

# INSTRUCTION MANUAL

Please read this carefully before installation



**ELECTRIC STORAGE  
WATER HEATER**



Dear Customer,

Thank you for choosing a world-class product from Ariston Group India Private Limited. Your choice for nothing but the best is reflected by your trust placed in Ariston. Racold is registered trademark of Ariston Spa Italy.

Ariston Group India Private Limited is a fully owned subsidiary of Ariston Spa Italy, and part of the Ariston Group the leaders in water heater.

Today Ariston Group India Private Limited is the largest provider of water heating solutions in India, catering to all sectors water heating namely “Electrical, Gas, Solar and Heat Pump water heaters”.

The Racold range of products from Ariston Group India Private Limited have changed the industry standards by setting new benchmarks in quality, aesthetics and performance.

**Our many firsts in India include:**

- Water heater with rust proof polypropylene body.
- Stainless steel inner container with multi-function safety valve for high pressure operation without additional pressure reducing valve.
- PUF insulation for maximum energy saving.
- Energy labelling for any domestic electrical appliances.
- Only water heater with quality and performance certification as per IEC/EN and Indian standards (ISI mark).
- Won highest number of National Energy Conservation Award from BEE (Bureau of Energy Efficiency) for electric storage water heaters.

Retain this manual safely and in case you need any assistance you may get in touch with any of our customer care centres, the details of which are enclosed.

Kindly follow the instructions given in this manual and enjoy years of trouble-free performance.

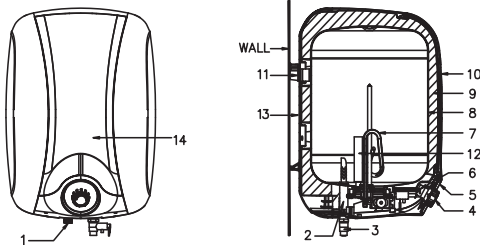
For further information including but not limited to FADs, relevant products please visit our website by scanning this QR code.



## PRODUCT FEATURES:

1. High density PUF insulation.
2. Strong non-corrosive and durable PP outer body and inspection cover.
3. **Titanium Plus Technology:** The titanium enamel coating in the tank prevents corrosion by handling even the toughest water conditions, providing reliable and healthy water for years to come.
4. **Safety+:** Enhanced protection with 3 layer of safety with thermostat, cut out and safety valve for a worry-free hot water bathing experience.
5. **Flexomix:** Get consistent hot water output for long showers.
6. **Magnesium Anode:** The water heater now comes with a bigger anode that prevents corrosion of the inner tank and thus extends its life.
7. **Smart Bath Logic:** Decide how much water is to be heated by selecting your preferred modes. Enjoy a truly personalized bathing experience as you save up to 40%\* energy.  
\*Smart bath logic only available in NXT & PRO models.
8. **HPR Technology:** The sturdy tank enables it to withstand high pressure, making it suitable for high-rise buildings.
9. **Children Care:** Ensures your child's safety against accidental exposure to extreme hot water with a pre-set safe temperature for a comfortable hot shower.  
Note: Children care mode available only in DLX models.
10. Compact size.
11. Drip proof construction.
12. Special flush mounting. 💧

## KNOW YOUR WATER HEATER :



## VERTICAL INSTALLATION

- |   |                         |                                |
|---|-------------------------|--------------------------------|
| 1 -OUTLET CONNECTION                            | 2 -INLET CONNECTION     | 3 -MULTI-FUNCTION SAFETY VALVE |
| 4 -TEMP CONTROL KNOB<br>(CLOCKWISE INCREMENTAL) | 5 -INSPECTION COVER     | 6 -THERMOSTAT AND CUT-OUT      |
| 7 -HEATING ELEMENT                              | 8 -INNER CONTAINER      | 9 -PUF INSULATION              |
| 10 -FRONT COVER                                 | 11 -INSTALATION BRACKET | 12 -MAGNESIUM ANODE            |
| 13 -BACK COVER                                  | 14 -STRIP               |                                |

## SAFETY DEVICES :

### A. Multi functional Safety Valve :

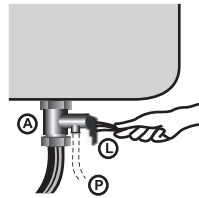
In-built multifunction safety valve (Pressure relief valve) is set to operate between 7.5 bar (109 p.s.i.) to 8.5 bar (123 p.s.i.).

Drain lever (L) is provided to drain the water heater only in case of servicing as shown in Fig.2. To avoid deposition of lime in the safety valve, please move the lever(L) up and down few times once in a 6 month.

In case of safety-valve dripping during normal use, connect a discharge pipe (P) as shown in Fig.2. This will happen only if the pressure inside the tank reaches beyond rated pressure limits.

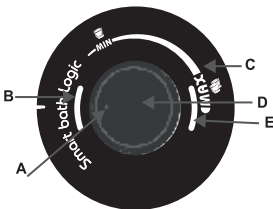


Fig. 2

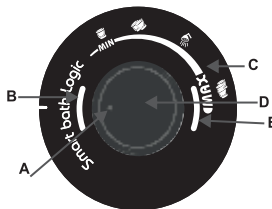


## OPERATIONAL INSTRUCTIONS:

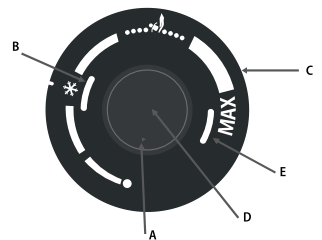
**MODEL :**  
ER 10 & 15 V



**MODEL :**  
ER 25 V



**MODEL :**  
ETERNO DLX 10V, 15V, 25V



A= Arrow Mark (Reference Point), B= Red Lamp, C= Display Sticker,

D=4 Temp control knob (clockwise incremental)  
E= Blue Lamp

**Note:** Children care mode available only in DLX models

1. Switch on the water heater's main supply, red and blue indicator lamp comes on.
2. The arrow mark knob should be position as per bathing requirement using the point mention on the display sticker.
3. The red indicator lamp switches off indicates water inside the water heater reached to the set temperature .
4. The Blue indicator lamp, which is ON during the normal operation, goes OFF when the thermal cut-out is activated. Contact qualified service personnel in this event.

## SMART BATH LOGIC

The intelligent Smart Bath Logic indicators around the temperature regulator knob allows you to choose the hot water requirement to suit to your bathing requirements and thereby choose the amount of power the water heater consumes. The Smart Bath Logic indicators allow you to be in total control of the energy consumed, by adjusting the knob to the required position

The following are the indicative saving in each of the desired knob positions as compared to the maximum thermostat setting.

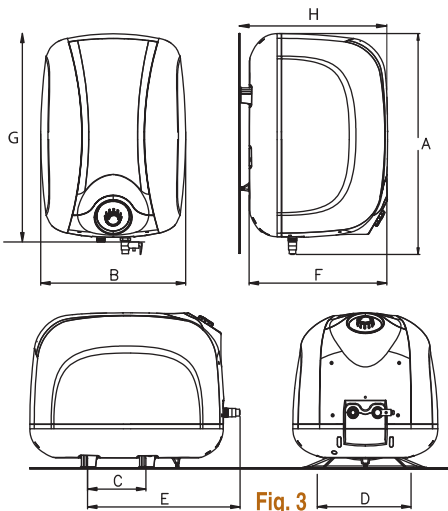
| Indicative Electricity Savings as compared to maximum possible setting |          |           |          |
|--|----------|-----------|----------|
| Desired knob setting   | 1 Bucket | 2 Buckets | 1 Shower |
| Water Heater Capacity  |          |           |          |
| 10L  | 25%      |           |          |
| 15L  | 25%      |           |          |
| 25L  | 30%      | 20%       | 10%      |

The results in the above table are mentioned as per test conditions. Results may varies from unit to unit & place to place.

**Note:** • Hot water from the water heater, needs to be mixed with cold water to get the desired quantity of water at bathable temp (40°C).

• Smart Bath Logic only available for Eterno NXT & PRO models

## SPECIFICATIONS:



| Model                               | A   | B   | C | D   | E   | F   | G   | H   |
|-------------------------------------|-----|-----|---|-----|-----|-----|-----|-----|
| ETERNO PRO 10V<br>ETERNO 2 NXT 10V  | 478 | 310 | - | 225 | 320 | 295 | 448 | 310 |
| ETERNO PRO 15V<br>ETERNO 2 NXT 15 V | 602 | 310 | - | 225 | 436 | 295 | 573 | 310 |
| ETERNO PRO 25V<br>ETERNO 2 NXT 25V  | 559 | 386 | - | 225 | 394 | 368 | 523 | 386 |

All Dimensions are in 'mm'

**Maximum rated pressure-**

8 Bar/ 800000 pacal/ 0.8 Mpa / 80 N/cm<sup>2</sup> /~80m

Water Head

**Minimum inlet water pressure-**

5000 Pascal (0.05 bar) for all models

**Fig. 3**

**Note:** Rated pressure is developed inside the tank after heating at outlet pipe. It is recommended to maintain approximately 1.5bar pressure at inlet pipe

## ETERNO SERIES

| Model   | ETERNO PRO, ENTERNO 2NXT, ENTERNO DLX |      |      |
|---|---------------------------------------|------|------|
| Capacity declared (Ltrs)                        | 10                                    | 15   | 25   |
| Real capacity ( Ltrs)                           | 10.1                                  | 15.3 | 25.2 |
| Power supply (Kw)                               | 230 Volts AC, 50Hz, Single Phase      |      |      |
| Wattage (Kw)                                    | 2.0                                   |      |      |
| Reheating time for 50°C temp rise (minutes) Max | 25                                    | 30   | 60   |
| Mean hot water output temp (°C) Min             | 50                                    | 50   | 50   |
| Mixing factor (%) Max                           | 30                                    | 30   | 30   |

### PREPARATION FOR INSTALLATION:

1. For the installation of this water heater you need to prepare the wall suitably and more so if the wall is constructed out of hollow bricks.
2. For solid bricks the usual method of installation of drilling holes in the wall and securing bolts in the right position with the help of cement concrete can be adopted, use M8 x 75 mm bolts.
3. However for hollow bricks the following procedure should be adopted:  
 Dig up sufficient space to accommodate the wall mounting bracket supplied with this water heater, upto a minimum depth of 80mm and till up the complete space with cement concrete.  
 After the cement concrete is properly set the wall bracket can then be secured to the wall with the help of bolts. It is very important to put the wall bracket only after the cement concrete has set in.

#### FOR VERTICAL INSTALLATION

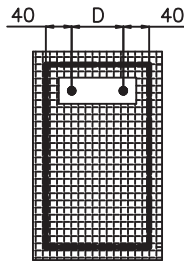


Fig. 4

### INSTALLATION:

#### Mounting and plumbing

1. Mounting bracket is supplied with the water heater.
2. Mark the position of the bolts on the wall, after checking the same with the mounting bracket supplied with the water heater.
3. Hook the water heater to the bolts and pull down the water heater slightly by hand to cause firm gripping in the slot of the bracket.
4. The cold water inlet pipe is circled with a blue collar while the hot water outlet pipe with red collar.
5. Fix 1/2" BSP union coupling on inlet and outlet connections.
6. Make necessary plumbing with the reference of the installation diagrams shown .
7. Ensure proper ventilation where the water heater unit is been installed.

Please ensure that the pressure in water heater is less than the rated pressure. install pressure reducing valve at the inlet as shown in Fig. 5.

### VERTICAL PLUMBING

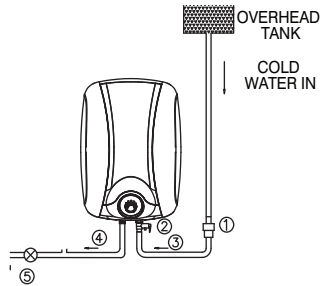


Fig. 5

1. Pressure Reducing Valve (PRV)
2. Multi-function safety valve (MFSV)
3. Cold water Inlet
4. Hot water outlet
5. Stop Cock (SC)

PRV should be installed at a minimum distance of 12 feet from the inlet pipe, to avoid safety valve dripping.

### MAINS CORD:

⇒ 3 Pin Plug, 3 Core x 1.0 Sq. mm (32 x 0.2) PVC Sheathed, 16A, 250V with ISI mark certified for ETERNO 2 NXT, ETERNO PRO, ETERNO DLX.

### ELECTRICAL CONNECTION:

Refer wiring diagram, Fig.6 to check electrical connections. Ensure proper earthing at 3pin supply point.

### WIRING DIAGRAM:

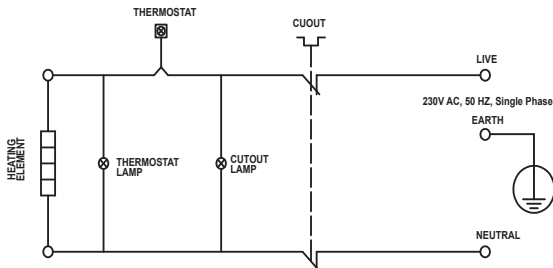


Fig. 6

**Note :** Main's cord or any other electrical component must be repaired/ replaced by authorized service personnel only. Minimum contact separation of 3mm is required in all poles for disconnection.

## TROUBLE SHOOTING GUIDE FOR WATER HEATER:

| #  | Problem/Observation  | Possible causes   | Solution /Remarks  |
|----|--|---|--|
| 1  | Water Heating takes longer time than specified in Instruction manual | Scaling on the Heating element cause slower water heating   | Get the Heating element de-scaled from authorized service person or replace with genuine spare parts recommended by company<br><br>Measure the temperature of water using thermometer.<br>Adjust the flow rate at 3 Ltrs/min |
|    |  | Low voltage at certain places   | Check the voltage at customer's place  |
| 2  | Equipment creates abnormal Noise                                     | High voltage fluctuations ,Hard water   | Recommend Spare Heating element with low watt density (8W/cm <sup>2</sup> )  |
|    | Equipment creates hissing Noise                                      | Due to scaling on Heating Element   | descaling Heating element  |
| 3  | Unit not working   | Power point may not be working  | Need the line at customer's place to be checked  |
|    |  | Check for any short circuit of harness/Power cord inside  |  |
|    |  | Cut out operated due to dry heating   | Reset Cut out  |
|    |  | Heating element might not be functioning (may be due to Dry heat or short/Crack/ burst/heavy scaling) | Replace Heating element  |
| 4  | Leakage of the unit  | Rusting of the tank   | Check from where the leakage is (tank, collar, gasket, Heater plate), Replace or repair based on the observation   |
|    |  | Not enough torque to the bolts on HP/HE flange  | Replace or repair based on the observation   |
|    |  | Leaking from Heating element brass flange (Instant water heater)                                      | Replace Heating element  |
| 5  | No Hot water out put   | Heating element not working   | Reset Cut out  |
|    |  | Thermostat low setting (check if someone tampered the setting in Instant water heater)                |  |
|    |  | Cut out trip  |  |
|    |  | Inlet valve closed  | Open the inlet valve   |
| 6  | User gets mild shock when using Water heater                         | Improper earthing at customer's place   | Check for proper earthing & if not then suggest customer to do it properly   |
| 7  | Outlet water blockage  | Heavy scaling on Outlet pipe opening end  | descaling the product from authorized service personal   |
| 8  | Leaking from MFSV (Safety valve)                                     | Excess pressure than rated pressure   | Check the pressure when unit is in ON condition, ensure Inlet line is ON.<br><br><b>Note</b> When MFSV is dripping, it ensures safety of the equipment from excess pressure. Put drain pipe at MFSV with clip .              |
|    |  | Check PRV position from inlet pipe  | It should be minimum 12 feet from equipment  |
|    |  |   | Check if PRV is there in high rise building  |
| 9  | Water Heater unit burnt  | Short circuit of the harness/Power Cord   | Replace Harness asm or Power Cord  |
|    |  | Use of Low amp Power Cord   |  |
| 10 | Smell comes out of water   | If Water heater unit is not used in 15+ days, water inside smells for some time                       | Flush out 2 times capacity of water heater   |

## Dos AND DON'Ts OF WATER HEATER:

| #  | DOs.  | REMARKS  |
|----|---|--|
| 1  | Installation of water heater should be done by qualified person only, preferably from Racold service.   | Product warranty will get void in case of wrong installation.  |
| 2  | Use pressure reducing valve in case rated water pressure is higher than recommended.  | To Avoid Water dripping from safety valve.   |
| 3  | Inlet water line should be continuously Open when water heater is in use except when it is being serviced.  |  |
| 4  | Ensure proper leveling of the unit while doing Installation   | If tilted, it may affect the hot water out put quantity  |
| 5  | Ensure proper earthing at the place of Installation   | Chances of getting Shock   |
| 6  | Use ISI marked or Branded company Power Plugs only.   | Use 16 Amp Power Plug only   |
| 7  | Use of two spanners suggested while installing the product (connecting the hose pipes)  | There may be a chance of crack on the pipes if we don't do so  |
| 8  | Ensure water coming out from outlet prior switching the unit ON (first time)  | If no water inside tank, unit goes into dry heat causing damages, burning etc. else Warranty will be void. |
| 9  | It is recommended that the IN/OUT pipes, Heating Element and Safety valve be de-scaled at least once in 6 months through proper Racold service only. "At customer cost" | This helps in Improving product life.  |
| 10 | As per the safety norms Thermostat, Cut out are set at desired temperatures and Safety Valve set at desired pressure and its recommended not to change the settings     | Product warranty will get void if setting changed.   |
| 11 | Power OFF the unit while servicing the water heater unit  | Chances of product burning/Safety purpose  |
| 12 | Use Only Genuine company spare parts from authorised service centers  | Product warranty will get void if used other than company recommended spare parts                          |
| #  | DON'Ts  | REMARKS  |
| 1  | Use connectors In case if is required to connect another cord with main power cord came along with the product.   | Chances of product burning /Safety purpose   |
| 2  | Do not tamper the thermostat setting  | As per safety standards, thermostats are set at desired temperatures. Recommend not to change the settings |
| 3  | Do not switch ON the product without checking the water coming out from outlet  | Chances of product burning   |
| 4  | Do not adjust/disturb Safety valve setting  | As per safety standards, Safety valve are set at desired pressure. Recommend not to change the settings.   |

### IMPORTANT NOTES:

1. Optimum performance of the water heater is achieved when the total hardness of water <400 ppm & chloride content <300ppm.
2. In case a pressure reducing valve is used in installation, please ensure that it is installed at a min.12 feet distance from the inlet point
3. Please ensure the installation of water heater to be done by keeping minimum 1 foot from the wall on either side.
4. Anode should be checked periodically within 6 months. If n found consumed(< Dia.7mm),replace it on chargeable basis.
5. If product installed at inaccessible place, it is customer's responsibility to dismount the product and make available to the service representative.
6. Annual maintenance contract (AMC) - it is recommended to take AMC and extended warranty from authorized service franchisee.
7. Visit charges shall be applicable for product installation, Demonstration & explanation related calls.
8. Please ensure proper ventilation whenever the unit is installed to avoid any rust formation/aggrevation.

## ELECTRIC WATER HEATER INSTALLATION GUIDELINE FOR PLUMBERS

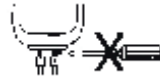
- Read Instruction Manual carefully and follow installation instructions.
- Check product type : Whether Vertical or horizontal, if Horizontal whether wall Mounting (WM) or Floor Mounting (FM) and install accordingly.
- Safety valves are pre-set for certain working pressure . Under any circumstances do not tamper / over-tighten the safety valve.
- Continuous water dripping from Safety valve is an indication of excessive pressure at inlet of water heater compared to the rated pressure. In that case install pressure reducing valve at the inlet
- Check for leakages after installation, plumbing & before switching ON the power supply.
- Ensure flow of water from outlet before connecting electric power supply to the appliance.
- Do not use excessive force while tightening inlet and outlet Couplings. This may cause serious damage to the Water Heater. Use Cross spanner for tightening.
- Check supply voltage at the place of installation 230V.
- Ensure proper earthing of electrical connection.
- No extension cords to be used.
- Use only ISI marked electrical accessories of proper rating e.g. 3 Pin Plug, Connection Boxes, Wires etc.
- In Storage water Heaters , check whether both blue and red lamps are glowing when the water heater is switched on.
- Ensure all Couplings / Joints are leak-proof.
- Check the Water Heater operation for one complete cycle i.g. one cycle of Thermostat operation, i.e Cut-off and cut-in



Horizontal



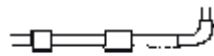
Vertical



Red



Blue





**WARRANTY CARD**

**PLEASE COMPLETE THE FOLLOWING DETAILS:**

**Product:** ELECTRIC STORAGE WATER HEATER

**Model No:** \_\_\_\_\_ **Serial No:** \_\_\_\_\_

**PURCHASER'S NAME & ADDRESS:** \_\_\_\_\_

**DEALER'S NAME & ADDRESS:** \_\_\_\_\_

**DEALER'S SIGNATURE:** \_\_\_\_\_

**CASH MEMO NO:** \_\_\_\_\_

**DATE OF PURCHASE:** \_\_\_\_\_

The Racold water heater comes with a warranty for a period of two years from the date of purchase against electrical or mechanical failure caused through defective material and workmanship. The inner container has a warranty against leakage for 7 years and the heating element has warranty period of 3 years. In event of failure covered by this warranty, you are requested to contact our customer care & obtain the complaint number. Our trained technicians will repair the product at our discretion. No further liability for the consequential or damage is accepted or implied. We will not be responsible for any human injury, property damages, consequential damages caused due to improper use. All disputes will be subject to Pune Jurisdiction only. The warranty on the inner container includes only the inner container and does not include any other part/s inside or outside of the inner container.

**Warranty on the tank and heating element applies only if:**

- 1) Annual check of anode is done mandatorily & its replacement done Incase of consumption (rod diameter less than 7mm).
- 2) Warranty will be no more valid in case the maintenance of anode is not done as per point no. 1.

**Following things shall not be covered under warranty:**

- 1) Any plumbing and/or Electrical related problems, not related to product.
- 2) Any defects arising due to wrong and/or non recommended installation procedure.
- 3) Dry heating of water heater.
- 4) Consumables such as anode.
- 5) Any human injury, property damages and consequential damages caused due to improper use.
- 6) Tank Cleaning and De-Scaling of the product is chargeable.



**Additional Note:** To prevent issues related to CPVC/UPVC, please ensure to verify the suitability of CPVC/UPVC plumbing for water heater installation. Use only if deemed appropriate after confirming compatibility.

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racold.com



## QUICK START :

1. Connect the safety valve at the inlet of water heater if supplied separately. Don't install water heater without safety valve.
2. Hook the water heater on wall with the help of mounting brackets. Take Necessary dimensions for making holes for mounting brackets.
3. Connect the inlet & outlet piping as marked on water heater.
4. Start water flow inside Water heater & fill it completely till water comes out from outlet connection.
5. Connect the electrical cord to power point.
6. Switch on the water heater's main supply, red indicator lamp comes on.
7. The red indicator lamp switches off indicates water inside the water heater reached to the set temperature
8. Run a complete cycle of Thermostat ON to Thermostat cut OFF, in presence of service provider / Installation technician / plumber.

# **Racold** Your comfort your way



Winner of  
Good Design  
Award

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