

REFRIGERANT CYCLING
HEAT PUMPS

**ENERGY
EFFICIENT
HOT WATER**



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 CO₂ 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

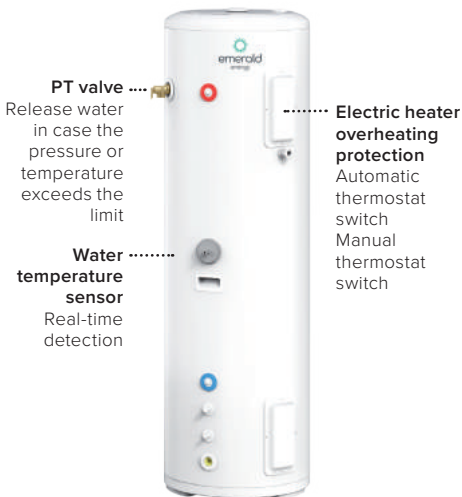
Max. piping difference in height: 10m

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

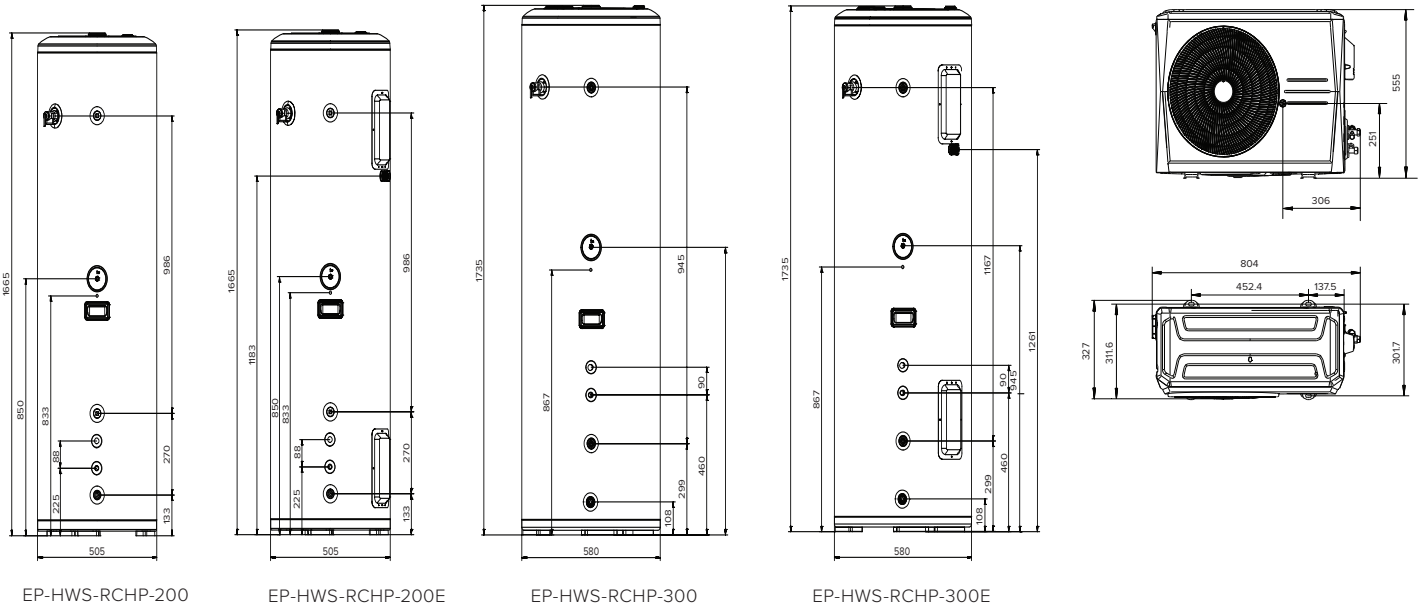


Superheat protection

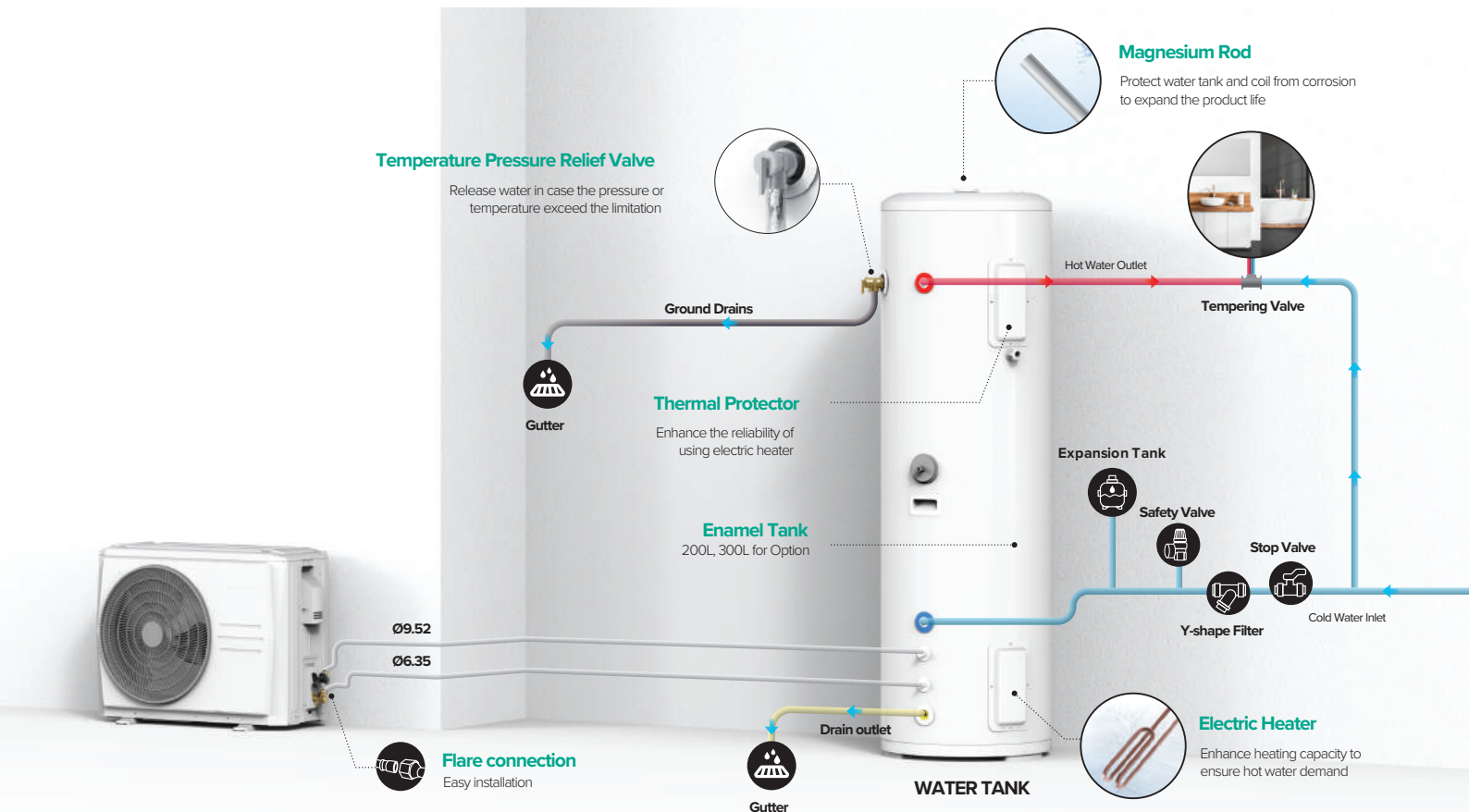


Anti-freezing protection

PRODUCT DIMENSIONS



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 | | m ³ /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.

