HAVELLS

MAGNATRON

INTRODUCING

iHTT

INDUCTION HEAT TRANSFER TECHNOLOGY

No heating element

Rapid heating

Long lasting heating efficiency

MAGNATRON

Dear Customer,

We welcome you to the ever growing HAVELLS family and congratulate you for being a priority customer of HAVELLS. At Havells we believe in constant innovation and improvement; and keep strengthening our commitment to offer 'technologically superior and premium products' to our consumers. In line with this mission we have developed a novel product - Magnatron Water Heater. It is industry's first Water Heater with iHTT (Induction Heat Transfer Technology).

We congratulate you for choosing this excellent product.

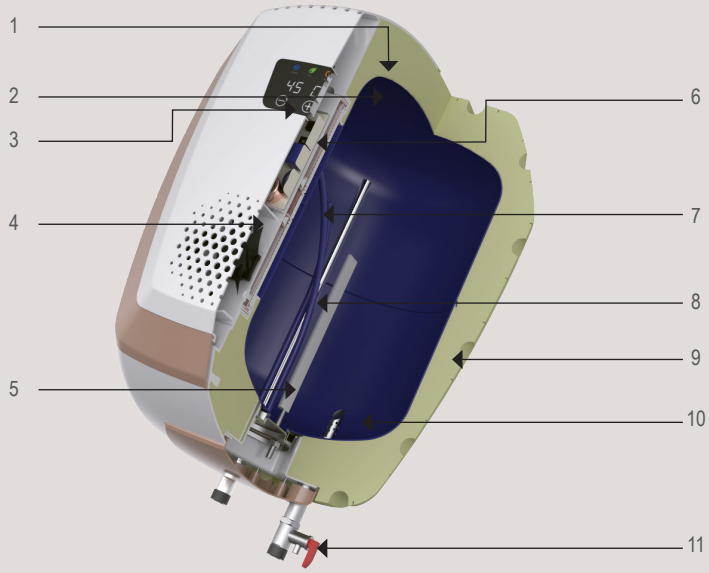
Thank you.
HAVELLS INDIA LIMITED

AN INTRODUCTION TO MAGNATRON WATER HEATER

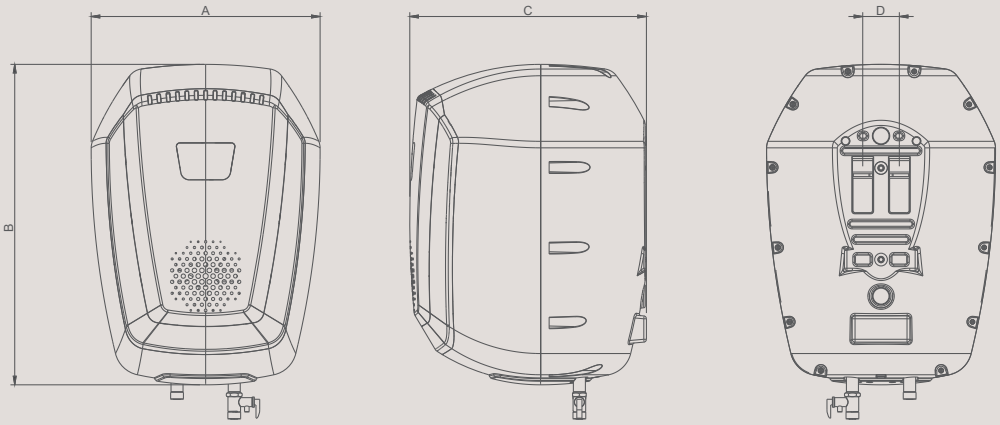
Introducing a uniquely designed and Industry's First Water Heater with iHTT (Induction Heat Transfer Technology) which allows quick heating using electromagnetic waves. What's more it comes with unique features that makes it an excellent choice:

- Without Heating element
- Rapid Heating
- Long Lasting Heating Efficiency
- Minimal Scaling Impact
- Remote Control
- Feather Touch Panel for Temperature Setting
- FeroglasTM Coating Technology
- 7 Years + 5 Years + 2 Years Warranty

Parts List: Magnatron 15 L & 25 L



1. Heavy guage inner tank
2. Fero glass coating layer
3. Display window
4. Fan
5. Heavy-Duty anode rod
6. Induction coil
7. NTC pocket
8. Cutout pocket
9. Energy saving high density PUF insulation
10. Water tubes with whirlflow
11. Multifunction safety valve



Model	A	B	C	D
Magnatron 15 L	380 mm	501 mm	374 mm	62 mm
Magnatron 25 L	400 mm	560 mm	413.5 mm	62 mm

*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	MAGNATRON 15 L	MAGNATRON 25 L
1	Rated Capacity in L	15 L	25 L
2	Mounting	Vertical	Vertical
3	Rated Voltage in Volt & frequency in Hz	230 V, 1 Phase, 50 Hz, AC	230 V, 1 Phase, 50 Hz, AC
4	Rated Power Input in W	2000 W	2000 W
5	Rated Input Current in Ampere	8.7 A	8.7 A
6	Max Hot Water Temp. (°C)	75 °C	75 °C
7	Rated Pressure in MPa	0.8 MPa	0.8 MPa
8	Standing Loss in kWh / 24 h / 45 °C	≤ 0.419 kWh	≤ 0.511 kWh
9	Reheating Time in min to raise 50 °C	25 min	40 min
10	Mixing Factor Maximum (%)	30%	30%
11	Weight of water heater in kg		
	- Empty	12.5 kg	15.2 kg
	- Water Filled	27.8 kg	40.2 kg
12	Water Proof Degree	IPX4	IPX4
13	Class of Appliance	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:

Ferroglass coated tank with single weld line design:

A. Made of Ultra thick superior quality steel.
B. Provides more corrosion resistance and anti-rust property compared to standard inner tank designs resulting longer life.
C. Single weld line on the inner tank eliminates the risk of water leakage.

Heavy Duty anode rod protects tank from corrosion:

With steel core, anode rod protects enameled tank from rust and corrosion.

Energy saving High density Puf Insulation:

CFC free thicker insulation offers complete protection against radiant heat loss.

Water tubes with whirl flow:

The flow ensures no immediate direct contact between cold and hot water for a faster heating and maximum energy saving effect.

Thermal Cut Out:

Cuts off electric power to guarantee safety, in case the water temperature exceeds the highest temperature beyond pre-set of the thermostat.

Multifunctional Safety Valve:

The MFV used with this unit is a unique safety valve. This has four functions.

1. Pressure release valve
2. Non return valve
3. Vacuum release valve
4. Drain device

4 Bolt flange:

Provides an easier way for product maintenance.

Feather touch display:
Allows manual setting for heating the water between 25 °C to 75 °C

Shock safe plug:
India's first integrated shock safe plug is designed to prevent injury to humans due to electric shocks, the plug will cut off the power immediately in case of any current leakage.

Minimal scaling impact:
Since there is no heating element inside water tank, Impact of deposition of scale will have minimal impact on heating.

Rapid heating:
Magnatron uses Induction technology to heat the water inside tank, this technology heats up the water rapidly and keep the water bathing ready in no time.

Long lasting heating efficiency:
Magnatron's induction technology heats up the water from outside tank and thus ensure no contact with water and greater heating efficiency

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. Temperature sensor

This device "cuts-off" and "cuts-in" the power supply between a defined bands of temperature range. This device has feature touch keys to set the desired temperature. When the device cuts off, device beeps for 2 seconds and the set temperature is shown equal to actual temperature on the display.

B. Thermal Cutout

A non-self-resetting thermal cutout is provided as a safety device. In case, the thermostat fails to operate, this device cuts-off the power at 95 °C ± 5 °C

C. Earth leakage Circuit Breaker (ELCB)*

This water heater is equipped with an earth leakage circuit breaker (ELCB) which will cut-off the power immediately in case of any current leakage. This will ensure protection against electric shock in case of current leakage. In order to ensure that the ELCB is working normally, press the 'Testing' button on the device. If ELCB cuts off the power to the heater, it means that it is working properly. After testing, please reset button to restore normal functioning of the heater. It is advisable to periodically repeat this test to verify the functioning of the ELCB.

D. Multi-function Valve (MFV)

1. This valve prevents the built-up of excessive pressure within the water heater by releasing water from the drain.
2. It also acts as a non-return valve to avoid the return of water from the water heater back to supply. Thereby prevents the dry heating.
3. It acts as an expansion valve to allow the hot water expansion during heating which flows back through drain.
4. Customer can ensure proper working of the MFV by cleaning of salt deposits, by lifting the drain lever up. Customer can drain out the water from tank in case of prolonged non-use of water heater.

INSTALLATION & SAFETY:

A. Always use services of Havells Authorized person 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 sets, spanner and tool kit.
2. Two number of metal flexible pipes.
3. PVC pipe for drain

Preparation of Wall Structure

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

A. IN CASE OF HOLLOW BRICK WALLS.

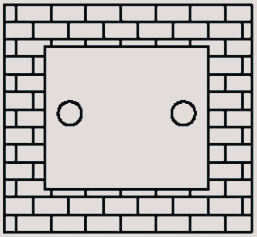
1. Dig up sufficient space to accommodate the wall mounting bracket (bracket supplied with water heater) of minimum depth 10 cm
2. Fill up the complete dig up space with cement concrete.
3. Ensure cement concrete is properly cured/set.
4. Then, the wall bracket can be fixed with the help of bolts provided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

B. In case of solid walls

Follow process as below :

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

A
Hollow brick walls

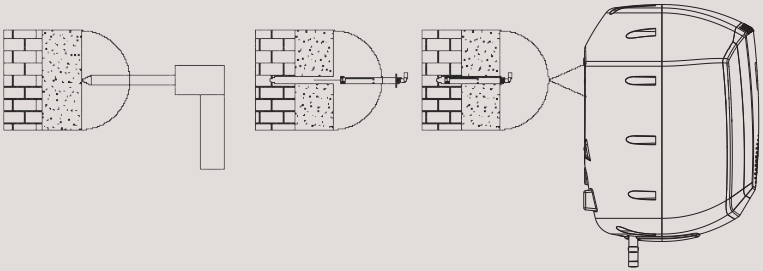


B
Solid walls

MOUNTING

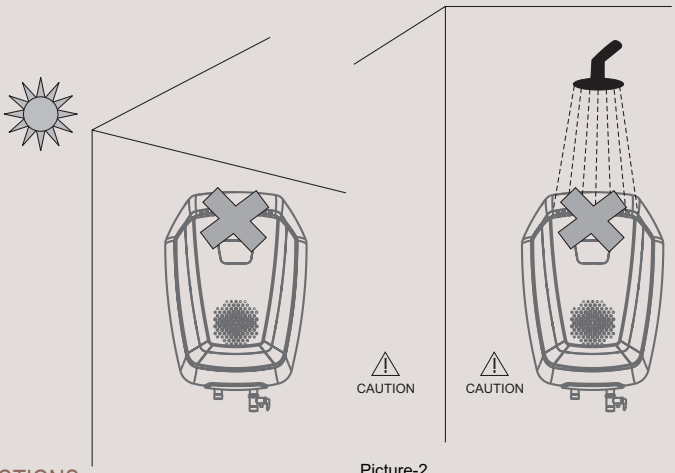
Now the water heater can be hooked on the wall bracket.

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



Drill Hole Insert Nut Fasten Bracket Mount Water Heater

2. Do not install in the area of direct sunligh and water splashes.



Picture-2

WATER CONNECTIONS

⚠ CAUTION

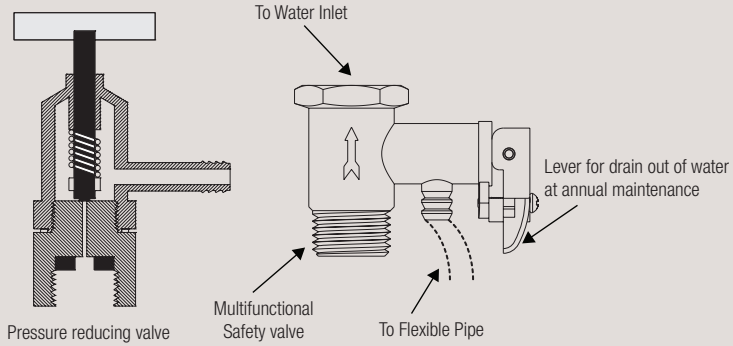
Do not connect the inlet directly to water lifting pump.

Do not SWITCH ON water heater without water filled in tank

1. In case inlet water pressure is more than 0.8 MPa or water pressure head 80 m, install the dead weight valve before inlet as shown in Picture 2 (not provided with this unit).
2. Minimum height between the water heater and water supply tank should be atleast 1 m
3. For connecting the inlet & outlet between water heater and bathroom fittings, use metal flexible pipes having plastic nut / plastic adapter.
4. Cold water inlet is marked blue and hot water outlet is marked with red.
5. First, fix the multifunction valve (MFV) to inlet of water heater
6. Connect cold water inlet to other end of MFV with metal flexible pipes having plastic nut / plastic adapter.
7. 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.
8. Connect the outlet of water heater with metal flexible pipe having plastic nut / plastic adapter to hot water outlet point of bath fitting. Open the tap & valve to verify that water is flowing through the hot water tap.
9. Connect MFV with PVC pipe for drain see Picture 3.

⚠ **CAUTION**

Ensure no leakage of water through inlet and outlet joints.



Picture 3

ELECTRICAL CONNECTIONS

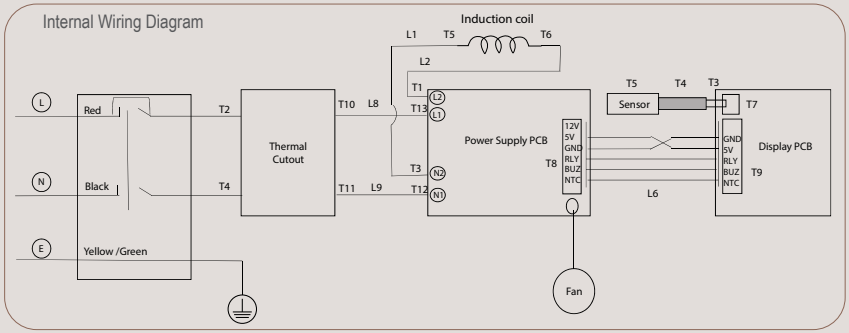
1. This unit is provided with all internal connections / wiring made in the factory itself.
2. The water heater is provided with a supply cord, with an in-built ELCB and a 3 pin plug top of 16 A
3. Make sure that the electrical contact of 3-pin plug and switch is secure with proper earthing.
4. To energize water heater, plug in the 3-pin in socket for electric supply.
5. Type C 16 A double pole MCB or 16 A fuse must be used as a backup protection for overload.
6. To ensure proper functioning, use test button in the shock safe plug at least once a month.
7. ⚠ Shock safe plug does not eliminate the risk of electric shock but limits duration of passage of current through human body for such a short time, probabilities of a lethal effect are reduced to a minimum.
8. ⚠ IEC: 61540 recommend that shock safe plug should not be considered as a sole means of protection it is essential to provide proper earthing and all parts of the system should be properly insulated.

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.



OPERATION OF WATER HEATER:

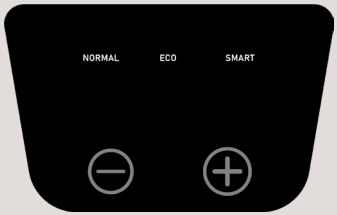
A. Using the Water Heater for the first time:

1. Do not switch “ON” the water heater before filling it with water.
2. Leave the hot water tap open. Now fill water by opening the control valve at the inlet.
3. When the water heater is full, water will start flowing through the hot water tap. Close the hot water tap.
4. Now the water heater will always have water inside. Water drawn will be replaced by water from the overhead tank.
5. Always keep the inlet control valve open.
6. Now switch “ON” the power supply to the water heater.

B. Using the Water Heater regularly:

1. Always keep the inlet valve open so that water drawn from the hot water tap is automatically replaced from the main supply.
2. Different Modes of operations :
   Magnatron is equipped with 3 modes of operations which can be selected from the remote provided with the product

a. Normal Mode
b. Eco Mode
c. Smart Mode

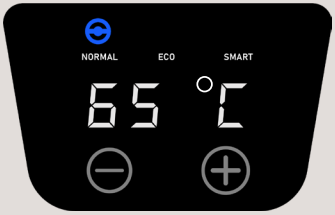


Display OFF

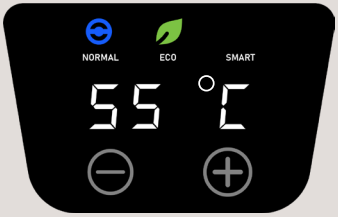
Display ON

Remote

a. Normal Mode: In this mode, one can adjust the temperature of the water heater from 25 °C to 75 °C. Only Blue LED glows, when the set temperature is above 55 °C. Blue and Green LED glows when the set temperature is 55 °C or below.
Digital display shows the current temperature and set temperature alternatively. In every 4 s, it shows the current water temperature for 3 s and set temperature for 1 s
Once the current temperature reaches set temperature, the buzzer will make a short sound 2 times.



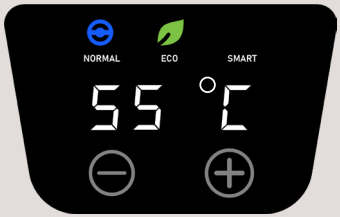
Normal mode with set temperature › 55 °C



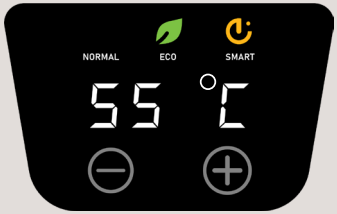
Normal mode with set temperature ≤55 °C

When water reaches the set temperature, thermostat will cut-off the power supply automatically.

b. Eco Mode: Eco mode is set at 55 °C or below temperatures. If the user adjust the set temperature at 55 °C or below, either in Normal mode or Smart mode, then the water heater enters ECO mode and heats upto the set temperature which is ≤55 °C and hence saves power and time. Glowing of green light indicates activation of ECO mode



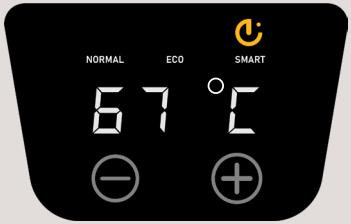
ECO mode activation in Normal mode



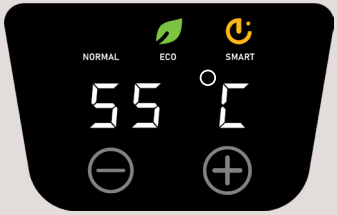
ECO mode activation in Smart mode

c. Smart Mode : This mode enables user to get the desired temperature at desired time. Magnatron automatically does the calculation and gives desired hot water at your preset convenient time. Only Orange light glows when the user sets the temperature above 55 °C in this mode. Orange and Green light glows when the user adjust the set temperature 55 °C or below.

User can press “Mode” button on the remote to enter the smart mode (if not already in smart mode). Once the water heater enters this mode it will automatically ask you to set the desired time at which you require hot water. Left side of the digit display shows the hour and right side shows the minutes. The clock follows 24 h format.



Smart Mode with set temperature >55 °C



Smart mode with set temperature ≤ 55 °C

Time adjustment slots are available with an interval of 30 minutes. Up (▲) and Down (▼) arrows on the remote will increase or decrease the set time by 30 minutes. Press the “Set” button on the remote or do not press anything for 5 seconds, your desired time will be saved.

Once the time is set, press Up (▲) and Down (▼) arrows on the remote to set the desired temperature. Temperature can be increased or decreased by pressing Up (▲) and Down (▼) arrows. Single pressing of these arrows will increase or decrease the set temperature by 1 °C

Once the desired time and temperature is set, smart mode will give you your desired result at desired time. Water heater must be kept in switched ON condition in smart mode.

3. Real time setting in clock – Press the “Set” button on the remote for 5 s, water heater will enter into the time setting mode. You can set the real time by pressing Up (▲) and Down (▼) arrows and press set again for freezing the time. Time will be in the memory of water heater for 48 hours. If the water heater is switched ON after 48 hours, time setting has to be done again.

4. The water heater can also be kept “ON” always, if required; since the heater is completely insulated keeping the water hot. The thermostat cuts-in and cuts-off automatically to keep the water at constant temperature assuring hot water output always.

5. Error Codes: Please find below, table for all the error codes in Magnatron.

Sr. No.	Error Code	Explanation
1	E01	Heating surface not detected by circuit
2	E02	Coil installation is abnormal
3	E03	Input Voltage is outside desired range of 180 V to 265 V
4	E04	Water temperature sensor problem
5	E05	Water temperature above 90 °C
6	E06	Open or short circuit in electronic circuit
7	E07	Temperature is too high in electronic circuit
8	E08	Communication between power PCB and display PCB is abnormal
9	E12	No water inside the tank

MAINTENANCE & CLEANING:

1. To benefit from the highest standards of services and to ensure your guarantee remains in focus, please always contact HAVELLS Authorized Franchisee
2. Always keep the inlet control open.
3. Never switch “ON” the water heater without water in it; it might damage the tank/water heater.
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. It is recommended to descale the water heater once a year.
7. 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
   c. Unscrew the drain lever, lift the lever upward to remove the water through drain system provided in the MFV.
8. During reuse of water heater
   a. Ensure Drain Plug lever is reset and screwed
   b. Open Inlet Valve and fill the water heater till the clean water flows from outlet tap.
   c. Plug-in the power supply to heat the water
9. Periodically check the MFV to ensure that it is in operating condition. The MFV should be operated regularly to remove salt deposits and to verify that it is not blocked
10. Check proper functioning of the safety valve in every two months by opening and closing the test lever.
11. We recommend to check Magnesium anode rod every year & once it has been used up over 60%, the Magnesium anode should be replaced with a new one.

FOR CLEANING THE TANK OR REPLACING THE ANODE USE THE FOLLOWING PROCEDURE:

1. Switch off the electric supply to the water heater.
2. Open the hot water taps until the hot water is removed completely.
3. Close cold water supply.
4. Drain the cold water from tank through MFV drain pipe by lifting the drain lever. Remove flexible pipe.
5. Remove the water heater from the hanger hook, after water heater is emptied.
6. Remove the inspection cover from bottom, unscrew the flange.

7. Clean the container to remove scale formation, by using a suitable acid or by gently scraping the scale. Check the surface after cleaning for “No Surface damage”
8. Replace Magnesium anode in case it is worn out.
9. Remount the flange. Ensure the internal wiring connection are made as per the wiring diagram shown in the manual.
10. Hang the water heater on the mounting bracket / hook provided on the wall. Move the water heater downward to ensure that it is seated on bracket properly.
11. Open cold water supply until water flows without interruption from outlet valve.
12. Close the outlet valve and check for “No eventual leakage” around the flange and water connections
13. When there is no leakage then switch on the electric supply.

DO’S

1. The gate valve at the inlet should always be kept open.
2. To minimize scaling on the sensing pockets & the tank, (which takes place rapidly in areas of hard water), drain the water from heater unit periodically. However get this done through a authorized technician / plumber only.
3. Always get the water heater services once in a year from a Havells authorized service representative.
4. Use genuine spares when spares placement 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 on the tank.
6. In case both the lamps do not glow, do not start the unit by resetting the thermal cutout.

DON’TS

1. Safety devices like safety valve, NTC , 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*

M/s. Havells India Ltd. ("Company") hereby offers a limited warranty ("Warranty") against manufacturing defect/s for a period of 2 (two) years on this Water Heater ("Product"), 5 (five) years on Induction Coil, 7 (seven) years on its inner container from the date of invoice on the terms and conditions provided hereinafter.

WARRANTY TERMS AND CONDITIONS

To claim Warranty, it is mandatory that the customer provides the original invoice and wherever possible original Warranty certificate (duly signed and stamped by the selling dealer) must be presented by the customer.

To avail Warranty services, the customer can log in his complaint with the customer care cell.

This Warranty is valid only in respect of the Product purchased in India.

This Warranty is limited to the first purchaser of the Product only.

It is clarified that after two years from the date of invoice, Company's responsibility to continue to provide additional Warranty services in terms as agreed upon shall however be limited only to supply of the parts free of cost and any cost(s) incurred towards labour, transportation and any other incidental expenditure for providing the said Warranty services shall be borne by the customer.

The decision to repair or replace any part of the Product shall be at the sole discretion of the Company.

In case of repair or replacement of any part of the Product during the said Warranty Period, the Warranty of the repaired or replaced part shall thereafter continue only for the unexpired period of Warranty.

If the Product is not repairable at the place of installation then the decision of the Company's Authorized Service Representative to take the Product to the service center for repair shall be final. Company's decisions on all questions and complaints regarding the defects, shall be conclusive.

The defective spare parts shall be sole property of the Company or its Authorized Service Partner during the Warranty Period.

In the event of any unforeseen circumstance, and/or spares are not available, Company's prevailing depreciation rules will be binding on the customer to accept as a commercial solution in lieu of repairs.

The depreciation rule will be applicable after one year from the date of purchase.

To avail Warranty services for the Product, any recommendations made by the Company's visiting Authorized Service Representative shall be complied by the customer and if that recommendation requires repair of any electrical installations, wiring or of any third party product attached to the Product, it shall be first undertaken by the customer at his entire cost. Thereafter, the Warranty for the Product can be availed.

Company shall not be held liable or be deemed to be in default for any delay or failure in performance resulting directly or indirectly from causes beyond its control including delay in repairing due to non-availability of any component or accessory, labour problem, restrictions and regulations of the government, public movement, war and any other unavoidable/unforeseen circumstances including any force majeure event, specially vis-à-vis the import of supplies and raw material.

The Warranty provided herein is in lieu of implied conditions and warranties under the law and is confined to the repair or replacement of defective parts and does not cover any economic loss, commercial loss, consequential or resulting liability, damage to the property, or any other harm or loss.

None of the employees and /or Authorized Dealers of the Company have any authority whatsoever to vary the Terms and Conditions of this Warranty.

In the event that any Terms and Condition of this Warranty becomes invalid and/or unenforceable, the remaining Terms and Conditions shall continue in full force and effect.

WARRANTY EXCLUDES OR DOES NOT APPLY:

- If the Product or any of its parts/accessories are not properly installed, used, maintained or operated as per the user manual or Product specifications.
- If the Product is serviced or repaired by any person other than the Authorized Service Representative of the Company.
- If customer violates Warranty Terms and Conditions, instruction manual guidelines, recommendations of Authorised Service Representative and/or operates the Product otherwise than as per Product specifications.
- If the serial number affixed by the Company on the Product or any part thereof is damaged, defaced, obliterated or erased/ tampered with for any reason whatsoever or if Product is refurbished/modified.
- If the Product is operated in conditions otherwise than normal conditions (e.g., abnormal Voltage surge, extreme heat, corrosive/alkaline/acidic atmosphere, dust, damage from sea water, pollution, chemical environment, extreme environmental conditions, sulfur in the air, installation near the open drainage system etc.).
- If the Product is installed in direct sunlight, rain, water splashes etc.
- If safety valves and anodes are not kept under right working conditions.
- If multi-functional safety valve is not used or installed with the Product.
- If the Product is used for any commercial purpose.
- Any harm caused due to accident, negligence, improper maintenance, mishandling, tampering, incurred in

transit by the customer or which can be attributed to the fault of the customer.

- Any harm resulting from any unforeseeable circumstances such as force majeure event etc.
- Any harm caused due to any defect in any electrical/civil installation(s), wiring or third party products.
- Any liability resulting from any un-authorized adaptations, attachments and/or adjustments to the Product or from a third party apparatus or equipment.
- Any damage caused due to quality of water, scaling or sediment deposits in the water tank.
- Any damage to the Product due to household pets, rodent or any other insect/animals.
- Cleaning of scale deposits inside water heater tank as general service.
- If any problem arises due to sedimentation/scaling.
- Anode is not included under warranty, he service life of the anode is determined by the quality and quantity of the water flowing through.
- If the anode is consumed, it needs to be replaced by an authorized service technician for efficient protection of water heater.
- Low water output/ plumbing problem due to water supply issue at customer end.
- Power supply problem at customer end.
- Corrosion, rusting, plastic parts & accessories.

Customer Name_____ Model No.:_____

Serial No. _____ Invoice No.: _____

Date of Purchase: _____

Dealer's Name, Address:

Dealer's Seal & Signature

Actual products may vary in colour, design, description and colour combination etc.
Although every effort has been made to ensure accuracy in the compilation of the technical detail within this publication. Specifications & performance data are constantly changing.

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