

CAHV-R450YA-HPB

HOT WATER HEAT PUMP



For outdoor installation
Heating Capacity: 40kW

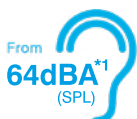
The EcodanPro CAHV-R is optimised for the production of medium temperature hot water for heating applications. It is suitable for commercial, industrial and process applications with flow temperatures of up to 70°C.

Utilising Low Global Warming Potential refrigerant R454C, the CAHV-R has a minimal environmental impact. It is engineered to perform in New Zealand's harsh conditions and being an inverter heat pump does so extremely efficiently. By adopting Mitsubishi Electric's unique technology, the CAHV-R ensures highly reliable performance.

Low Temperature Performance



Low Noise Operation



Low GWP Refrigerant



High Flow Temperatures



ecodan[®]pro

HOT WATER HEAT PUMP – FOR SPACE HEATING

Key Features

Utilises Low GWP R454C Refrigerant

R454C is an environmentally-friendly refrigerant, with zero Ozone Depletion Potential (ODP) and a very low Global Warming Potential (GWP) of 148.

Monobloc Design

With electrical and water connections only, a monoblock machine is easy to add in to systems that have existing external pumps and hydronic ancillaries. The simplicity of a monoblock system also gives the heat pump less points of failure and makes maintenance straight forward.

Inverter Control Maximises Efficiency

With extended lower limits, the CAHV-R can ramp up and down compressor capacity to match almost any load requirement which improves energy efficiency.

Group Multiple Units for Higher Capacities

Connect up to 16 CAHV-R units at 40kW each, to form a modular heat pump plant that can provide capacity up to 640kW as one controlled system.

Rotation Function Offers Extended Product Life

A plant made up of multiple CAHV-R units will automatically alternate the operating units to ensure equal wear and optimal life and efficiency.

Stable Heating at Low Temperatures

The CAHV-R utilises Mitsubishi Electric Flash Injection Technology to provide heating – even at ambient temperatures as low as -25°C. The unit can also operate to supply 70°C hot water without boost heaters.

Coastal Protection Treatment

Available in both standard and BS Coastal Protection models, you can rest assured that the CAHV-R will withstand some of New Zealand's harshest conditions and continue to efficiently operate for many years to come.

Capacity Range

VERSION	DESCRIPTION	HEATING CAPACITY
CAHV-R450YA-HPB	STANDARD MODEL	40kW
CAHV-R450YA-HPB-BS	COASTAL PROTECTION MODEL	40kW

*1 The sound pressure level is a value measured in an anechoic room in accordance with the conventional method in JRA 4060.

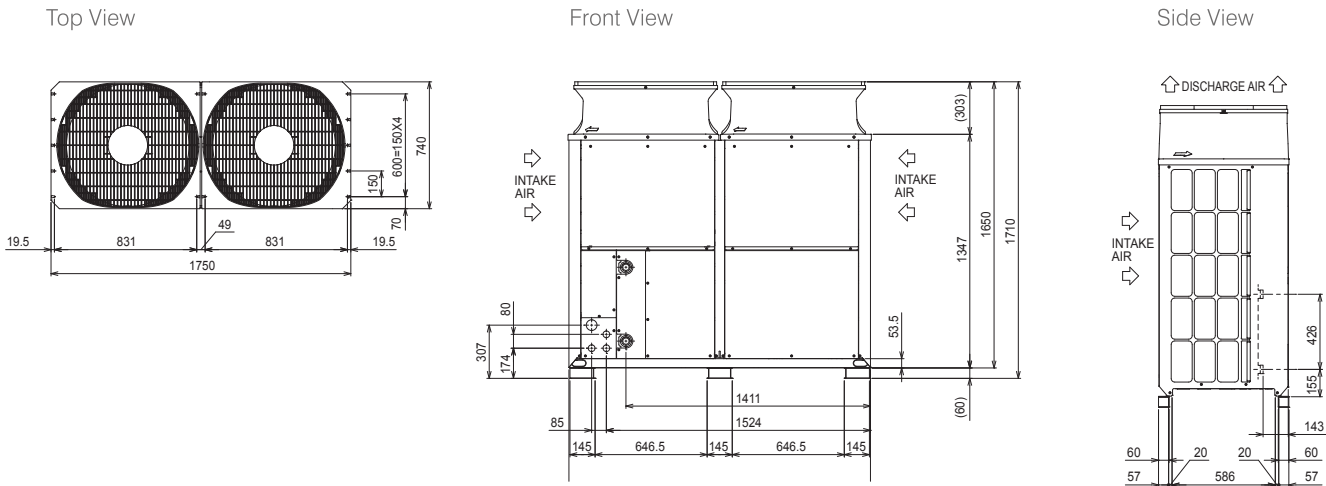
*2 Refer to Databook for more information.

Specifications

CAHV-R450YA-HPB

CAHV-R450YA-HPB			
POWER SUPPLY		3-PHASE 4-WIRE 380-400-415V 50/60Hz	
CAPACITY (EN14511) ^{*1}		kW	40.0
	POWER INPUT	kW	14.03
	COP	kW/kW	2.85
MAXIMUM CURRENT INPUT		A	44.0 - 41.8 - 40.3
WATER PRESSURE DROP ^{*1}		kPa	10.2
TEMPERATURE RANGE ^{*2}	OUTLET WATER TEMPERATURE		24 - 70°C
	AIR TEMPERATURE	D.B.	-25 - 43°C
CIRCULATING WATER VOLUME RANGE ^{*3}		m ³ /h	1.5 - 15.0
SOUND PRESSURE LEVEL (MEASURED 1M BELOW UNIT IN AN ANECHOIC ROOM) ^{*1,4}		dB(A)	64
WATER PIPE DIAMETER AND TYPE	INLET	mm (in)	38.1 (Rc 1 1/2")
	OUTLET	mm (in)	38.1 (Rc 1 1/2")
EXTERNAL FINISH			Acrylic painted steel sheet
NET WEIGHT		kg	359
MAXIMUM DESIGN PRESSURE	WATER	MPa	1.0
MINIMUM SYSTEM VOLUME		L	525
HEAT EXCHANGER	WATER-SIDE		Copper brazed stainless steel sheet
	AIR-SIDE		Plate fins and copper tubes
COMPRESSOR	TYPE		Inverter scroll hermetic compressor
FAN	AIR FLOW RATE	m ³ /min	150 x2
	EXTERNAL STATIC PRESSURE		10 Pa (1mm H ₂ O)
	TYPE AND QUALITY		Propeller fan x2
	CONTROL AND DRIVING MECHANISM		Inverter control, direct driven by motor
DEFROSTING METHOD			Auto-defrost mode (Reversed refrigerant cycle)
REFRIGERANT	TYPE AND FACTORY CHARGE		R454C, 9.0kg

- (1) Under normal heating conditions at the outdoor temp, 7°CDB/6°CWB, the outlet water temperature of 45°C, and the inlet water temperature of 40°C.
- (2) Refer to the Databook.
- (3) 4.0 - 15.0 m³/h under the following conditions: 1) The outdoor ambient temperature is below 0°C. 2) The outdoor ambient is below 6°C and the outlet water temperature is 30°C or less.
- (4) The sound pressure level is a value measured in an anechoic room in accordance with the conventional method in JRA 4060.



Optional Extras

- TW-TH16-E Temperature Sensors

• PAR-W31MAA Controller

• MelcoBEMS Mini BMS Interface

For more information please visit our website
or call our Applied Products Sales Team.
www.mitsubishi-electric.co.nz | 0800 784 382

PUBLISHED MAR 2024

PLEASE LOOK AFTER THE ENVIRONMENT AND RECYCLE



Black Diamond
Technologies Limited



Exclusive New Zealand
Partner Since 1981

