning, MELCloud Wi-Fi connectivity and energy monitoring functions are also included as standard.

#### Key Features

- Optional 2-zone energy efficient space heating control
- Ready-Plumbed and wired for faster installation
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- MELCloud Wi-Fi connectivity

#### FTC6 Controller

Mitsubishi Electric's sixth generation controller (FTC6) includes intelligent room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season. FTC6 now also includes energy monitoring showing consumed and produced energy.



| CYLINDER                                                       |  |            | EHPT20X-MHEDW                                 |
|----------------------------------------------------------------|--|------------|-----------------------------------------------|
| NOMINAL HOT WATER VOLUME (LITRES)                              |  |            | 200                                           |
| HEAT PUMP COMBINATION HEATER - Large Profile (Average Climate) |  | ErP Rating | A+                                            |
| OPERATING AMBIENT TEMPERATURE (°C DB)                          |  |            | 0 ~ +35°C (RH<80%)                            |
| SOUND PRESSURE LEVEL AT 1M (dBA)                               |  |            | 28                                            |
| WATER DATA                                                     |  |            | 14 / 17 / 24 / 32 / 37                        |
|                                                                |  |            | 28                                            |
|                                                                |  |            | Grundfos UPM3 15-75 130                       |
|                                                                |  |            | Grundfos UPSO 15-60 130                       |
|                                                                |  |            | 28 / 22                                       |
|                                                                |  |            | 1 - 80                                        |
|                                                                |  |            | Supplied                                      |
|                                                                |  |            | 75                                            |
|                                                                |  |            | 90 / 0.7 (7)                                  |
|                                                                |  |            | 595                                           |
|                                                                |  |            | 680                                           |
|                                                                |  |            | 1600                                          |
|                                                                |  |            | 94 / 300                                      |
|                                                                |  |            | 220-240v, 50Hz                                |
|                                                                |  |            | Single                                        |
|                                                                |  |            | 10                                            |
|                                                                |  |            | 220-240v, 50Hz                                |
|                                                                |  |            | Single                                        |
|                                                                |  |            | 3                                             |
|                                                                |  |            | 13                                            |
|                                                                |  |            | 16                                            |
|                                                                |  |            | DHW and 1 Heating Zone <sup>2</sup>           |
|                                                                |  |            | PAR-WT50-E Controller and PAR-WR51-E Receiver |

<sup>1</sup> MCB Sizes BS EN60898-2 & BS EN60947-2 <sup>2</sup> Optional 2 zone accessory pack available

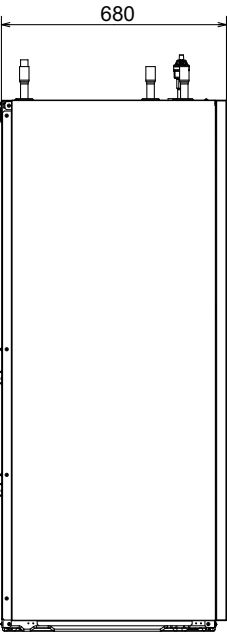
**Notes:** Cylinder includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Pumps & Valves for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, 3kW Immersion Heater.

Product Dimensions

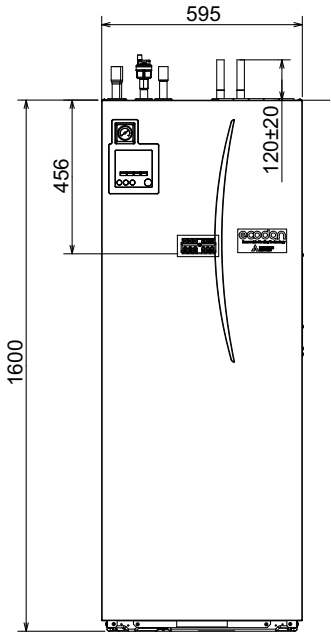
EHPT20X-MHEDW

All measurement in mm

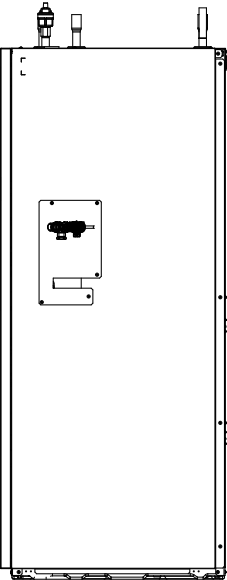
Left View



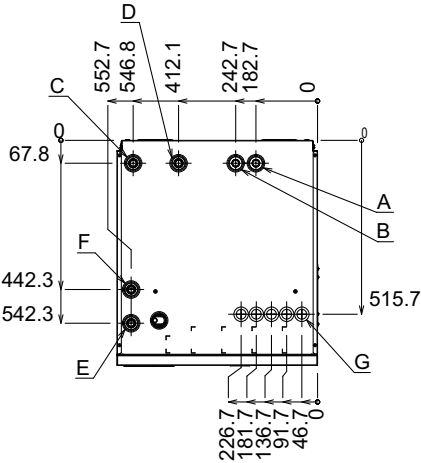
Front View



Right View



Upper View

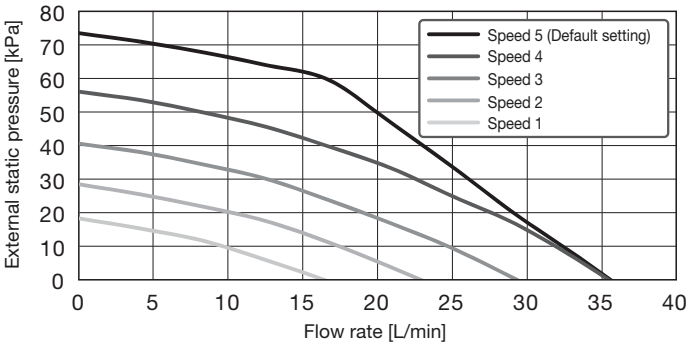


| Letter | Pipe Description                | Connection size/type |
|--------|---------------------------------|----------------------|
| A      | DHW outlet connection           | 22mm/Compression     |
| B      | Cold water inlet connection     | 22mm/Compression     |
| C      | Space heating return connection | 28mm/Compression     |
| D      | Space heating flow connection   | 28mm/Compression     |
| E      | Flow from heat pump connection  | 28mm/Compression     |
| F      | Return to heat pump connection  | 28mm/Compression     |
| G      | Electrical cable inlets         |                      |

Circulation Pumps

EHPT20X-MHEDW

Heat Pump Circuit



Domestic Hot Water Sanitary Circuit

Default setting: Speed 2  
DHW circulation pump **MUST** be set to speed 2.

# EHPT15-17X-UKHLDW

## Pre-Plumbed Slimline Cylinders for Ecodan Monobloc Units



The Pre-Plumbed Slimline Cylinder comes complete with integrated hydraulic components & advanced controls.

Designed to optimise performance and flexibility within a minimal footprint, the slimline cylinder fully integrates with the Ecodan monobloc air source heat pump range. Advanced plate heat exchanger technology delivers superior heat up times and our rapid SD card commissioning, MELCloud Wi-Fi connectivity and energy monitoring functions are also included as standard.

### Key Features

- Optional 2-zone energy efficient space heating control
- Pre-Plumbed and wired for faster installation
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- MELCloud Wi-Fi connectivity

### FTC6 Controller

Mitsubishi Electric's sixth generation controller (FTC6) includes intelligent room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season. FTC6 now also includes energy monitoring showing consumed and produced energy.



| CYLINDER                                                           |                                                            | EHPT15X-UKHLDW                                    |  | EHPT17X-UKHLDW                                        |  |
|--------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|--|-------------------------------------------------------|--|
| NOMINAL HOT WATER VOLUME (LITRES)                                  |                                                            | 150                                               |  | 170                                                   |  |
| ErP RATING                                                         |                                                            | C                                                 |  | C                                                     |  |
| HEAT LOSS (kWh/24hrs)                                              |                                                            | 1.40                                              |  | 1.59                                                  |  |
| HEAT LOSS (W)                                                      |                                                            | 58                                                |  | 66                                                    |  |
| WATER                                                              |                                                            | Flow Rate (l/min) - WM 50 / 60 / 85               |  | 14 / 17 / 24                                          |  |
|                                                                    |                                                            | Primary Circuit Pump                              |  | Grundfos UPMGEO 25-85                                 |  |
|                                                                    |                                                            | Heating Circuit Pump                              |  | Grundfos UPM3 25-70                                   |  |
|                                                                    |                                                            | Sanitary Hot Water Pump                           |  | Grundfos UPSO 15-60 CIL2                              |  |
|                                                                    |                                                            | Connection Size (mm) Heating / DHW                |  | 22 / 22                                               |  |
| WATER SAFETY                                                       | Water Circuit<br><br>DHW Cylinder                          | Charge Pressure (MPa (Bar))                       |  | 0.35 (3.5)                                            |  |
|                                                                    |                                                            | Control Thermistor (°C)                           |  | 1 - 80                                                |  |
|                                                                    |                                                            | DHW Expansion Vessel (Litres)                     |  | 12                                                    |  |
|                                                                    |                                                            | Control Thermistor                                |  | 75                                                    |  |
|                                                                    |                                                            | Over Temperature Cut-Out (°C)                     |  | 80 ± 5                                                |  |
|                                                                    |                                                            | Temp and Pressure Relief Valve (°C) / (MPa (Bar)) |  | 90 / 1.0 (10)                                         |  |
|                                                                    |                                                            | Expansion Relief Valve (Cold) (MPa (Bar))         |  | 0.8 (8)                                               |  |
| DIMENSIONS (mm)                                                    |                                                            | Width                                             |  | 648                                                   |  |
|                                                                    |                                                            | Depth                                             |  | 645                                                   |  |
|                                                                    |                                                            | Height                                            |  | 1515                                                  |  |
|                                                                    |                                                            | WEIGHT EMPTY / FULL (kg)                          |  | 54 / 204                                              |  |
| CYLINDER MATERIAL                                                  | Cylinder                                                   | Cylinder Material                                 |  | Stainless Steel                                       |  |
|                                                                    | Insulation                                                 | Insulation Type                                   |  | CFC / HCFC-free flame-retardant expanded Polyurethane |  |
|                                                                    |                                                            | Insulation Thickness (mm)                         |  | 50                                                    |  |
|                                                                    |                                                            | GWP of Insulation                                 |  | 3.1                                                   |  |
|                                                                    |                                                            | ODP of Insulation                                 |  | 0                                                     |  |
| ELECTRICAL DATA                                                    | Control Board<br><i>optionally powered by outdoor unit</i> | Electrical Supply                                 |  | 220-240v, 50Hz                                        |  |
|                                                                    |                                                            | Phase                                             |  | Single                                                |  |
|                                                                    |                                                            | Fuse Rating - MCB Sizes (A) <sup>1</sup>          |  | 16                                                    |  |
|                                                                    | Immersion Heater                                           | Electrical Supply                                 |  | 220-240v, 50Hz                                        |  |
|                                                                    |                                                            | Phase                                             |  | Single                                                |  |
|                                                                    |                                                            | Capacity (kW)                                     |  | 3                                                     |  |
|                                                                    |                                                            | Max Running Current (A)                           |  | 13                                                    |  |
| Fuse Rating - MCB Sizes (A) <sup>1</sup>                           |                                                            | 16                                                |  |                                                       |  |
| MECHANICAL ZONES                                                   |                                                            | DHW and 1 Heating Zone <sup>2</sup>               |  |                                                       |  |
| OPTIONAL SIMPLIFIED WIRELESS ROOM THERMOSTAT AND WIRELESS RECEIVER |                                                            | PAR-WT50-E Controller and PAR-WR51-E Receiver     |  |                                                       |  |

For information marked with a "-." please consult the databook or speak to your local sales office.

<sup>\*1</sup> MCB Sizes BS EN60898-2 & BS EN60947-2 <sup>\*2</sup> Optional 2 zone accessory pack available

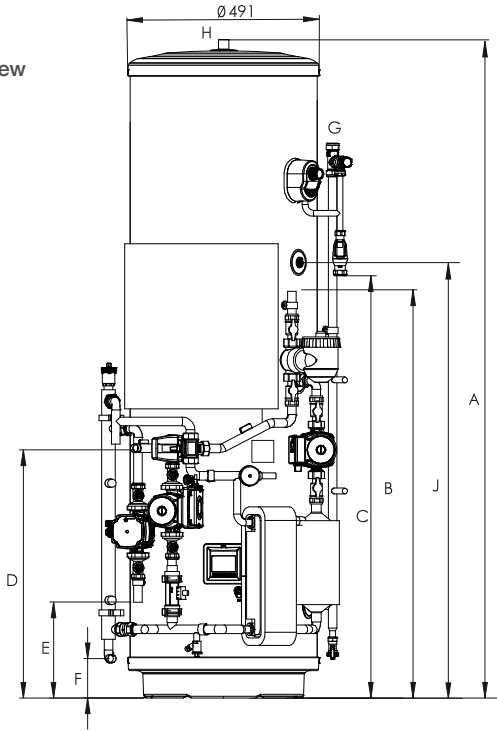
**Notes:** Cylinder includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Magnetic & Cyclonic Filter, Pumps & Valves for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, 3kW Immersion Heater and Expansion Vessel.

### Product Dimensions

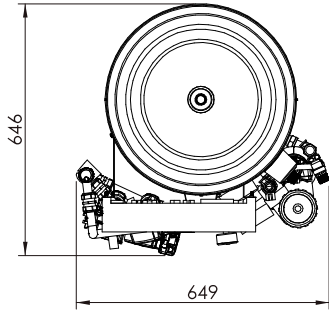
EHPT15-17X-UKHLDW

All measurement in mm

Front View



Upper View



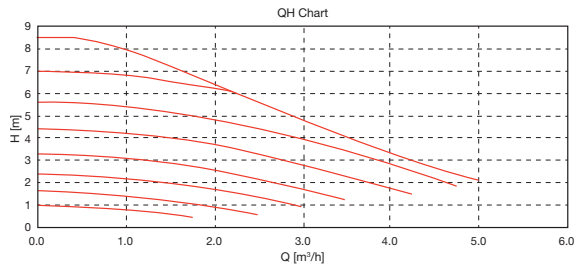
| Letter | Pipe Description                                        | Connection size/type          |
|--------|---------------------------------------------------------|-------------------------------|
| A      | Overall height                                          |                               |
| B      | Heat pump flow                                          | 22mm O/D Copper               |
| C      | Tundish outlet                                          | 22mm/Compression              |
| D      | Heat pump return                                        | 22mm O/D Copper               |
| E      | Heating circuit flow                                    | 22mm O/D Copper               |
| F      | Heating circuit return                                  | 22mm O/D Copper               |
| G      | Cold water inlet                                        | 22mm/Compression              |
| H      | Hot water outlet                                        | 22mm/Compression / 3/4" BSP M |
| J      | THW5A sensor pocket                                     |                               |
| K      | Wi-Fi adaptor (included, installer to locate and mount) |                               |

| Capacity | 150                           | 170  |
|----------|-------------------------------|------|
| A        | 1515                          | 1689 |
| B        | 1047                          | 1043 |
| C        | 909                           | 1083 |
| D        | 640                           | 640  |
| E        | 246                           | 246  |
| F        | 101                           | 101  |
| J        | 943                           | 1117 |
| K        | Installer to locate and mount |      |

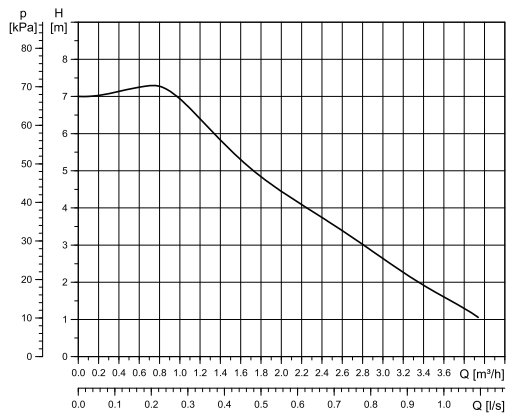
### Circulation Pumps

EHPT15-17X-UKHLDW

Heat Pump Circuit



Space Heating Zone 1 Circuit



Domestic Hot Water Sanitary Circuit

Default setting: Speed 2  
DHW circulation pump **MUST** be set to speed 2.



## EHPT15-30X-UKHDW

### Pre-Plumbed Standard Cylinders for Ecodan Monobloc Units

The Pre-Plumbed Standard Cylinder comes complete with integrated hydraulic components & advanced controls.

Designed to optimise performance and flexibility within an average footprint, the standard cylinder fully integrates with the Ecodan monobloc air source heat pump range. Advanced plate heat exchanger technology delivers superior heat up times and our rapid SD card commissioning, MELCloud Wi-Fi connectivity and energy monitoring functions are also included as standard.

#### Key Features

- Optional 2-zone energy efficient space heating control
- Pre-Plumbed and wired for faster installation
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- MELCloud Wi-Fi connectivity

#### FTC6 Controller

Mitsubishi Electric's sixth generation controller (FTC6) includes intelligent room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season. FTC6 now also includes energy monitoring showing consumed and produced energy.



| CYLINDER                          |                                                            |                                                                    | EHPT15X-UKHDW                                         | EHPT17X-UKHDW                                 | EHPT21X-UKHDW          | EHPT25X-UKHDW             | EHPT30X-UKHDW             |  |
|-----------------------------------|------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------|------------------------|---------------------------|---------------------------|--|
| NOMINAL HOT WATER VOLUME (LITRES) |                                                            |                                                                    | 150                                                   | 170                                           | 210                    | 250                       | 300                       |  |
| ErP RATING                        |                                                            |                                                                    | B                                                     | B                                             | C                      | C                         | C                         |  |
| HEAT LOSS (kWh/24hrs)             |                                                            |                                                                    | 1.15                                                  | 1.23                                          | 1.53                   | 1.80                      | 2.09                      |  |
| HEAT LOSS (W)                     |                                                            |                                                                    | 48                                                    | 51                                            | 64                     | 75                        | 87                        |  |
| WATER                             |                                                            |                                                                    |                                                       |                                               |                        |                           |                           |  |
| Primary Circuit Pump              | Flow Rate (l/min) - (H)WM 50 / 60 / 85 / 112 / 140         |                                                                    | 14 / 17 / 24 / N/A / N/A                              | 14 / 17 / 24 / N/A / N/A                      | 14 / 17 / 24 / 32 / 40 | N/A / N/A / 24 / 32 / 40  | N/A / N/A / 24 / 32 / 40  |  |
|                                   |                                                            |                                                                    | Grundfos UPMGEO 25-85                                 | Grundfos UPMGEO 25-85                         | Grundfos UPMGEO 25-85  | Grundfos UPMXL GEO 25-125 | Grundfos UPMXL GEO 25-125 |  |
|                                   | Heating Circuit Pump                                       |                                                                    | Grundfos UPM3 25-70                                   |                                               |                        |                           |                           |  |
|                                   | Sanitary Hot Water Pump                                    |                                                                    | Grundfos UPSO 15-60 CIL2                              |                                               |                        |                           |                           |  |
|                                   | Connection Size (mm) Heating / DHW                         |                                                                    | 22 / 22                                               | 22 / 22                                       | 22 / 22                | 22 / 22                   | 22 / 22                   |  |
|                                   | Charge Pressure (MPa (Bar))                                |                                                                    | 0.35 (3.5)                                            | 0.35 (3.5)                                    | 0.35 (3.5)             | 0.35 (3.5)                | 0.35 (3.5)                |  |
| WATER SAFETY DEVICES              | Water Circuit<br>DHW Cylinder                              | Control Thermistor (°C)                                            | 1 - 80                                                | 1 - 80                                        | 1 - 80                 | 1 - 80                    | 1 - 80                    |  |
|                                   |                                                            | DHW Expansion Vessel (Litres)                                      | 12                                                    | 18                                            | 18                     | 24                        | 24                        |  |
|                                   |                                                            | Control Thermistor                                                 | 75                                                    | 75                                            | 75                     | 75                        | 75                        |  |
|                                   |                                                            | Over Temperature Cut-Out (°C)                                      | 80 ± 5                                                | 80 ± 5                                        | 80 ± 5                 | 80 ± 5                    | 80 ± 5                    |  |
|                                   |                                                            | Temp and Pressure Relief Valve (°C) / (MPa (Bar))                  | 90 / 1.0 (10)                                         | 90 / 1.0 (10)                                 | 90 / 1.0 (10)          | 90 / 1.0 (10)             | 90 / 1.0 (10)             |  |
|                                   |                                                            | Expansion Relief Valve (Cold) (MPa (Bar))                          | 0.8 (8)                                               | 0.8 (8)                                       | 0.8 (8)                | 0.8 (8)                   | 0.8 (8)                   |  |
|                                   |                                                            | DIMENSIONS (mm)                                                    |                                                       |                                               |                        |                           |                           |  |
|                                   |                                                            | Width                                                              | 683                                                   | 683                                           | 683                    | 683                       | 683                       |  |
| Depth                             | 730                                                        | 730                                                                | 730                                                   | 730                                           | 730                    |                           |                           |  |
| Height                            | 1130                                                       | 1256                                                               | 1508                                                  | 1760                                          | 2074                   |                           |                           |  |
| WEIGHT EMPTY / FULL (kg)          |                                                            |                                                                    | 56 / 206                                              | 62 / 232                                      | 69 / 279               | 77 / 327                  | 87 / 387                  |  |
| CYLINDER MATERIAL                 | Cylinder                                                   | Cylinder Material                                                  | Stainless Steel                                       | Stainless Steel                               | Stainless Steel        | Stainless Steel           | Stainless Steel           |  |
|                                   | Insulation                                                 | Insulation Type                                                    | CFC / HCFC-free flame-retardant expanded Polyurethane |                                               |                        |                           |                           |  |
|                                   |                                                            | Insulation Thickness (mm)                                          | 60                                                    | 60                                            | 60                     | 60                        | 60                        |  |
|                                   |                                                            | GWP of Insulation                                                  | 3.1                                                   | 3.1                                           | 3.1                    | 3.1                       | 3.1                       |  |
|                                   |                                                            | ODP of Insulation                                                  | 0                                                     | 0                                             | 0                      | 0                         | 0                         |  |
| ELECTRICAL DATA                   | Control Board<br><i>optionally powered by outdoor unit</i> | Electrical Supply                                                  | 220-240v, 50Hz                                        | 220-240v, 50Hz                                | 220-240v, 50Hz         | 220-240v, 50Hz            | 220-240v, 50Hz            |  |
|                                   |                                                            | Phase                                                              | Single                                                | Single                                        | Single                 | Single                    | Single                    |  |
|                                   |                                                            | Fuse Rating - MCB Sizes (A) <sup>1</sup>                           | 16                                                    | 16                                            | 16                     | 16                        | 16                        |  |
|                                   |                                                            | Electrical Supply                                                  | 220-240v, 50Hz                                        | 220-240v, 50Hz                                | 220-240v, 50Hz         | 220-240v, 50Hz            | 220-240v, 50Hz            |  |
|                                   | Immersion Heater                                           | Phase                                                              | Single                                                | Single                                        | Single                 | Single                    | Single                    |  |
|                                   |                                                            | Capacity (kW)                                                      | 3                                                     | 3                                             | 3                      | 3                         | 3                         |  |
|                                   |                                                            | Max Running Current (A)                                            | 13                                                    | 13                                            | 13                     | 13                        | 13                        |  |
|                                   |                                                            | Fuse Rating - MCB Sizes (A) <sup>1</sup>                           | 16                                                    | 16                                            | 16                     | 16                        | 16                        |  |
|                                   |                                                            | MECHANICAL ZONES                                                   |                                                       | DHW and 1 Heating Zone <sup>2</sup>           |                        |                           |                           |  |
|                                   |                                                            | OPTIONAL SIMPLIFIED WIRELESS ROOM THERMOSTAT AND WIRELESS RECEIVER |                                                       | PAR-WT50-E Controller and PAR-WR51-E Receiver |                        |                           |                           |  |

For information marked with a "-" please consult the databook or speak to your local sales office.

<sup>1</sup> MCB Sizes BS EN60898-2 & BS EN60947-2 <sup>2</sup> Optional 2 zone accessory pack available

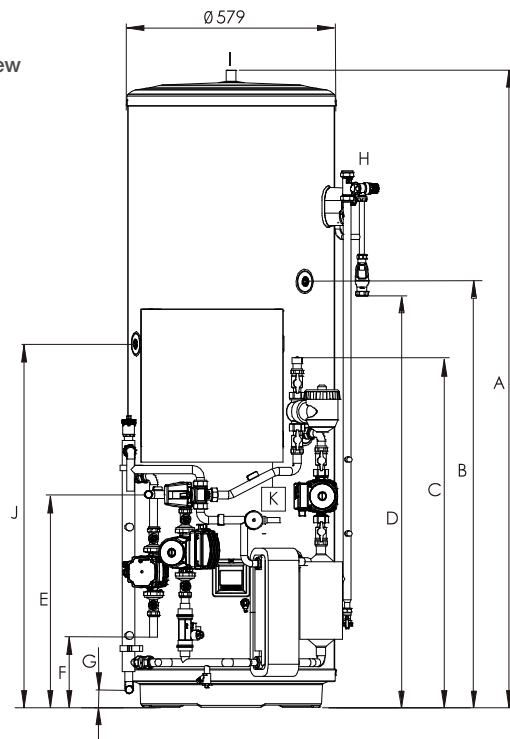
**Notes:** Cylinder includes: Flow Temperature Controller with Main Controller and Temperature Sensors, Magnetic & Cyclonic Filter, Pumps & Valves for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, 3kW Immersion Heater and Expansion Vessel. R410a model codes: EHPT\*\*UKHDW & R32 model code: EHPT\*\*UKHDW.

## Product Dimensions

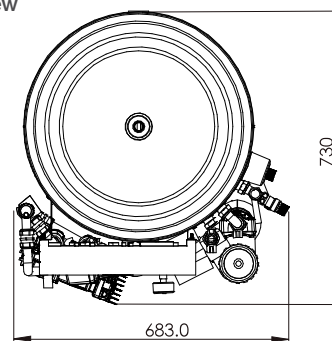
EHPT15-30X-UKHDW

All measurement in mm

Front View



Upper View



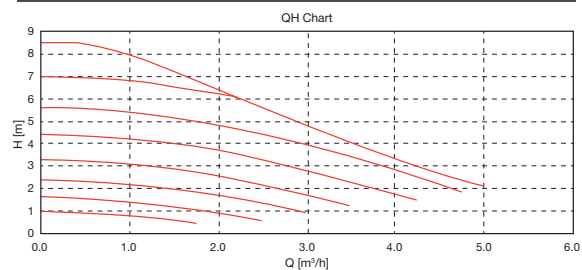
| Letter | Pipe Description                                        | Connection size/type          |
|--------|---------------------------------------------------------|-------------------------------|
| A      | Overall height                                          |                               |
| B      | Secondary return tapping                                |                               |
| C      | Heat pump flow                                          | 22mm O/D Copper               |
| D      | Tundish outlet                                          | 22mm/Compression              |
| E      | Heat pump return                                        | 22mm O/D Copper               |
| F      | Heating circuit flow                                    | 22mm O/D Copper               |
| G      | Heating circuit return                                  | 22mm O/D Copper               |
| H      | Cold water inlet                                        | 22mm/Compression              |
| I      | Hot water outlet                                        | 22mm/Compression / 3/4" BSP M |
| J      | THW5A sensor pocket                                     |                               |
| K      | Wi-Fi adaptor (included, installer to locate and mount) |                               |

| Capacity | 150                           | 170  | 210  | 250  | 300  |
|----------|-------------------------------|------|------|------|------|
| A        | 1130                          | 1256 | 1505 | 1762 | 2074 |
| B        | -                             | -    | 1050 | 1175 | 1385 |
| C        | 909                           | 990  | 990  | 990  | 990  |
| D        | 505                           | 630  | 880  | 1136 | 1450 |
| E        | 585                           | 585  | 585  | 585  | 585  |
| F        | 195                           | 195  | 195  | 195  | 195  |
| G        | 50                            | 50   | 50   | 50   | 50   |
| J        | 675                           | 815  | 1005 | 1005 | 1193 |
| K        | Installer to locate and mount |      |      |      |      |

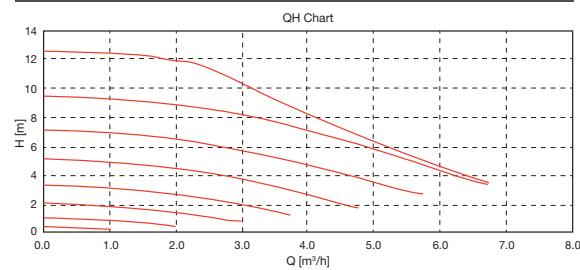
## Circulation Pumps

EHPT15-30X-UKHDW

Heat Pump Circuit (150L - 210L)



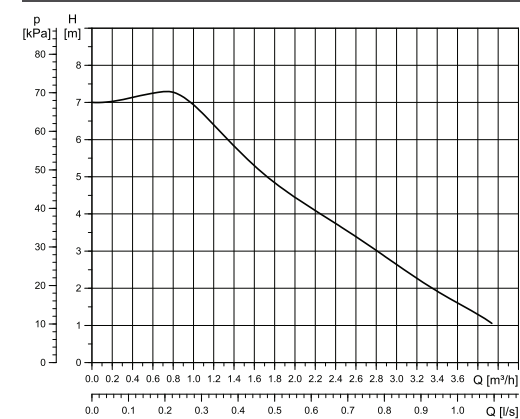
Heat Pump Circuit (250L-300L)



Domestic Hot Water Sanitary Circuit

Default setting: Speed 2  
DHW circulation pump **MUST** be set to speed 2.

Space Heating Zone 1 Circuit





## EHPT21-30X-UKHSDW

### Pre-Plumbed Solar Cylinders for Ecodan Monobloc Units



The Pre-Plumbed Solar Cylinder comes complete with integrated hydraulic components & advanced controls.

Designed to optimise performance and flexibility within an average footprint, the solar cylinder includes an independent coil and fully integrates with the Ecodan monobloc air source heat pump range. Advanced plate heat exchanger technology delivers superior heat up times and our rapid SD card commissioning, MELCloud Wi-Fi connectivity & energy monitoring functions are included as standard.

#### Key Features

- Includes independent coil for connection to solar thermal systems
- Optional 2-zone energy efficient space heating control
- Pre-Plumbed and wired for faster installation
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- MELCloud Wi-Fi connectivity

#### FTC6 Controller

Mitsubishi Electric's sixth generation controller (FTC6) includes intelligent room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season. FTC6 now also includes energy monitoring showing consumed and produced energy.



| CYLINDER                                                           |                                                            |                                                   | EHPT21X-UKHSDW                                        | EHPT25X-UKHSDW            | EHPT30X-UKHSDW            |
|--------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|---------------------------|---------------------------|
| NOMINAL HOT WATER VOLUME (LITRES)                                  |                                                            |                                                   | 210                                                   | 250                       | 300                       |
| ErP RATING                                                         |                                                            |                                                   | C                                                     | C                         | C                         |
| HEAT LOSS (kWh/24hrs)                                              |                                                            |                                                   | 1.57                                                  | 1.79                      | 1.88                      |
| HEAT LOSS (W)                                                      |                                                            |                                                   | 65                                                    | 75                        | 78                        |
| WATER                                                              |                                                            |                                                   | 14 / 17 / 24 / 32 / 40                                | N/A / N/A / 24 / 32 / 40  | N/A / N/A / 24 / 32 / 40  |
|                                                                    |                                                            |                                                   | Grundfos UPMGEO 25-85                                 | Grundfos UPMXL GEO 25-125 | Grundfos UPMXL GEO 25-125 |
|                                                                    |                                                            |                                                   |                                                       | Grundfos UPM3 25-70       |                           |
|                                                                    |                                                            |                                                   |                                                       | Grundfos UPSO 15-60 CIL2  |                           |
|                                                                    |                                                            |                                                   | 22 / 22                                               | 22 / 22                   | 22 / 22                   |
|                                                                    |                                                            |                                                   | 0.35 (3.5)                                            | 0.35 (3.5)                | 0.35 (3.5)                |
| WATER SAFETY DEVICES                                               | Water Circuit<br>DHW Cylinder                              | Control Thermistor (°C)                           | 1 - 80                                                | 1 - 80                    | 1 - 80                    |
|                                                                    |                                                            | DHW Expansion Vessel (Litres)                     | 18                                                    | 24                        | 24                        |
|                                                                    |                                                            | Control Thermistor                                | 75                                                    | 75                        | 75                        |
|                                                                    |                                                            | Over Temperature Cut-Out (°C)                     | 80 ± 5                                                | 80 ± 5                    | 80 ± 5                    |
|                                                                    |                                                            | Temp and Pressure Relief Valve (°C) / (MPa (Bar)) | 90 / 1.0 (10)                                         | 90 / 1.0 (10)             | 90 / 1.0 (10)             |
|                                                                    |                                                            | Expansion Relief Valve (Cold) (MPa (Bar))         | 0.8 (8)                                               | 0.8 (8)                   | 0.8 (8)                   |
|                                                                    |                                                            | Width                                             | 683                                                   | 683                       | 683                       |
|                                                                    |                                                            | Depth                                             | 730                                                   | 730                       | 730                       |
| DIMENSIONS (mm)                                                    |                                                            | Height                                            | 1513                                                  | 1765                      | 2081                      |
|                                                                    |                                                            |                                                   | 74 / 284                                              | 82 / 332                  | 92 / 392                  |
| WEIGHT EMPTY / FULL (kg)                                           |                                                            |                                                   |                                                       |                           |                           |
| CYLINDER MATERIAL                                                  | Cylinder                                                   | Cylinder Material                                 | Stainless Steel                                       | Stainless Steel           | Stainless Steel           |
|                                                                    | Insulation                                                 | Insulation Type                                   | CFC / HCFC-free flame-retardant expanded Polyurethane |                           |                           |
|                                                                    |                                                            | Insulation Thickness (mm)                         | 60                                                    | 60                        | 60                        |
|                                                                    |                                                            | GWP of Insulation                                 | 3.1                                                   | 3.1                       | 3.1                       |
|                                                                    |                                                            | ODP of Insulation                                 | 0                                                     | 0                         | 0                         |
| ELECTRICAL DATA                                                    | Control Board<br><i>optionally powered by outdoor unit</i> | Electrical Supply                                 | 220-240v, 50Hz                                        | 220-240v, 50Hz            | 220-240v, 50Hz            |
|                                                                    |                                                            | Phase                                             | Single                                                | Single                    | Single                    |
|                                                                    |                                                            | Fuse Rating - MCB Sizes (A) <sup>1</sup>          | 16                                                    | 16                        | 16                        |
|                                                                    | Immersion Heater                                           | Electrical Supply                                 | 220-240v, 50Hz                                        | 220-240v, 50Hz            | 220-240v, 50Hz            |
|                                                                    |                                                            | Phase                                             | Single                                                | Single                    | Single                    |
|                                                                    |                                                            | Capacity (kW)                                     | 3                                                     | 3                         | 3                         |
|                                                                    |                                                            | Max Running Current (A)                           | 13                                                    | 13                        | 13                        |
|                                                                    |                                                            | Fuse Rating - MCB Sizes (A) <sup>1</sup>          | 16                                                    | 16                        | 16                        |
| MECHANICAL ZONES                                                   |                                                            |                                                   | DHW and 1 Heating Zone <sup>2</sup>                   |                           |                           |
| OPTIONAL SIMPLIFIED WIRELESS ROOM THERMOSTAT AND WIRELESS RECEIVER |                                                            |                                                   | PAR-WT50-E Controller and PAR-WR51-E Receiver         |                           |                           |

For information marked with a "-" please consult the databook or speak to your local sales office.

<sup>1</sup> MCB Sizes BS EN60898-2 & BS EN60947-2 <sup>2</sup> Optional 2 zone accessory pack available

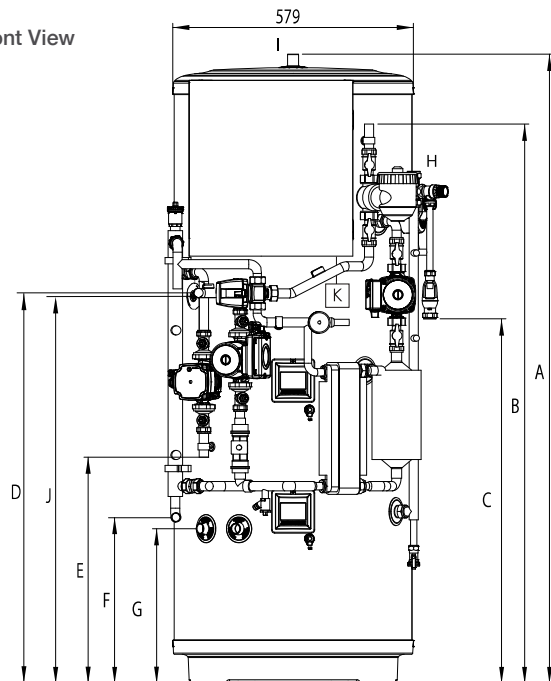
**Notes:** Cylinder includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Magnetic & Cyclonic Filter, Pumps & Valves for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, 3kW Immersion Heater and Expansion Vessel.

## Product Dimensions

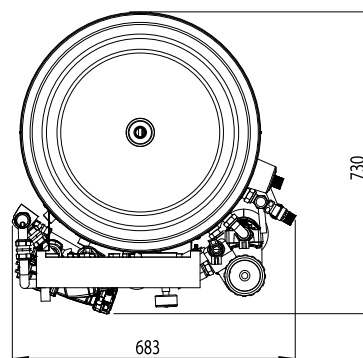
EHPT21-30X-UKHSDW

All measurement in mm

Front View



Upper View



### Solar coil specification:

Surface area: 1.1m<sup>2</sup>  
Coil volume: 5.8 litres  
Pressure drop: 3.6 kPa (0.036 bar)  
Output rating: 30kW at 80°C flow temperature, 15 litres/minute flow rate  
Connections: 22mm compression / 3/4" BSP male  
Dedicated solar volume: 75 litres

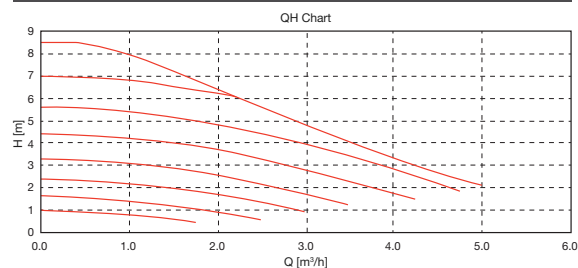
| Letter | Pipe Description                                        | Connection size/type          |
|--------|---------------------------------------------------------|-------------------------------|
| A      | Overall height                                          |                               |
| B      | Heat pump flow                                          | 22mm O/D Copper               |
| C      | Tundish outlet                                          | 22mm/Compression              |
| D      | Heat pump return                                        | 22mm O/D Copper               |
| E      | Heating circuit flow                                    | 22mm O/D Copper               |
| F      | Heating circuit return                                  | 22mm O/D Copper               |
| G      | Solar coil                                              | 22mm/Compression / 3/4" BSP M |
| H      | Cold water inlet                                        | 22mm/Compression              |
| I      | Hot water outlet                                        | 22mm/Compression / 3/4" BSP M |
| J      | THWSA sensor pocket                                     |                               |
| K      | Wi-Fi adaptor (included, installer to locate and mount) |                               |

| Capacity | 210                           | 250  | 300  |
|----------|-------------------------------|------|------|
| A        | 1513                          | 1765 | 2081 |
| B        | 1346                          | 1346 | 1346 |
| C        | 877                           | 1129 | 1444 |
| D        | 935                           | 935  | 935  |
| E        | 545                           | 545  | 545  |
| F        | 400                           | 400  | 400  |
| G        | 372                           | 372  | 372  |
| J        | 933                           | 1008 | 1198 |
| K        | Installer to locate and mount |      |      |

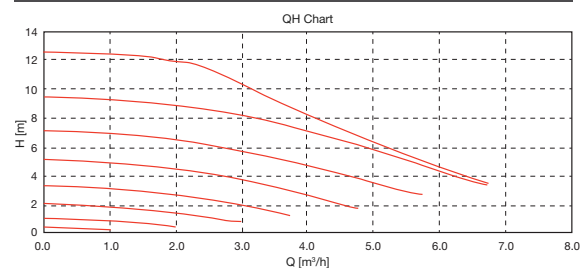
## Circulation Pumps

EHPT21-30X-UKHSDW

### Heat Pump Circuit (210L)



### Heat Pump Circuit (250L-300L)

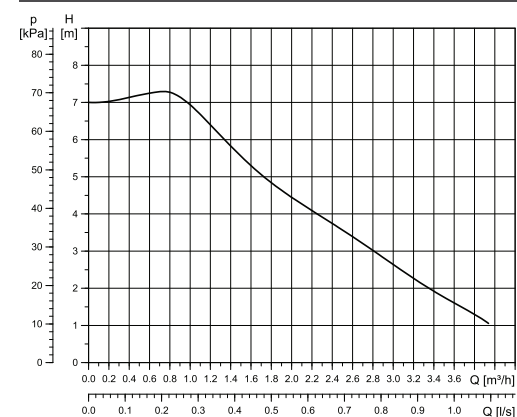


### Domestic Hot Water Sanitary Circuit

Default setting: Speed 2

DHW circulation pump **MUST** be set to speed 2.

### Space Heating Zone 1 Circuit





## FTC6 / FTC2BR Flow Temperature Controllers

For use with Ecodan Monobloc Units and Third Party BEMS



The FTC6 Flow Temperature Controller is designed specifically by Mitsubishi Electric to integrate with the Ecodan PUZ monobloc air source heat pump range and a third party cylinder.

The FTC2BR has been developed to allow the Ecodan PUZ range to interface with third party or BEMS (Building Energy Management System) controls. A combination of volt free and voltage inputs allow the Ecodan PUZ monobloc range to be used in applications where only simple on/off and temperature control is required.

### Functions that can be controlled and monitored by third party controls:

#### Controlled

- On/Off heating mode
- On/Off heating ECO mode
- On/Off hot water mode
- On/Off holiday mode
- On/Off legionella mode
- Change water flow temperature

#### Monitored

- Unit running
- Error
- Defrost

The ability to interface with third party controls opens up a huge number of application opportunities. Many processes simply require a heat source that provides hot water, without polished end user controls. The FTC2BR controller allows the Ecodan PUZ to be used in these applications. FTC2BR inputs and outputs can be used in conjunction with local BEMS.



| FLOW TEMPERATURE CONTROLLERS                  |                        | FTC6 (PAC-IF072B-E)                           | FTC2BR (PAC-IF033B-E)                         |
|-----------------------------------------------|------------------------|-----------------------------------------------|-----------------------------------------------|
| COMPATIBILITY                                 | PUZ-WM50VHA(-BS)       | ✓                                             | ✓                                             |
|                                               | PUZ-WM60VAA(-BS)       | ✓                                             | ✓                                             |
|                                               | PUZ-WM85V(Y)AA(-BS)    | ✓                                             | ✓                                             |
|                                               | PUZ-WM112V(Y)AA(-BS)   | ✓                                             | ✓                                             |
|                                               | PUZ-HWM140V(Y)HA(-BS)  | ✓                                             | ✓                                             |
| BUILT-IN FEATURES                             | Initial Setting Wizard | ✓                                             |                                               |
|                                               | Commissioning Aide     | ✓                                             |                                               |
|                                               | Smart Grid Ready       | ✓                                             |                                               |
|                                               | PV Connection          | ✓                                             |                                               |
|                                               | Energy Monitoring      | ✓                                             |                                               |
|                                               | Dual Set-Point DHW     | ✓                                             |                                               |
|                                               | Silent-Mode            | ✓                                             |                                               |
|                                               | Cascade <sup>*1</sup>  | ✓                                             |                                               |
|                                               | Hybrid                 | ✓                                             |                                               |
| MELCloud <sup>*2</sup>                        |                        | ✓                                             |                                               |
| BEMS INTERFACE                                |                        |                                               | ✓                                             |
| DIMENSIONS (MM)                               | Width                  | 393                                           | 336                                           |
|                                               | Depth                  | 86.7                                          | 69                                            |
|                                               | Height                 | 422                                           | 278                                           |
| WEIGHT (kg)                                   |                        | 4.1                                           | 3.2                                           |
| OPERATING AMBIENT TEMPERATURE (°C) / HUMIDITY |                        | 0~ +35°C (RH<80%)                             | 0~ +35°C (RH<80%)                             |
| ELECTRICAL DATA                               | Electrical Supply      | Via Outdoor Unit or Independent Source (230v) | Via Outdoor Unit or Independent Source (230v) |
|                                               | Phase                  | Single                                        | Single                                        |

<sup>\*1</sup> Requires Optional part(s) PAC-SIF051B-E. Please contact your regional sales office technical team. <sup>\*2</sup> Requires Wi-Fi interface MAC-567IF-E.



## MELCloud Wi-Fi Connectivity



Featuring the award-winning



MELCloud is a cloud based solution for controlling your Mitsubishi Electric Ecodan heating system either locally or remotely by PC, Mac, Tablet or Smartphone via the internet.

The set up and remote operation of your Ecodan heating system via MELCloud is simple and straight forward. All you need is a wireless connection where the Ecodan is located and an internet connection on your mobile or fixed device.

To set up the system, the router and the Ecodan Wi-Fi interface need pairing and this is done simply and quickly via the WPS button found on all mainstream routers, or using access point pairing via a mobile phone.

### Key Features

- Access to remote maintenance and technical support
- View and control your heating and hot water from anywhere in the world
- Reports on energy use, temperature history and more
- Live weather feed at location of Ecodan
- Share / restrict access and control of the Ecodan system
- Compatible with Alexa
- Available for any FTC6 based system, new or retrofit using a MAC-567IF-E interface



## MELConsole

**Ecodan Helpdesk**

Once connected, you can also enjoy the benefits of **MELConsole** which provides **remote maintenance & technical support** reducing the need of a visit from an engineer.

**MELConsole**  
Remote Maintenance & Technical Support



**24/7 Technical Support**





For a demonstration of Mitsubishi Electric's MELCloud visit our website: [melcloud.com](http://melcloud.com) and click 'Login'



Available for PC, Mac, Tablet or Smartphone

## Supported Ecodan Models

All **Ecodan FTC6** systems have energy monitoring functionality as standard and the ability to connect to MELCloud. A MAC-567IF-E Wi-Fi Interface is required to use MELCloud.

| Wi-Fi Interface       | MAC-567IF-E                |
|-----------------------|----------------------------|
| DESCRIPTION           | Wi-Fi Interface            |
| CONNECT TO            | Indoor Unit                |
| MAX NUMBER OF UNITS   | 1                          |
| COMPATIBILITY         | Ecodan FTC6                |
| POWER SUPPLY          | From indoor unit           |
| DIMENSIONS (WxDxH) mm | 79 x 18.5 x 44             |
| CONTROL               | On/Off                     |
|                       | Mode                       |
|                       | Heating Setpoint           |
|                       | Hot Water Boost            |
|                       | 2-Zone Control             |
|                       | Holiday Mode               |
|                       | Timer                      |
|                       | Frost Protection           |
| MONITOR               | On/Off                     |
|                       | Mode                       |
|                       | Heating Setpoint           |
|                       | Tank Temperature           |
|                       | Tank Target Temperature    |
|                       | Outside Temperature        |
|                       | Fault Codes                |
|                       | Consumed Electrical Energy |
|                       | Produced Heat Energy       |

## Supported Hardware / Software

### Tablets (Apps or Web Client)

Apple iPad / iPad mini  
Samsung Galaxy Tab / Note  
Google Nexus  
Dell Latitude 10  
Microsoft Surface  
BlackBerry PlayBook

### Smartphones (Apps or Web Client)

Apple iPhone  
Samsung Galaxy S  
Google Nexus  
Nokia Lumia  
BlackBerry Z10

### Operating Systems

Android  
Apple iOS / OS  
Microsoft Windows  
BlackBerry

### Internet Browsers (Web Client only)

Microsoft Internet Explorer  
Google Chrome  
Apple Safari  
Mozilla Firefox  
Opera

### Please Note:

This is not definitive list of all compatible devices, other similar devices which use supported Operating Systems or Internet Browsers should also work either via dedicated Apps or via Web Browser / Web Client options. Please note that user experience may vary slightly depending on hardware and software combination.

## Energy Monitoring Packs

All Ecodan Flow Temperature Control (FTC6 / FTC5) systems come with free energy monitoring as standard. System users are able to measure both consumed electrical energy and produced heat energy to the nearest kWh. Further energy monitoring packs are also available, ranging from electric meter packs, through to a Renewable Heat Incentive (RHI) compliant Metering and Monitoring Service Pack (MMSP) which allows additional RHI payments to be claimed.

In addition to the basic system functionality features, i.e. hot water and heating status, the system's energy performance can also now be viewed. Historic energy consumption, heat production and run cost reports are available via the main controller, SD card or MELCloud.



| PACK       | 4kW | 5kW | 6kW | 8.5kW  | 11.2kW | 14kW   | DESCRIPTION                                                                                   | ELECTRIC METER | HEAT METER | DATA STORAGE | OPTIONAL WI-FI |
|------------|-----|-----|-----|--------|--------|--------|-----------------------------------------------------------------------------------------------|----------------|------------|--------------|----------------|
| EMP1       | ✓   | ✓   | ✓   | ✓      | ✓      | ✓      | Energy input & output estimation included as standard                                         |                |            |              | -              |
| EMP2       | ✓   | ✓   | ✓   | ✓      | ✓      | ✓      | Electrical energy measurement consumption pack                                                | 2              |            |              | -              |
| EMP3-M-1Ph |     | ✓   | ✓   | ✓ *VAA | ✓ *VAA | ✓ *VHA | MMSP compliant electrical energy consumption and heat generation pack with cloud data storage | 2              | 1          | ✓            | Optional*      |
| EMP3-M-3Ph |     |     |     | ✓ *YAA | ✓ *YAA | ✓ *YHA | MMSP compliant electrical energy consumption and heat generation pack with cloud data storage | 2              | 1          | ✓            | Optional*      |
| EMP3-Q-1Ph | ✓   |     |     |        |        |        | MMSP compliant electrical energy consumption and heat generation pack with cloud data storage | 2              | 1          | ✓            | Optional*      |
| EMPH-M-1Ph |     | ✓   | ✓   | ✓      | ✓      | ✓      | Electrical energy consumption and heat generation pack for hybrid systems                     | 2              | 1          |              | -              |

\* Wi-Fi Interface is required by OIGEM for MMSP. Note that the interface is included as standard within Ecodan system packages. Please contact your local sales office for guidance.

# i-LIFE2 Slim

## Fan Assisted Radiator

The i-Life2 Slim Fan Assisted Radiator designed to work seamlessly with existing heating or renewable technologies.

### Key Features

- **Stylish** - At only 13cm deep, the sleek and elegant satin-white, wall mounted cabinet is designed to blend seamlessly into any setting
- **Flexible** - Packed with advanced controls and functions, the i-Life2 Slim will work with traditional heating or renewable systems such as heat pumps
- **Easy to Use** - Airflow is managed by deflectors at the top of the unit, which open and close automatically ensuring fast even heat distribution



| MODEL                        |                                                        | i-LIFE2 SLIM DLMV 80 | i-LIFE2 SLIM DLMV 170 |
|------------------------------|--------------------------------------------------------|----------------------|-----------------------|
| CAPACITY (W) <sup>2 *8</sup> |                                                        | 500 / 780 / 880      | 1060 / 1660 / 2130    |
| ELECTRICAL DATA              | Electrical Supply                                      | 230v, 50Hz           | 230v, 50Hz            |
|                              | Phase                                                  | Single               | Single                |
|                              | Fan Power Input (W) - (Lo-Mi-Hi) <sup>1 *8</sup>       | 0.7 / 4.6 / 10.7     | 1.62 / 10.1 / 19.0    |
| WATER DATA                   | Water Flow Rate (l/min) - (Lo-Mi-Hi) <sup>2</sup>      | 1.2 / 2.4 / 2.4      | 3 / 4.8 / 6           |
|                              | Water Pressure Drop (kPa) - (Lo-Mi-Hi) <sup>2 *8</sup> | 3 / 6 / 8            | 2 / 5 / 8             |
| AIR DATA                     | Air Flow Rate (m3/h) - (Lo-Mi-Hi) <sup>1</sup>         | 51 / 93 / 125        | 122 / 221 / 277       |
| SOUND DATA                   | Sound Pressure (dB(A)) - (Lo-Mi-Hi) <sup>3</sup>       | 24 / 35 / 41         | 26 / 36 / 42          |
|                              | Sound Power (dB(A)) - (Lo-Mi-Hi) <sup>4 *7 *8</sup>    | 33 / 44 / 50         | 35 / 45 / 51          |
| DIMENSIONS (mm) <sup>5</sup> | Width                                                  | 737                  | 937                   |
|                              | Depth                                                  | 131                  | 131                   |
|                              | Height                                                 | 579                  | 579                   |
| WEIGHT (kg) <sup>5</sup>     |                                                        | 17                   | 20                    |



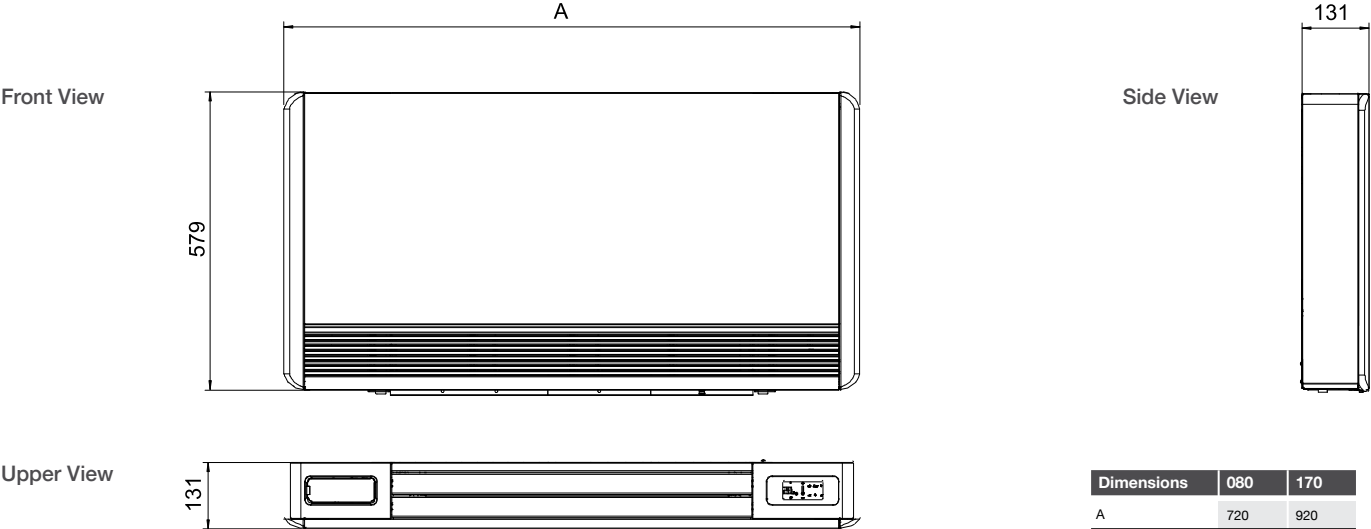
i-Life2 Slim units are managed by a variable speed fan motor that continuously modulates the fan speed

1. Room temperature 27°C d.b./19°C w.b.; Chilled water (in/out) 7/12°C.
2. Room temperature 20°C d.b.; Hot water (in/out) 45/40 °C.
3. Sound pressure level in free field on a reflective surface, 1m from fan front and 1m from the ground. Non-binding value obtained from sound power level.
4. Sound power on the basis of measurements made in compliance with ISO 374 and Eurovent 8/2.
5. Unit in standard configuration/execution, without optional accessories.
6. Values in compliance with EN14511-3:2013.
7. Values in compliance with [REGULATION (UE) N.2016/2281].
8. Certified data in EUROVENT.

Product Dimensions

i-LIFE2 SLIM DLMV 80 & i-LIFE2 SLIM DLMV 170

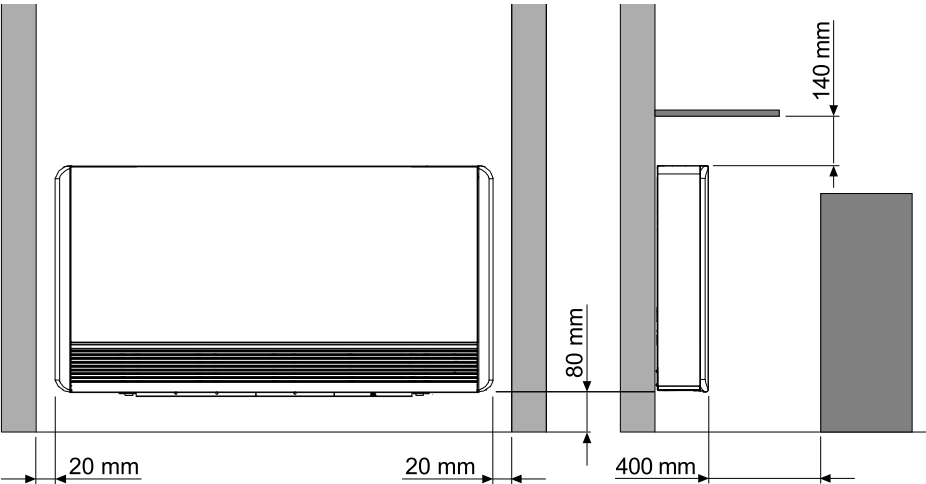
All measurement in mm



Installation Location

i-LIFE2 SLIM DLMV 80 & i-LIFE2 SLIM DLMV 170

All measurement in mm



## Accessories / Optional Extras

| DESCRIPTION                                                            | MODEL REF.      |
|------------------------------------------------------------------------|-----------------|
| <b>QUHZ / PUZ</b>                                                      |                 |
| Wireless Controller Transmitter                                        | PAR-WT50R-E     |
| Wireless Controller Receiver                                           | PAR-WR51R-E     |
| Modbus CN105 Interface                                                 | ACC-BEMS-A1M    |
| ODU Isolator 20A IP65                                                  | ACC-ISO-020     |
| ODU Isolator 32A IP65                                                  | ACC-ISO-032     |
| ODU Isolator 40A IP65                                                  | ACC-ISO-040     |
| FTC6 High Temperature Sensor 5m Cable                                  | PAC-TH012HT-E   |
| FTC6 High Temperature Sensor 30m Cable                                 | PAC-TH012HTL-E  |
| FTC Flow and Return Temperature Sensors 5m Cable                       | PAC-TH011-E     |
| FTC6 Cylinder DHW Temp Sensor 5m Cable                                 | PAC-TH011TK2-E  |
| FTC6 Cylinder DHW Temp Sensor 30m Cable                                | PAC-TH011TKL2-E |
| FTC Service Diagnostic Tool                                            | PAC-SK52ST      |
| Ecodan Anti-Vibration Fix-It-Foot 600mm Kit                            | ACC-AVM-001     |
| Ecodan Reinforced Lightweight Slab +Anti-Vibration Fix-It-Foot Kit     | ACC-AVS-001     |
| Std Drain Socket Kit                                                   | PAC-SG61DS-E    |
| 10L Anti Freeze                                                        | ACC-AFZ-010     |
| 25L Anti Freeze                                                        | ACC-AFZ-025     |
| Insulated Through Wall Sleeve Kit (85mm)                               | ACC-FCP-TW1     |
| External Pipework Trunking Length (1m x 140mm Black x2)                | ACC-TRU-LE1     |
| External Pipework Trunking Length (2m x 140mm Black x1)                | ACC-TRU-LE2     |
| External Pipework Trunking Length Connector (140mm Black)              | ACC-TRU-JO1     |
| External Pipework Trunking Wall Cover (140mm Black)                    | ACC-TRU-CO1     |
| External Pipework Trunking Elbow (140mm Black)                         | ACC-TRU-EL1     |
| External Pipework Trunking External Corner (140mm Black)               | ACC-TRU-EC1     |
| External Pipework Trunking Internal Corner (140mm Black)               | ACC-TRU-IC1     |
| Pack for 2 Zone Systems with Equal Temperatures                        | ACC-2ZP-K01     |
| Pack for 2 Zone Systems with Different Temperatures                    | ACC-2ZP-K02     |
| ALL Flow Balancing Valve                                               | ACC-FBV-40L     |
| Insulated Flexible Connection Pipes (OUHZ: 750mm x 15mm) Standard Pair | ACC-FCP-QUHZ    |
| Insulated Flexible Connection Pipes (22mm x 500mm) Standard Pair       | ACC-FCP-S22     |
| Insulated Flexible Connection Pipes (28mm x 500mm) Standard Pair       | ACC-FCP-S28     |
| Insulated Flexible Connection Pipes (28mm x 300mm) Elbow Pair          | ACC-FCP-E28     |
| 12L Exp Vessel +PRV                                                    | PAC-EVP12-E1    |

# Heating

Ecodan Commercial Renewable Heating Systems



## QAHV

### Monobloc Air Source Heat Pump



Specifically designed for commercial sanitary hot water application, where gas boilers, combined heat and power systems (CHP) or electric water heating have been traditionally utilised, the 40kW QAHV provides a low carbon solution for hotels, apartment blocks, leisure centres, hospitals, care homes, restaurants and education.

Utilising the natural and stable refrigerant CO<sub>2</sub> (R744), the environmentally clean solution enables compliance to strict local planning laws and boosts BREEAM points. Compounded by the increasing decarbonisation of the electrical grid, the QAHV provides a high efficiency, low carbon hot water delivery solution with leaving water temperature up to 90°C.

#### Key Features

- High efficiency at high flow temperatures
- Utilises CO<sub>2</sub> refrigerant which has a GWP of 1
- Uses a unique twisted and spiral gas cooler to enhance energy efficiency
- Full heating capacity down to -3°C outdoor temperature and operates down to -25°C
- Super low noise levels
- Able to utilise with an indirect system



| OUTDOOR UNIT                          |                                                          | QAHV-N560YA-HPB                                           |
|---------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|
| WATER HEATING 65°C <sup>*1</sup>      | CAPACITY (kW)                                            | 40                                                        |
|                                       | POWER INPUT (kW)                                         | 10.31                                                     |
|                                       | CURRENT INPUT (A)                                        | 16.3                                                      |
|                                       | COP                                                      | 3.88                                                      |
| WATER HEATING 65°C <sup>*2</sup>      | CAPACITY (kW)                                            | 40                                                        |
|                                       | POWER INPUT (kW)                                         | 10.97                                                     |
|                                       | CURRENT INPUT (A)                                        | 18.3                                                      |
|                                       | COP                                                      | 3.65                                                      |
| WATER HEATING 65°C <sup>*3</sup>      | CAPACITY (kW)                                            | 40                                                        |
|                                       | POWER INPUT (kW)                                         | 11.6                                                      |
|                                       | CURRENT INPUT (A)                                        | 18.7                                                      |
|                                       | COP                                                      | 3.44                                                      |
| WATER HEATING ENERGY EFFICIENCY CLASS | FOR MEDIUM TEMPERATURE APPLICATION                       | A                                                         |
| TEMPERATURE RANGE                     | INLET WATER TEMPERATURE (°C)                             | 5 ~ 63                                                    |
|                                       | OUTLET WATER TEMPERATURE (°C)                            | 55 ~ 90                                                   |
|                                       | OUTDOOR TEMPERATURE (°C)                                 | -25~43                                                    |
| ELECTRICAL                            | MAX CURRENT INPUT (A)                                    | 33.8                                                      |
|                                       | ELECTRICAL SUPPLY (V / Hz)                               | 380-415v, 50Hz                                            |
|                                       | PHASE                                                    | 3                                                         |
|                                       | FUSE RATING - MCB SIZES (A) <sup>*5</sup>                | 40                                                        |
| WATER DETAIL                          | INLET / OUTLET (mm (in.))                                | 19.05 (Rc 3/4"), screw pipe / 19.05 (Rc 3/4"), screw pipe |
|                                       | ALLOWABLE EXTERNAL PUMP HEAD (kPa)                       | 77                                                        |
| DIMENSIONS (mm)                       | WIDTH                                                    | 1220                                                      |
|                                       | DEPTH                                                    | 760                                                       |
|                                       | HEIGHT                                                   | 1837 (1777 without legs)                                  |
| WEIGHT (kg)                           |                                                          | 400                                                       |
| NOISE LEVEL                           | SOUND PRESSURE <sup>*4</sup> (dB(A))                     | 56                                                        |
| REFRIGERANT                           | TYPE                                                     | R744 (GWP 1)                                              |
|                                       | REFRIGERANT CHARGE (kg) / CO <sub>2</sub> EQUIVALENT (t) | 6.5 / 0.0065                                              |

<sup>\*1</sup> Under Normal heating conditions at the outdoor temp, 16°CDB/12°CWB, the outlet water temperature 65°C, and the inlet water temperature 17°C

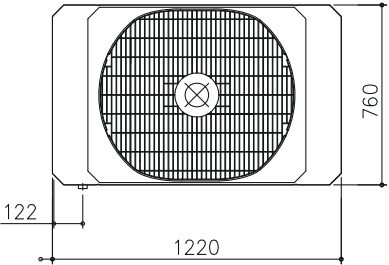
<sup>\*2</sup> Under Normal heating conditions at the outdoor temp, 7°CDB/6°CWB, the outlet water temperature 65°C, and the inlet water temperature 9°C

<sup>\*3</sup> Under Normal heating conditions at the outdoor temp, 7°CDB/6°CWB, the outlet water temperature 65°C, and the inlet water temperature 15°C

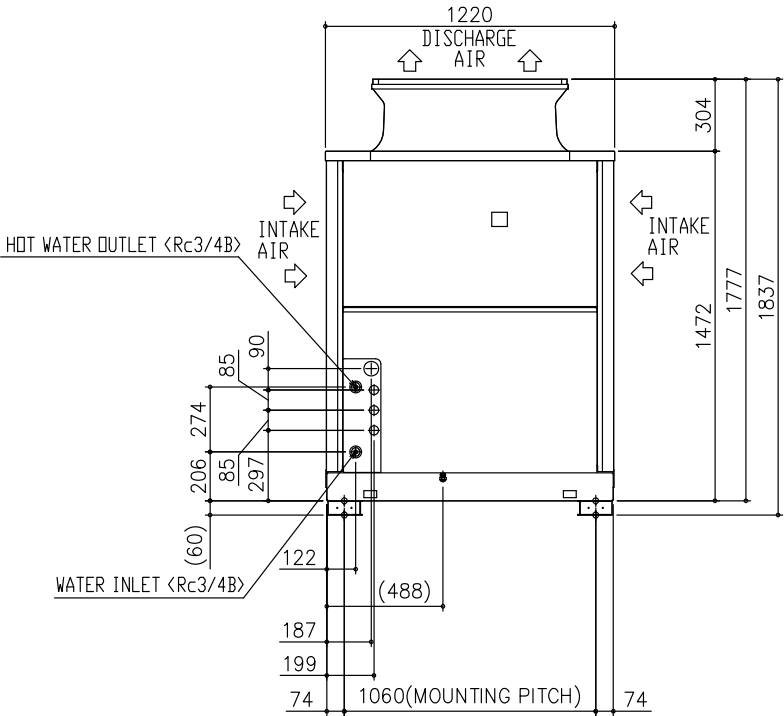
<sup>\*4</sup> Measured 1m from the front of the unit in an anechoic room

<sup>\*5</sup> MCB Sizes BS EN60898-2 & BS EN60947-2

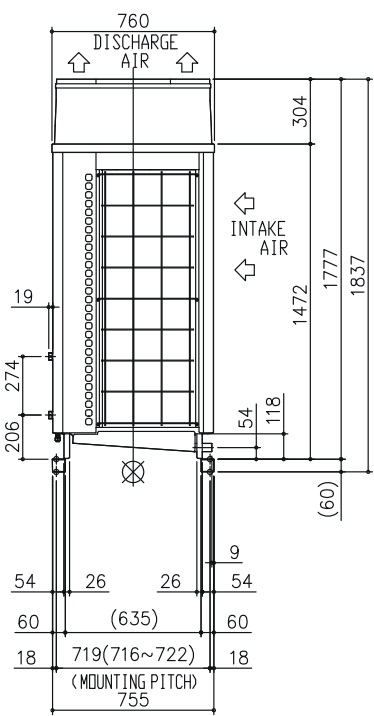
Upper View



Front View



Side View





## CAHV

### Monobloc Air Source Heat Pump



MCS

CERTIFIED

Certificate Number: MCS HP0002  
Product Type: Heat Pumps  
Product Reference: CAHV-P500YB-HPB

Specifically designed for large applications, the Ecodan CAHV air source heat pump monobloc system can operate singularly, or form part of a multiple unit system. The CAHV also comes equipped with a wide range of controller features as standard.

A multiple unit system has the ability to cascade available units on and off to meet the load from a building. As an example of this modulation, a 16 unit system allows 0.5kW increments of capacity, from 18kW all the way up to 688kW. This level of modulation is unprecedented within the heating industry and with cascade and rotation built in as standard, the Ecodan CAHV system is perfectly suited to a wide range of commercial applications.

#### Key Features

- Multiple unit cascade control of up to 688kW capacity, only water and electrical connections needed
- Ability to rotate units based on accumulated run hours
- Provides from 25°C up to 70°C water flow temperatures without boost heaters
- Low maintenance



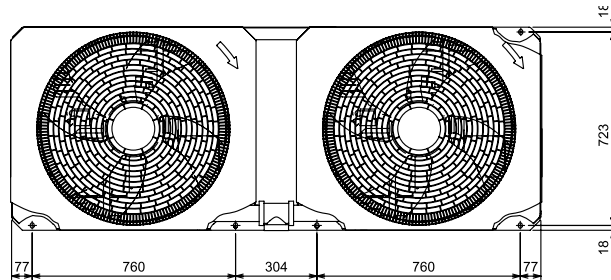
| OUTDOOR UNIT                                                |                  | CAHV-P500YB-HPB          |
|-------------------------------------------------------------|------------------|--------------------------|
| HEAT PUMP SPACE<br>HEATER - 55°C                            | ErP Rating       | A++                      |
|                                                             | $\eta_s$         | 125%                     |
|                                                             | SCOP             | 3.19                     |
| HEAT PUMP SPACE<br>HEATER - 35°C                            | ErP Rating       | A+                       |
|                                                             | $\eta_s$         | 139%                     |
|                                                             | SCOP             | 3.54                     |
| HEATING*1<br>(A-3/W35)                                      | Capacity (kW)    | 42.6                     |
|                                                             | Power Input (kW) | 15.2                     |
|                                                             | COP              | 2.80                     |
| OPERATING AMBIENT TEMPERATURE (°C DB)                       |                  | -20~+40°C                |
| SOUND PRESSURE LEVEL AT 1M (dBA)*2,3                        |                  | 59                       |
| LOW NOISE MODE (dBA)*2                                      |                  | Variable                 |
| FLOW RATE (l/min)                                           |                  | 126                      |
| WATER PRESSURE DROP (kPa)                                   |                  | 18                       |
| DIMENSIONS (mm)                                             | Width            | 1978                     |
|                                                             | Depth            | 759                      |
|                                                             | Height           | 1710 (1650 without legs) |
| WEIGHT (kg)                                                 |                  | 526                      |
| ELECTRICAL SUPPLY                                           |                  | 380-415v, 50Hz           |
| PHASE                                                       |                  | 3                        |
| NOMINAL RUNNING CURRENT [MAX] (A)                           |                  | 17.6 [52.9]              |
| FUSE RATING - MCB SIZES (A)*4                               |                  | 63                       |
| REFRIGERANT CHARGE (kg)<br>/ CO <sub>2</sub> EQUIVALENT (t) | R407C (GWP 1774) | 11 / 19.5                |

\*1 Under normal heating conditions at outdoor temp: -3°CDB / -4°CWB, outlet water temp 35°C, inlet water temp 30°C \*2 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

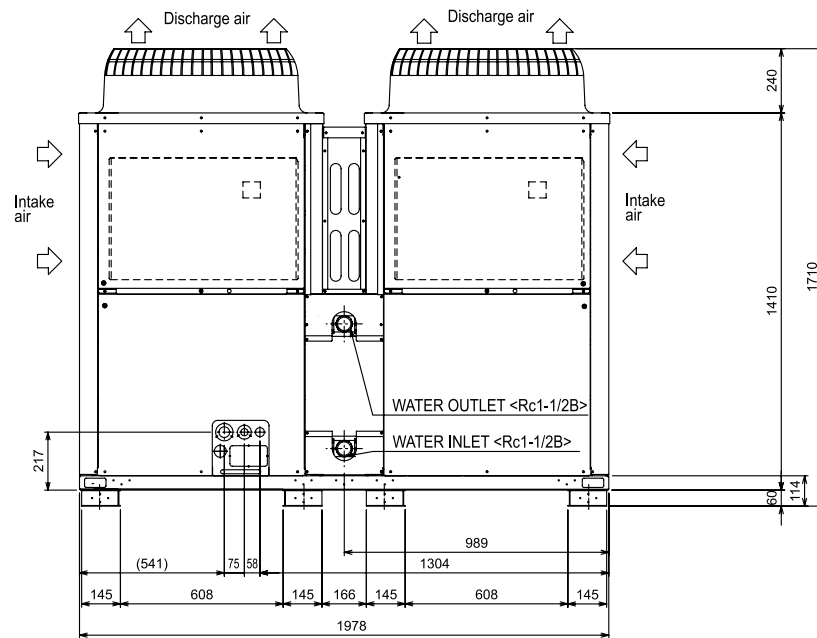
\*3 Sound power level of the CAHV-P500YB-HPB is 70.7dBA. Tested to BS EN12102 \*4 MCB Sizes BS EN60898-2 & BS EN60947-2

$\eta_s$  is the seasonal space heating energy efficiency (SSHEE)  $\eta_{wh}$  is the water heating energy efficiency

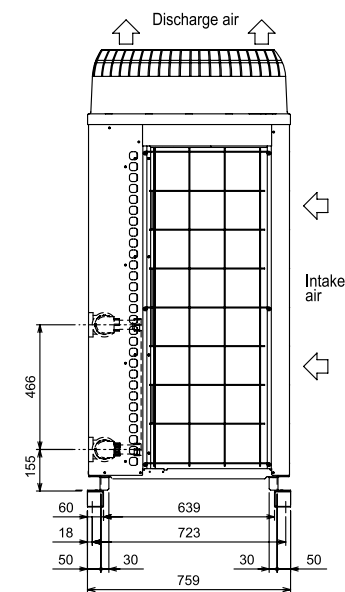
Upper View



Front View



Side View





## CRHV

### Monobloc Ground / Water Source Heat Pump



PLEASE NOTE: Full design criteria is needed to ascertain the capacity which could change based on heat source temperature and building flow temperature.

- \*1 Under normal heating conditions at brine inlet: 0°C, outlet water temp 35°C as tested to BS EN14511 (60kW)
- \*2 Under normal heating conditions at brine inlet: 0°C, outlet water temp 35°C as tested to BS EN14511 (45kW)
- \*3 Under normal heating conditions at water inlet: 10°C, outlet water temp 35°C as tested to BS EN14511 (60kW)
- \*4 Under normal heating conditions at water inlet: 10°C, outlet water temp 35°C as tested to BS EN14511 (45kW)
- \*5 Sound power level as tested to BS EN12102
- \*6 Heat source inlet temperature above 27°C and up to 45°C option must reverse the inlet and outlet heat source connections and refer to manual for dip switch changes
- \*7 The system should be adequately protected from freezing
- \*8 MCB Sizes BS EN60898-2 & BS EN60947-2
- \* LTHW - Low Temperature Hot Water
- \* Please use adequate frost protection to ensure pipework and the unit do not freeze if the system is powered down
- \* Please do not use ground water or well water directly within the unit
- \* The water circuit must be a closed circuit
- $\eta_{s,h}$  is the seasonal space heating energy efficiency (SSHEE)
- $\eta_{w,h}$  is the water heating energy efficiency

The inverter driven Ecodan CRHV monobloc ground / water source heat pump can operate singly, or be banked together to create a system that can modulate and cascade available units on and off to meet the load from a building.

This level of modulation is unprecedented within the heating industry, and with cascade and rotation built in as standard, the Ecodan CRHV system is perfectly suited to a wide range of commercial applications.

#### Key Features

- Wide range of heat sources - bore holes, slinkies, aquifers, lakes, rivers and waste heat
- Multiple unit cascade control of up to 16 units / 960kW
- Ability to rotate units based on accumulated run hours
- Provides up to 65°C water flow temperatures without booster heaters
- Low maintenance, just electrical and water connections
- Heat recovery applications can be achieved by moving heat between applications
- Passive cooling possible by exchanging ground / water source with a chilled water system

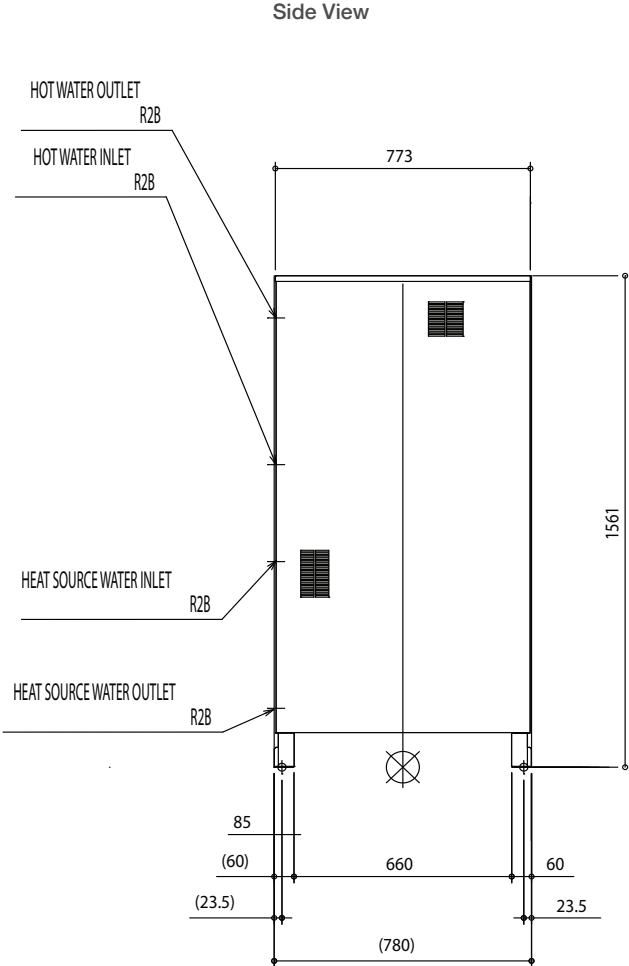
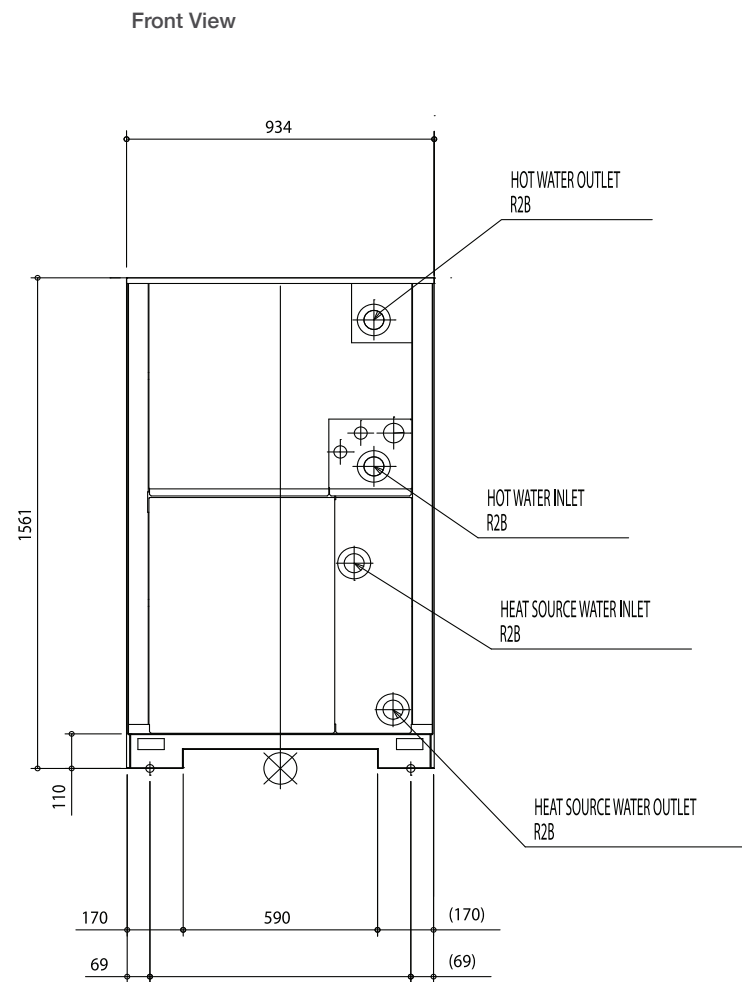


| CRHV HEAT PUMP                                                   |                                                     | CRHV-P600YA-HPB                       |
|------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------|
| HEAT PUMP SPACE HEATER - 55°C                                    | ErP Rating                                          | A++                                   |
|                                                                  | $\eta_{s,h}$                                        | 127%                                  |
| HEAT PUMP SPACE HEATER - 35°C                                    | SCOP                                                | 3.37                                  |
|                                                                  | ErP Rating                                          | A++                                   |
| HEATING <sup>*1</sup><br>(B0/W35)                                | $\eta_{s,h}$                                        | 153%                                  |
|                                                                  | SCOP                                                | 4.03                                  |
| SEASONAL EFFICIENCY EN14825 (SPF)                                | Capacity (kW)                                       | 60                                    |
|                                                                  | Power Input inc. pump (kW)                          | 14.20                                 |
| HEATING <sup>*2</sup><br>(B0/W35)                                | COP                                                 | 4.23                                  |
|                                                                  | B0/W35 (60kW)                                       | 4.33                                  |
| SEASONAL EFFICIENCY EN14825 (SPF)                                | Capacity (kW)                                       | 45                                    |
|                                                                  | Power Input inc. pump (kW)                          | 10.20                                 |
| HEATING <sup>*3</sup><br>(W10/W35)                               | COP                                                 | 4.41                                  |
|                                                                  | B0/W35 (45kW)                                       | 4.03                                  |
| SEASONAL EFFICIENCY EN14825 (SPF)                                | Capacity (kW)                                       | 60                                    |
|                                                                  | Power Input inc. pump (kW)                          | 11.90                                 |
| HEATING <sup>*4</sup><br>(W10/W35)                               | COP                                                 | 5.08                                  |
|                                                                  | W10/W35 (60kW)                                      | 5.09                                  |
| SEASONAL EFFICIENCY EN14825 (SPF)                                | Capacity (kW)                                       | 45                                    |
|                                                                  | Power Input inc. pump (kW)                          | 8.89                                  |
| SOUND DATA                                                       | COP                                                 | 5.11                                  |
|                                                                  | W10/W35 (45kW)                                      | 4.55                                  |
| WATER DATA                                                       | Pressure Level L <sub>pA</sub> at 1m (dBA)          | 50                                    |
|                                                                  | Power Level L <sub>wA</sub> (dBA) <sup>*5</sup>     | 66                                    |
| Flow Rate Range                                                  | Heat Source (Brine) (l/s (m <sup>3</sup> /hr))      | 1.5 to 4.1 (5.4 to 15)                |
|                                                                  | Building Side (LTHW) (l/s (m <sup>3</sup> /hr))     | 1.5 to 4.4 (5.4 to 16)                |
| Mechanical Connections                                           | Heat Source Outlet (Brine) (mm ("))                 | 50.8 (R2) screw                       |
|                                                                  | Heat Source Inlet (Brine) (mm ("))                  | 50.8 (R2) screw                       |
| Operating Temperature Range                                      | Building Side Outlet (LTHW) (mm ("))                | 50.8 (R2) screw                       |
|                                                                  | Building Side Inlet (LTHW) (mm ("))                 | 50.8 (R2) screw                       |
| Heat Source Fluid Type <sup>*7</sup>                             | Heat Source Inlet (Brine) (°C)                      | -5 to +27                             |
|                                                                  | Heat Source Inlet Option (Brine) (°C) <sup>*8</sup> | -5 to +45                             |
| Pressure Drop<br>(at 1.5l/s inc 30% glycol in heat source fluid) | Building Side Outlet (LTHW) (°C)                    | +30 to +65                            |
|                                                                  |                                                     | Min 30% Ethylene Glycol or equivalent |
| Maximum Working Pressure                                         | Heat Source (Brine) (kPa)                           | 12                                    |
|                                                                  | Building Side (LTHW) (kPa)                          | 7                                     |
| DIMENSIONS                                                       | Heat Source (Brine) (MPa(Bar))                      | 1 (10)                                |
|                                                                  | Building Side (LTHW) (MPa(Bar))                     | 1 (10)                                |
| WEIGHT (kg)                                                      | Width (mm)                                          | 934                                   |
|                                                                  | Depth (mm)                                          | 780                                   |
| REFRIGERANT                                                      | Height (mm)                                         | 1561                                  |
|                                                                  |                                                     | 395                                   |
| ELECTRICAL DATA                                                  | Type                                                | R410A                                 |
|                                                                  | Charge (kg) / CO <sub>2</sub> Equivalent (t)        | 9 / 18.7                              |
|                                                                  | Max pressure (MPa (Bar))                            | 4.15 (41.5)                           |
|                                                                  | Compressor Type                                     | Inverter Driven                       |
|                                                                  | Circuit type                                        | Hermetically Sealed System            |
|                                                                  | Electrical Supply                                   | 415v, 50Hz                            |
|                                                                  | Phase                                               | 3                                     |
|                                                                  | Maximum Running Current (A)                         | 44                                    |
|                                                                  | Fuse Rating - MCB Size (A) <sup>*9</sup>            | 50                                    |
|                                                                  |                                                     |                                       |

MCS

CERTIFIED

Certificate Number: MCS-HP0002  
Product Type: Heat Pumps  
Product Reference: CRHV-P600YA-HPB



## Accessories / Optional Extras

| DESCRIPTION                                    | MODEL REF.   |
|------------------------------------------------|--------------|
| <b>QAHV</b>                                    |              |
| Main Pipework Thermistor                       | TW-TH16      |
| Differential Pressure Switch for Water Systems | KS10-EP100S  |
| Wired Remote Controller                        | PAR-W31MAA-J |
| Centralised Controller                         | AE-200E      |
| AE-200E Wall Mounted Box - for Wall Mounting   | PAC-YG82TB   |
| Secondary Side Control Circuit Kit             | Q-1SCK       |
| <b>CAHV</b>                                    |              |
| Main Pipework Thermistor                       | TW-TH16      |
| Differential Pressure Switch for Water Systems | KS10-EP100S  |
| Wired Remote Controller                        | PAR-W21MAA-J |
| Centralised Controller                         | AE-200E      |
| AE-200E Wall Mounted Box - for Wall Mounting   | PAC-YG82TB   |
| <b>CRHV</b>                                    |              |
| Main Pipework Thermistor                       | TW-TH16      |
| Differential Pressure Switch for Water Systems | KS10-EP100S  |
| Wired Remote Controller                        | PAR-W21MAA-J |
| Centralised Controller                         | AE-200E      |
| AE-200E Wall Mounted Box - for Wall Mounting   | PAC-YG82TB   |
| External Temperature Sensor and Solar Guard    | TMP-O        |

# Ventilation

Fresh Air Ventilation Range





## VL-100(E)U<sub>5</sub>-E

### Wall Mounted Lossnay



The **VL-100** units supply fresh air inside a room using simultaneous supply and extract operation in an energy efficient manner.

The recovery of both latent heat and sensible heat ensures a comfortable internal environment as well as reducing heat losses, saving both energy and costs.

The compact unit with its simple installation makes it ideal for single room applications, such as small offices, bedrooms etc.

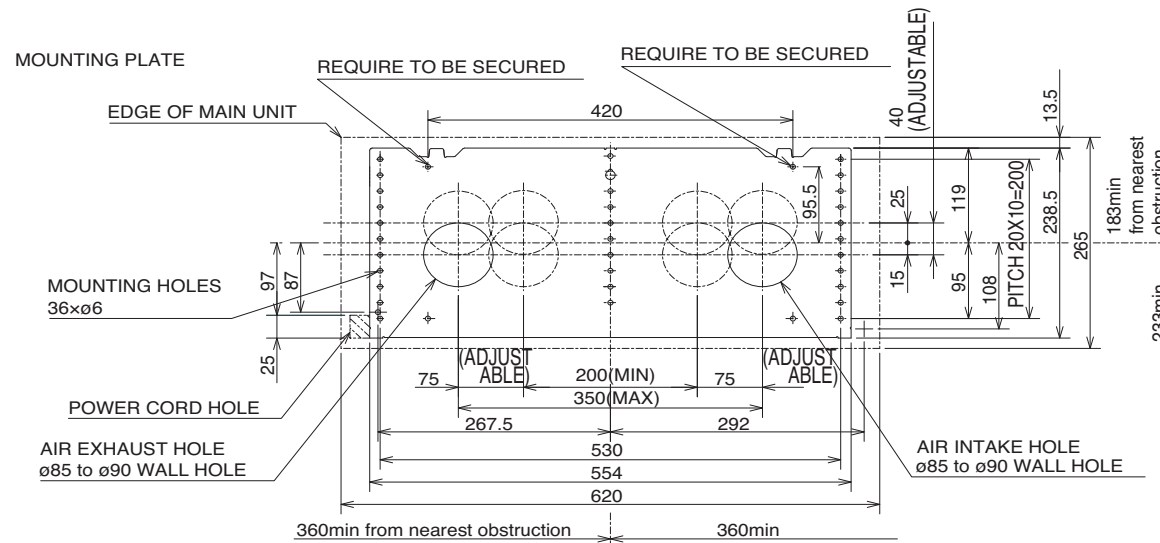
#### Key Features

- Effective fresh air ventilation with improved air quality
- Reduces heating / cooling costs
- Simple installation

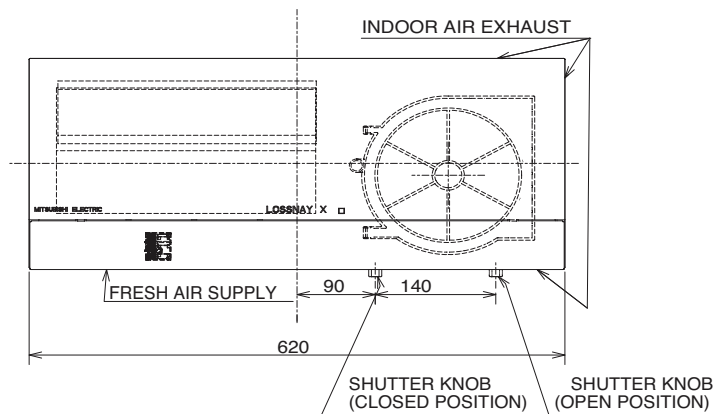
| MODEL                               |        | VL-100U <sub>5</sub> -E | VL-100EU <sub>5</sub> -E |
|-------------------------------------|--------|-------------------------|--------------------------|
| ELECTRICAL POWER SUPPLY             |        | 220-240V, 50Hz          | 220-240V, 50Hz           |
| PHASE                               |        | Single                  | Single                   |
| POWER CONSUMPTION (W)               | Low    | 17                      | 17                       |
|                                     | High   | 34                      | 34                       |
| AIRFLOW (m <sup>3</sup> /h)         | Low    | 61                      | 61                       |
|                                     | High   | 106                     | 106                      |
| SOUND PRESSURE LEVEL (dBA)          | Low    | 27                      | 27                       |
|                                     | High   | 38                      | 38                       |
| TEMPERATURE EXCHANGE EFFICIENCY (%) | Low    | 79                      | 79                       |
|                                     | High   | 72                      | 72                       |
| WEIGHT (kg)                         |        | 7.5                     | 7.5                      |
| DIMENSIONS (mm)                     | Width  | 620                     | 620                      |
|                                     | Depth  | 200                     | 200                      |
|                                     | Height | 265                     | 265                      |
| DUCT SIZE (mm)                      |        | 2 x Ø75                 | 2 x Ø75                  |
| FUSE RATING (BS88) - HRC (A)        |        | 6                       | 6                        |
| MAINS CABLE No. Cores               |        | 3                       | 3                        |
| CONTROL ON/OFF                      |        | Pull Cord               | Field Supplied           |

Notes: The VL-100U<sub>5</sub>-E includes a pull cord switch to control the unit. Also available as VL-100EU<sub>5</sub>-E which includes the option to fit a field supplied external wall switch

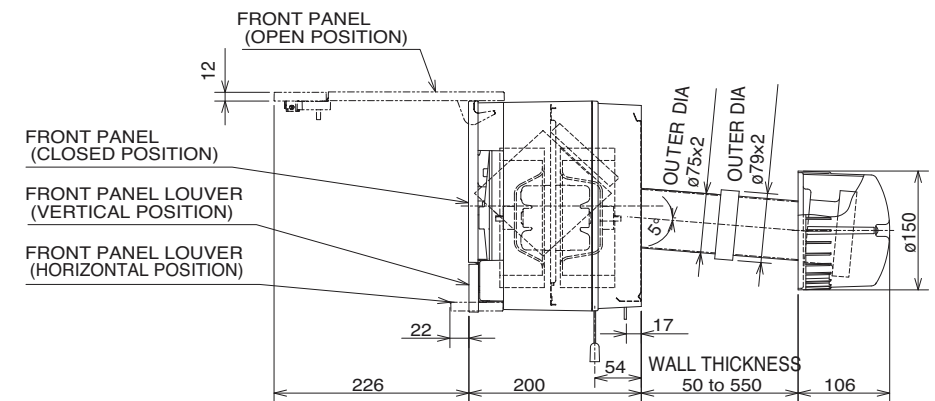
Front View



Upper View



Side View



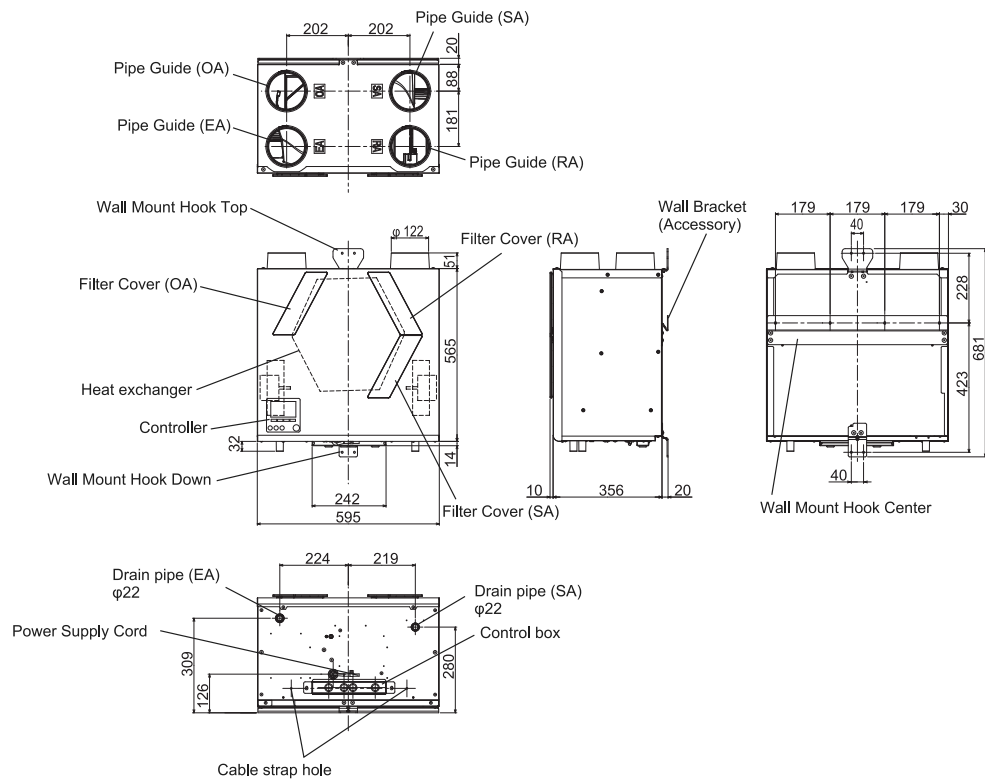


## Product Dimensions

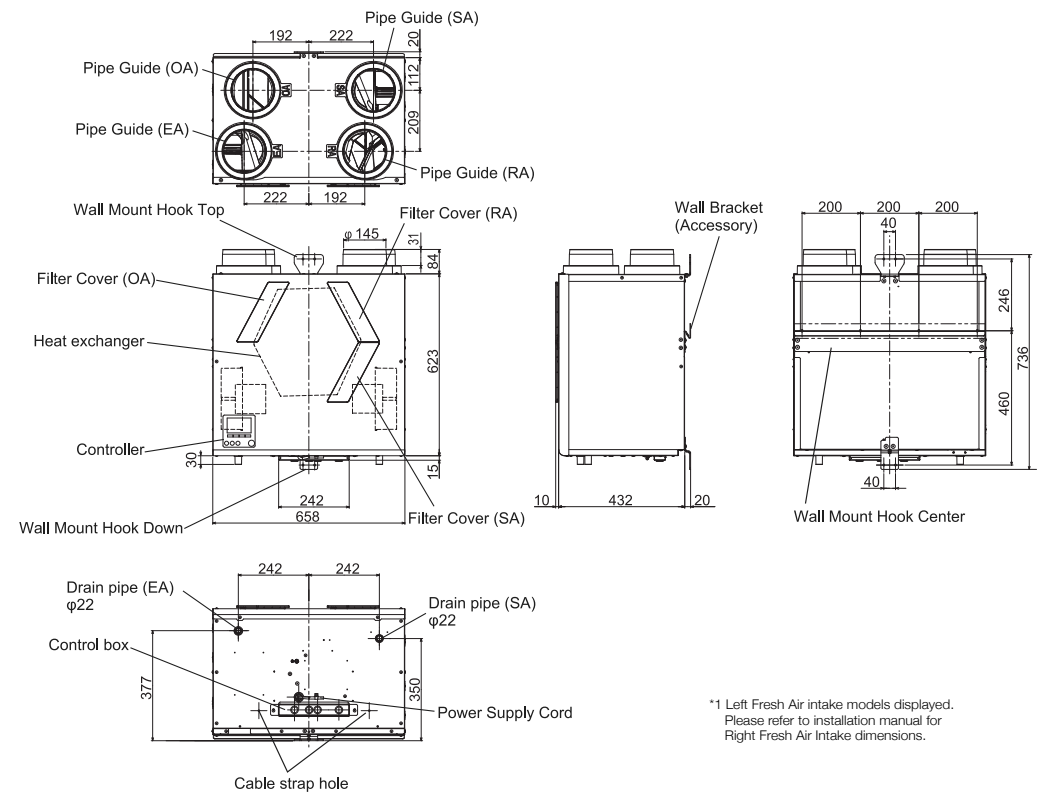
### VL-250CZPVU-(R/L)-E & VL-350CZPVU-(R/L)-E

All measurement in mm

VL-250CZPVU-L-E<sup>\*1</sup>



VL-350CZPVU-L-E<sup>\*1</sup>

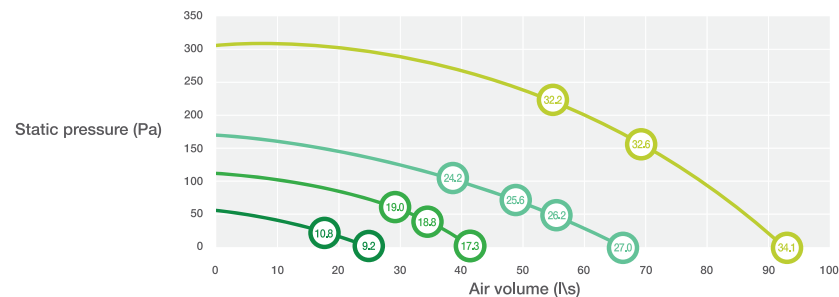


\*1 Left Fresh Air intake models displayed. Please refer to installation manual for Right Fresh Air Intake dimensions.

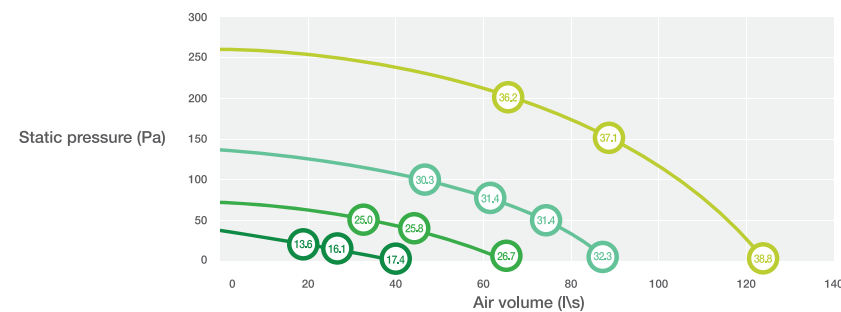
## Performance curves and breakout sound data

### VL-250CZPVU-(R/L)-E & VL-350CZPVU-(R/L)-E

VL-250CZPVU-(R/L)-E



VL-350CZPVU-(R/L)-E



Note: dB(A) level measured at 3m hemispherical. Full sound power spectrum available for breakout and in-duct upon request.



## Accessories / Optional Extras

| DESCRIPTION                                                     | MODEL REF.           |
|-----------------------------------------------------------------|----------------------|
| <b>VL-100(E)U5-E</b>                                            |                      |
| High Efficiency Filter                                          | <b>P-100HF5-E</b>    |
| Extension Pipe For VL-100U                                      | <b>P-100P-E</b>      |
| Extension Pipe For VL-100U                                      | <b>P-100PJ-E</b>     |
| <b>VL-(250-500)CZPVU-(R/L)-E</b>                                |                      |
| Standard filter for VL-250CZPVU Coarse 55% / G3                 | <b>P-250F-E</b>      |
| Standard filter for VL-350CZPVU Coarse 55% / G3                 | <b>P-350F-E</b>      |
| Standard filter for VL-500CZPVU Coarse 55% / G3                 | <b>P-500F-E</b>      |
| Medium efficiency filter for VL-250CZPVU ePM2.5 50% / M6        | <b>P-250PF-E</b>     |
| Medium efficiency filter for VL-350CZPVU ePM2.5 50% / M6        | <b>P-350PF-E</b>     |
| Medium efficiency filter for VL-500CZPVU ePM2.5 50% / M6        | <b>P-500PF-E</b>     |
| NOx supply air filter for VL-250CZPVU-E                         | <b>P-250NF-E</b>     |
| NOx supply air filter for VL-350CZPVU-E                         | <b>P-350NF-E</b>     |
| NOx supply air filter for VL-500CZPVU-E                         | <b>P-500NF-E</b>     |
| Acoustic top box for VL-250CZPVU-E                              | <b>P-250SB-E</b>     |
| Acoustic top box for VL-350CZPVU-E                              | <b>P-350SB-E</b>     |
| Acoustic top box for VL-500CZPVU-E                              | <b>P-500SB-E</b>     |
| VL-CZPVU remote controller cover and 1m cable with noise filter | <b>P-RCC-E</b>       |
| MELCloud Wi-Fi Interface                                        | <b>MAC-567IF-E1H</b> |



Telephone: 01707 282880

email: [heating@meuk.mee.com](mailto:heating@meuk.mee.com)

web: [heating.mitsubishielectric.co.uk](http://heating.mitsubishielectric.co.uk)

UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division

Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880 Fax: 01707 278881

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (00353)1

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**Note:** The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP:4). \*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), R407C (GWP:1650) or R134a (GWP:1300).



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to the environment

