ECONOVA

ECONOVA® OWNER'S MANUAL

Wi-Fi Enabled
Hot Water Heat Pump

ECON-300RVW
ECON-300RVW-2.0E

08.07.25

Table of Contents

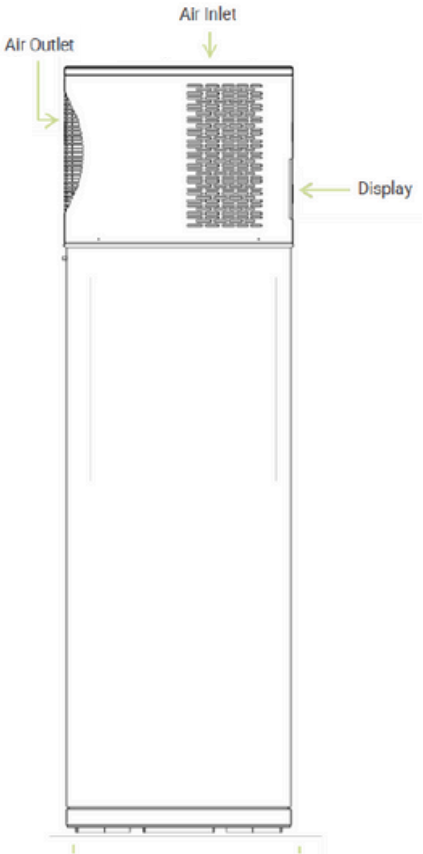
Introduction

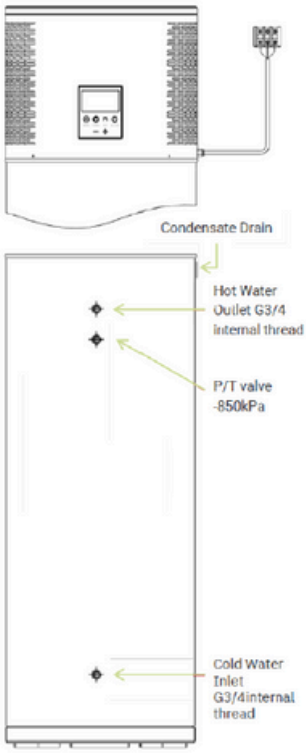
Congratulations on your purchase of one of the most energy efficient Heat Pump Water Heaters in the world. Our Australian based design team has over 20 years experience designing and making some of the most exceptional heat pump water heaters and we are very proud to provide you with this manual to consider.

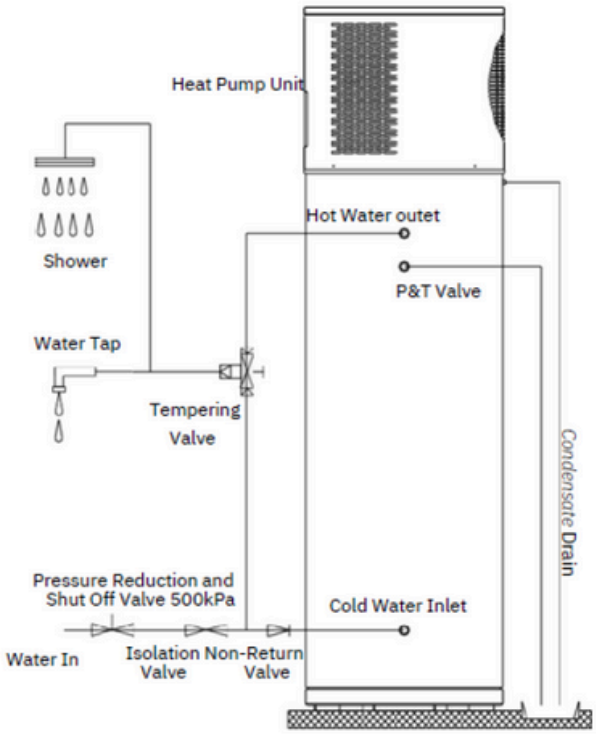
All ECONOVA models featured in this manual are mains powered, electrical safety protection Class I, IPX4 rated for ingress protection, uses flammable refrigerant R290, fixed appliance requiring fixed connection to mains through an RCBO . The units must be installed by qualified and trained professionals according to local regulations for plumbing and electrical safety.

Within this manual are instructions required by the safety standards AS/NZS 60335.2.40:2023 and AS/NZS 60335.1:2020+A1 applicable to heat pumps included in the manuals.

The RVW Heat Pump Water Heater







Owners Warning: Safety Information

WARNING - Please read all manuals carefully before installing and operating this unit. The following safety warnings are very important, always read and obey all safety signs. The Heat Pump Must be installed by a licensed electrician according to Australian wiring rules. The water heater must be maintained in accordance with the Owner's Guide and Installation.

WARNING

Do not insert fingers, rods or other objects into the air inlet or outlet. The fan is rotating at high speed, which may cause injury. Do not use flammable sprays, such as hairspray or paint near the machine to avoid fire.

The unit must be fixed firmly, otherwise noise and vibration may be generated. Ensure there are no obstacles around the device.

The pressure release valve (PTR) should be opened every 6 months to ensure that the valve does not have any restrictions. The drainpipe should be well insulated.

It is normal for the (PTR) to release some water during operation. However, if there is a large amount of water, please contact our service team. Improper drainage can cause water damage to surrounding areas such as buildings, furniture, etc.

Once operational, do not turn this unit off, as you may disrupt the self-cleaning cycle which is required to ensure safe water quality.

Note, this unit is equipped with electrical safety measures and for these safety measures to be effective the unit must be connected to power, other than when servicing.

If the hot water system is not in use for several weeks, a quantity of hydrogen gas may accumulate in the water heater. To dissipate the gas safely, please turn on the hot water taps for several minutes to ensure that gas has been properly removed from the water heater. As the air escapes, sounds may occur which is normal.

Water pressure: Minimum 200 kPa, and the maximum inlet water pressure should not exceed 500 kPa, if it does, a pressure reducing valve is to be installed. See installation instruction. A one-way check valve and a suitable isolation valve must be installed on the water inlet side.

Water temperature over 50 degrees Celsius will cause severe burns and even death.

Children, the disabled and the elderly are at highest risk of burns. Feel the water temperature with your hands before showering or taking a bath to avoid burns.

This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions concerning use of the appliance by a person responsible for their safety.

Children should be supervised by a responsible person to ensure their safety. We recommend keeping children away from the Heat Pump.

Do not remove, cover, or damage any permanent instructions or labels from the exterior or interior of the unit panel.

Do not puncture the water heater casing, smoke, or activate sparking of any description within 1.5 meters of this water heater. R290 may not contain an odour.

Compliance with national gas regulations should be observed.
This water heater contains flammable propane refrigeration in a sealed closed refrigeration circuit.

Under no circumstances should "home craft" type modifications be attempted. To avoid an electric shock do not operate the machine with wet hands. If the power supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons to avoid a hazard.

Before cleaning, be sure to stop operation and isolate the unit (i.e. turn off the isolating switch or circuit breaker), otherwise, electric shock or injury may occur.

Specifications

Model	ECON-300RVW	ECON-300RVW-2.0E
Hot Water Capacity	290 Litres	290 Litres
Heating Capacity Watts	2650	2650
Maximum input current（A)	3	11.7
Rapid Boost Element (KW)	No	2
RCBO Current Rating（A）	16	20
Refrigerant	R290	R290
Type of electric control	Variable Frequency	Variable Frequency
Operating temperature	-7°C~+43°C	-7°C~+43°C
COP (approx,W/W)	5.7	5.7
Tank Dimension(mm)	φ640*2005	φ640*2005
PTR（kPa)	850	850
Min/Max Rated Pressure（kPa）	200 ~ 500	200 ~ 500

1. Heat Pump activation Set Point at mid sensor on residential models is 55 degrees.
2. All models power supply: 220-240V/50Hz
3. All models operating temperature range: -7°C ~+43°C
4. All Fittings (inlet & outlet): 20mm / G ¾
5.Maximum water temperature: 70 degrees Celsius
6. Protection Ranking Class: IPX4
7.RVW models come with high efficiency DC compressor and advanced, variable frequency control. RW models come with optimised AC fixed speed compressor and fans
8. 1st hour hot water delivery = storage + hot water produced in the 1st hour. Typical production in 50 to 60 litres/hour depending on the model and the weather conditions.
9. RVW-E models are the same as RVW models, except for 2 kW or 4.8 kW Rapid Boost Emergency Elements.
10. Rapid Boost is activated from the top sensor and provides additional heat to the upper tank only, to provide heating under excessive load, or emergency hot water consumption.

Legionella control methods

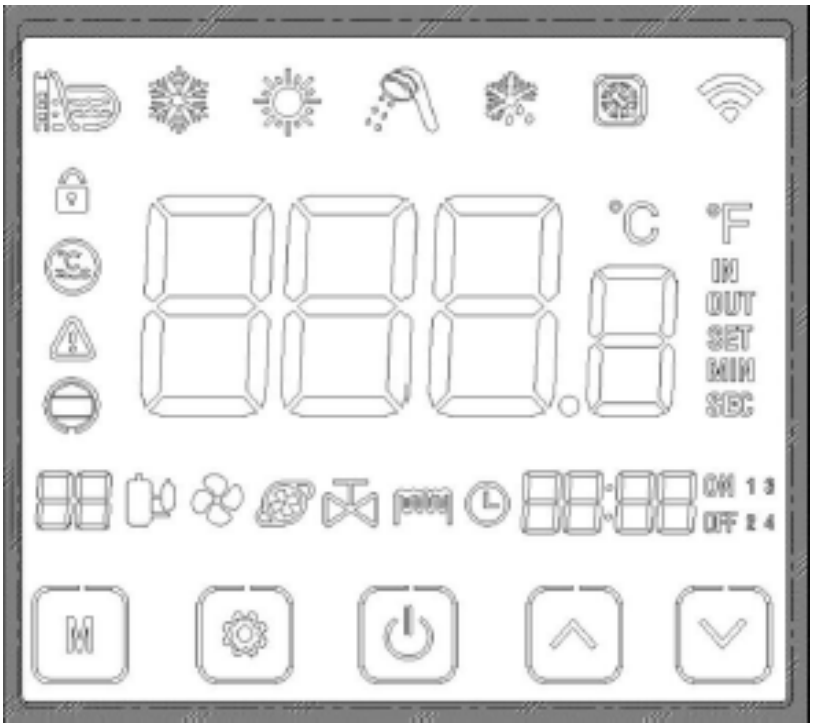
The following models comply with AS 3498 legionella control with a weekly heating cycle using the bottom sensor to ensure at least 90% of the tank volume is heated to at least 60C for 32 minutes - performed at 2.am for convenience.

ECON-300RVW

ECON-300RVW-2.0E

System Operation

WIRE CONTROLLER CONTROL PANEL LCD ICONS



: Defrosting :Fan : Heating state : N/A

: Insulation state : Locked state : Compressor state : Electric heater

: Down button : Up button : Four-way valve : Mode button

: Clock button : On-off button

Note, under normal working conditions you will see the 5 icon at the bottom of the screen.
The remaining icons are for the consideration of trained technician.

OPERATING INSTRUCTIONS

- The version number is displayed first when the controller is powered on.

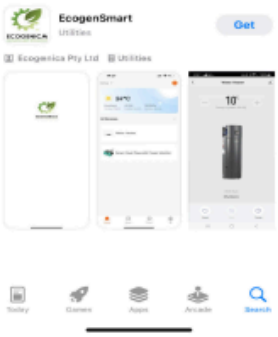
STARTUP / SHUTDOWN OPERATION

- Startup: Long press "⏻" button for 3s to start up under the off state
- Shutdown: Long press "⏻" button for 3s to shut down under the on state

WIFI CONFIGURATION

- Mobile phone Wi-Fi (2.4G) Connection:
- Search for "EcogenSmart" in the app store; Create a new account.
- Long press "⏻" on the wire controller for more than 2s, until the "📶" icon flashes, reset and enter the Wi-FI network if not automatically connected.
- Tap "+" in the top right corner of the APP in the mobile phone to enter the automatic device search state; Add Device.
- Click "Add Device", enter the Wi-Fi account No. and password to be connected in the pop-up interface
- After the successful connection, " 📶 " icons are on, and the APP can be used to enter the corresponding product settings.

Download the App



Wi-Fi Connection

Add your device

SET TEMPERATURE

- Press "▲" or "▼" button in the main interface to view the set temperature
- At this time, display "Set Temperature" and flash, press "+" or "-" button to adjust the set temperature, and then
- Press "⚙" button to save the setting and exit. If there is no operation within 5s, the system will save the user setting automatically and back to the main interface
- Press "⏻" to exit

SET WORKING MODE

- Press "M" to release and switch between "Automatic Mode" and "Energy-saving Mode". Under the "Energy-saving Mode", run according to the working period set (It is valid after the button is released)

SET TIME

- Press "⚙" button to enter the time setting. The time adjustment shall be as follows: Hour → Clock → Exit Setting
- Press "▲" and "▼" to adjust the corresponding time value
- It will exit automatically if no button is pressed after 30s
- Press "⏻" button to exit during setting

TIMING SETTING

- Long press "⚙" button for 3s to enter the timing setting
- **Timing 1:** At this time, "Timing on 1" hour flashes, press "▲" and "▼" to adjust the hour
- After the adjustment press "⚙" button, "Timing on 1" minute flashes, press "▲" and "▼" to adjust the minute;
- press "⚙" button again to enter the setting of "Timing off 1". The setting method is the same as for "Timing on 1".
- **Timing 2:** Press "⚙" button again to enter the setting state of "Timing on 2". The setting method is the same as for Timing 1
- **Timing 3:** The setting method is the same as that of Timing 1 and Timing 2
- It will exit automatically if no button is pressed after 30s
- Press "⏻" button to exit during setting

Note: If the start time and the end time of a timing period are the same, it means that the period is invalid. If the end time of a period is earlier than the start time, the end time is considered as that on the next day. For example, if a period is set from "22:00" to "03:30", it is deemed as from 10:00 p.m. to 3:30 a.m. the next day.

System Maintenance

Evaporator Maintenance and Safety Notice

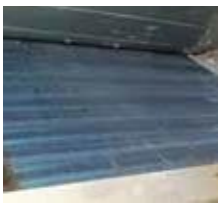
The efficiency of the heat pump is directly affected by the cleanliness of the evaporator. Dust, mud, or other debris on the evaporator surface can block airflow, reducing the effectiveness of heat exchange with the surrounding air. This results in diminished heating efficiency and increased strain on the unit.

To maintain optimal performance, customers must ensure the heat pump remains clean and free from obstructions at all times.

Important Safety Warning:
DO NOT USE FLAMMABLE CLEANING PRODUCTS to clean your heat pump.

If you notice a buildup of grime or debris on the evaporator, please **do not attempt to clean it yourself**. Contact **ECONOVA** to arrange a professional maintenance visit. Our trained technicians will ensure safe and proper cleaning to protect your system and uphold warranty conditions.

Before cleaning



After cleaning

Routine Inspection and Maintenance Guidelines

Please inspect the unit regularly for any visible signs of damage. If any damage is detected, contact our maintenance team immediately for assistance.

In regions where temperatures fall below 0°C, and if the system will be inactive for an extended period, it is essential to drain all water from the tank. This will prevent potential ice formation inside the cylinder, which can cause serious damage.

Anode Maintenance
Your water heater is equipped with a sacrificial anode to protect the cylinder from corrosion. Over time, this anode will wear out. We recommend replacing the anode during your five-year service interval—or sooner if you reside in an area with poor water quality.

Technician Safety and Repair Protocols
All repair work must be conducted under controlled procedures to minimize risks associated with flammable gases or vapors during operation.

Technicians and maintenance personnel must be fully aware of the repair requirements and the working environment. Avoid conducting work in confined or sealed spaces. The repair area should be properly isolated and free from combustible materials to maintain a safe working condition. Ensure that all technical staff are aware of the potential for refrigerant gas leaks.

PRESSURE & TEMPERATURE RELIEF (PTR) VALVE MAINTENANCE
To prevent excessive pressure buildup within the water tank—which may lead to tank deformation or reduce its service life—the Pressure and Temperature Relief (PTR) valve must be maintained in working order.

Locate the PTR valve on the unit. Carefully lift the lever to manually activate the valve, allowing a small amount of water to discharge. This process confirms that the valve is functioning correctly by relieving internal tank pressure as intended.

If water flows freely, the valve is operational. If water does not discharge or the valve appears stuck or blocked, it may be faulty and must be replaced immediately.

Homeowner Responsibility
It is strongly recommended that homeowners perform regular checks on the PTR valve—ideally every six months—as outlined in AS/NZS 3500.4. Routine activation of the valve helps prevent mineral build-up and ensures the system remains compliant and safe.

Failure of the PTR valve to operate correctly can result in uncontrolled internal pressure, posing significant risk to both the system and property.

If the valve is not functioning or requires replacement, please contact your licensed plumber or our Ecogenica service team for assistance. Only licensed tradespeople should perform replacements or adjustments to the PTR valve.

DRAINING THE TANK
If the tank is to be replaced, ensure the site is appropriate for safe drainage. Draining can be performed by connecting a hose to the cold water inlet and running it to a suitable drain point. To prevent the formation of a partial vacuum during draining, it is necessary to disconnect the hot water outlet or open the Pressure and Temperature Relief (PTR) valve.

Ensure that the drain line is positioned to safely discharge water away from the operator while the valve is open. All procedures must comply with *AS/NZS 3500.4:2021, Section 5.11*.

REFRIGERATION REPAIRS
All refrigeration leak detection must be performed using equipment certified for R290 (flammable refrigerant). The leak detector must be suitable for use with flammable gases and must not generate sparks.

Prior to beginning work and throughout the process, use an appropriate detector to check for refrigerant leaks. Only trained and qualified personnel should carry out any refrigerant handling or repair tasks.

WARNING – HOT WATER RISK
This appliance may deliver water at high temperatures. Always refer to the *Plumbing Code of Australia (PCA)*, local regulations, and the installation instructions to determine whether additional delivery temperature control is required. Failure to do so may result in scalding or other safety hazards.

System Maintenance

PTR MAINTENANCE

Periodic operation of the valve is recommended to ensure smooth water flow. If the water does not flow freely, change valve.

To avoid the expansion and deformation of the water tank due to excessive pressure, the service life of the water tank will be affected.

I. Find the position of the valve.

II. Carefully release the valve with the lever to release some water from the tank.

III. Note: Please use the water discharged from the container to avoid damage to other items.

IV. If the water is flowing, the valve is still in proper working order.

V. If the water does not flow freely, the valve is out of function and needs to be replaced.

VI. If the valve needs to be replaced, please contact your plumber or our service team for further assistance.

CHECK

Please check the machine regularly for any damage, if there is obvious damage, please contact our maintenance team.

In some cold areas (below zero degrees Celsius), if the system stops working for a long time, the water in the water tank should be released before activating the heat pump, to ensure the water is not freezing.

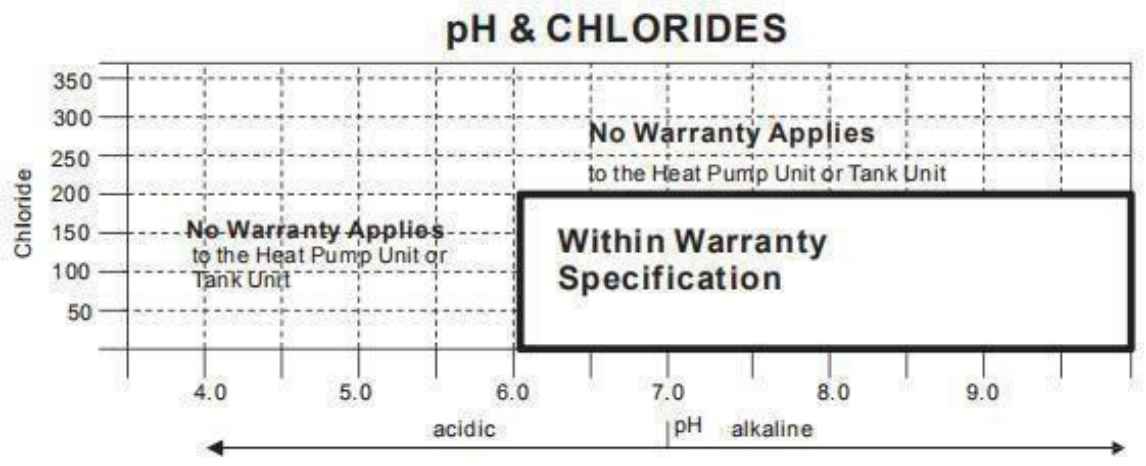
Failure to do so may cause the machine to malfunction and, in severe cases, damage.

If water does not release from your P&T valve consult your plumber and ECONOVA®.

CAUTION: WARRANTY REQUIREMENTS FOR WATER SUPPLY (CHLORIDE AND PH)

Heat pump units and hot water tank units with a Ph value less than 6.0 are not guaranteed. The water supply to rainwater storage tanks within urban agglomerations can be corrosive due to the dissolution of atmospheric pollutants.

Water with a pH value of less than 6.0 can be treated to increase the pH value, so it is recommended to analyze the quality of tap water before connecting to this type of water supply system.

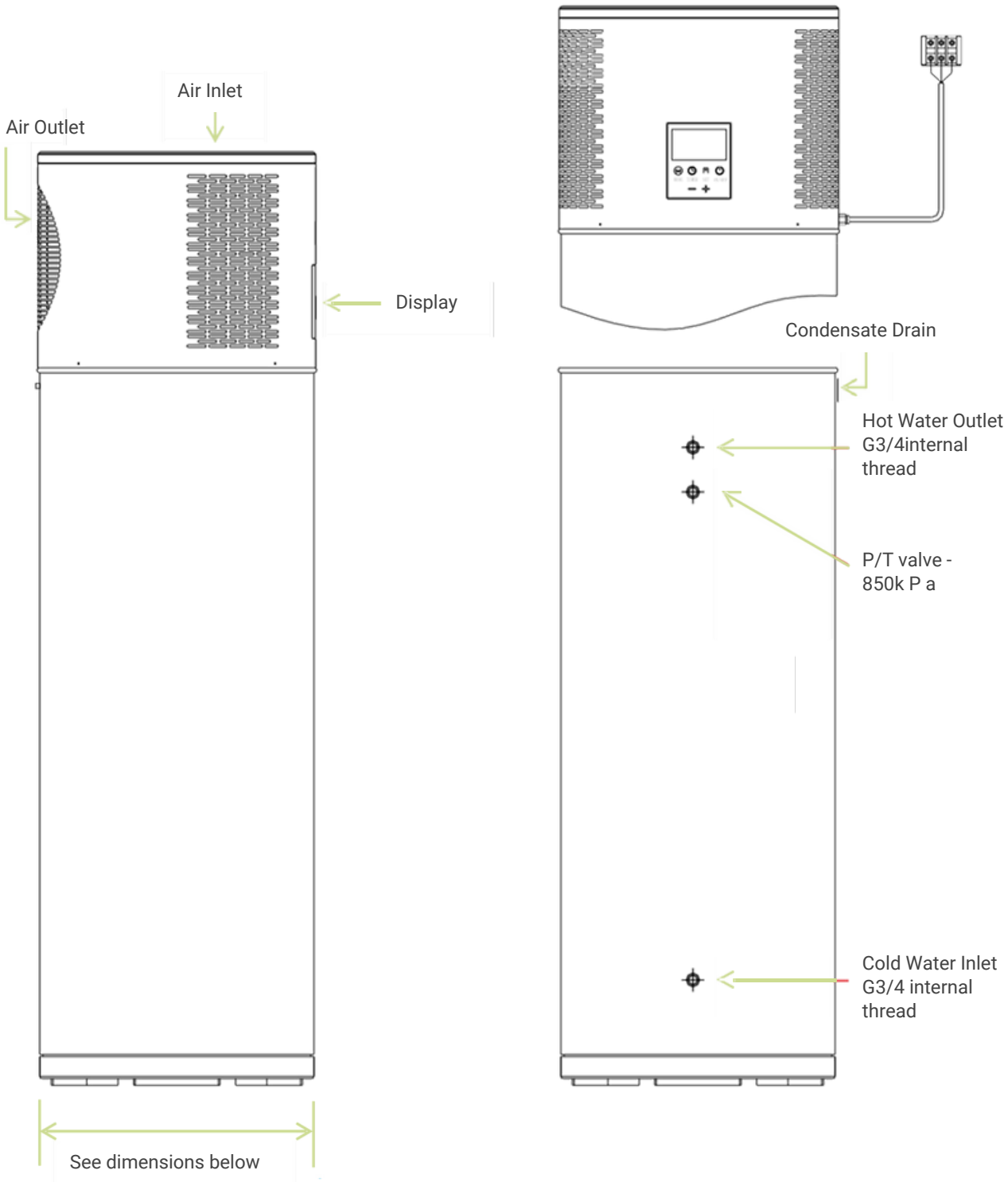


INSTALLATION INSTRUCTIONS

- ✓ High quality, efficient and energy saving
- ✓ Industry leading technology and innovation

Wi-Fi

Connections and Dimensions



Installers Warning and Safety Information

PLUMBING

Care must be taken to ensure the system is installed in accordance with AS/NZS 2712 and to AS/NZS 60335.2.40:2019 - with household and similar electrical appliances.

Since heat pump water heaters can generate water temperatures more than +50 degrees Celsius, regulations require that a regulating valve be installed on the hot water outlet line of the water heater to prevent the water temperature from exceeding a pre-set safety upper limit.

The installation must conform with the Plumbing Code of Australia (PCA), regulations of the local authority, in line with national building regulations and local occupational health and safety regulations.

Only licensed professionals will issue a certificate of compliance, certifying that the work in question meets all relevant standards, and only licensed professionals will take out craft insurance.

Ensure that the heat pump unit is installed in a compliant and accessible location is crucial for maintaining its warranty and ensuring efficient service. Please refer to the installation guidelines in this manual for detailed information on compliant installation practices.

CUSTOM INSTALLATION

Please consult with ECONOVA® about internal installations. If a safety tray is required to prevent building damage, construction, installation and draining of a safe tray must comply with AS/NZS 3500.4 and all local codes and regulatory authority requirements.

DISPOSAL

Your heat pump contains electrical com ponents. If electrical appliances are disposed of in landfills or dump sites, hazardous substances can seep into groundwater and cause health problems. Please note, the tank and heat pump must have the R290 natural gas released, or removed, before the units are sent to metal recycling, or to your local council appliance recycling centre. Note, ECONOVA® maintain a metal re-cycling service.

CIRCUIT BREAKER

The hot water pump power supply must be protected by a separate RCBO on the main power switchboard, if the unit has an electric element, and it must be rated to suit the size of the components.

Models with electric booster elements MUST be installed on their own dedicated circuit to avoid overloading and ensure proper operation. Models without an element can be installed on a shared circuit. However, care must be taken by the licensed electrician to ensure that the shared circuit is not overloaded.

The RCBO must be incorporated into the fixed wiring in accordance with the wiring rules and regulations (AS/NZS 3000 -Australian wiring rules).

CONDENSATION DRAIN

The heat pump must be installed on a flat dry surface. If there is no special drainage pipe (sink), be sure to ensure that the condensed water flowing on the ground can be drained smoothly to avoid water pooling around the heat pump. As condensate will otherwise drip from the appliance onto the floor if the drainpipe is not added.

P&T VALUE DRAIN LINE

A drain line from a relief valve must comply with the requirements of AS/NZS 3500.4. The outlet of a drain line must be easily seen, and arranged so discharge will not cause injury, damage, or nuisance. Drain some of the water heater must be directed away from the building, fall continuously, discharge water away from the operator during the operation of the valve and PTR drains must use copper piping.

GROUND CONNECTIONS

Proper ground connection is essential. The presence of water in the piping and water heater does no t provide sufficient conduction for a ground. Non-metallic piping, dielectric unions, flexible connector s plumbing etc, can cause the water heater to be electrically isolated

Plumbing must be well insulated. Lagging must be applied to pipes and valves for at least the first 500mm in all directions, including PTR drainpipes. Customer should consider investing in best practice plumbing to have external hot water pipework to the primary kitchen sink lagged. As every home is different pipework plumbing insulation in the home is quoted separately.

All installations of ECONOVA® Heat Pump systems must comply with the AS3000 electrical standards. It is the responsibility of the licensed electrician to ensure that all wiring, power supply connections, and protective devices adhere to these regulations to guarantee safe and effective operation.

Installers Warning and Safety Information

WARNING

Do not operate this Heat Pump without a full tank of water

INSTALLATION CHECK LIST

WARNING

WARNING – This appliance may deliver water at high temperature. Refer to the Plumbing Code of Australia (PCA), local regulations, and the installation instructions to determine if additional delivery temperature control (such as tempering valves) is required.

This system contains flammable R290 refrigerant-grade propane. All service and installation work must strictly adhere to the safety guidelines outlined in this manual. If repairs are to be conducted on-site, prior written approval must be obtained from ECONOVA®. Fire risk management procedures must be followed at all times.

Important Installation Notes:

- This appliance is intended for direct connection to a mains water supply. It is not suitable for use with temporary or hose-style connections.

- Electrical installation must comply with **AS/NZS 60335.1:2020** and **Amendment 1:2021 – Household and Similar Electrical Appliances – Safety General Requirements.**

- All fixed wiring insulation must be adequately protected using appropriately rated sleeving or other approved means.

- Installation must only be carried out by qualified personnel in compliance with local, state, and national regulations.

- **Improper installation** may lead to water leaks, electric shock, fire hazards, or personal injury.

- Do not use incorrectly rated fuses, as this may result in malfunction or electrical fire.

- Ensure the grounding electrode is properly and securely connected.

- All electrical plugs and sockets must be dry and tightly fitted. Reliable earthing of the unit is mandatory.

- **The unit must be fully filled with water before being powered on.** Activating the system without water may cause irreversible damage and void the warranty.

- Models with electric booster elements must be installed on their **own dedicated circuit** to prevent overloading and ensure correct operation.

- Models without electric boosters may be installed on a shared circuit, but the **licensed electrician must ensure** that total circuit load remains within safe limits.

Pre-Installation Safety Information

APPLIANCE OPERATION

In case of possible direct exposure to strong wind, face the air outlet to the most protected area. The direct incidence of strong wind in the outlet grille during long periods may affect the performance of the heat pump increasing the heating times and the frequency of defrost cycles.

This water heater should not be installed in an area with a corrosive atmosphere where chemicals or flammable liquids are stored or where aerosol propellants are released.

BOOST CONTROL

Some ECONOVA® models contain an electric element (see Product Specifications) for Automatic boost control, which will activate the heating element in extreme usage or temperature circumstances. This control is built into the PCB and is not controllable from the control panel. Boost is automatic and does not adjustment.

INLET-OUTLET CONNECTIONS

Installation of the water inlet or outlet pipes: The water inlet and outlet thread are ¾ BSP (internal thread). Pipes must be heat resistant, durable and UV resistant (when doing outdoor installation). Installation of the pipe for PTR valve: The specification of the valve thread is ½ BSP (internal thread). Note: one way valve must be installed at the inlet.

PRE-INSTALLATION

Ensure that there is enough space for installation and future maintenance. Do not install the heat pump in an area that is not easily accessible for maintenance and repair work. This includes installations in confined spaces, locations requiring special equipment to access, or areas that pose a safety risk to our technicians.

The air inlet and outlet should be free of obstacles and strong winds.

The bottom surface should be flat and capable of bearing the weight of the heat pump, while ensuring that no noise and/or vibration results from poorly installed tank.

When installing the tank DO NOT use adhesives since they are not considered to be a reliable fixing means.

POWER REQUIREMENTS

Check the markings on the rating plate of the water heater to be certain the available power supply corresponds to the water heater requirements. The Heat Pump Water Heater must be directly connected to a 230V-240VAC 50Hz mains power supply.

The water heater Heat Pump must be installed on separate individual circuits with a breaker switch installed directly at the switchboard.

Fill the heat pump tank with water before starting the heat pump for the first time.

SOLAR POWER

Some ECONOVA® models come with Wi-Fi; and all models have timer activation to better align operation with Solar Power production. Solar Power must be provided to the inverter and switch board, as per local regulations and Solar installation Standards. The timer ensures that the Heat Pump operates between daylight hours, to align with Solar Power production.

Solar Power is limited during rainy days, and in the Winter Months, and hot water loads increase, so we recommend that timer activations are not used during these times. Note, the ECONOVA® heat pump will mostly operate during the day in the Auto Mode if people show in the morning.

SITE REQUIREMENTS

The running noise and the exhausted airflow should not affect other people. Take care to consider the location of bedrooms and noise sensitive areas.

Unsafe Installation location: Installation must comply with safety standards and regulations. Including, and not limited to, areas with inadequate ventilation, proximity to hazardous materials, or installations that violate manufacturer guidelines.

Do not install in areas with pH & chlorides outside the range listed here (pH 6 to 10) & Chloride >200):

Installations indoors are not recommended, and permission must be secured from ECONOVA®.

Ensure the site is suitable for draining the tank at some point. Draining of the tank can be accomplished by the connection of a hose to the cold-water inlet and running to a suitable drain. It will be necessary to disconnect the hot water outlet or PTR valve to relieve any partial vacuum created as the water flows out.

Installation

PIPING CONNECTIONS

The water inlet and outlet thread are 3/4 BSP (internal thread). Pipes must be heat resistant, durable and UV resistant (when doing outdoor installation). Installation of the pipe for PTR valve: The valve thread specification is ½ BSP (internal thread). Note: non-return valve must be installed at the inlet.

All pipe work should be insulated with proper insulating material (weatherproof and UV resistant if exposed) to optimise energy efficiency.

To ensure the faultless operation, the unit must be installed vertically without a significant tilt, minor tilts should be in the direction of the condensate drain to favor the condensates drainage.

Take care to consider the location of bedrooms and noise sensitive areas. The running noise and the exhausted airflow should not affect other people.

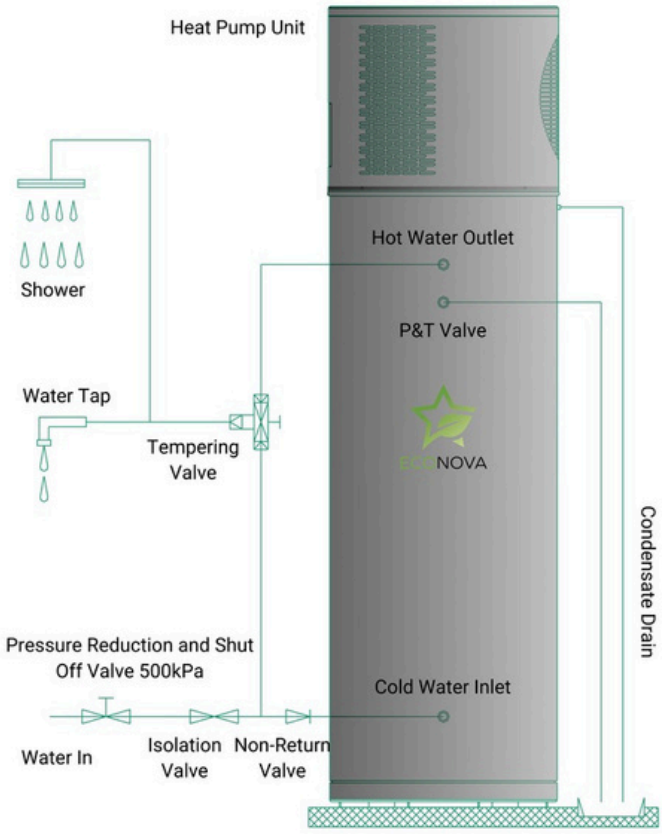
The inlet and outlet should be free of obstacles and strong winds.

Installation must comply with safety standards and regulations. Including, and not limited to, areas with inadequate ventilation, proximity to hazardous materials, or installations that violate manufacturer guidelines.

CAUTION

The temperature and pressure-relive valve must beinstalled according to local code. Not doing so will cause damage to the appliance and to other property.

The function of the temperature and pressure relief valve once installed on this water heater is to discharge high conditions. Therefore, it is strongly recommended thatt he pipe work connected to the relief valve can withstand water temperatures exceeding 99˚C. Failure to follow this recommendation may result in a dangerous situation.



CONDENSATE DRAIN TUBES

This unit has an integrated condensation tray. The water collected in the tray drains out of the tube. It is important that a hose is attached to drain. Ensure the heat pump is on a flat, firm surface capable of bearing the weight of the device. If there is no special drainage pipe (sink), be sure to ensure that the condensed water flowing on the ground can be drained smoothly to avoid water pooling around the heat pump. As condensate will otherwise drip from the appliance onto the floor if the drainpipe is not added.

CAUTION

Never block or seal the outlet of the PTR valve or its drain for any reason. The warranty will be void if the relief vale or other safety devices are tampered with or if the installation is not in accordance with this manual.

DIELECTRIC JOINT

Different metals between plumbing and tank materials and additionally the effect of hot water can cause the corrosion of one of the metals (generally the one in the tank is the metal attacked).

The dielectric joint will basically avoid any physical contact between the two metals, acting as an effective insulator and prevent this attack. How quickly this, or it at all, happens, depends a lot on the content of your water. It's pH, the dissolved minerals and the metals involved.

Installation

THERMAL EXPANSION TANK

Thermal expansion is a natural process where heated water increases its volume. When this water is stored in a tank, this volume increase will in fact mean a pressure is increased in the tank. This pressure increase potentially can result in a dangerous situation if Pressure Relief Valves are not releasing water occasionally. Consequently, when the safety settings on the relief valve are reached, the relief valve will operate during the heating cycle. Please contact a licensed professional, water supplier or plumbing inspector for information about this subject.

PTR VALVE
A temperature and pressure relief valve are supplied and must be installed in the tank port marked for this purpose. No valve or accessory of any type should be installed between the relief valve and the tank. Please observe local codes for the correct installation of relief valves.

The kW rating of the relief valve must be higher than 6kW to ensure that is always above the maximum output power of the water heater when operating with both electrical heated and heat pump and air at 40˚c. The supplied PTR valve complies with this by having a power capacity of 10kW.

Connect the outlet of the relief valve to a suitable open drain so that the discharge water cannot contact any electrical parts, persons or animals and to eliminate any other possible risks. Always use a valve of the same rated pressure and temperature as the PTR valve supplied with the unit.

CAUTION

The pressure rating of the relief valve must not exceed 850kPa, the maximum working pressure of the water heater as marked on the rating plate! Proper ground connection is essential!

TEMPERATURE MIXING DEVICE

The PCA (Plumbing Code of Australia), AS/NZS3500.4 ; requires the installation of a temperature limiting devic e between the water heater and the hot water outlets in a bathroom or similar usage point to reduce the risk of scalding.

The maximum temperature that can be delivere d is 50 degrees Celsius. Additionally, a certified plumber may have the legal obligation to ensure the water heater installation meets the hot water delivery requirements listed in AS/NZS3500.4.

EXPANSION CONTROL DEVICE

A saturation index greater than +0.4 or in corrosive wate r areas where there is enough silica dissolved in the wate r may require the installation of an expansion control valve (ECV) in the cold-water line, being the last valveinstalled prior to the water heater.

POWER SUPPLY AND ELECTRICAL INSTALLATION REQUIREMENTS

Before installation, verify that the available power supply matches the specifications listed on the rating plate of the heat pump water heater. The unit must be connected to a 230–240V AC, 50Hz mains power supply.

The heat pump water heater must be installed on a dedicated individual circuit protected by an RCBO (Residual Current Breaker with Overload protection) located at the main switchboard. An effective and reliable earth connection is required for safe operation—ensure the ground wire is securely connected to the external grounding system.

All power wiring should be laid out neatly and securely, avoiding splicing of wires wherever possible. Electrical connections must comply with all relevant safety regulations and wiring standards.

Important: The unit must only be powered on after the tank has been completely filled with water.

Wi-Fi Setup:
To enable smart control, download the companion app and pair your heat pump to your device following the application instructions.

Solar and Off-Grid Use:
- In warmer months, the heat pump can be set to operate between 10:00 AM and 5:00 PM using the timer function for optimal use of solar power.
- During colder months, we recommend using Auto Mode without a timer to ensure consistent hot water availability.
- For off-grid installations, ensure the system is connected to a UPS (Uninterruptible Power Supply) with a 230–240V AC, 50Hz true sine wave output.

Circuit Protection:
To ensure uninterrupted operation, the hot water heat pump must be protected by a dedicated RCBO rated appropriately for the installed components. Do not connect any other appliances—especially high-power devices—to the same power supply circuit as the water heater.

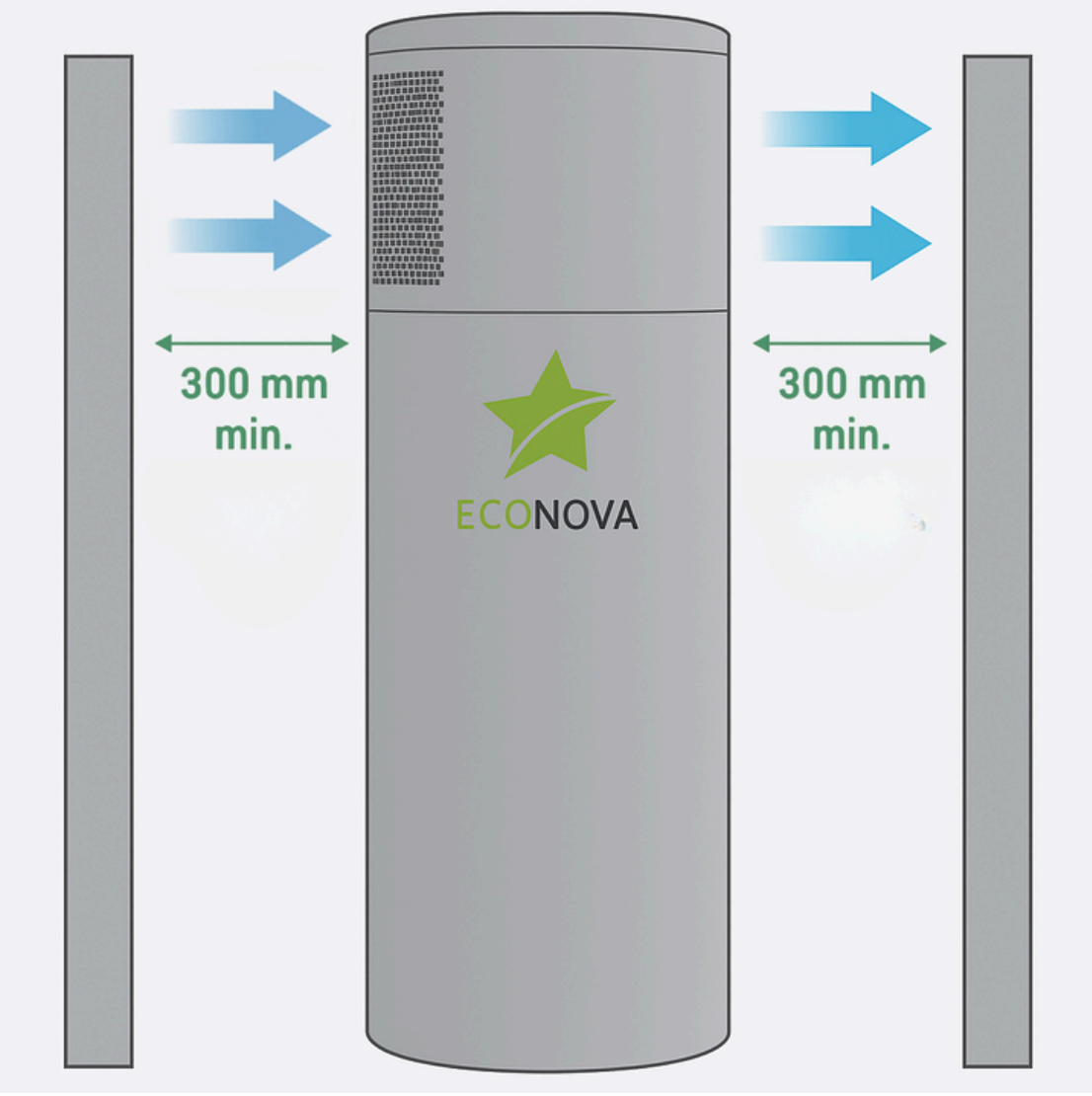
Installation

CLEARANCE REQUIREMENTS

To ensure proper operation and serviceability, the following minimum clearances must be maintained:

- A minimum of 300 mm clearance must be provided on both sides of the heat pump, at the air inlet and outlet, to allow for adequate airflow.
- An overhead clearance of 300–400 mm must be maintained above the unit to allow for future access if servicing is required.

Failure to maintain these clearances may impact system performance and access for maintenance.



Commissioning

WARNING

Before the heat is started please make sure the tank is full of water!

Then please consider this safety check list.

INSTALLATION AND COMMISSIONING CHECK LIST:

1. P&T and condensate drain lines must be directed away from building footings and must continuously fall from the valve to the point of discharge. Ensure the discharge does not pose a risk of injury to persons.

2. The drain line must discharge water away from the operator during valve operation. Installation must comply with **AS/NZS 3500.4:2021, Section 5.11.**

3. Copper piping must be used for all drain lines. Plastic piping is not permitted.

4. All drain lines must be insulated for a minimum of the first 500mm from the valve outlet.

5. Please note that these drain lines are considered "outlets" in accordance with **AS/NZS 3500.4:2021, Clause 2.5.2.**

6. Before commissioning the appliance, ensure the storage tank is completely filled with water. Purge the tank by opening the hot water outlet and one or more hot water taps to remove air from the system.

7. Open the cold water inlet valve to begin filling the tank.

8. Close the hot water taps only once the water flow is steady and free of air pockets.

9. Close the valve after a few moments, once water is flowing smoothly without air bubbles.

10. Connect the appliance to the power supply using fixed wiring, including an earth conductor. Ensure connections meet all local electrical codes.

11. After verifying that the power cord is securely connected, switch on the water heater.

12. There is no need to manually activate the display—it will power on by default.

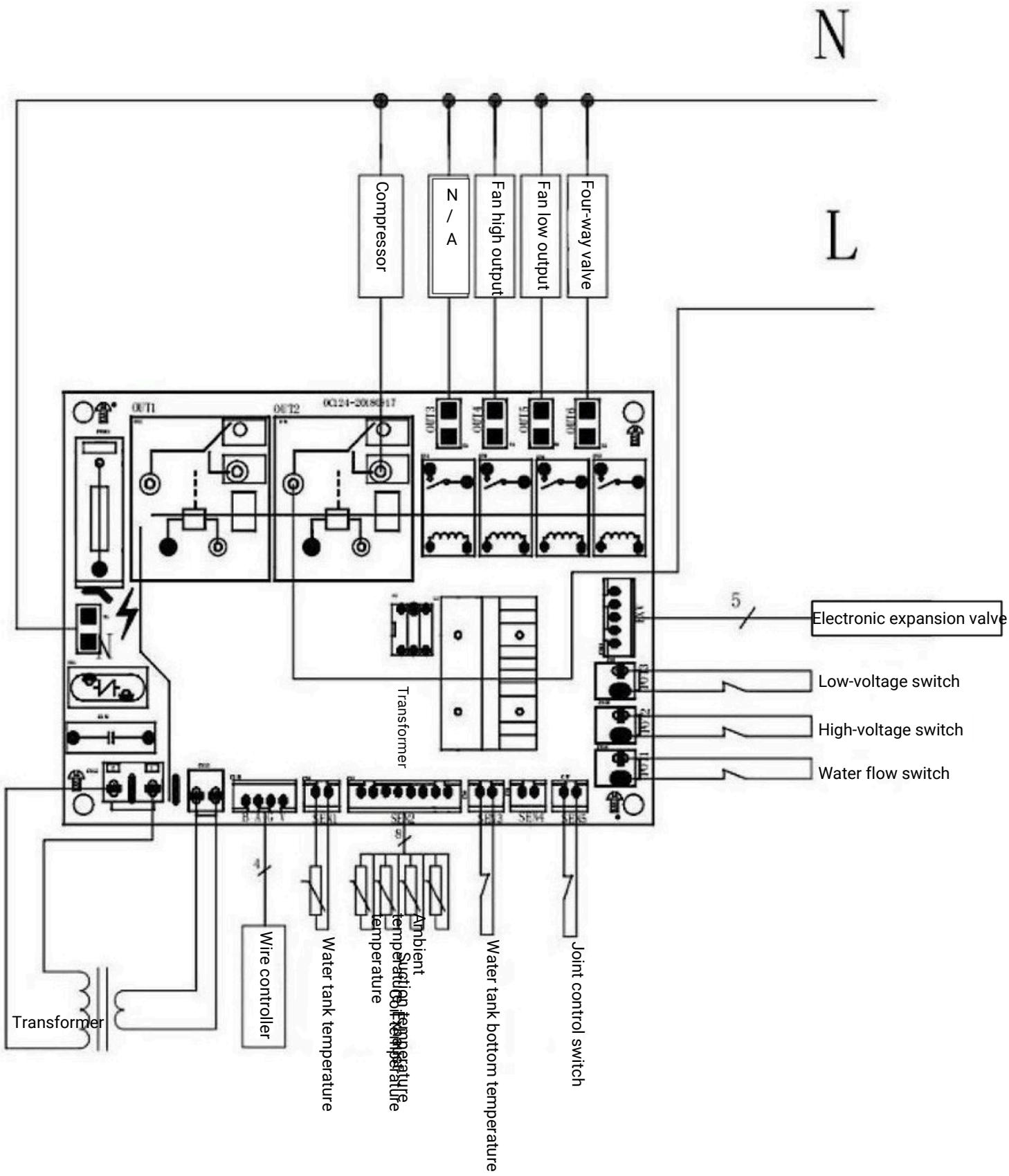
13. The unit features a three-minute delay start function. Please be patient. After 30 minutes of operation, verify the system status. If any issues occur, check the display screen for fault codes.

14. The ECONOVA® unit has fully automatic control and will operate based on environmental conditions, heating the stored water to the factory-set temperature.

Warning Proper ground connection is essential. The presence of water in the piping and water heater does not provide sufficient conduction for a ground. Nonmetallic piping, dielectric unions, flexible connectors etc, can cause the water heater to be electrically isolated.

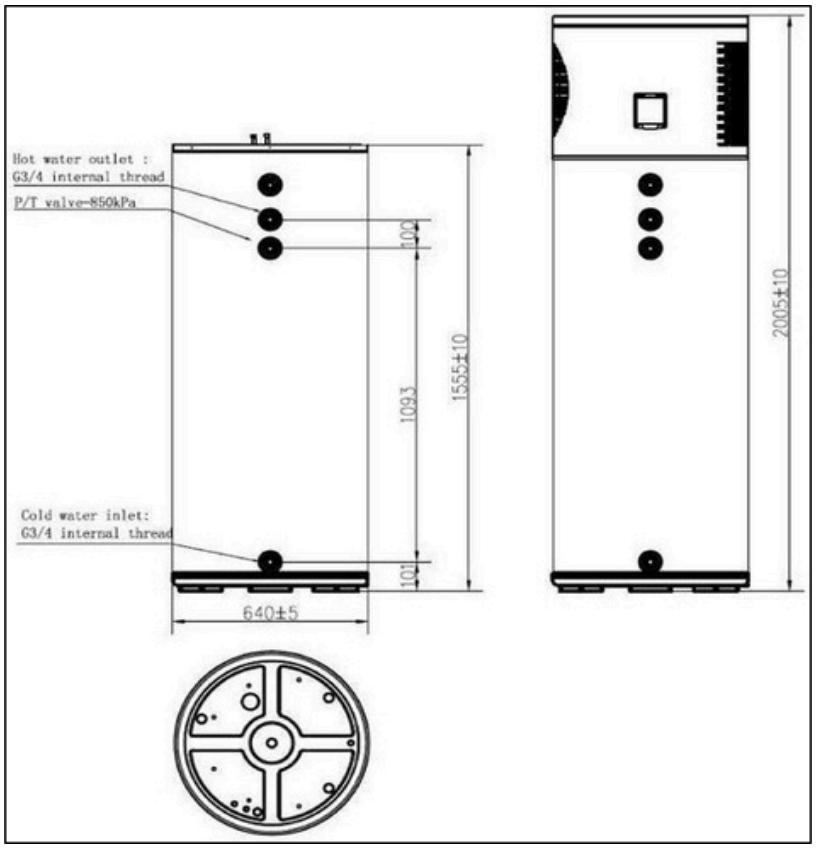
Electrical and Controls

Electrical Circuit Diagram



Connections and Dimensions

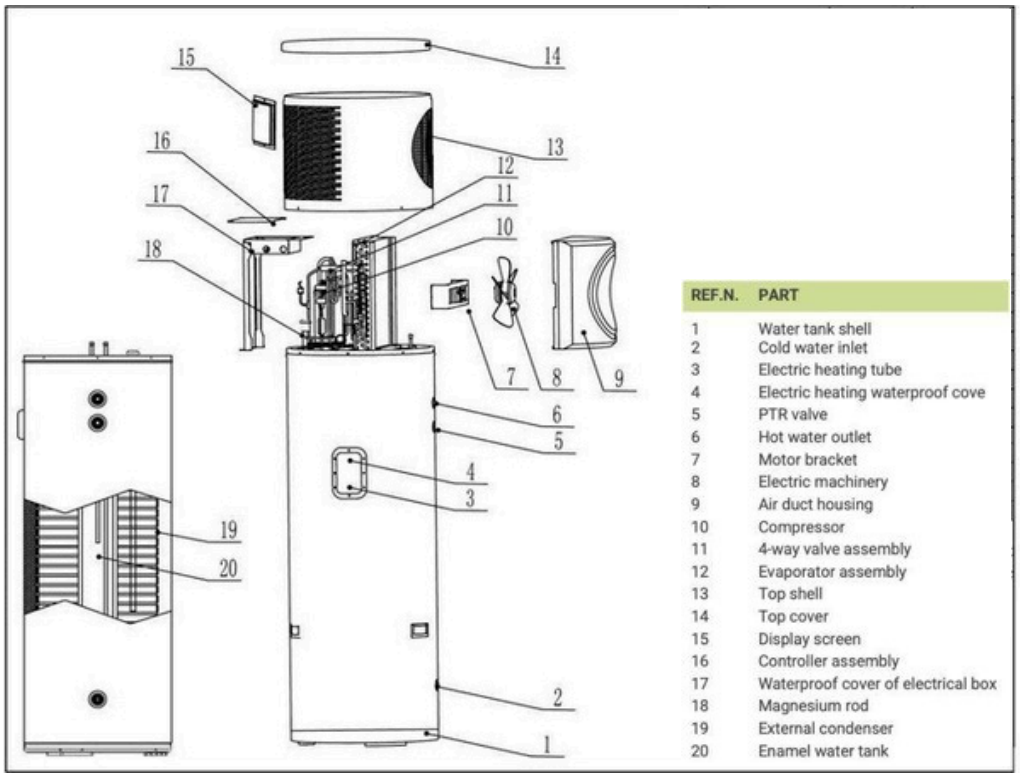
ECON-300RVW (no element)
Econ-300RVW-2.0E



Connections and Dimensions

ECONOVA® EXPLODED VIEWS FOR ALL MODELS

ECON-300RVW (no element)
ECON-300RVW-2.0E



REF.N.	PART
1	Water tank shell
2	Cold water inlet
3	Electric heating tube
4	Electric heating waterproof cove
5	PTR valve
6	Hot water outlet
7	Motor bracket
8	Electric machinery
9	Air duct housing
10	Compressor
11	4-way valve assembly
12	Evaporator assembly
13	Top shell
14	Top cover
15	Display screen
16	Controller assembly
17	Waterproof cover of electrical box
18	Magnesium rod
19	External condenser
20	Enamel water tank

Note: The magnesium rod (anode) come is a variety of materials, depending on water conditions.

System Repairs

NOTE; REPAIR PROCEDURE: ECONOVA® normally return heat pumps if repairs are to be conducted. If repairs are to be completed on site, approval from ECONOVA® must be obtained in writing, and this repair procedures must be followed to ensure fire risks are managed with best practices implemented.

REPAIR CHECK LIST:

1. Carry out repair work under controlled procedures to ensure the lowest risk by flammable gases or vapours arising during the operation.
2. All repair technicians and maintenance personnel in the work area shall be aware of the nature of the job.
3. Do not operate in the sealed space.
4. Working area should be properly isolated to control combustible material to ensure a safe working condition.
5. Flammable refrigerant pipe related work can only be conducted when R290 gases are removed from the site.
6. Ventilation is essential. Make sure the work area is adequately ventilated before opening the system.
7. Remove the R290 before disposal or hot gas service work.
8. Make sure the site has enough ventilation to ensure the leaking refrigerant is release into the atmosphere safely and rapidly.
9. During transport, installation or use, please be careful not to damage any of the heat pumps refrigeration circuit. Sparks may result in explosion, fire or burning.
10. The electrical equipment should not be placed under the unit or where refrigerant could gather in the event of a leak.
11. If the tank is to be removed, ensure that hot water is drained safely into drains and away from building structure, people, walk ways and the ECONOVA® Heat Pump.

Warranty

Disclaimer: All our Heat Pump systems must be installed by a licensed and certified installer ensuring all local, state and national regulations are met. Failure to do so will void this warranty.

NOTICE TO CONSUMER

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. Note: We recommend all consumers safely store receipts, invoices, warranties and any installation records to allow for faster processing of warranty claims.

TERMS OF WARRANTY
ECONOVA® PRODUCTS

The warranty terms, detailed here, relate only to the following ECONOVA® ranges: RVW, RVW-2.0E, FREC-W, FREC-WR, SV-4.2EC.

The warranty period is as follows from the date of installation:
Hot Water Heat Pump All-In-One Systems: A five (5) year warranty applies to the Hot Water Heat Pump All-In-One System supplied and a two (2) year warranty for labour and ancillary components/parts. Ancillary components/parts covered under the 2-year warranty include items such as the Pressure Temperature Relief Valve, Tempering Valve, Isolation Valve, Pressure Limiting Valve, General Power Outlet, and 3-pin plug.
Hot Water Heat Pump Split Systems: A seven (7) year warranty applies to the tank, a five (5) year warranty to the rest of the Hot Water Heat Pump Split System and a two (2) year warranty for labour and ancillary components/parts. Ancillary components/parts covered under the 2-year warranty include items such as the Pressure Temperature Relief Valve, Tempering Valve, Isolation Valve, Pressure Limiting Valve, General Power Outlet, and 3-pin plug.

Additional warranty for Solar Victoria Customers
For Econova Hot Water Systems installed from the 1st September 2025, under the Solar Victoria Solar Homes Program, an enhanced warranty applies in accordance with the program requirements:
A five (5) year warranty applies to all parts and labour for the complete hot water system, commencing from the date of installation.

This coverage is in addition to the standard warranty terms outlined in this document and is provided specifically for Solar Victoria program customers.
All other conditions, exclusions, and requirements contained in this warranty remain in force. Proof of installation under the Solar Victoria Solar Homes Program must be provided to claim this enhanced coverage.

The benefits conferred by this Warranty are in addition to all other rights and remedies in respect of the Heat Pump Water Heater System, which the purchaser has under the law including the Competition and Consumer Act 2010 and consumer protection legislation of the States and Territories. Nothing in this Warranty has the effect of excluding, restricting or modifying those rights.

ECONOVA® will repair or provide parts for repair or replacement, where defects arise from faulty materials. ECONOVA® is responsible for reasonable costs associated with legitimate warranty claims, as determined by ECONOVA®. To determine whether a warranty claim is legitimate, ECONOVA® may send an ECONOVA® accredited service agent to inspect the product. ECONOVA® is not responsible for:
a. any costs that are not pre-approved in writing by ECONOVA®; and
b. any costs associated with a product which is determined upon inspection not to be covered by this warranty.
Any reasonable costs incurred by the consumer that are associated with making a legitimate warranty claim will be reimbursed by ECONOVA®.

Enquiries relating to warranty coverage and claims for ECONOVA® products or services must be made by contacting ECONOVA®. An ECONOVA® accredited service agent or the ECONOVA® service department can repair or replace product components, subject to ECONOVA® terms and conditions of warranty. ECONOVA® can, in addition, provide information on operation and maintenance of ECONOVA® products. ECONOVA® contact details are on the back of this document.

WARRANTY CONDITIONS

The person making the claim must be the owner of the Product or have written authorisation to act on behalf of the owner which must be provided to ECONOVA®.
The person making the claim must notify ECONOVA® as soon as they notice any defects without delay, and the product must be within its warranty period as set out in the terms of warranty.
The warranty applies to products manufactured on or after the date of publication of this warranty.
The terms of warranty take effect from the date of completion of installation of the Product and full payment of the Product. ECONOVA® reserves the right to request proof of purchase or a copy of the certificate of compliance (this is required by law to be issued by the installer) to verify the date of completion of installation prior to commencing any warranty work. Where the date of completion of installation is not known, then this warranty will commence 2 months after the date of manufacture. The date of manufacture is stated on the data plate of the appliance.
Prior to any inspection, service, repair or replacement undertaken pursuant to the warranty on a Heat Pump Water Heater System, the following must occur:
a. The warranty works must be authorised by ECONOVA®; and
b. Proof of purchase and the certificate of compliance must be submitted to ECONOVA®.
The Heat Pump Water Heater System must be installed, commissioned, serviced, repaired and removed in accordance with the installation instructions supplied by ECONOVA® for the Heat Pump Water Heater System, and in accordance with all relevant statutory and local requirements of the state/province/municipality in which the Heat Pump Water Heater System is installed.
All Heat Pump Water Heater Systems must be operated and maintained in accordance with the ECONOVA® operating instructions.

Warranty

The warranty only applies to the Heat Pump Water Heater System and original or genuine (company) component replacement parts provided by ECONOVA®. The warranty does not cover any plumbing or electrical parts supplied by the installer and that is not an integral part of the Heat Pump Water Heater System. Such parts would include, but are not limited to, pressure regulating valve, limiting valves, check valves, tempering valves, electrical switches or fuses.

To the extent permitted by law, ECONOVA® shall not be liable under this Warranty for any consequential loss or damage or any incidental expenses resulting from any breach of this warranty, including but not limited to, claims for damage to buildings, roofs, ceilings, walls, foundations, gardens, personal belongings or household effects, fixtures and fittings, or any other consequential loss, damage or inconvenience, either directly or indirectly due to the Heat Pump Water Heater System or component(s) related to the system or its operation including but not limited to leakage.

Where a failed component or Heat Pump Water Heater System is replaced under warranty, the balance of the original warranty period will remain effective. The replaced part or Heat Pump Water Heater System does not carry a new warranty.

ECONOVA® reserve the right to have the installed product returned to the factory for inspection. Products eligible for repair may be replaced by refurbished goods of same type rather than being repaired. Refurbished parts may be used to repair/replace the Products.

Where the Heat Pump Water Heater System is not installed in accordance with the installation instructions or installed in a position that does not allow safe, ready access as determined by the attending service person, the service may be refused at their discretion. Any cost to access the site safely, including the cost of additional materials, handling and/or safety equipment, will be charged to the consumer and will be the consumer's responsibility.

The Heat Pump Water Heater System must be sized to supply the hot water demand in accordance with the guidelines in the Heat Pump Water Heater System Literature.

WARRANTY EXCLUSIONS

Products supplied by ECONOVA® are subject to warranties that cannot be excluded by law. Any breach of condition or warranty is limited to the repair or replacement of the Product, the supply of an equivalent Product, the payment of the cost of repairing or replacing the Product or acquiring an equivalent as determined by ECONOVA®.
Repair and replacement work will be carried out as set out in the Heat Pump Water Heater System terms of warranty. However, the following exclusions may void the warranty and may incur additional service charges and/or cost of parts:
Damage to the Heat Pump Water Heater System or any component, including accidental damage, natural disasters, acts of God, storm damage, vandalism.
Failure due to abuse, misuse or neglect, improper maintenance or failure to maintain and incorrect or unauthorised installations.

Failure or damage caused by alterations, service or repair work carried out by persons other than ECONOVA® accredited service agents or the ECONOVA® service department.

Where no fault is found with the Heat Pump Water Heater System or its components and the issue is related to the plumbing installation or is due to a direct or indirect failure of water, electric or gas supplies, corrosive atmosphere or other issues not caused by a fault of the Product including but not limited to:
a. excessive discharge from the temperature and/or the pressure relief valve due to high water pressure;
b. excessive water pressure;
c. no flow of hot water;
d. water leakage;
e. where the supply of electricity or water does not comply with relevant codes or acts or the power supply is cut;
f. the overflow vent drain has not been installed or it is blocked or corroded;
g. rust due to a corrosive atmosphere.

Where the unit fails to operate or fails because of excessive cold or ice formation in the piping to or from the Heat Pump Water Heater System.
Where any faults arise from connecting to a water source that is unfiltered such as dams, bores, rivers etc.
The Heat Pump Water Heater System being relocated from its original point of installation.
Operating the water heater and components when not completely filled with water.

This warranty applies to Heat Pump Water Heater Systems connected to the energy source listed on the data label of the Product.

This warranty does not apply to damage caused by sludge and/or sediment in the water supply.
Repair and/or replacement of the Heat Pump Water Heater System due to scale formation above 200ppm (water hardness) in the waterways or the effects of either corrosive water or water with a high chloride or low PH level when the water heater.

Where the ECONOVA® Heat Pump Water Heater System is in a position that does not comply with the Heat Pump Water Heater System installation instructions or relevant statutory requirements, causing the need to dismantle or remove cupboards, doors or walls, or require the use of special equipment to bring the Heat Pump Water Heater System to floor or ground level or to a serviceable position.

Labour costs incurred due to an ECONOVA® accredited service agent performing checks which should have been carried out by the consumer in accordance with the operating instructions and where no defect is found.
Disclaimer: Our Heat Pump units may require a technician to sign off on installations, as well as any other regulations across different jurisdictions. Please seek the correct guidance on how to proceed when installing the units ordered to best meet the regulations in all states.

ECONOVA® Pty Ltd
Phone: 1300 196 390
Email: sales@econova.com.au
Address: 6 Braeside Dr, Braeside VIC 3195, Australia

Water heating is the largest single source of green house emissions accounting for almost a quarter of household energy use.

Your new ECONOVA® heat pump uses a small amount of energy to move heat from one location to another. Heat is absorbed by ozone-friendly R290, a natural refrigerant **which does not contribute to global warming.**

ECONOVA®
A smart choice for the environment, a smart choice for you

We support the Australian Government in its commitment to transforming our energy supply system into one that is cheap, clean and reliable.

This lays the foundation for future generations to enjoy more secure, reliable and affordable energy. You can choose an ECONOVA® product safe in the knowledge that our innovative technology is focused on energy and environment savings.

Our hot water heat pumps are CFC free and utilise renewable energy, extracted from the air.

CALL: **1300 196 390**

VISIT: econova.com.au

6 Braeside Drive, Braeside, Vic, 3195 Australia

ECONOVA