Inspiration for better living

Operating
& Instruction
# Manual

Model :
- K2- DC 3624
- K2- DC 3612

K-2 series
Instant water heater

- New product
- Affordable to own
- Sleek and compact design
- SIRIM certified safety rating
- 3 classic colour options

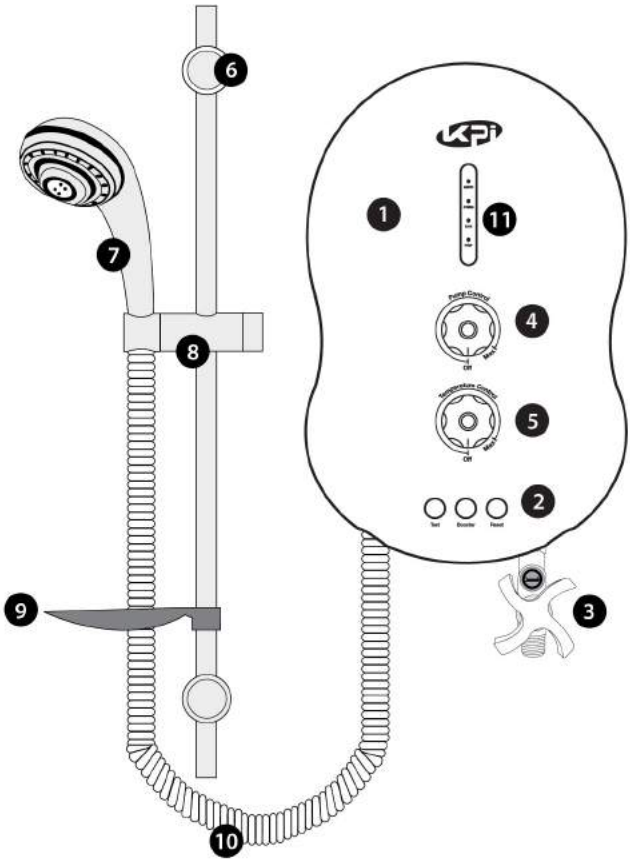
BUATAN MALAYSIA
MADE IN MALAYSIA

MS
SIRIM

Suruhanjaya Tenaga
Energy Commission

PART DESCRIPTION

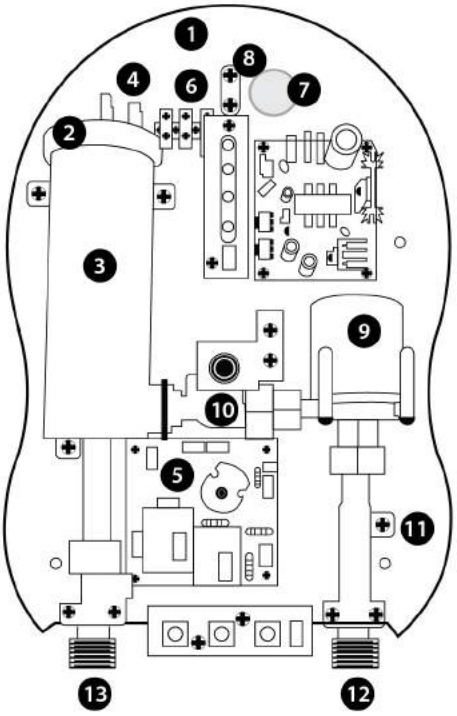
External Part Identification - K2-DC3624, K2-DC3612



1. Heater Cover
2. Test / Booster/ Reset Buttons
3. Water Valve
4. Pump Control Knob
5. Temperature Control Knob
6. Rail Support
7. Handshower
8. Shower Holder
9. Rotatable Soap Dish
10. 1.5m Flexible Hose
11. Earth/Power/ELCB/Pump Indicator

PART DESCRIPTION

Internal Part Identification - K2-DC3624, K2-DC3612



1. Heater Base
2. Heating Element
3. Heating Tank
4. Thermal Cut-out
5. Electronic Control Unit
6. Terminal Block
7. Side Cable Entry
8. Cable Clamp
9. Pump Assembly
10. Triac
11. Flow Switch Assembly
12. Water Inlet Connection
13. Water Outlet Connection

GENERAL INFORMATION

ELECTRICAL

1) All wiring MUST conform to local regulations. If in doubt, do consult a qualified electrician.
2) Installation must be carried out by a qualified electrician.
3) The heater must be permanently connected to the electricity supply through a double pole linked switch with a contact separation of at least 3mm in all poles incorporated in the circuit, and out of reach from the person using the shower.
4) The use of plug and socket is not recommended.
5) The correct size of wire conductor corresponding to different electrical loading should be used. The table below provides a reference for selecting the correct type of wire conductor.

Electrical Loading Table

Voltage (V~)	Power (kW)	Amperes (A)	Recommended Conductor Size (csa)				
			mm2	Conduit Cable	Flexible Cable	Fuse/ MCB (A)	ON/OFF Switch (A)
220 - 50/60 Hz	3.2	14.5	2.5	7/0.67mm	50/0.25	20	20
230 - 50/60 Hz	3.5	15.1	2.5	7/0.67mm	50/0.25	20	20
240 - 50/60 Hz	3.8	15.8	2.5	7/0.67mm	50/0.25	20	20

6) A typical electrical wiring connection is shown in Diagram 1.

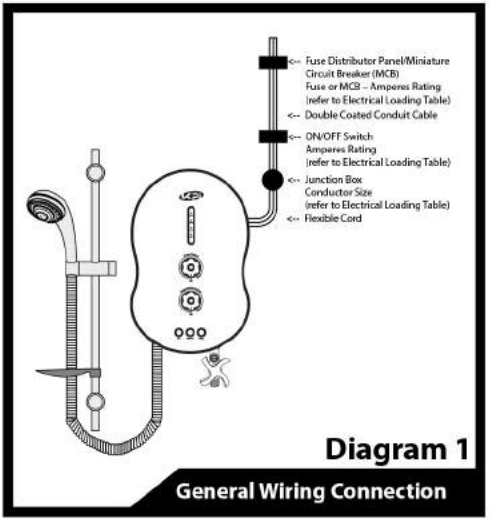


Diagram 1
General Wiring Connection

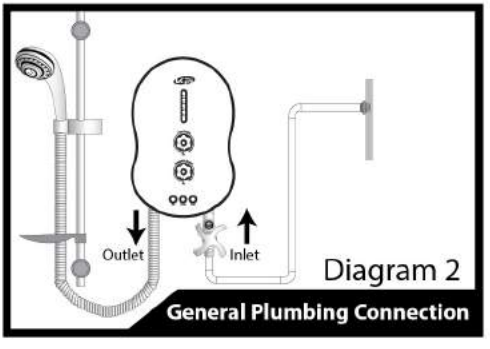


Diagram 2
General Plumbing Connection

GENERAL INFORMATION

■ WATER

1) The heater works at a minimum water flow rate of 2 litres/min. Note that an incoming water flow rate of 5 litres/min and above would optimise its performance.
2) A typical plumbing connection is shown in Diagram 2 (Pg 4).

■ SAFETY

1) Flow Switch Assembly - The water heater ONLY operates when there's water running and passing through the Magnet strip to trigger the Flow Switch.
2) Thermal Cut-out - This feature automatically cuts off the power supply if there is an abnormal rise in shower temperature e.g. if the water temperature goes above 55°C, the power will automatically cut off and the heater will stop operating immediately.
3) Heating Element - The double safety feature comes in the form of a small safety button on the heater tank which cuts off the power supply if there is an abnormal rise in shower temperature.
4) The built-in Earth Leakage Circuit Breaker (ELCB) would cut off the power supply to the heater in the event of leakage of as low as 15mA. In addition, the ELCB light will turn on when an earth leakage/ live and neutral current imbalance is detected.
5) The water heater casing is designed to provide a high degree of protection IP25 enclosure and prevent water from entering the heater during shower.

IMPORTANT NOTE

1) This heater is tested suitable for use in shower cubicles. However, do not install the heater unit where there is consistent water spray directly over the unit.
2) If the heater's ELCB trips during normal operation, switch off the mains supply and contact the sales agent for repair(s).
3) In the event the heater malfunctions, never attempt to repair the unit yourself. Call a qualified electrician.
4) The outlet point of this heater, hose and handshower act as a vent. They must not be blocked, obstructed or modified in any way. Fittings not recommended by manufacturer must not be connected. The use of unapproved accessories may not only affect its performance and safety of the user, but also invalidate its guarantee.
5) If there is a sudden reduction of incoming water, the shower temperature will increase. This does not indicate the fault of the heater. Adjust the Temperature Control Knob (to reduce heating power) or Water Valve (to increase flow) in order to get desired shower temperature.
6) Always test the shower temperature with your hand before showering.
7) Open, clean and clear the strainer of the water valve to remove any trapped stone or dirt that may cause sudden reduction of incoming water.
8) 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.
9) Do not leave your children, elderly, infirm or disabled persons unattended in the shower.

INSTALLATION PROCEDURES

- All plumbing work should be completed before proceeding to electrical wiring connection.
- The heater unit must be installed on solid wall to avoid the possibility of distorting the unit.
- Inlet and Outlet connections of the heater should not be reversed.
- Ensure that the water feeding into the Inlet connection be drawn from the household gravity water storage tank and not from the mains.

1) Mounting Position:

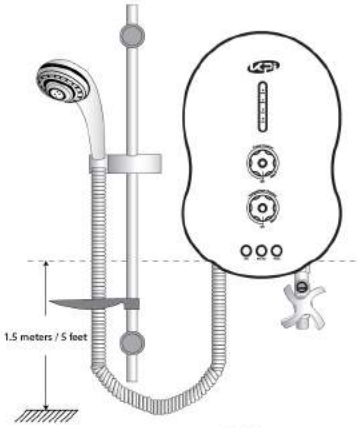
a) Turn off the water source.

b) Remove the screw at the bottom of the heater.

c) Remove the Heater Cover by lifting the bottom upward.

d) Mark out 4 mounting points on the wall.

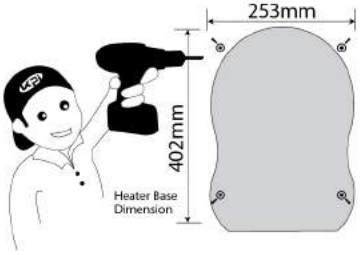
Note: It is recommended that the mounting at the bottom of the heater be 1.50 meters/5 feet above the floor of the bathroom. However, the height of the installation level is at the discretion of the user.



2) Water Heater Mounting:

a) Drill 4 holes with 6.0mm diameter drill bit.

b) Put in the wall plugs and install the heater on the wall with the screws provided.

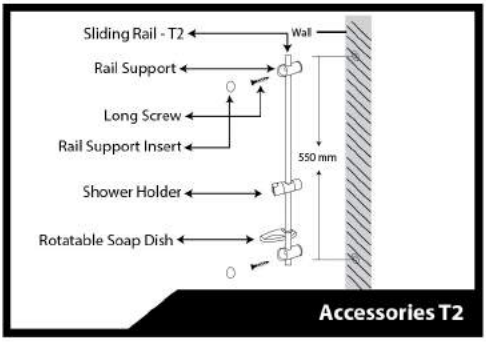


3) Shower Accessories Installation:

a) Fix the Rotatable Soap Dish, Shower Holder and Rail Support (Top and Bottom) on to the Sliding Rail.

b) Mark the position of the 2 holes of the Rail Support - be sure that the top portion is the same level if not higher than the top of the heater.

c) Drill the holes and mount the Shower Accessories with the wall plugs and screws provided. Insert the Rail Support Knobs on to the Rail Support.



INSTALLATION PROCEDURES

4) Connection of heater Inlet and Outlet:

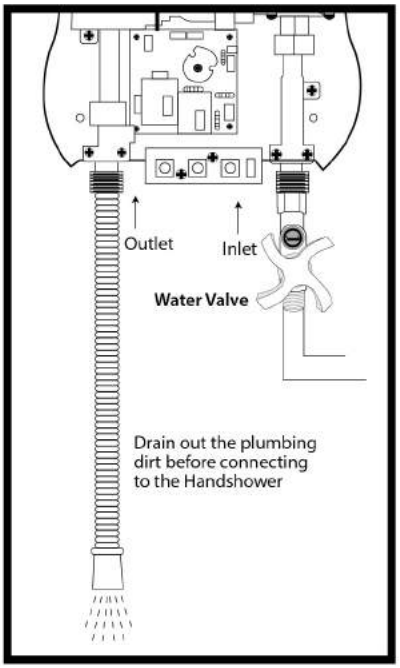
a) Connect the Water Valve to the heater Inlet by using the rubber seal provided.

b) Connect incoming water supply to the Water Valve. If necessary, make use of the sealing tape to prevent water leakage.

c) Connect the Flexible Hose to the heater Outlet.
(Do not connect the other end of the Flexible Hose to the Handshower at this stage.)

d) Turn on the water supply to drain out all the plumbing dirt and to fill up the heater tank.
(This step will prevent damage to the Heating Element.)

e) Connect the other end of the Flexible Hose to the Handshower.



- ***Do not apply excessive force to tighten any of the connections. Excessive force may cause damage to the connector.***
- ***Do not bend the Flexible Hose or install any accessories which can block the water flow at the heater Outlet.***
- ***Do not install valve at the heater Outlet.***

! *WARNING:*

- ***Metallic / chromed hose and conductive control valve shall not be used.***
- ***The appliance shall be earthed.***
- ***The appliance shall be permanently connected to fixed wiring.***
- ***The outlet shall not be connected to any tap or fitting other than those specified.***

INSTALLATION PROCEDURES

5) Electrical Connection:

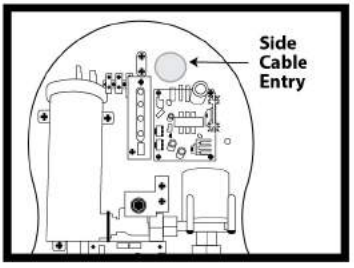
Caution:

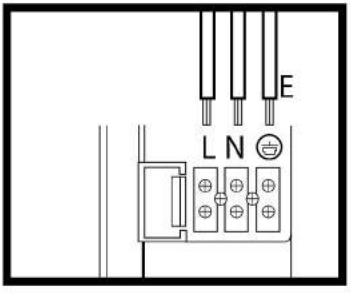
Switch off the mains before carrying out any service.

a) Remove the Heater Cover.

b) Insert the electrical cable through the rubber grommet from the entry located at the side. Connect the cable to the Terminal Block and fully tighten them as follows:
RED or BROWN -> LIVE (L)
BLACK or BLUE -> NEUTRAL (N)
GREEN/YELLOW or YELLOW/GREEN -> EARTH (E)

c) Replace the Heater Cover.
i) To ensure correct position, turn the Electronic Control Unit and Pump Control Unit (at Heater Base) to the 'Off' position.
ii) Install the heater cover and ensure that the Temperature Control Knob and Pump Control Knob are aligned (point to 'Off') to their control unit accordingly.
ii) Secure the screw.





6) Methods Of Using

a) Operating Of The Unit

Switch on the power supply, the unit will take self-inspection for 2s. The "ELCB" green indicator light will turn on (under the condition of no electricity leakage). When the water flow exceeds 2L/min, switch on the Temperature Control Knob and turn it clockwise, the heating indicator light will come on and the unit will start to work.

b) *Leakage Testing*

When the water heater is working normally (including working state of Pump), press the 'Test' button. If there is no leakage, the 'ELCB' green indicator light will be off and the unit will not heat up. Press the 'Reset' button to cancel testing. The 'ELCB' green indicator light will turn back on and the unit will resume its function. If there is leakage, pressing the 'Reset' button will not work in cancelling the leakage testing. The flickering of the 'Earth', 'ELCB' and 'Power' indicator lights means that there is a problem with the water heater. All the buttons will not work, the heating and the pump will stop functioning.

c) *Electricity Leakage Protection*

If the electricity leakage testing circuit is working normally, the 'Earth', 'ELCB' and 'Power' indicator lights will flicker and the water heater will not heat up when the leakage current is above 7.5mA. Do not use the water heater if there is electricity leakage. (If electricity leakage is tested, the red and green indicator lights will be off, stop the heater and switch off the pump system.)

REMINDER :
It is recommended that you check the condition of your heater once every month by pressing the Test and Reset buttons.

OPERATING INSTRUCTIONS

STEP 1 – Switch on the heater switch outside the bathroom. Turn on the Water Valve. The heater should start functioning.

STEP 2 – Adjust the water flow to the desired volume by adjusting the Water Valve. If the water pressure is not strong enough, turn the Pump Control Knob clockwise to adjust the water pump strength. The pressure should get stronger as the Knob is turned clockwise to 'Max'. If the water pressure is high, turn 'Off' the Pump Control Knob to achieve hotter shower.

STEP 3 – Adjust the temperature setting to the desired temperature by turning the Temperature Control Knob. The shower should get warmer as the Knob is turned clockwise to 'Max'.

STEP 4 – Normal cold shower can be selected by setting the Temperature Control Knob to 'Off' position.

STEP 5 – Turn off the heater by turning off the Water Valve, the heater will stop working when there is no water flow.

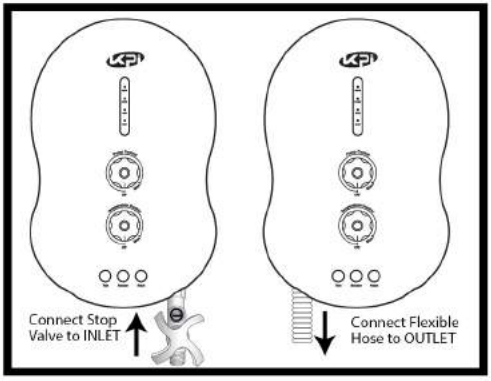
STEP 6 – Turn off the heater switch outside the bathroom.

Notes:

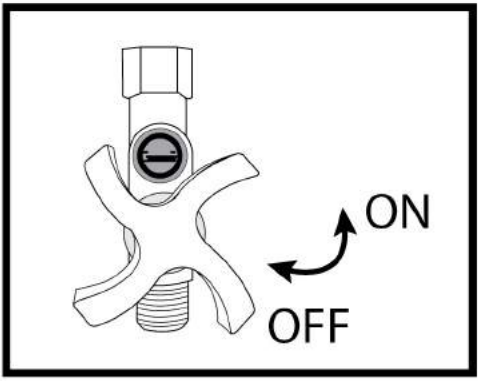
- The shower water may not be hot enough even at 'Max' in area where the water pressure is exceptionally high and cold. This can be remedied by reducing the water inflow or replacing the unit with one that is of higher power (if it is approved by relevant authorities).
- The Built-in Pump can be independently 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.
- The Booster is specially designed for low pressure areas where the water pressure is too weak to trigger the Built-in shower Pump. Just press the Booster Button and the Shower Pump will spring into action.
- It is recommended that the pump be operated at intervals of 30 minutes with 30 minutes rest in between.

OPERATING INSTRUCTIONS

■ Connection of Heater INLET & OUTLET :



■ Water Valve:



■ Temperature Control Knob :

Turn left to decrease heater power.
Turn right to increase heater power.

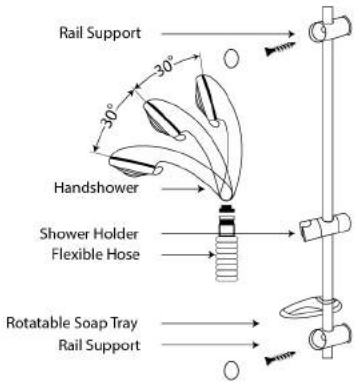
■ Built-in ELCB Test :

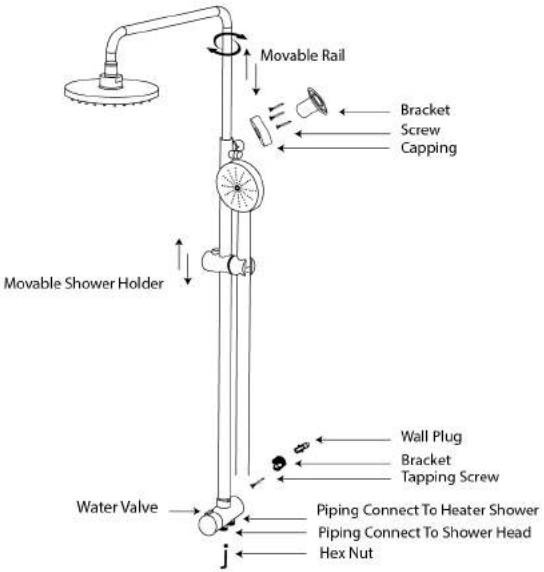
Press 'Test' button: Heater should trip and cut off the power supply.
Press 'Reset' button: Heater should resume its normal function.
**If the above steps prevail, the ELCB is functioning normally.*

■ Pump Control Knob

Turn left to decrease water pressure.
Turn right to increase water pressure.

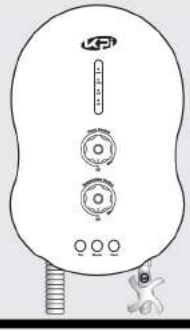
SHOWER ACCESSORIES :





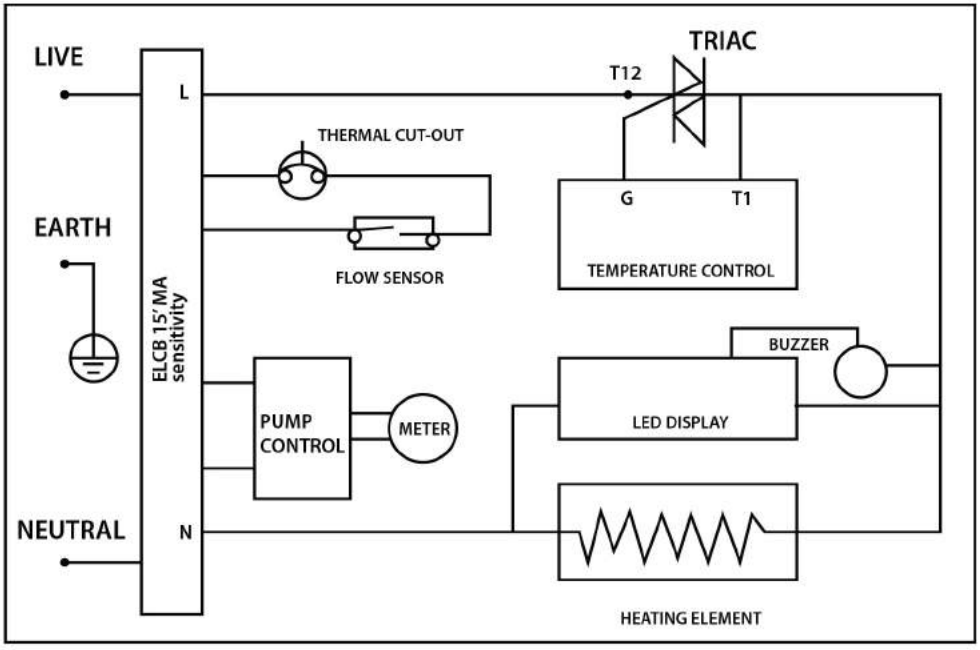
USER GUIDE

SPECIFICATIONS



Heater Power Rating	3.6KW 240V 50Hz (**DC 3624 /DC 3612**)
Water Connection	ø15.0mm (1/2" BSP)
Operating Condition	Open Water Valve
Minimum Water Flow	2.0 Litres/Minute
Maximum Water Flow	8.0 Litres/Minute
Minimum Water Pressure	9.8kPa (0.1kgf/cm²)
Maximum Water Pressure	380kPa (3.87kgf/cm²)
Degree Of Protection	IP25
Heater Nett Weight	K2-3624 (DC Pump 24) 2.15kg
	K2-3612 (DC Pump 12) 1.90kg

SCHEMATIC WIRING DIAGRAM - DC3624, DC3612



Authorised Dealer

Manufactured by :
KPI ELECTRICAL MANUFACTURING SDN BHD (1269030-M)
No. 18 & 20, Jalan Industri SMD,
Taman Perindustrian SMD @, Kundang,
48020 Rawang, Selangor
Tel : 03- 6090 3836/ 3826
Fax : 03- 6090 3816
Email : info@kpielectrical.com.my

www.kpielectrical.com.my