

Operating Instructions



Instantaneous Electric Water Heater
Model: **Opal 1 L & 3 L**

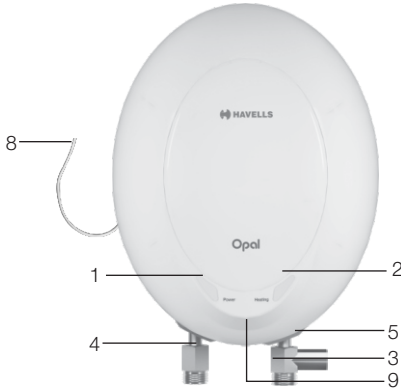


Dear Customer,

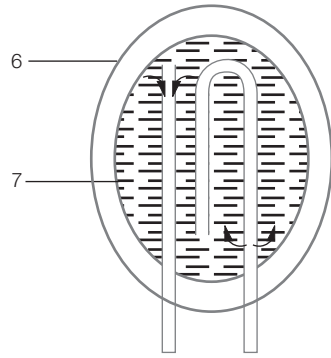
We congratulate you on choosing a **HAVELLS** Electric Water Heater, one of the highly prestigious brand in India. Meticulously designed, using only the highest quality materials and components, your electric water heater is designed to have many years of trouble free operation.

To enable your electric water heater to give you many years of perfect trouble free service, we recommend you to follow the advice contained in this Instruction manual very carefully.

PARTS LIST :

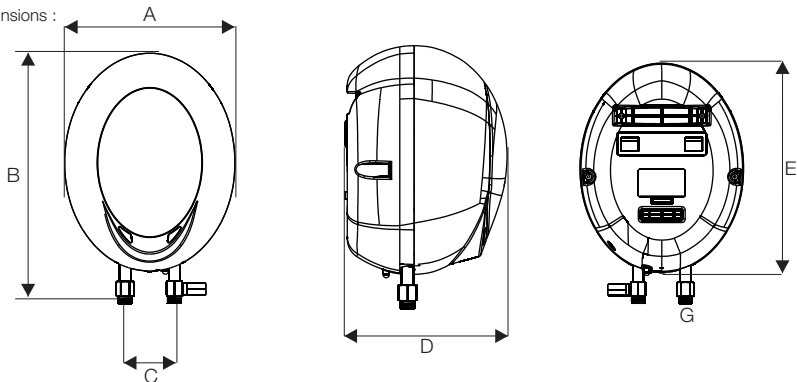


1. Power On Indicator lamp
2. Heating to use Indicator lamp
3. Cold water inlet (blue)
4. Hot water outlet (amber)
5. Safety valve



6. Outer shell
7. Inner tank
8. Power cord
9. Reset

Product Dimensions :



Model	A	B	C	D	E	G
Opal 1 L	230 mm	326 mm	66 mm	210 mm	295 mm	G ½
Opal 3 L	250 mm	335 mm	80 mm	235 mm	320 mm	G ½

*Note: All dimensions are in mm, dimensions tolerance +-5 mm
Dimensions in mm above refer to mechanical figures in this page.

Technical Specifications :

S.No.	PARAMETER	OPAL		OPAL		
1.	Rated Capacity in Litre	1 L		3 L		
2.	Mounting	Vertical	Vertical	Vertical	Vertical	
3.	Rated Voltage in & frequency in Hz	230 V, 1 Ph, 50 Hz, AC	230 V, 1 Ph, 50 Hz, AC	230 V, 1 Ph, 50 Hz, AC	230 V, 1 Ph, 50 Hz, AC	
4.	Rated Power Input in W	3000 W	4500 W	3000 W	4500 W	
5.	Rated Input Current in Ampere	16 A	25 A	16 A	25 A	
6.	Rated Pressure in MPa	0.65 MPa	0.65 MPa	0.65 MPa	0.65 MPa	
7.	Weight of water heater in kg	Empty	2.4 kg	2.4 kg	2.9 kg	2.9 kg
		Water Filled	3.6 kg	3.6 kg	6.1 kg	6.1 kg
8.	Class of Appliance	Class I	Class I	Class I	Class I	

WARNING

The installer should review the contents of this manual along with the owner after completion of installation and the manual should be left with the owner and placed at a place close to the installation.

Key Features :

Safety



High precision pre-calibrated
Thermostat



Safety valve



Preset thermal cutout



Fire retardant power cord



High working pressure
0.65 MPa ideal for high rise
buildings

Utmost Durability



Ultra thick stainless steel
inner tank of superior 304 grade



Rust and shock proof
ABS outer body

Convenience



Compact & easy to install



Twin Indicator lamp



ISI Marked

Safety Devices:

Havells Water Heater is built-in with a host of Safety Devices to ensure your safety at all times. The operation of these devices are described below :

A. Thermostat

Pre-calibrated : This device “cut-off” and “cut-in” the power supply between a narrow band of temperature range. The indicator lamp provided with this circuit glow and switch off during cut-in and cut-off. This shows the proper working of the thermostat. This is pre-calibrated device.

B. Thermal Cutout

A non-self resetting thermal cutout is provided as a safety device. When the thermostat fails to function, it cut-off the power at 92 °C.

The thermal cutout has to be manually reset with the knob provided at bottom of the unit, before the water heater can start operating again.

C. Safety Valve

1. This valve prevents the built-up of excessive pressure within the water heater by releasing water from the drain.

⚠ CAUTION

For your safety do not ever tamper with safety valve. Any tampering with the setting can be hazardous.

Warranty is void if setting is tampered.

Installation:

- A. Always use services of qualified plumber/electrician to install this unit.
- B. For easy installation and servicing enough space should be provided around this unit (5 cm from ceiling, 50 cm from sides & minimum 1.8 m from ground).
- C. Ensure following tools and accessories are made available before installation of this unit. (not provided by company)
 1. Drilling machine with concrete drill bit, set of spanner and tool kit.
 2. Two numbers of metal flexible pipes.

Preparation of Wall Structure

For installation of this unit, you need to prepare the wall suitably.

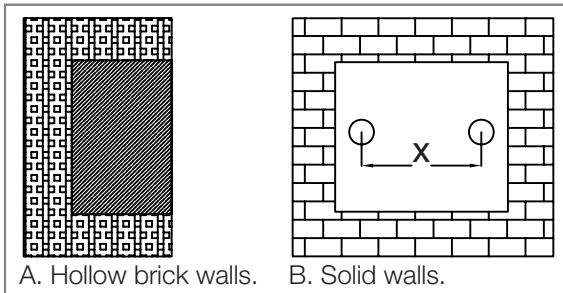
A. In case of hollow brick walls.

1. Dig up sufficient space to accommodate the wall mounting bracket (bracket supplied with water heater) of minimum depth 10 cm
2. Fill up the complete dig up space with cement concrete.
3. Ensure cement concrete is properly cured/set.
4. Then, the wall bracket can be fixed with the help of bolts provided along with the unit.

B. In case of solid walls

Follow process as below :

1. Drill hole in wall as shown Picture 1 & 2.
2. Insert the nut/bolt assembly in drilled hole, take out the bolt (as shown) Picture 1 & 2.
3. Fix the wall plate with the bolt and washer by testing till the wall plate is firm enough to carry the weight of water heater safely (with water).

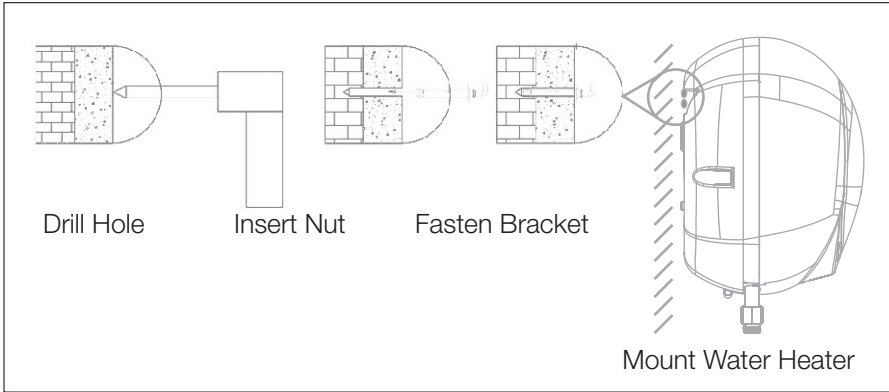


Mounting

Now the water heater can be hooked on the wall bracket.

1. After hooking on bracket, tug down the water heater and ensure both fingers of bracket are properly seated in the mounting slot.

Opal 1 L



Water Connections

⚠ CAUTION

- A. Do not connect the inlet directly to water lifting pump.
 - B. Do Not SWITCH ON water Heater without water filled in tank.
1. In case inlet water pressure is more than 0.65 MPa or water pressure head 60 metre, install the dead weight valve before outlet (not provided with this unit).
 2. Minimum height between the water heater and water supply tank should be at least 1 metre.
 3. For connecting the inlet & outlet between water heater and bathroom fittings, use metal flexible pipes.
 4. Cold water inlet is marked blue and hot water outlet is marked red.
 5. First, fix the safety valve to inlet source of water.
 6. Open inlet water tap and allow the water to fill in the water heater. Make sure that the water starts flowing from outlet of water heater.
 7. Connect the outlet with metal flexible pipe to hot water outlet point of bath fitting. Open the tap & valve and check the water flow through the hot water tap.

Electrical Connections

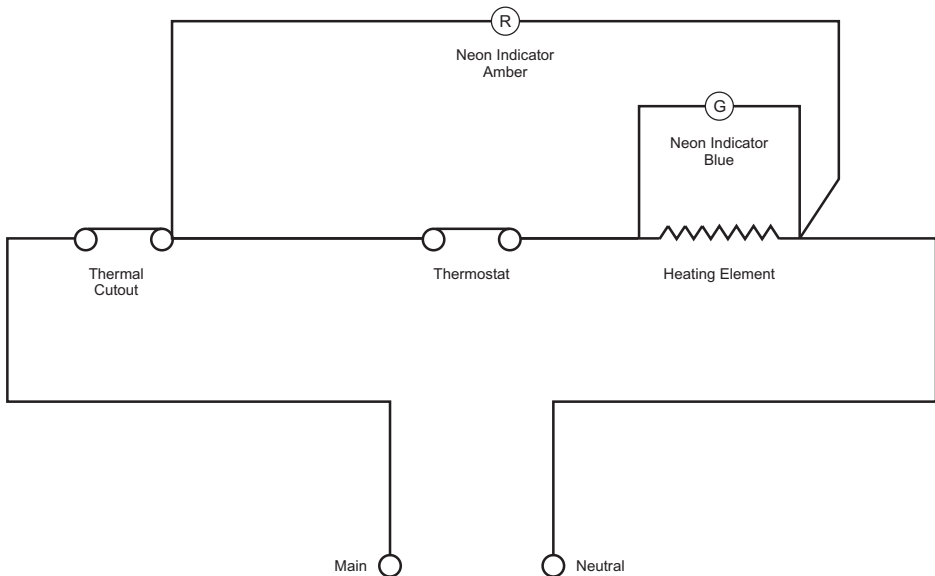
1. This unit is provided with all internal connections/wiring made in the factory itself.
2. The water heater is provided with a supply cord.
3. Make sure that the electrical contact of supply cord and switch is secure with proper earthing
4. To energize water heater plug in the 3-pin in socket for electric supply. (Not provided by Company)

Internal Wiring Diagram

The schematic diagram shows the internal wiring.

Make sure that the Water Heater is switched off and plugged-off from electrical supply before opening the Inspection cover. Follow the Internal wiring connections as shown in the diagram below while carrying out the maintenance.

Internal Wiring Diagram



Operation Of Water Heater :

A. 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 fill the heater by opening the control valve at the inlet.
3. When the heater is full, water will start flowing through the hot water tap. Close the hot water tap.
4. Now the heater will always have water inside. Water drawn will be replaced by water from the over head tank.
5. Always keep the inlet control valve open.
6. Now switch "ON" the power supply to the heater.

B. Using the heater regularly :

1. Always keep the inlet valve open so that water drawn from the hot water tap is automatically replaced from the mains.
2. When the water reaches the required temperature the thermostat will cut-off the power supply automatically.
3. The thermostat is pre-calibrated at 55 °C
4. As the temperature of water inside the tank drops thermostat again switches the power supply on.
5. By controlling flow of water desired hot water can be achieved. Greater the flow, lower will be the temperature of water and vice-versa.

Maintenance & Cleaning :

1. To benefit from the highest standards of service and to ensure your guarantee remains in focus, please always contact HAVELLS approved dealer or HAVELLS Authorised Franchise.
2. Always keep the inlet control valve open till the water heater is in use.
3. Never switch "ON" the water heater without water in the heater. It will damage the heating element.
4. Check condition of metal flexible pipe at-least once in a year. If found damaged replace with new pipes.
5. Check the condition of power & supply cord for "No Damages". Replace it by an authentic supply cord in case of damage.
6. If the water heater is not going to be used for a long time.
 - a. Plug Off the power supply.
 - b. Stop Inlet water supply.
7. To increase the life of heating element, de-scaling caused by impurities in the water supply should be done periodically, if required, you may take the assistance of the nearest authorized service center.
8. During reuse of water heater
 - a. Open Inlet Valve and fill the water heater till the clean water flows from outlet tap.
 - b. Plug-in the power supply to heat the water

DO'S

1. The gate valve at the inlet should always be kept open.
2. To minimize scaling of heating element & the tank, (which takes place rapidly in areas of hard water), drain the water from heater unit periodically. However get this done through a qualified technician/plumber only
3. Always get the water heater serviced once in a year from a Havells authorized service representative
4. Use genuine spares when spares replacement is necessary.
5. Switch OFF the power supply to the unit & drain out the water when not in use for a longer period of time. This prevents scaling of the element.
6. In case both the lamps do not glow, do not start the unit by resetting the thermal cutout. Instead contact the nearest customer care centre.

DON'TS

1. Safety devices like safety valve, thermostat, thermal cut-out etc are pre-set from factory & sensitive devices. Do not tamper with them, this could be hazardous.
2. Do not switch ON the heater till it is completely filled with water.
3. In case you observe any abnormality of operation, immediately switch OFF the main power supply to the unit and contact the nearest customer care centre.
4. Never install a pressure reducer valve at the inlet.

WARRANTY

This Havells Water Heater carries warranty of two years (24 months) for all electrical items including heating elements and 5 years for the Tank from the date of purchase against manufacturing defect. Free repair will be provided under this warranty when the water heater is returned to our service centre freight and cartage paid.

This warranty only applies if -

a)	The water heater has been installed as per instruction manual.
b)	Maintenance has been carried out as instructed.
c)	Safety valves have been kept in right working condition.

The warranty is void if –

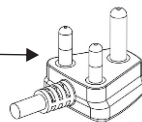
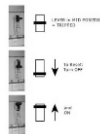
a)	The tank has been damaged by external causes.
b)	Damages due to misuse, accident, negligence, un-authorized repair or alteration or modifications or incorrect use of the water heater & normal wear & tear.

Please preserve this warranty card along with paid bill/invoice received from the dealer while making purchase. These documents must be presented to the service centre or to the dealer to avail this warranty.

Whenever some part is to be replaced get only genuine spares from our dealer. If there is any difficulty, please contact our service centre or customer care cell.

Troubleshooting Chart

Symptoms	Possible Cause	Suggested Remedy
Unit does not start	MCB has tripped	Reset MCB
		MCB Rating Advice :- For 3 kW- 15 A or more & For 4.5 kW 20 A or more
	Cut-out operated	Press Reset Button present in unit
		Make sure Water is filled in tank before switching the unit again
	NO power supply	Switch On the power supply
		Check blue/red light is glowing
Current in Water	Poor electrical installation	Use only ISI marked 3-Pin Plug (Not provided with this unit) For 3 kW- 15 A or more & For 4.5 kW 20 A or more
		Check earthing of the house
		Make tight electrical connections
Low Heating	Water Flow Rate	By Controlling flow of water, desired hot water can be achieved. Greater the flow, lower will be the temperature of water and vice versa
		Advice to keep 2 L / min (to be checked & set through tap by customer)
Water Leakage	PRV	If more then 20 Floor (Water Head max Height 65 m) Recommend to use pressure reducer
	Flexible Pipe Inlet/ Outlet	Steps to follow :- Locate the Leak, Shut off Water, Check Fittings, Repair or Replace (Flexipipes Not provided with this unit)
	Improper Installation	Installation by Havells team



NOTE :- If the Unit still does not work, or if any other types of symptoms are encounter, shut off the power supply and call the Havells customer service

WARRANTY CARD

Customer Name _____

Customer Address _____

Pin Code _____

Date of Purchase _____

Dealer's Name & Address

Dealer's Stamp:

Product Model

Opal 1 L & 3 L

Product Serial No.

Actual products may vary in colour, design, description and colour combination etc.
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Specifications & performance data are constantly changing.

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Havells India Ltd.

QRG Towers, 2D, Sector -126,
Expressway, Noida - 201 304 (UP), Ph. +91-120-3331000,
E-mail: marketing@havells.com, www.havells.com
Consumer Care No.: 1800 11 0303, 1800 103 1313 (All Connections),
011-4166 0303 (Landline)
Join us on Facebook at www.facebook.com/havells and share
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