Product specifications

emerald

Hot Water Heat Pump

All-In-One System

emerald.com.au

The benefits of Emerald's Hot Water Heat Pump All-In-One system

Engineered by Emerald, an Australian company with 18 years of manufacturing experience, this Wi-Fi enabled heat pump combines efficiency, reliability and smart home integration.

Emerald's Heat Pump All-In-One system is ideal for both residential and commercial use, providing reliable performance in any environment. It can also include an optional built-in electric heater to increase hot water supply. Manage all your installations through the Emerald Network in one convenient platform, while your customers can easily control their system using the Emerald App.

Warranty
5 years system
2 years labour and service

Premium DC technology

- Built with the best material and DC technology, for superior performance and offering more efficient, reliable and quiet operation.

R290

- With a low GWP of 3 and excellent thermodynamic properties, R290 delivers superior performance and better efficiency.

Built-in Wi-Fi

- Your customers will love the convenience of smart control to increase their savings.

Emerald Network for remote monitoring

- Gain visibility of all your heat pump installs and monitor their performance in real-time.

Solar soaker

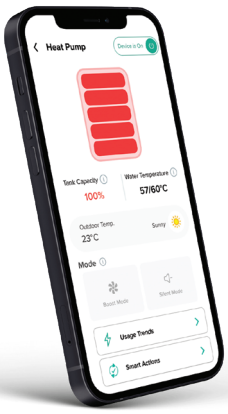
- Use surplus solar to operate the heat pump and generate free hot water with the Electricity Advisor Wi-Fi pack.

Boost mode

- Boost mode quickly raises the water temperature while maintaining low noise levels.

Generous government rebates

- Leading energy-efficient technology to align with schemes including VEU, ESS, and REPS.

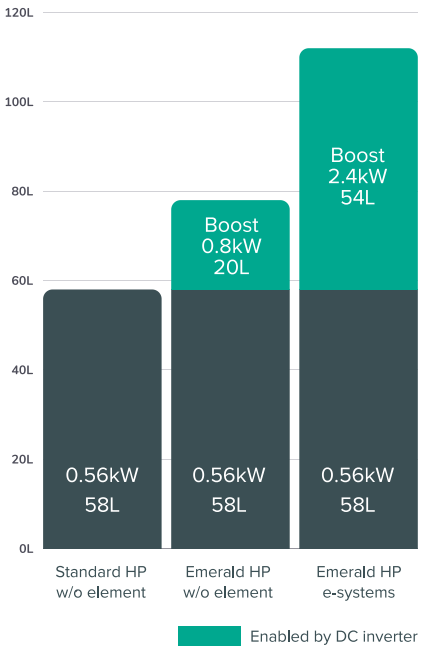


Built-in Wi-Fi control

Download on the App Store

GET IT ON Google Play

What sets the Emerald All-In-One system apart?



Based on outdoor temperature 20°C

DC inverter advantage

Our DC inverter increases system efficiency by adjusting fan speed, which also makes it quieter in operation. It provides energy-efficient variable power control, allowing our systems, both with or without an element, to operate in three modes: Standard, Silent, and Boost. Unlike most other non-E systems, Emerald's stands out as they don't require an electrical element or dedicated line to have a Boost mode.

Emerald non-E systems

- **Great value** –Due to there being no element, the non-E system is the most cost-effective option with lower upfront product and installation costs.
- **Assured efficiency** - Despite lower costs, the non-E system has a boost mode via the DC inverter, ensuring reliability and peace of mind.
- **Easy installation** - The pre-installed plug reduces or eliminates electrical work when following ASNZS 3000 wiring rules, making installs faster and more affordable without compromising quality.
- **Operating range** - Performs reliably in temperatures as low as -7°C.

Emerald E systems

- **Ideal for colder rural areas** – Designed to perform even in extreme conditions, with a broader operating temperature down to -14°C.
- **Boost mode for rapid heating** – The backup element activates for rapid water heating when needed.
- **Reliable backup** – The backup element kicks in if the system fails, ensuring hot water until repairs or replacement.

Manage all your installs with Emerald Network

Emerald Network lets you manage all your Emerald products, sites, and customer info in one place. With notifications and advanced troubleshooting, it reduces downtime and ensures smooth operation effortlessly.

Greater visibility

Real-time monitoring of all your Emerald installs from one unified control hub.

Customer service

Improve your customer support, by quickly identifying, diagnosing and troubleshooting errors.

Boost business efficiency

Centralised platform for businesses to manage Emerald products including heat pumps, install sites, and customers.

A size to suit every customer's hot water needs

Choose from 3 energy-efficient models

Emerald offer three hot water heat pump models with capacities of 220L, 270L, and 320L, each with the option of a built-in electric heater. This back-up heater provides faster heating and ensures a reliable supply of hot water, even during cooler weather conditions.

Recharge rates explained

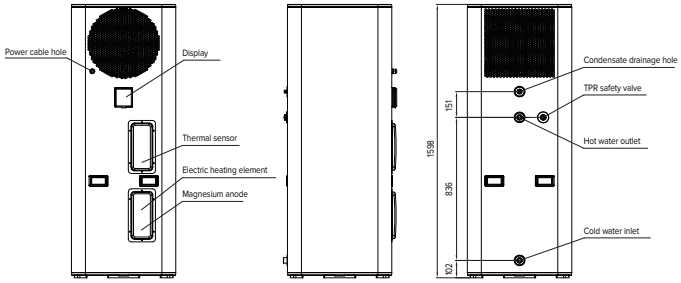
Think of the recharge rate like how quickly your phone charges. It indicates how fast the heat pump can reheat the water. The speed at which it heats up primarily depends on the outside temperature.

Outdoor air temp	220L, 270L and 320L	220L, 270L and 320L boost
20°C	58L/per hr	78L/per hr

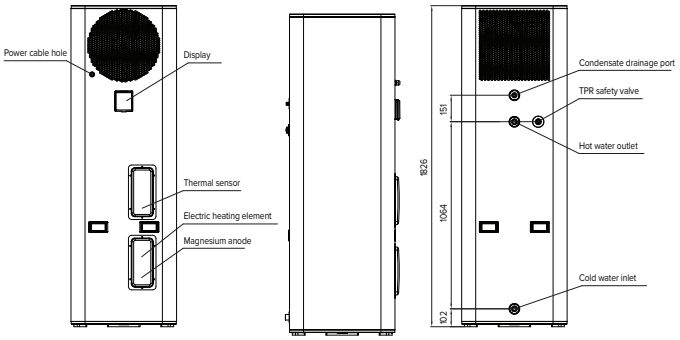
Models: EE-HWS-A1-220/270/320

Outdoor air temp	220L, 270L & 320L	220L, 270L and 320L boost
20°C	58L/per hr	112L/per hr

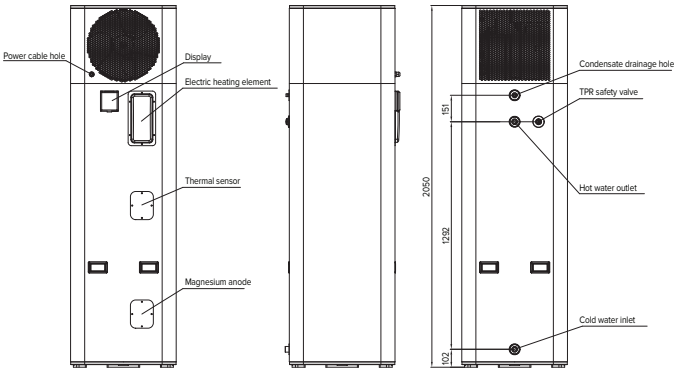
Models: EE-HWS-A1-220E/270E/320E



EE-HWS-A1-220E-1/-2
(The electric heating element is not included in EE-HWS-A1-220(-1))



EE-HWS-A1-270E-1/-2
(The electric heating element is not included in EE-HWS-A1-270(-1))



EE-HWS-A1-320E(-1)
(The electric heating element is not included in EE-HWS-A1-320(-1))

1 - 4 people

220L All-In-One System

Compact design yet still provides ample hot water for smaller uses.

4 - 5 people

270L All-In-One System

Efficiently caters to the average properties high hot water demand.

5+ people

320L All-In-One System

Meets the higher hot water demand of larger properties without sacrificing efficiency and space.

Generous Government energy-efficiency rebates

Australian energy saving schemes

Australian federal, state, and territory governments have introduced energy-efficiency schemes to incentivise smart technology adoption, reducing energy usage and carbon footprints nationwide. Emerald works closely with government agencies to ensure our products lead in energy-efficient technology and align with schemes like VEU, ESS, and REPS.

High Small-Scale Technology Certificates (STC)

Air source heat pumps qualify for Small-Scale Technology Certificates (STCs) that encourage heat pump water heater installation. STCs can be traded on the Australian market based on their value, which is determined by the efficiency of the unit and the temperature zone in Australia. Each STC represents 1MWh of energy saved over ten years.

Residential

	VEECS - Metro				VEECS - Regional				ESCS - Metro				ESCS - Regional				National				
	1D - Elec		3C - Gas		1D - Elec		3C - Gas		D17 - Elec		D19 - Gas		D17 - Elec		D19 - Gas		STC				
Model	Zone 4	Zone 5	Zone 4	Zone 5	Zone 4	Zone 5	Zone 4	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
EE-HWS-A1-220/220E	10	10	9	9	11	10	9	9	29	30	15	15	30	31	14	15	16	16	19	21	21
EE-HWS-A1-270/270E	10	9	9	8	10	10	9	8	28	29	13	14	29	30	13	13	16	15	19	20	20
EE-HWS-A1-320/320E	9	9	9	8	10	10	9	8	28	29	14	14	29	30	13	14	15	16	19	21	20

Commercial

	VEECS - Metro						VEECS - Regional						ESCS - Metro						ESCS - Regional					
	44A(i) Gas		44A(ii) Elec		44A(iii) New		44A(i) Gas		44A(ii) Elec		44A(iii) New		F16 Gas		F16 Elec		F17 New		F16 Gas		F16 Elec		F17 New	
Model	Zone 4	Zone 5	Zone 4	Zone 5	Zone 4	Zone 5	Zone 4	Zone 5	Zone 4	Zone 5	Zone 4	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5	Zone 3	Zone 5
EE-HWS-A1-220/220E-1	23	19	44	38	20	17	22	18	46	40	19	16	46	30	110	82	40	26	45	29	114	85	39	24
EE-HWS-A1-220E-2	28	20	57	43	24	17	26	19	61	46	22	15	49	30	134	94	41	23	47	28	138	97	39	22
EE-HWS-A1-270/270E-1	22	18	43	36	19	15	21	17	45	38	18	14	45	28	113	79	39	23	44	27	116	81	38	22
EE-HWS-A1-270E-2	29	23	60	48	25	19	27	21	63	51	23	17	50	34	138	105	42	27	48	32	142	108	40	25
EE-HWS-A1-320/320E-1	22	20	45	41	19	17	21	19	48	44	18	16	39	30	107	90	32	24	37	28	110	93	31	23
EE-HWS-A1-320E-1	30	27	65	59	25	22	28	25	69	63	23	20	49	38	153	129	39	30	46	36	158	133	36	27

*All certificates have been calculated from the date of 31st of Jan 2025 onwards.

(i) VEECs and ESCs Commercial certificates have been calculated when installing a new water tank and replacing an electric resistance boiler/heater of a 3.6 kW. For residential installations, the existing system size is not required for the calculations.

VEEC RESIDENTIAL · VEEC COMMERCIAL · ESC RESIDENTIAL · ESC COMMERCIAL · STC ENTITLEMENT

Contact Emerald to access our bespoke certificate calculator

sales@emerald.com.au

Specifications

EE Model (Residential)		EE-HWS-A1-220E	EE-HWS-A1-220	EE-HWS-A1-270E	EE-HWS-A1-270	EE-HWS-A1-320E	EE-HWS-A1-320
EE Model (Commercial)		EE-HWS-A1-220E-2	EE-HWS-A1-220-1	EE-HWS-A1-270E-2	EE-HWS-A1-270-1	EE-HWS-A1-320E-1	EE-HWS-A1-320-1
Power supply		220V ~ 240V/50HZ/60HZ/1Phase					
Water Tank Volume		220L		270L		320L	
Optional Running Modes		Standard / Silent / Booster / E-Heater	Standard / Silent / Booster	Standard / Silent / Booster / E-Heater	Standard / Silent / Booster	Standard / Silent / Booster / E-Heater	Standard / Silent / Booster
Electric Heating Element		1.6KW	N/A	1.6KW	N/A	1.6KW	N/A
Heating Capacity	Standard mode (Heat pump only)	2.7kW		2.7kW		2.7kW	
Rated Input Power		0.56kW		0.58kW		0.53kW	
COP		4.9		4.8		5.2	
Recharge Rate Per Hour		58L/h		58L/h		58L/h	
Sound Level		49dB(A)		49dB(A)		49dB(A)	
Heating Capacity	*Silent mode (Heat pump only)	1.8kW		1.8kW		1.8kW	
Rated Input Power		0.44kW		0.44kW		0.41kW	
COP		4.6		4.6		4.4	
Recharge Rate Per Hour		43L/h		43L/h		43L/h	
Sound Level		45dB(A)		45dB(A)		45dB(A)	
Heating Capacity	*Booster mode (Heat pump + Electric heater)	5.2kW	3.6kW	5.2kW	3.6kW	4.4kW	4.4kW
Rated Input Power		2.4kW	0.8kW	2.4kW	0.8kW	2.4kW	0.8kW
COP		4.5	4.5	4.5	4.5	4.4	4.4
Recharge Rate Per Hour		112L/h	78L/h	112L/h	78L/h	112L/h	78L/h
Heating Capacity	*E-Heater mode (Electric heater only)	1.6kW	N/A	1.6kW	N/A	1.6kW	N/A
Rated Input Power		1.6kW	N/A	1.6kW	N/A	1.6kW	N/A
COP		N/A	N/A	N/A	N/A	N/A	N/A
Recharge Rate Per Hour		N/A	N/A	N/A	N/A	N/A	N/A
Max Current (under booster mode)		14A	5A	14A	5A	14A	5A
Refrigerant		R290 (400g)				R290 (450g)	
Compressor		Highly (Hitachi JV) / DC Inverter / Rotary					
Fan Motor		DC Inverter					
Fan Type		Axial					
Expansion Valve		EEV					
Defrost		4-way valve					
Inner Tank		Enamel / 2.5mm tank wall / 3.0mm dome					
Inner Tank Design		Concave					
Tank Insulation		Polyurethane / 35mm-157mm					
Tank Protection		2 x Magnesium anodes					
Heat Exchanger		Microchannel					
Outer Casing		Galvanized painted sheet / White					
TPR valve		AVG / 850kPa					
Rated Outlet Water Temperature		60°C					
Max Outlet Water Temperature		70°C					
Working range with element		-15°C~43°C					
Working range without element		-7°C~43°C					
IP Class		IPX4					
Electric Shock Proof		I					
Unpacked Dimension		600*600*1598mm	600*600*1598mm	600*600*1826mm	600*600*1826mm	600*600*2050mm	600*600*2050mm
Packed Dimension (outdoor unit)		670*670*1730mm	670*670*1730mm	670*670*1956mm	670*670*1956mm	670*670*2170mm	670*670*2170mm
Net Weight (outdoor unit)		118kg	118kg	132kg	132kg	146kg	146kg
Gross Weight (outdoor unit)		126kg	126kg	141kg	141kg	154kg	154kg

*As per the AS/NZS 4234 modeling standards the modes (Silent, Booster, E-Heater) are one-shot functions that will reset to standard mode.
*Above test results are given based on the test condition ambient 20°C/15°C, Water from 15°C~55°C.
*Sound tested at 1m distance in a hemi-anechoic chamber.