

# SMART ENERGY PRODUCTS

## HEAT PUMPS - REFRIGERANT CYCLING



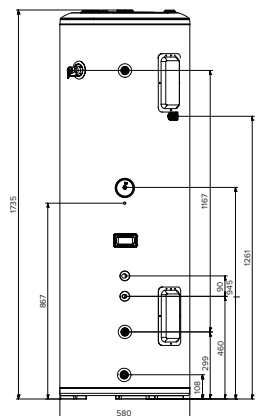
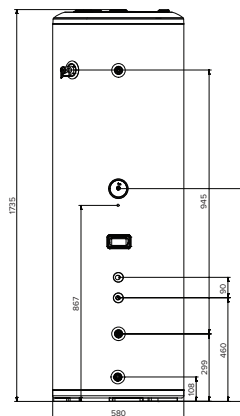
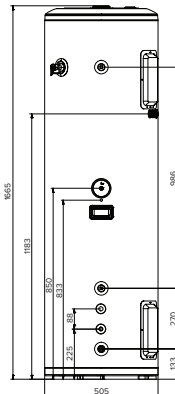
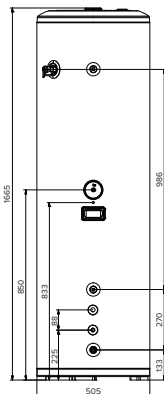
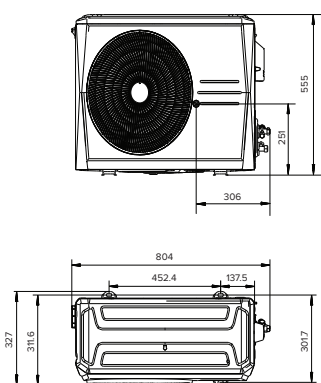
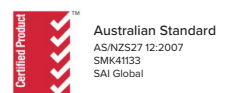
## EMERALD HEAT PUMP AND TANK 200L, 300L AND OPTIONAL HEATER

Emerald Energy's hot water heat pumps provide energy-efficient hot water all year round. Our refrigerant cycling heat pumps are available with an optional built-in electric heater to boost hot water supply when needed.

The refrigerant cycling heat pump's heat exchanger is in the water tank resulting in less energy use due to heat loss. It can also operate under lower outdoor temperature conditions.

## FEATURES

- Optional built-in electric heater as backup
- R134a refrigerant
- Max. water output temperature: 60°C
- Automatic startup and shutdown
- Four-way valve for automatic defrosting
- Anti-Legionella function
- Blue diamond enamel tank



EP-HWS-RCHP-200  
EP-HWS-RCHP-200-1  
EP-HWS-RCHP-200E  
EP-HWS-RCHP-200E-1

EP-HWS-RCHP-300  
EP-HWS-RCHP-300-1  
EP-HWS-RCHP-300E  
EP-HWS-RCHP-300E-1

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### AUSTRALIAN ENERGY SAVING SCHEMES

Australian federal, state and territory governments have established energy-efficiency schemes to incentivise the adoption of smart-technology solutions to help reduce energy usage and the carbon footprint of businesses and households across the country.

Emerald Planet works closely with government agencies to ensure our products are at the forefront of energy-efficient technology, and aligned to the benchmarks set by the energy-efficiency schemes across Australia. Our hot water heat pumps are approved for installation within these government schemes.

### HIGH SMALL-SCALE TECHNOLOGY CERTIFICATES (STCS)

Air source Heat Pumps are eligible for Small-Scale Technology Certificates (STCs) to encourage the installation of heat pump water heaters.

STC certificates can be traded in the Australian market - the higher the STC value the more money can be exchanged. 1 STC means 1MWh can be saved in 10 years. The higher the STC value, the more efficient the unit. The STC values are determined by the by Australia's different temperature zones.

Heat Pump	Split System	Split System	Split System	Split System
Size	200E	300E	200	300
Model No	EE-HWS-RCHP-200E EE-HWS-RCHP-200E-1	EE-HWS-RCHP-300E EE-HWS-RCHP-300E-1	EE-HWS-RCHP-200 EE-HWS-RCHP-200-1	EE-HWS-RCHP-300 EE-HWS-RCHP-300-1

CERTIFICATE VALUES																				
Residential Certificates	Z1	Z2	Z3	Z4	Z5	Z1	Z2	Z3	Z4	Z5	Z1	Z2	Z3	Z4	Z5	Z1	Z2	Z3	Z4	Z5
STCs	22	22	26	28	28	21	21	25	28	27	22	22	26	28	28	21	21	25	28	27
ESCs (D17)			46		44			45		43			46		44			45		43
VEECs (1D)				20	19				19	20				20	19				19	20

Commercial Certificates (-1)	Z1	Z2	Z3	Z4	Z5	Z1	Z2	Z3	Z4	Z5	Z1	Z2	Z3	Z4	Z5	Z1	Z2	Z3	Z4	Z5
STCs	21	21	25	28	28	20	20	24	26	26	21	21	25	28	28	20	20	24	26	26
ESCs (F16)			128		91			118		82			128		91			118		82
VEECs (44B)				60	50				54	45				60	50				54	45



\*All certificates have been calculated for the dates between the 1st Feb 2023 – 31st Jan 2024

\*VEEC's & ESC's Commercial certificates have been calculated when installing a new water tank and replacing an electric resistance boiler/ heater of a 3.0 kW capacity or greater. For residential installations, the existing system size is not included in the calculations

\*STC's, ESC's & VEECS certificates have been submitted to the CER and VEU and waiting for final approval

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### HIGH WATER TEMPERATURE AND LARGE WATER TANK DESIGN

200L and 300L big volume design ensure multi-point simultaneous use during peak water consumption.

### BLUE DIAMOND ENAMEL TANK

Blue Diamond enamel technology ensures the surface is clean and smooth and reduces dirt from adhering - keeping the tank cleaner and more hygienic over time.

### ANTI-LEGIONELLA FUNCTION

Disinfection temperature 60~75°C

#### Unit without electric heater:

maximum disinfection temperature 65°C

#### Unit with electric heater:

maximum disinfection temperature 75°C

#### Two disinfection modes available:

Periodicity automatically disinfect

Manually disinfect

### SPLIT SYSTEM DESIGN

Due to the split system design, the water tank and outer unit are separate units and connect by two refrigerant pipes.

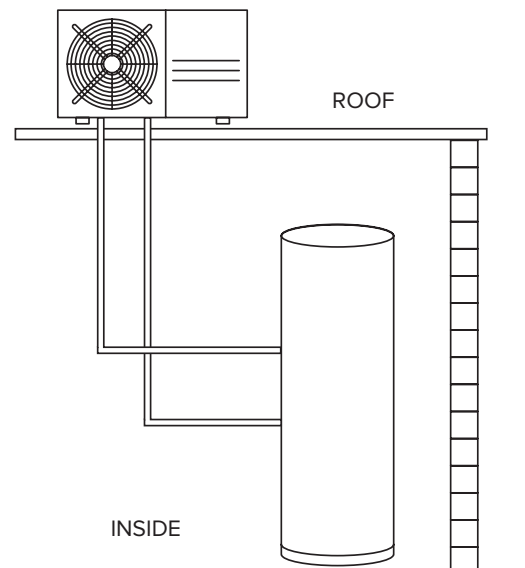
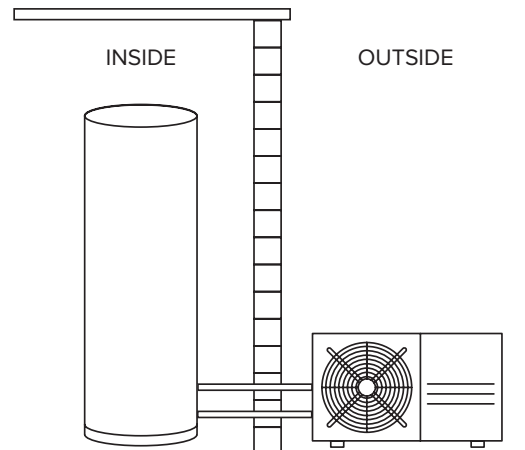
The standard refrigerant piping length supplied is 1m. This will suit most applications, particularly residential installations.

For commercial applications the water tank and outer unit may require greater distances apart. The refrigerant piping lengths can be increased. See below requirements:

Max. piping length: 20m

Max. piping difference in height: 10m

If the piping length were less than 10m, no additional refrigerant charge is required. If the piping length exceeds 10m, then an additional refrigerant charge of 20g/m is required.



The Outer Unit is required to be installed outdoors.  
The Water Tank can be installed indoors or outdoors.

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### SPECIFICATIONS

	MODEL NUMBER		EE-HWS-RCHP-200	EE-HWS-RCHP-200E	EE-HWS-RCHP-300	EE-HWS-RCHP-300E	
			EE-HWS-RCHP-200-1	EE-HWS-RCHP-200E-1	EE-HWS-RCHP-300-1	EE-HWS-RCHP-300E-1	
GENERAL	Ambient temperature	°C	-15~46				
	Leaving water temperature	°C	20~63				
	Heating	Capacity	W	2600			
		Input	W	1000			
		STC values		33(Zone3) / 36(Zone4)	33(Zone3) / 36(Zone4)	32(Zone3) / 35(Zone4)	32(Zone3) / 35(Zone4)
	Hot water yield	m <sup>3</sup> /h	0.044' / 0.056 <sup>2</sup>				
	Refrigerant piping	Refrigerant piping	mm(inch)	φ6.35 / φ1/4'			
		Gas side	mm(inch)	φ9.52 / φ3/8'			
		Max. height difference	m	10			
		Max. refrigerant pipe length	m	20			
Design pressure	MPa	3					
OUTDOOR UNIT	Outdoor unit power supply	V/N/Hz	220-240/1/50				
	Max. current	A	4.4	13.5	4.4	13.5	
	Compressor	Type	Rotary				
	Fan	Type	AC				
		Air flow (H/L)	m <sup>3</sup> /h	1250/769			
	Air side heat exchanger	Type	Hydraulic aluminum fin + Inner grooved copper tube				
	Throttle	Type	Electric expansion valve				
	Outdoor sound pressure level	dB(A)	54				
	Dimension	Unit dimension (L*W*H)	mm	804*327*555			
		Packing dimension (L*W*H)	mm	845*390*610			
		Net weight	Kg	29			
		Gross weight	Kg	32			
Refrigerant	Type		R134a				
	Charged volume	g	900				
INDOOR UNIT	Tank volume	L	200	200	300	300	
	Electric heater	Capacity	kW	/	2	/	2
		Power supply	V/N/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
	Dimension	Unit dimension(W*D*H)	mm	505*505*1665	505*505*1665	580*580*1735	580*580*1735
		Packing dimension(W*D*H)	mm	1775*635*590	1775*635*590	1835*690*670	1835*690*670
		Net weight	Kg	73	73	96	96
		Gross weight	Kg	83	83	108	108

1. Ambient temperature 19/15°C(DB/WB), Initial water temperature 9°C, Terminative water temp. 60°C.
2. Ambient temperature 19/15°C(DB/WB), Initial water temp. 15°C, Terminative water temp. 55°C.