

Domestic Heating

Product Information

Ecodan Air Source Heat Pumps
with Kingspan FTC2 Cylinder

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Difference

Technical Specification of Ecodan Air Source Heat Pumps

MODEL		PUHZ-W50VHA	PUHZ-W85VHA2	PUHZ-HW140VHA2	PUHZ-HW140YHA2
Heating*1 A2/W35	Capacity (kW)	5.0 (1.5-5.0)	8.5 (2.6-8.5)	14.0 (4.2-14.0)	14.0 (4.2-14.0)
	COP	3.13	3.17	3.11	3.11
	Power Input (kW)	1.60	2.68	4.52	4.52
	Nominal flow rate (L/min)	14.3	25.8	40.1	40.1
Heating*2 A7/W35	Capacity (kW)	5.0 (1.5-5.0)	9.0 (2.7-9.0)	14.0 (4.2-14.0)	14.0 (4.2-14.0)
	COP	4.10	4.18	4.25	4.25
	Power Input (kW)	1.22	2.15	3.31	3.31
	Nominal flow rate (L/min)	14.3	25.8	40.1	40.1
Dimensions (mm)	Width	950	950	1020	1020
	Depth	330+30*	330+30*	330+30*	330+30*
	Height	740	943	1350	1350
Weight (kg)		64	77	134	148
Airflow (m ³ /min)		50	55	100	100
Nominal Sound Pressure Level (dBA) ³		45 [▲]	48 [▲]	53 [▲]	53 [▲]
Low Noise Mode (dBA) @ 7°C		40	42	46	46
Guaranteed Operating Range (Outdoor)		-15~+35°C	-20~+35°C	-25~+35°C	-25~+35°C
Electrical Supply		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	380-415v, 50Hz
Phase		Single	Single	Single	3
Running Current [Max] (A)		5.4 [13]	10.3 [23]	14.9 [35]	5.1 [13]
Fuse Rating (MCB sizes BS EN 60898) (A)		16	25	40	16

*Grille ▲At distance of 1m from outdoor unit
Nominal operating condition:
*1 Heating (A2/W35) Outside air temperature (dry) +2°C
Outside air temperature (humid) +1°C
Water temperature (inlet/outlet) +30/+35°C
*2 Heating (A7/W35) Outside air temperature (dry) +7°C
Outside air temperature (humid) +6°C
Water temperature (inlet/outlet) +30/+35°C
*3 Sound power level of the W50 is 61dBA, W85 is 62.5dBA, HW140V is 65.5dBA and HW140Y is 67.5dBA. Tested to BS EN12102.

Technical Specification of Kingspan FTC2 Heat Pump Cylinder

MODEL		HU150CPR2	HU180CPR2	HU210CPR2	HU250CPR2	HU300CPR2
Nominal domestic hot water storage volume (litres)		150	180	210	250	300
Overall cylinder dimensions	Height x Width x Depth (mm)	1410x550x700	1410x550x700	1495x550x720	1700x550x720	2050x550x720
Weight (Kg)	(Empty / Full)	80/230	85/265	95/305	105/355	120/420
Unvented store expansion vessel	Nominal Volume (litres)	12	19	19	19	24
	Charge Pressure (bar)	2.1	2.1	2.1	2.1	2.1
Control / relief valve pressure settings	Mains Inlet Pressure Regulator	2.1 bar	2.1 bar	2.1 bar	2.1 bar	2.1 bar
	Expansion Relief Valve (CW)	3.0 bar	3.0 bar	3.0 bar	3.0 bar	3.0 bar
	P & T Valve	4.0 bar & 95°C	4.0 bar & 95°C	4.0 bar & 95°C	4.0 bar & 95°C	4.0 bar & 95°C
Backup immersion heater rating		3kW	3kW	3kW	3kW	3kW
Insulation thickness (mm)		50	50	50	50	50
Heat pump circuit circulating pump		UPS0 25-40		GRUNDFOS UPS0 25-55		
System circulating pump (DHW and zone 1 CH)		UPS0 25-40		GRUNDFOS UPS0 25-55		
DHW circuit zone valve - type HP22 (mm)		22	22	22	22	22
CH circuit zone valve - type HP22 (mm)		22	22	22	22	22
Control & overheat safety thermostat temperature settings	High limit stat	80°C	80°C	80°C	80°C	80°C
	Voltage	230 - 240v	230 - 240v	230 - 240v	230 - 240v	230 - 240v
Room thermostat & receiver (1no)	Electronic immersion time switch	Direct control from FTC2				
	7 day programmer, 24 hour 2 channel timer	DANFOSS Type - TP5000Si FR & RX1 DANFOSS Type - FP715Si				
Applicable Ecodan Units						
Ecodan PUHZ-W50VHA		✓	✓			
Ecodan PUHZ-W85VHA2		✓	✓	✓		
Ecodan PUHZ-HW140VHA2/YHA2				✓	✓	✓

For further information please refer to technical installation manuals



Telephone: 01707 282880
email: domesticheating@meuk.mee.com web: www.domesticheating.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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Designed to meet
the demands of
today's domestic
heating needs

Simple to install, cost effective for the end-user and with outstanding energy efficiency, Ecodan is ideal for designers, installers and users. Inverter-driven heat pump technology offers a low carbon alternative to traditional boilers in modern buildings, whether they are new build or refurbishments.

Key Features

- Self contained unit only requiring water and electric connections
- No need for gas supply, flues, ventilation
- Single phase power supply with a low starting current (3 phase available for 14kW)
- Low maintenance and quiet to run
- Reduced VAT to 5% for domestic applications
- Helps achieve Level 3 of the Code for Sustainable Homes
- Operates with outside temperatures as low as -20°C
- Available as a stand alone or complete packaged system



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



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



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The Kingspan FTC2 Heat Pump Cylinder

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The Ecodan air source heat pump range now benefits from a range of pre-plumbed packaged cylinders made by Kingspan.

The AEROCYL.me pre-plumbed unvented cylinder enables quick and easy installation of the Ecodan heat pump into most homes. All the components have been carefully selected to ensure good system efficiency and ease of installation. The packaged cylinder offers a flexible, quick and easy solution to both retrofit and new build installations.

Features & Benefits:

- SAP Appendix Q listed package cylinder
- Factory assembled for reliability - reduces call-backs and delays
- Simplified on site installation - up to 70% quicker to install than third party non pre-assembled systems
- Consistent electrical and plumbing layout, with a neat and tidy finish providing greater customer satisfaction
- Plug in connections for all controls
- No tanks required in roof space
- ISO 9001:2008 quality assured
- Three year warranty

Built-in automatic air bleed valve:

Installed on the cylinder to assist in removing air pockets within the system automatically.

Immersion heater and control box:

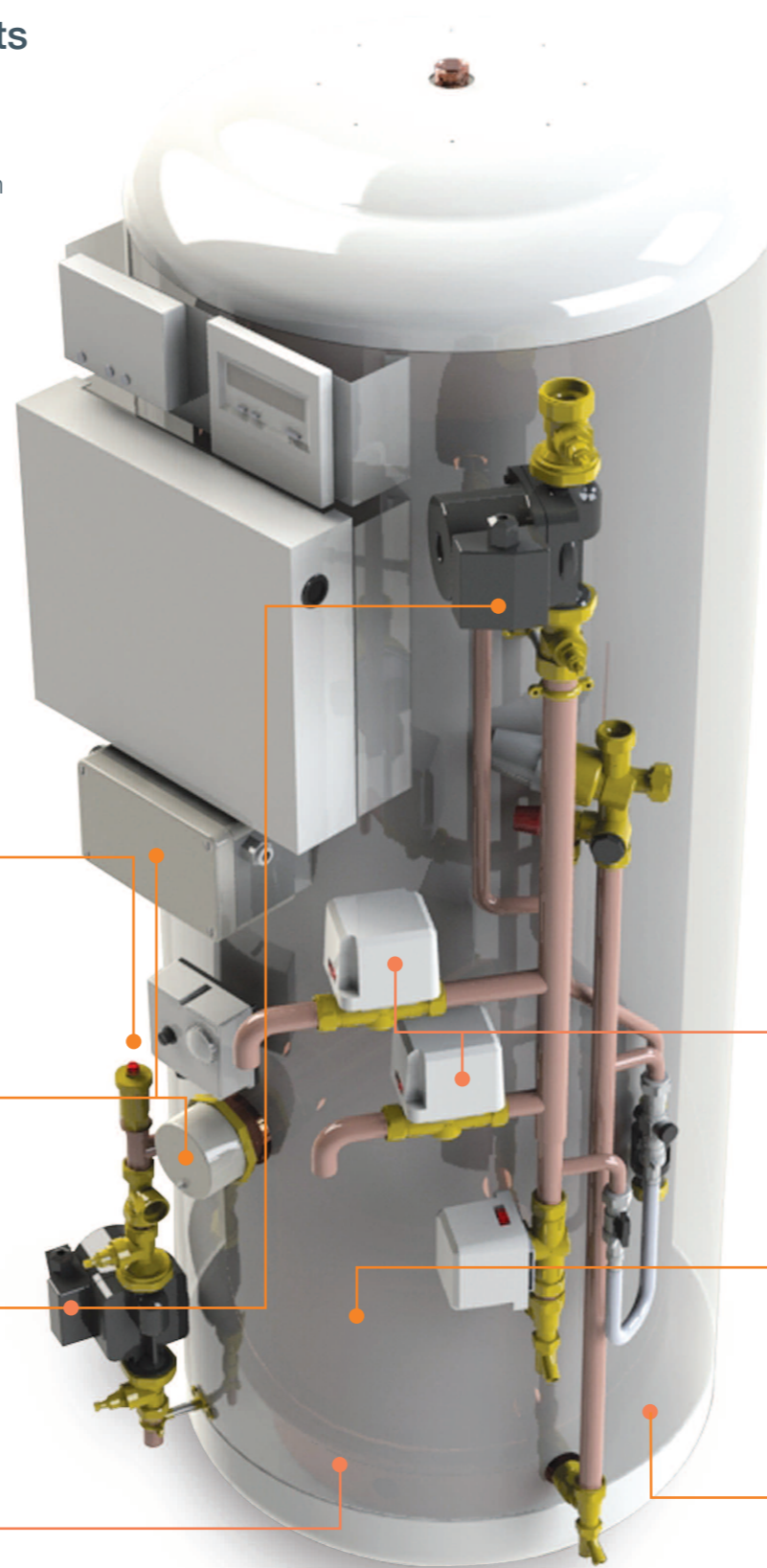
A 3kW immersion heater is installed and controlled by the FTC2 control box as standard. The automatic control settings are selectable upon commissioning.

Pumps:

Two Grundfos low energy, low noise pumps are mounted in series. These are maintenance free and have 3 speeds.

Cylinder body:

Built to BS EN 1653 and designed specifically to operate at a working pressure of 2.1 bar. Manufacturing ISO 9001:2008 quality assured.



2 channel electronic 7 day programmer:

- Large back light LCD display
- Easy to programme and operate



Wireless room thermostat:

This saves having to wire between the room thermostat and the receiver, saving installation time.

- Large LCD display
- Easy to programme and operate



Cylinder expansion vessel:

The cylinder expansion vessel, bracket and hose are supplied as standard.



Flow setter valve:

The flow setter valve assists with commissioning the system to the recommended flow rate, ensuring good system efficiency.

Two heating zones:

On models HU180CPR2, HU210CPR2, HU250CPR2 and HU300CPR2. HU150CPR2 has one heating zone.

Heat exchanger coil:

The coil within the cylinder has been optimised to work specifically with Ecodan air source heat pumps. This enables both quick and efficient heat up times.

Insulation:

Highly efficient insulation with low standing losses (HU150CPR2 = 1.38kWhr/24hrs, HU180CPR2 = 1.63, HU210CPR2 = 1.90, HU250CPR2 = 2.21 & HU300CPR2 = 2.43). Zero ODP and a GWP rating of 1.