

**MODENA**

# **User Manual Book Electric Instant Water Heater**

**Veloce Series**  
EI 2D B, EI 2 W

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This manual book explains everything you need to know about your new product. Please contact our Customer Care should you need further assistance through [www.modena.com](http://www.modena.com).

## PART 1: IMPORTANT SAFETY INFORMATION

To prevent personal injury, injury to others, and property damage, the safety instructions below must be followed. Incorrect operation due to the failure to follow the instructions will cause harm or damage.

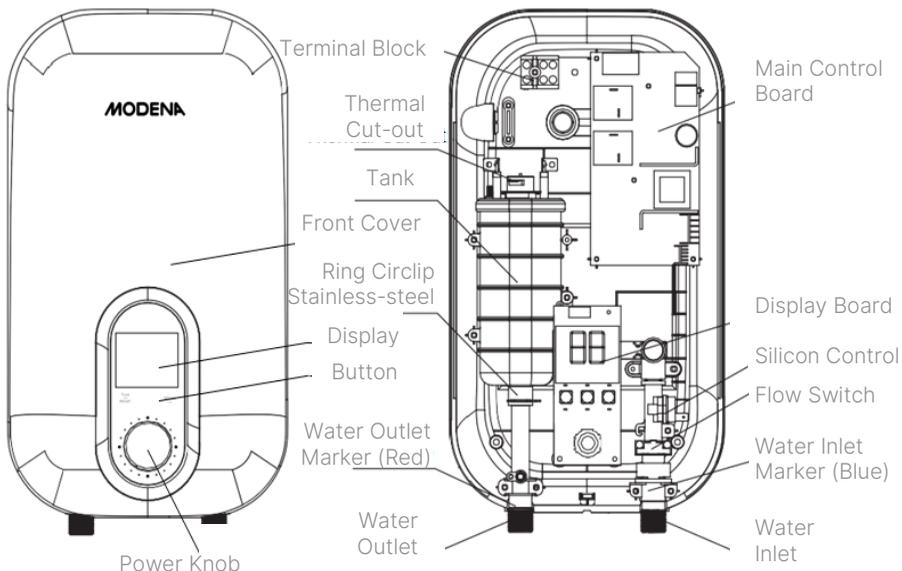
### Special Caution

- This water heater is household-based usage, and it can be installed in every area with hot water necessity.
- Plug is not used for this water heater; this water heater must be connected directly with the power switch that comes with leakage-protection. Please distinguish the live line (red/brown), the neutral line (blue) and the earth line (green/yellow) during installation.
- Do check whether the ampere (A) of the household wiring is enough before the installation, and particular circuit must be used during installation.
- Before installing this water heater, make sure the *grounding* electrode on the socket is reliably grounded without electricity.
- The hot water from this water heater may cause scald; therefore, please test the temperature of the hot water before use.
- The distance between the installed water heater and the water output should be as nearby as possible to avoid loss of heat.
- This electric instant water heater may be damaged if the water hardness is too high. To ensure the appliance durability, please install and put it into use on condition that the local water hardness is less than 450mg/L (CaCO<sub>3</sub>).
- In time of lightning/thunder, switch “Off” the Miniature Circuit Breaker (MCB) in advance to protect the water heater against possible damage.
- Inspect on the built-in ELCB (once a month) to avoid a hazard to users such as damage to property, serious injury or death.
- Do cut-off the power (electricity) supply before any maintenance. Any maintenance or adjustment towards this appliance by non-professional is highly prohibited.
- The damaged power cord must be replaced with a good power cord provided by the manufacturer, and the replacement should be done by a qualified technician or engineer or professionals of the similar products.

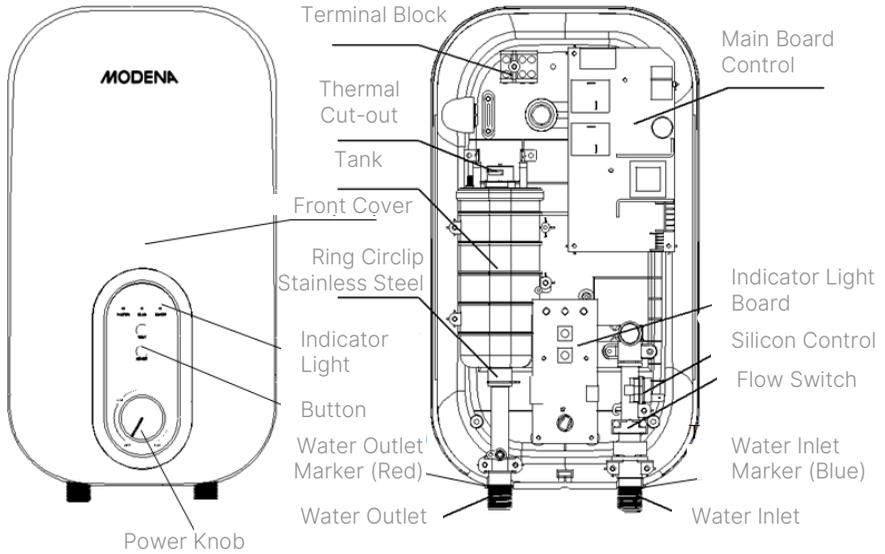
- In order to avoid a hazard due to inadvertent resetting of the Earth Leakage Circuit Breaker (ELCB), this appliance must not be supplied through an external switching device, such as timer or connected to a circuit that is regularly switched “On” and “Off” by the utility.
- This water heater is equipped with adjustable flow capacity safety valve. For the safety use, please do not change the location of the water heater installation and do not block its water outlet.
- MODENA will not be liable for any responsibility regarding to any improper installation and incorrect operation of this appliance.
- This water heater can be used for other purposes (e.g. washing hands, dishes or foods, and so on)
- When the water heater is used by children, elderly, or person(s) with special needs for their mental and physical capabilities, the heat-checking of water temperature by using hand from time to time is necessary.
- Children should be supervised to ensure that they do not play with this appliance.

## PART 2: NAME OF PARTS

### EI 2D B



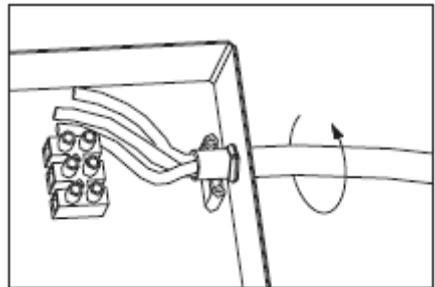
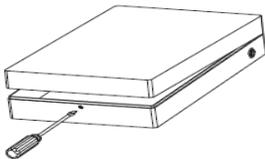
## EI 2 W



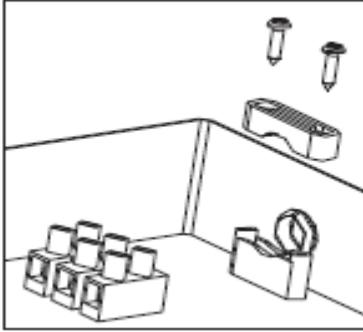
## PART 3: INSTALLATION

### Power Cord Installation

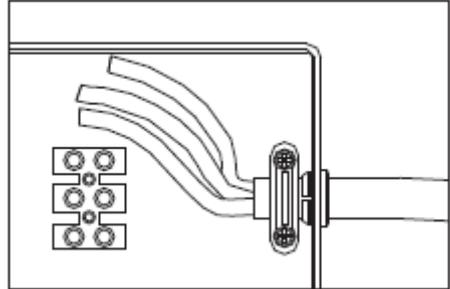
1. Remove the screws at the bottom of the unit. Lift up the main switch knob and the power knob to make it free. Remove the front plate (the cover) gently.
4. Insert the power cord (lines) into the jacket for installation of the wire pressing plate.



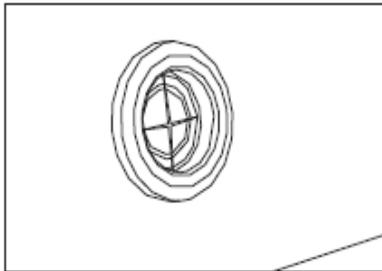
2. Remove the pressing plate of the power cord and keep the screws.



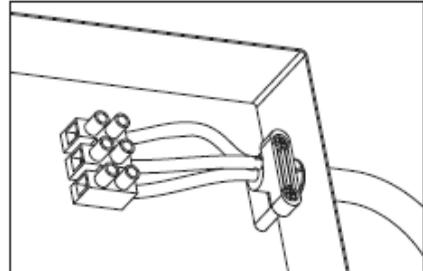
5. Tighten the wire-pressing plate with the screws to the primary position. Make sure that the power cord doesn't come loose when it is pulled at 60N force.



3. Gash the middle of the outer jacket with a sharp knife in order to insert the power cord (lines).



6. Connect the end of the power cord to wiring terminals; the method is as shown in the image.

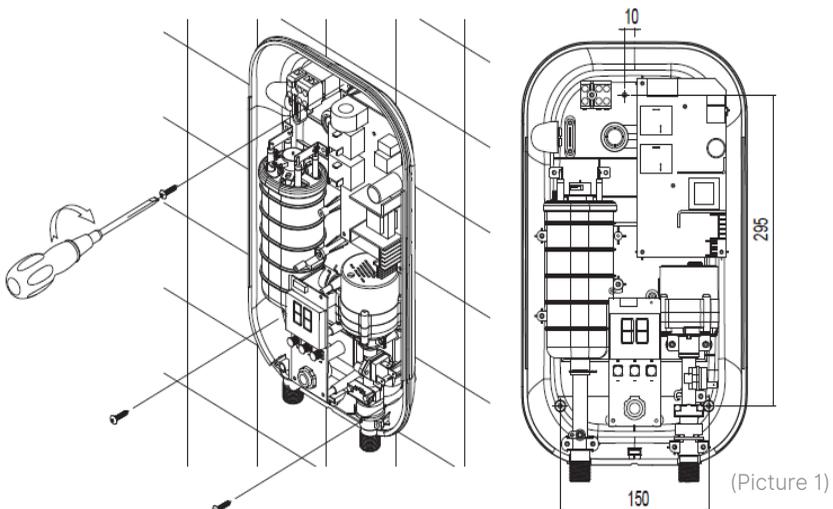


### NOTE

The installation of every ends of neutral line (blue), live line (brown /red) and earth line (green/yellow) should be corresponding to the other end on wiring terminals

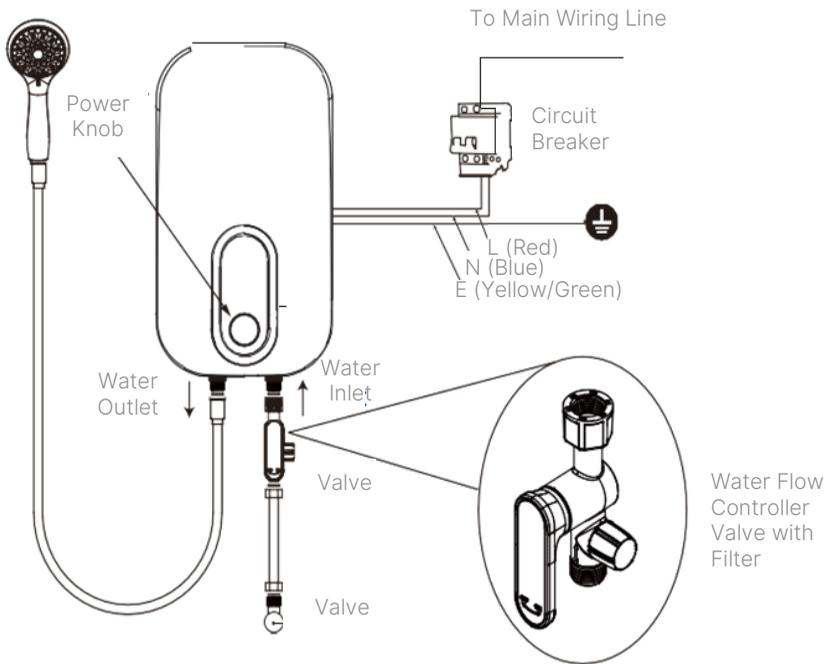
## Water Heater Installation

1. Determine the installation position of the water heater according to the length of the power cord / the position of switch (the distance from the floor to bottom part of the appliance should be  $\geq 1.6\text{m}$ ).
2. Make sure the distance between the appliance and the surrounding wall is not less than 300mm, so that to have enough space for maintenance purpose.
3. Determine the position of three fixing screws (that is attached with the wrapping carton). Make three holes with corresponding depth to the wall (by means of a drill) and insert a plastic wall anchor (*Fischer*) into the hole.
4. Tighten one of the screws on the top side of the appliance, and make sure that there is certain distance between the head of the screw and the wall (see below picture).
5. Install the appliance on the wall and tighten two screws at the bottom, connect the cords and re-install the top cover with the screws.



## Plumbing Connection

1. The water valve that is equipped with filter should be installed at the water inlet of the appliance, and the sealing ring equipped with filter should be installed at the end of the valve. (See below Picture).
2. Shower flexible hose should be connected with the hot water outlet and the shower head separately; attached sealing ring should be installed at the end of the hose.



### **WARNING!**

Do not use metallic / chromed hose and conductive control valve shall

## Power Supply Connection

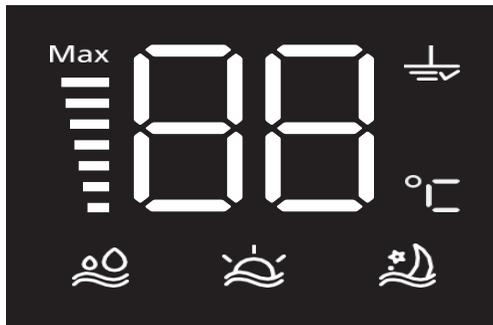
1. Adjust the power controller knob to “OFF”.
2. Choose circuit breaker (such as Miniature Circuit Breaker/MCB) that is equipped with leakage protection according to the power of the water heater.
3. When connecting the water heater to the electric network, please pay attention to connect the *live* line (red/brown), the *neutral* line (blue) and the *earth* line (yellow/green) with corresponding to the line in electric network.

## Water Supply

After all the process of the plumbing connection is finished, open the water inlet valve of the water heater and supply the appliance with the water to drain away the air inside until there is the stable water flow comes out from the shower head. In order to avoid water leak, check and fasten the pipe connection of the water heater, and then re-supply it with water.

## PART 4: HOW TO USE

### Display Screen Function (EI 2D B Only)



Display Icon	Function	Functional description
	Safety Sign	If the "Safety Sign" is displayed normally, it means the machine is trouble-free. If the "Safety Sign" twinkling flicker, it means the water heater cannot be connected to the <i>Ground</i> firmly.
	Cold Water Mode	If this function icon appears, the water heater is not heated. Thus, the cold water will come out instead.
	Morning Mode	If this function icon appears, the water heater is in the "Morning Mode". The default set temperature is 36°C.
	Night Mode	If this function icon appears, the water heater is in the "Night Mode". The default set temperature is 40°C.
	Temperature Scale	Displaying the current hot water temperature.
	Power Icon	The "Power" icon displays the power output status. The sign "Max" refers to the full power.

## Button Function (EI 2D B Only)

Display Icon	Function	Functional Description
	Leakage Circuit Detection	If the "Test" button is pressed, this water heater will perform the leakage circuit detection. Re-press (press back) this button, so the water heater will perform recovery.
	Mode Selection	If the "Mode" button is pressed, this water heater will switch to the "Cold", "Morning", or "Night" mode.

## Parameter Setting Mode (EI 2D B Only)

To activate this mode, do press the "Mode" button for 3 second, system will enter parameter setting and screen will flicker. Rotate the knob to set the temperature as desired. Re-press the "Mode" button; the parameters are set successfully.

## Water Heater Operation

Switch on the power supply, the screen of EI 2D B will be on or "Earth" and the "ELCB" blue indicator lights will turn on for EI 2 W. When the water flow exceeds 1.5L/min, rotate the knob clockwise to switch on the power switch, the heating indicator light will be on, and the water heater will start to work.

## Leakage Testing

*[EI 2D B]* When the water heater is working normally, press the "Test" button. If the leakage testing shows no issue, the screen will off, and this water heater will not working to heat. Press "Reset" button for finishing the test, the display will be on, and the appliance (the water heater) will be back to working state as before. If the electrical leakage occurs, pressing "Reset" button would not cancel the leakage testing. If the screen does not turning on, it means the water heater has problem and cannot be used; all the buttons are invalid and the heating stopped. If the "Safety Sign" twinkling flicker, it means the heater cannot be connected to the Ground firmly. Please check the grounding before use.

*[EI 2 W]* When the water heater is working normally, press the "Test" button. If the leakage testing shows no issue, the "ELCB" green indicator light will flicker, and the water heater will not working. Press "Reset" button for finishing the test, the "ELCB" green indicator light will turn on, and the water heater will be back to the working state as before. If the circuit leaks, pressing "Reset" button cannot cancel leakage testing. If the "ELCB" green indicator light keeps flickering, it

means the water heater has problem and cannot be used; all the buttons are invalid and heating stopped. If the “Earth” blue indicator light turns off, it means the water heater cannot be connected to the Ground firmly. Please check the grounding before use.

## **Electricity Leakage Protection**

When the electricity leakage testing circuit is working normally and if the electrical leakage is bigger than certain value between 7.5mA and 15mA, the display on EI 2D B will turn off or “Earth” indicator, “ELCB” and the “Power” indicator on EI 2 W will flicker, as well as no heating. The water heater can only be used after the failure is excluded.

## **Water Flow Adjustment**

Rotate the handle of the water flow (valve) to adjust the water flow.

## **Water Temperature Adjustment**

Rotate the handle of water flow (valve) to adjust the water flow as needed. Then, adjust power by rotating the knob clockwise to accordingly increase the power and water temperature or vice versa.

## **Overheating Protection**

If the water flow is weak and the power is highly used, the outlet water temperature is rather high, and the water heater will stop heating automatically. At this time, please lower the power and adjust the water flow faster in order to avoid inconsistency of water temperature.

## PART 5: MAINTENANCE

- This electric instant water heater should be installed at the place without sunshine or rain spray. Please cut off the power supply (electricity flow) if the water heater is not used for a long time.
- In order to avoid the blockage of water heater, please rinse the pipe with water for about 10 seconds to drain away the impurities in the pipe before connecting the water supply to the water heater.
- If the water heater has not been used for a long time, check the water heater first before use. Connect the water heater with power supply after the water flows out stably.
- To avoid moisture, do not spray water to the circuit breaker or the heater body directly.
- Please cut off the power supply in the weather of thunder and rain to avoid damaging the water heater.
- If the water heater is not used for a long period of time, please cut off the water inlet to prolong the durability of the water heater.
- Check the power cord that is connected to terminals frequently to make sure that they are in well condition, firmly connected, no overheating case, and in a well state of *grounding*.
- Disassembly the shower head and the sealing ring first before cleaning the water heater periodically.

### NOTE

This water heater can only be maintained and repaired by authorized service technician of MODENA. The incorrect installation and using method may cause serious injury or loss of property.

### WARNING!

Do cut off power supply before maintenance to avoid danger like electric shock.

## PART 6: TROUBLESHOOTING

Problem	Possible Cause	Recommended Action
<ul style="list-style-type: none"> <li>• When switching on the power, screen displays “E5” and flashing (EI 2D B).</li> <li>• ELCB indicator light is off (EI 2 W).</li> </ul>	<ol style="list-style-type: none"> <li>1. Power supply error.</li> <li>2. PCB error.</li> <li>3. Electricity leaks.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether the power supply is cut.</li> <li>2. Contact MODENA Customer Care for repair.</li> </ol>
The heating indicator light is off and the outlet water is cold.	<ol style="list-style-type: none"> <li>1. “Power” knob is off.</li> <li>2. PCB error.</li> <li>3. Water flow is less than 1.5L/min.</li> <li>4. Impurities clogging the rotor of water flow switch (water valve).</li> </ol>	<ol style="list-style-type: none"> <li>1. Rotate the “Power” knob.</li> <li>2. Repair or replace the PCB.</li> <li>3. Increase the water flow.</li> <li>4. Change the flow sensor.</li> <li>5. Open the water valve and clean the rotor.</li> </ol>
The outlet water is cold.	<ol style="list-style-type: none"> <li>1. The thermal cut-out is disconnected, and screen display “E3” on EI 2D B.</li> <li>2. Heating elements is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press the “Reset” handle of the <i>Thermal Cut-out</i> after checking.</li> <li>2. Change the heating elements.</li> </ol>
No water flows out from the shower head.	<ol style="list-style-type: none"> <li>1. Water supply is cut off.</li> <li>2. Water inlet valve is not open..</li> </ol>	<ol style="list-style-type: none"> <li>1. Wait until the water supply is restored.</li> <li>2. Open the water inlet valve.</li> </ol>
The temperature of outlet water is inconsistent	<ol style="list-style-type: none"> <li>1. The water pressure is unstable.</li> <li>2. The temperature of outlet water is too high - overheating protection is working excessively.</li> </ol>	Lower the heating power, and increase the water flow.
Safety sign is flickering (EI 2D B)	<ol style="list-style-type: none"> <li>1. Grounding is damaged.</li> <li>2. PCB error.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the grounding.</li> <li>2. Contact MODENA Customer Care for repair.</li> </ol>
“ELCB” indicator light is twinkling flicker (EI 2 W).	Electricity leaks	Contact MODENA Customer Care for repair.
<ul style="list-style-type: none"> <li>• Screen of EI 2D B display E1</li> <li>• “Power” indicator light is twinkling flicker (EI 2 W)</li> </ul>	Temperature sensor is damaged	Change the temperature sensor.

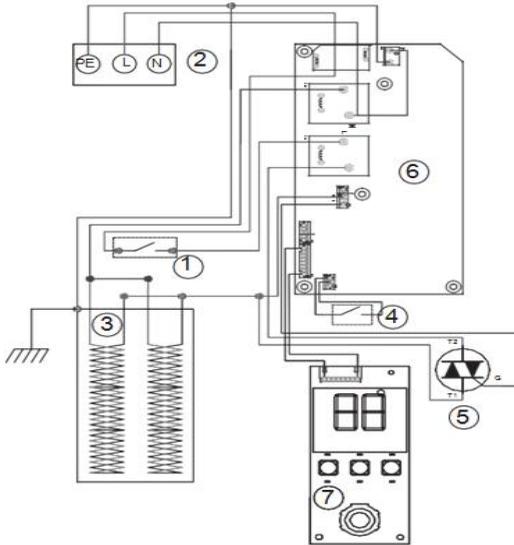
## PART 7: SPECIFICATION

Model	EI 2D B	EI 2 W
Rated Voltage / Frequency	220V / 50/60Hz	
Rated Power	2400W	
Rated Current	0~11A	
Minimum Flow Rate	1.5 Liter/Minute	
Water Output Temperature	30 ~ 55 °C	
Working Pressure	0.03 ~ 0.3 MPa	
Protection Class	I	
IP Rating	I P 2 5	
Product Size	406 × 232 × 103 mm	
Color	Brown	White
Temperature Display	Yes	No

Specifications of this appliance may change without notice to improve the quality of the product. Figures in this manual are schematic and may not match your product exactly. Values stated on the machine labels or in the documentation accompanying it are obtained in laboratory in accordance with the relevant standards. Depending on operational and environmental conditions of the appliance, values may vary.

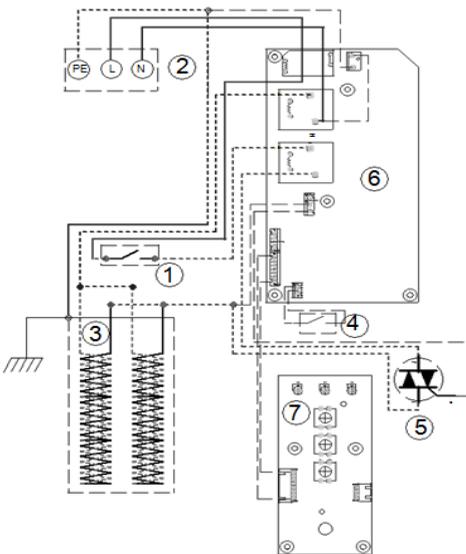
# APPENDIX: WIRING DIAGRAM

## EI 2D B



1. Thermal Cut-out
2. Terminal Block
3. Heating Element
4. Flow Switch
5. Silicon Control
6. Main Control Board
7. Display Board

## EI 2 W



1. Thermal Cut-Out
2. Terminal Block
3. Heating Element
4. Flow Switch
5. Silicon Control
6. Main Control Board
7. Indicator Light Board

