

EVO
SERIES

ALPHA

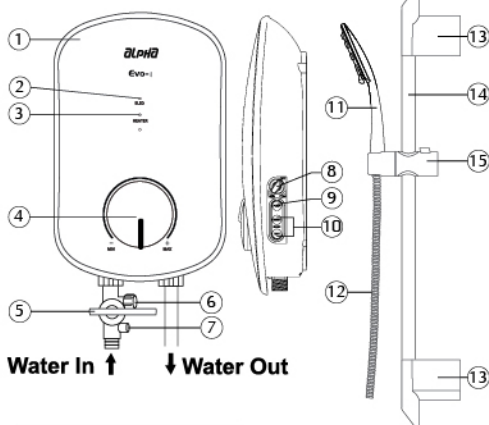


Model: EVO-E
EVO-i

PARTS IDENTIFICATIONS

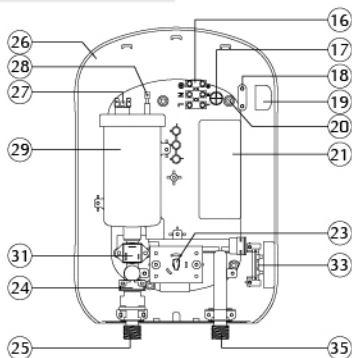
Fig. 1

Model: EVO-E / EVO-i

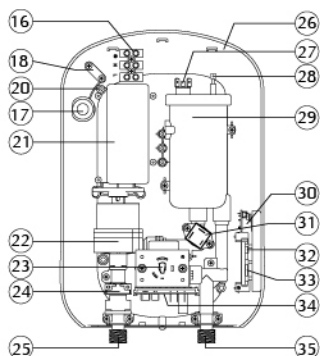


1. Heater Cover
2. ELSD Indicator
3. Heater Indicator
4. Temperature Control Knob
5. Stop Valve
6. Water Filter
7. Water Regulator
8. Pump Control knob*
9. Pump Activator*
10. TEST / RESET Button
11. Handshower
12. Flexible Hose
13. Rail Support Bracket
14. Sliding Rail
15. Shower Holder
16. Terminal Block
17. Rear Cable Entry
18. Cable Clamp
19. Side Cable Entry
20. Heater Base Mounting Holes (4 Holes)
21. Built-in ELSD
22. Pump Assembly*
23. Electronic Control Unit
24. Flow Switch Assembly
25. Water INLET Connection
26. Heater Base
27. Thermal Cut-out
28. Heating Element
29. Heater Tank
30. Pump Control Unit*
31. Triac
32. Pump Activator*
33. TEST/ RESET PCB
34. Pump Control PCB*
35. Water OUTLET Connection

EVO-E Series Heater



EVO-i Series Heater



*Item 8, 9, 22, 30, 32 & 34 are for model EVO-i.

i) ELECTRICAL

- a. The installation shall comply with *GP/ST/No.6/2016, Guideline for the Design, Installation, Inspection, Testing, Operation and Maintenance of the Water Heater Systems* by Energy Commission.
- b. Installation shall be done by competent person recommended by the manufacturer (MS 1957-2-35:2019).
- c. The heater must be permanently connected to the electricity supply through a double pole linked switch having a contact separation of least 3mm in all poles incorporated in the circuit, and out of reach from the person using the shower.
- d. Only fixed and permanent connection is allowed, plug and socket shall not be used. In the case where a direct connection cannot be made to the water heater, only correctly sized approved connector and connection box shall be used.
- e. For connection within the shower cubicle and below the ceiling, the connection box shall be IPX5 rated.
- f. An approved and correct size of PVC Cable / PVC Insulated Flexible Cables with maximum 1.5m length shall be used to connect the water heater to the connection box.
- g. Minimum cable size must be not less than 4mm².
- h. RCD at the main switch board of the premise need to test at least once a month.

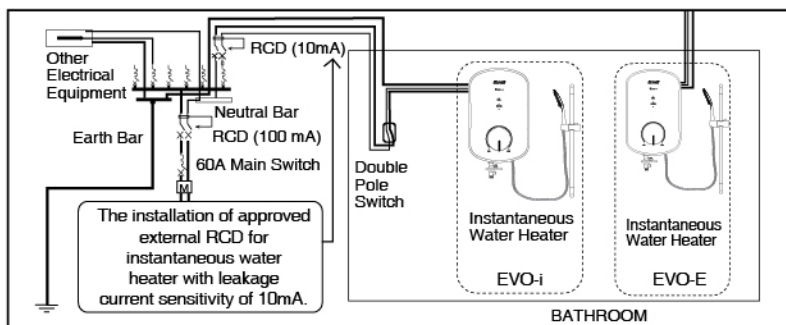


Fig. 2 - General Wiring Layout

Voltage (V~)	Power (kW)	Amperes (A)	Recommended Conductor Size (csa)		Fuse/ MCB (A)	Double Pole Switch (A)	
			mm ²	Conduit Cable			Flexible Cable
220 - 50/60Hz	3.5	16.0	4.0	7/0.85mm	56/0.30	20	20
	4.5	20.5	4.0	7/0.85mm	56/0.30	25	25
	5.5	25.0	4.0	7/0.85mm	56/0.30	32	32
	6.0	27.3	4.0	7/0.85mm	56/0.30	32	32
	6.5	29.6	4.0	7/0.85mm	56/0.30	40	40
	7.5	34.1	6.0	7/1.04mm	84/0.30	40	40
230 - 50/60Hz	8.0	36.4	6.0	7/1.04mm	84/0.30	40	40
	3.5	15.2	4.0	7/0.85mm	56/0.30	20	20
	5.5	24.0	4.0	7/0.85mm	56/0.30	32	32
	6.6	28.7	4.0	7/0.85mm	56/0.30	32	32
240 - 50/60Hz	8.8	38.3	6.0	7/1.04mm	84/0.30	45	45
	3.6	15.0	4.0	7/0.85mm	56/0.30	20	20
	3.8	15.8	4.0	7/0.85mm	56/0.30	20	20
	4.2	17.5	4.0	7/0.85mm	56/0.30	20	20
	7.1	29.6	4.0	7/0.85mm	56/0.30	40	40
	9.5	39.6	6.0	7/1.04mm	84/0.30	45	45

Table 1 - Electrical Loading Table

ii) WATER

The unit works at a minimum water flow rate of 3 liters/min. Note that an incoming water flow rate of 5 liters/min and above would excel its performance.

iii) **SAFETY**

Note: An approved type of Residual Current Device (RCD) of 10mA sensitivity shall be installed in conjunction with the heater.

- a. The built-in Earth Leaking Sensing Device (ELSD) will cut off the power supply to the heater in the event of current leakage of as low as 15mA.
- b. The heater only operates when there is sufficient water flow to trigger the Flow Switch.
- c. The Thermal Cut-out will automatically cut-off the power supply if there is abnormal rise in the water temperature during shower.

INSTALLATION PROCEDURES

i) **PLUMBING**

WARNING:

- a) All plumbing works shall be completed before proceeding to electrical wiring connection.
- b) Metallic / Chromed hose and conductive control valve shall not be used (in Malaysia only - Malaysian government's regulations. Optional for others).
- c) Heater outlet shall not be connected to any form of tap or fittings not recommended by manufacturer.

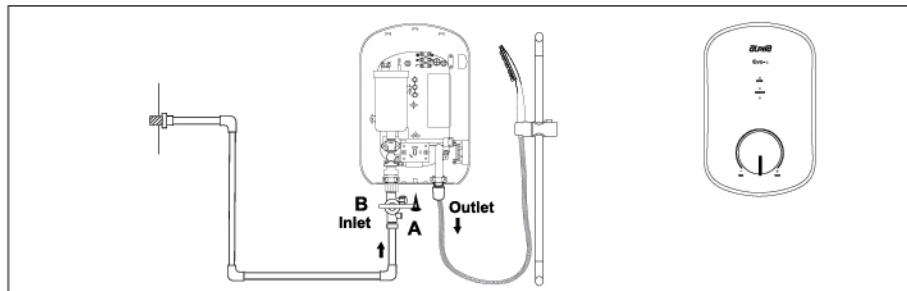


Fig. 3 - General Layout

- a. Turn off the water source.
- b. Remove screw marked 'A' with a screw driver.
- c. Remove cover by lifting the bottom upward until clear.
- d. Mark out all the (4) screw points of the heater base on the wall. It is recommended that the bottom of the heater be 1.50 meters / 5 feet above the floor of the bathroom.
- e. Drill the (4) holes with 5.0mm diameter drill bit.
- f. Mount and secure the heater with the wall plugs and screws provided.
- g. Connect the Stop Valve assembly to the INLET 'B'. A rubber washer is provided for this connection to prevent water leakage.
- h. Connect the piping from the Stop Valve to the incoming water supply. If necessary, make use of sealing tape for the connection to prevent water leakage. **Do not apply excessive force to tighten the connectors.**
- i. Turn on the water mains to drain out all plumbing dirt and to fill up the heater tank. (Note: This step will prevent damage to the heating element).

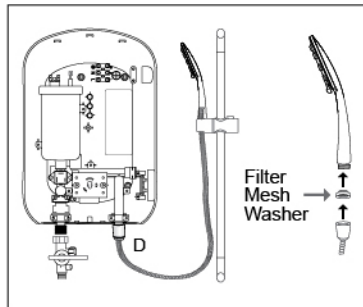


Fig. 4 - Shower Set Fitting

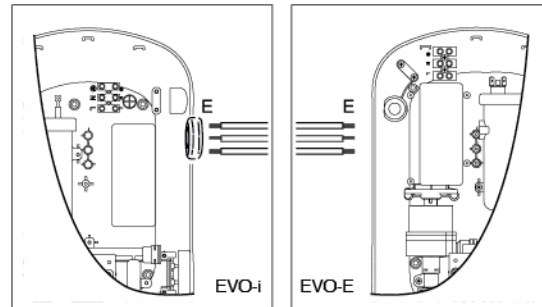


Fig. 5 - Electrical connection to Heater

ii) **SHOWER SET FITTING (Refer to Fig. 4)**

- a. Mark the positions of the two holes of the sliding rail set beside the heater - be sure that the top portion is in level with the top of the heater. Mount it with the plugs and screws provided.
- b. Connect the flexible hose and handshower to the OUTLET 'D' of the heater - be sure to put in the rubber washer.
- c. Connect the other end of flexible hose to handshower - be sure to put in the Filter Mesh.

iii) **ELECTRICAL CONNECTION (Refer to Fig. 5)**



WARNING:

- Make sure the electrical mains is off before carrying on the electrical work.
- Plug, socket and undersize cable shall not be used.

- a. Switch off the electrical mains.
- b. Insert the electrical cable through the rubber grommet marked 'E'.
- c. Connect the cable to the Terminal Block as follows:

RED OR BROWN	LIVE (L)
BLACK OR BLUE	NEUTRAL (N)
YELLOW/GREEN OR GREEN/YELLOW	EARTH (⊕)

- d. Replace the cover and secure screw marked 'A' as in Fig. 3.

iv) **TESTING**

- a. Turn on the water supply at the Stop Valve. Water should spray out from the handshower.
- b. Switch on the heater switch outside the bathroom. Turn the Temperature Control Knob of the heater to the 'ON' position. The indicator lights would light up. The shower should be warm in a few seconds.
- c. You may proceed to 'Operating Instructions' before using the heater.

OPERATING INSTRUCTIONS

The heater comes with an Electronic Variable Temperature Control for a wide range of power selections. Normal cold shower can be selected by just turning the Temperature Control Knob to 'OFF' position.

To have a warm shower, take note of the following steps:-

- a. Switch on the heater switch located outside the bathroom. The 'ELSD' indicator would light up.
- b. Turn on the water supply at the Stop Valve.
- c. Turn ON the Temperature Control Knob. The 'HEATER' indicator would light up. The shower would get warmer as the Temperature Control Knob is turned clockwise from 'ON' to 'MAX'. It is not necessary to return the Temperature Control Knob to the 'OFF' position when the heater is not in use.
- d. Switch off the heater switch outside the bathroom when the heater is not in use.

- Note:**
- The shower may not be hot enough even at 'MAX' in areas whereby the water pressure is exceptionally high and cold. This can be remedied by reducing the water inflow or replacing the unit with one that is of higher power (if it is approved by relevant authorities).
 - The built-in Shower Pump can be independently controlled by using the Pump Control Knob. In low pressure areas (below 15 p.s.i.), adjust pump speed to obtain desired spray of water. If water pressure is high (over 15 p.s.i.), turn "OFF" the Pump Control Knob to achieve hotter shower. (Model EVO-i)
 - The Pump Activator is specially designed for low pressure areas whereby the water pressure is too weak to trigger the built-in Shower Pump. Just press the Pump Activator Button and the Shower Pump will spring into action. (Model EVO-i)
 - It is recommended that the built-in Shower Pump be operated at intervals of 30 minutes with 30 minutes rest in between. (Model EVO-i)

WARNING

- a. Installation shall be done by competent person recommended by the manufacturer.
- b. The appliance must be earthed.
- c. This appliance is not to be used for potable water supply.
- d. The water control tap must be fitted to the water INLET only.
- e. Children should be supervised to ensure that they do not play with the appliance.
- f. 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 instruction concerning use of the appliance by a person responsible for their safety.
- g. The new hose-sets supplied with the appliance are to be used and that old hose-sets should not be reused.
- h. The water inlet of this appliance shall not be connected to inlet water obtained from any other water heating system.
- i. The water OUTLET of this heater acts as a vent and must not be connected to any form of tap or fitting not recommended by the manufacturer.
- j. Do not use shower head that can turn off the flow of water.
- k. Do not use plumbing cement on connection. If necessary, use only thread or sealing tape.
- l. If the heater malfunctions, immediately switch off the power supply. Then contact the sales agent for repair. Never attempt to repair the unit yourself.

- 5 -

GENERAL MAINTENANCE



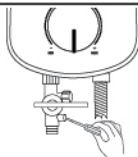
DO NOT USE THINNER, ALCOHOL OR PETROL

You may clean the heater with a damp cloth and mild detergent but do not use thinner, alcohol, petrol or any other corrosive solutions.



CHECK ELSD AT LEAST ONCE A MONTH

Turn on the electricity and water supply to the heater. Test the ELSD by gently pressing the ELSD 'TEST' button. The 'ELSD' indicator light and the 'HEATER' light must go off. Press the 'RESET' button to resume power.

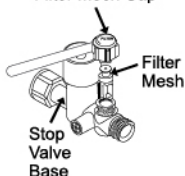


ADJUSTMENT OF WATER REGULATOR

Turn the knob anticlockwise to have the maximum water volume in low water pressure areas. In high water pressure areas, turn the knob clockwise until the desired shower temperature is attained.

a) Stop Valve

Filter Mesh Cap



CLEAN THE FILTER REGULARLY

The filter should be cleaned whenever there is a sign of inlet water blockage.

a) Stop Valve

Remove Filter Mesh Cap. Pull out Filter Mesh and flush it with water to remove any trapped sediments. Slot it back to its original position before securing it with Filter Mesh Cap.

b) Handshower



b) Handshower

- Handshower need to be descaled regularly.
 - Disconnect the handshower from the hose. Remove Filter Mesh Washer and flush it with water to remove any trapped sediments.
- Re-connect the handshower to the hose in its original position.

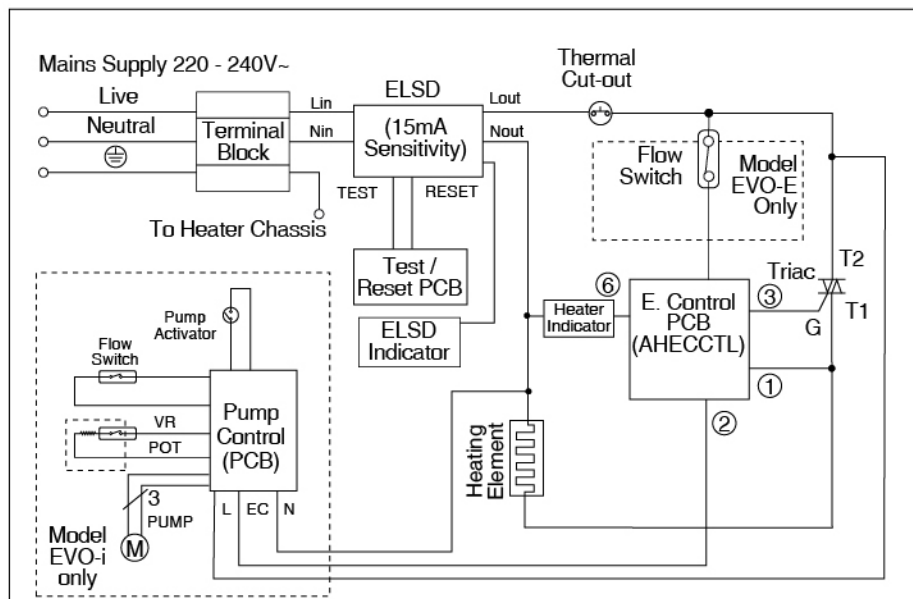
Note:

- Make sure to turn off the incoming water supply before the operation.
- This has to be done more regularly in area where the inlet water supply is dirty.

SPECIFICATIONS

Heater Power Rating	3.50kW 230V~ 50Hz 3.80kW 240V~ 50Hz	
Others Power Rating	Please refer Electrical Loading Table for reference	
Water Connection	Ø 15.0mm (½" BSP)	
Operating Condition	Open Outlet	
Protection Against Electric Shock	Class I	
Water Temperature Control	Electronics	
Degree Of Protection	IP25	
Minimum Flow Rate	3 liters / minute	
Minimum Pressure	20kPa (0.2 bar / 2.9 psi)	
Maximum Inlet Pressure	0.38MPa (3.8 bar / 55 psi)	
Heater Dimension	230mm (W) x 360mm (L) x 87.8mm (H)	
Heater Nett Weight	EVO-E	1.2kg
	EVO-i	1.6kg

SCHEMATIC WIRING DIAGRAM



MODEL: EVO-E / EVO-i

* The product's specifications and shower accessories shown in this manual are correct at the time of printing and subject to change without prior notice.

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