

ALPHA

**SK-
17** *Series*



**Model: SK-17E
(Malaysia)**

**ISO 9001
Certified Manufacturer**

J/S:16104/1122/AA

ALPHA SK-17E (M) H01B00182 (14.85cm(W) x 21cm(H))_ 11.11.2022

PARTS IDENTIFICATIONS

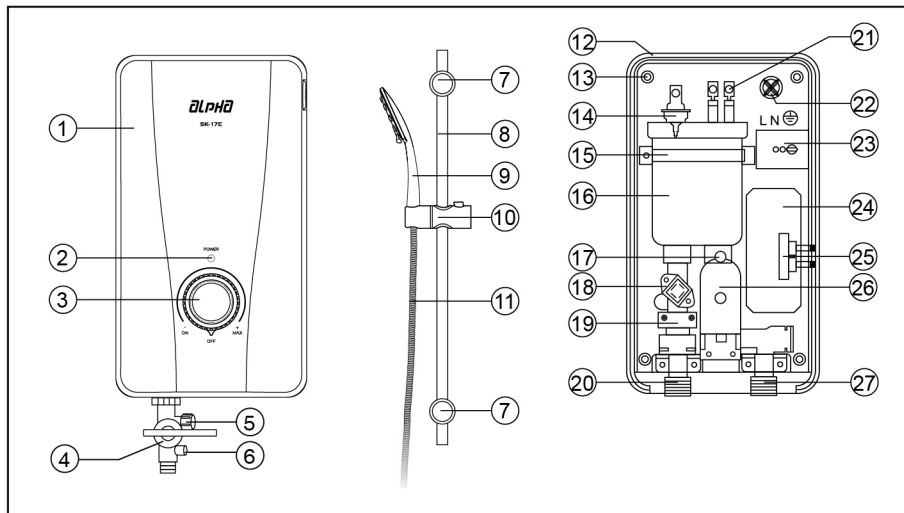


Fig. 1

- | | |
|------------------------------|--|
| 1. Heater Cover | 16. Water Tank |
| 2. Indicator Light | 17. Indicator Light |
| 3. Temperature Control Knob | 18. Triac |
| 4. Stop Valve | 19. Flow Switch Assembly |
| 5. Water Filter | 20. Water INLET Connection |
| 6. Water Regulator | 21. Heating Element |
| *7. Rail Supports (2 Nos) | 22. Cable Entry |
| *8. Sliding Rail | 23. Terminal Block |
| *9. Hand Shower | 24. Built-in Electronic ELCB
(Model SK-17E) |
| 10. Shower Holder | 25. ELCB TEST/RESET PCB
(Model SK-17E) |
| *11. Flexible Hose | 26. Electronics Control Unit |
| 12. Heater Base | 27. Water OUTLET Connection |
| 13. Mounting Holes (4 Holes) | |
| 14. Thermal Cut-out | |
| 15. Tank Clamp | |

*Optional Devices - Full Shower Accessories

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. Must engage competent and qualified electrician for installation.
- 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.

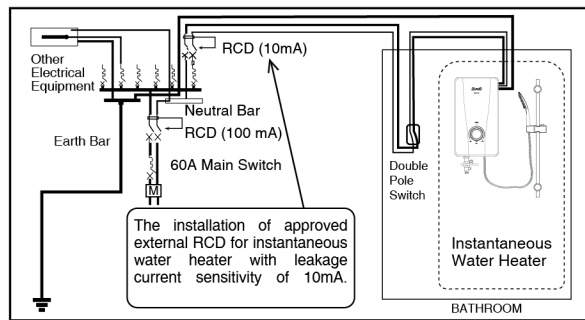


Fig. 2 - General Wiring Layout

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) should be installed in conjunction with the heater.

- a. The built-in Earth Leakage Circuit Breaker (ELCB) would 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 breaks off the power supply to the heater if there is abnormal rise in the water temperature during shower.

INSTALLATION PROCEDURES

i) **PLUMBING**

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

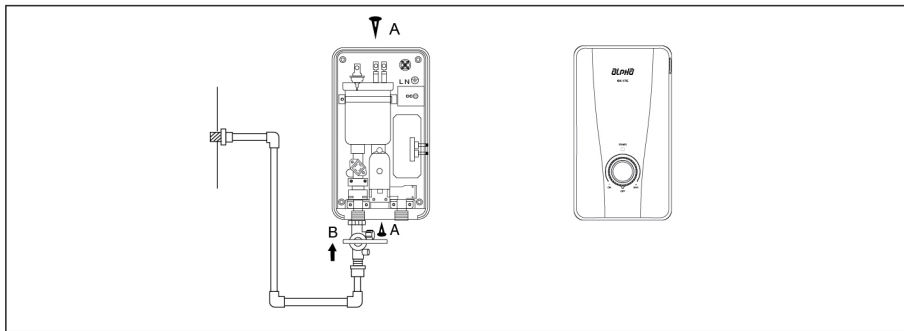


Fig. 3 - General Layout

- a. Turn off the water source.
- b. Remove 2 screws 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 Water Regulator / Stop Valve to the INLET 'B'. A rubber washer is provided for this connection to prevent water leakage.
- h. Connect the piping from the Water Regulator / 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).

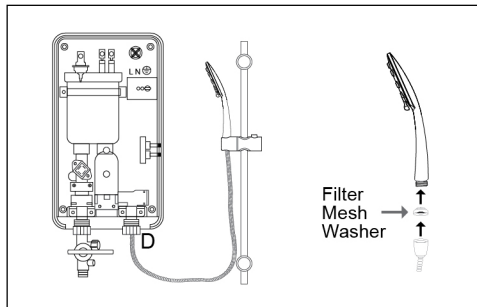


Fig. 4 - Shower Set Fitting

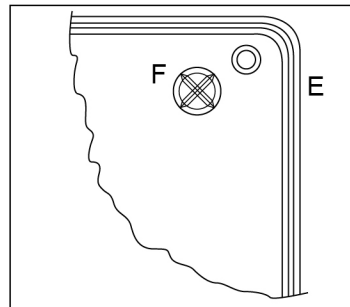


Fig. 5 - Electrical connection to Heater

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. Insert the electrical cable through the rubber grommet 'E' for Side Entry and 'F' for Wall Embedded Cable.
- b. 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 (⊕)
- c. Replace the cover and secure 2 screws marked 'A' as in Fig. 3.

iv) **TESTING**

- a. Turn on the water supply at the Water Regulator / 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 light 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 might not be hot enough even at 'MAX' in areas whereby the incoming water supply from the mains is too cold or the pressure too high. Replace the unit with one that is of higher power (if it is approved by the electrical board) or reduce the water inflow by adjusting the Water Regulator to get the desired showering temperature.

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.

GENERAL MAINTENANCE

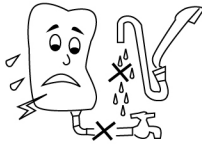
QUALITY ASSURED

All ALPHA heaters are tested before leaving the factory. With proper care and usage, the heaters are durable, safe and reliable. Use only accessories recommended by the manufacturer.

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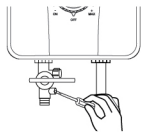
PLUMBING PRECAUTION

Never install any stop valve or tap fitting or shower head that can turn off the flow of water at the OUTLET of the pipe line.



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.



ADJUSTMENT OF WATER REGULATOR

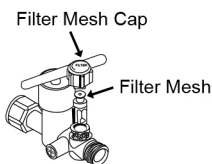
Turn the knob anticlockwise to have the maximum water volume in low water pressure areas. In high water pressure areas, turn the knob clockwise until the desired shower temperature is attained.



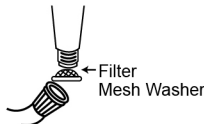
CHECK ELCB AT LEAST ONCE A MONTH

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

a) Stop Valve



b) Handshower



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 back to its original position before securing it with the Filter Mesh Cap.

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.

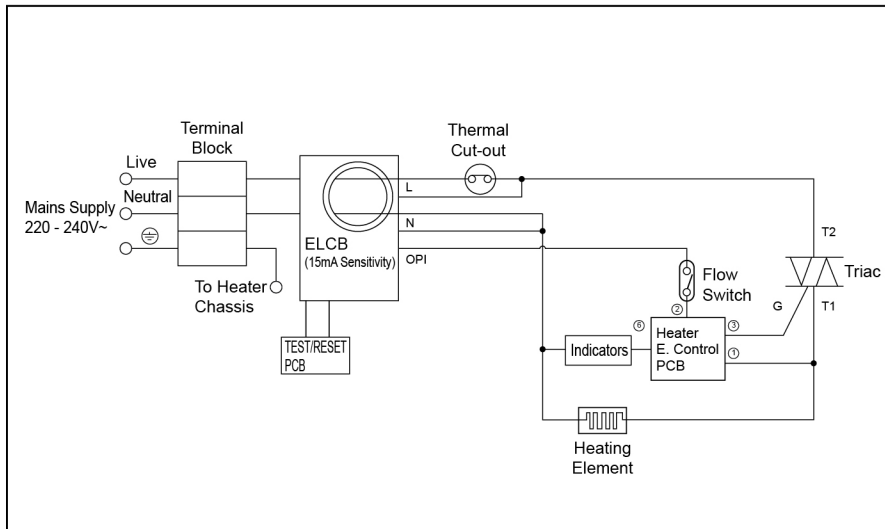
Note:

- 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	Malaysia	3.50kW 230V~ 50Hz 3.80kW 240V~ 50Hz
	Other Range	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 Water Pressure		20kPa (0.2 bar / 2.9 psi)
Maximum Water Pressure		0.38MPa (3.8 bar / 55 psi)
Heater Dimension		272mm (L) x 152mm (W) x 103mm (H)
Heater Nett Weight		1.2kg

SCHEMATIC WIRING DIAGRAM



Instruction manual can be downloaded from: www.alphamalaysia.com ALPHA SK-17E (M) H01B00182 13.08.2022

* 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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