REFRIGERANT CYCLING

HEAT PUMPS

ENERGY EFFICIENT HOT WATER

emerald
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ENERGY EFFICIENT HOT WATER

Emerald Energy's heat pump water heaters provide energy-efficient hot water all year round.

Unlike solar, there is no structural load on the roof. They can use the same plumbing and electrical connections as an electric water heater - making them an ideal upgrade from a standard electric water heater.

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

200L and 300L models are available with an optional built-in electric heater as backup for faster heating to ensure continuous hot water supply in cold weather conditions.

EP-HWS-RCHP-200

EP-HWS-RCHP-200E
(with backup electric heater)

EP-HWS-RCHP-300

EP-HWS-RCHP-300E
(with backup electric heater)

ENERGY EFFICIENT TECHNOLOGY

Emerald Heat Pumps can save households money, as well as substantially reduce energy consumption and CO_2 emissions. By utilising modern compressor technologies, heat pumps efficiently deliver hot water to homes.

A heat pump is a bit like a reverse refrigerator - it transfers heat from the air, through a heat exchange system, to the water in the tank.

Air is drawn in through a fan and absorbed by a refrigerant, which flows through the evaporator. The refrigerant is then compressed into a vapour which raises the temperature and pressure. The hot vapour then flows through the heat exchanger which heats the water and cools the refrigerant.

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.

HEALTH AND COMFORT

HIGH WATER TEMPERATURE AND LARGE WATER TANK DESIGN

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

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 design, the water tank can be placed close to where the hot water will be used - the hot water pipe is shorter for a quicker hot water supply.

The longer refrigerant piping allows the outdoor unit to be placed further away from living areas, minimising any noise impact.

Max. piping length: 20m

Max. piping difference in height: 10m

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.

SAFETY FEATURES

Precise temperature and pressure control

Antifreeze control

Current protection

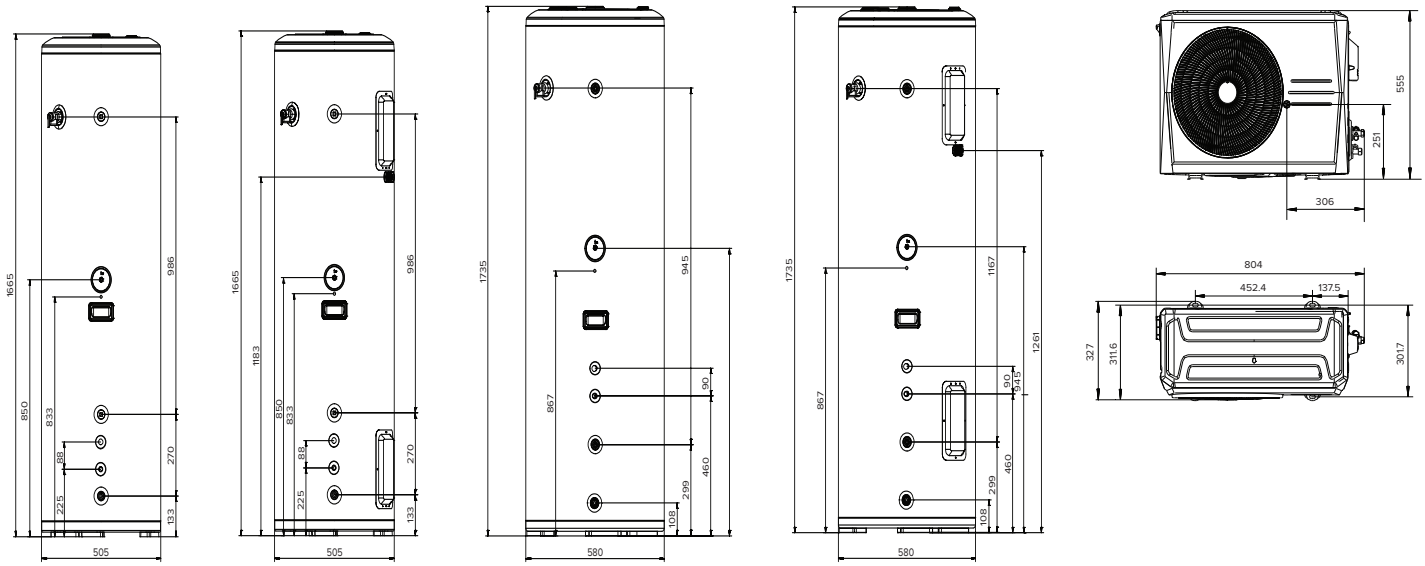
High pressure protection

Discharge temperature protection

Superheat protection

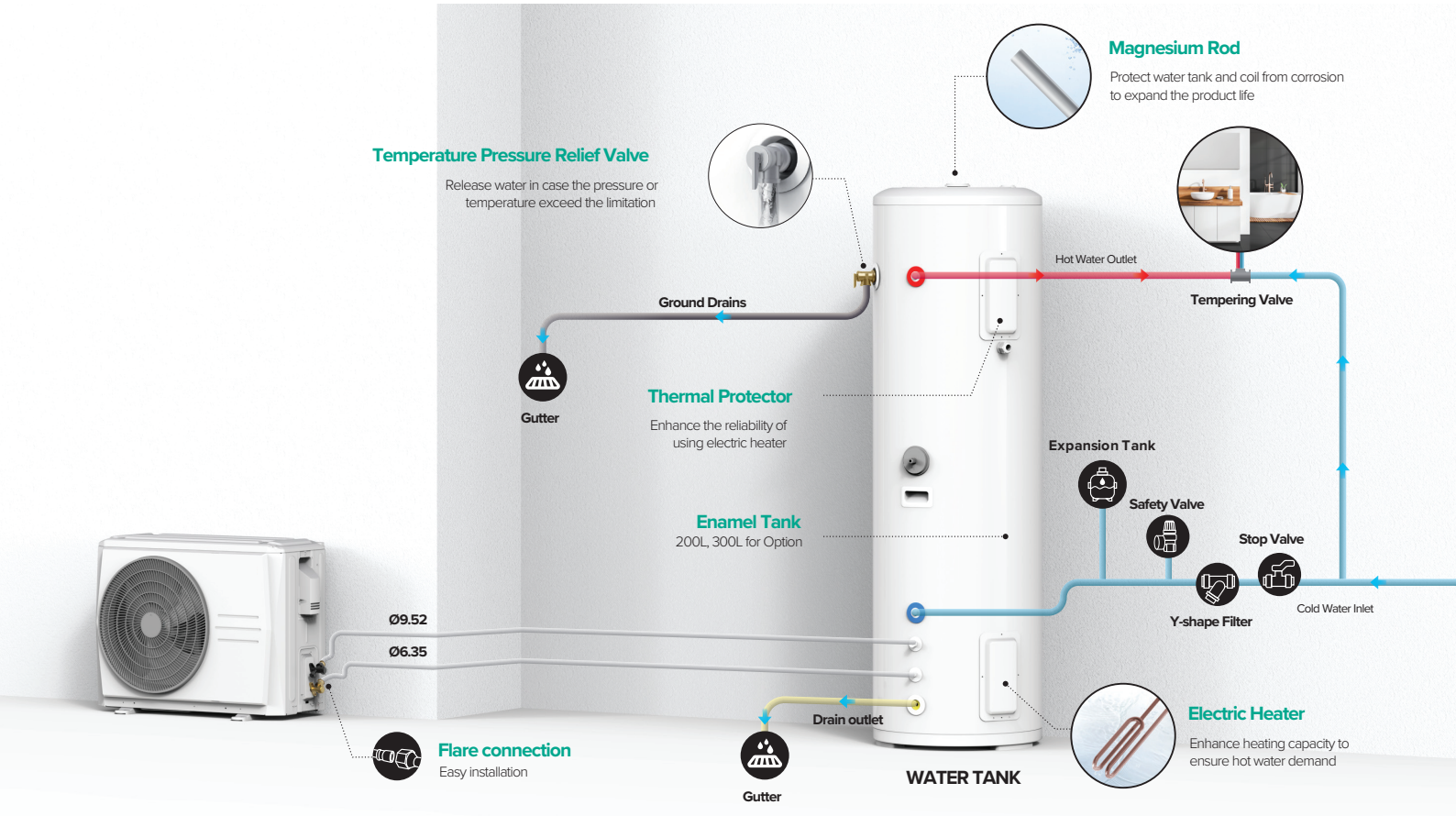
Anti-freezing protection

PRODUCT DIMENSIONS



EP-HWS-RCHP-200 EP-HWS-RCHP-200E EP-HWS-RCHP-300 EP-HWS-RCHP-300E

SYSTEM DIAGRAM



SPECIFICATIONS

	MODEL NUMBER			EE-HWS-RCHP-200	EE-HWS-RCHP-200E	EE-HWS-RCHP-300	EE-HWS-RCHP-300E
GENERAL	Ambient temperature		°C	-15~46			
	Leaving water temperature		°C	20~60			
	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		m3/h	0.044[1] / 0.056[2]			
	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^3/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.

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2022.09