

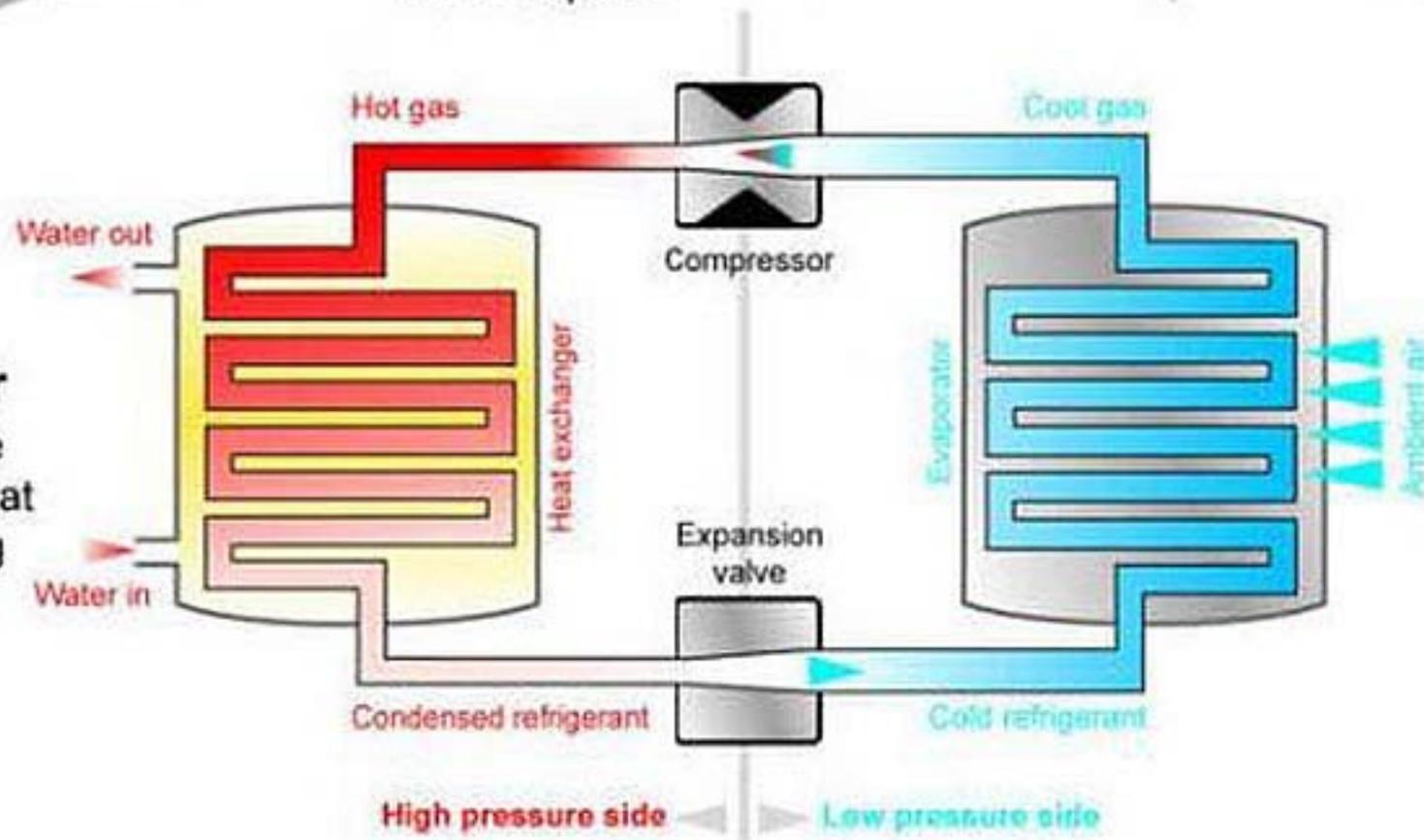


## 2. Vapour

Vapour is channelled into an electric compressor, increasing the pressure and temperature of the vapour.

## 1. Fan

A fan passes ambient air over the evaporator. The refrigerant boils and evaporates at low temperatures.



## 3. Warm vapour

Warm, high-pressure vapour enters the heat exchanger producing heat for water or heating system.

## 4. Condensed vapour

Condensed vapour returns to liquid, passes through the expansion

# HEAT PUMP INTERFACE UNIT

BOOST  
↑ EXIT

TEMP  
↓ →

MENU  
ENTER

BOOST MODE  
↑ EXIT

TEMPERATURE  
↓ →

MENU MODE  
ENTER

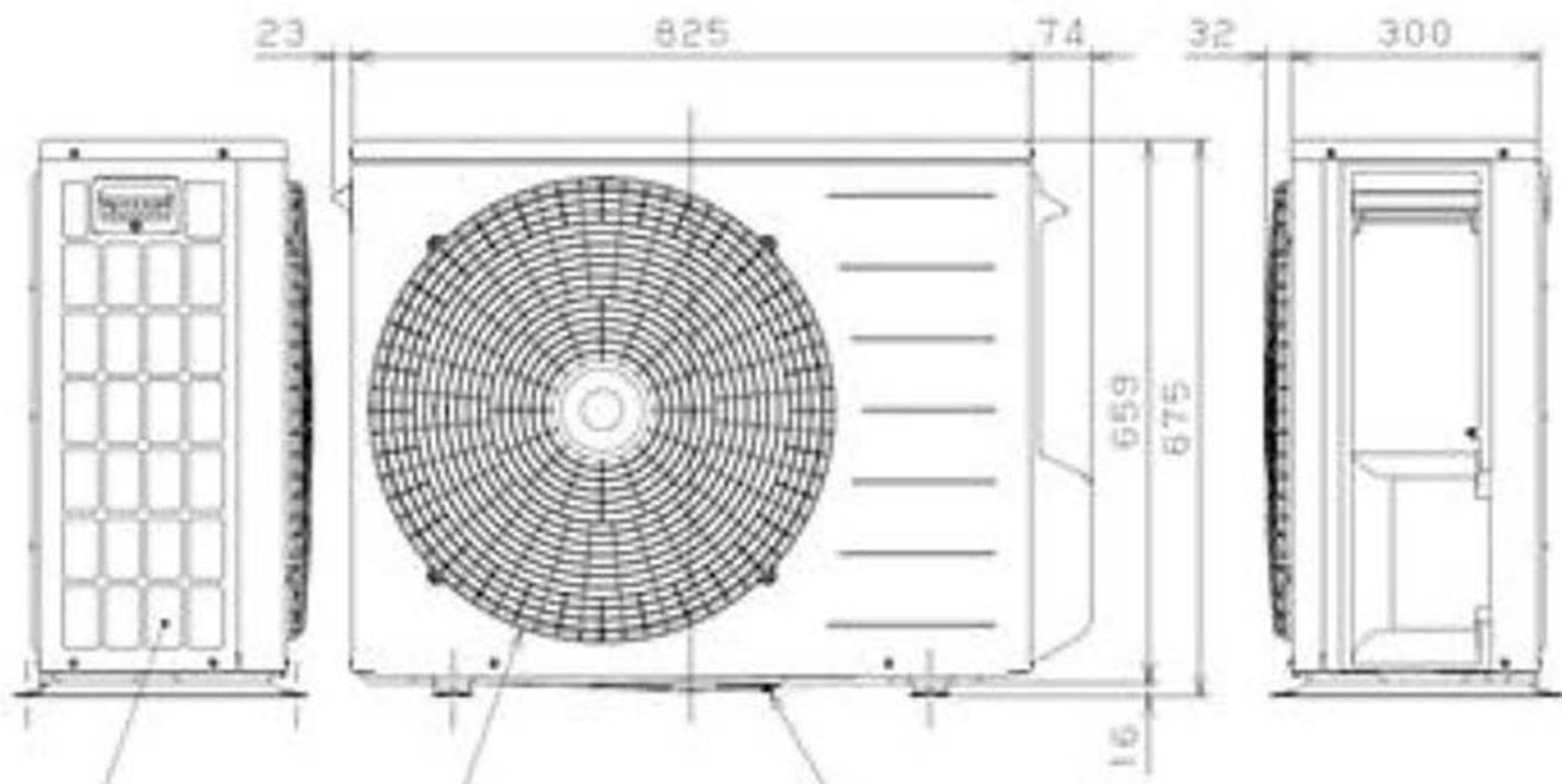
8.8.8.8

- POWER ON  
TEMPERATURE WICK FLASH
- HEAT PUMP ON CALL  
BOOST MODE FLASH
- HEAT PUMP FAULT  
ERROR CODE DISPLAYED

Temporary Labels  
for Testing Purposes

HP5A-01







CO2 Heat Pumps were developed in Japan ~15 years ago. We are now proud to exclusively distribute this **market leading product** in WA. This heat pump has been coupled with an Australian made Glass Lined tank that has proved the test of time with our harsh WA Scheme Water.

This Heat Pump is like a 3 – 4 kWh battery for your home. It has been designed to integrate with your PV system (Solar Power System) to maximise your savings and take advantage of the energy you are already creating, before exporting back to the grid for little return with current feed-in tariffs.

This unit does not need a separate element to act as a boost ensuring you have hot water at the end of the day. Some other products use less input like 0.6 kW or 600 watts to heat water and because they are creating less power than a standard element it's more likely the body of water won't be heated in time, in this case a secondary element of between 1.7 to 2.4 kW kicks in to top up. As a result you don't realise you are using a greater power consumption as the secondary element kicks in.

This system uses 1,000 watts or 1 kW and we know that this is enough to heat the body of water in the required time, no need for a secondary element whatsoever. The 1 kW electrical input connects to and works perfectly with nearly all PV (solar electricity systems).

Benefits:

- Top down Heat Pump return heating for quick water recovery
- Up to 80% savings versus an electric hot water system....and even more when connected to PV
- CO2 refrigerant ideally suited to excel in cold weather conditions
- CO2 refrigerant naturally environmentally friendly
- High COP creating high energy from low energy input
- Whisper quiet operation level at 37 dB
- One shot boost function for unexpected demand
- PV connectable with simple push of a button
- Smart controller for easy energy optimisation at customer fingertips.
- Australian made Tank and Interface Controller

The different modes of the Smart Controller are:

1. 24/7 'on-duty' operation
2. (off-peak 1 per CER method): 10 pm- 7 am
3. (off-peak 2 per CER method): 10 pm- 5 pm
4. 10 am- 4 pm - **ideal for those with solar power systems on WA 7c feed in-tariff**
5. timer with two zones for customized operations

## HEAT PUMP SPECIFICATIONS .

|  |         |                           |
|--|---------|---------------------------|
| Heat output at 30 C ambient/24 C cold water inlet    | kW      | 4.8                       |
| Electric input at 30 C ambient/24 C cold water inlet | kW      | 0.86                      |
| COP at 30 C ambient/24 C cold water inlet            | -       | 5.6                       |
| Standby power consumption                            | kW      | 0.0035                    |
| Power supply   | V/Hz    | 240V/50 Hz (single phase) |
| Heat pump refrigerant                                | -       | CO2 (R744)                |
| Heat pump hot water delivery temperature             | 0C      | 63                        |
| Range of operating Ambient temperature               | 0C      | -10 to 43                 |
| Heat pump unit weight                                | kg      | 48                        |
| Heat pump location                                   | -       | outdoor                   |
| Noise level  | dB      | 37                        |
| Dimension (H x W x D)                                | mm      | 675*825*300               |
| Rain resistance                                      | -       | IP*4                      |
| Water port connections (Inlet / Outlet)              | Inch/mm | 1/2" BSP, 12.7mm          |

## TANK SPECIFICATIONS . (GLASS LINED)

|   |     |            |
|---|-----|------------|
| Tank unit weight (empty)                          | kg  | 92         |
| Storage tank volume (delivery)                    | L   | 315        |
| PTRV pressure                                     | kPa | 700        |
| Thermistor level on tank (% from top of the tank) | %   | 65         |
| Height*Diameter Glass-lined AP315GLH              | mm  | 1765 / 617 |

## SMART CONTROLLER SPECIFICATIONS .

|   |      |                          |
|---|------|--------------------------|
| Controller power supply voltage and frequency | V/Hz | 240/50 (single phase)    |
| Signal from the controller to heat pump       | V/Hz | 12/50                    |
| Controller location                           | -    | Mounted on wall or tank  |
| Heat pump on/off temperature                  | C    | 37/59                    |
| Daily Self-Legionella control                 | -    | 60C at 45% level on tank |
| Operational mode (selectable by the end user) |      | 5 available options *    |

- Option 1: 24 hours- continuous
- Option 2: 9 hours (off-peak mode 1: 10p.m.-7 a.m.)
- Option 3: 19 hours (off-peak mode 2: 10p.m.-5 p.m.)
- Option 4: 6 hours (10 a.m. - 4 p.m.)
- Option 5: Timer (two-zones)

\*A quick boost button run the heat pump for the maximum of 6 hours to provide quick hot water delivery

| Component  | Model ID                                      | Description   | Warranty Period (Parts Only) |
|------------|---|---|------------------------------|
| Controller | RCE-HP-CONT-V1                                | RECLAIM ENERGY Controller and sensor lead   | 1 year                       |
| Tank       | RE315GLH<br>AP315AGLH<br>AP315GLH<br>AP315GLG | RECLAIM ENERGY Glass-Lined tank   | 7 years                      |
| Heat pump  | EHPE-4540P                                    | PCB (main)<br>PCB display<br>Motor<br>Sensors * 6 (Compressor charge/discharge, water inlet/outlet, ambient and frost thermistors)<br>Reactor<br>Expansion valve coil<br>Water Pump | 6 years                      |
|            |   | Refrigeration components (compressor, evaporator, water heat exchanger)- Unit replacement   | 6 years                      |
| Valves     | -   | 700 kPa PTRV  | 1 year                       |

\* Reclaim Energy covers the labour for 6 years on heat pump unit and 1 year for other parts with capped service costs as per service schedule of rates being 2 hours labour maximum including travel up to 25km. Travel charge outside of this 25km range to be paid by customer.