

CRHV-P600YA-HPB

Ecodan Monobloc Ground / Water Source Heat Pump

Making a
World of
Difference



Ecodan CRHV Monobloc Ground / Water Source Heat Pump System

The inverter driven Ecodan CRHV can operate singularly, or be banked together to create a system that can modulate and cascade available units on and off to meet the load from a building.

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

Key Features

- Bore holes, sinkies, aquifers, lakes, rivers, waste heat - can all be used as a heat source
- Multiple unit cascade control of up to 960kW capacity
- Split refrigerant circuits within each CRHV provide 50% back up
- Ability to rotate units based on accumulated run hours
- Provides up to 65°C water flow temperatures without booster heaters
- Low maintenance, low refrigerant volume hermetically-sealed monobloc design
- Heat recovery applications can be achieved by moving heat between applications
- Passive cooling possible by exchanging ground/water source with a chilled water system
- Low pressure drop to ensure pumping power is kept to a minimum
- High specification touch screen controls interfacing with BEMS



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



Air Conditioning | Heating
Ventilation | Controls



MODEL		CRHV-P600YA-HPB	
HEAT PUMP SPACE HEATER - 55°C		ErP Rating	A++
		$\eta_{s,h}$	127%
		SCOP	3.37
HEAT PUMP SPACE HEATER - 35°C		ErP Rating	A++
		$\eta_{s,h}$	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)	4.5 x 2
		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 Phase
		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.

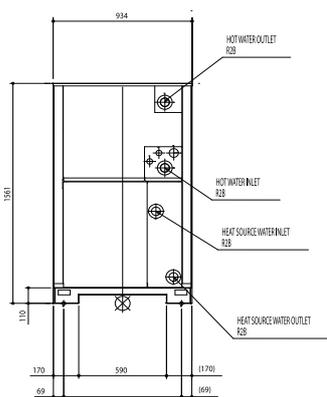
- *1 Under normal heating conditions at brine inlet: 0°C, outlet water temp 35°C as tested to BS EN14511 (60kW)
- *2 Under normal heating conditions at brine inlet: 0°C, outlet water temp 35°C as tested to BS EN14511 (45kW)
- *3 Under normal heating conditions at water inlet: 10°C, outlet water temp 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

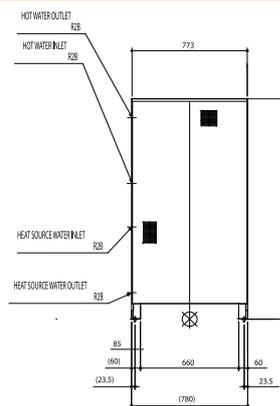
$\eta_{s,h}$ is the seasonal space heating energy efficiency (SHEE) $\eta_{s,h}$ is the water heating energy efficiency

DIMENSIONS

Front View



Side View



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