

# User Manual



## **DEAR CUSTOMER,**

Thank you for purchasing our Venus Sedra Water Heater, a top-quality product. We are committed to providing you with a trouble-free service that will last a lifetime. Our dedication to product quality is unwavering, and we have invested significant effort into designing a water heater that you can rely on completely. To assist you in installing the water heater correctly and ensuring optimal performance, we have included a user-friendly installation manual.

In addition, we have included a "Troubleshooting Guide" section that will help you address any minor issues that may arise. We want to ensure that you have a seamless experience with your Venus Sedra Water Heater.

We extend our warmest wishes to you and your new water heater, hoping for a lifetime of happiness and satisfaction.

### **I. STATE-OF-THE-ART FEATURES OF THE VENUS SEDRA WATER HEATER:**

1. **Porcelain Enamel Glass Lined Tank:** The inner container is protected from rust and corrosion by a waterproof coating. The enamel coating is fused and bonded with the inner container through a firing process at 850°C. It is manufactured using European Technology in a modern, automated plant.
2. **Unique Ceramic Cartridge Heating Element (for vertical models only):** This heating element is not in direct contact with water, eliminating the risk of electric shock. It also has a longer lifespan in areas with hard water compared to conventional tubular elements.
3. **Incoloy 800 Heating Element (for horizontal models only):** Made of high-grade Incoloy alloy material, this tubular element can withstand temperatures greater than 1000°C. It ensures a longer lifespan, even in areas with hard water.
4. **99.9% Pure Copper Sheathed Element (only for 6L - Vertical model & 10L - Horizontal model):** The heating element is sheathed in pure copper, providing excellent corrosion resistance and reducing scale formation. This feature is specific to certain models.
5. **Glass Lined Door Assembly:** The door assembly housing and Incoloy element are coated with a protective enamel layer, offering superior corrosion resistance. It reduces scale formation and ensures a longer lifespan, especially in areas with hard water. (Applies to Vertical and Horizontal models respectively).
6. **Magnesium Anode:** This special device enhances the corrosion protection of the tank through "Cathodic action."
7. **Rustproof and Shockproof Outer Body:** The outer body is made of MS Powder Coat, Pre-coated Metal, Polypropylene sheet, or Polypropylene Top & Bottom lids, ensuring resistance to rust and shocks

8. Externally Adjustable Capillary Thermostat: Users can easily set their desired temperature with this thermostat.
9. Thermal Cutout: This safety feature prevents over-heating and boiling of water.
10. Multi-function Valve (MFV): The MFV prevents excess pressure buildup inside the tank.
11. Polyurethane Foam (PUF) Insulation: The water heater is equipped with PUF insulation, which keeps the water hot for an extended period and reduces energy consumption.
12. Dual Light Indicator: The water heater's operation is indicated by a dual light. The blue light indicates "Heating (TST ON condition)," while the red light indicates "Ready to use (TST off condition)."

With these and many other features, the Venus Sedra Water Heater stands as a truly world-class product designed to provide years of reliable and trouble-free performance.

## II. INSTALLATION:

### PRECAUTIONS DURING INSTALLATION:

1. Always ensure that there is water inside the heater before switching it on.
2. The inlet control valve should only be closed during heater servicing; otherwise, it should remain open.
3. Never block the opening of the multifunctional valve (MFV).
4. Make sure that the maximum height of the overhead tank from the heater does not exceed the recommended values. Please refer to the section titled "MFV Operation at Various Heater Connections" in the upcoming pages, which discusses safety devices.
5. If the height exceeds 80m, please refer to the section titled "MFV Operation at Various Heater Connections" in the forthcoming pages.
6. When connecting the water heater to an automatic pump, follow the instructions provided in the section titled "MFV Operation at Various Heater Connections" under the safety devices section.
7. Ensure that the earth connection of the heater is properly grounded.
8. The following tools and accessories are required for installing the water heater. Please note that they are not provided along with the heater:
  - a) Two 24/27mm double-ended spanners.
  - b) Drilling machine with an 8mm drill bit.
  - c) Star screwdriver.

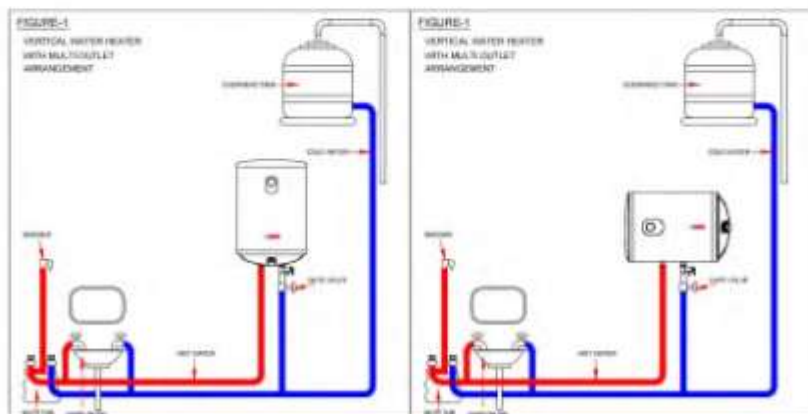
### A. Fixing to the wall:

- **For vertical models, please refer to Fig-1a.**

1. Vertical models should be fixed to the wall in a vertical position, with the inlet and outlet pipes facing downwards.
2. Leave a minimum clearance of 25mm between the heater and the roof to allow for easy removal of the heater if necessary.
3. The bottom of the heater should be approximately 1.8m from the ground to prevent water from splashing onto the heater.
4. For 6L to 35L models, mount the heater using two bolts, each approximately 100mm long with a diameter of 8mm to 12mm.
5. For 50L models and above, mount the heater using four bolts, each approximately 100mm long with a diameter of 8mm to 12mm.

- **For horizontal models, please refer to Fig-1b.**

1. Horizontal models can be fixed to the wall with the inlet and outlet pipes facing downwards, according to the plumbing requirements at the installation point.
2. Leave a minimum clearance of 500mm to the right of the heater for horizontal models, to allow for easy opening of the inspection cover and removal of electrical components if needed.
3. Mount the heater using four bolts, each approximately 100mm long with a diameter of 8mm to 12mm. For SOL models and above, as well as all horizontal models, use larger bolts.
4. Ensure that the bolts match the slots in the brackets of the heater and are firmly embedded in the wall.



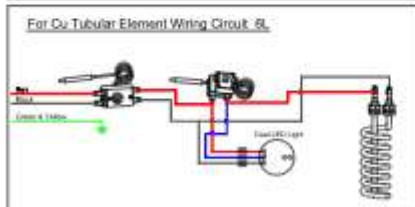
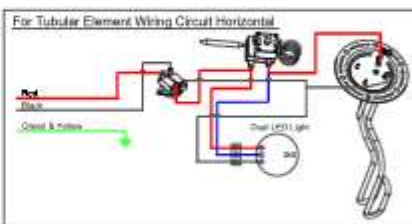
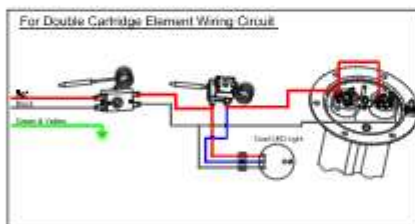
## B. Water Supply Connection:

1. Connect the water heater to the cold water line from the overhead tank or mains supply.
2. Install a control valve at the inlet of the heater. Make sure it is a gate valve or angle valve that opens and closes securely.
3. Use flexible tubes such as (a) chromium-plated copper tubes, (b) heavy-duty flexible PVC tubes, or (c) stainless steel braided flexible tubes to connect the cold and hot water pipelines.
4. The inlet (cold) and outlet (hot) pipes of the heater are labeled "IN" and "OUT" respectively on the bottom lid.
5. Before connecting the heater to the following, please refer to "MFV Operation at Various Heater Connections" under the section titled "Safety Devices" in the upcoming pages:
  - a) Pressure reducer valve
  - b) Automatic pressure pump
  - c) Heater installed in low-pressure areas or high-rise buildings, etc.

## C. Electrical connections:

1. All internal connections are already made at the factory.

Use a 16Amps 3-pin socket and preferably a 30Amps Double Pole (D.P) switch. Adding a separate fuse can provide additional safety.



**Caution:** If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or a similarly qualified person to avoid any hazards.

### III. OPERATION

#### A. Using the heater for the first time:

1. Before turning on the heater, ensure that it is filled with water.
2. Open the hot water tap and open the control valve at the inlet to fill the heater with water.
3. Once the water tank is full, the hot water tap will start flowing. Close the hot water tap.
4. The heater will now have water inside it at all times, and any water withdrawn will be replaced with water from the overhead tank.
5. Keep the inlet control valve open at all times.
6. Turn on the power supply of the heater at this point.

#### B. Using the heater regularly:

1. Keep the inlet valve open to automatically replace hot water drawn from the tap with water with ambient temperature from over head tank.
2. Turn 'ON' the heater. The blue straight indicator light will illuminate, indicating that the heater is ON.
3. When the water reaches the desired temperature, the thermostat will automatically turn off the power, and the red straight light will glow. The "Performance Table" on the following pages provides the estimated time for the thermostat to switch "OFF" for various capacities.
4. Assuming a room temperature of 20°C, the water temperature will decrease from 65°C (very hot) to 40°C in approximately 12 hours (warm).
5. The thermostat setting can be adjusted to suit personal preferences. Lowering the thermostat setting will result in a lower hot water temperature, while raising the setting will result in a higher output temperature.

**Caution: To ensure proper functioning, the thermostat is a delicate mechanism that should not be frequently adjusted.**

6. Initially, the water heater may take a while to heat up, so it is advisable to turn it on at least an hour before you intend to use hot water.
7. If hot water is needed early in the morning, the heater can be turned on the night before. When the water reaches the desired temperature, the thermostat will automatically turn off the electricity.
8. The heater is well-insulated, and the water will remain hot even if the heater is left "ON" all the time. The thermostat will automatically turn ON and OFF to maintain a consistent water temperature. As a result, hot water will always be available when you turn on the faucet (outlet).

**Caution: Children under the age of eight, individuals with low physical, emotional, or mental abilities, and those without experience or skills who are unaware of the potential dangers are not permitted to use this appliance.**

### C. Operation in Hard Water areas:

1. In areas with hard water, the contact between water and the heating element leads to the formation of a hard salt coating (scale) on the surface. This scale restricts heat transmission and can eventually cause the element to fail.
2. Scale formation can be minimized by setting the water heater temperature below 50°C. Adjust the temperature to 50°C or below.
3. In hard water areas, the element assembly should be removed and inspected annually. If the sacrificial anode has dissolved, it should be replaced.

**D. Draining the water heater:** In Venus water heaters, the multifunctional valve (MFV) includes a drain lever. After removing the screw in the drain lever by screwdriver, pulling the drain lever on the MFV, the water inside the tank can be drained. This is a slow process. A trained technician will require a tool (size 25 spanner) to remove the MFV and drain the water quickly.



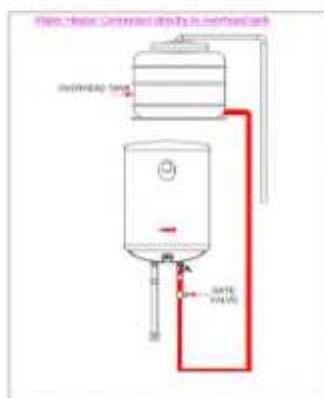
## IV. SAFETY DEVICES

Your Venus Sedra water heater is equipped with various safety devices to ensure your safety at all times. The operation of these devices is described below:

### A. MFV Operation at various Heater connections:

#### 1. Water Heater in Normal Condition:

During heating, the water inside the water heater expands due to thermal action. The multi-function valve (MFV) allows the water to flow back through the inlet line to the overhead tank, enabling the water heater to expand. The MFV has a built-in mechanism to accommodate the thermal expansion of the water inside the tank during the heating cycle. This helps maintain constant pressure inside the tank without increasing it.



#### CAUTION

To allow thermal expansion, it is important to ensure that the inlet does not hinder the backward flow of water.

## 2. Connection to Automatic Pressure Pump:

When connecting a water heater to a pressure pump, there are a few important considerations. If the pressure from the pressure pump exceeds the water heater's rated pressure (8bar / 8Kg/cm<sup>2</sup>), water will continuously be released from the MFV even in cold conditions. In such cases, reduce the pressure setting of the pressure pump to a lower level.

### CAUTION

**Pressure pumps should always be connected with pressure vessels. Using pressure pumps without pressure vessels can damage the water heater and void its warranty.**

During the heating cycle, the expanded water tries to travel back through the inlet line due to thermal expansion. However, because the pressure pump on the inlet line prevents the water from expanding, the water pressure inside the tank will rise, causing the MFV to start dripping and release the excess pressure. The dripping will stop as soon as the heating is turned off (when the heater switches off), and it will restart when the heating starts again. This is a normal operation of the MFV, which releases surplus pressure inside the tank. It is recommended to provide a PVC tube from the MFV to the nearest drain point, as illustrated in Fig. 6, to allow the expanded water to drain without causing any damage to the internal fittings. If the dripping is consistent and excessive, contact our mechanic for assistance. Never attempt to adjust the MFV setting, as it can result in damage.

### IMPORTANT

The MFV should never be removed or blocked in any way to prevent dripping or the release of excess pressure inside the heater. Such actions can have disastrous consequences. Tampering with the MFV in any manner will void the heater's guarantee. The discharge pipe connected to the pressure relief devices should be installed in a continuously downward direction and in a frost-free environment.

The water heater can be fully drained by lifting the drain lever provided in the MFV. It is important to note that the 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 are supervised or have received instructions from a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance. Periodically check the MFV to ensure it is operating properly. The MFV should be operated regularly to remove any lime deposits and to verify that it is not blocked.



### **3. Connection in High-Rise Buildings that height is more than 80M or Use of Pressure Reducing Valve:**

In high-rise buildings with a height of more than 80m or more than 20 floors, where the water supply comes from an overhead tank on the rooftop, there can be instances of very high water pressure at the lower floors. To protect the taps and fittings from damage caused by high pressure, a pressure reducing valve may be installed on the cold water line to the water heater. When the water heater is connected to a pressure reducing valve on the inlet line, there are some important considerations to keep in mind.

During the heating phase, the water inside the storage tank will expand and try to flow back through the inlet line due to thermal expansion. However, the pressure reducing valve on the inlet line will restrict the water from expanding. When the water pressure inside the tank will increase, the MFV will start dripping to release the excess pressure and protect the tank from damage. This dripping will be slow and intermittent, and it will stop as soon as the heating stops (when the heater switches off). The dripping will restart once the heating starts again. This is a normal operation of the MFV, which releases the excess pressure inside the tank.

In this case, first, check if the pressure reducing valve can be removed. If the line pressure does not exceed 6-7 bars/kg/cm<sup>2</sup>, it may be removed without affecting the water heater. If it is not possible to remove the pressure reducing valve due to technical reasons, then provide a PVC tube from the MFV to the nearest drain point, as shown in Figure No.6. This will allow the expanded water to drain without affecting any internal fittings.

### **4. Connection in Low Pressure Areas:**

Ensure that the water pressure is not too low. The bottom of the overhead tank should be at least 1.0m from the top of the heater. Use a 25mm pipe for the cold water line with a minimum number of bends. An air vent should be provided near the overhead tank to avoid airlock.

### **5. Connection to Multiple Outlets:**

The water heater can be connected to multiple outlets such as a shower, washbasin, bathtub, etc. Refer to Figure 2 for a schematic layout of multiple outlet connections.

**Note: Do not use an ordinary stopcock that also acts as a non-return valve.**

### **6. Solution:**

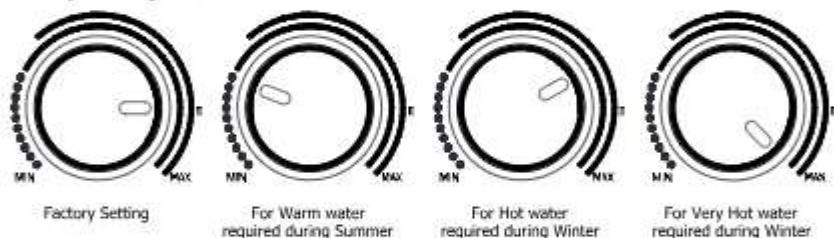
To address the dripping issue from the MFV, please fix a PVC tube from the MFV dripping point to the nearest drain, as shown in the picture.

### IMPORTANT :

- The MFV is a safety device provided with every water heater.
- It should not be disconnected from the inlet line or tampered with in any way to prevent its proper functioning. Otherwise, the warranty on the unit will become void.
- The MFV will be provided separately in the packing box, and the installer must fix it during installation.

### B. Thermostat:

The Venus Sedra water heater is equipped with a capillary thermostat that controls the power supply based on the desired temperature. The thermostat switches the power "ON" and "OFF" when the set temperature is reached. Occasionally, check if the blue indicator lamp goes "OFF" when the heater becomes hot. This serves as a test to ensure the thermostat is functioning properly. The adjustable thermostat has a temperature setting range of 0°C to 75°C, allowing you to set the desired temperature. The factory setting is 65°C.



### C. Thermal Cutout:

A non-self-resetting thermal cutout is included as a safety device. It cuts off the power when the temperature reaches a high level, typically between 95°C and 135°C. If the thermostat fails to function, the thermal cutout will activate. Before the heater can operate again, the thermal cutout needs to be manually reset. To avoid unintended resetting of the thermal cutout, do not supply power to the appliance through an external switching device like a timer, or connect it to a circuit that constantly switches on and off by a utility.

### D. Magnesium Sacrificial Anode :

Venus water heaters are equipped with a magnesium sacrificial anode in the glass-lined tank to protect against galvanic corrosion. The anode is a consumable component that loses weight over time while providing protection to the tank. The weight of the anode is provided according to BIS guidelines. The lifespan of the anode varies depending on water quality. If your building uses a water softener or has particularly hard water, the anode's life may be shortened.

## V. Performance Table:

Model	Capacity in Liters	Loading in watts	Time Required to rise temp. By 50°C		Mixing Factor in % Max	Hot water output Minimum
			Initial Heating	Re-Heating		
Vertical			Max.Hrs Min	Max.Hrs Min		
06SV	006	3000	0-10	0-08	35	006L at 45°C
10SV	010	2000	0-25	0-23	35	010L at 45°C
15SV	015	2000	0-29	0-27	35	015L at 45°C
25SV	025	2000	0-48	0-44	30	025L at 45°C
35SV	035	2000	1-07	1-02	30	035L at 45°C
50SV	050	2000	1-37	1-28	25	050L at 45°C
70SV	070	3000	1-35	1-23	25	070L at 45°C
100SV	100	3000	2-10	2-00	25	100L at 45°C
150SV	150	3000	3-04	2-54	25	150L at 45°C
Horizontal						
10SH	010	2000	0-25	0-23	35	010L at 45°C
15SH	015	2000	0-29	0-27	35	015L at 45°C
25SH	025	2000	0-48	0-44	30	025L at 45°C
35SH	035	2000	1-07	1-02	30	035L at 45°C
50SH	050	2000	1-37	1-28	25	050L at 45°C
70SH	070	3000	1-35	1-23	25	070L at 45°C
100SH	100	3000	2-10	2-00	25	100L at 45°C
150SH	150	3000	3-04	2-54	25	150L at 45°C

Note: the values are under the test conditions of ISI.

Except 06SV, 150SV/SH models, all other models are eligible for ISI.

## VI. Specifications:

- Name of the product : Stationary Storage Type Electric Water Heater
- Type : Closed Water Heater
- Rating : 2000W, 230V, 50Hz, Single phase AC
- Class : Class of Appliance I
- Material of Inner Tank : Porcelain Enamel Glass Lined Tank
- Heating Element : Ceramic Cartridge Element (SV models, Except 6SV), Tubular Heating Element (Incoloy 800 - SH) & (Copper 6SV Only)
- Material of Outer Body : Mild Steel (Powder Coated) / Polypropylene
- Indicator Bulb : Red - Indicates "Ready to use",  
Blue - Indicates "Heating"
- Insulation : Polyurethane Foam
- Safety Device : Thermostat, Thermal Cutout, Multi-function Valve & Magnesium Sacrificial Anode

## 9. Working Pressure and Water Head:

Vertical & Horizontal Models	Mpa	Bar	PSI	Kg/sq.cm	Maximum Height of over head tank above heaters
Maximum	0.8	8	116	8	80m
Minimum	0.002	0.02	0.234	0.02	0.2m

## VII. Maintenance Instructions:

1. Always keep the inlet control valve open.
2. Never switch on the water heater without water inside.
3. Check the condition of flexible hoses at least once a year. If any damage is found, replace the hoses.
4. Once a year, check the condition of the supply cord for damage. If it is damaged, it should be replaced with an authentic supply cord. For assistance, contact "Customer Care."
5. The anode should be examined by an authorized Venus technician every year. If the anode is consumed, it should be replaced with a new one. If the anode is dirty, covered with scale, or oxidized, it should be cleaned and reused.
6. Periodically perform descaling to increase the life of the heating element. For assistance, contact "Customer Care."
7. If the water heater will not be used for a long time, drain the water from the heater.

## VIII. Trouble shooting guides

S. No	Symptoms	Possible cause	Remedy
1	Water Cold and Indicator light "Off"	Power may not be available	Check Power. If power is "ON" then for assistance contact "Customer Care".
2	Water Cold and indicator light "ON"	Element may have failed.	Contact "Customer care"
3	Water Hot and indicator light "Off"	Bulb may be fused	Contact "Customer care"
4	Water leaking from the Unit	---	Contact "Customer care"
5	Water dripping from the MFV continuously	Pressure is higher than the rated pressure	Fit a pressure reducer valve to reduce the pressure to the heater.If the problem persists then for assistance contact "Customer Care"
6	Water dripping from MFV during heating	Pressure pump or NRV is fixed in the inlet	Refer MFV Operation at various Heater connection under the title "Safety devices"
7	Long time to heat	Multiple outlets low voltage	Reduce the usage from other outlets and check for low voltage. Even a 10% drop in voltage can increase heating time by approximately 25%. If the problem persists, contact "Customer Care" for assistance.
8	Low hot water pressure	Placement of overhead tank with reference to water heater may be very low. No of pipe bends. Air lock. Hot water outlets may be blocked by scale formation	Ensure the minimum height of the overhead tank from the heater is not less than 1m. Use 25mm diameter pipe for the cold water line with a minimum number of bends. Provide an air vent near the overhead tank to avoid air lock. Remove scale by descaling. If the problem persists, contact "Customer Care" for assistance.
9	Bad smell like rotten egg is coming in the water, after heater is left unused for a long time	Certain type of bacterial present in ground water may react with Mg anode and create bad smell.	Clean the overhead tank using chlorine. Call a Venus service technician to open the water heater and clean it with chlorine. Drain the water from the heater whenever it is not used for long periods (e.g., during summer months or extended absences). Alternatively, replace the magnesium anode with a zinc anode.



NOTE

NOTE





## GUARANTEE

This Venus Electric Water heater is guaranteed as given below.

Guarantee period			
Capacity / model	Product	Inner Container	Element
06L SV	2	7	2
10L & 15L SV	2	7	3

\*From the date of purchase subject to the terms and conditions as below.

Please preserve this Guarantee card along with paid bill from our authorized Dealer. These documents must be presented to the authorized service center to avail the Guarantee.

### Terms & Conditions:

1. This guarantee excludes any damages due to misuse, accident, negligence, tampering, unauthorized repair and normal wear and tear.
2. Free repair or replacement at our option will be provided when the water heater is returned to our authorized service center with freight and cartage paid.
3. Components subject to wear, such as Anode are not covered under this Guarantee.
4. It is recommended to examine the anode every year. If the anode has been consumed, replace with new a anode.
5. The MFV (Multi function valve) if tampered, in any manner cancels the Guarantee of the water heater.
6. Inspection and Test report of the authorized service center will be treated as final and binding under the guarantee for determining the defects, repair/alterations required or carried out, or certifying working of the water heater thereafter.
7. The authorized service center will be entitled to retain any defective part replaced under guarantee.
8. The Company's liability under the guarantee will be limited only to defects which occur under conditions of proper installation, normal operation and proper use. It excludes defects occurring because of lack of anode maintenance and repairs/alterations to product or the parts by unauthorized person.
9. The Customer will have no claim under this guarantee in respect of any personal injury, damage or property or consequential damages, or for utilization of the water heater not in accordance with the "User Manual"

Customer Name:-----Model No:-----

Address:-----Serial No:-----

-----Invoice No:-----

-----Date of Purchase:-----

Dealer's Name and Address :



Dealer's Seal & Signature

**Customer Care : 08144666999**  
E-mail: [customercare@venushomeappliances.com](mailto:customercare@venushomeappliances.com)



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