



INSTALLATION & OPERATION MANUAL



EVO CSi-E

COMMERCIAL INVERTER POOL HEAT PUMP



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1. Introduction

This manual contains information relating to the installation, troubleshooting, operation, and maintenance of this EvoHeat unit. Instructions in this manual must always be followed. Failure to comply with these recommendations will invalidate the warranty. Should you have any questions or require technical support, call the EvoHeat office on 1300 859 933 to speak to our team.

The data and information contained in this manual is correct at the time of publishing and is subject to change without notice. For the most up to date manual, contact EvoHeat directly.

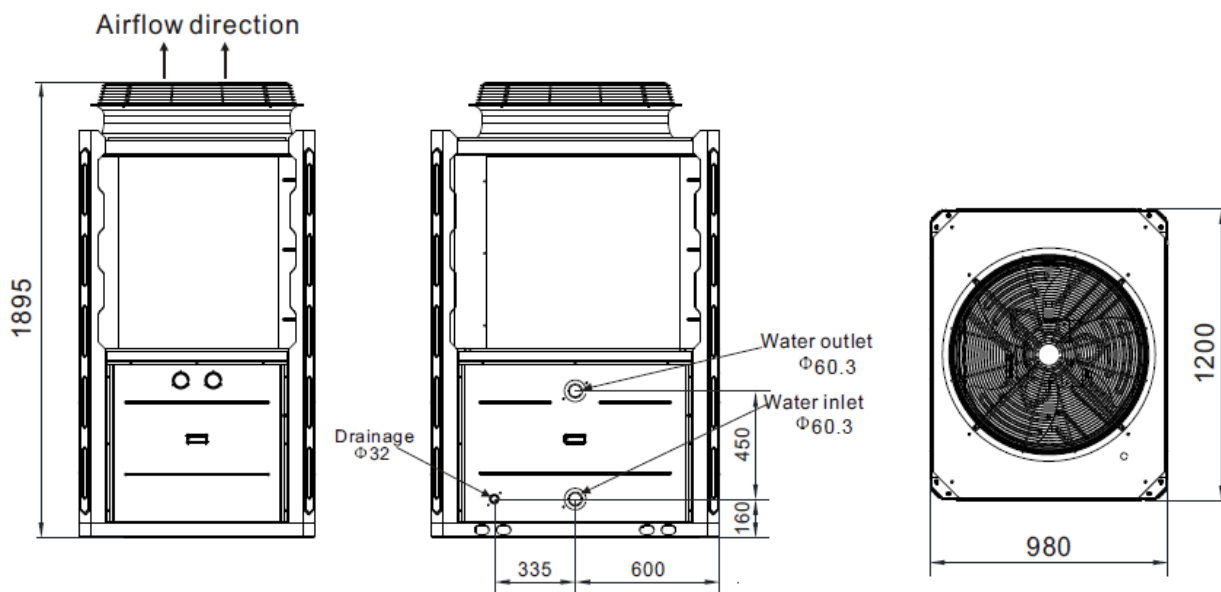


Engineered for high-demand commercial applications, the Evo CSi-E delivers powerful and efficient pool heating with advanced full inverter technology. Built with smart control features, R32 refrigerant and enhanced monitoring capability, the Evo CSi-E provides reliable year-round performance with exceptionally low operating costs.

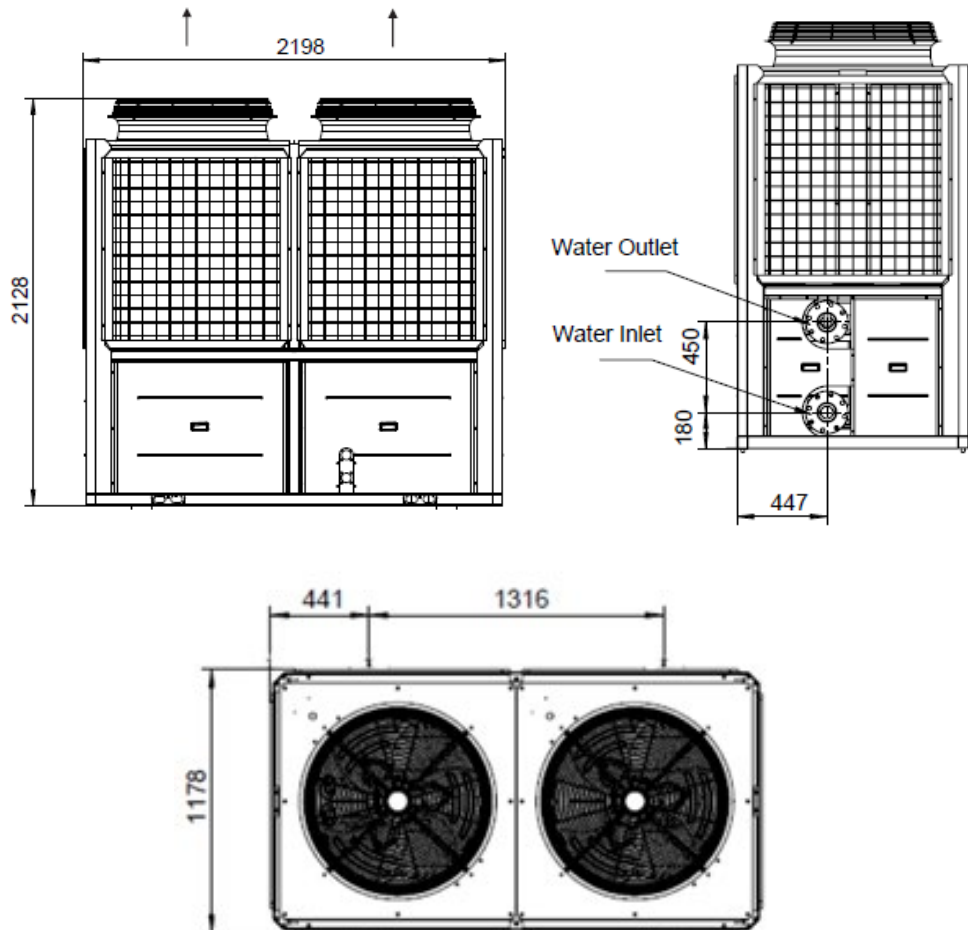
PERFORMANCE DATA			
CSi-E		70	150
Performance Conditions: Air at 27°C / Water In 26°C / Water Out 28°C			
Heating Capacity	kW	15.1~69.7	33.4~153.0
Consumed Power	kW	1.02~10.61	1.69~20.93
C.O.P		14.84~8.57	19.76~7.31
Performance Conditions: Air at 15°C / Water In 26°C / Water Out 28°C			
Heating Capacity	kW	11.0~51.1	25.0~116.2
Consumed Power	kW	1.47~10.43	3.25~23.67
C.O.P		7.5~4.9	7.7~4.91
Performance Conditions: Air at 35°C / Water In 29°C / Water Out 27°C			
Cooling Capacity	kW	28.0	87.0
Consumed Power	kW	2.0~11.2	11.03~20.68
E.E.R		2.5	2.5
TECHNICAL DATA			
Temperature Settings	°C	9 - 40°C	
Power Supply		380~415V/3/50Hz	
Max Current per Phase	amps	19	39.2
Compressor Type		Rotary	
Heat Exchanger Type		Twisted Tube in Shell	
Connection Type		Hardwired	
Fan Quantity		1	2
Fan Speed	RPM	650~750	500~700
Noise at 3M	dB(A)	58	61.5
Noise at 10M	dB(A)	48	52
Refrigerant		R32	
PVC Water Connection	mm	50mm	100mm Flange
Water Flow Volume	L/min	446	883
Max. Water Pressure Drop	kPa	33.7	37
Net Dimensions (LxWxH)		1200 x 980 x 1895	2198 x 1178 x 2128
Net Weight	kg	300	603

2. Dimensions

CSi-E 70



CSi-E 150



SWIM EVERYDAY WITH EVOHEAT



WARNING

THIS PRODUCT CONTAINS A BUTTON BATTERY

If swallowed, a lithium button battery can cause severe or fatal injuries within 2 hours.

Keep batteries out of reach of children.

If you think batteries may have been swallowed or placed inside any part of the body, seek immediate medical attention.

3. Safety Instructions



Installation, repair, or relocations must only be done by a fully qualified technician. If done incorrectly there is a number of hazards that can occur including fire, electric shock, water leakage and injury.

- A circuit breaker must be installed for the unit.
- Ensure the unit has a good power connection and earthing to avoid the risk of electrical shocks.
- Do not use any means to accelerate the defrosting processor or to clean other than those recommended by EvoHeat.
- The unit must be stored in a room without any continuously operating ignition sources (for example: open flames, an operating gas appliance)
- Do not pierce or burn the unit.
- If the supply cord is damaged, it must be replaced by a qualified service agent.
- This appliance must be installed in accordance with national wiring regulations.
- Before obtaining access to terminals all supply circuits must be disconnected.

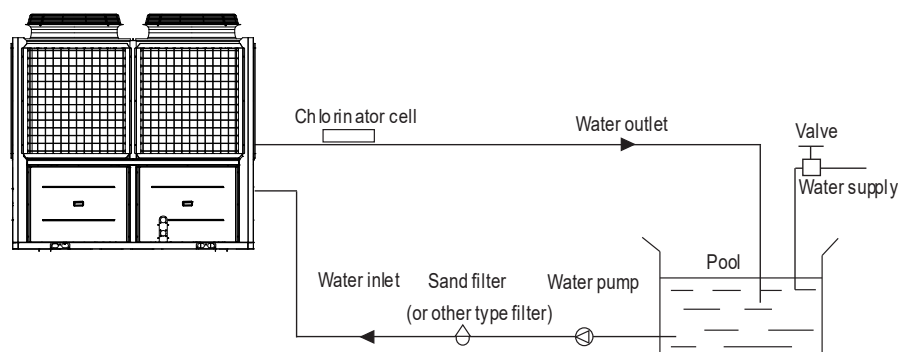
The unit is equipped with an over-load protection system. After a previous stoppage, the unit will not start for at least 3 minutes.

Be aware that refrigerants may not contain an odour.

An all-pole disconnection device must be incorporated which as at least 3mm clearances in all poles, a leakage current that may exceed 10mA, residual current device (RCD) having a rated residual operating current not exceeding 30mA and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

*Caution: Single wall heat exchanger, not suitable for potable water connection.

4. Installation



The schematic diagram is for reference only. Check the water inlet/outlet label on the heat pump while plumbing the unit.

Upon receiving the unit, check the packaging for any obvious signs of damage. Inform EvoHeat immediately if there is any evidence of rough handling. When the heater has been removed from the packaging check the refrigerant gauge on the front panel of the unit. When all refrigeration systems are operating, check the gauges are showing a pressure between the 10 o'clock & 2 o'clock range on the outside red band – any less than this figure means there may be a leak in the refrigerant system, and you should immediately contact your EvoHeat Dealer.



IMPORTANT: EvoHeat heat pumps **MUST** be connected by a licensed electrician. Under no circumstances should an unlicensed person attempt to install or repair an EvoHeat heat pump themselves. Heater electrical installation undertaken by an unlicensed installer will void the warranty. Correct installation is required to ensure safe and efficient operation of your pool heater.

Before installation it is very important to ensure 5 variables are carefully checked to allow the unit to operate correctly.

- Heater condition
- Location
- Clearances & airflow
- Adequate water flow & plumbing
- Correct electrical connection & supply



4.1 Rubber Feet

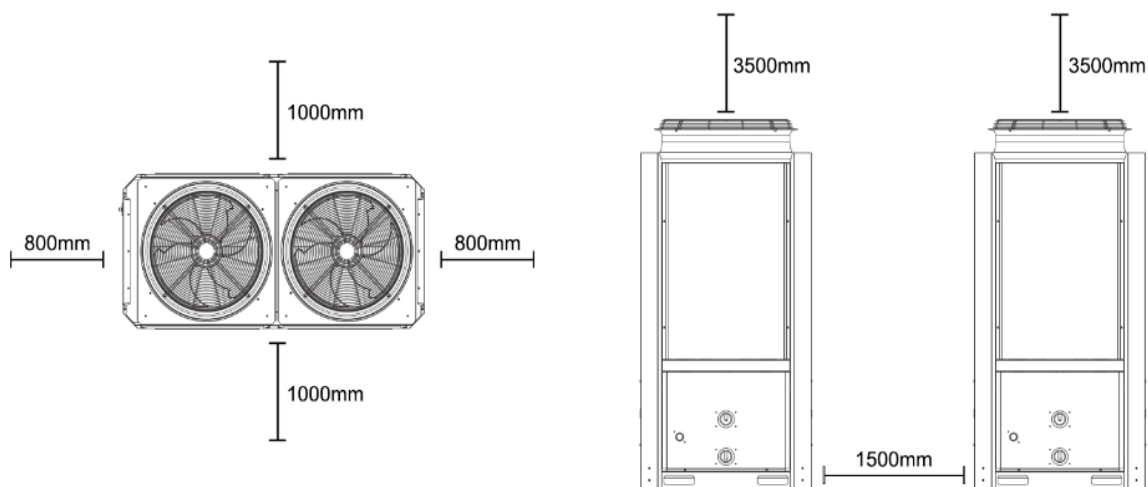
All EvoHeat units are provided with rubber feet which EvoHeat highly recommend being installed. The rubber feet help reduce vibration of the unit and help provide a space below the heat pump to install the drainage barbs.

4.2 Location of Installation

Evo recommend the heat pump should be installed in an outdoor location with appropriate ventilation. Installing the heater indoors without adequate ventilation, or in a poorly ventilated enclosed space, will result in very poor performance and can, in extreme cases, damage the heater. If a suitable outdoor location is unavailable please contact EvoHeat for specialist technical advice.

The Evo unit should be installed:

- At least 2m away from the water's edge.
- No greater than 7.5m from the water's edge (to avoid heat loss from the piping).
- No greater than 5m below the water level of the pool/spa.
- On a flat level surface.



Make sure the heat pump is not located where large amounts of water may run-off from a roof into the unit. Sharp sloping roofs without gutters will allow excessive amounts of rain water mixed with debris from the roof to be forced through the unit. A water deflector may be needed to protect the heat pump.

A rough estimate of heat loss over a 30m pipe run can be as high as 600 Watts per hour per 5 degrees of temperature difference between the air/ground and the pool water. These losses need to be taken into account over long distances and piping may need to be insulated to reduce heat leakage. If these installation guidelines cannot be adhered to, contact EvoHeat for specialist technical advice.

The casing of this unit is made from high quality durable stainless steel, however if it is intended to be installed in a coastal or corrosive saltwater environment; regular application of an anticorrosive surface protectant to all exposed metals and fixings is recommended.

4.3 Airflow Clearances

The heat pump unit needs continuous fresh air whilst running. The heater draws up to 47000 m³/h ambient air through the sides and discharges through the top fan cowl.

Ensure the heater is installed in a well-ventilated area with plenty of fresh air, a minimum gap between walls/fences etc of 1000mm on the sides and 3500mm overhead clearance. Leave sufficient space for unobstructed airflow into and out of the heater. Do not locate the heater in an enclosed area, or the discharged cold air will recirculate into the unit and consequently lower the heating efficiency as well as possible icing up.

When units of a similar height are placed side by side, EvoHeat recommend a 1500mm clearance between units.

*Fan discharge distance can be reduced by adding a Plenum to alter the air flow direction. Contact EvoHeat or a HVAC specialist for further advice. If you do not have a location with these suggested clearances, please contact our EvoHeat Tech Support Specialist to discuss appropriate installation locations.

4.4 Adequate Water Flow

All EvoHeat heat pumps have a factory preset internal water flow switch. If there is insufficient water flow the heater will not operate.

It is CRITICAL that there is sufficient water flow to the unit. Incorrect water flow can cause a loss of heating capacity and efficiency and possibly damage the unit. Optimal water flow rates are listed in the EvoHeat manual. It is imperative that water flow is kept as close as possible to these flow rates.

Before connecting the heater to the plumbing, all piping must be thoroughly flushed to ensure no debris can enter the heater. Failure to remove pipe debris can jam or damage the flow switch and may cause damage to the heater. When cleaning the pool it is advisable to turn off your heater as restricted water flow may cause the heater to shut down and indicate low water flow fault (E03 error) or high pressure fault (E01 Error).



IMPORTANT: Size an appropriate water pump to supply water to the heat pump/s to meet or slightly exceed heat pump model/s design flow rate specifications. A by-pass must be fitted for each individual heat pump to regulate the volume of water flow through each heat pump. The by-pass is used to reduce flow rate to design flow rate specifications. You'll know when design flow rate is achieved when there is a 2°C difference between Inlet and Outlet temperatures. This can be observed using each heat pumps digital display controller.

4.5 Drainage & Condensation



During operation, water in the air condenses on the fins of the evaporator. In high humidity, the condensate may be several litres per hour, giving the impression that the unit is leaking. This process is a normal function of heat pumps.

The heater will automatically activate reverse cycle or de-icing mode when required which also increases condensate discharge. This normally occurs at temperatures below 8°C. The condensate water will discharge through the base of the heater. As an option a pipe can be connected to the drain on the base of the unit to direct condensate water to an appropriate location.

Ensure the units are installed level to evenly distribute condensate into and through the condensate trays. A quick way to verify that the water is condensation is to shut off the unit and keep the pool pump running. If the water stops running out of the basepan, it is condensation. **AN EVEN QUICKER WAY IS to TEST THE DRAIN WATER FOR CHLORINE** – if there is no chlorine present, then it's condensation.

NOTE Removal of condensation can be achieved via installation of a condensate pan or by plumbing to a waste water drain. If plumbing, EvoHeat recommend raising the heat pump of the ground approximately 100mm to allow enough space to connect the condensate lines under the heat pump together, then drain to a wastewater drain.

The condensate water captured will discharge from the heat pump through one end, typically where the heat pumps Inlet/Outlet connections are located. The condensate discharges from the heat pump through a 32mm female threaded connections. Ensure condensate is plumbed away from the heat pump to an appropriate location, ideally a drain.

Note: A 32mm Male threaded adapter is NOT supplied with the heat pump.

4.6 Plumbing

A by-pass must be created to regulate the volume of water flowing through the heat pump to achieve design flow rate, and to have the ability to bypass ALL water from entering the heat pump.

Flow Rate

Since there is no residual heat or flame temperatures the unit does not need copper heat sink piping. PVC pipe can be run straight into the unit.

Location

Connect the unit in the pool pump discharge (return) line downstream of all filter and pool pumps, and upstream of any chlorinators, ozonators or chemical pumps.

The CSI-E 70 comes supplied with barrel unions for the Inlet/Outlet connections which accepts 50mm PVC pipe. The CSI-E 150 has a 100mm PVC flange connection for the Inlet/Outlet connections.

Give serious consideration to adding a quick coupler fitting at the unit inlet and outlet to allow easy draining of unit for winterizing and to provide easier access should servicing be required.



4.7 Electrical Connection

 Always use a suitably qualified Electrician to perform any electrical work, they must read the manual before connecting.

Ensure all cabling, circuit breakers, and protections are of a suitable size and specification in accordance with electrical wiring legislation for the heater being installed. Ensure to check that there is adequate voltage and current available at the heater connection to run the unit.

Voltage range should be between 380-415 volts for 3 phase units. Voltage ranges outside these parameters will cause heater damage and void your warranty.

1. Ensure power is disconnected during installation or service.
2. Always comply with the national and local electrical codes and standards.
3. Ensure the electrical cable size is adequate for heater requirements at the installation location.
4. The heater must be equipped with a circuit breaker and isolation device.
5. The CSi-E 70 has the ability to hard-wire a water pump directly to the heat pump. With this type of set up a circuit breaker must be installed between the heat pump and water circulation pump. Please note the heat pumps stated max. amp draw makes no allowance for the addition draw of the water pump that is hard wired to the heater. The CSi-E 150 connects to a water pump via an external relay, drawing its power from a separate power circuit.
6. The unit must be well earthed. Remove the front panel to access the electrical connection terminals of the heater. The electrical wiring diagram is affixed to the inside of the front panel or at the back of this manual.

4.8 Initial Start-up

 For the unit to heat the pool, the filter pump must be running to circulate water through the heat exchanger.

After installation is completed, follow the steps below:

1. Turn on your filter pump. Check for water leaks and verify flow to and from the pool.
2. Turn on the electrical power supply to the unit, then press the ON/OFF key on the display, it should start after a few minutes.
3. After the system has been running for approximately 5 minutes; check the 2 temperatures displayed on the screen and review the Temperature Differential (TD). The small temperature displayed is the cold-water inlet temperature, the main temperature display is the heated water outlet.
4. Adjust the water flow by opening or closing the 3-way valve installed at the cold-water inlet to achieve a target TD of approximately 2°C (e.g. 22°C inlet water and 24°C outlet water).
5. After running a few minutes make sure the air leaving the top of the unit is cooler (between 5-10 °C)
6. To test the correct operation of the unit's flow switch, while the unit is turned on and operating, turn OFF the water pump that is supplying the unit with water. The unit should turn off automatically.
7. Allow the unit and pool pump to run 24 hours per day until desired pool water temperature is reached. (Note: this may take up to several days depending on the initial water temperature and the size and location of the pool).

4.9 Time Delay

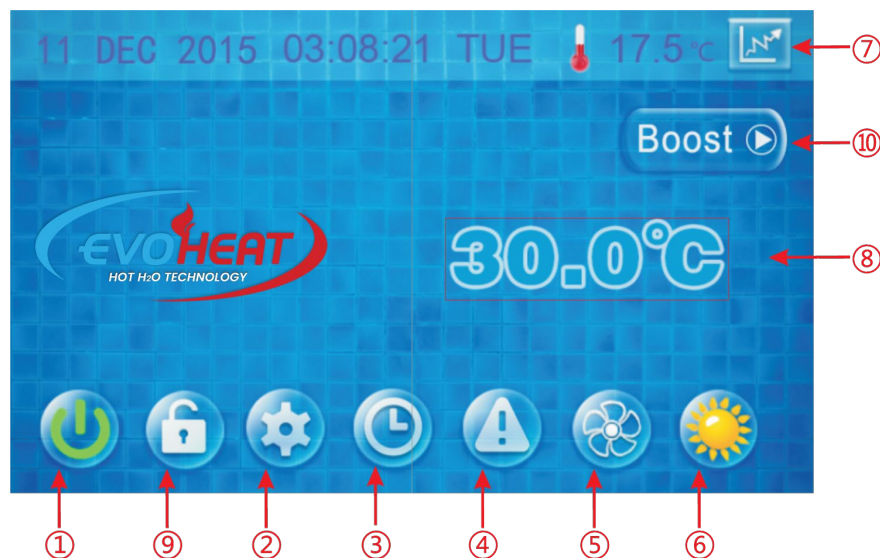
The unit is equipped with a 3-minute built-in solid-state restart delay included to protect control circuit components and to eliminate restart cycling and contactor chatter.

This time delay will automatically restart the unit approximately 3 minutes after each control circuit interruption. Even a brief power interruption will activate the solid state 3-minute restart delay and prevent the unit from starting until the 5-minute countdown is completed.

Power interruptions during the delay period will have no effect on the 3-minute countdown.

5. Operation

5.1 The Controller



1	ON/OFF	Start up or shut down the unit
2	PARAMETER	View the unit state and the parameter
3	CLOCK	Set the clock or turn the timer on/off. When the timer is on, this button is green
4	FAULT DISPLAY	View fault history
5	SILENT SETTING	Turn on/off silent function and set timing of the Low speed function
6	MODE	Enter mode settings and the target temp. settings interface
7	TEMP. CURVE	View temp. and power curve
8	WATER INLET TEMP.	Enter mode settings and the target temp. settings interface
9	LOCK	Lock or unlock the screen (password: 022)
10	BOOST MODE	Temporarily increases heating power, press to turn on or off.

5.2 Operating Functions

EvoHeat have developed a YouTube Channel with video walkthroughs of the different controller functions. Scan the QR code or head to our channel to view the videos we have available
<https://www.youtube.com/@evoheatpumps>



5.2.1 Startup & Shutdown

To turn the unit on or off, press the ON/OFF button.

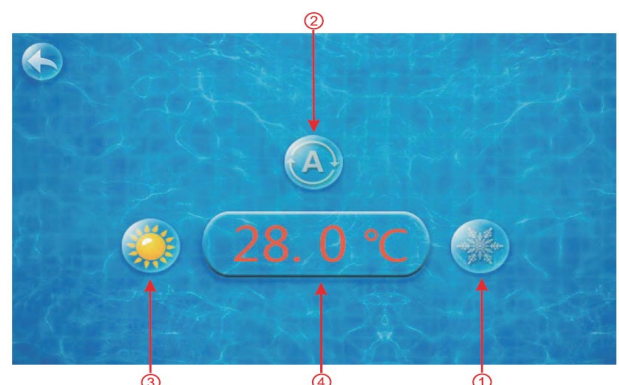
5.2.2 Setting the Mode & Target Temperature

In the main interface, click the MODE button or WATER INLET TEMP. (8) button to get the following menu:

Choose from the modes: Refrigeration mode (1), Automatic mode (2) or Heating mode (3).

Note: When the unit is designed for single automatic mode or single thermal mode, the mode cannot be switched.

From this screen, pressing the temperature (4) will allow you to adjust it as desired.



5.2.3 Clock Settings



Press the CLOCK button to bring up the clock menu. This menu allows you to either change the system date & time (left) or set timers (right).

5.2.3.1 Setting the Date & Time

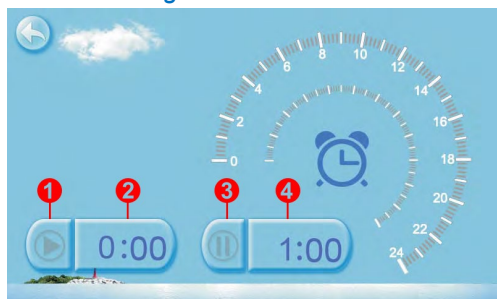


Click the value you wish to change to set the time directly. Press confirm to save the settings.

EXAMPLE

If the setup time were 23/11/2016 at 1:00pm; you would input:
23-11-16 13:00:00.
Be aware that if the input format is incorrect, pressing the confirm button will save the wrong time.

5.2.3.2 Setting Timers



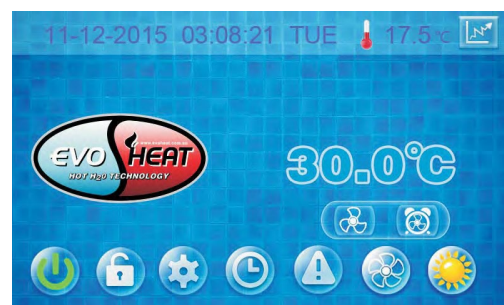
No.	Name	Button Colour	Function
1	Start Timing	Start: Green End: Grey	Click this button to start or end the timing start setting function
2	Timing On		Click to set the start time of the timer.
3	End Timing	Open: Red End: Grey	Click this button to start or end the timing end setting function.
4	Timing Off		Click to set the end time of the timer.

5.2.4 Silent & Silent Timers

Note: When silent mode is active it locks the compressor into a lower speed, reducing the available full heating capacity.

5.2.4.1 Silent Setting

Press the SILENT TIMING button from the main menu to bring up the silent settings. Press the left-hand fan symbol to enable silent mode. To exit silent mode, follow the steps and press the button again.

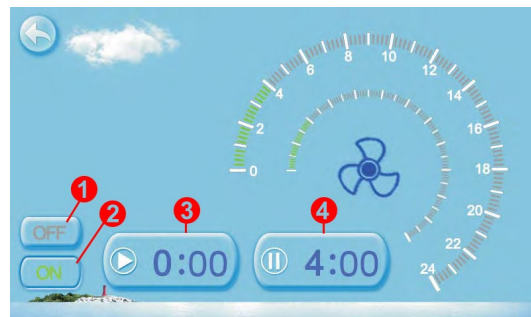


When silent mode is enabled, the icon will display with only 3 fans compared to 5 when the mode is off.

5.2.4.2 Silent Timer

Press the alarm clock (right) button to bring up the Silent Timer menu.

No.	Name	Button Colour	Function
1	Silent Timer Off	Enable: Red Disable: Grey	Enable or disable function
2	Silent Timer On	Enable: Green Disable: Grey	Enable or disable function
3	Start Time		Set silent timer start time
4	End Time		Set silent timer end time



The start and end time values must be within the range of 0:00 – 23:00; the value can be precise to the hour digit.

Example: Click 'ON' to use timing silent. The unit will begin silent mode from 0:00 and end at 4:00. Click 'OFF' to turn off the timing silent manually, however the unit will turn off this setting once it reaches the end time.

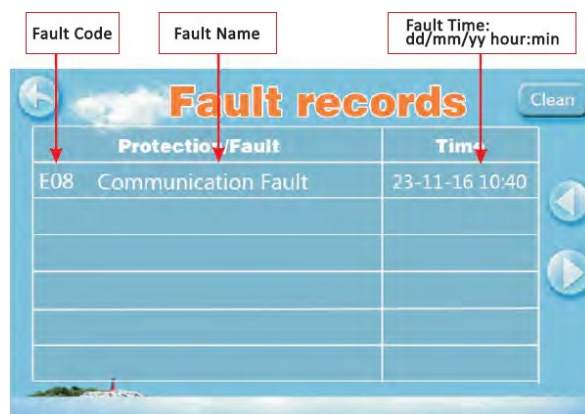
5.2.5 Fault History

If there have been no faults, the Fault button  on the main menu will appear dimmed.

When a fault does occur, the fault icon will flash. The fault interface menu will record the time, code, and name of the fault for you to view.

After troubleshooting, if you do not check the failure's record the fault button on the main menu will appear red but will not flash. If it is checked, it will appear dim again.

Faults appear in reverse order according to the time of occurrence. Press the clean key to delete all fault records.



Fault Code	Fault Name	Fault Time: dd/mm/yy hour:min
E08	Communication Fault	23-11-16 10:40

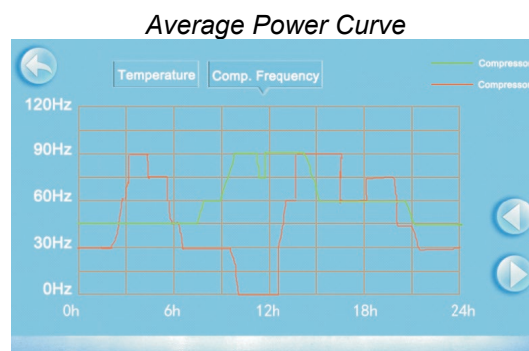
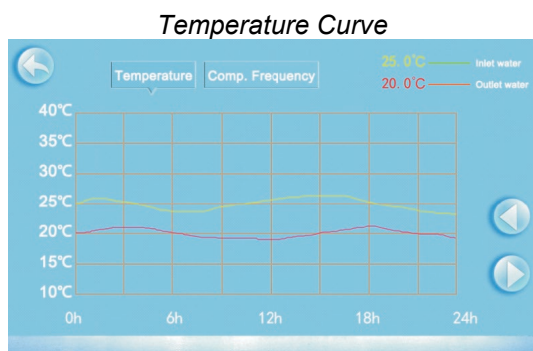
5.2.6 Colour Display Calibration

Quickly tap repeatedly on the blank area of any menu until you hear a long beep. This will allow you to enter the calibration interface.

Press '+' to start the calibration. When you hear the beep again you will finish the calibration and exit.

5.2.7 Temperature Curve

Press the **TEMP CURVE** button to view the temperature curve & average power curve.



The temperature curve automatically updates every hour and will be stored for 60 days.

If the unit is powered off after less than 1 hour of operation, the data in this period will not be saved.

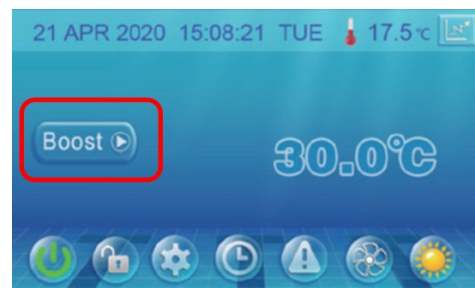
5.2.8 Boost Mode

The CSI-E system is capable of operating in high output Boost mode to assist in reaching the desired target temperature faster.

You can activate boost mode by simply pressing the "Boost" button in the display.

When the target water temperature is reached, the system will automatically deactivate Boost mode and retrain to normal operation.

Alternatively, Boost mode can be manually deactivated by simply pressing the "Boost" button again to turn it off.



5.2.9 Unlocking & Locking the Controller

To lock or unlock the controller, you can easily do so by accessing the main menu and selecting the lock symbol. When prompted for a password, simply enter **022**, this is the default password and cannot be changed.

6. Troubleshooting

HEAT PUMP NOT WORKING? CHECK THE FOLLOWING:

IS THE SCREEN OF CONTROL PANEL LIT?

If not, make sure the electrical wires and cables are correctly connected and the power is on. Ensure any circuit breaker devices are set to the ON position and press the ON button on your controller. Check your controller cable is plugged in and is not damaged. If the unit has been shut off or the power has been interrupted the heater will not restart for a 5-minute period to protect the compressor. Wait 5 minutes before attempting a restart.

IS THERE ENOUGH WATER FLOW?

If the screen displays a water flow related error check the water flow. Is the water pump in operation and the system free of debris that may cause a blockage? Disconnect pool cleaners to ensure proper water flow.

DOES YOUR HEAT PUMP HAVE AN ERROR MESSAGE ON THE SCREEN?

If yes, refer to the error code table 19.

IS THE HEAT PUMP SET TO RUN AT THE CORRECT TIME & DATE?

Please check your current timing or temperature modes on your controller – you may have programmed the unit to turn on at a different time.

IS THE CURRENT POOL/SPA WATER TEMP HIGHER THAN THE SET TEMP ON THE CONTROLLER?

If so the unit will not operate until the pool/spa water temperature falls below the set temperature on the controller.

HEAT PUMP IS RUNNING BUT NOT HEATING, CHECK THE FOLLOWING:

IS THE AIR DISCHARGED FROM THE TOP OF THE FAN NOTICEABLY COOLER THAN THE AMBIENT TEMPERATURE?

If not, check the refrigerant gauge on the bottom panel of the heater. Another way to determine if the heater is working correctly is to look at the controller's screen and check to see if the WATER OUT temp is higher than the WATER IN temp. Check also the INLET WATER TEMP is lower than the HEAT TEMP set point.

If the gauge shows less than 0.8MPa contact EvoHeat tech support to check the refrigerant system.

IS THE FAN FUNCTIONING?

If not contact EvoHeat tech support on 1300 859 933



Example of empty (loss of refrigerant)



Example of normal (Note: can vary based on ambient temperature)

Ensure sufficient fresh airflow around the unit as per installation instructions. Make sure cold air discharged does not recycle back through the heater. Check the condenser fins. If they are dirty or blocked use a low flow garden hose only (Pressurised water may cause damage to the heater).

- The unit will periodically defrost when the ambient air temperature is lower than 8 degrees.

IF THE HEAT PUMP IS RUNNING CONTINUOUSLY, CHECK THE FOLLOWING:

- Check the set temperature is at your desired level and that the pool water temperature is at or below this set point.
- Alternatively, this could be a possible electrical component failure – contact EvoHeat tech support.

WATER APPEARING AROUND THE BASE OF THE UNIT, CHECK THE FOLLOWING:

The water appearing around the base of your heat pump could be condensation or a possible water leak. To determine, check the following:

- Check the discharge for the presence of chlorine.

If the water has no chlorine then it is condensation and is it normal – see drainage and condensation for more information. If the water has chlorine, it is a water leak and you need to contact EvoHeat tech support.

- Turn the heater off & run the water pump continuously for a period of 2-4 hours. If the water dries out, then it was condensation – see drainage and condensation for more information. If there is a continuous leak contact EvoHeat tech support.

6.1 Error Codes

Electronic Controller Failure & Troubleshooting

Protect/fault	Fault display	Reason	Elimination methods
Inlet Temp Sensor Fault	P01	Sensor open circuit or short circuit	Check or replace the temperature sensor
Outlet Temp Sensor Fault	P02	Sensor open circuit or short circuit	Check or replace the temperature sensor
Ambient Temp Sensor Fault	P04	Sensor open circuit or short circuit	Check or replace the temperature sensor
Syst1 Coil Temp Sensor Fault	P151	Sensor open circuit or short circuit	Check or replace the temperature sensor
Syst2 Coil Temp Sensor Fault	P251	Sensor open circuit or short circuit	Check or replace the temperature sensor
Syst1 Suction Temp Sensor Fault	P17	Sensor open circuit or short circuit	Check or replace the temperature sensor
Syst2 Suction Temp Sensor Fault	P27	Sensor open circuit or short circuit	Check or replace the temperature sensor
Syst1 Exhaust Temp Sensor Fault	P181	Sensor open circuit or short circuit	Check or replace the temperature sensor
Syst2 Exhaust Temp Sensor Fault	P281	Sensor open circuit or short circuit	Check or replace the temperature sensor
Syst1 Exhaust Air Over-Temp Protection	P182	Compressor overload	Check if the compressor system is operating normally
Syst2 Exhaust Air Over-Temp Protection	P282	Compressor overload	Check if the compressor system is operating normally
Syst1 High Pressure Protection	E11	High-pressure switch fault	Check the pressure switch and refrigeration circuit
Syst2 High Pressure Protection	E21	High-pressure switch fault	Check the pressure switch and refrigeration circuit
Syst1 Low Pressure Protection	E12	Low-pressure switch fault	Check the pressure switch and refrigeration circuit
Syst2 Low Pressure Protection	E22	Low-pressure switch fault	Check the pressure switch and refrigeration circuit
Flow Switch Protection	E03	No or low water flow	Check water flow and verify pump operation
Waterway Anti-Freezing Protection	E05	Water or ambient temp too low	Check ambient temperature
Excess Water Temp Differential	E06	Low water flow or poor system pressure	Check water flow and ensure system is not blocked
Excess Water Temp Diff Protection 3+	E06	Low water flow or low system pressure	Check pipe water flow and ensure system is not blocked
Anti-Freezing Protection	E07	Water flow insufficient	Check pipe water flow and ensure system is not blocked
Anti-Freezing Protection (3+)	E07	Water flow insufficient	Check pipe water flow and ensure system is not blocked
Syst1 Low Pressure Sensor Fault	PP11	Pressure sensor fault	Check or replace the pressure sensor
Syst2 Low Pressure Sensor Fault	PP21	Pressure sensor fault	Check or replace the pressure sensor
Syst1 High Pressure Sensor Fault	PP12	Pressure sensor fault	Check or replace the pressure sensor
Syst2 High Pressure Sensor Fault	PP22	Pressure sensor fault	Check or replace the pressure sensor
Syst1 Compressor Overcurrent Protection	E151	Compressor overload	Check if the compressor system is operating normally
Syst1 Compressor Overcurrent Protection (3+)	E151	Compressor overload	Check if the compressor system is operating normally
Syst2 Compressor Overcurrent Protection	E251	Compressor overload	Check if the compressor system is operating normally
Syst2 Compressor Overcurrent Protection (3+)	E251	Compressor overload	Check if the compressor system is operating normally
Abnormal Power-Down Record	EE1	Power loss on startup	System recovers automatically after 3 minutes
Syst1 Coil Temp Sensor Fault	P152	Sensor open or short circuit	Check or replace the temperature sensor
Syst2 Coil Temp Sensor Fault	P252	Sensor open or short circuit	Check or replace the temperature sensor
Primary Anti-Freezing Protection	E19	Ambient temp too low	Check ambient temperature
Secondary Anti-Freezing Protection	E29	Ambient temp too low	Check ambient temperature
Communication Fault	E08	Communication failure between wire controller and mainboard	Check wiring between controller and mainboard

Communication Fault (Fan Motor 1)	E081	Fan motor control or mainboard communication failure	Check communication wiring
Communication Fault (Fan Motor 2)	E082	Fan motor control or mainboard communication failure	Check communication wiring
Low Ambient Temp Protection	TP	Ambient temperature too low	Check ambient temperature
EC Fan Feedback Fault	F051	Fan motor fault causing stop	Check if fan motor is broken or locked
Water Outlet High Temp Protection	E065	Outlet water temperature too high	Check water flow and pump operation
Water Outlet High Temp Protection (3+)	E065	Outlet water temperature too high	Check water flow and pump operation
Water Outlet Low Temp Protection	E071	Outlet water temperature too low	Check water flow and pump operation
Water Outlet Low Temp Protection (3+)	E071	Outlet water temperature too low	Check water flow and pump operation
Controller Program Mismatch	E084	Wire controller firmware mismatch	Re-load the correct program
Fan Motor 1 Overheat Protection	E103	Fan motor 1 overload	Check if fan 1 operates normally
Fan Motor 2 Overheat Protection	E203	Fan motor 2 overload	Check if fan 2 operates normally
Syst1 Refrigerant Leakage Protection	E131	System 1 refrigerant leakage	Check for refrigerant leakage in System 1
Syst2 Refrigerant Leakage Protection	E231	System 2 refrigerant leakage	Check for refrigerant leakage in System 2
Syst1 Suction High Temp Protection	E077	Suction temperature too high	Check if suction temperature exceeds safe limits
Syst2 Suction High Temp Protection	E078	Suction temperature too high	Check if suction temperature exceeds safe limits
Syst1 4-Way Valve Abnormal Switch	E121	Abnormal 4-way valve state	Check 4-way valve position and operation
Syst2 4-Way Valve Abnormal Switch	E221	Abnormal 4-way valve state	Check 4-way valve position and operation
Syst1 Refrigerant Leakage Protection (3+)	E131	System 1 refrigerant leakage	Check for refrigerant leakage in System 1
Syst2 Refrigerant Leakage Protection (3+)	E231	System 2 refrigerant leakage	Check for refrigerant leakage in System 2
Fan Motor 1 Overheat Protection (3+)	E103	Fan motor 1 overload	Check if fan motor 1 operates normally
Fan Motor 2 Overheat Protection (3+)	E203	Fan motor 2 overload	Check if fan motor 2 operates normally
Anti-Condensation Protection	E174	Air temp or inlet water temp too low	Check air temperature and inlet water temperature
Fan Motor 1 Output Phase Fault	F101	Fan motor 1 does not start	Check fan motor 1 wiring
Fan Motor 1 Output Zero Speed	F102	Fan motor 1 does not start	Check if fan motor 1 is blocked
Fan Motor 1 Start IPM Protection	F103	Fan motor 1 starting current too high	Check if fan motor 1 is blocked
Fan Motor 1 Running IPM Protection	F104	Fan motor 1 running current too high	Check if fan motor 1 is blocked
Fan Motor 1 Overcurrent Protection	F105	Fan motor 1 running current too high	Check if fan motor 1 is blocked
Fan Motor 1 Over-Temp Protection	F106	Insufficient cooling for fan motor 1	Check cooling conditions
Fan Motor 1 Bus Over Voltage	F107	Supply voltage too high	Check if supply voltage exceeds 480V
Fan Motor 1 Bus Under Voltage	F108	Supply voltage too low	Check if supply voltage is below 250V
Fan Motor 2 Output Phase Fault	F201	Fan motor 2 does not start	Check fan motor 2 wiring
Fan Motor 2 Output Zero Speed	F202	Fan motor 2 does not start	Check if fan motor 2 is blocked
Fan Motor 2 Start IPM Protection	F203	Fan motor 2 starting current too high	Check if fan motor 2 is blocked
Fan Motor 2 Running IPM Protection	F204	Fan motor 2 running current too high	Check if fan motor 2 is blocked
Fan Motor 2 Overcurrent Protection	F205	Fan motor 2 running current too high	Check if fan motor 2 is blocked
Fan Motor 2 Over-Temp Protection	F206	Insufficient cooling for fan motor 2	Check cooling conditions
Fan Motor 2 Bus Over Voltage	F207	Supply voltage too high	Check if supply voltage exceeds 480V
Fan Motor 2 Bus Under Voltage	F208	Supply voltage too low	Check if supply voltage is below 250V
Fan Motor 2 Overheat Protection	E203	Fan motor 2 overload	Check if fan 2 operates normally

Frequency Conversion Board Fault

Protect/fault	Fault display	Reason	Elimination methods
Syst1 Inverter Board Communication Failure	F151	Communication failure with System 1 inverter board	Check communication wiring and ensure System 1 inverter board is powered
Syst1 Compressor Start Failure	F152	System 1 compressor failed to start	Check compressor wiring and ensure compressor is not blocked
Syst1 Start IPM Protection	F153	Excessive System 1 startup current	Check startup pressure and verify compressor is not blocked
Syst1 Running IPM Protection	F154	Excessive System 1 running current	Check if the pressure ratio is too high
Syst1 IPM Over-Temperature Protection	F155	Poor heat dissipation on System 1 inverter board	Check for gaps or poor contact in cooling fins
Syst1 Compressor Overcurrent Protection	F156	Excessive System 1 compressor current	Check if the pressure ratio is too high
Syst1 Compressor Bus Over Voltage	F157	Input voltage too high	Check if supply voltage exceeds 480V
Syst1 Compressor Bus Under Voltage	F158	Input voltage too low	Check if supply voltage is below 250V
Syst2 Inverter Board Communication Failure	F251	Communication failure with System 2 inverter board	Check communication wiring and ensure System 2 inverter board is powered
Syst2 Compressor Start Failure	F252	System 2 compressor failed to start	Check compressor wiring and ensure compressor is not blocked
Syst2 Start IPM Protection	F253	Excessive System 2 startup current	Check startup pressure and verify compressor is not blocked
Syst2 Running IPM Protection	F254	Excessive System 2 running current	Check if the pressure ratio is too high
Syst2 IPM Over-Temperature Protection	F255	Poor heat dissipation on System 2 inverter board	Check for gaps or poor contact in cooling fins
Syst2 Compressor Overcurrent Protection	F256	Excessive System 2 compressor current	Check if the pressure ratio is too high
Syst2 Compressor Bus Over Voltage	F257	Input voltage too high	Check if supply voltage exceeds 480V
Syst2 Compressor Bus Under Voltage	F258	Input voltage too low	Check if supply voltage is below 250V

7. Appendix

7.1 Parameter List

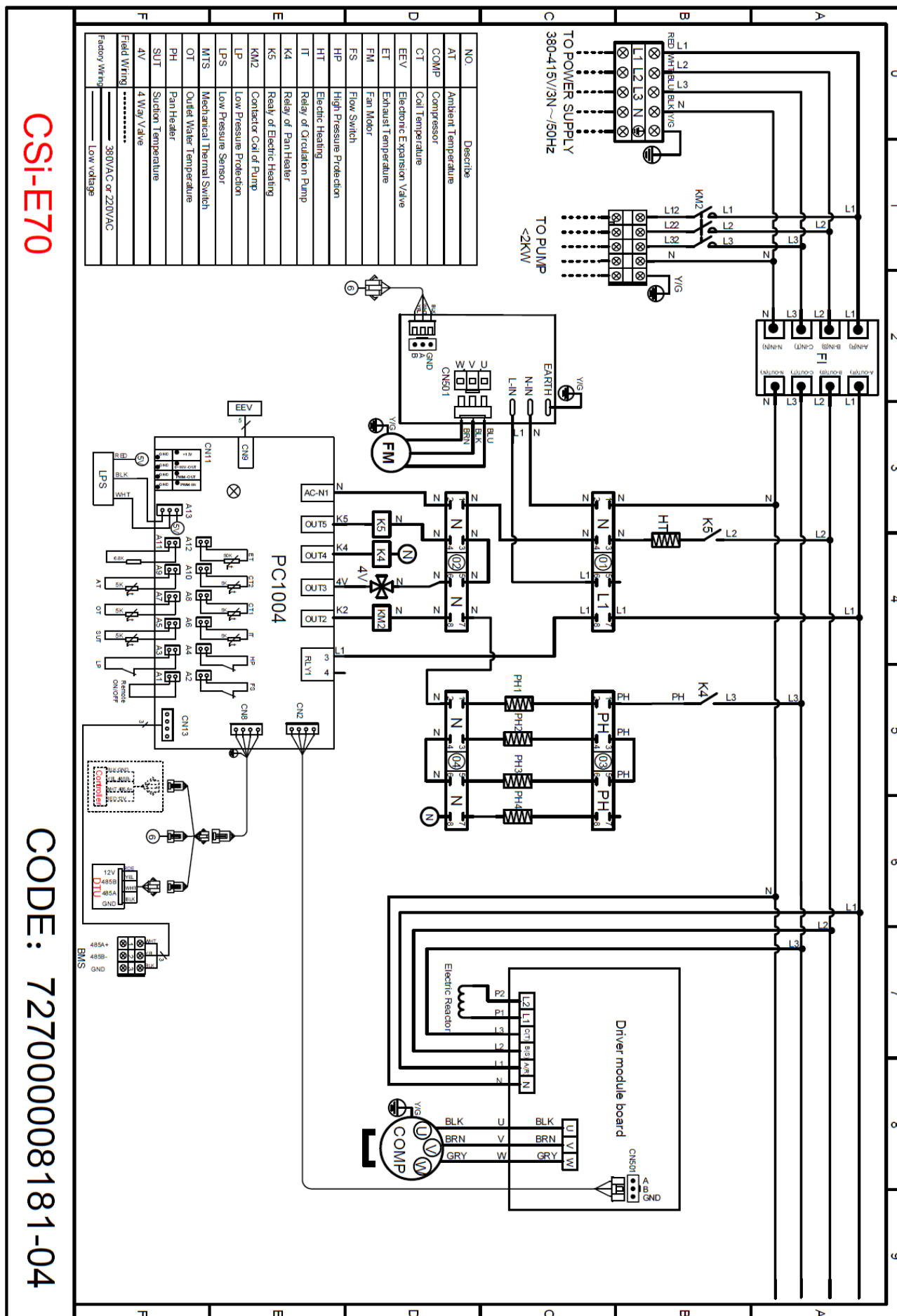
Meaning	Default	Remarks
Refrigeration target temperature set point	27°C	Adjustable
Heating the target temperature set point	27°C	Adjustable
Automatic target temperature set point	27°C	Adjustable

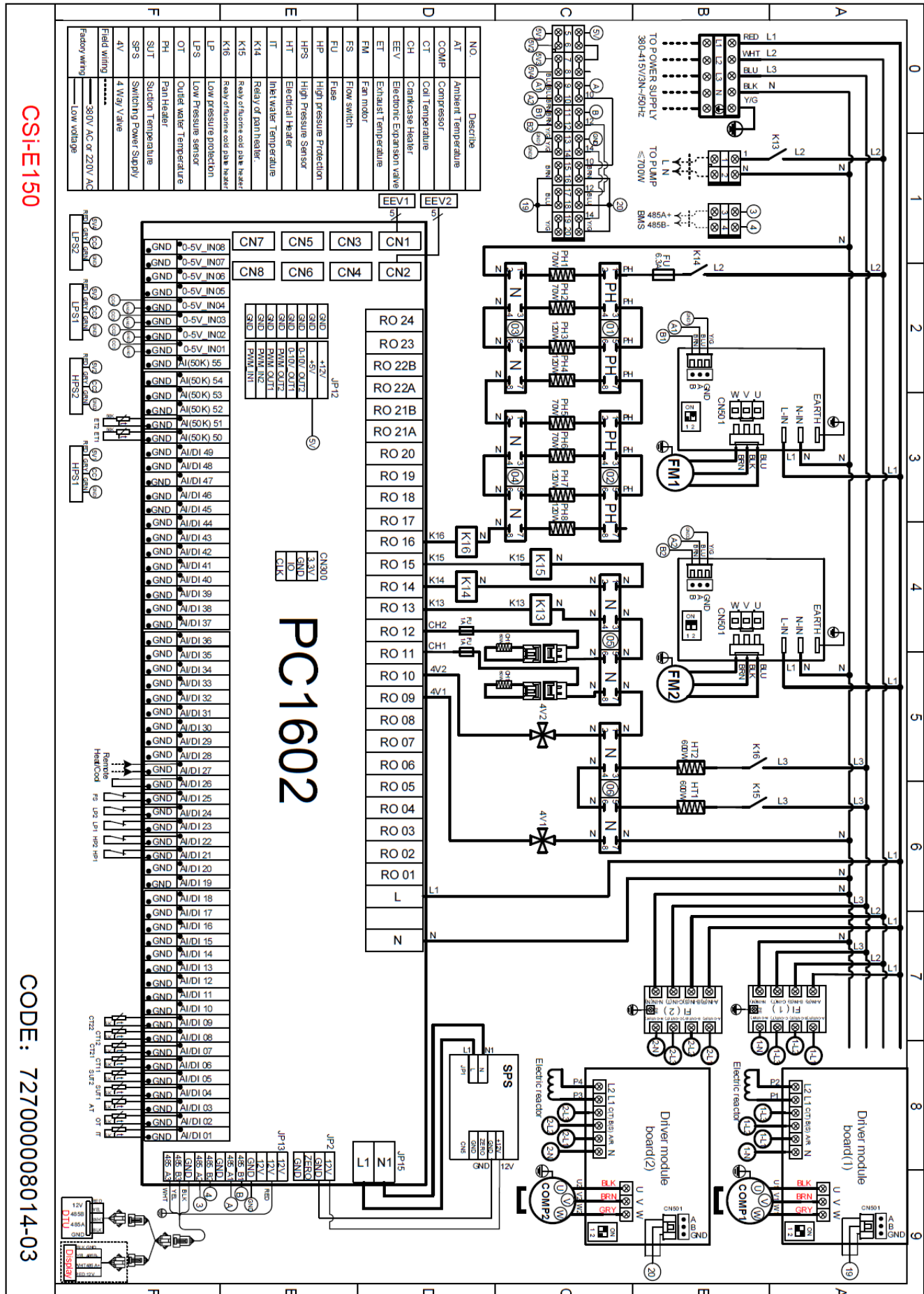
7.2 Cable Specifications

Single Phase Unit					
Nameplate maximum current	Phase line	Earth line	MCB	Creepage Protector	Signal Line
No more than 10A	2 x 1.5mm ²	1.5mm ²	20A	30mA less than 0.1 sec	n x 0.5mm ²
10~16A	2 x 2.5mm ²	2.5mm ²	32A		
16~25A	2 x 4mm ²	4mm ²	40A		
25~32A	2 x 6mm ²	6mm ²	40A		
32~40A	2 x 10mm ²	10mm ²	63A		
40~63A	2 x 16mm ²	16mm ²	80A		
63~75A	2 x 25mm ²	25mm ²	100A		
75~101A	2 x 25mm ²	25mm ²	125A		
101~123A	2 x 35mm ²	35mm ²	160A		
123~148A	2 x 50mm ²	50mm ²	225A		
148~186A	2 x 70mm ²	70mm ²	250A		
186~224A	2 x 95mm ²	95mm ²	280A		

Three Phase Unit					
Nameplate maximum current	Phase line	Earth line	MCB	Creepage Protector	Signal Line
No more than 10A	3 x 1.5mm ²	1.5mm ²	20A	30mA less than 0.1 sec	n x 0.5mm ²
10~16A	3 x 2.5mm ²	2.5mm ²	32A		
16~25A	3 x 4mm ²	4mm ²	40A		
25~32A	3 x 6mm ²	6mm ²	40A		
32~40A	3 x 10mm ²	10mm ²	63A		
40~63A	3 x 16mm ²	16mm ²	80A		
63~75A	3 x 25mm ²	25mm ²	100A		
75~101A	3 x 25mm ²	25mm ²	125A		
101~123A	3 x 35mm ²	35mm ²	160A		
123~148A	3 x 50mm ²	50mm ²	225A		
148~186A	3 x 70mm ²	70mm ²	250A		
186~224A	3 x 95mm ²	95mm ²	280A		

7.3 Wiring Diagrams





8. Maintenance

8.1 F.A.Q

 DO I NEED TO GET MY UNIT SERVICED?	It is recommended that you get your EvoHeat unit serviced once a year by your local certified air conditioning or refrigeration technician. If your unit is located in a coastal area, more frequent maintenance may be necessary. During the service, they will check the operational pressures of the refrigeration system and give the unit and fins a good clean to ensure maximum performance. Our commercial service plan offers on-time servicing by qualified and accredited EvoHeat technicians - in combination with our genuine EvoHeat replacement parts.
 DO WE HAVE RECOMMENDED SERVICE AGENTS?	EvoHeat have a large database of recommended service agents. Please contact EvoHeat tech support on 1300 859 933 for your local service agent details.
 SHOULD I CHECK MY UNIT REGULARLY?	We recommend checking the unit regularly to avoid potential issues and damage to your heat pump.
 WHAT SHOULD I BE CHECKING REGULARLY?	Check the water inlet/outlets often for leaks. Avoid the condition of no water or air entering into the system, as this will influence unit's performance and reliability. You should clear the pool/spa filter regularly to avoid damage to the unit as a result of the dirty or clogged filter. The area around the unit should be dry, clean and well ventilated. Make sure there is nothing blocking the airflow of the heater e.g. Leaf litter. Discharge all water in the water pump and water system, so that freezing of the water in the pump or water system does not occur. You should discharge the water at the bottom of water pump if the unit will not be used for an extended period. You should check the unit thoroughly and fill the system with water fully before using it for the first time after a period of time. Check the power supply and cable connection often, should the unit begin to operate abnormally, switch it off and contact the qualified technician

8.2 Energy Saving Tips

If pool water is allowed to cool significantly, it may take several days to return to the desired swimming temperature. For weekend use, it is more economical to maintain the pool water temperature at or near your desired swimming temperature.

If you do not plan to use your pool for a prolonged period, then you might choose to turn the heat pump completely off or decrease the temperature setting of the control several degrees to minimize energy consumption.

- Use an accurate pool thermometer. A difference of 2°C, between 26°C and 28°C, will significantly increase energy consumption.
- Monitor the water temp. of the pool in summer, you can reduce heat pump usage due to warmer temperatures.
- When the pool is not used for long periods, turn off the heat pump.
- Where possible, shelter the pool from prevailing winds with well-trimmed hedges or other landscaping or fencing.
- Always use a high-quality pool cover when practical. Besides providing a valuable water saving feature, a pool cover will dramatically reduce heat loss and reduce your pool heating running costs by up to 70%!

8.3 Advanced

CHECK THE AREA	GENERAL WORK AREA
Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimised. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system. prolonged period of no usage.	All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.
PRESENCE OF FIRE EXTINGUISHER	WORK PROCEDURES
If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging	Work shall be undertaken under a controlled procedure to minimise the risk of a flammable gas or vapour being present while the work is being performed.
CHECKING FOR PRESENCE OF REFRIGERANT	VENTILATED AREA
The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.	Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere. prolonged period of no usage.
CABLING	DETECTION OF FLAMMABLE REFRIGERANTS
Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also consider the effects of aging or continual vibration from sources such as compressors or fans.	Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.
REPAIR TO INTRINSICALLY SAFE COMPONENTS	LABELLING
Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use. Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating. Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.	Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.
NO IGNITION SOURCES	No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. No Smoking signs shall be displayed.
CHARGING PROCEDURES	In addition to conventional charging procedures, the following requirements shall be followed. • Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them. • Cylinders shall be kept upright. • Ensure that the refrigeration system is earthed prior to charging the system with refrigerant. • Label the system when charging is complete (if not already). • Extreme care shall be taken not to overfill the refrigeration system. Prior to recharging the system, it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site. The safety wire model is 5*20_5A/250VAC, and must meet the explosion-proof requirements.

CHECKS TO THE REFRIGERATION EQUIPMENT	Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance. The following checks shall be applied to installations using flammable refrigerants: • The charge size is in accordance with the room size within which the refrigerant containing parts are installed; • The ventilation machinery and outlets are operating adequately and are not obstructed; If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant; • Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected; • Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.
CHECKS TO ELECTRICAL DEVICES	Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment, so all parties are advised. Initial safety checks shall include: • That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking; • That there no live electrical components and wiring are exposed while charging, recovering or purging the system; • That there is continuity of earth bonding.
REPAIRS TO SEALED COMPONENTS	1. During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation. 2. Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc. Ensure that apparatus is mounted securely. Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications. <i>NOTE: The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to.</i>
LEAK DETECTION METHODS	The following leak detection methods are deemed acceptable for systems containing flammable refrigerants. Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed. Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work. If a leak is suspected, all naked flames shall be removed/extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

REMOVAL AND EVACUATION	When breaking into the refrigerant circuit to make repairs or for any other purpose conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration. The following procedure shall be adhered to: Remove refrigerant; Purge the circuit with inert gas; Evacuate; Purge again with inert gas; Open the circuit by cutting or brazing.	The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be "flushed" with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task. Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place. Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available. working on them.
RECOVERY	When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely. When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs. The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.	The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged. Do not mix refrigerants in recovery units and especially not in cylinders. If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.
DECOMMISSIONING	Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced. - Become familiar with the equipment and its operation. - Isolate system electrically. - Before attempting the procedure ensure that: - Mechanical handling equipment is available, if required, for handling refrigerant cylinders; - All personal protective equipment is available and being used correctly; - The recovery process is always supervised by a competent person; - Recovery equipment and cylinders conform to the appropriate standards. - Pump down refrigerant system, if possible. - If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system. - Make sure that cylinder is situated on the scales before recovery takes place. - Start the recovery machine and operate in accordance with manufacturer's instructions. - Do not overfill cylinders. (No more than 80 % volume liquid charge). - Do not exceed the maximum working pressure of the cylinder, even temporarily. - When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off. - Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.	

10. Warranty



**Refer to the EvoHeat website
for warranty details**

<https://evoheat.com.au/warranty-terms/>

REGISTER YOUR WARRANTY



EvoHeat highly recommend customers complete their warranty details online to ensure efficient warranty claim processing.

To register your warranty, scan our QR Code or head to our website and fill in the Warranty Registration Form: <https://evoheat.com.au/warranty-registration/>

1. Warranty terms are from date of purchase.
2. This warranty excludes any defect or injury caused by or resulting from misuse, abuse, neglect, accidental damage, improper voltage, vermin infestation, incompetent installation, any fault not attributable to faulty manufacture or parts, any modifications which affect the reliability or performance of the unit.
3. This warranty is conditional upon the correct operation and regular maintenance of the EvoHeat heat pump by the Owner. It does not cover the correction of non-product-related faults or issues. The Owner is responsible for:
 - a) Operating and maintaining the heat pump in accordance with the product's operating instructions.
 - b) Performing regular cleaning, including an annual maintenance check (please refer to the Maintenance section of the product manual).
 - c) Keeping the air inlet and outlet of the heat pump free from obstructions such as dirt, leaves, or plants.
 - d) Ensuring the condensate drain remains clean and unobstructed.
 - e) Ensuring all plumbing and electrical connections are secure and in good working order. *Note: Plumbing connections should be checked regularly to prevent chlorinated water leaking into the heat pump. Loose plumbing fittings that cause damage to the heat pump are not covered under warranty terms.*
 - f) Applying additional corrosion protection if the unit is installed in a corrosive environment (e.g. coastal areas or industrial zones).
4. This warranty does not cover the following:
 - a) Natural Disasters (hail, lightening, flood, fire etc.)
 - b) Damage resulting from any animal or creature (including vermin, reptiles and insects)
 - c) Rust or damage to exterior coatings, materials, and cabinet caused by corrosive atmosphere or weather/environmental conditions.
 - d) When serviced by an unauthorised person without the permission of Evo Industries.
 - e) When a unit is installed by an unqualified person.
 - f) When failure occurs due to improper or incorrect installation.
 - g) Where failure occurs due to failure of any other equipment connected in relation with the EvoHeat unit (e.g. power supply, water pump etc.).
 - h) Where failure occurs due to improper maintenance or misuse (refer to owners' responsibility and Operating Instructions).
 - i) 'No Fault Found' service calls where the perceived problem is explained within the operation instructions.
 - j) Costs associated with delivery, handling, freight, or damage to the product in transit.
 - k) Where the unit has been relocated from its originally installed location.
5. If warranty service is required, you should:
 - a) Contact Evo Industries Australia on 1300 859 933 or via our Contact page on our website.
 - b) Provide a copy of your receipt as proof of purchase.
 - c) Have completed the online Service Request Form via the website www.evoheat.com.au/service-request/
6. Onsite technical service is available within the normal operating area of your Evo Authorised Service Agents. Service outside this area will incur a traveling fee.
7. Unless otherwise specified to the purchaser, the benefits conferred by this express warranty and additional to all other conditions, warranties, rights and remedies expressed or implied by the Trade Practices Act 1974 and similar consumer protection provisions contained in legislation of the States and Territories and all other obligations and liabilities on the part of the manufacturer or supplier and nothing contained herein shall restrict or modify such rights, remedies, obligations or liabilities.

SWIM EVERYDAY WITH EVOHEAT