



# INSTALLATION & OPERATION MANUAL



# EVO SOLACE

INDOOR DEHUMIDIFIER



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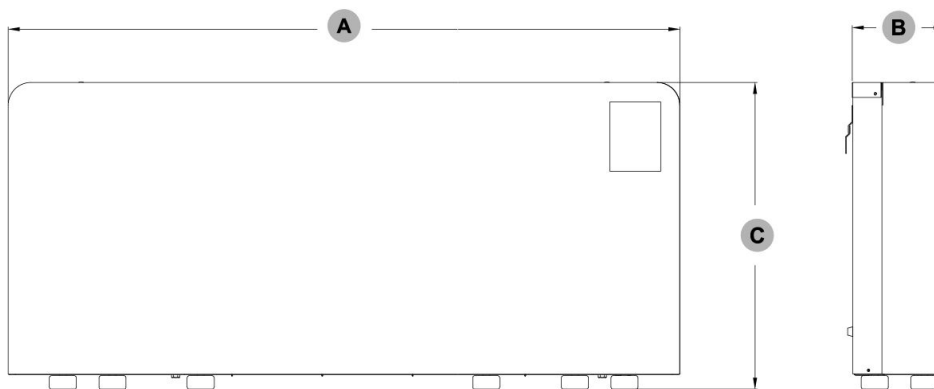
## 1. Introduction

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 Solace Domestic series dehumidifier is designed to remove the moisture from the air in the room without losing the warmth contained within. The Solace Domestic has the ability to remove up to 104 litres of moisture from an indoor pool room a day.

### 1.1 Dimensions

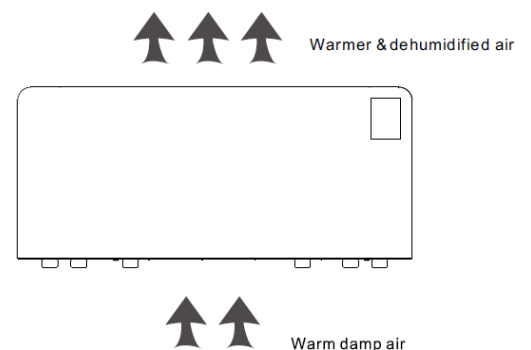


Length: A	Width: B	Height: C
1545mm	240mm	820mm

### 1.2 Working Principle

The Solace Dehumidifier works by drawing moist air over a refrigerated coil with a small fan. The cold coil of the refrigeration device condenses the water, which is removed. Then the air is reheated by the hot coil. This process works most effectively with higher ambient temperatures with a high dew point temperature.

For best results we recommend that the room temperature is maintained within 5 degrees of the pool temperature.



### 1.3 Packing List

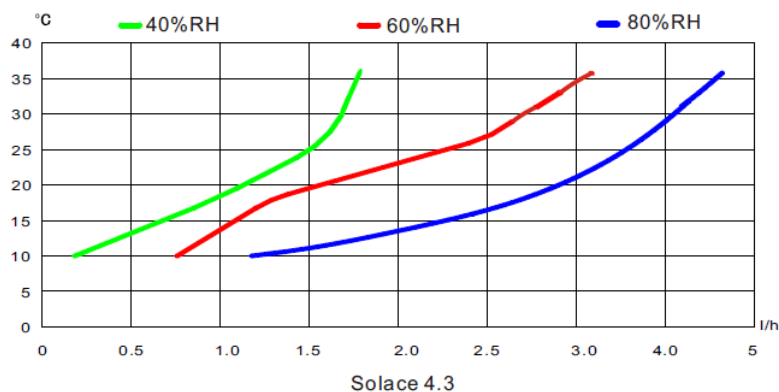
		Wall Suspension Bar	Expansion Bolts	Condensing Water Collector	Drainage Pipe
Manual	Solace Domestic				

## 2. Unit Specifications

### 2.1 Technical Data

Evo Solace Domestic Dehumidifier		
Rated Capacity at 80%RH - 32°C air	L/h	4.3
Air Volume	M <sup>3</sup> /h	750
Noise Level dB(A) at 1M	dB(A)	48
Rated Voltage/Freq	/	220-240V/50Hz
Rated Power Input	kW	1.55
Rated Running Current	A	6.7
Max Power Input	kW	2.1
Max Running Current	A	9.1
Relative Humidity	%RH	40-100
Temperature	C	10-36
IPX Rating	/	IPX4
Connection Type	/	10 Amp Plug
Refrigerant/Volume Operation	/	R410A/1050g
Pressure (High Side)	MPa	4.4
Pressure (Low Side)	MPa	2.1
Condensation Pipe Diameter	mm	16
Net Weight	kg	80
Shipping Dimensions (LxWxH)	mm	1545x240x820

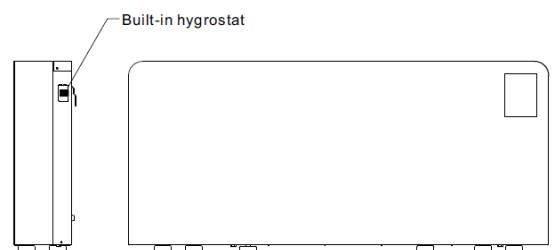
### 2.2 Performance Curve



### 2.3 Hygrostat Control

The dehumidifier is controlled by a built-in hygrostat set on one side of the unit. The target RH value can be set in ranged from 30% to 90%.

The unit will not start to dehumidify until the actual RH is beyond the setting value. We recommend that an external hygrostat should be installed to ensure a constant measure of the humidity in the pool area. The location of the hygrostat is as following:



### 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.

- Installation, repair or relocations must be done by a fully qualified technician. If done incorrectly it may cause fire, electric shock, water leakage and other hazards.
- Maintenance and operation must be carried out according to the recommended time and frequencies, as stated in this manual.
- To avoid risk of electrical shock, the unit must have a good power connection and earthing.
- If the supply cord is damaged, it must be replaced.
- Use genuine standard spare parts only.
- When an abnormality (smell of burning, etc.) occurs, stop the unit and disconnect the power or turn off the breaker. If the unit continues to be operated in an abnormal condition, it may cause a fire or hazards.
- For unit cleaning or maintenance, switch off and disconnect the power of the unit.
- Do not install the unit near flammable gas or spray flammable substances near it.
- Ensure the unit is installed on a strong and stable platform.
- A circuit breaker must be installed for the unit.
- Use a suitable fuse. Copper or iron will cause a failure or possibly a fire.
- Do not operate the unit with wet hands.
- Do not perform any modifications of safety or adjustment devices without authorisation.
- Even if the unit is disconnected from the mains supply, do not pull, cut or knot the electrical cables coming out of the unit.
- Do not poke objects through the inlet and outlet grills.
- Do not climb onto the appliance or rest any object on it.
- External parts of the unit can reach temperatures of more than 70°C, never touch it with your hands!
- The unit must be installed in accordance with national wiring regulations.

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

## 4. Installation

### 4.1 Location of Installation

Avoid installing the unit in close proximity to:

- Positions subject to exposure to direct sunlight
- Sources of heat
- Oil Fumes
- Areas subject to high frequencies

Ensure that:

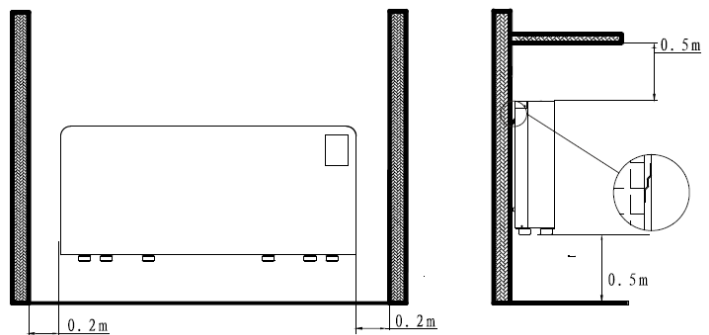
- The wall on which the unit is installed is strong enough to support the weight of the unit
- The part of the wall that the unit is installed does not have pipes or electrical wires passing through
- The wall is perfectly flat
- There are no obstacles around the unit that could interfere with the inlet and outlet air flow.
- It is preferable there is an outside perimeter-wall to allow the discharge of condensation outside.

### 4.2 Airflow Clearances

If hanging the unit on the wall, you are able to remove the rubber feet on the base of the unit.

The minimum mounting distances between the Solace Domestic and other objects in the wall are:

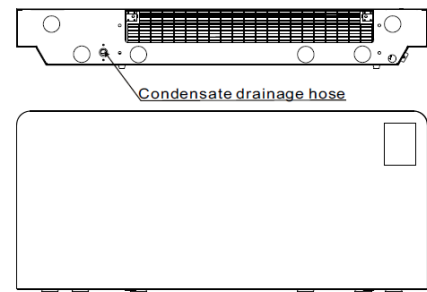
- 20cm from each end
- 50cm from above & below



### 4.3 Drainage

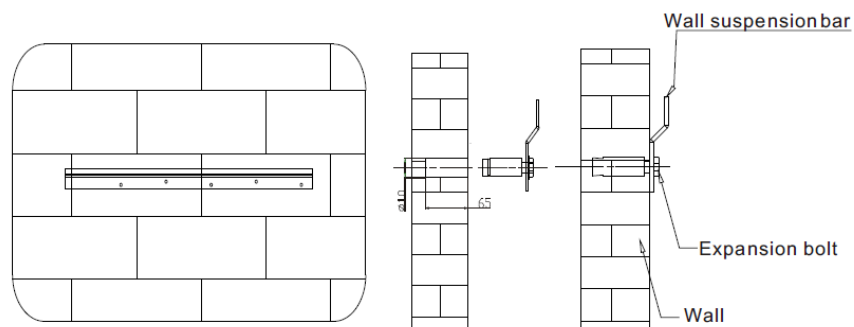
Select a suitably sized hose to connect to the built-in hose of the unit if required.

**NOTE:** If the condensation water discharges directly into a container, the condensate outlet should be located above the container to avoid it immersing in the container.



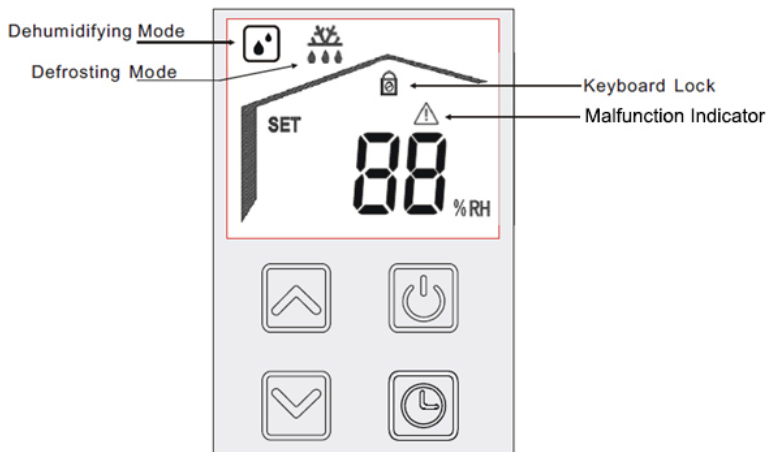
### 4.4 Wall Mounted Installation

Insert 5 Expansion Bolts into holes which are bored by a 10mm drill, then, fix the wall suspension bar horizontally.



## 5. Operation

### 5.1 The Controller



**NOTE:**

When the unit starts, you must wait 15 seconds until the unit shows the exact ambient relative humidity. During this time, you cannot operate the control panel and the screen will show 8.8.

After non-operation for 90 seconds the unit keys will light-off. If you touch the keys after this time, the keys will light back up again allowing you to operate the control panel.



**ON/OFF**

- Press this button to start up or shut down the unit.
- Hold this button for 5 seconds to lock or unlock the keyboard.



**UP**

- Press this button to check the relative humidity target value
- Press this button again to increase relative humidity target value



**DOWN**

- Press this button to check relative humidity target value
- Press this button again to decrease relative humidity target value



**TIMER**

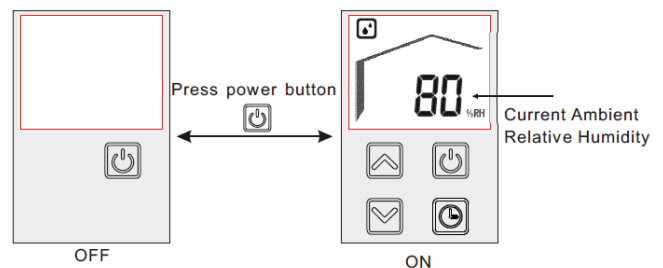
- When the unit is off, you can set a start-up time by pressing this button
- When the unit is on, you can set a shutdown time by pressing this button

### 5.2 Functions

#### 5.2.1 Power On/Off

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

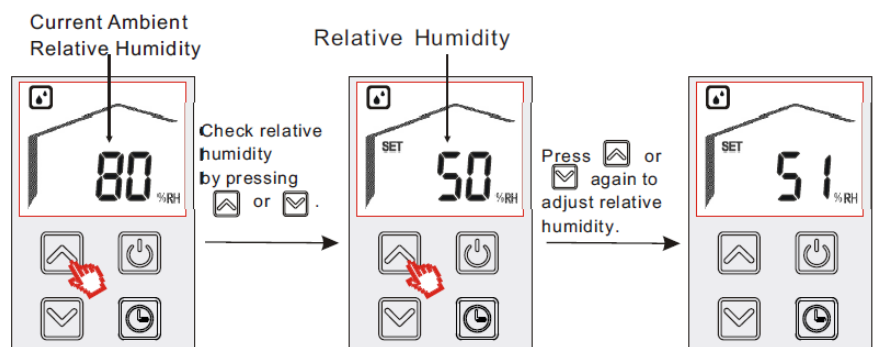
When the unit is on, the display will show the current ambient relative humidity, the mode icon and power button will also be lit up.




#### 5.2.2 Set Relative Humidity

To check the relative humidity, press the **UP or DOWN** arrow keys. Once the relative humidity is displayed, you can press the **UP or DOWN** arrows again to adjust it as desired.

If no operation is performed within 5 seconds, the screen will return to the home screen and save any changes made automatically.




### 5.2.3 Dehumidification Mode

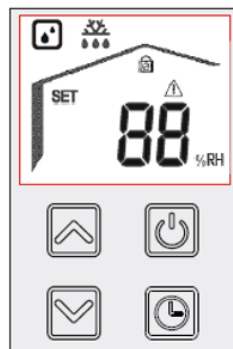
When the unit is in dehumidifying mode, the LED icon  lights up and:

1. If A (actual relative humidity of the room air)  $\geq$  TRH (target relative humidity) + 5% RH, and the condition has lasted for 30 seconds – the unit will begin to dehumidify.
2. If A (actual relative humidity of the room air)  $\leq$  TRH (target relative humidity) - 5% RH, and the condition has lasted for 3 minutes – the unit will cease dehumidifying.

### 5.2.4 Defrost Mode

When the ambient temperature is low, for example 11°C, and after the unit has worked for an extended period of time, there is a possibility that the evaporator will begin to ice up. When this happens, the unit will switch to defrosting mode automatically.

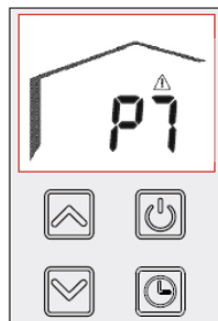
During defrosting the  icon will be lit up. When defrosting is over, the unit returns to dehumidifying mode.



### 5.2.5 Fault Display

If a problem occurs with the unit, the control panel will display a problem code which relates to the cause of the issue. See 6. Troubleshooting for failure codes, their definitions, and solutions.

Use the **UP** or **DOWN** arrow keys on the fault display to view other failure codes (if there are any).





## 6. Troubleshooting

Malfunction	Code	Reason	Solution
High pressure protection has appeared 3 times in 30 mins	P1	High pressure protection is too frequent	Check the below solutions to failure P1/P2/P3
High pressure protection	P2	Discharge pressure is too high	
Condenser outlet temp. over high	P3	Condenser coil temp. is too high	
Evaporator outlet temp. sensor failure	P5	This temp. sensor is broken or in open/short circuit	Check or replace temp. sensor
Evaporator inlet temp. sensor failure	P6	This temp. sensor is broken or in open/short circuit	Check or replace temp. sensor
Condenser outlet temp. sensor failure	P7	This temp. sensor is broken or in open/short circuit	Check or replace temp. sensor
Humidity sensor failure	P8	Humidity sensor is broken or in open/short circuit	Check or replace humidity sensor
Motor feedback signal failure	E0	The feedback wiring has a bad connection or fan motor is damaged	Check the feedback wiring of the fan motor or replace the fan motor

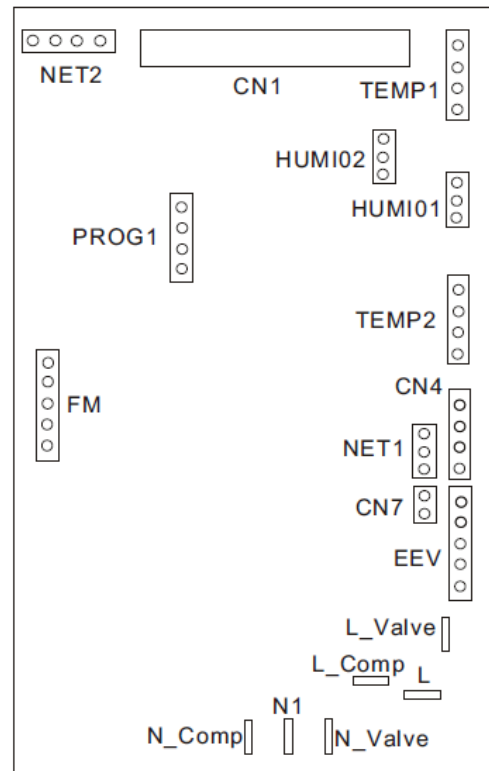
### To resolve a P1, P2 and/or P3 error:

1. If other failure codes appear with P1, P2 or P3, resolve them first.
2. If there are no other failures of P3~E0, and P1 & P2 still exist, disconnect the power to the unit and try connecting again after 1 hour.
3. If only the P3 error exists, keep the fan running for 30 mins. If P3 still appears after running the fan, disconnect the power to the unit and try reconnecting it again after an hour.

If you require technical support or have a question, call the EvoHeat Tech Support line on 1300 859 933.

### 7. PCB I/O Port

No.	Ports	Meaning
1	CN1	To operation panel
2	CN4 NET1 NET2	Reserved
3	FM	To fan motor (DC)
4	TEMP1	To evaporator inlet/outlet temp. sensor
5	TEMP2	To condenser outlet temp. sensor
6	HUMI01	To the build-in RHS (Refer to 7.2)
7	HUMI02	To the external RHS (optional)
8	CN7	To high-pressure protection switch
9	EEV	To electronic expansion valve
10	PROG1	Program burning port
11	L	To the live wire of power supply
12	N1 N_Comp N_Valve	Neutral wire
13	L_Comp	To the live wire of compressor



### 8. Maintenance



Before cleaning or maintaining the unit, cut off the power supply.

To ensure the efficiency and reliability of the Solace Domestic, we suggest that the unit be maintained and cleaned every 6 months.

To clean the strainer:

- 1) Press the two red buttons and drag it down slowly (Fig 8)
- 2) Separate the return air filter screen from the units as the image shown below (Fig 9)
- 3) Takeaway the return air filter screen and flush it with water (Fig 10)
- 4) Set the filter net and the air return grill to the original place and press the limiting pin (Fig 11)
- 5) Clean up the outer unit with a soft and damp rag (Fig 12). To protect the paint coat on the unit, do not use a rough sponge or corrosive detergent.

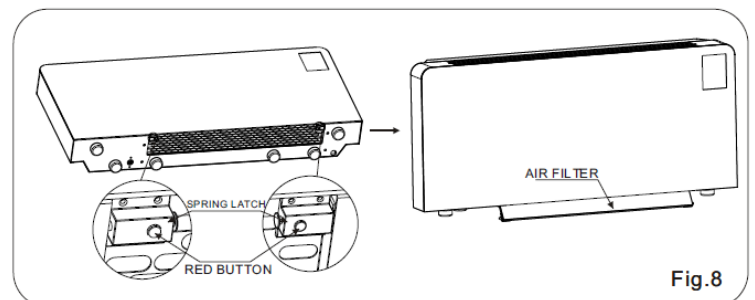


Fig.8

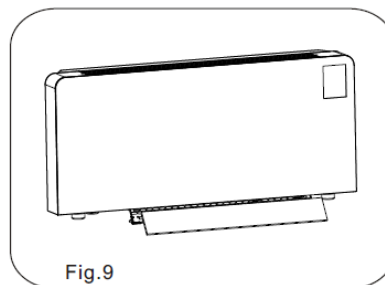
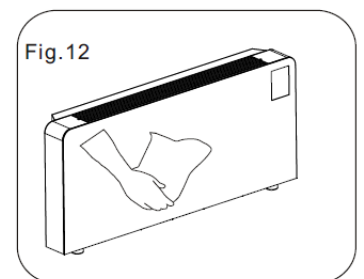
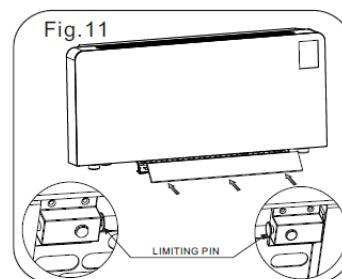
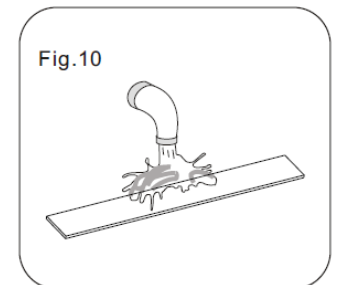


Fig.9



## 9. Warranty



### Refer to the EvoHeat website for warranty details

- Australia: <https://evoheat.com.au/warranty-terms/>
- South East Asia: <http://evoheat.com.sg/warranty/>

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 does not cover the following:
  - a. Natural Disasters (hail, lightning, flood, fire etc.)
  - b. Rust or damage to paintwork caused by a corrosive atmosphere
  - c. When serviced by an unauthorized person without the permission of Evo Industries
  - d. When a unit is installed by an unqualified person
  - e. Where a unit is incorrectly installed
  - f. When failure occurs due to improper or faulty installation
  - g. Failure due to improper maintenance (refer Operating Instructions)
  - h. 'No Fault Found' service calls where the perceived problem is explained within the
  - i. Costs associated with delivery, handling, freighting, or damage to the product in transit.
4. If warranty service is required, you should:
  - a. contact Evo Industries Australia on 1300 859 933 or via our Contact page on our web site
  - b. provide a copy of your receipt as proof of purchase
  - c. have completed the online *Warranty Registration Form*
5. 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.
6. 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.

## 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/>

