

The Renewable Solutions Provider  
Making a World of Difference

# Heating



Air Conditioning | Heating  
Ventilation | Controls



Heating





**MELCloud** is a new Cloud based solution for controlling your Mitsubishi Electric Ecodan systems either locally or remotely by PC, Mac, Tablet or Smartphone via the Internet.

Increasing energy bills, the need to reduce carbon emissions and the raft of challenging legislation are driving the demand for alternative forms of heating to improve energy efficiency.

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

The award winning Ecodan heat pump range is suitable for both small and large projects and delivers effective, low carbon heating and hot water. Ecodan systems provide a simple, renewable solution that rivals traditional heating systems.

- Helps achieve renewable energy targets
- Capable of reducing running costs and CO<sub>2</sub> emissions
- Easy to design, install and maintain
- Fully scalable and can work independently or in conjunction with other systems
- Optimised systems from 4kW to 688kW
- MCS approved

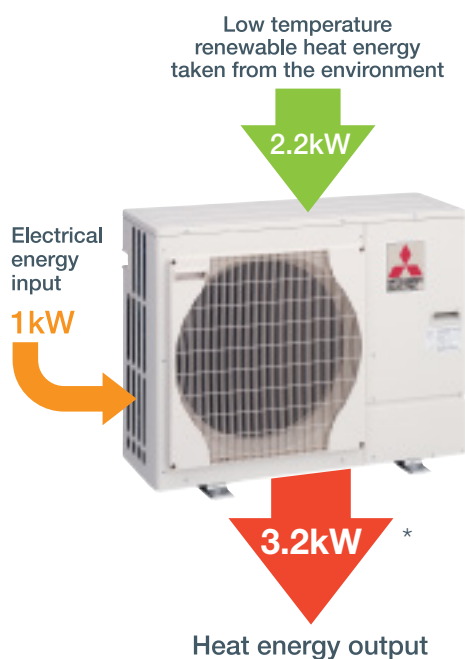
From small flats to large detached houses, office blocks, schools and community heating schemes, Ecodan is the ideal choice to provide reliable space heating and hot water all year round.



## How Ecodan air source heat pumps work

Ecodan heat pumps require only a small amount of electricity to harvest, upgrade and move heat from one location to another.

To achieve this a **vapour compression cycle** is used, which has 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.

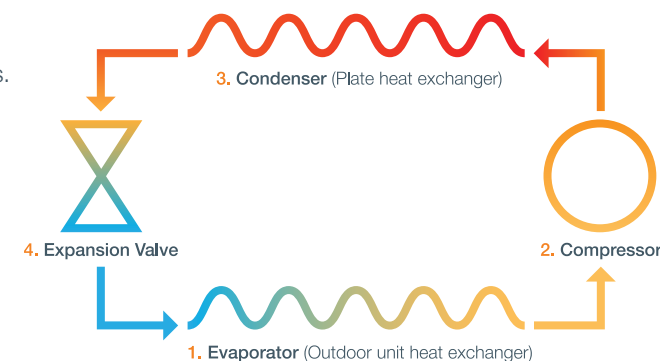


\*As independently tested by BSRIA based upon BSEN14511 Part 3 standard rating conditions. Due to the method of operation, the performance of heat pumps will vary based upon the temperature of the heat source and the requirements of the heat delivered. The BSEN14511 testing relates to the heat pump performance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

### The vapour compression cycle ▼

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

1. The refrigerant passes into the evaporator and heat energy from the outside air passes over the evaporator causing the refrigerant to increase in pressure and change to 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. The hot refrigerant gas is then condensed as it passes across one side of a plate heat exchanger. The heat is transferred to the cooler side (water side) of the heat exchanger, and this is transferred via the primary water circuit to heat up the water tank inside the property. As the temperature of the refrigerant decreases the state changes from a gas back to a cool vapour.
4. Despite dropping in temperature, the cool vapour still has a high pressure and to reduce this pressure the vapour passes through an expansion valve. This causes the pressure to drop and the temperature lowers, returning the refrigerant to its initial state of cool low pressure liquid.



This process is repeated

It is only the refrigerant that passes through this cycle; the water is heated as it travels through the plate heat exchanger. The heat energy from the refrigerant passes through the plate heat exchanger to the cooler water which increases in temperature. This heated water enters the building heating circuit and can also be used to provide sanitary hot water via a hot water cylinder.



## Microgeneration Certification Scheme

The complete range of Ecodan heating products has received full accreditation for the Government's Microgeneration Certification Scheme (MCS).

The MCS process is very robust and also looks at the companies installing this type of equipment so that customers can take real confidence that they will get the reduction in fuel consumption expected. MCS is administered by the DECC (the Department for Energy & Climate Change) and is designed to evaluate products and installers against criteria for microgeneration technologies, thereby providing greater consumer protection. An MCS approved product, such as Ecodan, installed by an MCS approved installer is a requirement to apply for the Government's Renewable Heat Incentive (RHI).



## SAP Appendix Q

SAP Appendix Q allows you to enter performance data specific to Ecodan rather than using the default Air Source Heat Pump (ASHP) data in SAP. SAP Appendix Q generates a saving in kWh/year rather than a set COP. This saving can then be retrospectively applied to SAP 2005. Savings will vary due to differences in heat loads and hot water demands from each property. Feedback from those who have already used the data have reported significant benefits.

## EU Ecolabel

The EU Ecolabel also known as "the Flower" due to its flower logo denotes products and services with superior environmental performance. Products bearing the label are certified to meet EU-wide environmental criteria, and compliance is independently verified by an approved body. The EU Ecolabel scheme is voluntary and represents products with class leading environmental performance. It is available for many consumer and commercial product groups and now includes heat pumps. The Ecodan Monobloc PUHZ range of products met this criteria in November 2009.



## Quiet Mark

The Ecodan range is the first air source heat pump to receive the official backing of the Noise Abatement Society which has awarded it the new 'Quiet Mark' of approval.



## Enhanced Capital Allowance

Some of our Ecodan products are registered on the Energy Technology List and hence qualify for enhanced capital allowances. For further information please go to [etl.decc.gov.uk/etl](http://etl.decc.gov.uk/etl)



Products eligible include Ecodan PUHZ-(H)W and Ecodan CAHV.

## Ecodan Sales Tools

### Home Owner Portal

The Homeowner Portal was developed to increase understanding amongst homeowners on how to get the best out of their Ecodan heating system, and uses clever animations to show how to operate the systems controller.

Offering guidance through video tutorials, the Homeowner Portal is a useful tool for installers when demonstrating how Ecodan works, as it provides easy access to simple but detailed information on how to operate, programme and manage the system. The site also includes a very useful FAQ section which has been designed to sell the concept of air source heat pumps and increase the understanding of why Mitsubishi Electric's Ecodan leads the market.

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



### Ecodan Selection Tool

The brand new Ecodan Selection Tool allows end users, consultants, contractors or anyone else with an interest in heat pumps to get an insight into what this technology could deliver to your building. Whether your project is a single domestic dwelling or a large commercial project, the application is designed to direct you towards the right solution, whilst personalising the information for you.

So for example, as a homeowner we have chosen to supply you with case studies and application information, but for a contractor you would want to know more technical information about the heat pump itself. The aim of the tool is to deliver a personalised bespoke equipment selection for your project; allowing you to make a decision about progressing to the next stage of design.

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



### Ecodan Dashboard














The Ecodan Dashboard demonstrates the effectiveness of Ecodan air source heat pumps by showing real data gathered from properties around the country that are using the Ecodan system.

For each monitored site, the dashboard gives an overview of the system, detailing age and type of property. You can also determine how the unit performs at any time of the day, week, month or year and see the running costs, CO<sub>2</sub> emissions and energy consumed, when compared to gas, oil and direct electric systems. The dashboard is designed to be as open and transparent as possible so that owners can see the results for themselves, whether it is in the height of summer or the depths of winter.

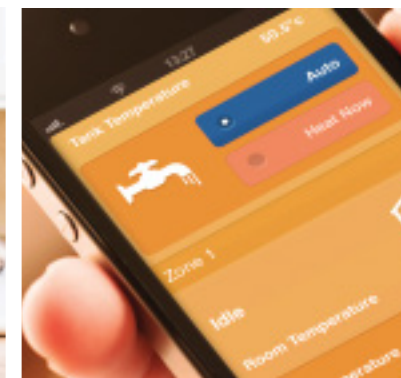
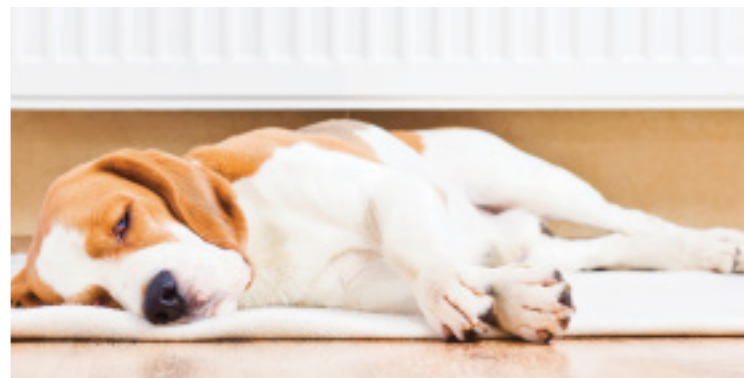
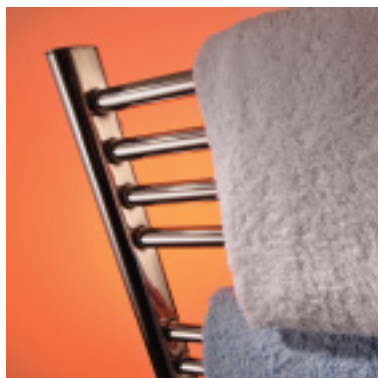
Please visit the website: [dashboard.mitsubishielectric.co.uk](http://dashboard.mitsubishielectric.co.uk)

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	Optimised Rotary or Scroll Compressor
	Inverter Control - adjusts performance to economically match the demand for heating or cooling
	Auto-Restart
	Quiet Operation
	Wi-Fi
	Blue Fin Treatment - protection from corrosion in high salt environments
	SD Card Commissioning and Logging
	Magnetic Filter
	Optimised Cascade Function
	Intelligent Bivalent / Hybrid Operation
	Intelligent Defrost - reverse cycle using dual refrigerant circuits
	Waste Heat Recovery
	Weather Compensation

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# PUHZ-(H)W

## Monobloc Air Source Heat Pumps



Certificate Number: MCS HP0002  
Product Reference:  
PUHZ-W50VHA-(BS), PUHZ-W85VHA2-(BS)  
PUHZ-HW140VHA2/YHA2-(BS)



License Number:  
UK/31/001 - PUHZ-W50VHA-(BS)  
UK/31/002 - PUHZ-W85VHA2-(BS)  
UK/31/003 - PUHZ-HW140VHA2/YHA2-(BS)

Our range of Ecodan monobloc air source heat pumps includes 5, 8.5 and 14kW sizes.

Now with the ability to cascade up to six units of the same output, Ecodan monobloc systems offer a capacity range from 5 through to 84kW. Designed to suit a wide number of applications, these models offer a viable solution for the varying requirements that domestic and small commercial applications demand.

### Key Features

- Self-contained unit, only requiring water and electric connections
- No need for gas supply, flues or ventilation
- Single phase power supply with a low starting current (3 phase available for 14kW)
- Low maintenance and quiet to run
- Operates with outside temperatures as low as -25°C
- Multiple unit connection
- Bivalent function, for use with conventional boilers
- 2-zone energy efficient space heating control
- Available as a standalone, packaged or semi packaged system
- Remote Wi-Fi control with MELCloud



MODEL		PUHZ-W50VHA	PUHZ-W85VHA2	PUHZ-HW140VHA2	PUHZ-HW140YHA2
Heating <sup>*1</sup> (A-3/W35)	Capacity (kW)	4.8	8.3	14.0	14.0
	Power Input (kW)	1.63	2.96	4.81	4.81
	COP	2.95	2.80	2.91	2.91
Heating <sup>*2</sup> (A2/W35)	Capacity (kW)	5.0	8.5	14.0	14.0
	Power Input (kW)	1.60	2.68	4.52	4.52
	COP	3.13	3.17	3.11	3.11
Heating <sup>*3</sup> (A7/W35)	Capacity (kW)	5.0	9.0	14.0	14.0
	Power Input (kW)	1.22	2.15	3.31	3.31
	COP	4.10	4.18	4.25	4.25
Operating Ambient Temperature (°C DB)		-15 ~ +35°C	-20 ~ +35°C	-25 ~ +35°C	-25 ~ +35°C
Sound Pressure Level at 1m (dBA) <sup>*3,4</sup>		45	48	53	53
Low Noise Mode (dBA) <sup>*3</sup>		40	42	46	46
Water Data	Pipework Size (mm)	22	22	28	28
	Flow Rate (l/min)	14.3	25.8	40.1	40.1
	Water Pressure Drop (kPa)	12	13.5	9	9
Dimensions (mm) <sup>*7</sup>	Width	950	950	1020	1020
	Depth	330+30 <sup>*5</sup>	330+30 <sup>*5</sup>	330+30 <sup>*5</sup>	330+30 <sup>*5</sup>
	Height	740	943	1350	1350
Weight (kg)		64	77	134	148
Electrical Data	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	380-415v, 50Hz
	Phase	Single	Single	Single	3
	Nominal Running Current [MAX] (A)	5.4 [13]	10.3 [23]	14.9 [35]	5.1 [13]
	Fuse Rating - MCB Sizes (A) <sup>*6</sup>	16	25	40	16

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

<sup>\*2</sup> Under normal heating conditions at outdoor temp: 2°CDB / 1°CWB, outlet water temp 35°C, inlet water temp 30°C as tested to BS EN14511

<sup>\*3</sup> 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

<sup>\*4</sup> Sound power level of the PUHZ-W50VHA is 61dBA, PUHZ-W85VHA2 is 62.5dBA, PUHZ-HW140VHA2 is 65.5dBA, PUHZ-HW140YHA2 is 67.5dBA. Tested to BS EN12102

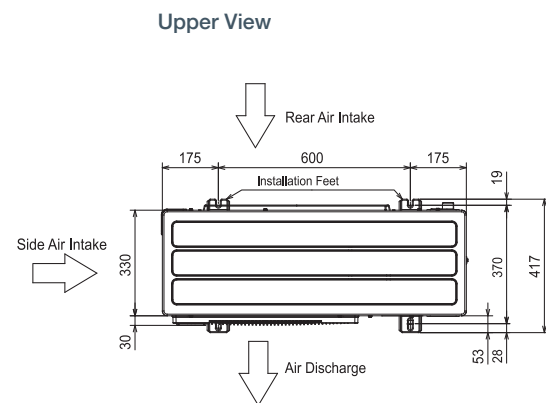
<sup>\*5</sup> Grille

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

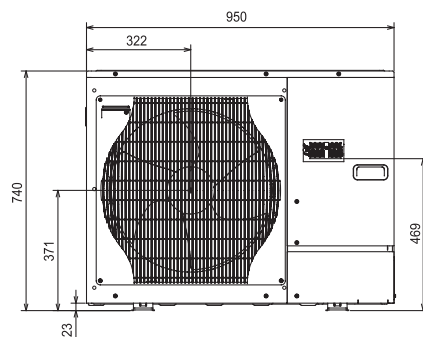
<sup>\*7</sup> Flow Temperature Controller (FTC) for standalone systems, PAC-IF052B-E, Dimensions WxDxH (mm) - 393x87x422

Product Dimensions

PUHZ-W50VHA

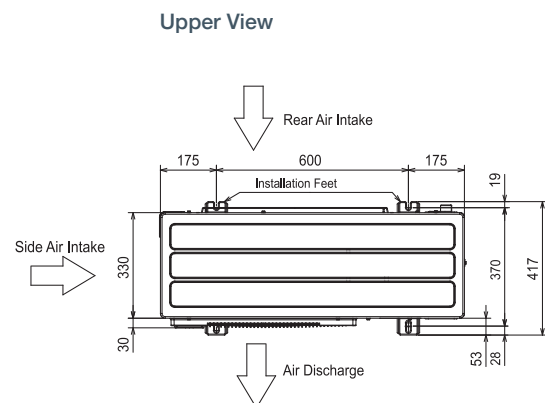


Front View

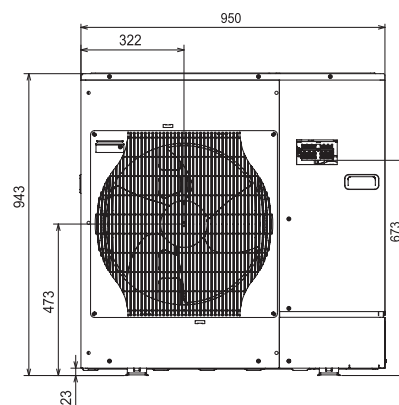


Product Dimensions

PUHZ-W85VHA2

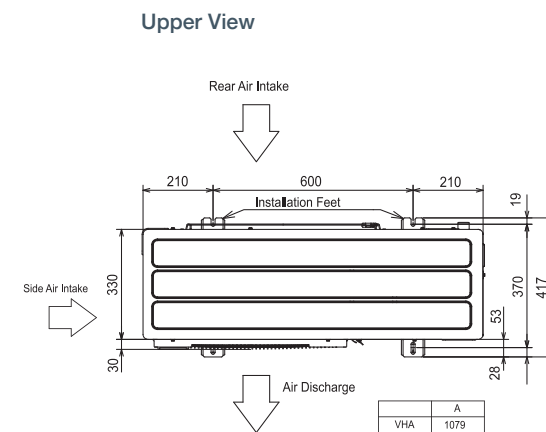


Front View

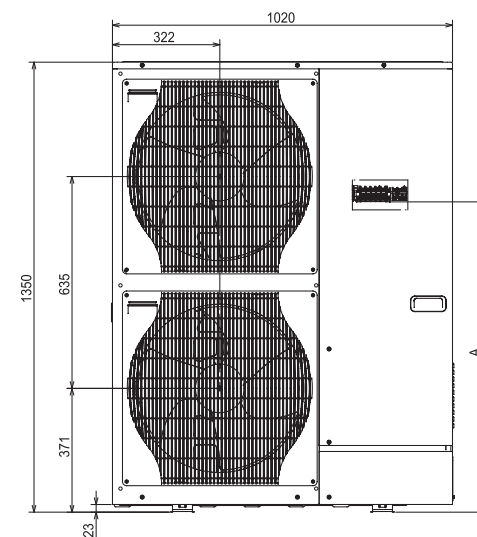


Product Dimensions

PUHZ-HW140VHA2 / YHA2



Front View





# CAHV

## Monobloc Air Source Heat Pump

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
- Split refrigerant circuits within each CAHV provide 50% back up
- 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, hermetically-sealed monobloc design
- Low on-site refrigerant volume
- HIC (Zubadan) technology delivers 43kW at -3°C with minimal drop off down to -20°C



MODEL		CAHV-P500YA-HPB
Heating*1 (A-3/W35)	Capacity (kW)	42.6
	Power Input (kW)	15.2
	COP	2.80
Heating*2 (A2/W35)	Capacity (kW)	42.8
	Power Input (kW)	14.2
	COP	3.01
Heating*3 (A7/W35)	Capacity (kW)	45.0
	Power Input (kW)	10.9
	COP	4.13
Operating Ambient Temperature (°C DB)		-20~+40°C
Sound Pressure Level at 1m (dBA)*3*4		59
Low Noise Mode (dBA)*3		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)*5		63

\*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: 2°CDB / 1°CWB, outlet water temp 35°C, inlet water temp 30°C

\*3 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

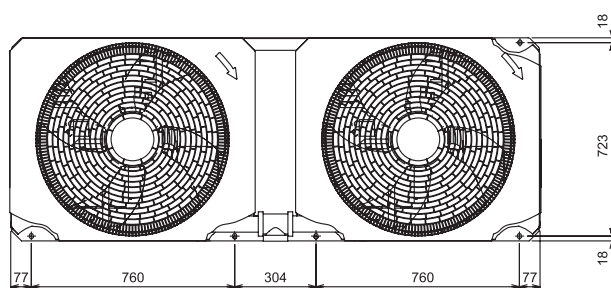
\*4 Sound power level of the CAHV-P500YA-HPB is 70.7dBA. Tested to BS EN12102

\*5 MCB Sizes BS EN60898-2 & BS EN60947-2

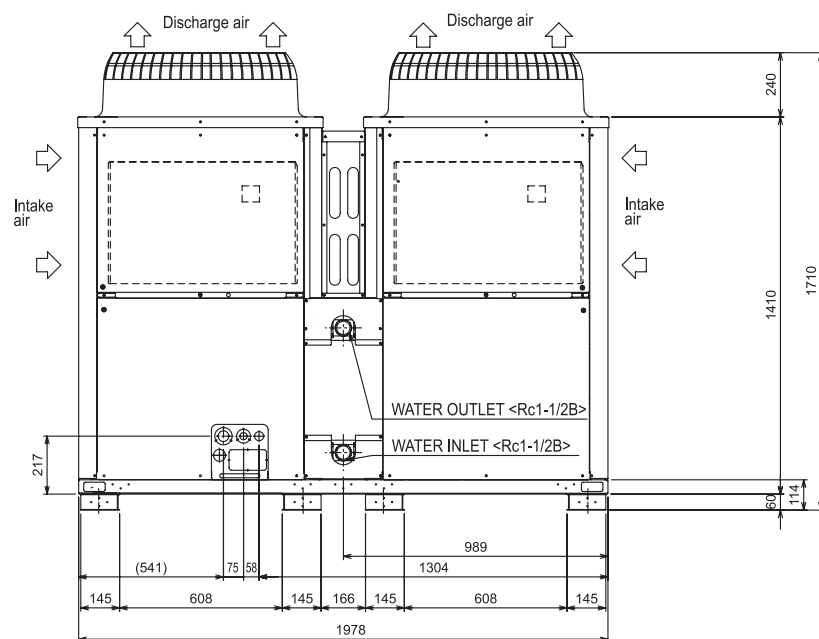


Certificate Number: MCS HP0002  
Product Reference: CAHV-P500YA-HPB

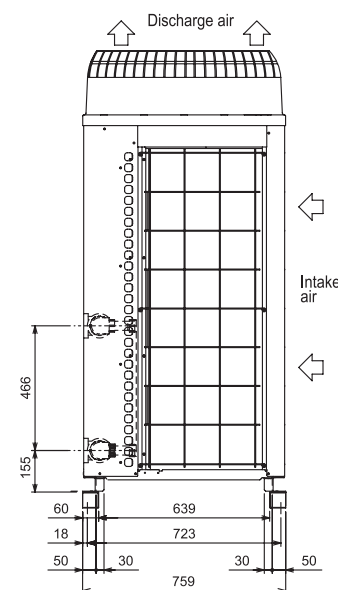
Upper View



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 don't use steel for the water piping material  
 \* 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

The new inverter driven Ecodan CRHV monobloc ground / water source heat pump can operate singularly, 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.

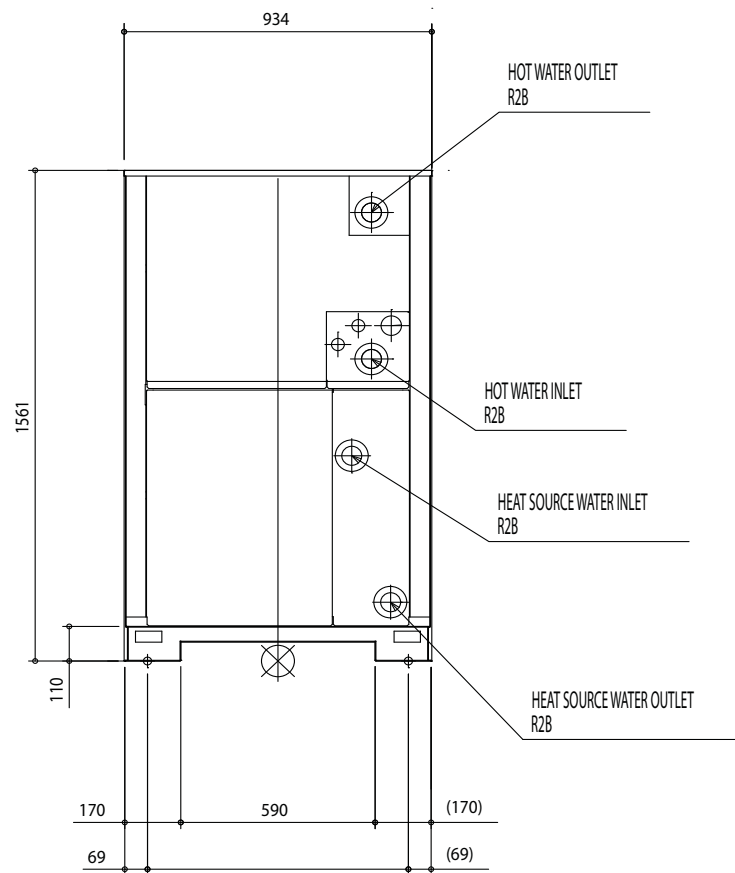
### Key Features

- Bore holes, slinkies, aquifers, lakes, rivers, waste heat - can all be used as a heat source
- Multiple unit cascade control of up to 16 units
- Split refrigerant circuits within each CRHV provide 50% back up
- Ability to rotate units based on accumulated run hours
- Provides up to 65°C water flow temperatures without booster heaters
- Low maintenance, low refrigerant volume hermetically-sealed monobloc design
- Heat recovery applications can be achieved by moving heat between applications
- Passive cooling possible by exchanging ground / water source with a chilled water system
- Low pressure drop to ensure pumping power is kept to a minimum
- High specification touch screen controls interfacing with BEMS

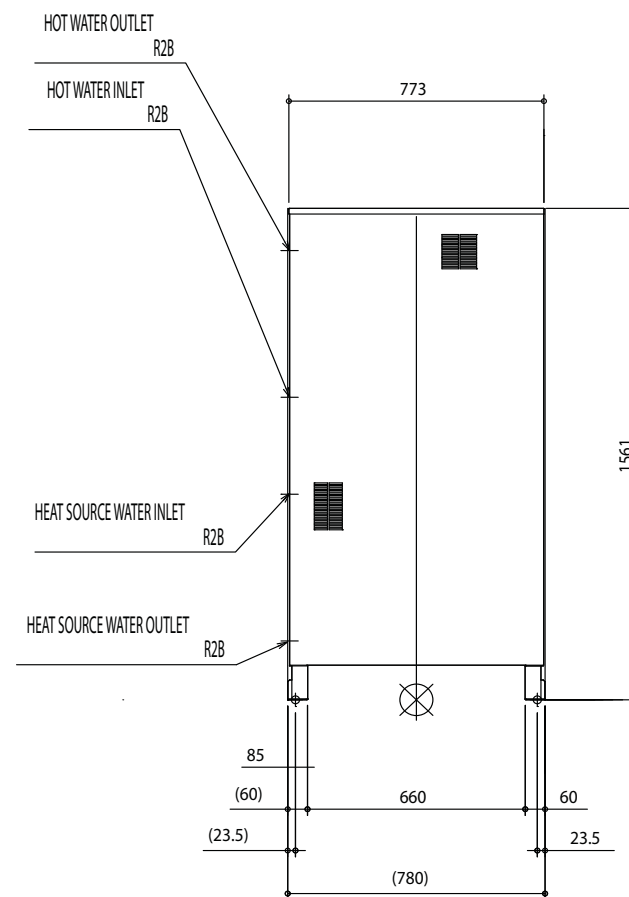


MODEL		CRHV-P600YA-HPB	
Heating*1 (B0/W35)	Capacity (kW)	60	
	Power Input inc. pump (kW)	14.20	
	COP	4.23	
	B0/W35 (60kW)	4.33	
Seasonal Efficiency EN14825 (SPF) Heating*2 (B0/W35)	Capacity (kW)	45	
	Power Input inc. pump (kW)	10.20	
	COP	4.41	
	B0/W35 (45kW)	4.00	
Seasonal Efficiency EN14825 (SPF) Heating*3 (W10/W35)	Capacity (kW)	60	
	Power Input inc. pump (kW)	11.90	
	COP	5.08	
	W10/W35 (60kW)	5.09	
Seasonal Efficiency EN14825 (SPF) Heating*4 (W10/W35)	Capacity (kW)	45	
	Power Input inc. pump (kW)	8.89	
	COP	5.11	
	W10/W35 (45kW)	4.55	
Seasonal Efficiency EN14825 (SPF) Sound Data	Pressure Level $L_{pa}$ at 1m (dBA)	50	
	Power Level $L_{wa}$ (dBA) *5	66	
	Heat Source (Brine) (l/s (m³/hr))	1.5 to 4.1 (5.4 to 15)	
	Building Side (LTHW) (l/s (m³/hr))	1.5 to 4.4 (5.4 to 16)	
Water Data	Flow Rate Range	Heat Source Inlet (Brine) (mm ("))	
		50.8 (R2) screw	
	Mechanical Connections	Heat Source Inlet (Brine) (mm ("))	
		50.8 (R2) screw	
	Operating Temperature Range	Building Side Inlet (LTHW) (mm ("))	
		50.8 (R2) screw	
	Heat Source Fluid Type *7	Heat Source Inlet (Brine) (°C)	
		-8 to +27	
Dimensions	Pressure Drop (at 1.5l/s inc 30% glycol in heat source fluid)	Heat Source Inlet Option (Brine) (°C) *6	
		-8 to +45	
	Maximum Working Pressure	Building Side Outlet (LTHW) (°C)	
		+30 to +65	
	Type	Min 30% Ethylene Glycol or equivalent	
		12	
	Charge (kg)	Heat Source (Brine) (kPa)	
		7	
Refrigerant	Max pressure (MPa (Bar))	Building Side (LTHW) (kPa)	
		1 (10)	
	Compressor Type	Building Side (LTHW) (MPa(Bar))	
		1 (10)	
	Circuit Type	Width (mm)	
		934	
	Electrical Supply	Depth (mm)	
		780	
Electrical Data	Phase	Height (mm)	
		1561	
	Maximum Running Current (A)	395	
		R410A	
Fuse Rating - MCB Size (A) *8	Compressor Type	Charge (kg)	
		4.5 x 2	
	Circuit Type	Max pressure (MPa (Bar))	
		4.15 (41.5)	
Hermetically Sealed System	Electrical Supply	Compressor Type	
		Inverter Driven	
	Phase	Circuit Type	
		Hermetically Sealed System	
3 Phase	Maximum Running Current (A)	Electrical Supply	
		415v, 50Hz	
50	Fuse Rating - MCB Size (A) *8	Phase	
		3 Phase	

Front View



Side View





# EHPT20X-VM2HB

## Packaged Cylinder for Ecodan Monobloc Units



The packaged cylinder unit is the latest generation hot water tank, with integrated hydraulic components and advanced controls.

Designed specifically by Mitsubishi Electric to integrate with the Ecodan monobloc air source heat pump range, the packaged cylinder unit provides improved performance with a simple to use graphical interface controller. Fast on site commissioning is now available via a pre-programmed SD card.

### Key Features

- Simple graphical control
- Capability to provide 2-zone energy efficient space heating control
- Sleek modern design
- Compatible with Mitsubishi Electric wireless room controllers
- Back up electrical heaters
- Pre-plumbed and wired for faster installation
- Bivalent function, for use with conventional boilers
- SD card commissioning
- Cascade function for multiple unit control
- Remote Wi-Fi control with MELCloud



### FTC4 Controller

Mitsubishi Electric's fourth-generation controller includes intelligent, room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season.



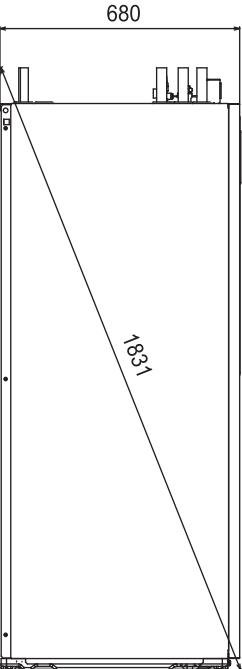
MODEL		EHPT20X-VM2HB	
Nominal Hot Water Volume (Litres)		200	
Operating Ambient Temperature (°C DB)		0 ~ +35°C (RH<80%)	
Sound Pressure Level at 1m (dBA)		28	
Water Data		Flow Rate (l/min) W50 - W85 - HW140	14.3 - 25.8 - 40.1
		Pump	Grundfos UPM2 25 70-180
		Connection Size (mm) Heating / DHW	28 / 22
		Primary Expansion Vessel (Litres)	12
		Charge Pressure (MPa (Bar))	0.1 (1)
Water Safety Devices	Water Circuit	Control Thermistor (°C)	1 - 80
		Pressure Relief Valve (MPa (Bar))	0.3 (3)
		Flow Switch	Supplied
	Booster Heater	Booster Heater Control Thermistor (°C)	80
		Booster Heater Manual Reset Thermostat (°C)	90
		Booster Heater Thermal Cut Off (°C)	121
	DHW Tank	Control Thermistor (°C)	40-70
		Temp and Pressure Relief Valve (°C)/ (MPa (Bar))	90 / 0.7 (7)
	Dimensions (mm)		Width
Depth			595
Height			1600
			113 / 326
Weight Empty / Full (kg)			
Electrical Data	Control Board - <i>optionally powered by outdoor unit</i>	Electrical Supply	220-240v, 50Hz
		Phase	Single
		Fuse Rating - MCB Sizes (A)*1	10
	Immersion Heater	Electrical Supply	220-240v, 50Hz
		Phase	Single
		Capacity (kW)	3
		Max Running Current (A)	13
		Fuse Rating - MCB Sizes (A)*1	16
	Booster Heater - <i>optionally powered if required</i>	Electrical Supply	220-240v, 50Hz
Phase		Single	
Capacity (kW)		2	
Max Running Current (A)		9	
Fuse Rating - MCB Sizes (A)*1		16	
Optional Simplified Wireless Room Thermostat and Wireless Receiver		PAR-WT50-E Controller and PAR-WR51-E Receiver	

Optional Simplified Wireless Room Thermostat and Wireless Receiver

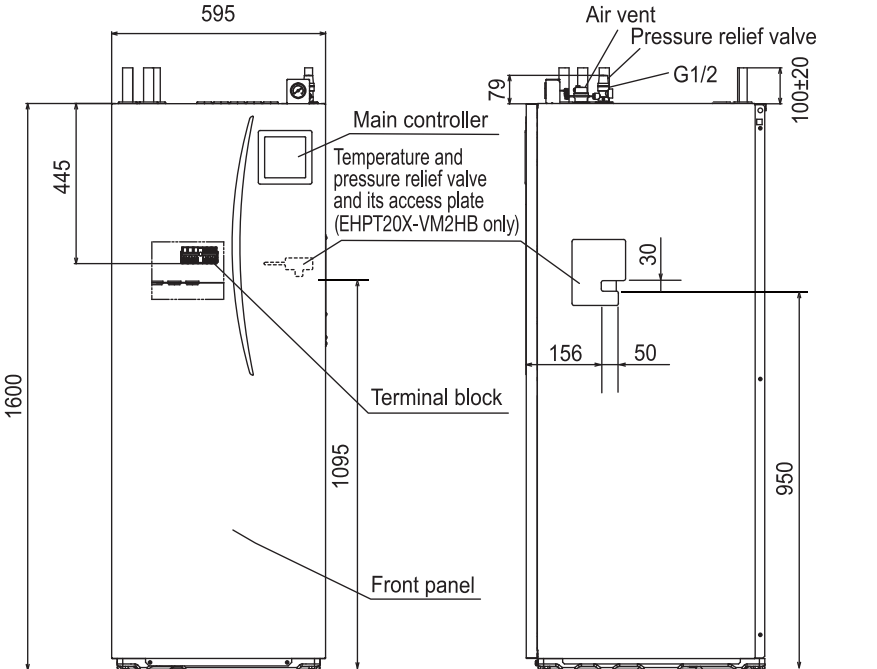
PAR-WT50-E Controller and PAR-WR51-E Receiver

\*1 MCB Sizes BS EN60898-2 & BS EN60947-2

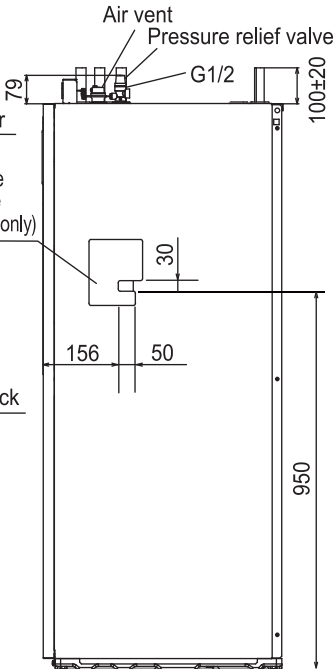
Left View



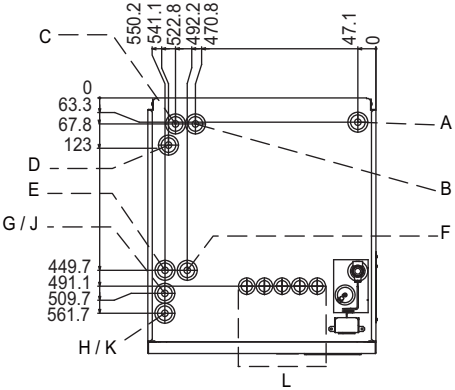
Front View



Right View



Top View

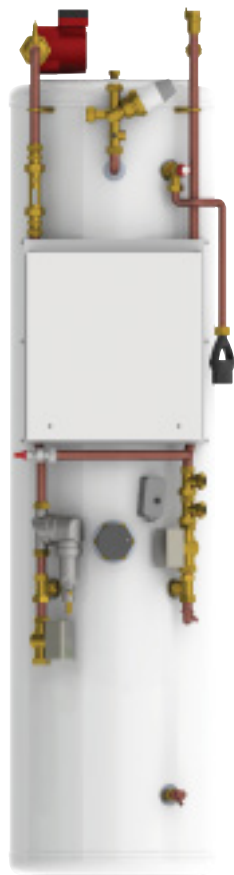


Letter	Pipe Description	Connection
A	DHW outlet	22mm/Compression
B	Cold water inlet	22mm/Compression
C/D	Solar (ancillary heat source)	22mm/Compression
E	Space heating RTN	28mm/Compression
F	Space heating flow	28mm/Compression
G	Flow from H/P	28mm/Compression
H	RTN to H/P	28mm/Compression
L	Electrical cable inlets	



# ECOSLIM- 150-180L-PP-MEUK

## Pre-plumbed Slimline Cylinder for Ecodan Monobloc Units



The optimised pre-plumbed slimline cylinder comes complete with integrated hydraulic components and advanced controls.

Designed to minimise floor space and footprint whilst still offering optimum performance, the cylinder completely integrates with the Ecodan monobloc air source heat pump range. The pre-plumbed slimline cylinder unit provides improved performance with a simple to use graphical interface controller. Fast on site commissioning is now available via a pre-programmed SD card.

### Key Features

- Simple graphical control
- Optional 2-zone energy efficient space heating control
- Compatible with Mitsubishi Electric wireless room controllers
- Pre-plumbed and wired for faster installation
- Factory fitted magnetic filtration system
- Hybrid function, for use with conventional boilers
- SD card commissioning
- Remote Wi-Fi control with MELCloud



### FTC4 Controller

Mitsubishi Electric's fourth-generation controller includes intelligent, room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season.

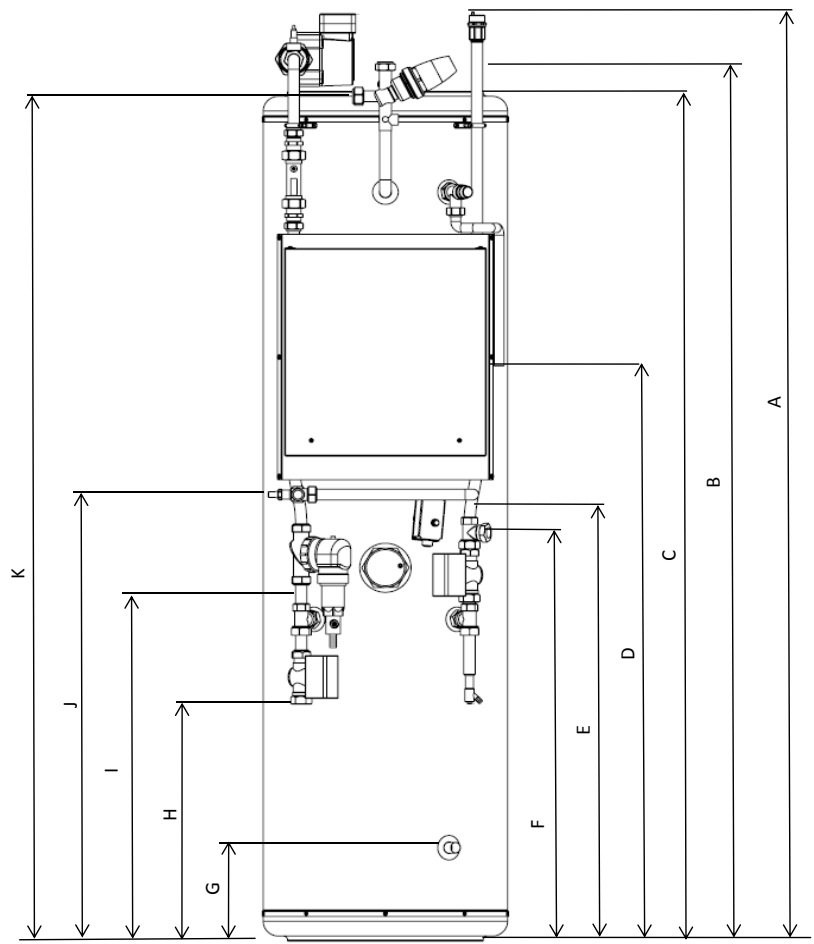


MODEL			ECOSLIM-150L-PP-MEUK	ECOSLIM-180L-PP-MEUK
Nominal Hot Water Volume (Litres)			150	180
Water		Flow Rate (l/min) W50 - W85	14.3 - 25.8	14.3 - 25.8
		Pump	1 x Grundfos UPS2 25-60	1 x Grundfos UPS2 25-60
		Connection Size (mm) Heating / DHW (mm)	22	22
		Primary Expansion Vessel (Litres)	12	19
		Charge Pressure (MPa (Bar))	0.3 (3)	0.3 (3)
Water Safety Devices	Water Circuit	Control Thermistor (°C)	1 - 80	1 - 80
		Pressure Relief Valve (MPa (Bar))	0.3 (3)	0.3 (3)
		Expansion Relief Valve (Cold)	0.6 (6)	0.6 (6)
		Control Thermistor	40-70	40-70
	DHW Tank	High Limit Stat (°C)	Mechanical 80	Mechanical 80
		Temp and Pressure Relief Valve (°C) / (MPa (Bar))	90 / 0.7 (7)	90 / 0.7 (7)
		Dimensions (mm)		Width
		Depth	565	565
		Height	1880	1950
Weight Empty / Full (kg)				65.5 / 215.5    69.5 / 249.5
Cylinder Material	Tank	Cylinder Material	Stainless Steel	Stainless Steel
		Heating Surface Area (m²)	2	3
	Insulation	Insulation Type	Polyurethane (PU) Insulation with CO <sub>2</sub> Blowing Agent	
		Insulation Thickness (mm)	50	50
		Standing Heat Loss (kWh/24hrs)	1.31	1.6
		GWP of Insulation	0	0
		ODP of Insulation	Less than 5	Less than 5
Electrical Data	Control Board <i>optionally powered by outdoor unit</i>	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz
		Phase	Single	Single
		Fuse Rating - MCB Sizes (A)*1	10	10
	Immersion Heater	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz
		Phase	Single	Single
		Capacity (kW)	3	3
		Max Running Current (A)	13	13
		Fuse Rating - MCB Sizes (A)*1	16	16
Mechanical Zones		DHW and 1 Heating Zone *2	DHW and 1 Heating Zone *2	
Optional Simplified Wireless Room Thermostat and Wireless Receiver			PAR-WT50-E Controller and PAR-WR51-E Receiver	

\*1 MCB Sizes BS EN60898-2 & BS EN60947-2

\*2 Optional 2-zone accessory available

Front View



- A** Top of AAV (Highest point)
- B** Mains Cold Feed and Heat Pump Flow
- C** Hot Water Outlet
- D** Tundish Outlet
- E** Heating Zone 1 Flow
- F** Heating Zone 2 Flow
- G** Domestic Hot Water Drain
- H** Heating Zone 1 Return
- I** Heating Zone 2 Return
- J** Automatic Bypass Valve
- K** Balanced Cold Feed

MODEL	A	B	C	D	E	F	G	H	I	J	K
150L-PP-MEUK	1880	1780	1740	1360	940	860	80	487	730	1100	1800
180L-PP-MEUK	1950	1850	1810	1360	940	860	80	487	730	1100	1870



# HU150-300FTC4ST

## Pre-plumbed Standard Cylinder for Ecodan Monobloc Units



The optimised pre-plumbed standard cylinder comes complete with integrated hydraulic components and advanced controls.

Designed to integrate with the Ecodan monobloc air source heat pump range, the pre-plumbed standard cylinder unit provides improved performance with a simple to use graphical interface controller. Fast on site commissioning is now available via a pre-programmed SD card.

### Key Features

- Simple graphical control
- 2-zone energy efficient space heating control
- Compatible with Mitsubishi Electric wireless room controllers
- Pre-plumbed and wired for faster installation
- Factory fitted Fernox TF1 filtration system
- Bivalent function, for use with conventional boilers
- SD card commissioning
- Cascade function for multiple unit control
- Remote Wi-Fi control with MELCloud



### FTC4 Controller

Mitsubishi Electric's fourth-generation controller includes intelligent, room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season.

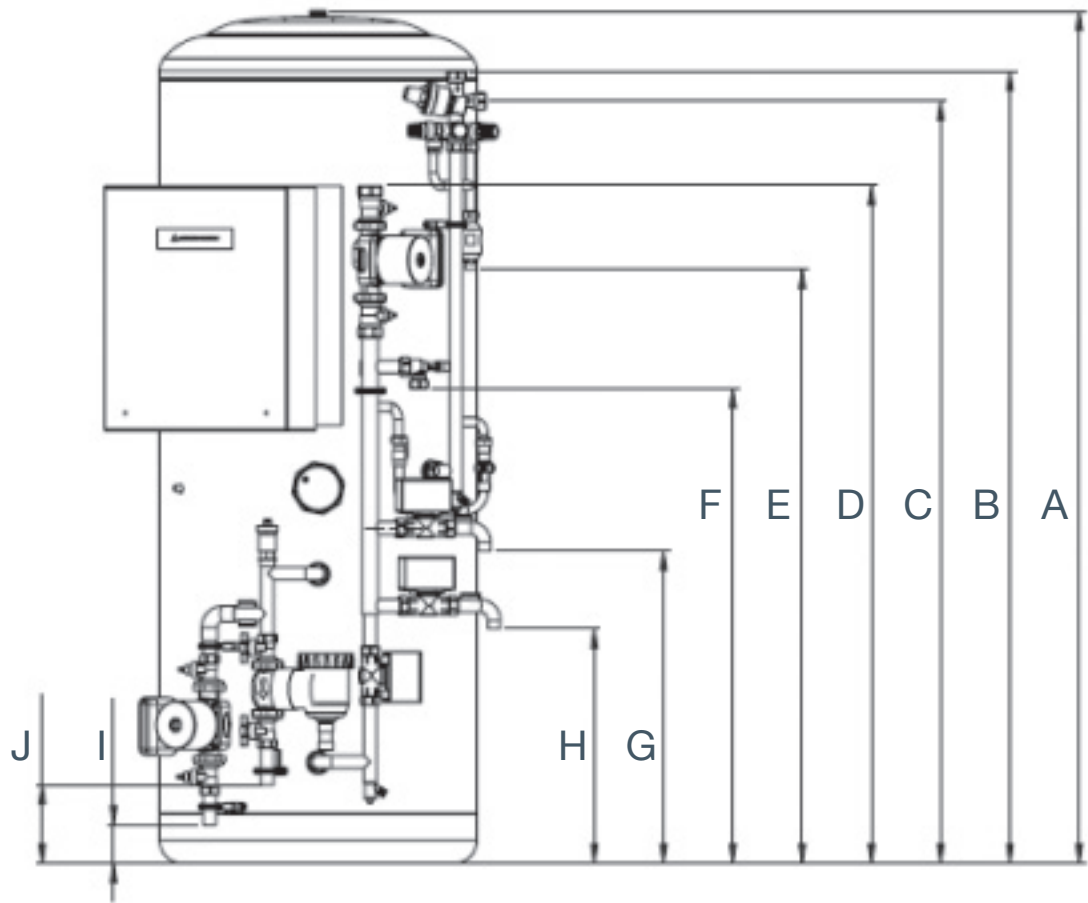


Manufactured in the UK

MODEL		HU150FTC4ST	HU180FTC4ST	HU210FTC4ST	HU250FTC4ST	HU300FTC4ST
Nominal Domestic Hot Water Storage Volume (Litres)		150	180	210	250	300
Overall Cylinder Dimensions (mm)*	Width	550	550	550	550	550
	Depth	550	550	550	550	550
	Height	1281	1281	1469	1719	2032
Empty Cylinder Weight (kg)		87.4	92.8	97.7	103.2	113
Unvented Store Expansion Vessel	Nominal Volume (Litres)	12	19	19	19	24
	Charge Pressure (Bar)	3.0	3.0	3.0	3.0	3.0
Control / Relief Valve Pressure Settings	Mains Inlet Pressure Regulator (Bar)	3.0	3.0	3.0	3.0	3.0
	Expansion Relief Valve (CW) (Bar)	6.0	6.0	6.0	6.0	6.0
	P & T Valve (Bar / °C)	7.0 / 90	7.0 / 90	7.0 / 90	7.0 / 90	7.0 / 90
Backup Immersion Heater Rating (kW)		3	3	3	3	3
Insulation Thickness (mm)		50	50	50	50	50
Ozone Depletion Potential		0	0	0	0	0
Global Warming Potential		< 5	< 5	< 5	< 5	< 5
Heat Pump Circuit Circulating Pump		UPS2 25-60 130 (2no.)				
DHW Circuit Zone Valve (mm)		22 (1no.)	22 (1no.)	22 (1no.)	22 (1no.)	22 (1no.)
CH Circuit Zone Valve (mm)		22 (1no.)	22 (1no.)	22 (1no.)	22 (1no.)	22 (1no.)
Control & Overheat Safety Thermostat Temperature Settings	Control Stat (°C)	65	65	65	65	65
	Voltage, Hertz	230-240v, 50Hz	230-240v, 50Hz	230-240v, 50Hz	230-240v, 50Hz	230-240v, 50Hz
Number of Zones		1	2	2	2	2
Optional Simplified Wireless Room Thermostat and Wireless Receiver		PAR-WT50-E Controller and PAR-WR51-E Receiver				

\*Minimum cupboard footprint 750x750mm

Front View



- A Hot Water Outlet
- B Cold Mains Inlet
- C Balanced Outlet
- D Heat Pump Flow
- E Tundish Outlet
- F Automatic Bypass Valve
- G Heating Zone Valve 1
- H Heating Zone Valve 2
- I Heating Return
- J Heat Pump Return

Model	HU150FTC4ST	HU180FTC4ST	HU210FTC4ST	HU250FTC4ST	HU300FTC4ST
A	1290	1291	1479	1729	2042
B	921	937	1363	1363	1688
C	869	885	1311	1311	1636
D	1176	1176	1176	1176	1176
E	417	605	1031	1043	1356
F	824	824	824	824	824
G	N/A	542	542	542	542
H	407	407	407	407	407
I	66	66	66	66	66
J	136	136	136	136	136

For further information please refer to the installation manual



# HUS150-300FTC4ST

## Pre-plumbed Solar Cylinder for Ecodan Monobloc Units



The optimised pre-plumbed solar cylinder comes complete with integrated hydraulic components and advanced controls.

Designed to integrate with the Ecodan monobloc air source heat pump range, the pre-plumbed solar cylinder unit provides improved performance with a simple to use graphical interface controller. Fast on site commissioning is now available via a pre-programmed SD card.

### Key Features

- Includes secondary coil for connection to solar thermal systems
- Simple graphical control
- 2-zone energy efficient space heating control
- Compatible with Mitsubishi Electric wireless room controllers
- Pre-plumbed and wired for faster installation
- Factory fitted Fernox TF1 filtration system
- Bivalent function, for use with conventional boilers
- SD card commissioning
- Cascade function for multiple unit control
- Remote Wi-Fi control with MELCloud



### FTC4 Controller

Mitsubishi Electric's fourth-generation controller includes intelligent, room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season.

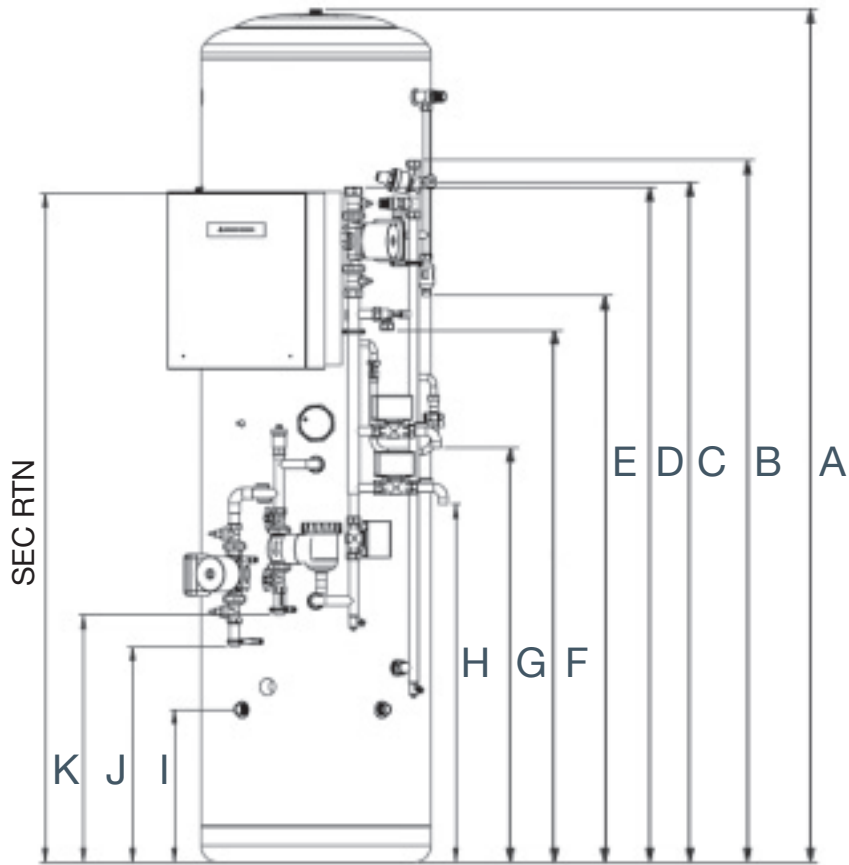


Manufactured in the UK

MODEL		HUS210FTC4ST	HUS250FTC4ST	HUS300FTC4ST
Nominal Domestic Hot Water Storage Volume (Litres)		210	250	300
Overall Cylinder Dimensions (mm)*	Width	550	550	550
	Depth	550	550	550
	Height	1719	1719	2032
Empty Cylinder Weight (kg)		102.2	108.6	122.2
Unvented Store Expansion Vessel	Nominal Volume (Litres)	19	19	24
	Charge Pressure (Bar)	3.0	3.0	3.0
Control / Relief Valve Pressure Settings	Mains Inlet Pressure Regulator (Bar)	3.0	3.0	3.0
	Expansion Relief Valve (CW) (Bar)	6.0	6.0	6.0
	P & T Valve (Bar / °C)	7.0 / 90	7.0 / 90	7.0 / 90
Backup Immersion Heater Rating (kW)		3	3	3
Insulation Thickness (mm)		50	50	50
Ozone Depletion Potential		0	0	0
Global Warming Potential		< 5	< 5	< 5
Heat Pump Circuit Circulating Pump		UPS2 25-60 130 (2no.)		
DHW Circuit Zone Valve (mm)		22 (1no.)	22 (1no.)	22 (1no.)
CH Circuit Zone Valve (mm)		22 (1no.)	22 (1no.)	22 (1no.)
Control & Overheat Safety Thermostat Temperature Settings	Control Stat (°C)	65	65	65
	Voltage, Hertz	230-240v, 50Hz	230-240v, 50Hz	230-240v, 50Hz
Optional Simplified Wireless Room Thermostat and Wireless Receiver		PAR-WT50-E Controller and PAR-WR51-E Receiver		

\*Minimum cupboard footprint 750x750mm

Front View



- A Hot Water Outlet
- B Cold Mains Inlet
- C Balanced Outlet
- D Heat Pump Flow
- E Tundish Outlet
- F Automatic Bypass Valve
- G Heating Zone Valve 1
- H Heating Zone Valve 2
- I Solar Connections
- J Heating Return
- K Heat Pump return

Model	HUS210FTC4ST	HUS215FTC4ST	HUS300FTC4ST
A	1729	1729	2042
B	1370	1370	1680
C	1318	1318	1628
D	1516	1516	1516
E	1031	1043	1356
F	1174	1274	1274
G	892	892	892
H	757	757	757
I	366	366	366
J	416	416	416
K	492	492	492

The Domestic Heating Compliance Guide document L1A and L1B provides advice in sizing both cylinder designated solar areas and heat exchangers to the surface area of the solar collectors.

Using this guide Mitsubishi Electric are able to offer the following sizing advice for specification.

Model	DESIGNATED SOLAR VOLUME	HEAT PUMP VOLUME	TOTAL CAPACITY
HUS210FTC4ST	65	145	210
HUS215FTC4ST	90	160	250
HUS300FTC4ST	100	200	300

For further information please refer to the installation manual



## EHPX-VM2B

### Packaged Hydrobox for Ecodan Monobloc Units



The packaged hydrobox offers a highly adaptable heating solution for retrofit or new build.

Designed specifically by Mitsubishi Electric to integrate with the Ecodan monobloc air source heat pump range and a third party cylinder, the hydrobox provides hydraulic components with an advanced simplified graphical user interface. Fast commissioning via an SD card is also now available.

#### Key Features

- Simple graphical control
- Capability to provide 2-zone energy efficient space heating control
- Sleek modern design
- Compatible with Mitsubishi Electric wireless room controllers
- Pre-plumbed and wired for faster installation
- Bivalent function, for use with conventional boilers
- SD card commissioning
- Cascade function for multiple unit control
- Remote Wi-Fi control with MELCloud



#### FTC4 Controller

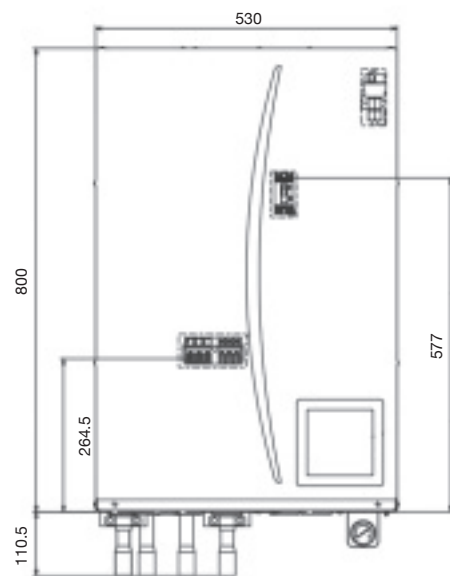
Mitsubishi Electric's fourth-generation controller includes intelligent, room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season.



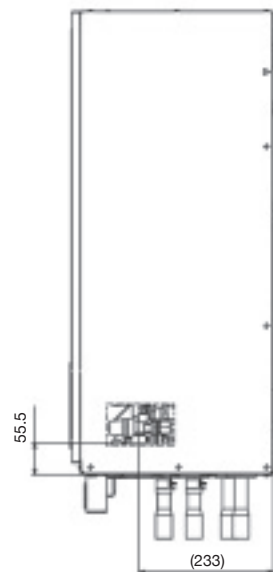
MODEL		EHPX-VM2B	
Operating Ambient Temperature (°C DB)		0 ~ +35°C (RH<80%)	
Sound Pressure Level at 1m (dBA)		28	
Water Data	Flow Rate (l/min) W50 - W85 - HW140	14.3 - 25.8 - 40.1	
	Pump	Grundfos UPM2 25 70-180	
	Connection Size (mm)	28	
	Primary Expansion Vessel (Litres)	10	
	Charge Pressure (MPa (Bar))	0.1 (1)	
Water Safety Devices	Control Thermistor (°C)	1 - 80	
	Pressure Relief Valve (Mpa (Bar))	0.3 (3)	
	Flow Switch	Supplied	
	Booster Heater Control Thermistor (°C)	80	
	Booster Heater Manual Reset Thermostat (°C)	90	
Dimensions (mm)	Booster Heater Thermal Cut Off (°C)	121	
	Width	520	
	Depth	360	
	Height	800	
Weight Empty / Full (kg)		39 / 44	
Electrical Data	Control Board - optionally powered by outdoor unit	Electrical Supply	220-240v, 50Hz
		Phase	Single
		Fuse Rating - MCB Sizes (A)*1	10
	Booster Heater - optionally powered if required	Electrical Supply	220-240v, 50Hz
		Phase	Single
		Capacity (kW)	2
		Max Running Current (A)	9
		Fuse Rating - MCB Sizes (A)*1	16
Optional Simplified Wireless Room Thermostat and Wireless Receiver		PAR-WT50-E Controller and PAR-WR51-E Receiver	

\*1 MCB Sizes BS EN60898-2 & BS EN60947-2

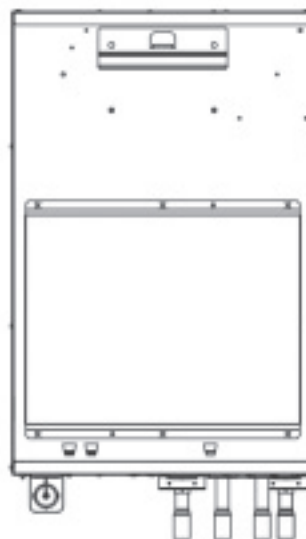
Front View



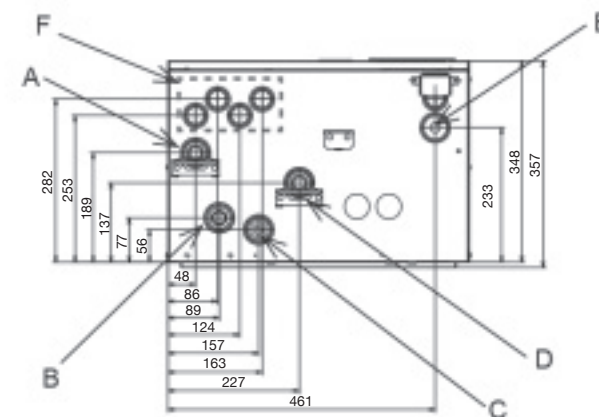
Right View



Rear View



Below View



Letter	Pipe Description	Connection
A	Space heating/ Indirect DHW tank (primary) return connection	28mm/Compression
B	Flow connection from heat pump	28mm/Compression
C	Return connection from heat pump	28mm/Compression
D	Space heating/ Indirect DHW tank (primary) flow connection	28mm/Compression
E	Discharge pipe (by installer) from pressure relief valve	G1/2" female (valve port within hydrobox casing)
F	Electrical cable inlets	-



# PUHZ-SW

## Ecodan Split Air Source Heat Pumps



Certificate Number: MCS HP0002  
 Product Reference:  
 PUHZ-SW40VHA  
 PUHZ-SW75VHA  
 PUHZ-SW120VHA

Our range of Ecodan split air source heat pumps includes 4, 7.5 and 12kW sizes.

With the ability to cascade up to six units of the same output Ecodan split systems offer a capacity range from 4 to 72kW. Designed to suit a wide number of applications, these models offer a viable solution for the varying requirements that domestic and small commercial applications demand.

### Key Features

- Split unit allowing water connections to be made internally
- No need for gas supply, flues or ventilation
- Single phase power supply with a low starting current
- Low maintenance and quiet to run
- Operates with outside temperatures as low as -20°C
- Multiple unit connection
- Bivalent function for use with conventional boilers
- 2-zone energy efficient space heating control
- Remote Wi-Fi control with MELCloud



MODEL		PUHZ-SW40VHA	PUHZ-SW75VHA	PUHZ-SW120VHA
Heating <sup>1</sup> (A-3/W35)	Capacity (kW)	3.8	7.0	11.2
	Power Input (kW)	1.27	2.24	3.71
	COP	2.99	3.12	3.02
Heating <sup>2</sup> (A2/W35)	Capacity (kW)	4.0	7.5	12.0
	Power Input (kW)	1.24	2.2	3.7
	COP	3.24	3.4	3.24
Heating <sup>3</sup> (A7/W35)	Capacity (kW)	4.1	8.0	16.0
	Power Input (kW)	0.85	1.82	3.9
	COP	4.80	4.4	4.1
Operating Ambient Temperature (°C DB) <sup>7</sup>		-15 ~ +35°C	-20 ~ +35°C	-20 ~ +35°C
Sound Pressure Level at 1m (dBA) <sup>3,4</sup>		45	51	54
Low Noise Mode (dBA) <sup>3</sup>		42	48	51
Water Data - Water connections made at indoor hydrobox		Flow Rate (l/min)		
Dimensions (mm)	Width	11.8	22.9	45.9
	Depth	800	950	950
	Height	300+23 <sup>5</sup>	330+30 <sup>5</sup>	330+30 <sup>5</sup>
Weight (kg)		600	943	1350
Refrigerant	42	75	118	
	Type	R410A	R410A	R410A
	Charge (kg) - 10m pipe length	2.1	3.2	4.6
	Pipe Size - Gas/Liquid (mm (in))	12.7 (1/2") / 6.35 (1/4")	15.88 (5/8") / 9.52 (3/8")	15.88 (5/8") / 9.52 (3/8")
	Connection Type	Flared	Flared	Flared
	Max Pipe Length (m)	40	40	75
	Min Pipe Length (m)	5	5	5
	Max Height Difference (m)	10	10	30
Electrical Data	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
	Phase	Single	Single	Single
	Nominal Running Current [MAX] (A)	3.8 [13]	8.1 [19]	17.5 [29.5]
	Fuse Rating - MCB Sizes (A) <sup>6</sup>	16	25	40

<sup>1</sup> Under normal heating conditions at outdoor temp: -3°CDB / -4°CWB, outlet water temp 35°C, inlet water temp 30°C

<sup>2</sup> Under normal heating conditions at outdoor temp: 2°CDB / 1°CWB, outlet water temp 35°C, inlet water temp 30°C as tested to BS EN14511

<sup>3</sup> 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

<sup>4</sup> Sound power level of the PUHZ-SW40VHA is 60.9dBA, PUHZ-SW75VHA is 65.6dBA, PUHZ-SW120VHA is 68.8dBA. as tested to BS EN12102

<sup>5</sup> Grille

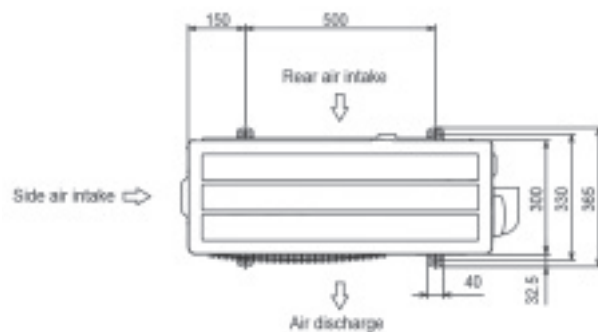
<sup>6</sup> MCB Sizes BS EN60898-2 & BS EN60947-2

<sup>7</sup> Heating maximum ambient temperature -21°CDB, DHW Hot water maximum ambient temperature -35°CDB

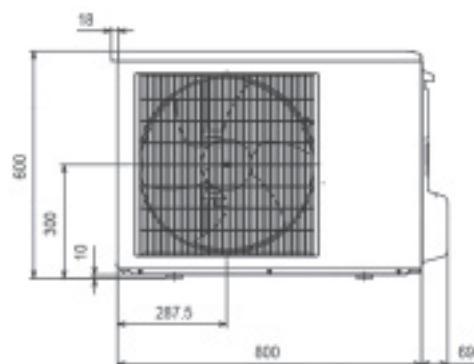
## Product Dimensions

PUHZ-SW40VHA

Upper View



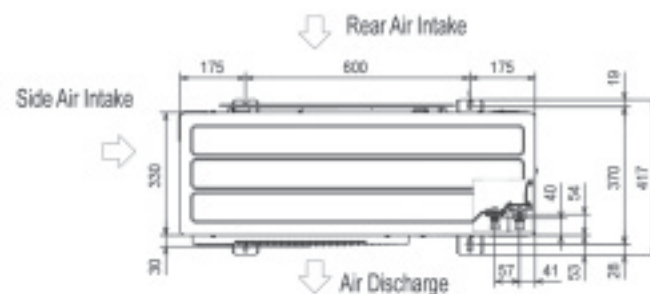
Front View



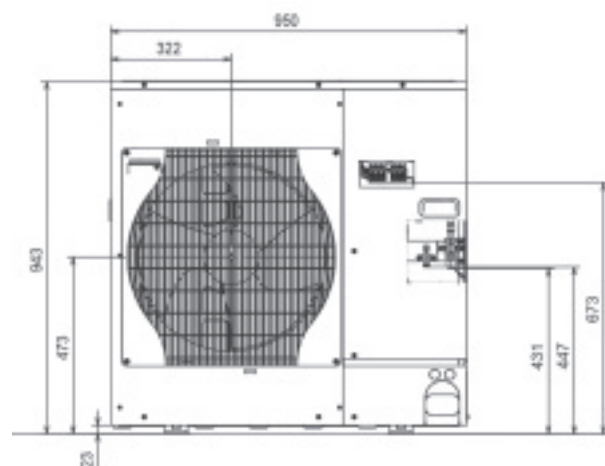
## Product Dimensions

PUHZ-SW75VHA

Upper View



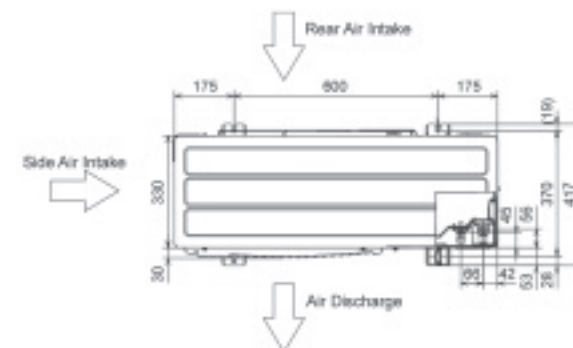
Front View



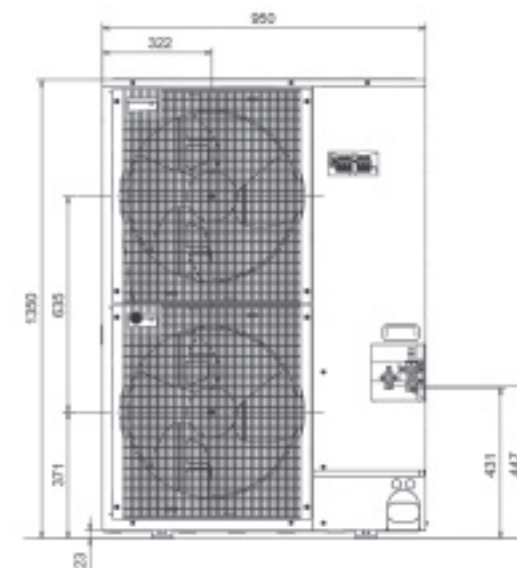
## Product Dimensions

PUHZ-SW120VHA

Upper View



Front View



ecodan®

# EHSC-VM2B

## Split Hydrobox



The split hydrobox offers a highly adaptable heating solution for retrofit or new build.

Designed specifically by Mitsubishi Electric to integrate with the Ecodan split air source heat pump range and a third party cylinder. The split hydrobox provides hydraulic components with an advanced simplified graphical user interface. Fast commissioning via an SD card is also now available.

### Key Features

- Simple graphical control
- Capability to provide 2-zone energy efficient space heating control
- Sleek modern design
- Compatible with Mitsubishi Electric wireless room controllers
- Pre-plumbed and wired for faster installation just requiring the refrigerant connections to be made on site
- Bivalent function, for use with conventional boilers
- SD card commissioning
- Cascade function for multiple unit control
- Remote Wi-Fi control with MELCloud



### FTC4 Controller

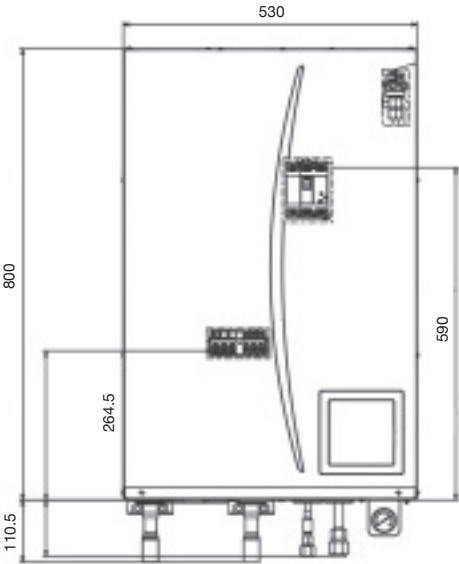
Mitsubishi Electric's fourth-generation controller includes intelligent, room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season.



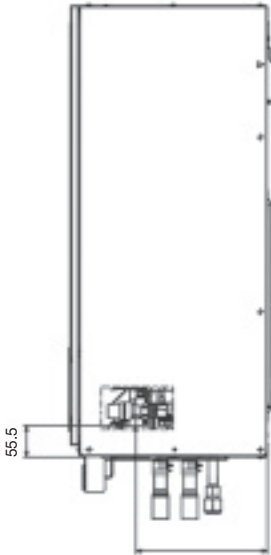
MODEL			EHSC-VM2B
Operating Ambient Temperature (°C DB)			0 ~ +35°C (RH<80%)
Sound Pressure Level at 1m (dBA)			28
Water Data	Flow Rate (l/min) SW40 - SW75 - SW120		11.8 - 22.9 - 45.9
	Pump		Grundfos UPM2 25 70-180
	Connection Size (mm)		28
	Primary Expansion Vessel (Litres)		10
	Charge Pressure (MPa (Bar))		0.1 (1)
Water Safety Devices	Control Thermistor (°C)		1 - 80
	Pressure Relief Valve (MPa (Bar))		0.3 (3)
	Flow Switch		Supplied
	Booster Heater Control Thermistor (°C)		80
	Booster Heater Manual Reset Thermostat (°C)		90
	Booster Heater Thermal Cut Off (°C)		121
Dimensions (mm)	Width		520
	Depth		360
	Height		800
			53 / 59
Weight Empty / Full (kg)			
Refrigerant	Type		R410A
	Connection Size - Gas/Liquid (mm (in))		15.88 (5/8") / 9.52 (3/8")
	Connection Type		Flared
Electrical Data	Control Board - optionally powered by outdoor unit	Electrical Supply	220-240v, 50Hz
		Phase	Single
		Fuse Rating - MCB Sizes (A)*1	10
		Electrical Supply	220-240v, 50Hz
	Booster Heater - optionally powered if required	Phase	Single
		Capacity (kW)	2
		Max Running Current (A)	9
		Fuse Rating - MCB Sizes (A)*1	16
Optional Simplified Wireless Room Thermostat and Wireless Receiver			PAR-WT50-E Controller and PAR-WR51-E Receiver

\*1 MCB Sizes BS EN60898-2 & BS EN60947-

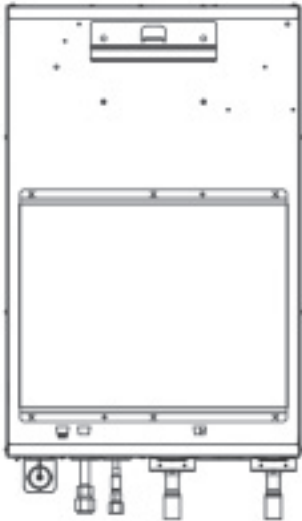
Front View



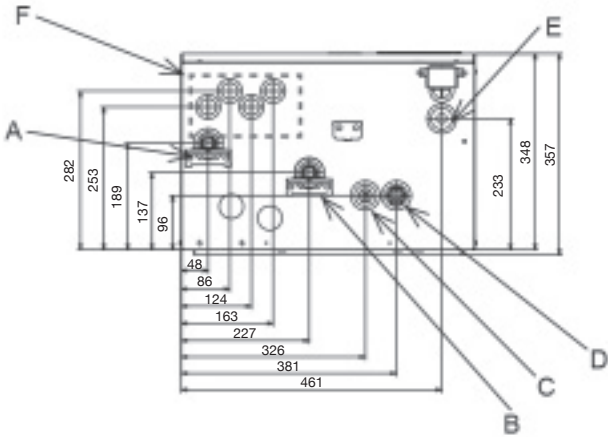
Right View



Rear View



Below View



Letter	Pipe Description	Connection
A	Space heating/ Indirect DHW tank (primary) return connection	28mm/Compression
B	Space heating/ Indirect DHW tank (primary) flow connection	28mm/Compression
C	Refrigerant (Liquid)	9.52mm/Flare
D	Refrigerant (Gas)	15.88mm/Flare
E	Discharge pipe (by installer) from pressure relief valve	G1/2" female (valve port within hydrobox casing)
F	Electrical cable inlets	-



## Mobile Control and Monitoring

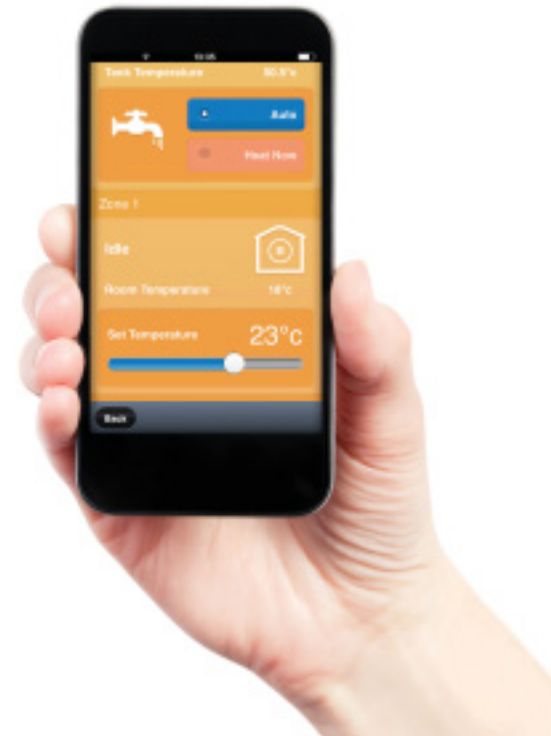


MELCloud is a new Cloud based solution for controlling your Mitsubishi Electric Ecodan systems either locally or remotely by PC, Mac, Tablet or Smartphone via the Internet.

Set up and remote operation of your Ecodan heating system via MELCloud is simple and straight forward. All you need is a wireless connection in your home or building 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.

### Key Features

- View and control your heating and hot water from anywhere in the world
- Holiday mode
- Set up of 7 day weekly schedule
- Temperature history reports
- Operation mode reports
- Live weather feed at location of Ecodan
- Compatible with Apple, Android, Windows and Blackberry operating systems
- Works on any PC / Mac / Tablet / Smartphone
- Share / restrict access and control of the Ecodan system



Available for any FTC4 based system, new or retrofit using a PAC-WF010-E interface



For a demonstration of  
Mitsubishi Electric's  
MELCloud visit website:  
**melcloud.com** and click 'Login'



Available on PC, Mac, Tablet or Smartphone

### Supported Ecodan Models

The following Mitsubishi Electric Ecodan units can be connected to MELCloud via the Ecodan Wi-Fi Interface (PAC-WF010-E):

#### Cylinder Units

EHPT20X-VM2HB  
HU150/180/210/250/300FTC4ST  
HUS210/250/300FTC4ST  
ECOSLIM-150L/180L-PP-MEUK

#### Hydrobox Units

EHSC-VM2B/6B  
EHPX-VM2B

#### Flow Temperature Controller & Interface

PAC-IF052B-E

### Models Not Supported

EHPT20X-VM2HA  
EHPX-VM2A  
PAC-IF011/012/021/031/032/041B-E  
PAC-SIF051B-E  
CAHV-P500YA-HPB  
CRHV-P600YA-HPB

### MODEL

### PAC-WF010-E

Description	Wi-Fi Interface
Connect to	Indoor Unit
Max Number of Units	1
Compatibility	See Table to the left
Power Supply	From Indoor Unit
Dimensions (WxDxH) mm	88 x 18.5 x 49
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	✓
Outside Temperature	✓
Fault Codes	✓

### Supported Hardware / Software

#### Tablets (Apps or WebClient)

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

#### Smartphones (Apps or WebClient)

Apple iPhone  
Samsung Galaxy S  
Google Nexus  
Nokia Lumia  
BlackBerry Z10

#### Operating Systems

Android  
Apple iOS / OS X  
Microsoft Windows 8  
BlackBerry 10

#### Internet Browsers (WebClient 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 / WebClient options. Please note that user experience may vary slightly depending on hardware and software combination.



### Ecodan FTC4 Monobloc Standalone Systems

Ecodan PUAZ-W50VHA-BS & FTC4 Standalone System

Ecodan PUAZ-W85VHA2-BS & FTC4 Standalone System

Ecodan PUAZ-HW140VHA2-BS 1Ph & FTC4 Standalone System

Ecodan PUAZ-HW140YHA2-BS 3Ph & FTC4 Standalone System

#### Items included in the Ecodan FTC4 Monobloc Standalone Systems

Ecodan PUAZ-W50VHA-BS Monobloc Unit

Ecodan PUAZ-W85VHA2-BS Monobloc Unit

Ecodan PUAZ-HW140VHA2-BS Monobloc Unit

Ecodan PUAZ-HW140YHA2-BS Monobloc Unit

PAC-IF052B-E Flow Temperature Controller (FTC4) with main controller and TH1 Flow Sensor

TF1 - Magnetic Particle Filter - 22mm PUAZ-W50/W85VHA(2)

TF1 - Magnetic Particle Filter - 28mm PUAZ-HW140V/YHA2

Flexible Connection Pipes

Flow Meter

PAC-TH011TK-E - DHW Cylinder Sensor

Warranty Card

Ecodan Homeowner DVD

FTC4 Homeowner Quick Start Guide

### Ecodan FTC4 Monobloc Packaged Cylinder Systems

Ecodan PUAZ-W50VHA-BS & 200l Packaged Cylinder System

Ecodan PUAZ-W85VHA2-BS & 200l Packaged Cylinder System

Ecodan PUAZ-HW140VHA2-BS 1Ph & 200l Packaged Cylinder System

Ecodan PUAZ-HW140YHA2-BS 3Ph & 200l Packaged Cylinder System

#### Items included in the Ecodan Monobloc Packaged Cylinder Systems

Ecodan PUAZ-W50VHA-BS Monobloc Unit

Ecodan PUAZ-W85VHA2-BS Monobloc Unit

Ecodan PUAZ-HW140VHA2-BS Monobloc Unit

Ecodan PUAZ-HW140YHA2-BS Monobloc Unit

EHPT20X-VM2HB FTC4 200l Packaged Cylinder

TF1 - Magnetic Particle Filter - 22mm PUAZ-W50/W85VHA(2)

TF1 - Magnetic Particle Filter - 28mm PUAZ-HW140V/YHA2

PAC-WK01UK-E - G3 Compliance Kit

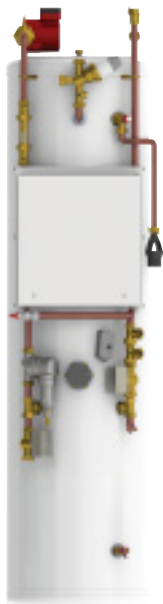
Flexible Connection Pipes

Flow Meter

Warranty Card

Ecodan Homeowner DVD

FTC4 Homeowner Quick Start Guide



### Ecodan FTC4 Monobloc Pre-Plumbed Slimline Cylinder Systems

Ecodan PUAZ-W50VHA-BS & 150l Pre-Plumbed Slimline Cylinder System

Ecodan PUAZ-W50VHA-BS & 180l Pre-Plumbed Slimline Cylinder System

Ecodan PUAZ-W85VHA2-BS & 150l Pre-Plumbed Slimline Cylinder System

Ecodan PUAZ-W85VHA2-BS & 180l Pre-Plumbed Slimline Cylinder System

#### Items included in the Ecodan Monobloc Pre-Plumbed Slimline Cylinder Systems

Ecodan PUAZ-W50VHA-BS Monobloc Unit

Ecodan PUAZ-W85VHA2-BS Monobloc Unit

ECOSLIM-150L-PP-MEUK Pre-Plumbed Slimline Cylinder

ECOSLIM-180L-PP-MEUK Pre-Plumbed Slimline Cylinder

Flexible Connection Pipes

Warranty Card

Ecodan Homeowner DVD

FTC4 Homeowner Quick Start Guide

### Ecodan FTC4 Monobloc Pre-Plumbed Standard Cylinder Systems

Ecodan PUAZ-W50VHA-BS & 150l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-W50VHA-BS & 180l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-W85VHA2-BS & 150l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-W85VHA2-BS & 180l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-W85VHA2-BS & 210l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-HW140VHA2-BS 1Ph & 210l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-HW140VHA2-BS 1Ph & 250l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-HW140VHA2-BS 1Ph & 300l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-HW140VHA2-BS 3Ph & 210l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-HW140VHA2-BS 3Ph & 250l Pre-Plumbed Standard Cylinder System

Ecodan PUAZ-HW140VHA2-BS 3Ph & 300l Pre-Plumbed Standard Cylinder System

#### Items included in the Ecodan Monobloc Pre-Plumbed Standard Cylinder Systems

Ecodan PUAZ-W50VHA-BS Monobloc Unit

Ecodan PUAZ-W85VHA2-BS Monobloc Unit

Ecodan PUAZ-HW140VHA2-BS Monobloc Unit

Ecodan PUAZ-HW140VHA2-BS Monobloc Unit

HU150FTC4ST Pre-Plumbed Standard Cylinder

HU180FTC4ST Pre-Plumbed Standard Cylinder

HU210FTC4ST Pre-Plumbed Standard Cylinder

HU250FTC4ST Pre-Plumbed Standard Cylinder

HU300FTC4ST Pre-Plumbed Standard Cylinder

Flexible Connection Pipes

Warranty Card

Ecodan Homeowner DVD

FTC4 Homeowner Quick Start Guide



### Ecodan FTC4 Monobloc Pre-Plumbed Solar Cylinder Systems

Ecodan PUHZ-W50VHA-BS & 210ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-W50VHA-BS & 250ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-W85VHA2-BS & 210ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-W85VHA2-BS & 250ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-W85VHA2-BS & 300ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-HW140VHA2-BS 1Ph & 210ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-HW140VHA2-BS 1Ph & 250ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-HW140VHA2-BS 1Ph & 300ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-HW140YHA2-BS 3Ph & 210ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-HW140YHA2-BS 3Ph & 250ℓ Pre-Plumbed Solar Cylinder System  
 Ecodan PUHZ-HW140YHA2-BS 3Ph & 300ℓ Pre-Plumbed Solar Cylinder System

#### Items included in the Ecodan Monobloc Pre-Plumbed Solar Cylinder Systems

Ecodan PUHZ-W50VHA-BS Monobloc Unit  
 Ecodan PUHZ-W85VHA2-BS Monobloc Unit  
 Ecodan PUHZ-HW140VHA2-BS Monobloc Unit  
 Ecodan PUHZ-HW140YHA2-BS Monobloc Unit  
 HUS210FTC4ST Pre-Plumbed Solar Cylinder  
 HUS250FTC4ST Pre-Plumbed Solar Cylinder  
 HUS300FTC4ST Pre-Plumbed Solar Cylinder  
 Flexible Connection Pipes  
 Warranty Card  
 Ecodan Homeowner DVD  
 FTC4 Homeowner Quick Start Guide

### Ecodan FTC4 Monobloc Packaged Hydrobox Systems

Ecodan PUHZ-W50VHA-BS & Packaged Hydrobox System  
 Ecodan PUHZ-W85VHA2-BS & Packaged Hydrobox System  
 Ecodan PUHZ-HW140VHA2-BS 1Ph & Packaged Hydrobox System  
 Ecodan PUHZ-HW140YHA2-BS 3Ph & Packaged Hydrobox System

#### Items included in the Ecodan Monobloc Packaged Hydrobox Systems

Ecodan PUHZ-W50VHA-BS Monobloc Unit  
 Ecodan PUHZ-W85VHA2-BS Monobloc Unit  
 Ecodan PUHZ-HW140VHA2-BS Monobloc Unit  
 Ecodan PUHZ-HW140YHA2-BS Monobloc Unit  
 EHPX-VM2B Water Based Packaged Hydrobox  
 Flexible Connection Pipes  
 TF1 - Magnetic Particle Filter - 22mm PUHZ-W50/W85VHA(2)  
 TF1 - Magnetic Particle Filter - 28mm PUHZ-HW140V/YHA2  
 Flow Meter  
 PAC-TH011TK-E - DHW Cylinder Sensor  
 Warranty Card  
 Ecodan Homeowner DVD  
 FTC4 Homeowner Quick Start Guide

### Ecodan FTC4 PUHZ Monobloc Cascade Systems

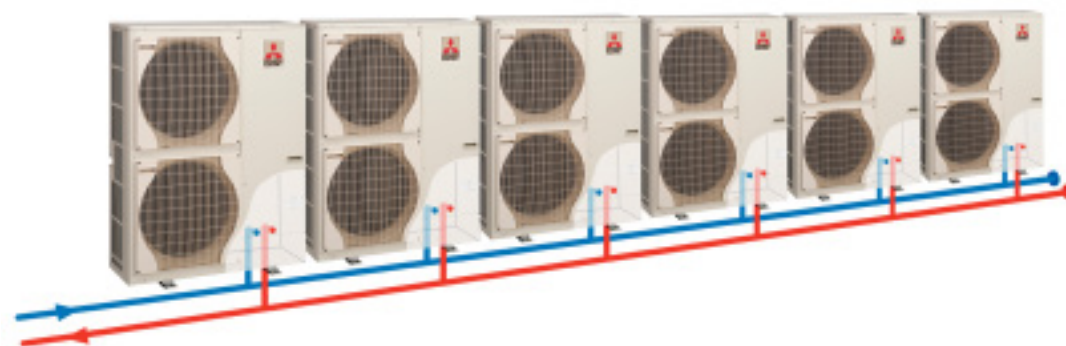
Ecodan 2 x PUHZ-W50VHA-BS Cascade Monobloc System
Ecodan 3 x PUHZ-W50VHA-BS Cascade Monobloc System
Ecodan 4 x PUHZ-W50VHA-BS Cascade Monobloc System
Ecodan 5 x PUHZ-W50VHA-BS Cascade Monobloc System
Ecodan 6 x PUHZ-W50VHA-BS Cascade Monobloc System
Ecodan 2 x PUHZ-W85VHA2-BS Cascade Monobloc System
Ecodan 3 x PUHZ-W85VHA2-BS Cascade Monobloc System
Ecodan 4 x PUHZ-W85VHA2-BS Cascade Monobloc System
Ecodan 5 x PUHZ-W85VHA2-BS Cascade Monobloc System
Ecodan 6 x PUHZ-W85VHA2-BS Cascade Monobloc System
Ecodan 2 x PUHZ-HW140VHA2-BS Cascade Monobloc System
Ecodan 3 x PUHZ-HW140VHA2-BS Cascade Monobloc System
Ecodan 4 x PUHZ-HW140VHA2-BS Cascade Monobloc System
Ecodan 5 x PUHZ-HW140VHA2-BS Cascade Monobloc System
Ecodan 6 x PUHZ-HW140VHA2-BS Cascade Monobloc System
Ecodan 2 x PUHZ-HW140YHA2-BS Cascade Monobloc System
Ecodan 3 x PUHZ-HW140YHA2-BS Cascade Monobloc System
Ecodan 4 x PUHZ-HW140YHA2-BS Cascade Monobloc System
Ecodan 5 x PUHZ-HW140YHA2-BS Cascade Monobloc System
Ecodan 6 x PUHZ-HW140YHA2-BS Cascade Monobloc System

### Product

**Please note:** The items below are included with the kits, the prices below are individual item costs. For quantities included with the kit please contact your Mitsubishi Electric representative.

Flexible Connection Pipes	1 pair per outdoor
PAC-IF052B-E FTC4 Master Controller	1 per cascade system
PAC-SIF051B-E FTC4 Slave Controller	1 per outdoor unit
Warranty Card	1 per cascade system
Ecodan Homeowner DVD	1 per cascade system
FTC4 Homeowner Quick Start Guide	1 per cascade system
Full Day Health Check/Commissioning	1 per cascade system

**Multiple control of six 14kW  
Ecodan PUHZ Units**





### Ecodan CAHV Monobloc Air Source Systems

Ecodan CAHV-P500YA-HPB Monobloc Air Source Unit, including commissioning

The Ecodan CAHV-P500YA-HPB model also has the cascade feature. This allows between 2 and 16 x CAHV-P500YA-HPB units to be connected together, enabling system capacities up to 688kW.

**Please note:** Applications for cascade systems will be bespoke, and as a result the price will be on application. Please contact your local Mitsubishi Electric representative, who will be pleased to give a price on this.

### Ecodan CRHV Monobloc Ground / Water Source Systems

Ecodan CRHV-P600YA-HPB Monobloc Ground / Water Source Unit, including commissioning

The Ecodan CRHV-P600YA-HPB model also has the cascade feature. This allows between 2 and 16 x CRHV-P600YA-HPB units to be connected together.

**Please note:** Applications for cascade systems will be bespoke, and as a result the price will be on application. Please contact your local Mitsubishi Electric representative, who will be pleased to give a price on this.

### Ecodan FTC4 Split Hydrobox Systems

Ecodan PUHZ-SW40VHA-BS & Split Hydrobox System

Ecodan PUHZ-SW75VHA-BS & Split Hydrobox System

Ecodan PUHZ-SW120VHA-BS & Split Hydrobox System

#### Items included in the Ecodan Split Hydrobox Systems

Ecodan PUHZ-SW40VHA-BS Split Unit

Ecodan PUHZ-SW75VHA-BS Split Unit

Ecodan PUHZ-SW120VHA-BS Split Unit

EHSC-VM2B Refrigerant Based Split Hydrobox

PAC-SH30RJ-E Joint Pipe (only included with PUHZ-SW40VHA-BS)

PAC-SH50RJ-E Joint Pipe (only included with PUHZ-SW40VHA-BS)

TF1 - Magnetic Particle Filter - 22mm PUHZ-SW40/SW75VHA

TF1 - Magnetic Particle Filter - 28mm PUHZ-HW140V/YHA2

Flow Meter

PAC-TH011TK-E - DHW Cylinder Sensor

Warranty Card

Ecodan Homeowner DVD

FTC4 Homeowner Quick Start Guide

## Accessories

DESCRIPTION	MODEL REF.
<b>PUHZ Accessories</b>	
Remote Sensor - A Wired Thermistor available for Room Temperature Monitoring	PAC-SE41TS-E
Drain Socket Set	PAC-SH71DS-E
Wireless Remote Controller Transmitter	PAR-WT50R-E
Wireless Remote Controller Receiver	PAR-WR51R-E
A wireless receiver should be purchased with a wireless transmitter. Up to 8 transmitters can be paired with 1 wireless receiver	
Remote Controller Blanking Plate	PAC-RC01
Standard Sensor - for optional 2-Zone Control on Standalone Systems	PAC-TH011-E
High Temperature Sensor	PAC-TH011HT-E
DHW Cylinder Sensor	PAC-TH011TK-E
Slimline Cylinder 2 Zone Connection Kit	ESPPMEUK2ZKIT
Slimline Cylinder Additional Pump	ESPPMEUKUPS2
Fix-it foot 600 kit	
Fernox HP-5C Antifreeze containing biocide 10ltr	
Fernox HP-5C Antifreeze containing biocide 25ltr	
3 wire adapter for low noise mode	
Wi-Fi Interface	PAC-WF010-E
<b>CAHV Accessories</b>	
Wind Hood (Four hoods supplied, two side and two rear)	CAHV-WH
Raised Stand	CAHV-RS
Drain Pan and Heater	CAHV-DP
Main Pipework Thermistor	TW-TH16
Wired Remote Controller	PAR-W21MAA-J
Centralised Controller	AG150A-J
Centralised Controller Power Pack	PAC-SC51KUA
AG150 Back Box - for wall recessed mounting	PAC-YG83UTB
AG150 Wall Mounted Box - for wall mounting	PAC-YG81TB
AG150 Panel - for wall mounting both AG150 and power pack	PAC-YG85KTB
AG150 Black Cover	PAC-YG71CBL
<b>CRHV Accessories</b>	
Main Pipework Thermistor	TW-TH16
Wired Remote Controller	PAR-W21MAA-J
External Temperature Sensor	TMP-O