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 **VENUS**TM
WATER HEATERS

Venus Home Appliances (P) Ltd.

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User Manual

 **Lava**
INSTANT WATER HEATERS



55 YEARS
ISO 9001 & 14001
IS: 8978
CIBL-012354
24 HOURS SERVICE BY
VENUS

 **VENUS**TM
WATER HEATERS

DEAR CUSTOMER,

Thank you for having bought a world class Water Heater. Your Venus Lava Instant Water Heater has been designed to give you a life time of trouble-free service. It is backed by our firm commitment to innovation and product Quality.

We have spent a lot of effort in building this totally reliable water heater. We have also introduced this handy installation manual which will help you in correctly installing your water heater and in getting the maximum performance out of it.

There is also a section called "Trouble Shooting Guide" to assist you in setting right minor problems.

We wish you and your new water heater a life time of happy association.

I FEATURES:

1. ABS Plastic Outer Body : Sleek, Corrosion proof, Wipeable, Shockproof.
2. Indicator Lamps : Two in 3 Kw / 4.5 Kw models for Heating & tripping operation, three in 5 Kw model, the extra lamp for indicating the additional element functioning.
3. Inner Container : 99.9% pure Copper for corrosion free performance.

II PRECAUTIONS:

1. This works on AC 230 V with 3 / 4.5 Kw rating. Ensure your Electrical wiring can handle this load.
2. Do not switch on the heater without water in it.
3. Ensure the heater is properly earthed.
4. Ensure the maximum height of the overhead tank from the heater does not exceed the figure given under "Water Head" in page 8.
5. If the height is more use a pressure reducer valve to reduce the pressure below the working pressure given in page 8.

Model	Wattage	Current Rating In Amps	Plug & Wiring needed
L30	3000 W	13 A	Current Rating of the Plug and wiring should be 16A
L45	4500 W	20 A	Current Rating of the Plug and wiring should be 25A
3L30	3000 W	13 A	Current Rating of the Plug and wiring should be 16A
3L45	4500 W	20 A	Current Rating of the Plug and wiring should be 25A

III INSTALLATION:

A. Fixing to the wall :

1. The heater should be fixed to the wall only in the Vertical position with the inlet and outlet pipes facing downwards.
2. Mount the heater on screws that are fixed on the wall spaced at the same distance between the two keyholes on the heater's rear.

B. Water supply connection:

1. Connect the water heater to an overhead tank in the same building or a central overhead tank of the colony or Municipality.
2. Fix a control valve at the inlet of the heater. Ensure that this is a gate valve or angle valve that opens and closes positively when operated.
3. Do not connect cold and hot water pipes to the heater directly.

⚠ Warning

Do not fit a non-return valve or check valve at the inlet.

A non-return valve prevents expansion of hot water inside the container. This will lead to increase in the pressure inside the container till the safety multi function valve opens. This will happen in each heating cycle and is not desirable. So, a non-return valve should not be fitted.

Note : do not use an ordinary stop cock which also acts as a non-return valve.

4. Connect the cold and hot water pipes by Flexible tubes like,
 - (a) Chromium Plated Copper tubes
 - (b) Heavy duty flexible PVC tubes (or) Lead pipe.
5. Heater Inlet (Cold) and outlet (Hot) pipes are indicated by Blue and Red plastic covers. They are also indicated by Blue "IN" Red "OUT" markings on the bottom.
6. The heater can be connected to multiple outlets. However, it is advisable to connect to upto two outlets a shower and/ or a tap. All outlets should be as close to the heater as possible to minimize heat loss. Fig -1 shows the schematic layout of two outlet connections from the heater.
7. Ensure that the maximum height of the overhead tank from the heater does not exceed the height given in page-8 under "Water Head".
8. Ensure minimum height of the overhead tank from the heater is not less than 1.0m.

Note: The water pressure should not be very low. The bottom of the overhead tank should be at least about 1.0m from the top of the heater. Even in this case, use 25mm pipe for cold and hot water line with minimum of bends. An air vent can be provided near the overhead tank to avoid air lock.

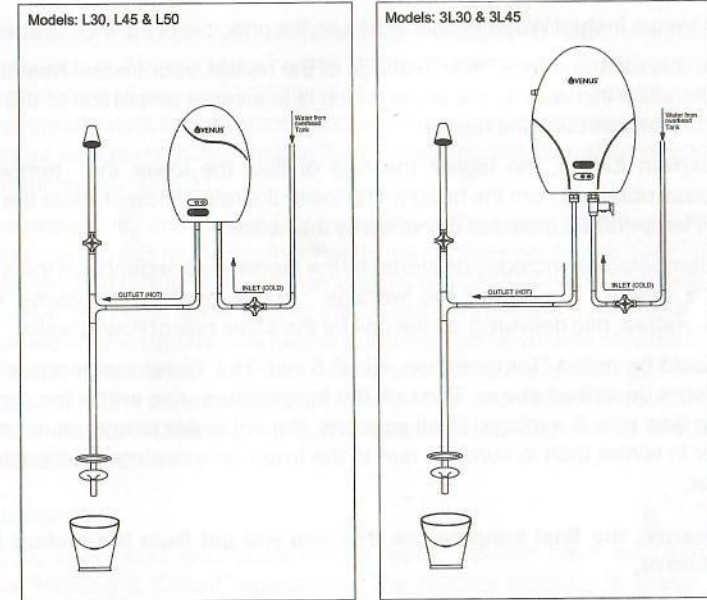


Fig - 1.

C. Electrical Connections :

1. All internal connections are made in the factory itself.
2. Use a 3 pin plug and preferably a 30 Amps Double Pole Switch. Connect Red wire to phase, Black wire to Neutral and combination of Green/Yellow wire to earth terminal of the plug.

A separate fuse can also be provided as an additional safety features.

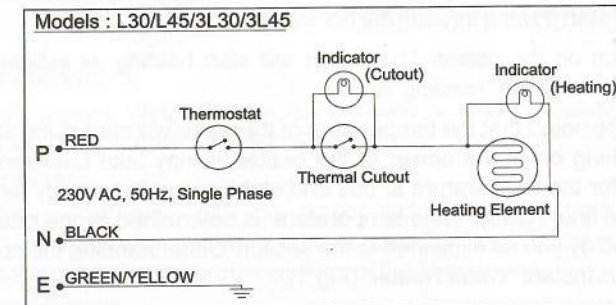


Fig -2.

IV. OPERATION:

A. Understanding the operation of your Venus Instant Water Heater:

Before operating your Venus Instant Water Heater it would be useful to understand how it operates, what it can and cannot do. This shall help you in deriving the maximum from the heater.

1. Your Venus Instant Water Heater works on the principle of Flow vs. Wattage.
2. What this means is for a given wattage of the heater, your Instant heater give a temperature increase to the water which is in inverse proportion to the rate of flow of water through the heater.
3. To explain further, the higher the rate of flow the lower the temperature increase obtained from the heater. The lower the rate of flow of water the higher is the temperature increase delivered by the heater.
4. The temperature increase delivered by the heater also depends on the wattage of the heater. The higher the wattage of the heater the greater will be temperature rise delivered by the unit for the same rate of flow of water.
5. It should be noted "Temperature Rise" & not "Hot Water temperature" is the measure described above. Through the temperature rise will be the same (for given flow rate & wattage) in all seasons, the hot water temperature may be lower in winter than in summer due to the lower temperature of the inlet cold water.

To summarize, the final temperature that you will get from the instant heater is a function of,

1. The rate of flow of water fixed by you.
2. The wattage of the Unit.
3. The incoming cold water temperature.

B. Using the heater for the first time :

1. Do not switch "ON" before filling the heater with water.
2. Leave the hot water tap open. Now open the control valve at the inlet. Water will start flowing through the hot water tap.
3. Now switch on the power. The heater will start heating as indicated by the glowing of the Green 'Heating' lamp.
4. It should be noted that the temperature of the water will start rising slowly after the switching on of the power to the heater; it may take between 30 to 45 seconds for the temperature to rise and stabilized at the steady temperature value. The final steady state temperature is determined by the rate of flow of water fixed by you as explained in the section 'Understanding the operation of your Venus Instant "Water Heater" (Fig.1).

C. Using the heater regularly :

1. Always keep the inlet open. so that water drawn from the hot water tap is automatically replaced from the mains.
2. Open the hot water tap. Water will flow through the outlet.
3. Switch on the power supply. The Green "Heating" lamp will glow indicating that the heater is in heating mode.

4. It should be noted that the temperature of the water will start rising slowly after switching on of power to the heater. It may take between 30 - 45 seconds for the temperature to rise and stabilized at the steady state temperature value. The final steady state temperature is determined by the rate of flow of water fixed by you as explained in the section 'Understanding the operation of your Instant "Water Heater" (Fig-1).
5. The heater may also be used by switching on the power before opening the hot water tap. In this mode the thermostat may or may not switch "OFF" the power (as indicated by the HEATING lamp going off) depending on how long you take to open the outlet water tap. In this mode of operation if the hot water tap is opened after sometime, the heater will deliver some volume of water that is very hot. The temperature of the outlet water shall then start falling, if the outlet is kept open, till is determined by the rate of flow water fixed by you as explained in the section "Understanding the operation of your Venus Instant Water Heater". (Fig-2)

D. Indicators :

Your L30, L45, 3L30 and 3L45 Instant water heaters have two indicators to indicate "Heating & Cutout" operations. The heating indicator is Green in colour while the 'Cutout' is in Amber colour. The working of these indicators is explained below.

Models	Heating (Green)	Super Heat (Green)	Cutout (Amber)	Explanation
L30, L45, 3L30, 3L45	ON	—	OFF	Heating Mode
	OFF	—	OFF	Power Off Model or Power On & Thermostat switched off the heater.
	OFF	—	ON	Cutout has switched off the heater Refer to Trouble shooting guide on page 8.

V. SAFETY DEVICES:

Your Venus Instant Water Heater comes with a host of safety at all times. The operation of these devices is described here:

D. Thermostat :

This switches "on" and "off" the power automatically. Check occasionally whether the indicator lamp (Green colour) goes "Off" when the water becomes hot. This is the check for the proper working of the Thermostat.

B. Thermal Cutout :

A non-self resetting thermal cutout is provided as a safety device. When the thermostat fails to function, this cuts off the power at 90°C to 110°C. Amber light switch On. The thermal cutout has to be manually reset before the heater can start operating again.

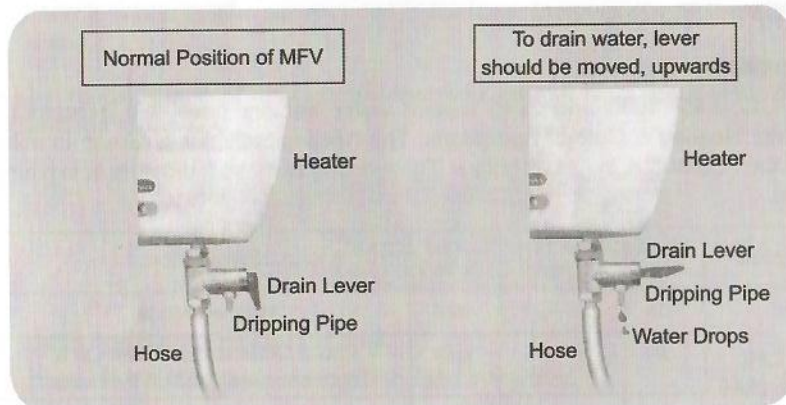
C. Pressure Release Valve (PRV) : (Models : L30 & L45)

This valve prevents the build up of excessive pressure within the water heater by releasing water which drips from the valve tip.

D. Multi Function Valve (MFV): (Models: 3L30 & 3L45)

1. This valve prevents the build up of excessive pressure within the water heater by releasing water which drips from the valve tip.
2. Non-return valve is to avoid the return flow of cold water from the heater back into the plumbing, and this preventing the dry heat condition.
3. Expansion valve is to allow the hot water expansion during heating, back into the plumbing.
4. Customer can ensure proper working of the MFV by cleaning it of salt deposits, by pushing the drain lever up. Also customer can drain the water inside the heater by using drain lever for a prolonged period.

Multi Function Valve



VI. SPECIFICATIONS:

1. Type : Closed Instant Water Heater
2. Voltage : 230 V, 50Hz, AC
3. Wattage : L30 → 3 Kw ; L45 → 4.5 Kw
3L30 → 3 Kw ; 3L45 → 4.5 Kw
4. Capacity : L30 & L45 : 1 Ltr.
3L30 & 3L45 : 3 Ltr.
5. Inner Tank : Copper (99.9% Purity)
6. Outer Body : ABS Plastic
7. Heating Element : Mineral filled Sheathed Element
8. Safety Devices : (i) L30 & L45 : Thermostat, Thermal Cutout & PRV
(ii) 3L30 & 3L45 : Thermostat, Thermal Cutout & MFV
9. Working Pressure : 6kg / cm²
10. Water Head : max 60m

VII. TROUBLE SHOOTING GUIDE :

Sl.No	Symptom	Possible Cause	Remedy
1	Water cold and indicator (Green) light off	<ul style="list-style-type: none"> • Power may not be available 	<ul style="list-style-type: none"> • Check Power
2	Water cold but indicator (Green) light on	<ul style="list-style-type: none"> • Water flow may be very high • Element may have failed 	<ul style="list-style-type: none"> • Reduce flow of water and check if temperature increases. Else contact "Customer Care"
3	Heating Indicator (Green) not lighting	<ul style="list-style-type: none"> • Bulb may be fused. • Thermostat may have cut off power. 	<ul style="list-style-type: none"> • Contact "Customer Care" • Open the hot water tap and allow the water to flow. After few seconds you will get hot water flow and light may come on. Else contact "Customer Care"
4	Indicator (Amber) lighting	<ul style="list-style-type: none"> • Cutout may have cut off 	<ul style="list-style-type: none"> • Contact "Customer Care"
5	Shock from water heater (main tripping)	<ul style="list-style-type: none"> • Earthing is not done Properly 	<ul style="list-style-type: none"> • Check if earthing is properly done (or) contact "Customer Care"
6	Water heater leakage	---	<ul style="list-style-type: none"> • Contact "Customer Care"
7	Water running from the pressure release valve	<ul style="list-style-type: none"> • Pressure is higher than the rated pressure 	<ul style="list-style-type: none"> • Fit a pressure reducer valve to reduce the pressure to the heater.



GUARANTEE

This Venus Lava Instant Water Heater is guaranteed for a period of Two years from the date of purchase, against manufacturing defects of all functional parts. Free repair will be provided under this guarantee when the water heater is returned to our Branch Office / Dealer's Showroom, freight and cartage prepaid.

The inner container only, excluding the door assembly is guaranteed for a total period of 10Years from the date of purchase.

This guarantee excludes any damages due to misuse, accident, negligence, tampering, unauthorized repair and normal wear and tear.

Please preserve this Guarantee Card along with the paid Bill from our Dealer. These Documents must be presented to the Service Centre / Dealer to avail this Guarantee.

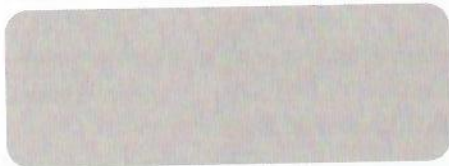
Customer Name : Model No :

Address : Serial No :

..... Invoice No :

..... Date of Purchase:

Dealer's Name and Address :



Dealer's Signature