

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.

Ariston Group India Private Limited

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Customer care number:

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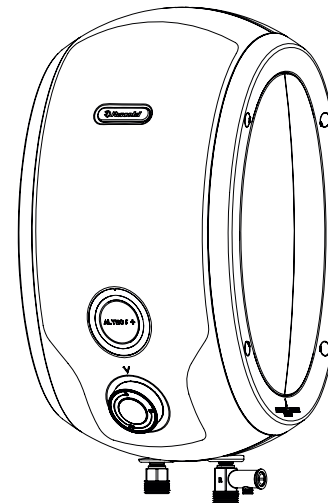
Racold

Reborn Everyday with Hot Water

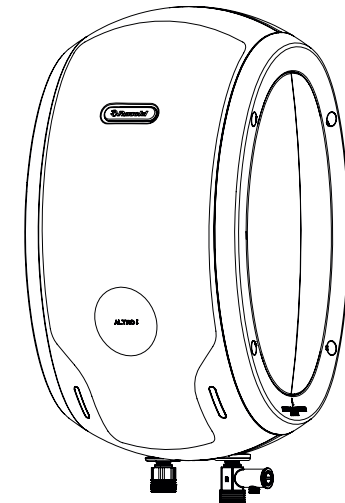


Instruction Manual

Please read this carefully before installation



ALTRO i +



ALTRO i
ALTRO i RS
SVELTO
ALTRO i DN

ELECTRIC INSTANT & STORAGE WATER HEATER

- PRODUCT FEATURES
- SAFETY FEATURES
- INSTALLATION GUIDE

- KNOW YOUR WATER HEATER
- SPECIFICATIONS
- ELECTRICAL CONNECTIONS

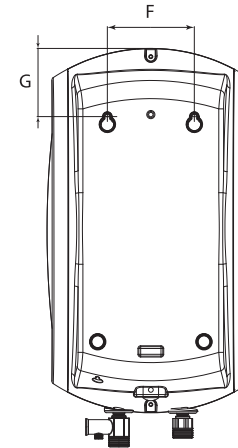
REBORN EVERYDAY WITH HOT WATER

Electric | Solar | Gas | Heat Pump



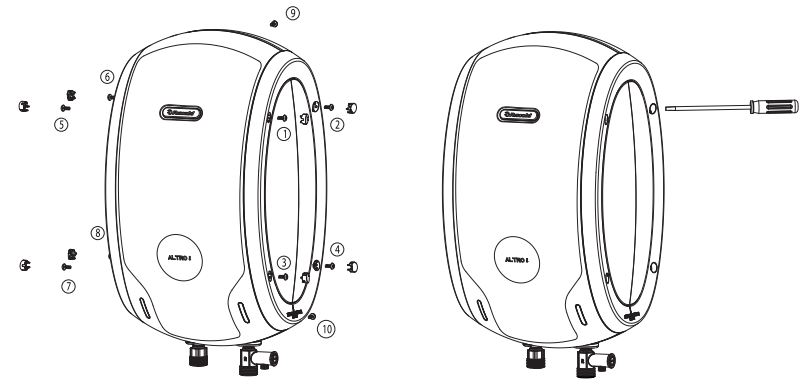
INSTALLATION GUIDE / DISASSEMBLY OF PRODUCT

ALTRO i+/ALTRO i/ALTRO i RS/SVELTO/ALTRO i DN



#	Capacity	F	G
ALTRO i/ALTRO i RS	1L	80	58
ALTRO i/ALTRO i RS	3L	90	71
SVELTO/ALTRO i DN	3L	90	71
ALTRO i +	3L	90	71
ALTRO i +	6L	55	138

All dimensions are in mm.



Disassembly of Product:

1. Remove cap with Screw driver at slot provided in ring/cap
2. Unscrew 4 screw of LH & RH ring each side.
3. Remove rings from body.
4. Unscrew 2 screws of Front & Back cover.
5. Take out Front cover & remove lamp holder/harness (For ALTRO i model) and Remove plastic connector from PCB & Harness fasten from Capillary Thermostat (For ALTRO i+ model) for servicing of inner tank related items.

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:

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

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 Group. 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 across globe. 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 includes:

- 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
- High density PUF insulation for maximum energy saving
- Energy labelling for any domestic electrical appliances
- Only water heater with quality and performance certification as per IEC (International) standards, CE (European) standards and ISI (Indian) standard.

Read this manual thoroughly before installing product and in case you need further 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.

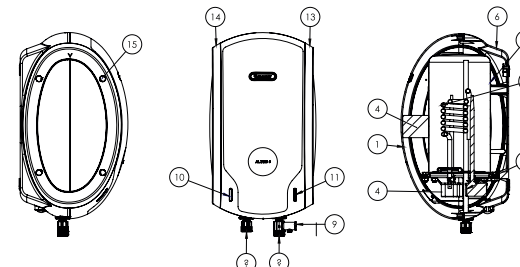
PRODUCT FEATURES:

- Outer Body** : Rust proof non corrosive polypropylene body.
- Inner Container** : Made-up of Stainless Steel which gives better corrosion resistance against hard water Material Inox (SS304L) in ALTRO i, ALTRO i RS, SVELTO models.
- Duronox** :A specially treated tank with duronox coating & made-up of superior grade SS 316 steel which ensures greater corrosion resistance and improved durability in ALTRO i DN 3L & ALTRO i+ 6L models. A special Aluminum Anode inside these products, further protects the tank from corrosion by forming a layer of Aluminum on the inner tank.
- Functional Thermostat** : Built-in stem type thermostat in ALTRO i, ALTRO i RS, SVELTO, ALTRO i DN models and capillary (bulb)

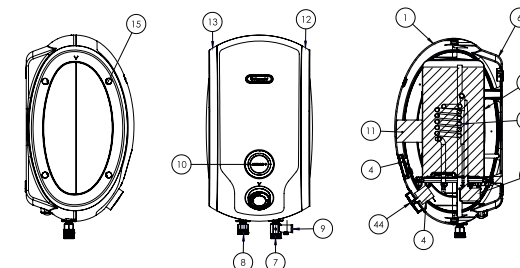
thermostat for ALTRO i+ models ensures automatic temperature control and auto cutoff for safety.

- Safety Thermostat (Cut-out)** : Stem type non-self resetting Thermal cut-out for extra safety.
- Safety Valve** : Special Spring activated pressure relief valve to relieve any excess pressure built up within water heater tank than rated pressure.
- Heating Element** : Long life tubular low watt density powerful heating element as per ISI specifications.
- Knob for Customised Application** : Set different temperature modes for bucket bath and kitchen application with the help of knob in ALTRO i+ models.
- Smart LED Ring**: A smart LED ring changes colour from RED to BLUE to indicate when the hot water is ready.

KNOW YOUR WATER HEATER



- FRONT COVER
- INNER CONTAINER
- HEATING ELEMENT
- FUNCTIONAL THERMOSTAT
- SAFETY THERMOSTA (CUT-OUT)
- BACK COVER
- INLET
- OUTLET
- SAFETY VALVE
- RED LAMP INDICATOR
- BLUE LAMP INDICATOR
- PUF
- RH RING
- LH RING
- SCREW CAP



- FRONT COVER
- INNER CONTAINER
- HEATING ELEMENT
- FUNCTIONAL THERMOSTAT
- SAFETY THERMOSTA (CUT-OUT)
- BACK COVER
- INLET
- OUTLET
- SAFETY VALVE
- DISPLAIT STICKER
- PUF
- LH RING
- SCREW CAP

IMPORTANT INSTRUCTIONS:

Installation is to be done by qualified personal only, Ariston Group India Pvt Ltd. cannot be held responsible for the damages caused by wrong installation, faulty material, using substandard water or for not following instructions included in this instruction manual, particularly:

1. Installation of the water heater should be done by qualified personal only.
2. When newly installed, make sure that the water flows freely from the outlet tap (or spout) before electric supply is switched on.
3. Inlet water line should be continuously open when water heater is in use except when it is being serviced.
4. The temperature of the water can be regulated by controlling the flow through hot water stop cock.
5. When no more hot water is required the electric supply must be switched 'OFF' before the hot water Stopcock is closed.
6. Switch off water heater when not in use.
7. The Blue indicator lamp which is ON during the normal operation, turns OFF when the thermal cut out is activated
Contact qualified service personal in this event.
8. Use pressure reducing valve in case operating pressure in the water heater is higher than 6.5 bar (95p.s.i.)
9. The electrical connection should be in accordance with the instruction given refer page 3.
10. The safety valve needs to be service at least once in 6 months.

SAFETY DEVICES:

A. Safety Valve

In - built safety (pressure relief valve) is set to operate between 6.5 bar (95p.s.i.) and 7.5 bar (109 p.s.i.) Service the safety valve at least once in 6 months Racold service persons. Close inlet water supply. Remove dirt/scales from the water connection side. Push rubber disk gently to ensure it is not stuck. Do not tamper with the sealed screw otherwise pressure setting will get disturbed. Fix back after replacing old fibre washer. Check for any leakage before switching on electric supply

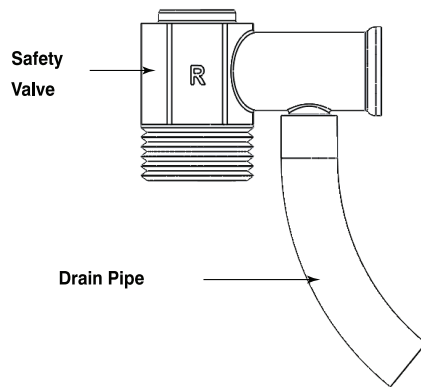
B. Thermal Cut-Out

Stem type non self-resetting Thermal Cut out set to operate at temperature below 96 °C and disconnects electrical supply for extra safety. Please contact only authorized service Personnel in such an event.

C. Thermostat

Stem type self-resetting; Automatic Resetting type, ON/OFF indication by red lamp.

Warning: Do not switch on if there is a possibility that the water in the heater is frozen.



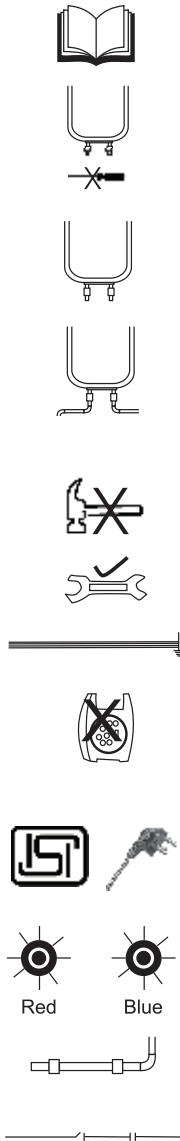
Note: This rated pressure is developed inside the tank after heating at outlet pipe. it is recommended to maintain approximately 1.5 bar pressure at inlet pipe.

TROUBLE SHOOTING GUIDE FOR WATER HEATER:

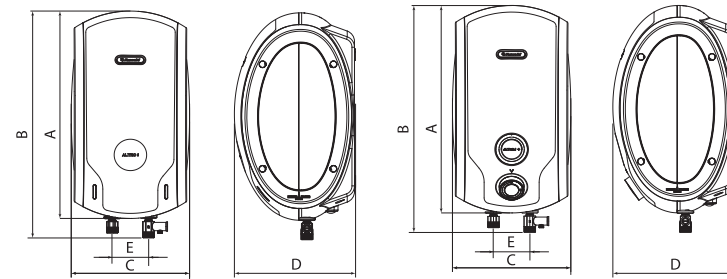
TROUBLE SHOOTING GUIDE FOR WATER HEATER			
#	Problem/Observation	Possible causes	Solution/Remarks
1	Unit not working (Red LED light not glowing, also not getting hot water OR)	1. Power point may not be working	Need the line at customer's place to be checked.
		2. Short circuit of harness/power cord inside	Check Harness/power cord
		3. Cutout operated due to dry heating	Reset cut out
		4. Heating element might not be functioning (may be due to Dry heat or short/Crack/Burst /Heavy scaling)	Replace Heating element
		5. Function thermostat fail	Replace Function thermostat
		6. Knob position is on zero (Altro i+ model only)	Turn knob clockwise to desired temperature setting
2	Blue LED light not glowing	1. Safety Thermostat (cutout) operated	Reset Safety thermostat (cut-out)
		2. There is no Electric Power	Check power supply
		3. PCB fail (Altro i+ model only)	Replace PCB
3	Red LED not glowing, but getting Hot water	1. PCB fail (Altro i+ model only) 2. Connecting wire to PCB get burn (Altro i+ model only)	Replace PCB Replace Wire harness
4	Water leakage observed from product	1. Check heater plate assembly for leakage due to rust	Replace heater plate assembly
		2. Rusting of the tank	Replace inner tank
		3. Not enough torque to the bolts on HP/HE flange	Replace or repair based on the observation
		4. Leaking from Heating element flange (Instant water heater)	Replace Heating element
		3. Drain plug crack or loose	If loose, tight it properly or in case of crack, replace it.
5	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
		Low Voltage at certain places	Check the Voltage at customer's place
6	Product creates abnormal noise	High voltage fluctuations, Hard Water	Recommend Spare Heating element with low watt density (8 W/cm ²)
	Product creates hissing, noise	Due to scaling on heating element	Descaling the Heating element
7	No Hot water output	Heating element fail	Replace Heating element
		Thermostat low setting	Check if someone tampered the setting in Instant water heater
		Cut out operated	Reset cut-out /Safety thermostat
		Inlet Valve closed	Open the Inlet valve
8	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.
9	Outlet water blockage	Heavy scaling on outlet pipe opening end	Descaling the product from authorized service personal
10	Dripping from Safety valve	Excess pressure than rated pressure	Check the pressure when unit is in ON condition, ensure Inlet line is ON. Note: When safety valve dripping, it ensures safety of the equipment from excess pressure. Put drain pipe at safety valve with dip
		Check NRV/PRV position from Inlet pipe, it may installed too close to equipment	It should be minimum 12 feet from product or add extra length hose pipe at inlet
		Check if PRV is there in Inlet water line (Specially in multi storey building)	Install pressure reducing valve(PRV), if Inlet water pressure is more than 1.5 bar, specially in multi storey building.
11	Water heater unit burnt	Short circuit of the harness/power cord	Replace Harness assembly or Power Cord
		Use of low ampere Power cord	
12	Smell comes out of water	If water heater unit is not used in 15+ days, water inside smells for some times	Flush out 2 times capacity of water heater

ELECTRIC WATER HEATER INSTALLATION GUIDELINE FOR PLUMBERS

- Read Instruction Manual carefully and follow installation instructions.
- Safety valve 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 rated pressure. In that case install pressure reducing valve at the inlet.
- Check for leakage 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 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.



ALTRO i+/ALTRO i/ALTRO i RS/SVELTO/ALTRO i DN



#	Capacity	A	B	C	D	E
ALTRO i/ALTRO i RS	1L	302	334	172	177	66
ALTRO i/ALTRO i DN/ALTRO i RS	3L	377	412	215	220	66
SVELTO	3L	377	412	215	220	66
ALTRO i +	3L	377	412	215	220	66
ALTRO i +	6L	471	510	269	274	66

- Note: 1. All dimensions are in mm.
 2. ALTRO i+ model is available in 3L (3.0 & 4.5 KW) & 6L (3KW) capacities.
 3. SVELTO model is available in 3L (3.0 & 4.5 KW) capacity.

SPECIFICATIONS:

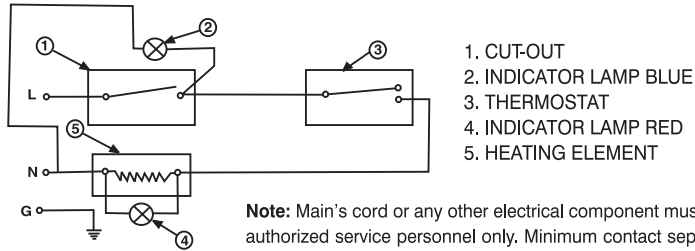
FEATURES	ALTRO i, ALTRO i DN, ALTRO i RS, SVELTO	ALTRO i +	ALTRO i +
Product type	Instantaneous water heater		Storage water heater
Capacity (Ltrs)	1L	3L	6L
Power supply	230V, 50Hz, Single phase		
Wattage (Kw)	3.0 / 4.5	3.0 / 4.5	3.0
Indicator lamps	Red Color: Heating ON & Blue Color: Shower ready		
Function Thermostat setting (°C)	55 °C (+/-3)	57 °C (+/3)	67 °C (+/3)
Safety Thermostat Setting (°C)	90 °C (+/-5)		
Pressure rating (Bar)	6.5 (+/- 0.5)		
Reheating time (mins) for 50°C temp rise (max)			10
Mean hot water output temp °C (min)	Not Applicable		50
Mixing factor (max %)			20

INSTALLATION:

1. The appliance must be installed in compliance with current local regulations.
2. Mount the water heater vertically on the wall by fixing the bolts (1/4"X2")
3. Connect the inlet in the cold water of the mains by means of a 1/2" BSP female pipe fitting.
4. If the operating pressure in the water heater is above 6.5 bar (95 p.s.i.) fit a pressure reducing valve.
5. connect the outlet pipe of the appliance to the hot water supply system by means of a 1/2" BSP pipe fitting.
6. Care to be taken to avoid damage caused by applying excessive force while connecting.
7. Inlet water line should not have pressure more than 1.5 bar else there will be water drippage from pressure relief valve it is recommended to fit pressure reducing valve at the inlet specifically in multistorey building.
8. In case of water dripping from safety valve, please put drain pipe (as shown in Picture)
 Product must be installed in a such a way that it should be easily accessible for servicing.

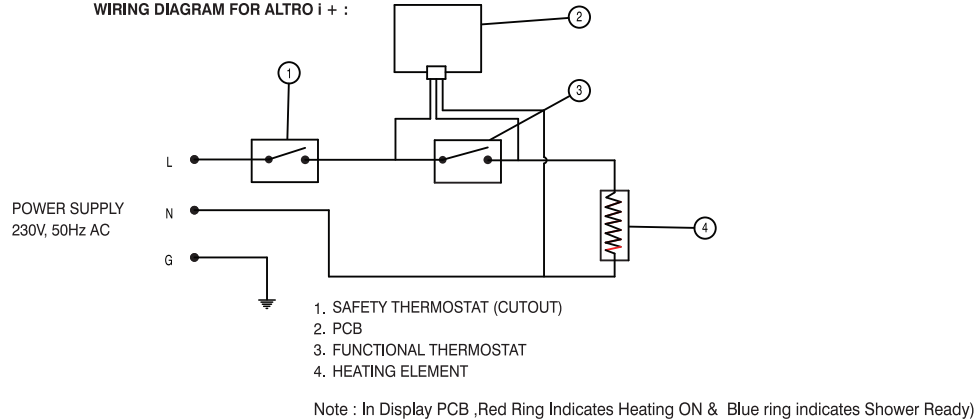
ELECTRICAL CONNECTIONS:

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



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 mains Cord: 48/0.2 (1,5 mm²) for 3kW heating element configuration in ALTRO i+, ALTRO i, ALTRO i DN, ALTRO i RS, SVELTO and 80/0.2 (2,5mm²) for 4.5kW heating element configuration in ALTRO i+, ALTRO i, ALTRO i RS, SVELTO

WIRING DIAGRAM FOR ALTRO i+ :



Warning: Do not switch ON the water heater if there is a possibility that water in the heater is frozen.

1. Check that the electric data shown on the date plate corresponds to those of the electric supply available.
2. Minimum contact separation of circuit breaker 3mm.

Specifications:

For 3 kW models – min. 15A, 230V
For 4.5 kW models- min. 20 A, 230V

Warranty Card

2 YEAR WARRANTY

PLEASE COMPLETE THE FOLLOWING DETAILS: (To be filled by authorized dealer only)

Product: _____ ELECTRIC 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 period of 2 years from the date of purchase against electrical / mechanical breakdown and/or mechanical failure caused through defective material and workmanship. The inner container of the water heater has a warranty period of 5 years and the heating element has a warranty period of 2 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 option. 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 subjected to Pune Jurisdiction only. The warranty on the inner container covers only for the inner container and does not include any other parts inside or outside of the inner tank.

Warranty on the tank and heating element applies only if:

- 1) Annual check of anode is done mandatorily & Its replacement done In case of consumption rod diameter less than 7mm. (Applicable only for Altro i+ 6L, Altro i DN 3L.)
- 2) Warranty will be no more valid in case the maintenance of anode is not done as per point no 1 (applicable for Altro i+ 6L, Altro i DN 3L. model, Refer important notes)

Following things shall not be covered under warranty:

- 1) Any plumbing and/or Electrical related problems.
- 2) Any defects arising due to wrong and/or non recommended installation procedure.
- 3) Dry heating of water heater.
- 4) Consumables such as anode. (Applicable only for Altro i+ 6L, Altro i DN 3L.)
- 5) Any human injury, property damages and consequential damages caused due to improper use.

It is recommended to install the product through authorized service center only.

Please check instruction manual or our website for the customer care contact number.

