# Heating

## PUHZ-(H)W50-140VHA(2)/YHA2(-BS) Ecodan Monobloc Air Source Heat Pumps

Making a World of Difference









Designed to meet the demands of today's heating needs











Our range of Ecodan monobloc air source heat pumps includes 5, 8.5, 11.2 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 operation
- Operates with outside temperatures as low as -25°C
- Multiple unit connection
- Hybrid function, for use with conventional boilers
- 2-zone energy efficient space heating control
- Available as a standalone, packaged or semi packaged system
- Energy monitoring as standard
- Coastal protection models available (-BS)

### **Application Examples**

- The vast majority of UK homes
- Small Retail Outlets
- Dental / Doctor's Surgeries
- Public Sector / Commercial Buildings



Air Conditioning | Heating Ventilation | Controls





PUHZ-(H)W50-140VHA(2)/YHA2(-BS)

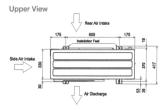
Ecodan Monobloc Air Source Heat Pumps

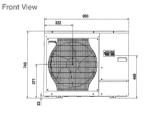
Making a World of Difference

OUTDOOR UNIT		PUHZ-W50VHA2(-BS)	PUHZ-W85VHA2(-BS)	PUHZ-W112VHA(-BS	) PUHZ-HW140VHA2(-BS) P	JHZ-HW140YHA2(-B
HEAT PUMP SPACE	ErP Rating	A++	A++	A++	A++	A++
HEATER - 55°C	η,	127%	128%	125%	126%	126%
	SCOP	3.17	3.18	3.11	3.12	3.12
HEAT PUMP SPACE	ErP Rating	A++	A++	A++	A++	A++
HEATER - 35°C	η,	162%	162%	164%	157%	157%
	SCOP	4.03	4.01	4.06	3.87	3.87
HEAT PUMP COMBINATION HEATER - Large Profile <sup>1</sup>	ErP Rating	Α	Α	A	Α	А
	$\eta_{\text{wh}}$	99%	97%	100%	96%	96%
HEATING <sup>12</sup>	Capacity (kW)	4.8	8.3	11.0	14.0	14.0
A-3/W35)	Power Input (kW)	1.63	2.96	3.65	4.81	4.81
	COP	2.95	2.80	3.01	2.91	2.91
OPERATING AMBIENT TEMPERATURE (°C DB)		-15 ~ +35°C	-20 ~ +35°C	-20 ~ +35°C	-25 ~ +35°C	-25 ~ +35°C
SOUND PRESSURE LEVEL AT 1M (dBA) 314		45	48	53	53	53
LOW NOISE MODE (dBA) <sup>73</sup>		40	42	46	46	46
WATER DATA	Pipework Size (mm)	22	22	28	28	28
	Flow Rate (I/min)	14.3	25.8	32.1	40.1	40.1
	Water Pressure Drop (kPa)	12	13.5	6.3	9	9
DIMENSIONS (mm) <sup>-7</sup>	Width	950	950	1020	1020	1020
	Depth	330+30-5	330+30-	330+30°5	330+30*5	330+30%
	Height	740	943	1350	1350	1350
VEIGHT (kg)		64	77	133	134	148
ELECTRICAL DATA	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	380-415v, 50Hz
	Phase	Single	Single	Single	Single	3
	Nominal Running Current [MAX] (A)	5.4 [13]	10.3 [23]	11.2 [29.5]	14.9 [35]	5.1 [13]
	Fuse Rating - MCB Sizes (A) <sup>76</sup>	16	25	32	40	16

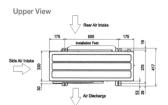
#### **DIMENSIONS**

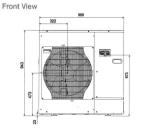
#### PUHZ-W50VHA2(-BS)



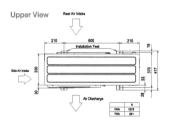


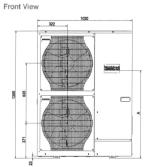
#### PUHZ-W85VHA2(-BS)





#### PUHZ-(H)W112-140VHA(2) / YHA2(-BS)







Telephone: 01707 282880

email: heating@meuk.mee.com web: heating.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environmental Systems Division

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

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

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<sup>2</sup> Under normal insuling constances at outdoor temps -3-CUBS -4-CUVs, outlier water temp 30°C, inliet water temp 30°C.

\*\*Surface from a purp of the PUHZ-W50VHA2 is 61dBA, PUHZ-W65VHA2 is 62.5dBA, PUHZ-W112VHA is 65dBA, PUHZ-HW140VHA2 is 65.5dBA, PUHZ-HW140VHA2 is 65.5dBA, PUHZ-HW140VHA2 is 65.5dBA, PUHZ-HW140VHA2 is 65.5dBA, PUHZ-HW140VHA2 is 67.5dBA. Tissted to BS EN12102.

 <sup>10</sup> clinie.
 16 MOB Sizes BS EN60898-2 & BS EN60947-2.
 17 Flow Temperature Controller (FTC) for standalone systems PAC-IF062B-E Dimensions WxDxH (mm) - 520x150x450.

 $<sup>\</sup>eta_{\rm e}$  is the seasonal space heating energy efficiency (SSHEE) —  $\eta_{\rm ee}$  is the water heating energy efficiency

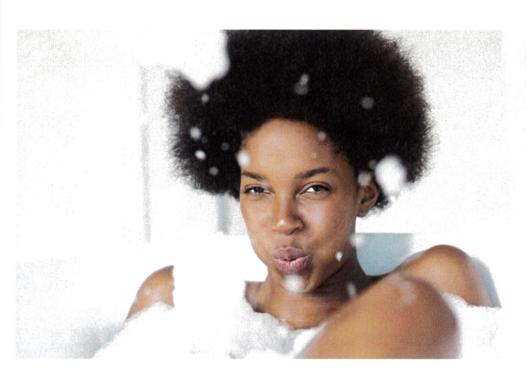
# Heating

### EHPT15-30X-UKHCW

FTC5 Pre-plumbed Standard Cylinders for Ecodan Monobloc Units

Making a World of Difference

ecodari





The 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 standard cylinder provides improved performance and faster heat up times through the use of plate heat exchanger technology. Fast commissioning via an SD card and energy monitoring functions are now included.

### **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







# Heating

### EHPT15-30X-UKHCW

FTC5 Pre-plumbed Standard Cylinders for Ecodan Monobloc Units

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#### ADVANCED CONTROLLER - WITH ENERGY MONITORING

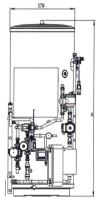


Mitsubishi Electric's fifth generation controller (FTC5) includes intelligent room temperature control as standard. This together with advanced weather compensation ensures the system delivers efficient, comfortable heating regardless of the season. FTC5 now also includes energy monitoring showing consumed and produced energy.

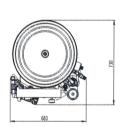
CYLINDER			EHPT15X-UKHCW	EHPT17X-UKHCW	EHPT21X-UKHCW	EHPT25X-UKHCV	EHPT30X-UKHC
OMINAL HOT WATER	R VOLUME (LITRES	6)	150	170	210	250	300
rP RATING			В	В	С	C	С
HEAT LOSS (kWh/24hi	rs)		1.19	1.32	1.57	1.67	1.89
HEAT LOSS (W)			50	55	65	70	75
WATER		Flow Rate (I/min) W50 - W85 - W112 - HW140			14.3 - 25.8 - 32.1 - 40.1		
Primary Pump Secondary Circuit Pump Sanitary Hot Water Pump Connection Size (mm) Heating / DHW (mm) Primary Expansion Vessel (Litres)			Grundfos UPMGEO 25 - 85		Grundfos UPA	IXL GEO 25 - 125	
		Connection Size (mm) Heating / DHW (mm)	22	22	22	22	22
		Primary Expansion Vessel (Litres)	12	18	18	24	24
		Charge Pressure (MPa (Bar))	0.35 (3.5)	0.35 (3.5)	0.35 (3.5)	0.35 (3.5)	0.35 (3.5)
ATER SAFETY	Water Circuit	Control Thermistor (°C)	1 - 80	1 - 80	1 - 80	1 - 80	1 - 80
EVICES		Pressure Relief Valve (MPa (Bar))	0.3 (3)	0.3 (3)	0.3 (3)	0.3 (3)	0.3 (3)
		Expansion Relief Valve (Cold)	0.8 (8)	0.8 (8)	0.8 (8)	0.8 (8)	0.8 (8)
	DHW Cylinder	Control Thermistor	40-70	40-70	40-70	40-70	40-70
		High Limit Stat (°C)	Mechanical 80 (+/-5)	Mechanical 80 (+/-5)	Mechanical 80 (+/-5)	Mechanical 80 (+/-5)	Mechanical 80 (+/-
		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)
DIMENSIONS (mm) Width		683	683	683	683	683	
		Depth	730	730	730	730	730
		Height	1130	1256	1508	1760	2074
VEIGHT EMPTY / FUL	L (kg)		56 / 206	62 / 232	69 / 279	77 / 327	87 / 387
YLINDER MATERIAL	Cylinder	Cylinder Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Insulation	Insulation Type		CFC / HCFC	-free flame-retardant expan	ded 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	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
	optionally powered by outdoor unit	Phase	Single	Single	Single	Single	Single
		Fuse Rating - MCB Sizes (A) <sup>-1</sup>	10	10	10	10	10
	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
	4.1	Fuse Rating - MCB Sizes (A)"	16	16	16	16	16
IECHANICAL ZONES					DHW and 1 Heating Zone		
PTIONAL SIMPLIFIED	WIRELESS ROOM	THERMOSTAT AND WIRELESS RECEIVER		PAR-WT50-	E Controller and PAR-WR5	1-E Receiver	

#### DIMENSIONS









Overall Height (A)		
1130		
1256		
1508		
1760		
2074		

\*All dimensions in mm







Telephone: 01707 282880 email: heating@meuk.mee.com web: les.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880 Fax: 01707 278881

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

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Note: The fuse rating is for guidance only. Please refer to the relevent 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 regulate and site specific conditions. Mistubeith Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, RA10A, (MPM-2088), R82 (GWP-675), R407C (GWP-1774) or R134a (GWP-1303). The values are based on Regulation (EU). No. M502/E011 from PCC3 are define, these are as follows. R410A, (WPM-1973, R420, WPM-1950, R470C (GWP-1950), R407C (GWP-1950), R407C











Mitsubishi Electric UK's commitment to the environment









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Effective as of June 2018

# Air Conditioning

MXZ-F R32 Inverter Heat Pump (3.3-8.0kW) Multi-Split Units

Making a World of Difference

Multi-Splits



The R32 Multi-Split system allows up to four M Series or Mr Slim wall mounted, cassette, ducted or ceiling suspended indoor units of different capacities to be operated from a single outdoor unit. This makes it an economic and efficient answer for multi-room applications, whilst also offering space saving benefits.

### **Key Features**

- Up to four indoor units may be connected to a single outdoor unit
- Energy saving inverter controlled outdoor unit adjusts compressor performance to economically match the demand for heating and cooling
- Units may be added within the capacity of the system as requirements change
- Capacities of indoor units may be mixed to suit individual rooms







# Air Conditioning

MXZ-F R32 Inverter Heat Pump (3.3-8.0kW) Multi-Split Units

Making a World of Difference

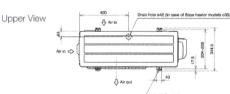




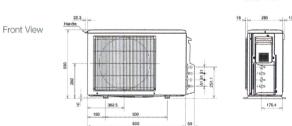
			-				
MXZ-F - OUTDOOR UNITS  NUMBER OF CONNECTABLE INDOOR UNITS		MXZ-2F33VF2	MXZ-2F42VF2	MXZ-3F54VF2	MXZ-3F68VF2	MXZ-4F72VF2	MXZ-4F80VF2
		2	2	2 - 3	2 - 3	2 - 4	2 - 4
CAPACITY (kW)	Heating (nominal)	4.0 (1.0-4.1)	4.5 (1.0-4.8)	7.0 (2.6-9.0)	8.6 (2.6-10.6)	8.6 (3.4-10.7)	8.8 (3.4-11.0)
	Cooling (nominal)	3.3 (1.1-3.8)	4.2 (1.1-4.4)	5.4 (2.9-6.8)	6.8 (2.9-8.4)	7.2 (3.7-8.8)	8.0 (3.7-9.0)
	Heating (UK)	3.32 (0.83-3.40)	3.74 (0.84-3.99)	5.81 (2.16-7.47)	7.14 (2.16-8.80)	7.14 (2.82-8.89)	7.31 (2.82-9.12)
	Cooling (UK)	3.23 (1.07-3.72)	4.12 (1.08-4.32)	5.3 (2.85-6.67)	6.66 (2.84-8.23)	7.0 (3.59-8.56)	7.77 (3.59-8.75)
COP / EER (nominal)*1		4.40 / 3.90	5.10 / 4.30	4.60 / 4.10	4.50 / 3.70	4.60 / 3.90	4.40 / 3.56
SCOP / SEER (BS EN14825)		4.16 / 6.13	4.60 / 8.69	4.61 / 8.52	4.12 / 7.96	4.07 / 8.13	4.07 / 7.55
ErP ENERGY EFFICIENCY CLASS	Heating/Cooling	A+ / A++	A++ / A+++	A++ / A+++	A+ / A++	A+ / A++	A+ / A++
MAX AIRFLOW (m³/min)	Heating/Cooling	33.7 / 32.9	33.3 / 27.7	43.0 / 42.1	43.0 / 42.1	43.0 / 42.1	44.1 / 40.3
SOUND PRESSURE LEVEL (dBA)	Heating/Cooling	50 / 49	50 / 44	50 / 46	53 / 48	54 / 48	55 / 50
SOUND POWER LEVEL (dBA)	Cooling	60	59	59	63	63	65
DIMENSIONS (mm)	Width x Depth x Height	800 x 285 x 550	800 x 285 x 550	840 x 330 x 710	840 x 330 x 710	840 x 330 x 710	840 x 330 x 710
WEIGHT (kg)		33	37	58	58	59	59
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single
POWER INPUT (kW)	Heating/Cooling (nominal)	0.909 / 0.846	0.88 / 0.98	1.52 / 1.32	1.91 / 1.84	1.87 / 1.85	2.00 / 2.25
	Heating/Cooling (UK)	0.82 / 0.68	0.90 / 0.78	1.38 / 1.06	1.73 / 1.47	1.69 / 1.48	1.81 / 1.80
STARTING CURRENT (A)		4.6	4.2	7.0	10.5	10.0	10.1
RUNNING CURRENT (A)	Heating/Cooling [MAX]	4.6 / 4.3 [10.0]	4.2 / 4.5 [12.2]	7.0 / 5.9 [18.0]	10.5 / 9.6 [18.0]	10.0 / 9.5 [18.0]	9.2 / 10.3 [18.0]
INTERCONNECTING CABLE No. CORES		4 Core	4 Core	4 Core	4 Core	4 Core	4 Core
TOTAL PIPE LENGTH (m)		20	30	50	60	60	60
MAX PIPE LENGTH PER INDOOR UNIT (m)		15	20	25	25	25	25
MAX HEIGHT DIFFERENCE (m)		10	15 (10 if OU higher than a	l) 15 (10 if OU higher than IU) 1	(10 if OU higher than IU)	15 (10 if OU higher than IU)	15 (10 if OU higher than IU
CHARGE REFRIGERANT (kg) /CO₂ EQUIVALENT (t) - R32 (GWP 675)		1.00 / 0.68 (20m)	1,20 / 0.81 (20m)	1.40 / 0.95 (50m)	1.40 / 0.95 (60m)	1.40 / 0.95 (60m)	2.40 / 1.62 (60m)
MAX ADDITIONAL REFRIGERANT (kg) /CO₂ EQUIVALENT (t) - R32 (GWP 675)		1.00 / 0.68	1.40 / 0.95	2.40 / 1.62	2.40 / 1.62	2.40 / 1.62	2.40 / 1.62
FUSE RATING (BS88) - HRC (A)		16	16	25	25	25	25

1 System COP / EER when connected to MSZ-LN / MSZ-AP x indoor unit connections. Combined max running current of all indoors on system must not exceed 3A. The SEZ-M25DA cannot be used when the total indoor capacity is equal to the outdoor capacity, i.e. when the capacit ratio is 1.

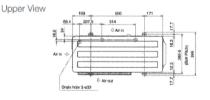
PRODUCT DIMENSIONS MXZ-2F33VF2, MXZ-2F42VF2



Side View

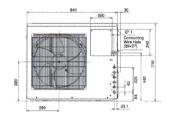


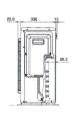
MXZ-3F54VF2, MXZ-3F68VF2, MXZ-4F72VF2, MXZ-4F80VF2



Side View

Front View







Telephone: 01707 282880 email: air.conditioning@meuk.mee.com web: airconditioning.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880 Fax: 01707 278881
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