TECHNICAL DATA

Model	NERO
Construction	Open Outlet
Rated Power Input	4.5kW
Rated Voltage	240V
Rated Frequency	50/60 Hz, a.c.
Rated Pressure	0MPa
Protection Class	1
Enclosure	IP25 Splash Proof
Mode Of Operation	Continuous Operation
Main Connection	Permanent Connection
Dimensions	360mm(H) x 240mm(W) x 91mm(D)
Pipe Connection	Ø15.0mm (1/2" BSP)
Weight	1.95kg
Minimum Water Flow Rate	2 l/m
Minimum Inlet Water Pressure	0.2 Bar (0.02MPa)
Maximum Inlet Water Pressure	3.0 Bar (0.3MPa)

DUE TO CONTINUOUS IMPROVEMENT AND UPDATING, SPECIFICATIONS MAY BE ALTERED WITHOUT PRIOR NOTICE.

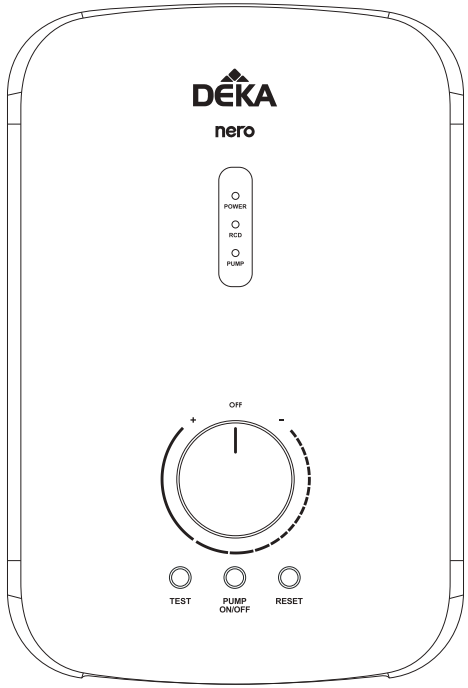
20250625-00

DEKA®

Innovate The Future

Instant Water Heater

USER INSTRUCTIONS MANUAL

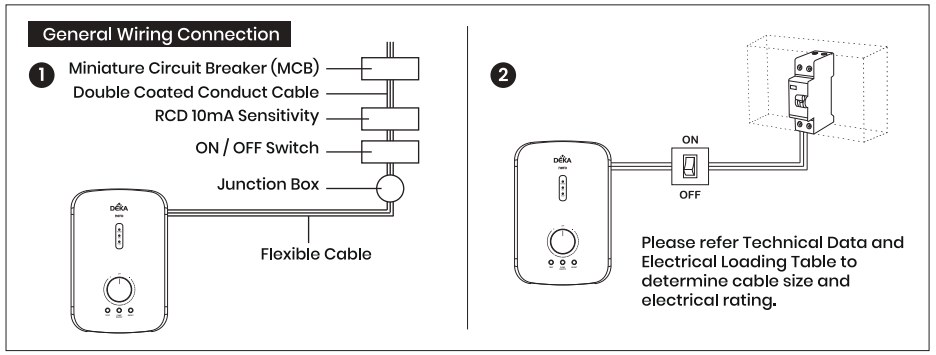


Model : NERO

⚠ SAFETY PRECAUTION

1. Check the built in RCD in the water heater and the RCD at main switch board of the premise at least once a month.

2. The installation shall comply with GP/ST/No.6/2016, Guideline for the Design, Installation, Inspection, Testing, Operation and Maintenance of water heater systems by energy Commission.



3. Only fixed and permanent connection is allowed. Plug, socket and undersize cable shall not be used. In the case where a direct connection cannot be made to the water heater, only correctly size approved connector and connection box shall be used.

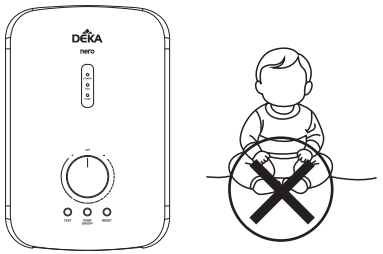
4. An approved, correctly size (MS 60335-1: 2013) copper flexible cable with maximum 1.5m length, shall be used to connect the water heater to the connection box.

5. Minimum cable size must be not less than 4.00mm^2.

6. Metallic / chromed hose and conductive control valve shall not be used.

7. Individual including children with reduced physical, sensory or mental capabilities or lack of experience and knowledge, must not be allowed to use the water heater (unless they have been given supervision or instruction).

8. Children should be supervised to ensure that they do not play with the water heater.

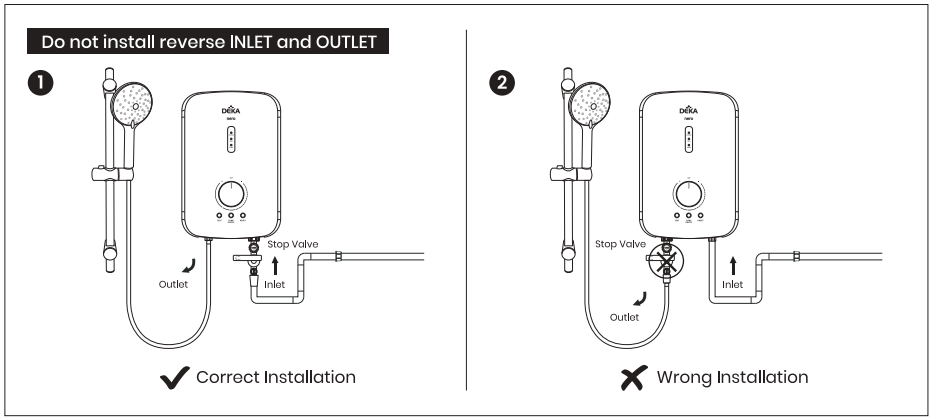


NOTES

NOTES

9. Do not connect the OUTLET of water heater to any tap or fitting other than specified in the instruction manual.

10. Do not install reverse INLET & OUTLET and Stop Valve of water heater.



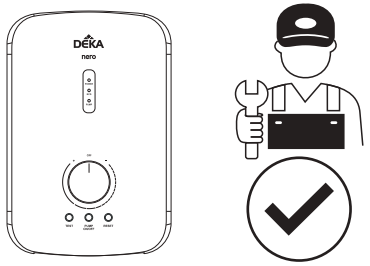
11. Do not connect the INLET of water heater from any other water heating system.

12. This appliance is not to be used for a portable water supply.

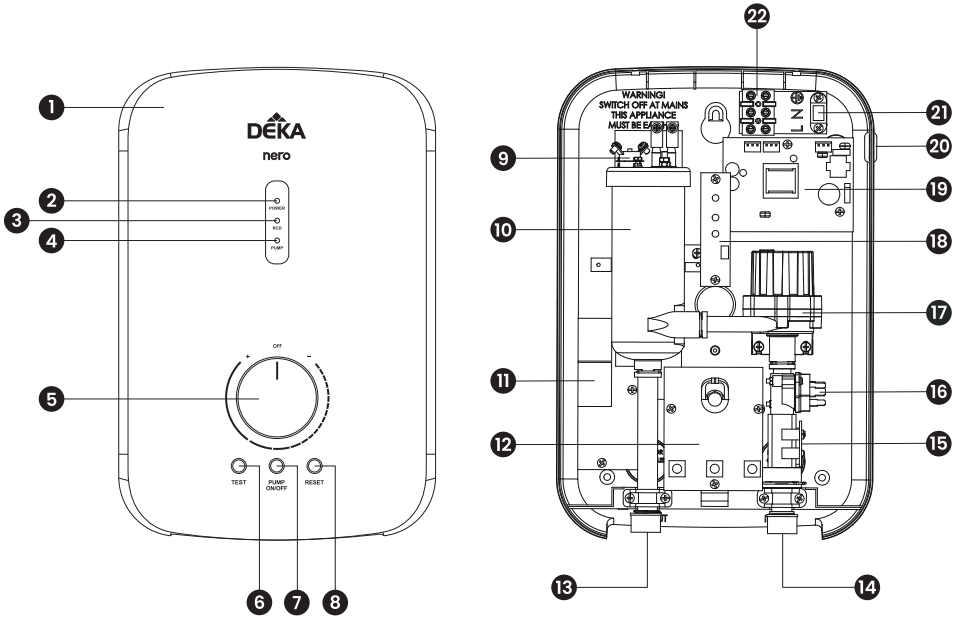
13. Do not use water heater if minimum inlet water pressure less than 0.02MPa (0.2 bar) or maximum inlet water pressure is higher than 0.3MPa (3 bar).

14. The water heater should be installed by a qualified service electrician.

15. All repair and servicing must be done by a competent and qualified service technician.



PARTS DESCRIPTION



1. Front Cover
2. POWER Indicator
3. RCD Indicator
4. PUMP Indicator
5. Temperature Control Knob
6. RCD Test Button
7. Pump ON/OFF Button
8. RCD Reset Button
9. Thermostat
10. Heater Tank
11. RCD PCB
12. Main PCB
13. Water Outlet Connector
14. Water Inlet Connector
15. Flow Switch Assembly
16. Triac
17. DC Pump
18. Indicator PCB
19. Power Supply PCB
20. Rubber Grommet
21. Cable Clip
22. Terminal Block

TROUBLESHOOTING

Important Safety Reminder:
Before attempting any troubleshooting procedures, please remember the following safety precautions:

1. **Qualified Personnel:** Troubleshooting tasks should only be carried out by individuals who are competent and knowledgeable about the equipment or system being worked on.
2. **Power Supply:** Always switch off the power supply before starting any troubleshooting or maintenance work. This helps prevent electrical accidents.
3. **Electrical and Plumbing Work:** Do not attempt any electrical or plumbing work unless you are confident in your abilities to do so safely. Mishandling these systems can lead to injury or property damage.

If you are uncertain about any aspect of the troubleshooting process, please seek assistance from a qualified professional.

ISSUES	POSSIBLE CAUSES	SOLUTIONS
Water too cold or not hot as desired	Decrease in ambient water temperature.	Switch increases the heater temperature and reduces the water flow rate.
	Defective heating elements.	Contact Deka Customer Service.
Water too hot	Temperature setting too high.	Switch reduces heater temperature. Release input water flow rate.
	Defective PCB control.	Contact Deka Customer Service.
Input power no light	Interrupted main electrical supply.	Contact Deka Customer Service.
	No electric current flowing through the unit.	Contact Deka Customer Service.
	RCD tripped.	Contact Deka Customer Service.
	Insufficient water supply to trigger flow switch.	Unit requires minimum 2L/min water flow rate.
	Thermostat tripped.	Let the cold water flow through water heater until power indicator light up.
Water flow too low	Interrupted water supply.	Check the incoming water flow rate. Check the stop valve is closed or open.
	Shower head is blocked.	Clean the shower head.
	Inlet filter is blocked.	Clean the stop valve's filter.
	Flexible shower hose twisted.	Check the water heater hose passage for any obstructions. Replace it if necessary.

1. **Cable Sizing Recommendation:**
   To keep things safe and working well, it's important to use the right size of cable.
   Check out the Electrical Loading Table below to see which size you need for your setup:

ELECTRICAL LOADING TABLE

Voltage (AC)	Power (kW)	Current (A)	Minimum Conductor Size (csa)			On/Off Switch (A)	Fuse / MCB (A)
			mm²	Conduit Cable	Flexible Cable		
240~ 50/60Hz	3.75	15.6	2.5	7 / 0.67 mm	50 / 0.25 mm	20	20
	4.2	17.5	4.0	7 / 0.85 mm	56 / 0.25 mm	20	20
	4.5	18.8	4.0	7 / 0.85 mm	56 / 0.25 mm	20	20
	5.2	21.7	4.0	7 / 0.85 mm	56 / 0.30 mm	32	32
230~ 50/60Hz	3.3	14.3	2.5	7 / 0.67 mm	50 / 0.25 mm	20	20
	4.5	19.6	4.0	7 / 0.85 mm	56 / 0.25 mm	32	32
220~ 50/60Hz	2.5	11.4	2.5	7 / 0.67 mm	50 / 0.25 mm	20	20
	3.5	15.9	2.5	7 / 0.67 mm	50 / 0.25 mm	20	20
	4.5	20.5	4.0	7 / 0.85 mm	56 / 0.30 mm	32	32
	5.5	25.0	4.0	7 / 0.85 mm	56 / 0.30 mm	32	32

2. **Safety Reminder:**
   Using a double pole switch along with the appropriate Miniature Circuit Breaker (MCB) is crucial for ensuring safety and preventing electrical issues. If you're ever uncertain about any step in the process, it's best to seek guidance from a qualified professional.

3. **Thermostat Safety Cut Out**
   The thermostat will automatically cut off the power supply when reach abnormal temperature.

   To reset the water heater and return it to its operational state, follow these steps:
   1. **Remove the Front Cover:** Carefully take off the front cover of the water heater to access the internal components.
   2. **Press the Reset Button:** Locate the reset button positioned at the center of the thermostat. Press this button to reset the water heater.

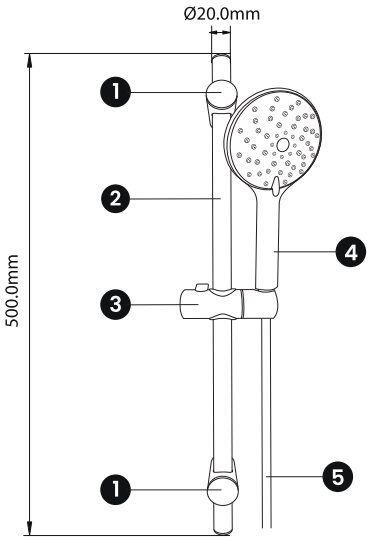
   By completing these steps, you can reset the water heater and restore it to its normal operating condition.

Manual Reset Button

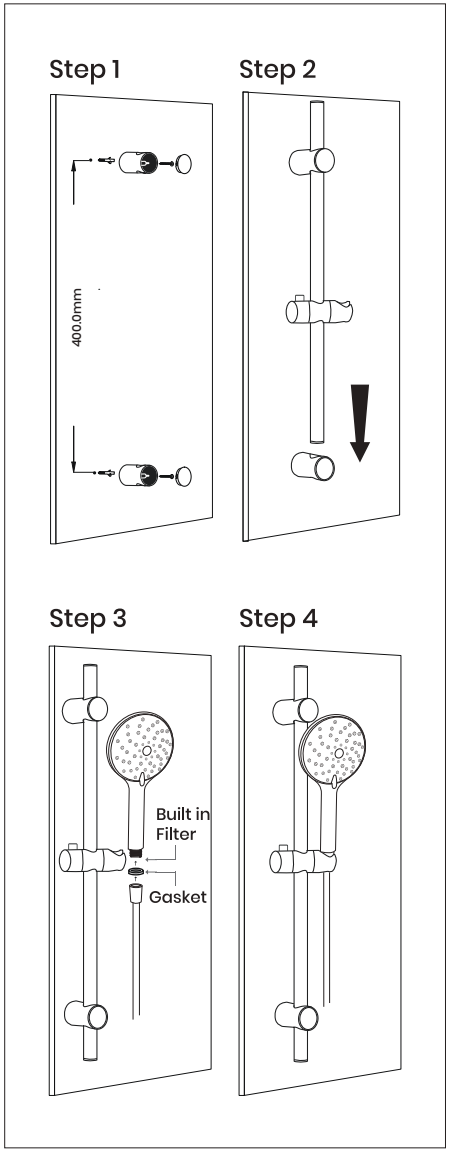
NOTE :
If the button is not pressed and there is no clicking, then you should wait until the water heater cools down to the initial temperature.

⚠ WARNING
If you're unable to disassemble the thermal switch to reset it, it's best to seek professional help. Trying to dismantle it without the proper knowledge or tools can be dangerous. A qualified technician can assist you safely and efficiently.

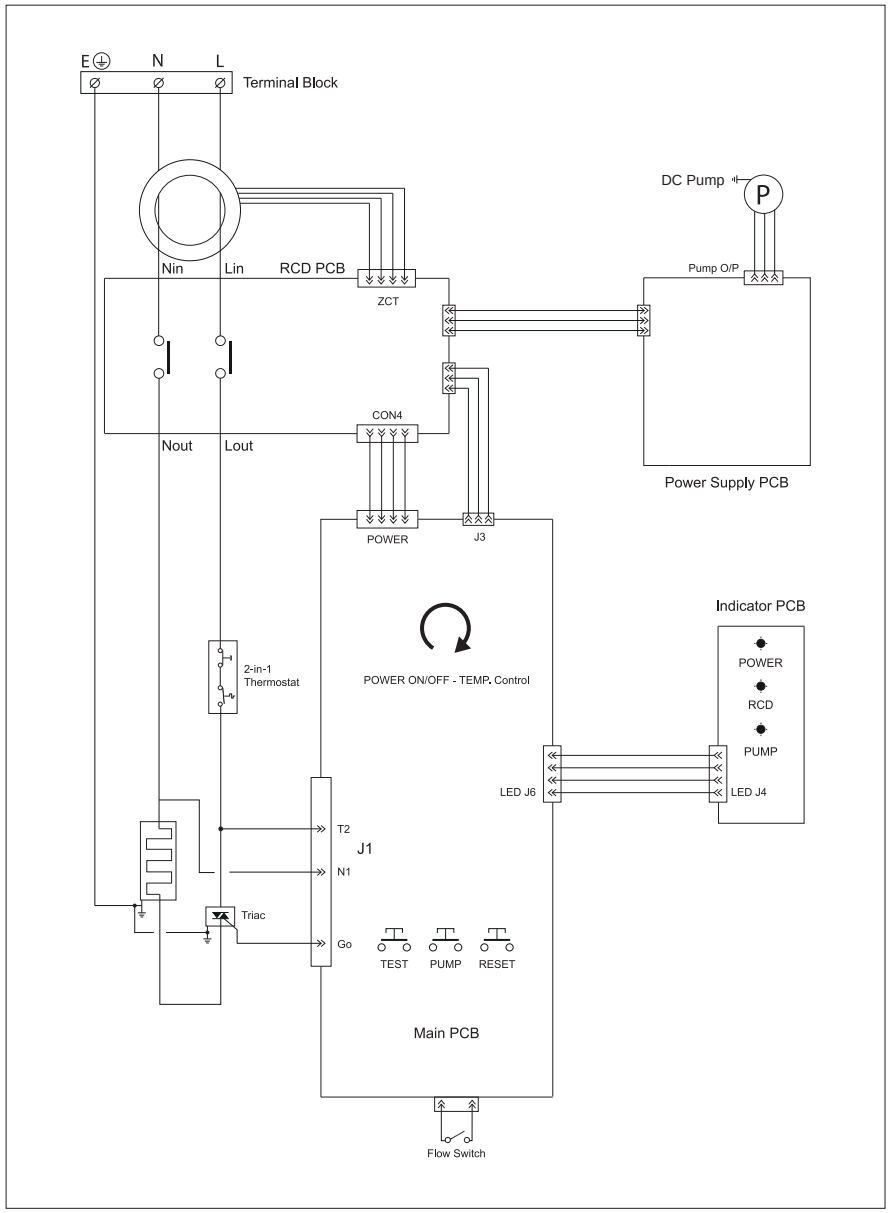
SLIDING SHOWER ACCESSORIES



1. Wall Mounting Bracket
2. Shower Rod
3. Shower Holder
4. Hand Shower (3 Way)
5. 5ft Shower Hose



SCHEMATIC WIRING DIAGRAM



STEP TO OPERATE THE HEATER

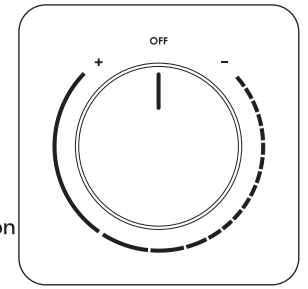


Fig. 12

1. **Turn the unit on :**
   - Turn on the heater switch.
   - Turn on the water supply.
   - Turn the temperature control knob in clockwise direction towards **+ (MAX)** and adjust to the preferred water temperature.

2. **Turn the unit off :**
   - Turn the temperature control knob in anti-clock wise direction back to **OFF.**
   - Turn off the water supply.
   - Turn off the heater switch.

3. **Turn off the 3-in-1 stop valve to temporarily turn off water supply (Fig. 13) :**
   - When you want to apply soap during shower, you can turn off the water supply temporarily by turning off the stop valve.
   - Be careful when turning on the water supply to resume using the water heater. The first flush of water will be very hot.
   - Turn the shower head away from you to avoid any contact from the first flush of hot water.
   - Turn on the water supply and test that the water temperature is suitable before you resume using the water heater.

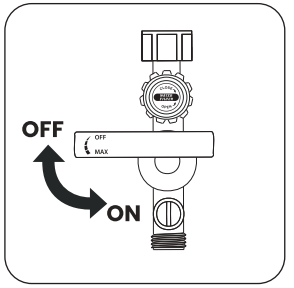


Fig. 13

Important : Switch off the electricity supply after showering.

OPERATING PROCEDURE

TEST RUN OF THE HEATER

Important:
Turn on the stop valve to let water flow through the heater. This helps release any trapped air in the system. Before using any heat settings, make sure the water heater is completely filled with water.

1. Switch on the electricity power supply, the green **RCD** indicator will light up **(Fig. 9)**.
2. Turn on the temperature control **(Fig. 10)**, the red **POWER** indicator will light up.
3. Turn on the pump by pump button located at the heater **(Fig. 11)**, the yellow **PUMP** indicator will light up.

TEST & RESET

RCD Test and Reset Buttons (Fig. 11)

Check the Built-in RCD as follows:

- Press the "**TEST**" button, the heater unit should trip and cut off the power supply.
- Press the "**RESET**" button to reset the heater unit return to normal condition.

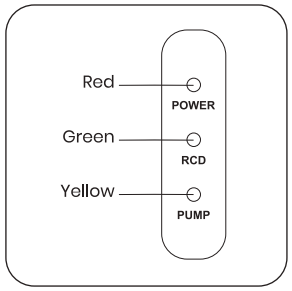


Fig. 9

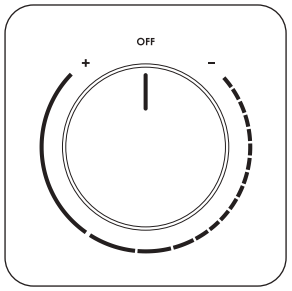


Fig. 10

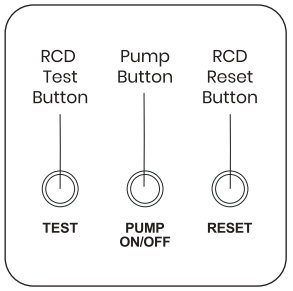


Fig. 11

Important :
Consumers are requested to do the above step every 3 months to ensure the heater units are functioning well and safe to use.

Warning :
If the heater cannot be reset, please contact the DEKA service team for service checking.

PRODUCT INSTALLATION

UNIT INSTALLATION INSTRUCTIONS

THIS APPLIANCE MUST BE EARTHED

1. Installation must be carried out by a qualified electrician with close reference to the operation manual and in compliance with the local regulations.
2. Take note of the electricity and water supply location, and find a suitable place for the water heater unit. Make sure the unit is in an upright position.
3. The control knob is an integral part of the cover, do not attempt to remove it.

   Mark mounting position (Fig. 1):
   - Remove the screw (A) at the bottom and remove the front cover from the heater base.
   - Use the heater base as a template and mark the three mounting points on the wall.
   - Drill the holes and insert the wall plugs.
   - Mount the heater unit firmly in position with the screws provided.

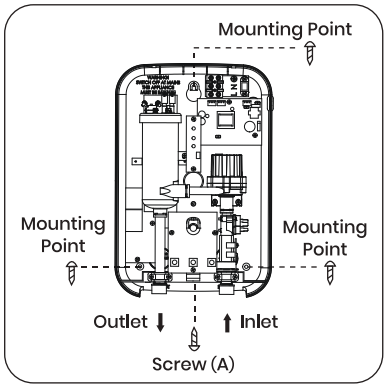


Fig. 1

PLUMBING CONNECTION

Important : Plumbing works should be completed before proceeding to electrical wiring connection.

1. Inlet and Outlet connection of the heater unit should not be reversed **(Fig. 2)**.
2. Connect the stop valve to heater inlet connector or with use of the filter mesh provided to prevent water leakage. Use correct tools to tighten the connection and be careful not to over tighten and damage the plastic nut.
3. Connect the incoming water supply to stop valve using 15mm copper pipe with compression fitting.
4. Connect flexible hose to the heater outlet connector.
5. Ensure that the backplate of the unit is flat on the wall and positioned squarely. Tighten the fixing screws.

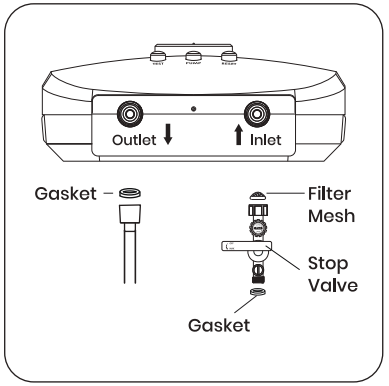


Fig. 2

Warning : At this stage no electricity can flow through the unit.

PRODUCT INSTALLATION

ELECTRICAL CONNECTION

Important : Switch off the main supply before carrying out any electrical work.

1. This appliance must be earthed. Improper grounding could cause electrical shock.
2. The water heater must be permanently connected to the electricity supply, directly from the consumer unit via double poles linked switch with a minimum contact gap of 3mm in both poles.
3. The ON/OFF switch of the water heater must be located outside the bathroom.
4. The wiring must be connected to the switch without the use of plug or socket outlet.
5. The cable size required is determined by the kW rating of the water heater and the distance between the water heater and consumer unit. **(Refer to Electrical Loading Table)** When in doubt, always consult a qualified electrician.
6. The electrical rating of the water heater is shown on the rating label within the unit. **(Refer to Technical Data)**

PROCEDURE

1. Poke the electrical cable through rubber grommet by cutting a hole at the rubber grommet and lead the cable to cable clip **(Fig. 3).**
2. Connect the cable to the Terminal Block as follows **(Fig. 4)** :
   - Live Cable to terminal marked **L**
   - Neutral Cable to terminal marked **N**
   - Earth Cable to terminal marked **E** ⏚

   Important :
   Ensure that the terminal block screws are **fully tightened** and no cable insulation is trapped under the screws. Loose connections can result in cabling becoming overheated.
3. The cable clip must be used to secure the cable, the clip suitable for 6mm² cable or can be reversed for 10mm² cable.
4. If cable larger than 10mm² is used, do not use the cable clip but the cable must then be secured either by routing through conduit or in trunking or embedding in the wall, in accordance with IEE regulation.

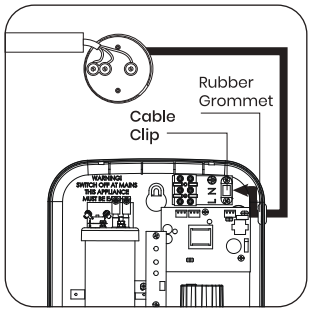


Fig. 3

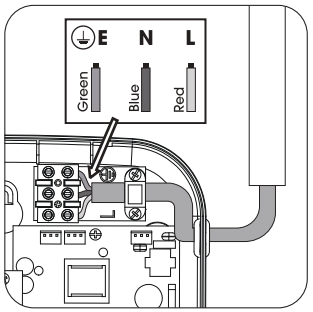


Fig. 4

COMMISSIONING

Important : Do not switch on the electricity supply until the following procedure has been completed and the front cover has been fitted.

1. The first operation of the shower is intended to flush out any remaining dirt particles in the unit, and to ensure the heater unit contains water before the heating element is switched on.
2. This operation must be carried out with the flexible hose screwed to the outlet but without the hand shower attached. **Ensure the outlet of the flexible hose is able to drain out the waste water (Fig. 5).**
3. Turn on the main water supply, check if there are any water leaks from the pipe line **(Fig. 5).**
4. Secure the front cover in position with screws. **Do not overtighten.**

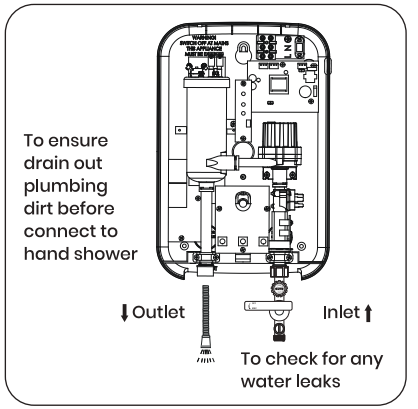


Fig. 5

REPLACING THE FRONT COVER

Important : While putting back the front cover, please take note of the procedure shown below.

1. Turn the Temperature VR Knob to "**OFF**" position at the heater base **(Fig. 6).**
2. Replace the front cover and turn the Temperature Control Knob at the front cover to "**OFF**" position to align with the VR Knob **(Fig. 7).**
3. Secure the front cover with the screw (A) as shown in the figure below **(Fig. 8).**

Warning : The water heater is now ready to use. We recommend that you allow your water heater to reach a stable temperature before you start to shower.

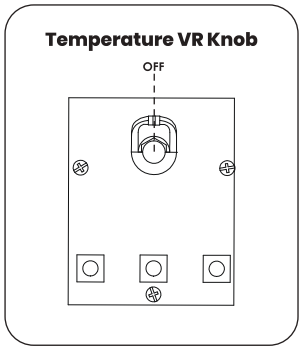


Fig. 6

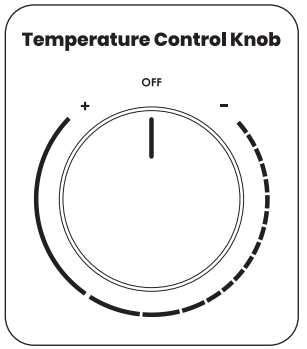


Fig. 7

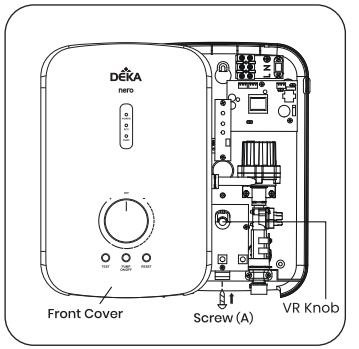


Fig. 8