MITSUBISHI ELECTRIC

2021

Heating and Ventilation Product Catalogue

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Heating

Ecodan Residential Renewable Heating Systems

ecodan
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.

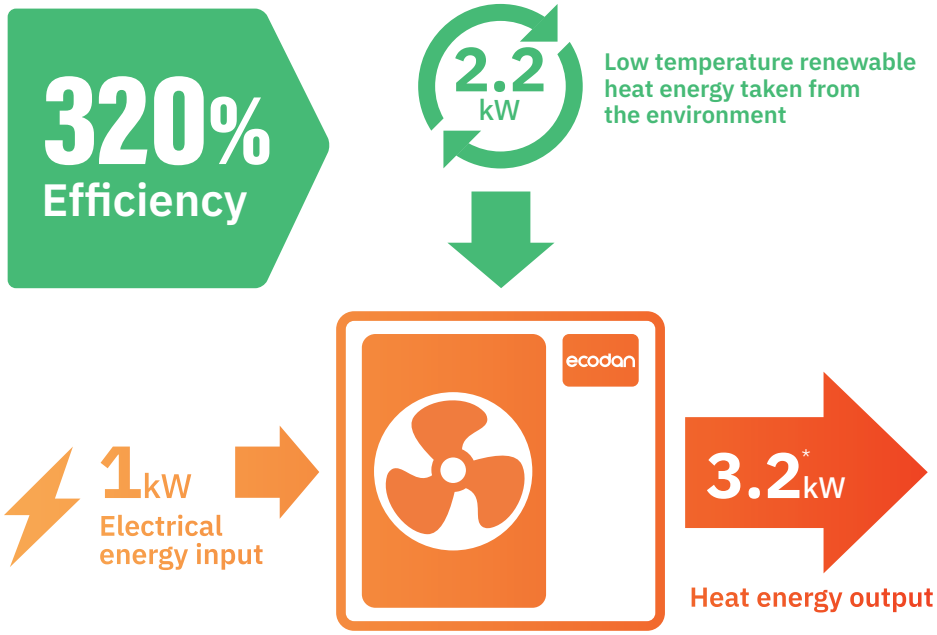
I’m therefore delighted to associate myself with Ecodan, the market-leading brand of heat pumps built here in the UK and which can help reduce energy bills and lower emissions for almost any home. ”

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.

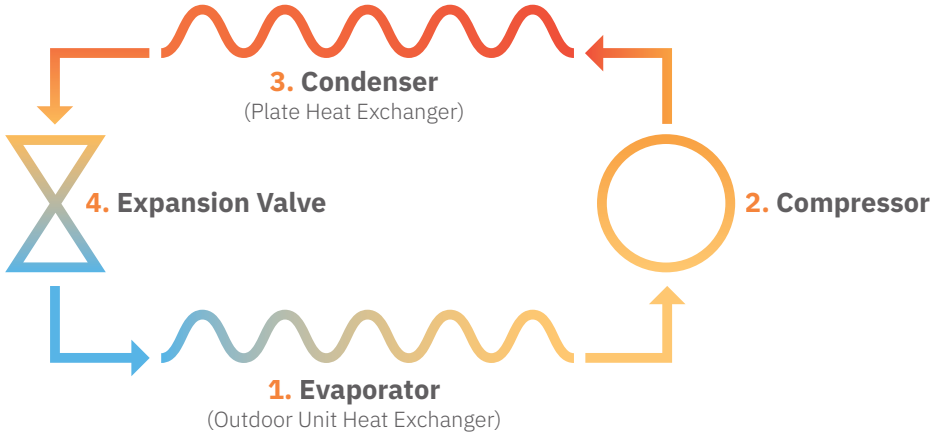


*As independently tested by BSRIA based upon BSEN14511 Part 3 standard rating conditions. Due to the method of operation, the performance of heat pumps will vary based upon the temperature of the heat source and the requirements of the heat delivered. The BSEN14511 testing relates to the heat pump performance 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°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

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**

ecodan Renewable Heating Systems

Range Overview


QUHZ-W40VA


PUZ-WM50VHA


PUZ-WM60VAA


PUZ-WM85VAA
PUZ-WM85YAA


PUZ-WM112VAA
PUZ-WM112YAA


PUZ-HWM140VHA
PUZ-HWM140YHA


QAHV-N560YA-HPB


CAHV-P500YB-HPB


CRHV-P600YA-HPB

System Type		Litres	4kW	5kW	6kW	8.5kW	11.2kW	14kW	40kW	43kW	60kW
Standalone	 			●	●	●	●	●	●	●	●
Thermal Store		EHPT20Q-VM2EA	200	●							
Packaged Cylinder		EHPT20X-MHEDW	200		●	●	●	●	●		
Pre-Plumbed Slimline Cylinder		EHPT15X-UKHLDW	150		●	●	●				
		EHPT17X-UKHLDW	170		●	●	●				
Pre-Plumbed Standard Cylinder		EHPT15X-UKHDW	150		●	●	●				
		EHPT17X-UKHDW	170		●	●	●				
		EHPT21X-UKHDW	210		●	●	●	●	●		
		EHPT25X-UKHDW	250				●	●	●		
		EHPT30X-UKHDW	300				●	●	●		
Pre-Plumbed Solar Cylinder		EHPT21X-UKHSDW	210		●	●	●	●	●		
		EHPT25X-UKHSDW	250				●	●	●		
		EHPT30X-UKHSDW	300				●	●	●		
Approvals		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_2 (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

R744

OUTDOOR UNIT		QUHZ-W40VA
HEAT PUMP COMBINATION HEATER - 55°C	ErP Rating	A+
	η_s	117%
	SCOP	2.90
HEAT PUMP COMBINATION HEATER - Large Profile*1	ErP Rating	A
	η_{wh}	129%
	COP	3.00
HEATING*2 (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)*3		43
SOUND POWER LEVEL (dBA)*4		53
WATER DATA	Pipework Size (mm)	15
	Flow Rate (l/min)	3 to 8
DISTANCE BETWEEN OUTDOOR UNIT AND THERMAL STORE (m)	Height Difference	5
	Piping Length	15
DIMENSIONS (mm)	Width	809+70*5
	Depth	300+20*5
	Height	715
WEIGHT (kg)		57
ELECTRICAL DATA		Powered from indoor unit
REFRIGERANT CHARGE (kg) / CO_2 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 (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)*4		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)*6	20
OPTIONAL SIMPLIFIED WIRELESS ROOM THERMOSTAT AND WIRELESS RECEIVER		PAR-WT50-E Controller and PAR-WR51-E Receiver

*1 Combination with EHPT20Q-VM2EA Thermal Store.
*2 Under normal heating conditions at outdoor temp: -3°CDB / -4°CWB, outlet water temp 55°C, inlet water temp 47°C.
*3 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.
*4 Sound power level tested to BS EN12102.
*5 Grille or pipe cover.
*6 MCB Sizes BS EN60898-2 & BS EN60947-2.

η_s is the seasonal space heating energy efficiency (SSHEE)
η_{wh} is the water heating energy efficiency

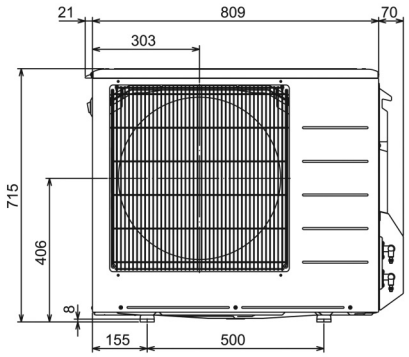
MCS CERTIFIED

Certificate Number: MCS HP0002
Product Type: Heat Pumps
Product Reference: QUHZ-W40VA

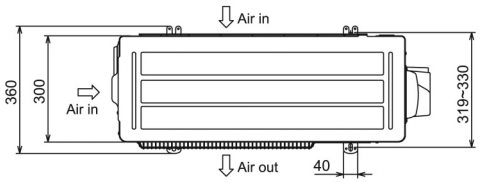
Product Dimensions QUHZ-W40VA

All measurement in mm

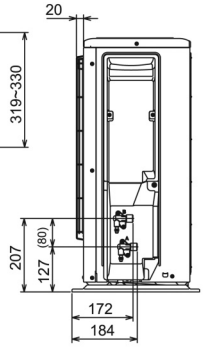
Front View



Upper View



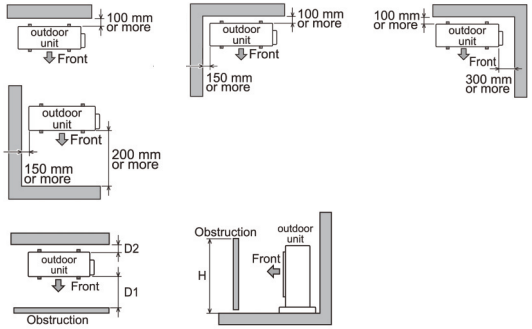
Side View



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.

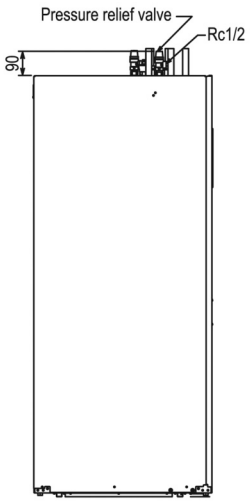
Obstruction height (H)	Required clearance (D1/D2)	
	Without wind guides	With wind guides
1200mm or less	200mm or more / 100mm or more	185mm or more / 30mm or more
More than1200mm	300mm or more / 100mm or more	350mm or more / 30mm or more

*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.

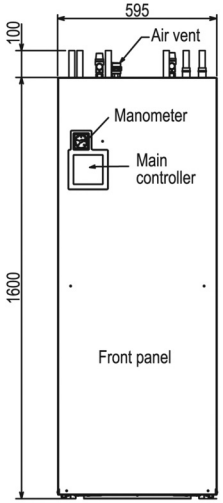
Product Dimensions EHPT20Q-VM2EA

All measurement in mm

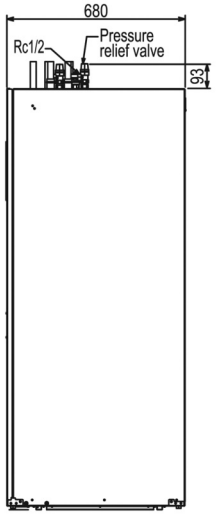
Left View



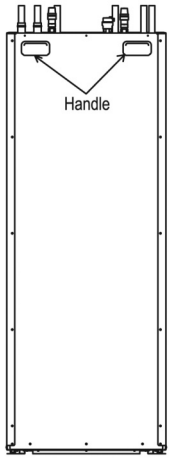
Front View



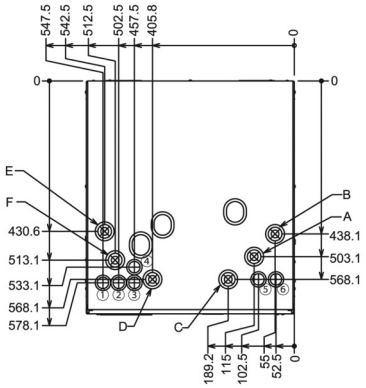
Right View



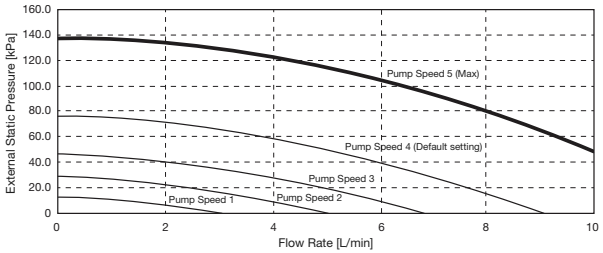
Rear View



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

ecodan

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 -20ºC
- 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

Manufactured in the UK

R32

OUTDOOR UNIT		PUZ-WM50VHA(-BS)
HEAT PUMP SPACE HEATER - 55˚C	ErP Rating	A++
	η_s	129%
	SCOP	3.33
HEAT PUMP SPACE HEATER - 35˚C	ErP Rating	A+++
	η_s	183%
	SCOP	4.58
HEAT PUMP COMBINATION HEATER - Large Profile*1	ErP Rating	A+
	η_{wh}	135%
HEATING*2 (A-7/W35)	Capacity (kW)	5.0
	Power Input (kW)	1.67
	COP	3.00
OPERATING AMBIENT TEMPERATURE (°C DB)		-20 ~ +35
SOUND DATA*3	Pressure Level at 1m (dBA)	47
	Power Level (dBA)*4	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*7
	Height	923
WEIGHT (kg)		71
ELECTRICAL DATA	Electrical Supply	220-240v, 50Hz
	Phase	Single
	Nominal Running Current [MAX] (A)*5	4.64 [13]
	Fuse Rating - MCB Sizes (A)*6	16
REFRIGERANT CHARGE (kg) / CO_2 EQUIVALENT (t)	R32 (GWP 675)	2.0 / 1.35

*1 Combination with E*PT20X Cylinder
*2 Under normal heating conditions at outdoor temp: -7°CDB / -8°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 55°C, inlet water temp 47°C as tested to BS EN14511.
*4 Sound power level tested to BS EN12102.
*5 Under nominal heating conditions at outdoor temp: 7ºC, outlet water temp: 35ºC.
*6 MCB Sizes BS EN60898-2 & BS EN60947-2.
*7 Grille.

η_s is the seasonal space heating energy efficiency (SSHEE) η_{wh} is the water heating energy efficiency

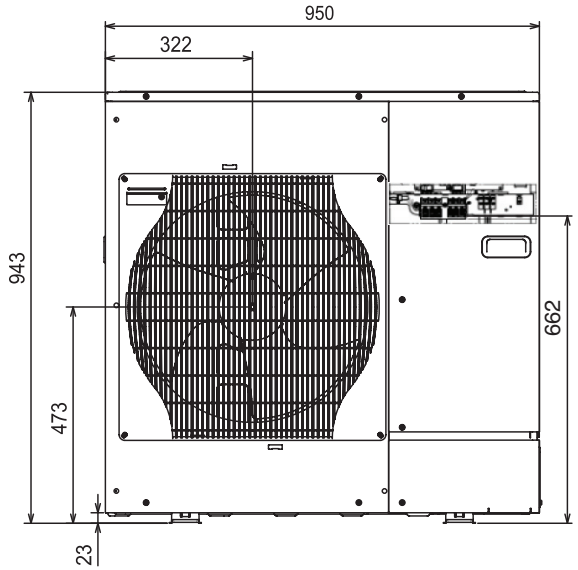
Certificate Number: 037-0032-20
Product Type: Heat Pumps
Product Reference: PUZ-WM50VHA(-BS)

Product Dimensions

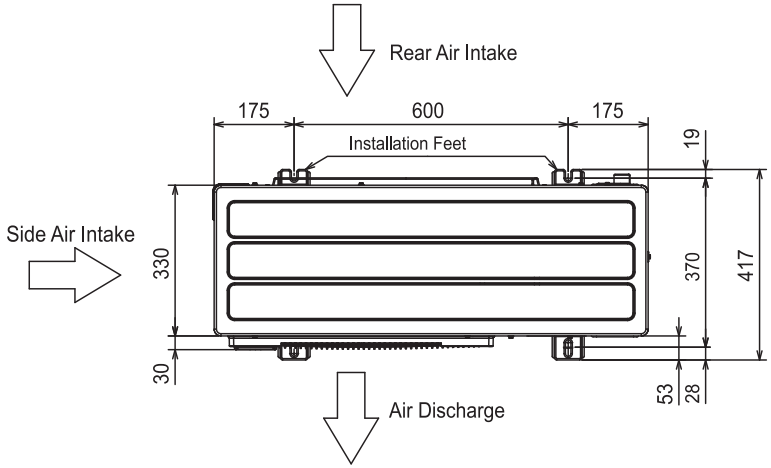
PUZ-WM50VHA(-BS)

All measurement in mm

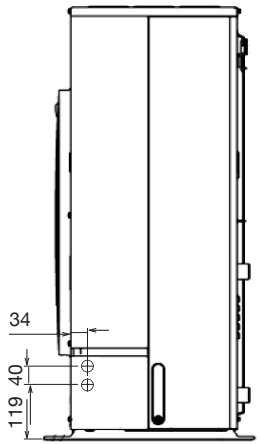
Front View



Upper View



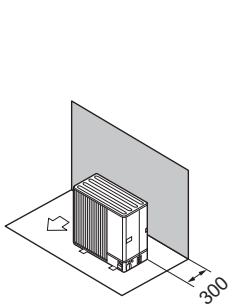
Side View

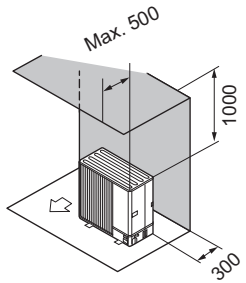


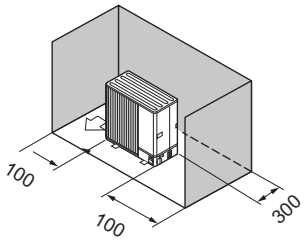
Installation Location

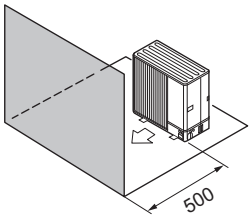
PUZ-WM50VHA(-BS)

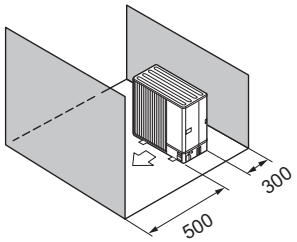
All measurement in mm

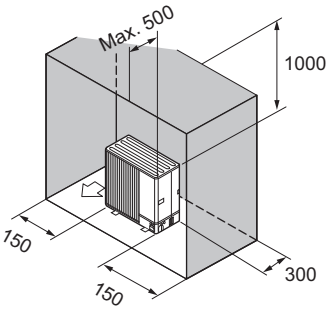












Please refer to Databook and Installation Manual for further details.

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 -25ºC
- Optimised low ambient defrost control and operation down to -7ºC
- Hybrid function, for use with conventional boilers
- Energy monitoring as standard
- Multiple unit cascade function

Manufactured in the UK

R32

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++
	η_s	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+++
	η_s	190%	193%	193%	191%	191%
	SCOP	4.62	4.57	4.79	4.58	4.78
HEAT PUMP COMBINATION HEATER - Large Profile*1	ErP Rating	A+	A+	A+	A+	A+
	η_{wh}	145%	145%	145%	148%	148%
HEATING*2 (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*3	Pressure Level at 1m (dBA)	45	45	45	45	45
	Power Level (dBA)*4	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)*5	5.68 [13]	9.1 [22]	2.9 [11.5]	10.9 [28]	3.6 [13]
	Fuse Rating - MCB Sizes (A)*6	16	25	16	32	16
REFRIGERANT CHARGE (kg) / CO_2 EQUIVALENT (t)	R32 (GWP 675)	2.2 / 1.49	2.2 / 1.49	2.2 / 1.49	3.0 / 2.03	3.0 / 2.03

*1 Combination with E*PT20X Cylinder
*2 Under normal heating conditions at outdoor temp: -7°CDB / -8°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 55°C, inlet water temp 47°C as tested to BS EN14511.
*4 Sound power level tested to BS EN12102.
*5 Under nominal heating conditions at outdoor temp: 7ºC, outlet water temp: 35ºC.
*6 MCB Sizes BS EN60898-2 & BS EN60947-2.

η_s is the seasonal space heating energy efficiency (SSHEE) η_{wh} is the water heating energy efficiency

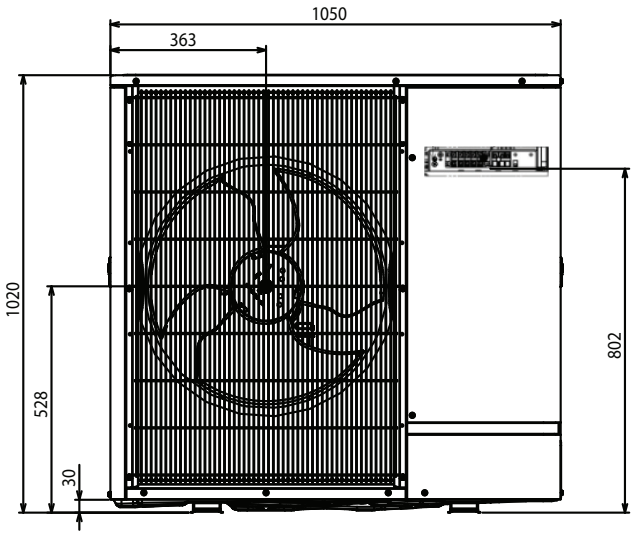
Certificate Number: 037-0033-20 / 037-0034-20
Product Type: Heat Pumps
Product Reference: PUZ-WM60/85VAA(-BS) / PUZ-WM112VAA(-BS)

Product Dimensions

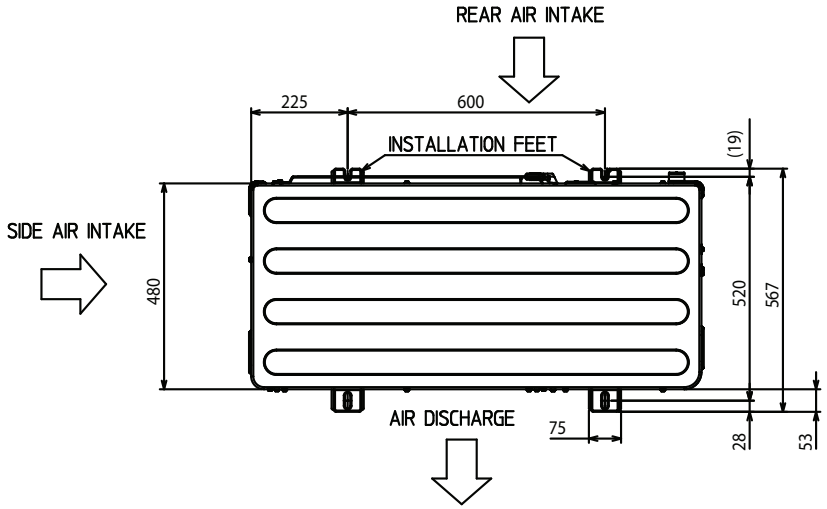
PUZ-WM(60-112)(V/Y)AA

All measurement in mm

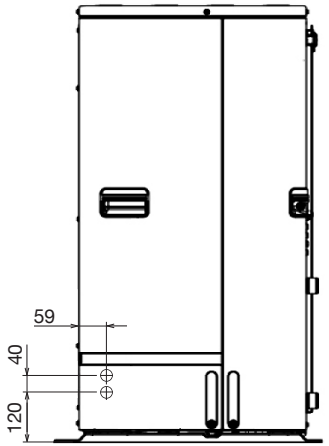
Front View



Upper View



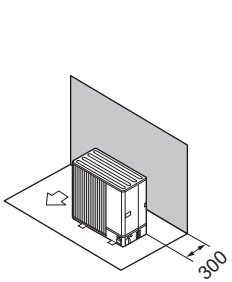
Side View

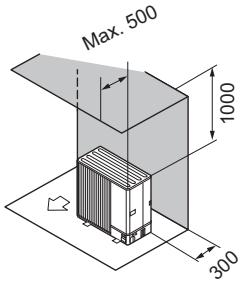


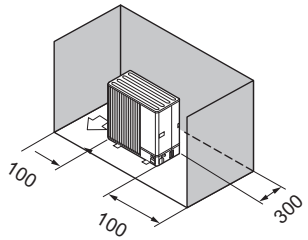
Installation Location

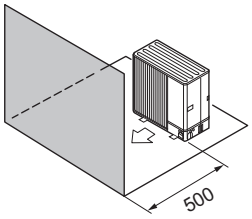
PUZ-WM(60-112)(V/Y)AA

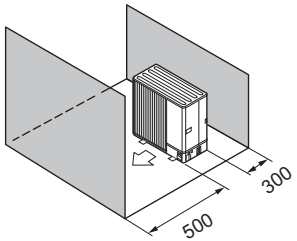
All measurement in mm

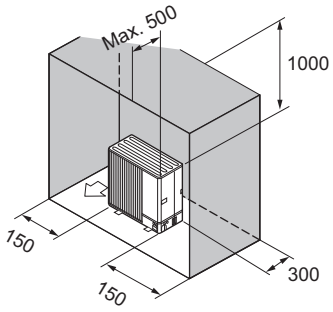












Please refer to Databook and Installation Manual for further details.

PUZ-HWM-VHA/YHA

Monobloc Standalone Air Source Heat Pumps

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 -28ºC
- 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

R32

OUTDOOR UNIT		PUZ-HWM140VHA(-BS)	PUZ-HWM140YHA(-BS)
HEAT PUMP SPACE HEATER - 55°C	ErP Rating	A++	A++
	η_s	3.35	131
	SCOP	3.34	3.35
HEAT PUMP SPACE HEATER - 35°C	ErP Rating	A+++	A+++
	η_s	176	176
	SCOP	4.48	4.45
HEAT PUMP COMBINATION HEATER - Large Profile*1	ErP Rating	A+	A+
	η_{wh}	130	130
HEATING*2 (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*3	Pressure Level at 1m (dBA)	53	53
	Power Level (dBA)*4	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*7	330+30*7
	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)*5	xx [35]	xx [13]
	Fuse Rating - MCB Sizes (A)*6	40	16
REFRIGERANT CHARGE (kg) / CO_2 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.

*1 Combination with E*PT20X Cylinder *2 Under normal heating conditions at outdoor temp: -7°CDB / -8°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 55°C, inlet water temp 47°C as tested to BS EN14511.
*4 Sound power level tested to BS EN12102. *5 Under nominal heating conditions at outdoor temp: 7ºC, outlet water temp: 35ºC.
*6 MCB Sizes BS EN60898-2 & BS EN60947-2. *7 Grille.

η_s is the seasonal space heating energy efficiency (SSHEE) η_{wh} is the water heating energy efficiency

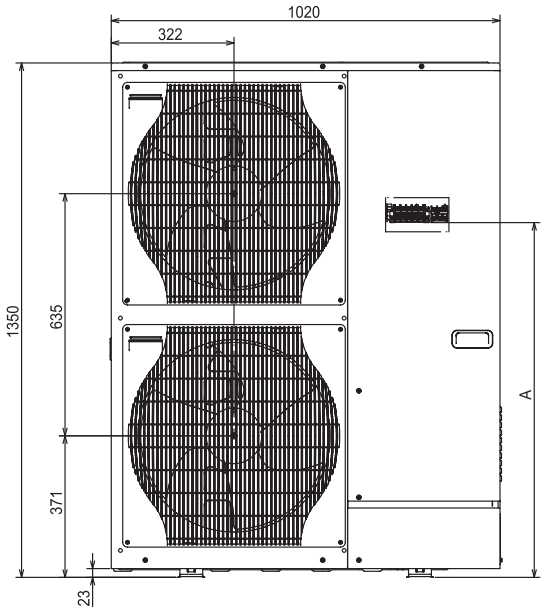
Certificate Number: 037-0035-20
Product Type: Heat Pumps
Product Reference: PUZ-HWM140VHA/YHA(-BS)

Product Dimensions

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

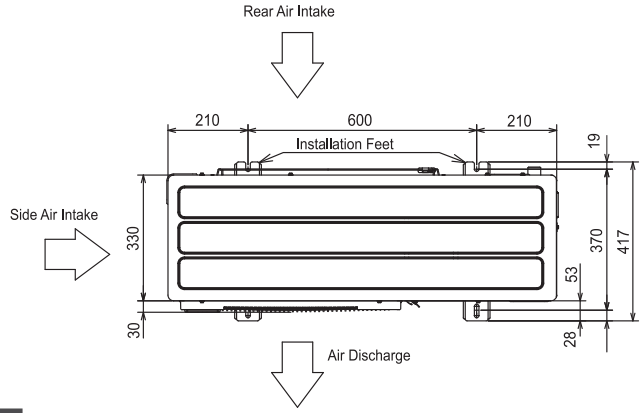
All measurement in mm

Front View

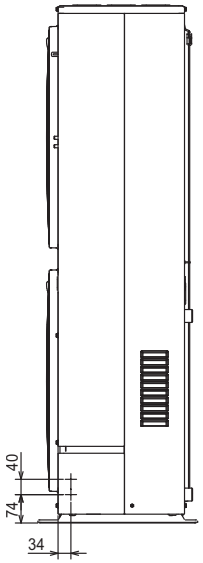


	A
VHA	1079
YHA	931

Upper View



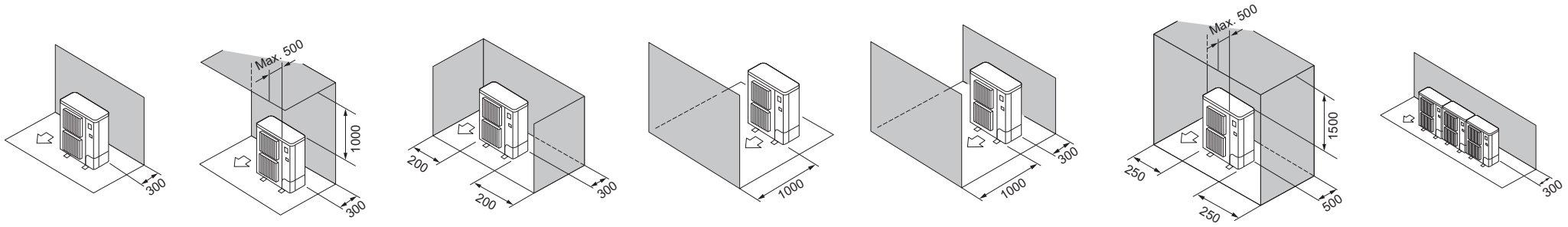
Side View



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.

Manufactured in the UK

R32

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		Flow Rate (l/min) - (H)WM 50 / 60 / 85 / 112 / 140	14 / 17 / 24 / 32 / 37
		Primary Circuit Pump	Grundfos UPM3 15-75 130
		Sanitary Hot Water Pump	Grundfos UPSO 15-60 130
		Connection Size (mm) Heating / DHW	28 / 22
WATER SAFETY DEVICES	Heating Water Circuit	Control Thermistor (°C)	1 - 80
		Flow Sensor (minimum flow 5L/min)	Supplied
	DHW Cylinder	Control Thermistor (°C)	75
		Temp and Pressure Relief Valve (°C)/ (MPa (Bar))	90 / 0.7 (7)
DIMENSIONS (mm)		Width	595
		Depth	680
		Height	1600
WEIGHT EMPTY / FULL (kg)			94 / 300
ELECTRICAL DATA	Control Board - *optionally powered by outdoor unit*	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
MECHANICAL ZONES			DHW and 1 Heating Zone*2
OPTIONAL SIMPLIFIED WIRELESS ROOM THERMOSTAT AND WIRELESS RECEIVER			PAR-WT50-E Controller and PAR-WR51-E Receiver

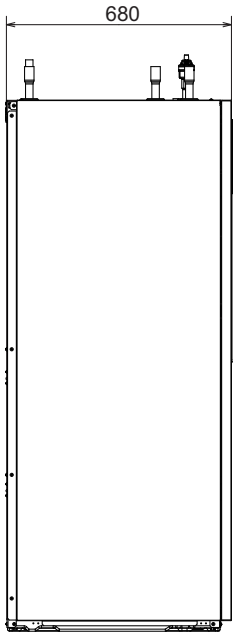
*1 MCB Sizes BS EN60898-2 & BS EN60947-2 *2 Optional 2 zone accessory pack available

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.

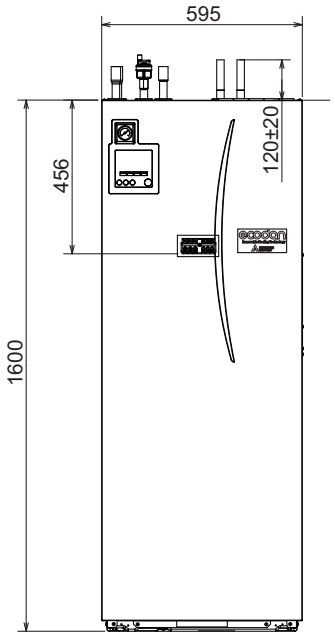
Product Dimensions EHPT20X-MHEDW

All measurement in mm

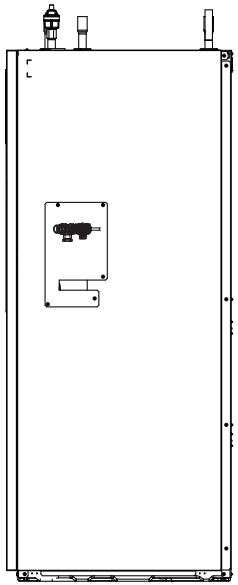
Left View



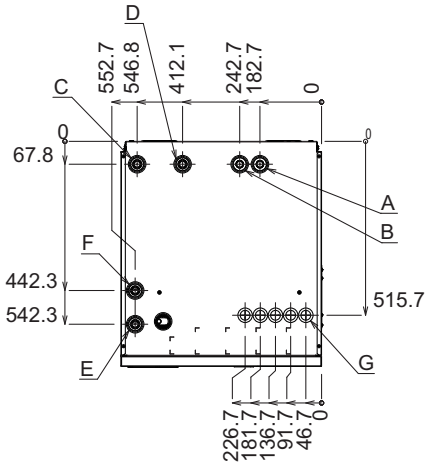
Front View



Right View



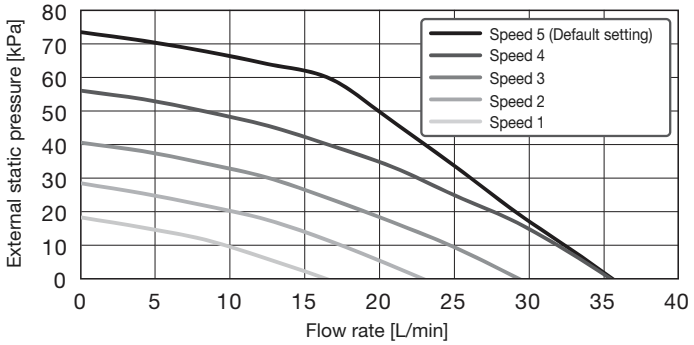
Upper View



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.

Manufactured in the UK

R32

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	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	22 / 22
		Charge Pressure (MPa (Bar))	0.35 (3.5)	0.35 (3.5)
WATER SAFETY	Water Circuit	Control Thermistor (°C)	1 - 80	1 - 80
	DHW Cylinder	DHW Expansion Vessel (Litres)	12	18
		Control Thermistor	75	75
		Over Temperature Cut-Out (°C)	80 ± 5	80 ± 5
		Temp and Pressure Relief Valve (°C) / (MPa (Bar))	90 / 1.0 (10)	90 / 1.0 (10)
		Expansion Relief Valve (Cold) (MPa (Bar))	0.8 (8)	0.8 (8)
DIMENSIONS (mm)		Width	648	648
		Depth	645	645
		Height	1515	1689
WEIGHT EMPTY / FULL (kg)			54 / 204	60 / 230
CYLINDER MATERIAL	Cylinder	Cylinder Material	Stainless Steel	Stainless Steel
	Insulation	Insulation Type	CFC / HCFC-free flame-retardant expanded Polyurethane	
		Insulation Thickness (mm)	50	50
		GWP of Insulation	3.1	3.1
		ODP of Insulation	0	0
ELECTRICAL DATA	Control Board *optionally powered by outdoor unit*	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz
		Phase	Single	Single
		Fuse Rating - MCB Sizes (A)*1	16	16
	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	
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.

*1 MCB Sizes BS EN60898-2 & BS EN60947-2 *2 Optional 2 zone accessory pack available

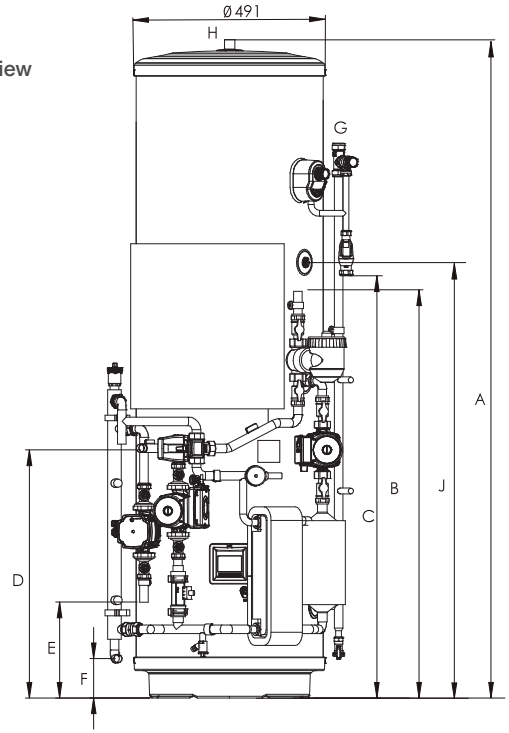
Notes: Cylinder includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Magnetic & Cyclonic Filter, Pumps & Valves for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, 3kW Immersion Heater and Expansion Vessel.

Product Dimensions

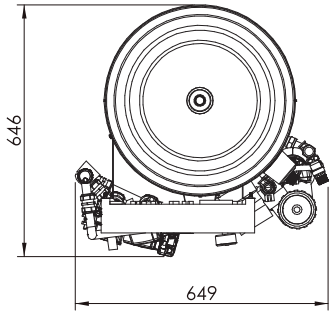
EHPT15-17X-UKHLDW

All measurement in mm

Front View



Upper View



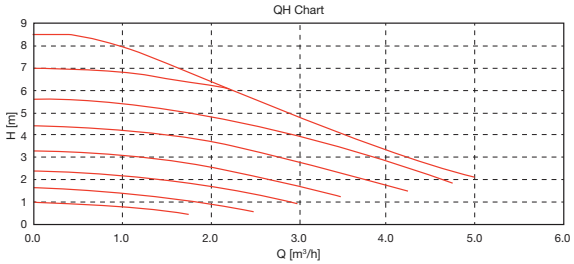
Letter	Pipe Description	Connection size/type
A	Overall height	
B	Heat pump flow	22mm O/D Copper
C	Tundish outlet	22mm/Compression
D	Heat pump return	22mm O/D Copper
E	Heating circuit flow	22mm O/D Copper
F	Heating circuit return	22mm O/D Copper
G	Cold water inlet	22mm/Compression
H	Hot water outlet	22mm/Compression / 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	

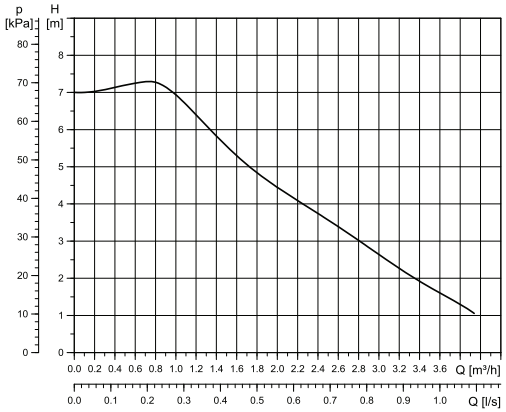
Circulation Pumps

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.

Manufactured in the UK

R32

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		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
	Primary Circuit Pump		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	Control Thermistor (°C)	1 - 80	1 - 80	1 - 80	1 - 80	1 - 80
	DHW Cylinder	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 *optionally powered by outdoor unit*	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)*1	16	16	16	16	16
	Immersion Heater	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
		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)*1	16	16	16	16	16
MECHANICAL ZONES			DHW and 1 Heating Zone*2				
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.

*1 MCB Sizes BS EN60898-2 & BS EN60947-2 *2 Optional 2 zone accessory pack available

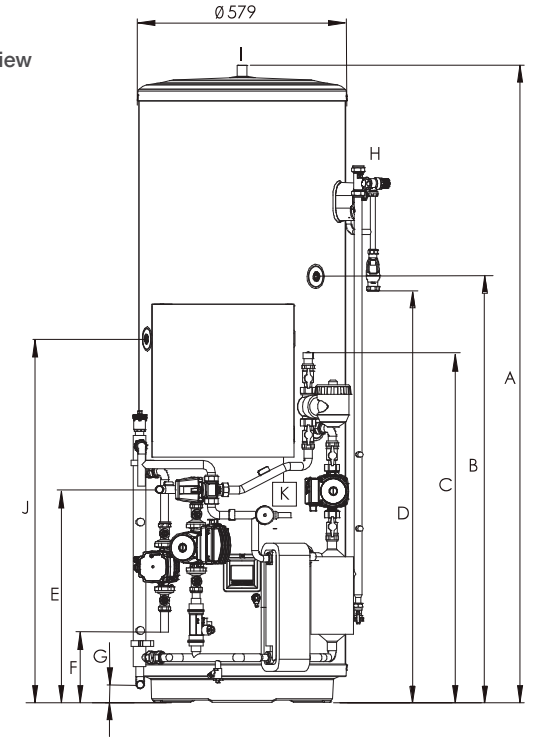
Notes: Cylinder includes: Flow Temperature Controller with Main Controller and Temperature Sensors, Magnetic & Cyclonic Filter, Pumps & Valves for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, 3kW Immersion Heater and Expansion Vessel.
R410a model codes: EHPT**-UKH**C**W & R32 model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

Product Dimensions

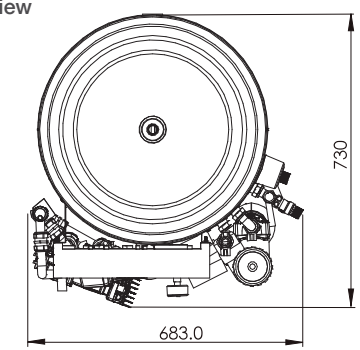
EHPT15-30X-UKHDW

All measurement in mm

Front View



Upper View



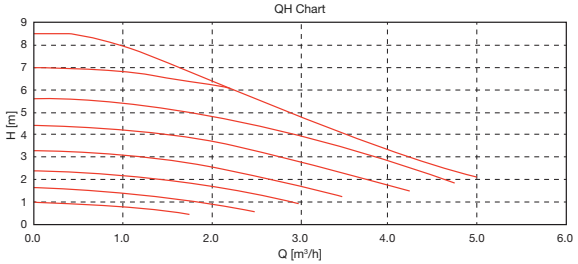
Letter	Pipe Description	Connection size/type
A	Overall height	
B	Secondary return tapping	
C	Heat pump flow	22mm O/D Copper
D	Tundish outlet	22mm/Compression
E	Heat pump return	22mm O/D Copper
F	Heating circuit flow	22mm O/D Copper
G	Heating circuit return	22mm O/D Copper
H	Cold water inlet	22mm/Compression
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				

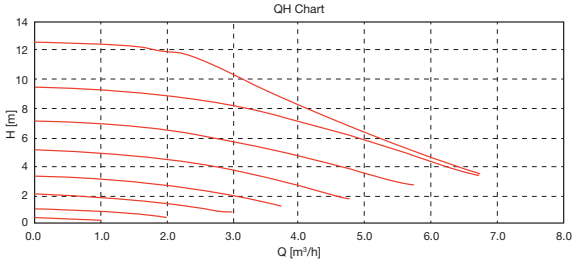
Circulation Pumps

EHPT15-30X-UKHDW

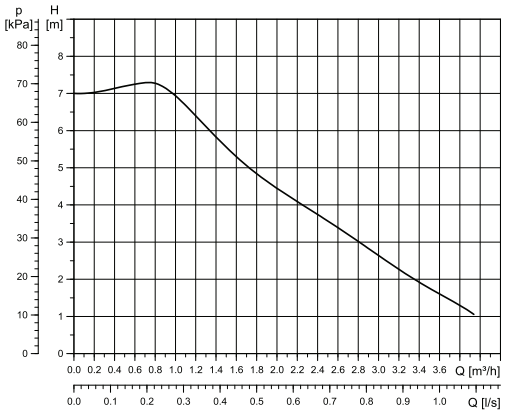
Heat Pump Circuit (150L - 210L)



Heat Pump Circuit (250L-300L)



Space Heating Zone 1 Circuit



Domestic Hot Water Sanitary Circuit

Default setting: Speed 2

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

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.

Manufactured in the UK

R32

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		Flow Rate (l/min) - (H)WM 50 / 60 / 85 / 112 / 140	14 / 17 / 24 / 32 / 40	N/A / N/A / 24 / 32 / 40	N/A / N/A / 24 / 32 / 40
		Primary Circuit Pump	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
		Charge Pressure (MPa (Bar))	0.35 (3.5)	0.35 (3.5)	0.35 (3.5)
WATER SAFETY DEVICES	Water Circuit	Control Thermistor (°C)	1 - 80	1 - 80	1 - 80
	DHW Cylinder	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)
DIMENSIONS (mm)		Width	683	683	683
		Depth	730	730	730
		Height	1513	1765	2081
WEIGHT EMPTY / FULL (kg)			74 / 284	82 / 332	92 / 392
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 *optionally powered by outdoor unit*	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
		Phase	Single	Single	Single
		Fuse Rating - MCB Sizes (A)*1	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)*1	16	16	16
MECHANICAL ZONES			DHW and 1 Heating Zone*2		
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.

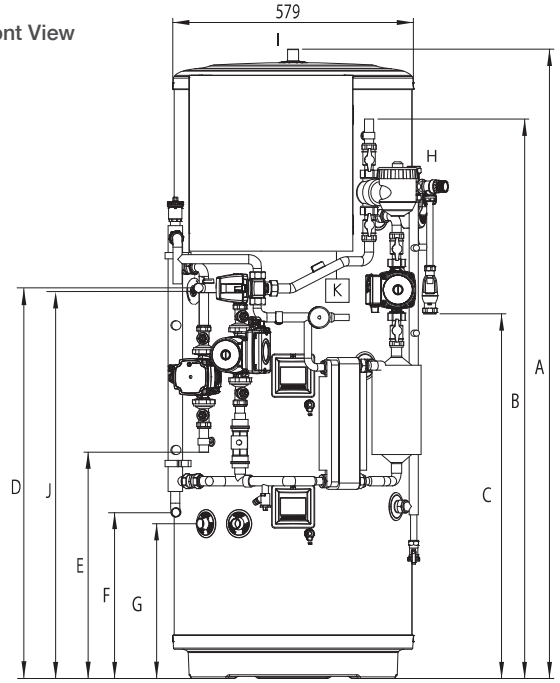
*1 MCB Sizes BS EN60898-2 & BS EN60947-2 *2 Optional 2 zone accessory pack available

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.

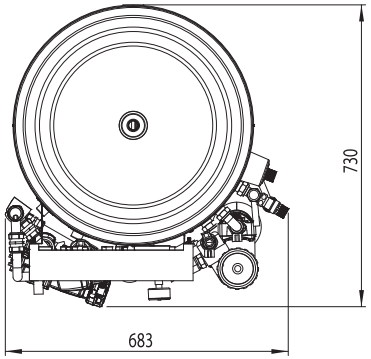
Product Dimensions — EHPT21-30X-UKHSDW

All measurement in mm

Front View



Upper View



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	THW5A sensor pocket	
K	Wi-Fi adaptor (included. installer to locate and mount)	

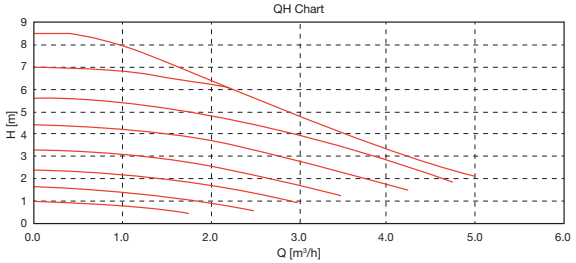
Solar coil specification:

Surface area: 1.1m²
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

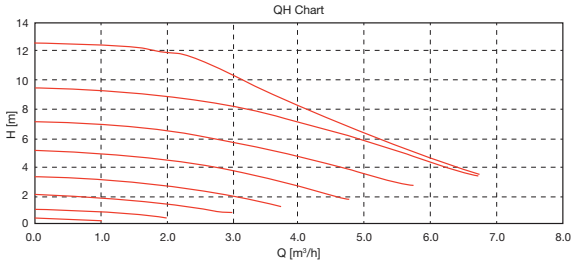
Capacity	210	250	300
A	1513	1765	2081
B	1346	1346	1346
C	877	1129	1444
D	935	935	935
E	545	545	545
F	400	400	400
G	372	372	372
J	933	1008	1198
K	Installer to locate and mount		

Circulation Pumps — EHPT21-30X-UKHSDW

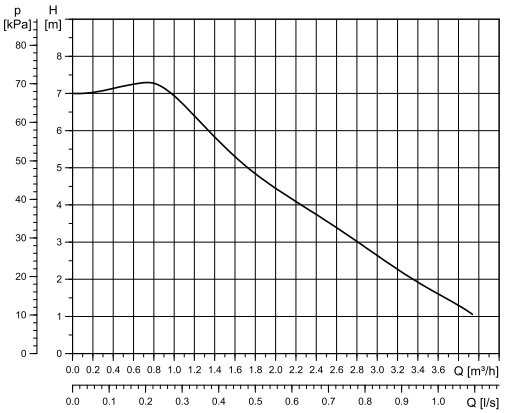
Heat Pump Circuit (210L)



Heat Pump Circuit (250L-300L)



Space Heating Zone 1 Circuit



Domestic Hot Water Sanitary Circuit

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

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.

R32

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*1	✓	
	Hybrid	✓	
MELCloud*2		✓	
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

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

MELCloud Wi-Fi Connectivity

MELCloud™

Featuring the award-winning

MELConsole
Remote Maintenance & Technical Support

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

Available on the App Store

ANDROID APP ON Google play

Windows Store

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

MELCloud™

For a demonstration of Mitsubishi Electric's MELCloud visit our website: **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.

ecodan

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.

MELCloud


QUHZ-W40VA


PUZ-WM50VHA


PUZ-WM60VAA


PUZ-WM85VAA
PUZ-WM85YAA


PUZ-WM112VAA
PUZ-WM112YAA


PUZ-HWM140VHA
PUZ-HWM140YHA

PACK	4kW	5kW	6kW	8.5kW	11.2kW	14kW
EMP1	✓	✓	✓	✓	✓	✓
EMP2	✓	✓	✓	✓	✓	✓
EMP3-M-1Ph		✓	✓	✓ *VAA	✓ *VAA	✓ *VHA
EMP3-M-3Ph				✓ *YAA	✓ *YAA	✓ *YHA
EMP3-Q-1Ph	✓					
EMPH-M-1Ph		✓	✓	✓	✓	✓

DESCRIPTION	ELECTRIC METER	HEAT METER	DATA STORAGE	OPTIONAL WI-FI
Energy input & output estimation included as standard				-
Electrical energy measurement consumption pack	2			-
MMSP compliant electrical energy consumption and heat generation pack with cloud data storage	2	1	✓	Optional*
MMSP compliant electrical energy consumption and heat generation pack with cloud data storage	2	1	✓	Optional*
MMSP compliant electrical energy consumption and heat generation pack with cloud data storage	2	1	✓	Optional*
Electrical energy consumption and heat generation pack for hybrid systems	2	1		-

* Wi-Fi Interface is required by OfGEM 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

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

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

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.

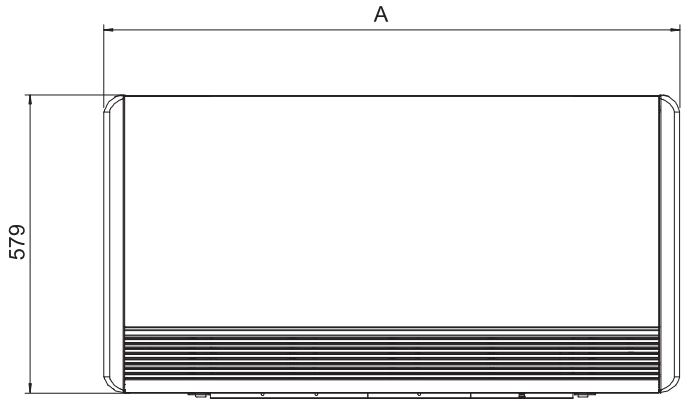
CLIMAVENETA
SUSTAINABLE COMFORT

Product Dimensions

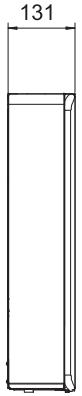
i-LIFE2 SLIM DLMV 80 & i-LIFE2 SLIM DLMV 170

All measurement in mm

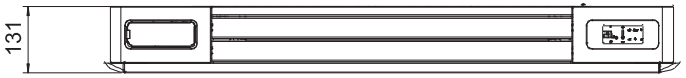
Front View



Side View



Upper View

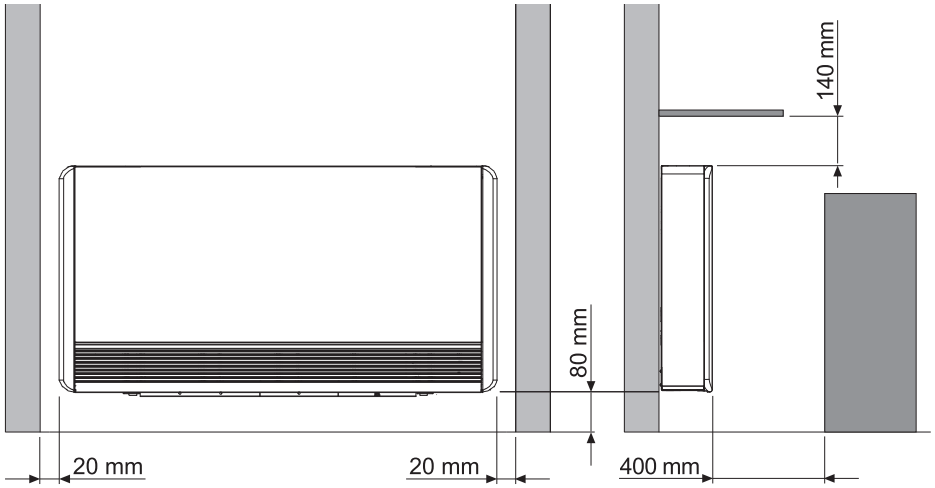


Dimensions	080	170
A	720	920

Installation Location

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

All measurement in mm



Accessories / Optional Extras

DESCRIPTION	MODEL REF.
QUHZ / PUZ	
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**

MITSUBISHI ELECTRIC

Heating

Ecodan Commercial Renewable Heating Systems

ecodan

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_2 (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

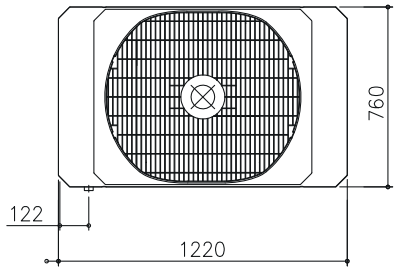
- High efficiency at high flow temperatures
- Utilises CO_2 refrigerant which has a GWP of 1
- Uses a unique twisted and spiral gas cooler to enhance energy efficiency
- Full heating capacity down to -3°C outdoor temperature and operates down to -25°C
- Super low noise levels
- Able to utilise with an indirect system

R744

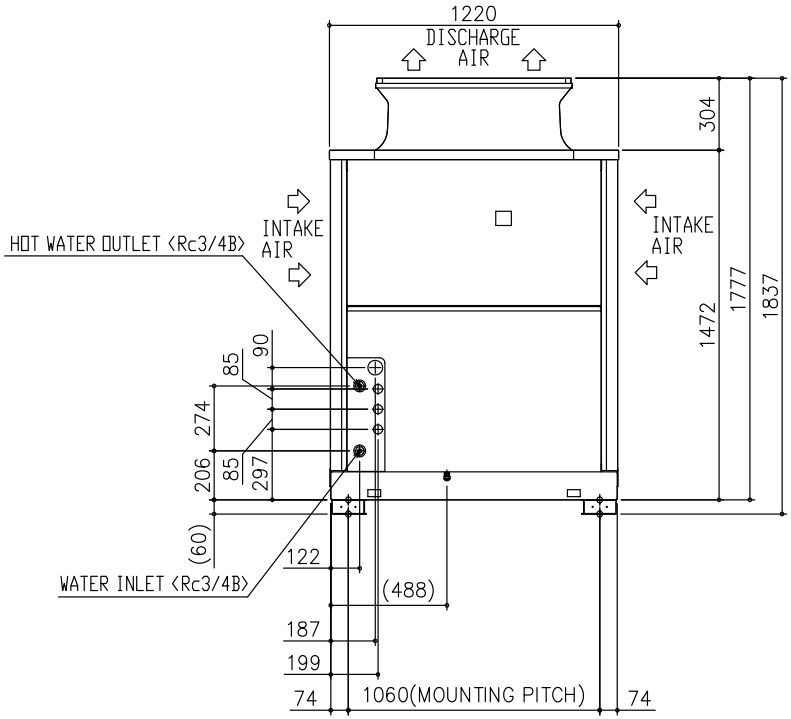
OUTDOOR UNIT		QAHV-N560YA-HPB
WATER HEATING 65°C *1	CAPACITY (kW)	40
	POWER INPUT (kW)	10.31
	CURRENT INPUT (A)	16.3
	COP	3.88
WATER HEATING 65°C *2	CAPACITY (kW)	40
	POWER INPUT (kW)	10.97
	CURRENT INPUT (A)	18.3
	COP	3.65
WATER HEATING 65°C *3	CAPACITY (kW)	40
	POWER INPUT (kW)	11.6
	CURRENT INPUT (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)*5	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 *4 (dB(A))	56
REFRIGERANT	TYPE	R744 (GWP 1)
	REFRIGERANT CHARGE (kg) / CO_2 EQUIVALENT (t)	6.5 / 0.0065

*1 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
*2 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
*3 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
*4 Measured 1m from the front of the unit in an anechoic room
*5 MCB Sizes BS EN60898-2 & BS EN60947-2

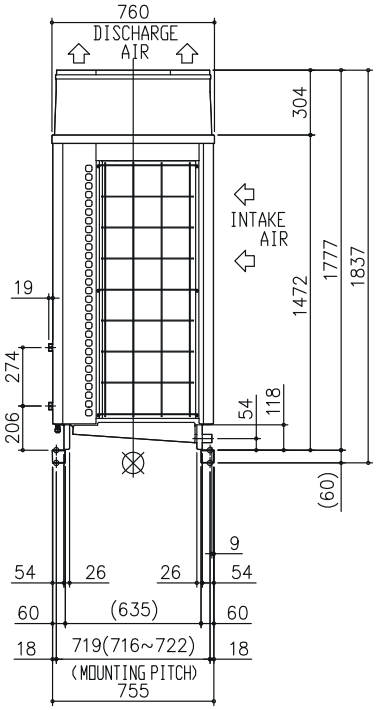
Upper View



Front View



Side 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, only water and electrical connections needed
- Ability to rotate units based on accumulated run hours
- Provides from 25ºC up to 70°C water flow temperatures without boost heaters
- Low maintenance

R407C

OUTDOOR UNIT		CAHV-P500YB-HPB
HEAT PUMP SPACE HEATER - 55°C	ErP Rating	A++
	η_s	125%
	SCOP	3.19
HEAT PUMP SPACE HEATER - 35°C	ErP Rating	A+
	η_s	139%
	SCOP	3.54
HEATING*1 (A-3/W35)	Capacity (kW)	42.6
	Power Input (kW)	15.2
	COP	2.80
OPERATING AMBIENT TEMPERATURE (°C DB)		-20~+40ºC
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) / CO_2 EQUIVALENT (t)	R407C (GWP 1774)	11 / 19.5

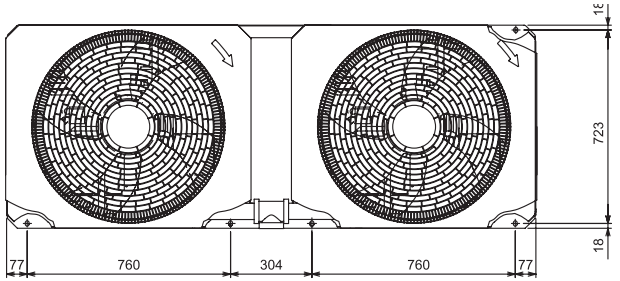
*1 Under normal heating conditions at outdoor temp: -3°CDB / -4°CWB, outlet water temp 35°C, inlet water temp 30°C *2 Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 35°C, inlet water temp 30°C as tested to BS EN14511
*3 Sound power level of the CAHV-P500YB-HPB is 70.7dBA. Tested to BS EN12102 *4 MCB Sizes BS EN60898-2 & BS EN60947-2

η_s is the seasonal space heating energy efficiency (SSHEE) η_{wh} is the water heating energy efficiency

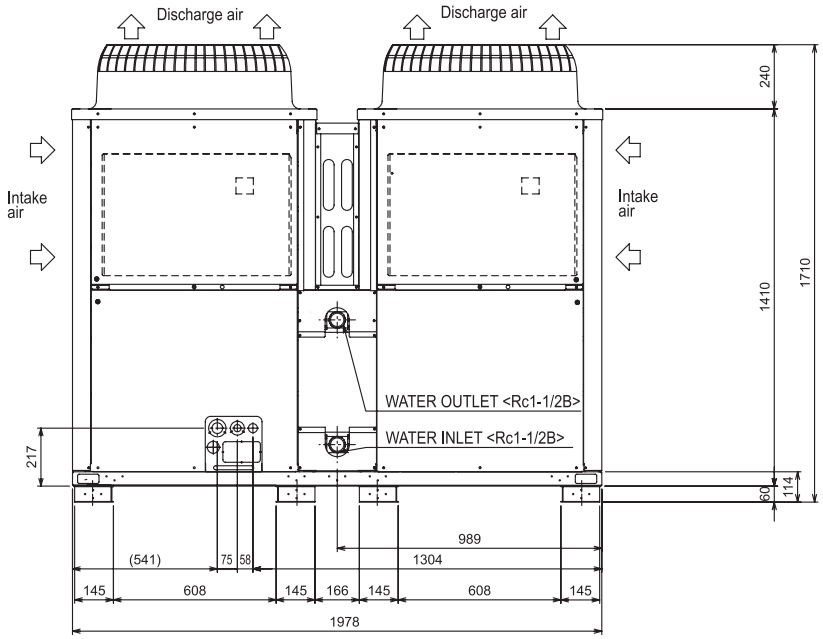
MCS CERTIFIED

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

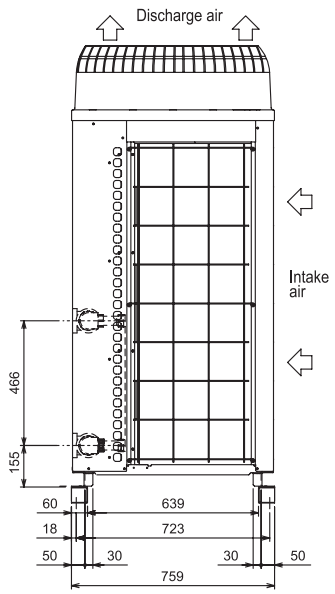
Upper View



Front View



Side View



CRHV

Monobloc Ground / Water Source Heat Pump

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

R410A

CRHV HEAT PUMP			CRHV-P600YA-HPB
HEAT PUMP SPACE HEATER - 55°C		ErP Rating	A++
		η_s	127%
		SCOP	3.37
HEAT PUMP SPACE HEATER - 35°C		ErP Rating	A++
		η_s	153%
		SCOP	4.03
HEATING*1 (B0/W35)		Capacity (kW)	60
		Power Input inc. pump (kW)	14.20
		COP	4.23
SEASONAL EFFICIENCY EN14825 (SPF)		B0/W35 (60kW)	4.33
HEATING*2 (B0/W35)		Capacity (kW)	45
		Power Input inc. pump (kW)	10.20
		COP	4.41
SEASONAL EFFICIENCY EN14825 (SPF)		B0/W35 (45kW)	4.03
HEATING*3 (W10/W35)		Capacity (kW)	60
		Power Input inc. pump (kW)	11.90
		COP	5.08
SEASONAL EFFICIENCY EN14825 (SPF)		W10/W35 (60kW)	5.09
HEATING*4 (W10/W35)		Capacity (kW)	45
		Power Input inc. pump (kW)	8.89
		COP	5.11
SEASONAL EFFICIENCY EN14825 (SPF)		W10/W35 (45kW)	4.55
SOUND DATA		Pressure Level L_{pA} at 1m (dBA)	50
		Power Level L_{WA} (dBA)*5	66
WATER DATA	Flow Rate Range	Heat Source (Brine) (l/s (m^3/hr))	1.5 to 4.1 (5.4 to 15)
		Building Side (LTHW) (l/s (m^3/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
		Building Side Outlet (LTHW) (mm ("))	50.8 (R2) screw
		Building Side Inlet (LTHW) (mm ("))	50.8 (R2) screw
	Operating Temperature Range	Heat Source Inlet (Brine) (°C)	-5 to +27
		Heat Source Inlet Option (Brine) (°C)*6	-5 to +45
		Building Side Outlet (LTHW) (°C)	+30 to +65
	Heat Source Fluid Type*7		Min 30% Ethylene Glycol or equivalent
	Pressure Drop (at 1.5l/s inc 30% glycol in heat source fluid)	Heat Source (Brine) (kPa)	12
		Building Side (LTHW) (kPa)	7
	Maximum Working Pressure	Heat Source (Brine) (MPa(Bar))	1 (10)
		Building Side (LTHW) (MPa(Bar))	1 (10)
DIMENSIONS		Width (mm)	934
		Depth (mm)	780
		Height (mm)	1561
WEIGHT (kg)			395
REFRIGERANT		Type	R410A
		Charge (kg) / CO_2 Equivalent (t)	9 / 18.7
		Max pressure (MPa (Bar))	4.15 (41.5)
		Compressor Type	Inverter Driven
		Circuit type	Hermetically Sealed System
ELECTRICAL DATA		Electrical Supply	415v, 50Hz
		Phase	3
		Maximum Running Current (A)	44
		Fuse Rating - MCB Size (A)*8	50

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

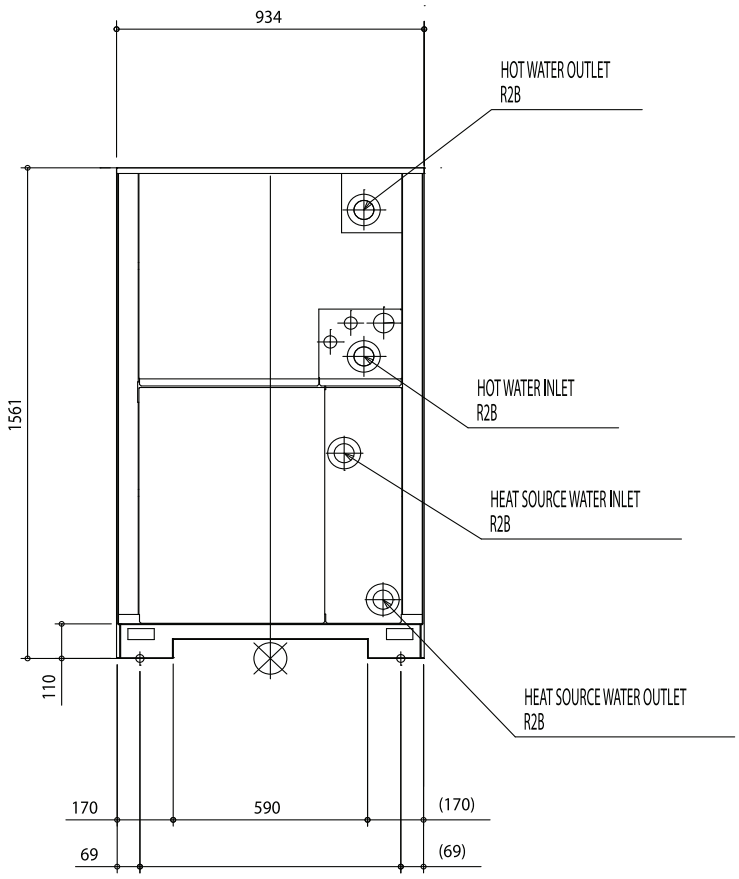
* LTHW - Low Temperature Hot Water
* Please use adequate frost protection to ensure pipework and the unit do not freeze if the system is powered down
* Please do not use ground water or well water directly within the unit
* The water circuit must be a closed circuit

η_s is the seasonal space heating energy efficiency (SSHEE)
η_{wh} is the water heating energy efficiency

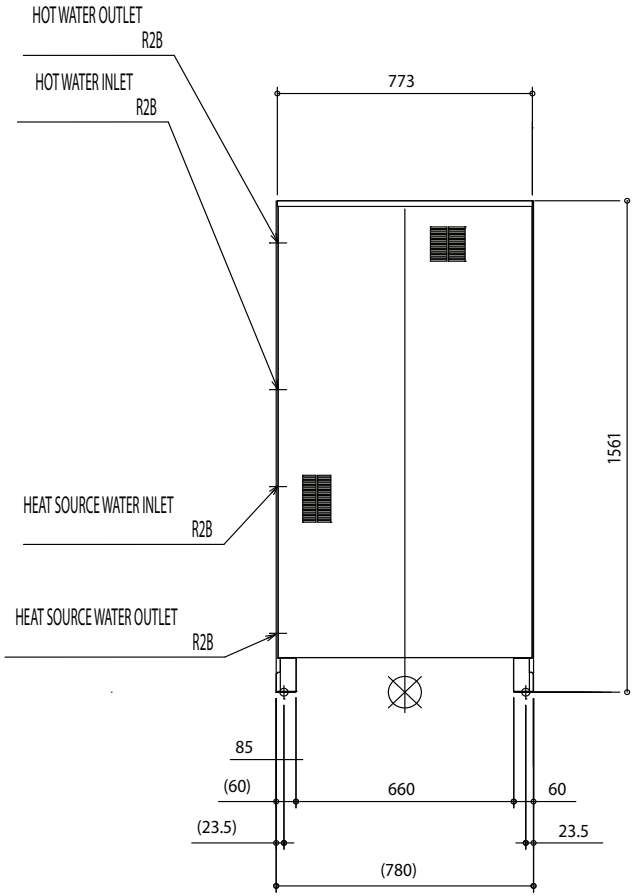
MCS CERTIFIED

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

Front View



Side View



Accessories / Optional Extras

DESCRIPTION	MODEL REF.
QAHV	
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**
CAHV	
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**
CRHV	
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$_5$-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.

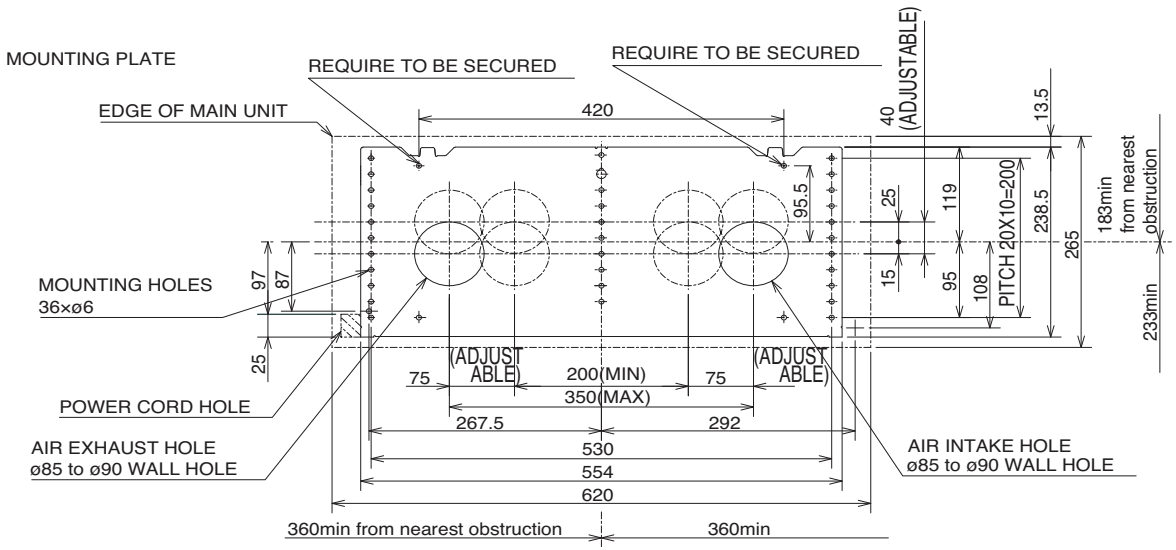
Key Features

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

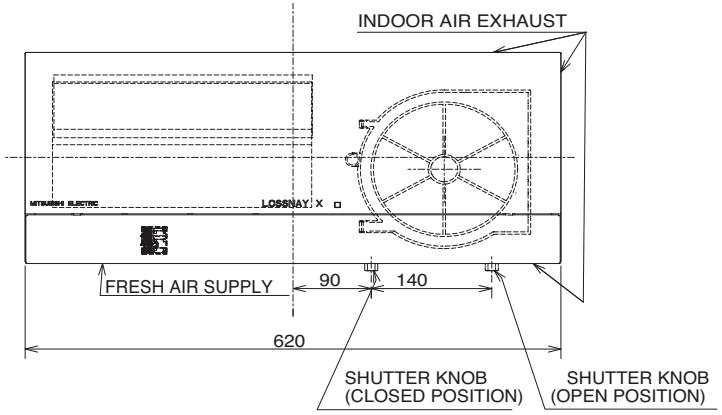
MODEL		VL-100U$_5$-E	VL-100EU$_5$-E
ELECTRICAL POWER SUPPLY		220-240V, 50Hz	220-240V, 50Hz
PHASE		Single	Single
POWER CONSUMPTION (W)	Low	17	17
	High	34	34
AIRFLOW (m^3/h)	Low	61	61
	High	106	106
SOUND PRESSURE LEVEL (dBA)	Low	27	27
	High	38	38
TEMPERATURE EXCHANGE EFFICIENCY (%)	Low	79	79
	High	72	72
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$_5$-E includes a pull cord switch to control the unit. Also available as VL-100EU$_5$-E which includes the option to fit a field supplied external wall switch

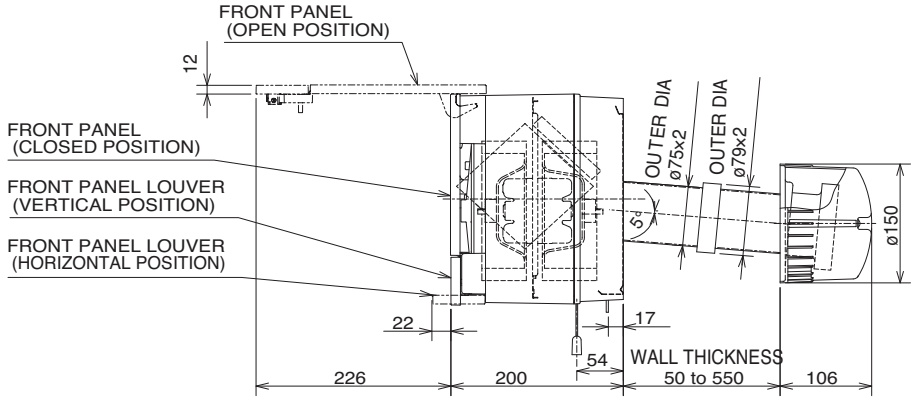
Front View



Upper View



Side View



VL-CZPVU-(R/L)-E

Residential Lossnay

The residential Lossnay range of Mechanical Ventilation with Heat Recovery (MVHR) units create an environment of constant clean and healthy air at home.

These systems are designed to continuously extract from bathrooms, kitchens, toilets, and utility rooms where air can become polluted. The Lossnay supplies a balanced flow of fresh air from outside to living spaces such as bedrooms and living rooms. Whilst doing this the unit minimises the energy lost by recovering the heat from the extracted air and transferring this to the supplied fresh air.

Key Features

- Ultra quiet noise levels
- Optional particulate matter filter, including NOx filtration
- Full summer bypass function
- Digital controller included for ease of commissioning and use
- Automated boost via live switch or volt free contact
- Cloud control

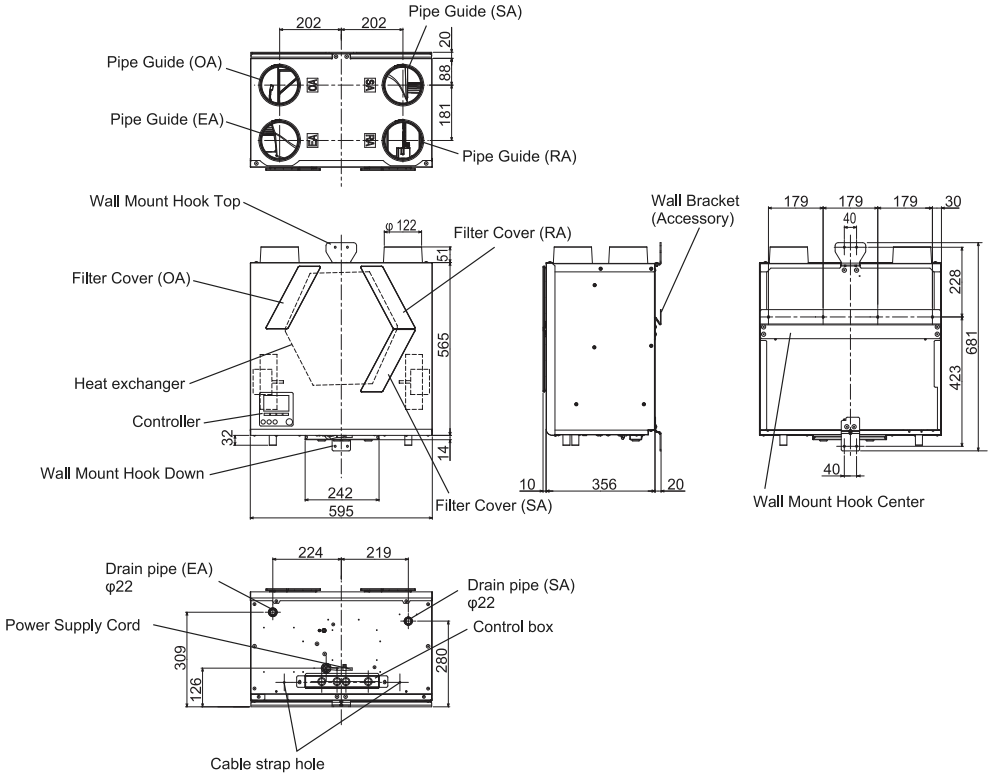
MODEL		VL-250CZPVU-R/L-E		VL-350CZPVU-R/L-E	
DIMENSIONS H X W X D (MM)		563 x 595 x 386		623 x 658 x 462	
WEIGHT (KG)		26		32	
ELECTRICAL POWER SUPPLY		220-240V 50Hz		220-240V 50Hz	
MAX RUNNING CURRENT (A)		1.0		1.32	
SUMMER BYPASS		Full Bypass		Full Bypass	
SPIGOT DIAMETER (MM)		125		150	
STANDARD FILTER (ISO 16890:2016/EN779:2012)	OUTSIDE AIR	Coarse 55% / G3		Coarse 55% / G3	
	RETURN AIR	Coarse 55% / G3		Coarse 55% / G3	
OPTIONAL FILTER(S)	SUPPLY AIR	NOx 90%		NOx 90%	
	OUTSIDE AIR	ePM2.5 50%		ePM2.5 50%	
SAP 2012 PCDB DATA		SFP W/(L/S)	HEAT EXCHANGE EFFICIENCY (%)	SFP W/(L/S)	HEAT EXCHANGE EFFICIENCY (%)
K + 1 (21 L/S)		0.62	90	0.86	90
K + 2 (29 L/S)		0.67	89	0.80	90
K + 3 (37 L/S)		0.79	88	0.84	89
K + 4 (45 L/S)		1.00	87	0.96	89
K + 5 (53 L/S)		1.19	87	1.08	88
K + 6 (61 L/S)		-	-	1.28	87

Product Dimensions

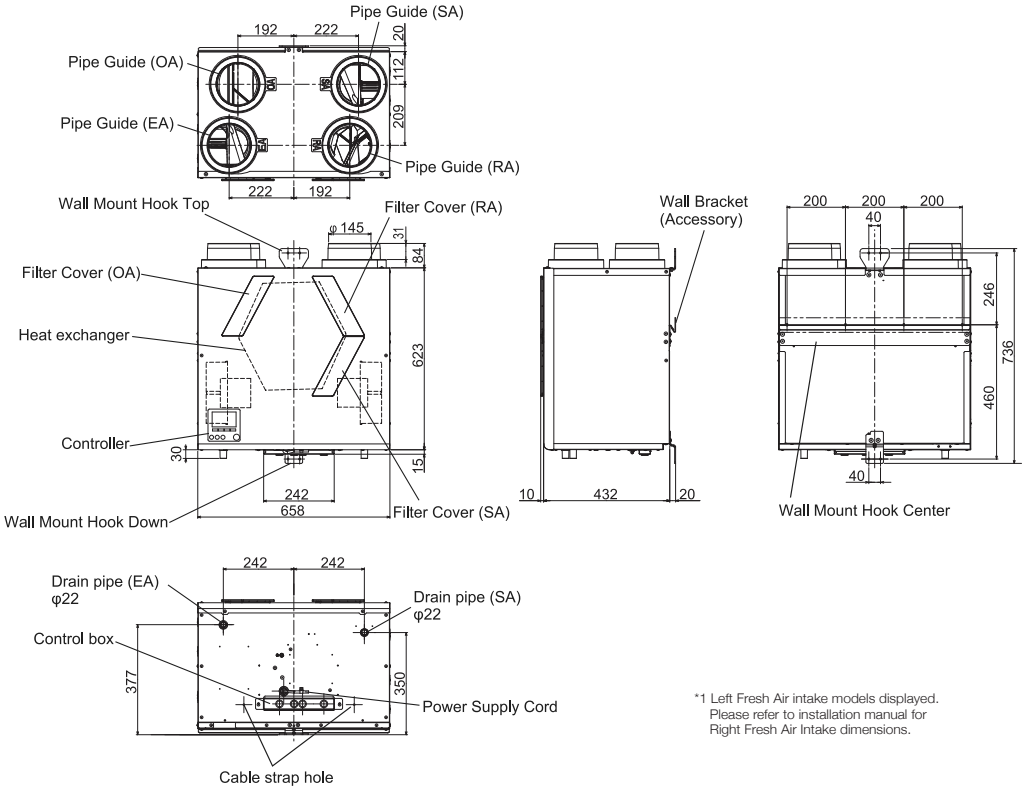
VL-250CZPVU-(R/L)-E & VL-350CZPVU-(R/L)-E

All measurement in mm

VL-250CZPVU-L-E*1



VL-350CZPVU-L-E*1

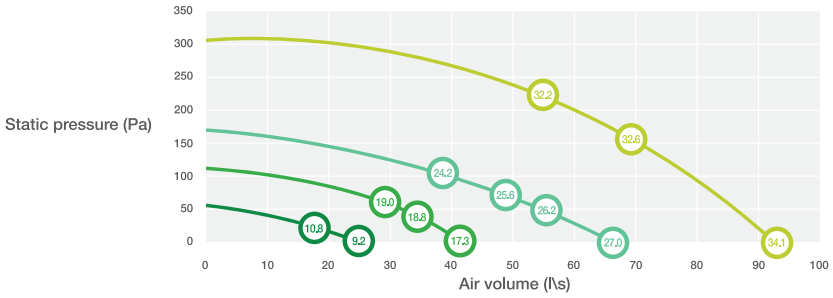


*1 Left Fresh Air intake models displayed. Please refer to installation manual for Right Fresh Air Intake dimensions.

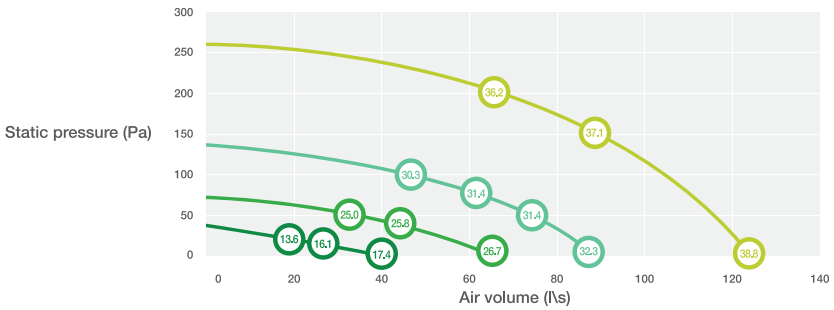
Performance curves and breakout sound data

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.

Lossnay

Accessories / Optional Extras

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

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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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