

# UNVENTED WATER HEATER



**ARISTON**

**ASSEMBLY AND OPERATION INSTRUCTIONS**

## GENERAL SAFETY INSTRUCTIONS

1. **Read the instructions and warning in this manual carefully, they contain important information regarding safe installation, use and maintenance.**

**This manual is an integral part of the product. Hand it on to the next user/owner in case of change of property.**

2. The manufacturer shall not liable for any injury to people, animals or damage to property caused by improper, incorrect or unreasonable use or failure to follow the instructions reported in this publication.
3. Installation and maintenance must be performed by professionally qualified personnel as specified in the relative paragraphs. Only use original spare parts. Failure to observe the above instructions can compromise the safety of the appliance and **relieves** the manufacturer of any liability for the consequences.
4. DO NOT leave the packaging materials (staples, plastic bags, expanded polystyrene, etc.) within the reach of children they can cause serious injury.
5. **The appliance may not be used by persons under 8 years of age, with reduced physical, sensory or mental capacity, or lacking the requisite experience and familiarity, unless under supervision or following instruction in the safe use of the appliance and the hazards attendant on such use. DO NOT permit children to play with the appliance. User cleaning and maintenance may not be done by unsupervised children.**
6. **DO NOT** touch the appliance when barefoot or if any part of your body is wet.
7. Before using the device and after routine or extraordinary maintenance, we recommend filling the appliance's tank with water and draining it completely to remove any residual impurities.
8. If the appliance is equipped with a power cord, the latter may only be replaced by an authorised service centre or professional technician.
9. It is mandatory to screw on the water inlet pipe of the unit a safety valve in accordance with national regulations. In countries which have enacted EN 1487, the safety group must be calibrated to a maximum pressure of 1487 MPa (0,7 bar) and include at least a cock,

- check valve and control, safety valve and hydraulic load cutout.
10. Do not tamper with the overpressure safety device (valve or safety group), if supplied together with the appliance; trip it from time to time to ensure that it is not jammed and to remove any scale deposits.
  11. It is **normal** water drips from the overpressure safety device when the appliance is heating. For this reason, the drain must be connected, always left open to the atmosphere, with a drainage pipe installed in a continuous downward slope and in a place free of ice.
  12. Make sure you drain the appliance and disconnect it from the power grid when it is out of service in an area subject to subzero temperatures.
  13. Water heated to over 50 °C can cause immediate serious burns if delivered directly to the taps. Children, disabled persons and the aged are particularly at risk. We recommend installing a thermostatic mixer valve on the water delivery line, marked with a red collar.
  14. Do not leave flammable materials in contact with or in the vicinity of the appliance.
  15. Do not place anything under the water heater which may be damaged by a leak.

## LEGIONELLA BACTERIA FUNCTION

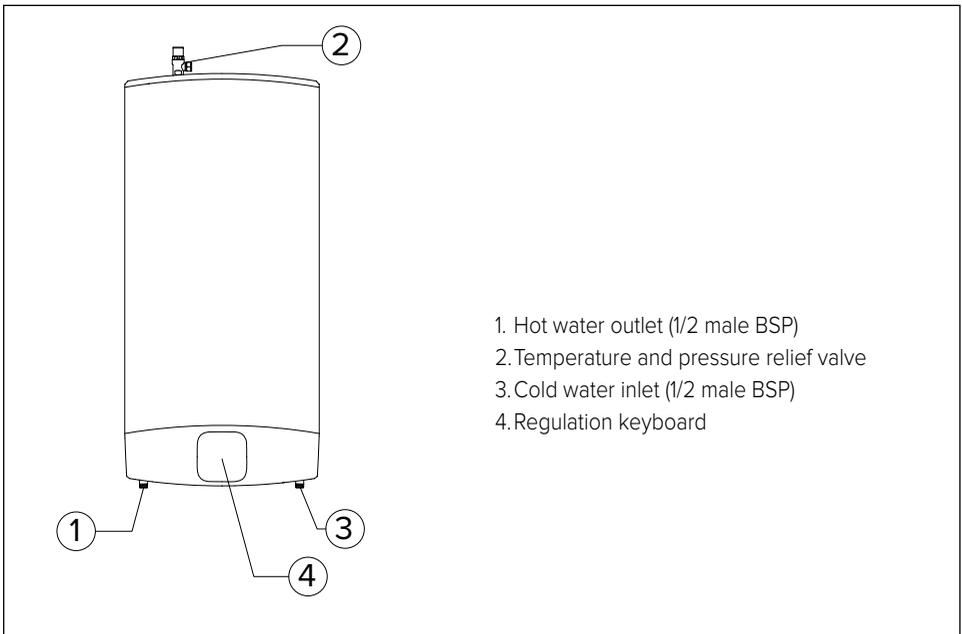
Legionella are small rod shaped bacteria which are a natural constituent of all fresh waters. Legionnaires' disease is a pneumonia infection caused by inhaling of Legionella species. Long periods of water stagnation should be avoided; it means the water heater should be used or flushed at least weekly.

The European standard CEN/TR 16355 gives recommendations for good practice concerning the prevention of Legionella growth in drinking water installations but existing national regulations remain in force.

This electronic storage water heater is sold with a thermal disinfection cycle function enabled by default. Every time the product is switched on and every 30 days, the thermal disinfection cycle runs to heat the water heater up to 60°C.

**Warning:** when this software has been carrying out the thermal disinfection treatment, water temperature can cause burns. Feel water before bathing or showering.

## DESCRIPTION OF WATER HEATER



## TECHNICAL CHARACTERISTICS

For the technical specifications, refer to the nameplate (the nameplate is located next to the water intake/outlet pipes).

TABLE 1 - PRODUCT INFORMATION					
Product range		VLS EVO 45	VLS EVO 80	VLS EVO 45 WiFi	VLS EVO 80 WiFi
Weight when empty	kg	21	32	21	32
Weight when full	kg	66	112	66	112
Installation		Vertical	Vertical	Vertical	Vertical
Model		Refer to the nameplate			
SMART		X	X	X	X
$Q_{elec}$	kWh	6,79	7,125	6,79	7,125
$Q_{elec, week, smart}$	kWh	25,467	27,141	25,467	27,141
$Q_{elec, week}$	kWh	28,758	32,041	28,758	32,041
Load profile		M	M	M	M
$L_{wa}$	dB	15			
$\eta_{wh}$		39,1%	39,0%	39,1%	39,0%
V40	L	77	115	77	115
Heat loss	kWh/day	0,964	1,317	0,964	1,317
Heat up times [15-60°C]	minutes	60	112	29	56
Maximum inlet pressure [rated pressure]	bar	12			
Maximum design pressure	bar	6			
Set operating pressure expansion valve	bar	6			
Pre-charge pressure of the expansion vessel	bar	3,5			
Set opening T&P relief valve	bar	7			
Capacity	L	45	80	45	80

The power consumption data in the table and the other information given in the Product Data Sheet (Enclosure A to this manual) are defined in relation to EU Directives 812/2013 and 814/2013.

The products without the label and the data sheet for water heaters and solar devices, stipulated in regulation 812/2013, are not intended to be used in such assemblies.

The device is equipped with a smart function that allows you to adapt the consumption to the user profiles. If operated correctly, the device has a daily consumption of " $Q_{elec}$  ( $Q_{elec, week, smart} / Q_{elec, week}$ ) less than that of an equivalent product with no smart function".

**This appliance is conforming with the international electrical safety standards IEC 60335-1 and IEC 60335-2-21.**

**The CE marking of the appliances attests its conformity to the following EC Directives, of which it satisfies the essential requisites:**

- LVD Low Voltage Directive: EN 60335-1, EN 60335-2-21, EN 60529, EN 62233, EN 50106.
- EMC Electro-Magnetic Compatibility: EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3.
- RoHS2 Risk of Hazardous Substances: EN 50581.
- ErP Energy related Products: EN 50440.

- EN 12897:2016

This product is in conformity with REACH regulations.

## Water Regulations and Byelaws

These regulations and byelaws ensure a good supply of wholesome water, and that only approved materials, pipes and fittings are used to convey water.

## Building Regulations

These are a statutory document and take priority over all other regulations and recommendations.

The installation of an unvented hot water system of over 15 litres is classified as a "Controlled Service" and Regulation G3 applies. To meet the requirements of the regulation, installation of an unvented system should be undertaken by a "competent installer".

All installations of unvented hot water storage systems having a capacity of more than 15 litres should be notified to the relevant Local Authority by means of building notice or by the submission of full plans. It is important to note that it is a criminal offence to install an unvented hot water storage system over 15 litres without notifying the Local Authority.

## Delivery

The products are supplied with the following:

Unvented water heater (with factory-fitted T&P)	x1
Pressure relief valve set at 6 bar	x1
Dielectric junctions	x2
Tundish	x1
Expansion Vessel	x1
Check Valve	x1
Pressure reducing Valve	x1

**Important note: Dielectric junctions must be fitted to all models as they prevent an electrolytic reaction and safeguard against potential aggressive corrosion.**

**If the supplied Dielectric Junctions are not fitted this could void the warranty.**

## INSTALLING NORMS (for the installer)

**Before installing the heater read these instructions in full.**

**If you are unsure please contact our technical service department (03332407777).**

**The installation must comply with all relevant Water Regulations/Byelaws and Building Regulations. The installer should check with the local water authority for confirmation of the maximum water supply pressure.**

**The appliance should be left packed until it is ready to be installed. When unpacking take care not to damage the temperature and pressure relief valve on the top of the heater.**

A drain has to be provided for any water discharged through the safety valves.

A cold water supply pressure between 1 and 3.5 bar is required (if the mains pressure is above 3.5 bar a pressure reducing valve must be installed). **Please note that turning down the stop-cock will reduce flow not pressure.**

The outlet pressure from the reducing valve (if supplied) is 3.5 bar.

A 240 VAC; 3 kW single phase electrical supply is required

**This product is a device that must be installed vertically in order to operate correctly. Once installation is complete, and before any water is added or the power supply is connected, use a measuring instrument (i.e. a spirit level) to check that the device has been installed perfectly vertical.**

The appliance heats water to a temperature below boiling point. It must be linked up to a mains water supply according to the appliance performance levels and capacity.

Before connecting the appliance, it is first necessary to:

- Check whether the characteristics (please refer to the data plate) meet the customer's requirements.
- Make sure the installation conforms to the IP degree (of protection against the penetration of liquids) of the appliance according to the applicable norms in force.
- Read the instructions provided on the packaging label and on the appliance data plate.

This appliance was designed to be installed only inside buildings in compliance with the applicable norms in force. Furthermore, installers are requested to keep to the following advice in the presence of:

- **Damp:** do not install the appliance in closed (unventilated) and damp rooms.
- **Frost:** do not install the appliance in areas where the temperature may drop critically and there may be a risk that ice may form.
- **Sunlight:** do not expose the appliance to direct sun rays, even in the presence of windows.
- **Dust/vapours/gas:** do not install the appliance in the presence of particularly dangerous substances such as acidic vapours, dust or those saturated with gas.
- **Electrical discharges:** do not install the appliance directly on electrical supplies that aren't protected against sudden voltage jumps.

In the case of walls made of bricks or perforated blocks, partition walls featuring limited static, or masonry different in some way from those stated, you first need to carry out a preliminary static check of the supporting system.

The wall-mounting fastening hooks must be designed to support a weight that is three times higher than the weight of the water heater filled with water.

Fastening hooks with a diameter of at least 12 mm are recommended.

To facilitate maintenance, make sure there is a clearance of at least 50 cm inside the enclosure for access to the electrical equipment.

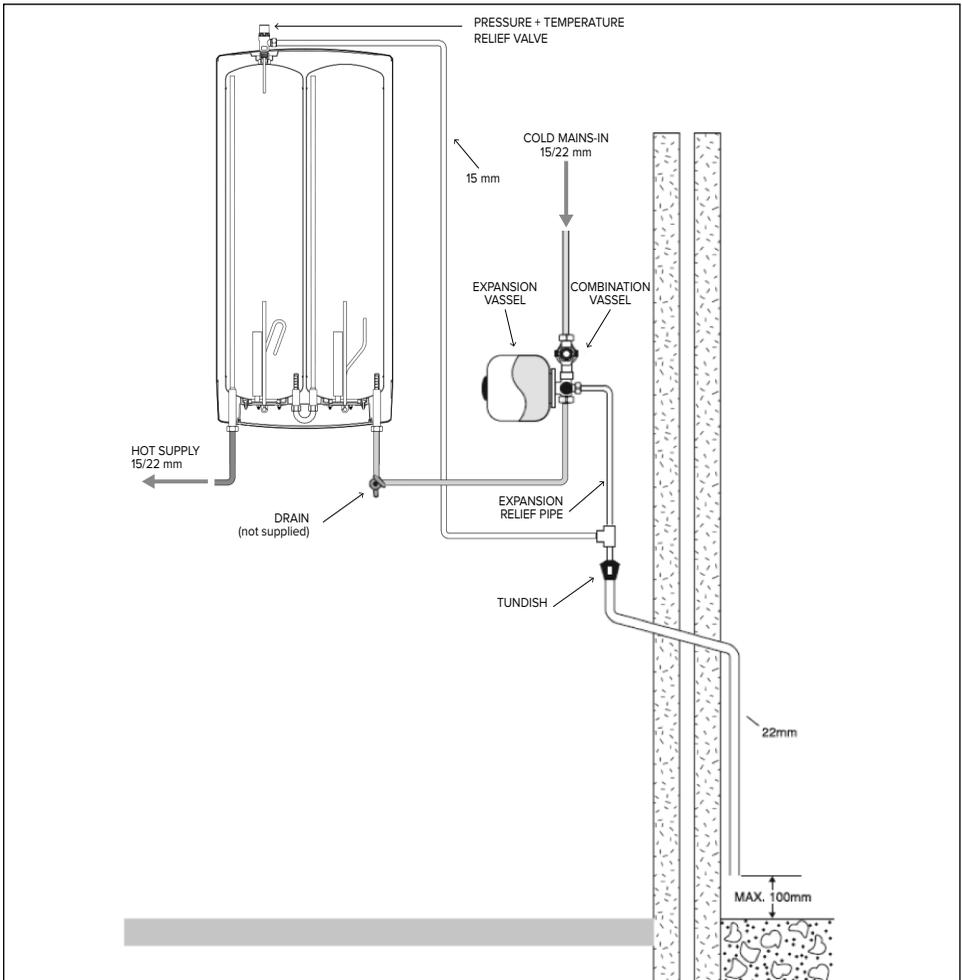
### **PLUMBING WARNING:**

**Note: If a valve i.e. a non return valve, water meter, pressure reducing valve or any type of valve or fitting that acts as a non return valve is installed on the cold water mains, this will prevent expansion. Therefore it will be necessary to install an expansion vessel (see figure below).**

**Note: If in doubt always install a pressure reducing valve (limited to 3.5bar) and expansion vessel.**

**The outlet from temperature and pressure relief valve/pressure relief valve must not be for any other purpose.**

Take great care not to allow any swarf into the pipe work or fittings, as this might impair the operation of the safety valve(s). The water connection may be carried out as per the following:



Do not fit any stop cocks or isolating valves within the distance required for expansion. If a pressure reducing valve is needed, due to a mains pressure of over 3.5 bar, an expansion control kit must be fitted regardless of expansion pipework installed. The expansion distances quoted are for 15mm pipes and can be approximately halved for 22mm pipes.

The appliance must not be supplied with water of hardness less than 12°F, not with especially hard water (greater than 25°F); we recommend installing a water softener, properly calibrated and controlled - do not allow the residual hardness to fall below 15°F.

The appliance is covered under the Building Regulations and therefore it is not possible to accommodate the expansion water within the system pipe work and consequently a set of expansion controls must be installed.

Note: The discharge from relief valves must be made in a safe and conspicuous manner.

**Please note that in all cases the dielectric junctions must be connected to the heater before any other connection is made (these prevent an electrolytic reaction).**

If the supplied Dielectric Junctions are not fitted this could void the warranty.

Only the use of copper pipe is recommended for connection to the heater. If any other material is used it must be able to withstand 90°C at 7 bar pressure for long periods.

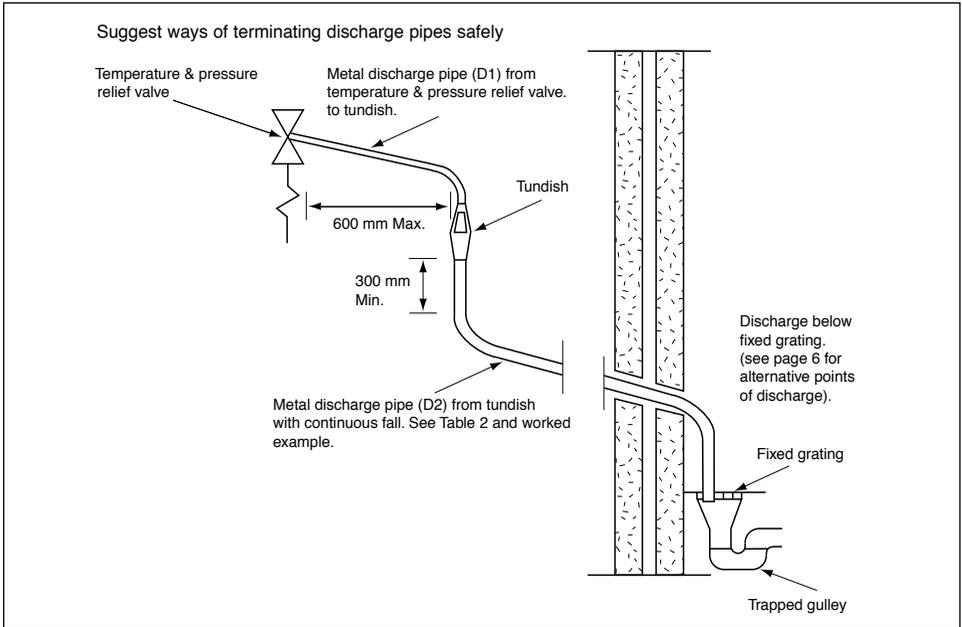
No valve must be fitted between the expansion/pressure relief valve and the water heater.

All other required safety components to install the appliance are supplied as a kit with the appliance: 15 mm pressure reducing valve set at 3.5bar. Expansion vessel (charge pressure set at 3.5bar)”

### **DISCHARGE PIPE WORK NOTE:**

The following guidelines refer to Building Regulation G3. It is good practice to follow these guidelines for all relief valve discharge pipe work.

- 1) The tundish must be vertical and fitted within 600 mm of the temperature & pressure relief valve and must be located with the cylinder. The tundish must also be in a position visible to the occupants, and positioned away from any electrical devices. The discharge pipe from the tundish should terminate in a safe place where there is no risk to persons in the vicinity of the discharge and to be of metal.
- 2) Discharge pipes from the temperature & pressure relief and pressure relief valve may be joined together.
- 3) The pipe diameter must be at least one pipe size larger than the nominal outlet size of the safety device unless its total equivalent hydraulic resistance exceeds that of a straight pipe 9 m long.  
i.e. Discharge pipes between 9 m and 18 m equivalent resistance length should be at least 2 sizes larger than the nominal outlet size of the safety device. Between 18 m and 27 m at least 3 times larger, and so on.  
Bends must be taken into account in calculating the flow resistance.  
See the following figure and the Table 2.
- 4) The discharge pipe must have a vertical section of pipe at least 300 mm in length, below the tundish before any elbows or bends in the pipe work.
- 5) The discharge pipe must be installed with a continuous fall.
- 6) The discharge must be visible at both the tundish and the final point of discharge, but where this is not possible or practically difficult; there should be clear visibility at one or other of these locations. Examples of acceptance are:
  - i) Ideally below a fixed grating and above the water seal in a trapped gully.
  - ii) Downward discharges at a low level; i.e. up to 100 mm above external surfaces such as car parks, hard standings, grassed areas etc. These are acceptable providing that where children may play or otherwise come into contact with discharges, a wire cage or similar guard is positioned to prevent contact, whilst maintaining visibility.
  - iii) Discharges at high level; i.e. into a metal hopper and metal down pipe with the end of the discharge pipe clearly visible (tundish visible or not). Or onto a roof capable of withstanding high temperature discharges of water 3 m from any plastic guttering systems that would collect such a discharge (tundish visible).



iv) Where a single pipe serves a number of discharges, such as in blocks of flats, the number served should be limited to no more than 6 systems so that any installation can be traced reasonably easily. The single common discharge pipe should be at least one pipe size large than the largest individual discharge pipe to be connected. If unvented hot water storage systems are installed where discharges from safety devices may not be apparent i.e. in dwellings occupied by the blind, infirm or disabled people, consideration should be given to the installation of an electronically operated device to warn when discharge takes place. Note: The discharge will consist of scalding water and steam. Asphalt, roofing felt and non-metallic rainwater goods may be damaged by such discharges.

**Table 2**

Sizing of copper discharge pipe “D2” for common temperature valve outlets

Valve outlet size	Minimum size of discharge pipe D1*	Minimum size of discharge pipe D2* from tundish	Maximum resistance allowed, expressed as a length of pipe (i.e. no elbow or bends)	Resistance created by each elbow or bend
G 1/2	15 mm	22 mm	Up to 9 m	0.8 m
		28 mm	Up to 18 m	1.0 m
		35 mm	Up to 27 m	1.4 m
G 3/4	22 mm	28 mm	Up to 9 m	1.0 m
		35 mm	Up to 18 m	1.4 m
		42 mm	Up to 27 m	1.7 m
G 1	28 mm	35 mm	Up to 9 m	1.4 m
		42 mm	Up to 18 m	1.7 m
		54 mm	Up to 27 m	2.3 m

## WORKED EXAMPLE

The example below is for a G 1/2" temperature & pressure relief valve with a discharge pipe (D2) having 4 no. elbows and length of 7 m from the tundish to the point of discharge.

From Table 2

Maximum resistance allowed for a straight length of 22 mm copper discharge pipe (D2) from G 1/2" T & P valve is 9 m. Subtract the resistance for 4 no. 22 mm elbows at 0.8 m each = 3.2 m. Therefore the maximum permitted length equates to: 5.8 m.

As 5.8 m is less than the actual length of 7 m therefore calculate the next largest size

Maximum resistance allowed for a straight length of 28 mm pipe (D2) from G 1/2" T & P valve equates to: 18 m.

Subtract the resistance for 4 no. 28 mm elbow at 1.0 m each = 4 m. Therefore the maximum permitted length equates to: 14 m

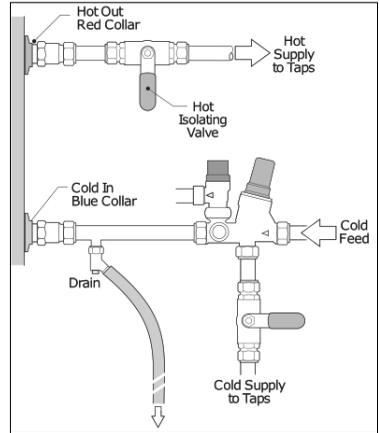
As the actual length is 7 m, a 28 mm (D2) copper pipe will be satisfactory.

## DRAINING THE APPLIANCE

The appliance must be drained if left inactive in a room subject to frost and/or in the event of prolonged inactivity.

Typical drain arrangement and system designs will vary:

1. Turn power off to ensure appliance is not operated when empty.
2. Turn off cold supply to appliance.
3. Shut off hot water feed from appliance.
4. Connect hose to drain cock and place other end in sink, basin etc.
5. Open drain cock and open TPR valve to vent cylinder.



## ELECTRICAL WARNING

### The appliance must be earthed

The electrical installation must be in line with the current I.E.E. wiring regulations. A mains supply of 240 VAC 3 kW (13 amps) is required (Fig. 2)

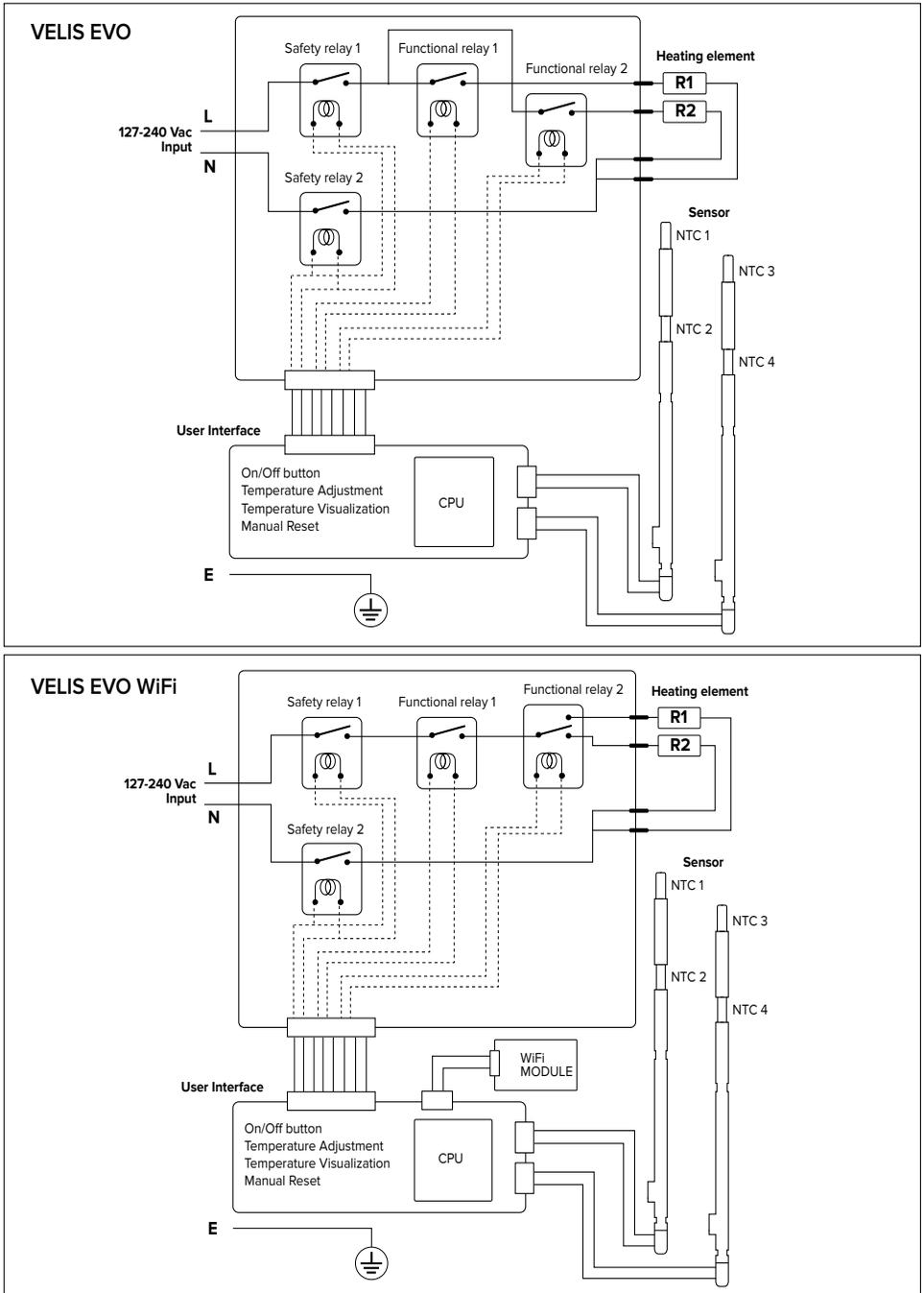
Heat resisting cable, round 3 core 1.5 mm (to BS 6141 table 8) should be used to connect to the electrical supply through either:

- a 13 amp socket to BS 1363; or
- a double pole fused isolating switch with a contact separation of 3 mm minimum on each pole.

Flexible cables are colour coded as follows:

Brown ..... live  
Blue ..... neutral  
Green and yellow ..... earth

Fig. 2 - Wiring diagram



**To enter into the terminal compartment unscrew the 2 screws on the cover.  
(To access the screws, remove the decorative caps on the control access panel).**

It is mandatory, before installing the appliance, to perform an accurate control of the electrical system by verifying compliance with current safety standards, which is adequate for the maximum power absorbed by the water heater (refer to the data plate) and that the section of the cables for the electrical connection is suitable and complies with local regulations.

The manufacturer is not liable for damage caused by lack of grounding or anomalous power supply. Before starting up the appliance, check that the power rating matches that given on the nameplate. The use of multi plugs, extensions or adaptors is strictly prohibited.

It is strictly forbidden to use the piping from the plumbing, heating and gas systems for the appliance earthing connection. If the appliance is supplied with a power supply cable, should the latter need replacing, use a cable featuring the same characteristics. The power cord must be routed into the hole in the back of the appliance and connected to the thermostat terminals **(M Fig.7-8)**.

The appliance must be grounded with a cable (yellow/green and longer than the phase cable) connected to the terminals marked  **(G Fig.7-8)**.

## COMMISSIONING

- Check that all the necessary components are supplied and for those not factory fitted, that they are the type recommended by the manufacturer for the particular water heater.
- Check that the water heater/components are undamaged.
- Check that the discharge pipe is plumbed so that it falls continuously and that no taps, valves or other shut-off devices are installed in the pipe.
- Check that the discharge pipe drains safely to waste and is readily visible.
- Check, in the case where some components are not factory fitted, that they are marked so as to refer to the warning label on the water heater.
- Open all outlet taps.
- Turn on the mains water supply.
- Close taps in turn as water flow stabilises with no air bubbles.
- Check for leaks.
- Check that no water is passing through the safety valve(s).
- Test the operation of the safety valve(s) by lifting/turning the lever/knob, and observing that water flows through and safely to waste.
- Switch on electricity and set thermostat to at 60°C to reduce the build up of scale in hard water areas.
- Check the water heats up.
- Check that <<warning to user label>> is secure and visible on the heater and related warning labels are fitted to the controls.
- Demonstrate operation to user, including operation of safety valve(s) and what to do if it/they operate(s).
- Give this handbook to the user and discuss future maintenance.
- Drain and refill the entire system ensuring it is flushed in accordance with BS6700.

# MAINTENANCE REGULATIONS (for qualified personnel)

Before calling your Technical Servicing Centre, check that the fault is not due to lack of water or power failure.

**Caution:** disconnect the appliance from the mains before conducting any maintenance work.

## Replacing parts

The electrical parts may be accessed by removing the cover (Fig. 7, 8).

Intervene on the power board (Ref. Z) by disconnecting the cables (Ref. C, Y and P) and remove the screws. Intervene on the control panel by first removing the power board (Ref. Z). The display board is attached to the product through two fixing side flaps (A Fig. 4a) accessible from inside the lower cover.

Release the control panel fixing flaps using a flat screwdriver to pry upon the same (A Fig. 4b) and release them from the pins, simultaneously push it outwards to free it from the seat. Repeat for both fixing flaps. Pay special attention not to damage the plastic flaps as breaking them will not allow for correct assembly of the panel in its seat, resulting in possible aesthetic defects. After removing the control panel, you can disconnect the connectors of the rod carrying sensors and power board. Intervene on the rod carrying sensors (Ref. K) by disconnecting the wires (Ref. F) from the control panel and remove it from its seat, taking care not to excessively bend them.

**During reassembly, make sure that all components are put back in their original positions.**

To work on the heating elements and anodes, first drain the appliance (refer to the related paragraph).

Remove the bolts (C Fig. 5) and remove the flanges (F Fig. 5). The flanges are coupled to the heating elements and anodes. During reassembly, make sure to restore the rod carrying sensors and the heating elements to the original positions (Fig. 5, 7, 8). Make sure that the flange plate with the coloured writing H.E.1 or H.E.2, is mounted in its position marked by the same writing.

We recommend replacing the flange gasket (Z Fig. 6) every time it is disassembled.

Only for models equipped with user interface shown in figure 8. Se si deve sostituire l'anodo a corrente in pressa (Rif. Q), unscrew the nut, disconnect the cable and unscrew the anode from the flange.

When you are putting it back in, replace the gasket, tighten the anode to a maximum torque of 2.5 Nm, connect the cable and tighten the relative nut to a maximum torque of 0.6 Nm.

**CAUTION! The reversal of the heating elements involves malfunction of the appliance.**

**Work on one heating element at a time and remove the second only after replacing the first.**

**Use only original spare parts.**

## Periodical maintenance

The heating element (R fig. 6) should be descaled every two years to ensure it works properly (R Fig. 6) approximately every two years (the frequency must be increased, if water is very hard).

If you prefer not to use special liquids for this operation, simply crumble away the lime deposit without damaging the heating element.

The magnesium anodes (N Fig. 6) must be replaced every two years (this does not apply to appliances with stainless steel boilers); however, the anode should be checked every year if the water is corrosive or chloride rich. To replace them, remove the heating elements and unscrew them from the brackets.

The bypass pipe (X Fig. 7, 8) is inspected in the event of fault due to its obstruction. To inspect it remove the two rings (W Fig. 7, 8).

**After routine or extraordinary maintenance, we recommend filling its tank with water and draining it completely so as to remove any residual impurities. Use only original spare parts supplied by the manufacturer's authorised service centres.**

# USER INSTRUCTIONS

## Advice for user

- Avoid positioning any objects and/or appliances that could be damaged by water leaks beneath the water heater.
- Should you not use any water for an extended period of time, you should:
  - disconnect the appliance from the electrical supply by switching the external switch to “OFF”;
  - turn off the plumbing circuit taps;
- Hot water at above 50°C flowing out of the taps at the point of use could cause serious scalds or even death from burns. Children, the disabled and the elderly are more exposed to the risk of burns. It is strictly forbidden for the user to perform any routine or extraordinary maintenance.  
To clean the external parts use a damp cloth soaked in soap and water.

## Adjusting the temperature and activating the functions (Fig. 9-10)

The product is set to “Manual” by default, with a temperature set to 65 °C and the function “ECO EVO” is active. In case of a power failure or if the product is switched off using the button ON/OFF (Ref. A), the last temperature set remains saved.

Slight noise may occur during the heating phase due to the water being heated.

Switch the appliance on by pressing the ON/OFF button (Ref. A). Set the desired temperature by selecting a level between 40°C and 65°C using the “+” and “-” buttons. During the heating phase, the LEDs (Ref. 1-5) related to the temperature reached by the water remain on; the subsequent ones, until the temperature is set, flash progressively. If the temperature drops, for example due to water being drawn, the heating is automatically reactivated and the LEDs between the last one on (steady) and that related to the set temperature start to flash progressively again.

## ECO EVO FUNCTION

The “ECO EVO” function is a software program that automatically “learns” user consumption levels, reducing heat loss to a minimum and maximising energy savings. The “ECO EVO” software consists of an initial saving period of a week, when the product begins to operate at the temperature set. At the end of this “learning” week, the software adjusts water heating according to the user’s real needs which are automatically identified by the appliance. The product guarantees a minimum reserve of hot water even during periods in which water is not withdrawn.

The hot water demand learning process, continues even after the first week. The process achieves maximum efficiency after four weeks of learning.

Activate the function by pressing the corresponding button, which will light up. In this mode, the manual selection of the temperature is possible, however changing it disables the “ECO EVO” function.

Reactivate it by pressing the “ECO” button.

Whenever the “ECO EVO” function or the product is turned off and on again, the function will continue to learn the levels of consumption. In order to guarantee proper operation of the program, it is recommended not to disconnect the appliance from the mains. An internal memory ensures data storage for up to four hours without electricity, after which all acquired data is cancelled and the learning process will begin from the start. Each time the knob is rotated to set the temperature, the “ECO EVO” function is automatically disabled and the relative writing turns off. The product continues to operate with the program selected, the ECO function is not active.

To voluntarily cancel the acquired data, hold down the “ECO” button for more than 5 seconds. When the reset process is completed, “ECO” flashes quickly to confirm data cancellation.

## SHOWER READY FUNCTION

### For model equipped with user interface type shown in figure 9

The product is equipped with an intelligent function to minimise water heating time. Regardless of the temperature set by the user, the symbol "  " shower ready will turn on as soon as there is enough hot water for at least one shower (40 litres of mixed hot water at 40 °C).

## ANTI-FREEZE FUNCTION

The anti-freeze function is the appliances automatic protection to avoid damages caused by very low temperatures below 5 °C, in the event in which the product is turned off during winter. It is recommended that the product remains plugged in to the mains power, even if is inactive for a long time.

## THERMAL DISINFECTION FUNCTION (Anti-Legionella)

The Anti-Legionella function is activated by default. It consists of a water heating/60°C temperature maintenance cycle for 1 hour which has a thermal disinfection action on the relative bacteria.

The cycle starts when the product is started up and when it is restarted after a power outage. If the product always functions at temperatures lower than 55°C, the cycle is repeated after 30 days. When the product is switched off, the anti-Legionella function is deactivated. If the equipment is switched off during the anti Legionella cycle, the product switches off and the function is deactivated. At the end of the cycle, the use temperature returns to the temperature previously set by the user.

The activation of the anti-legionella cycle appears as a normal temperature adjustment 60°C. Activate this function by pressing and holding both the "ECO" and "+" buttons for 4 s.; once activation is confirmed, the LED (Ref. 4) will flash quickly for 4 s.

Permanently deactivate the function by repeating the above steps; once the deactivation is confirmed, LED 40°C (Ref. 1) will flash quickly for 4 s.

## RESET/DIAGNOSTICS

### For models equipped with user interface type shown in figure 9

When one of the malfunctions described above occurs, the appliance will enter its "fault status" and all LEDs on the control panel will flash simultaneously.

**Diagnostics:** to enable the diagnostic function, press contemporary ON-OFF button (ref. A) and MINUS button for 3 sec. The type of fault is indicated by five LEDs (Ref. 1-5) according to the following scheme:

LED Ref. 1 - internal malfunction of the circuit board

LED Ref. 1 and 3 - internal malfunction of the circuit board (NFC communication or NFC data)

LED Ref. 3 - broken temperature probes (open or short circuited) - boiler outlet

LED Ref. 5 - excessive water temperature detected by single sensor - boiler outlet

LED Ref. 4 and 5 - general excessive water temperature (circuit board fault) - boiler outlet

LED Ref. 3 and 4 - Failure to heat water with powered heating element - boiler outlet

LED Ref. 3, 4 and 5 - overheating caused by lack of water - boiler outlet

LED Ref. 2 and 3 - broken temperature probes (open or short circuited) - boiler inlet

LED Ref. 2 and 5 - excessive water temperature detected by single sensor - boiler inlet

LED Ref. 2, 4 and 5 - general excessive water temperature (circuit board fault) - boiler inlet

LED Ref. 2, 3 and 4 - failure to heat water with powered heating element - boiler inlet

LED Ref. 2, 3, 4 and 5 - overheating caused by lack of water - boiler inlet

Exit the diagnostic function by pressing the ON/OFF button (Ref. A) or wait for 25 seconds.

## WI-FI FUNCTION

### For models equipped with user interface type shown in figure 10

For detailed information on the Wi-Fi configuration and product registration procedure refer to the enclosed, dedicated connectivity Quick Start Guide.

### Account creation, figure 11

- First download and install the dedicated App on your mobile phone (App name can be found in the quick start guide).
- Open the APP and click on SIGN UP; Fill in the fields.
- Open the registration reply message received in your mailbox and click on the link to activate the user account

### Wi-Fi configuration, figure 12

- Press the Wi-Fi Button on the product's control panel to activate the Wi-Fi (Wi-Fi button will blink slow).
- Press the Wi-Fi Button again for 5 seconds on the product's control panel to create the Access Point (Wi-Fi button will blink fast).
- Log in to Aqua Ariston NET App and follow the wizard to connect and register your product.

### Procedure completed, figure 13

The connection is successful when:

- The wi-fi button is steady on.
- The app shows the successful registration message

If the connection fails, carefully check and repeat the above steps.

Note: the password cannot be Chinese characters. If there are any Chinese characters, please modify it.

### App layout, figure 14

The following instructions are included:

- Following functions are included:
- On/off (A)
- Manual mode (B)
- Program mode (C)
- ECO mode (D)
- POWER (E)
- Knob to select temperature(F)
- Remaining time (G)
- Number of showers (H)

### Connection status description

	Blinking slow	The Wi-Fi is connected to the home network
	Blinking Fast	The Wi-Fi module is on Access Point mode
	Steady on	The Wi-Fi module is ON and Connected to the home network
	Off	The Wi-Fi module is OFF

## USEFUL INFORMATION

### If the water comes out cold, have the following checked

- The presence of voltage on the power terminal block (m fig. 7 And 8);
- The circuit board;
- The heating parts of the heating element;
- Inspect the bypass pipe (x fig. 7 And 8);
- The sensor holder rods (k fig. 7 And 8).

### If the water comes out boiling hot (steam in the taps)

Disconnect the appliance from the electricity supply and have the following checked:

- The circuit board;
- The amount of scale on the boiler and components;
- The sensor holder rods (k fig. 7 And 8).

### If the hot water delivery is insufficient:

Have the following checked:

- The pressure of the water mains;
- The condition of the deflector on the cold water intake pipe;
- The condition of the hot water pipe;
- The electrical components.

### Water trickling from the pressure safety device

During the heating phase, some water may trickle from the tap. This is normal. To prevent the water trickling, a suitable expansion vessel must be installed on the flow system. If the trickling continues even after the heating phase, have the following checked:

- Device calibration;
- The pressure of the water mains.

**Caution: Never obstruct the appliance outlet!**

**IF THE PROBLEM PERSISTS, NEVER ATTEMPT TO REPAIR THE APPLIANCE YOURSELF - ALWAYS HAVE THIS DONE BY A QUALIFIED TECHNICIAN.**

**The indicated data and specifications are not binding; the manufacturer reserves the right to modify them at his own discretion notification or replacement.**

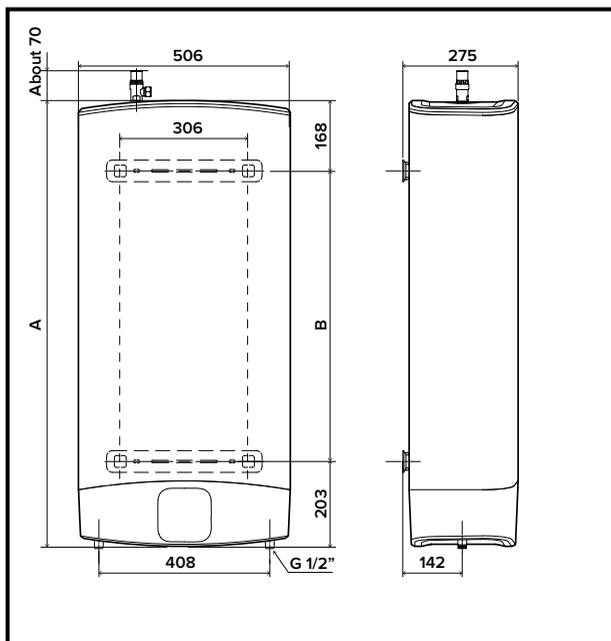


**This product conforms to Directive WEEE 2012/19/EU.**

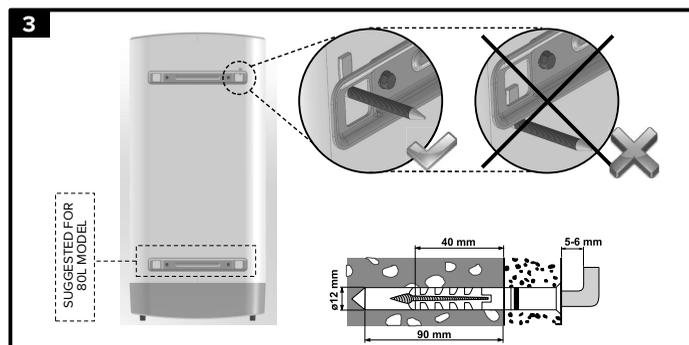
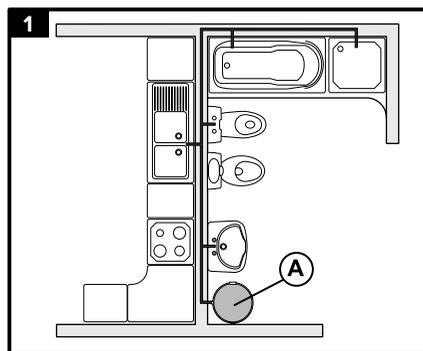
The symbol of the crossed waste paper basket on the appliance and its packaging indicates that the product must be scrapped separately from other waste at the end of its service life. The user must therefore hand the equipment over to a sorted waste disposal facility for electro-technical and electronic equipment at the end of its service life.

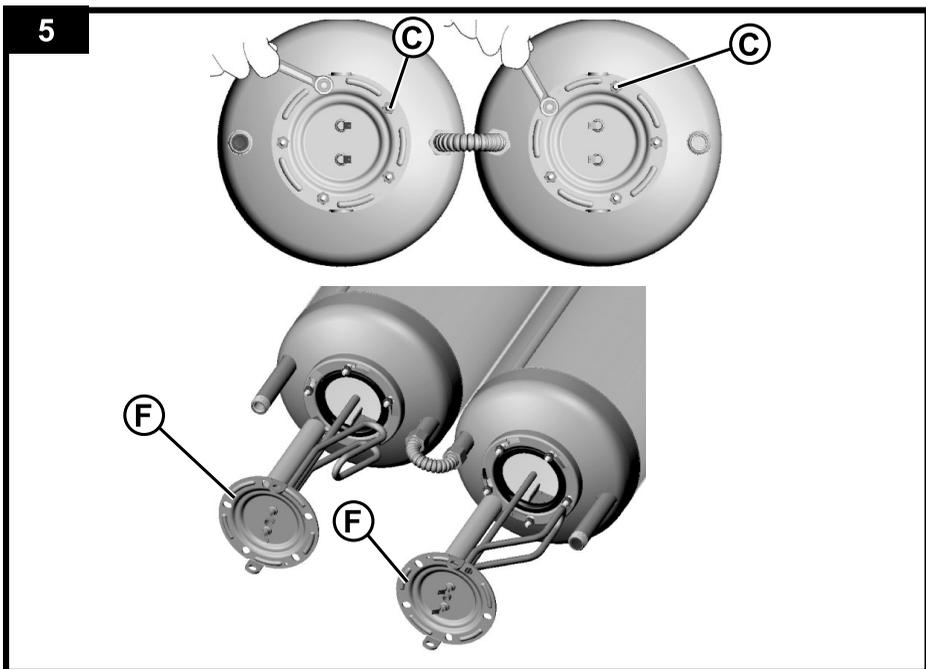
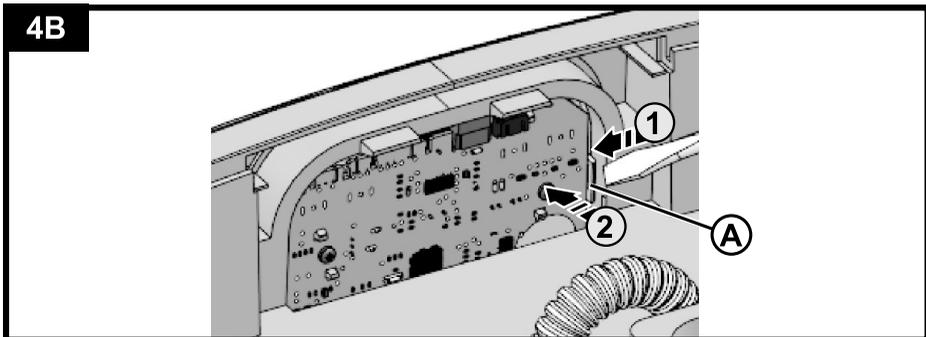
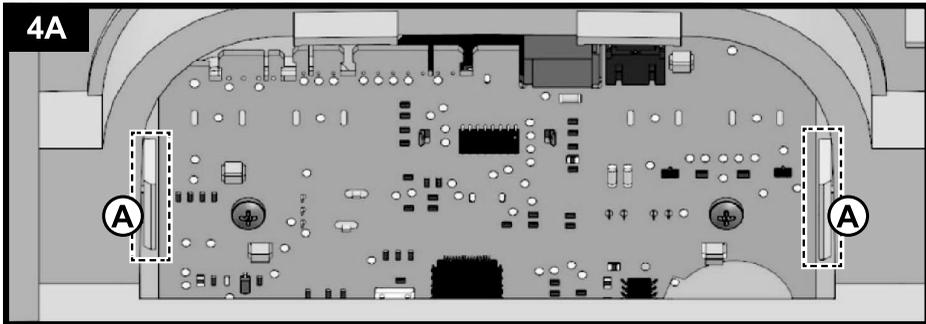
Alternatively, he may return the equipment to the retailer at the time of purchase of a new equivalent type of appliance. Electronic equipment of size less than 25 cm can be handed over to any electronics equipment retailer whose sales area is at least 400 m<sup>2</sup> for disposal free of charge and without any obligation to purchase new product.

## Installation scheme

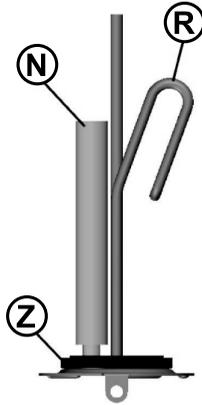


Model	A	B
VELIS 45	776	405
VELIS 80	1251	880

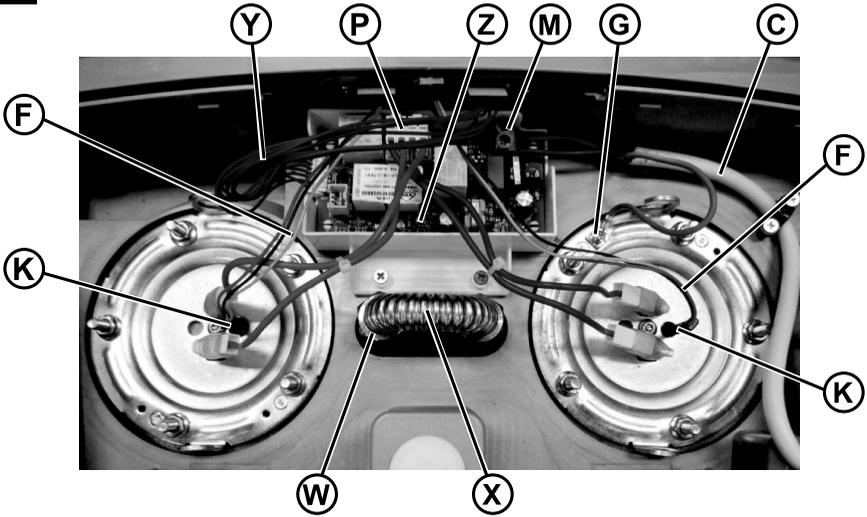




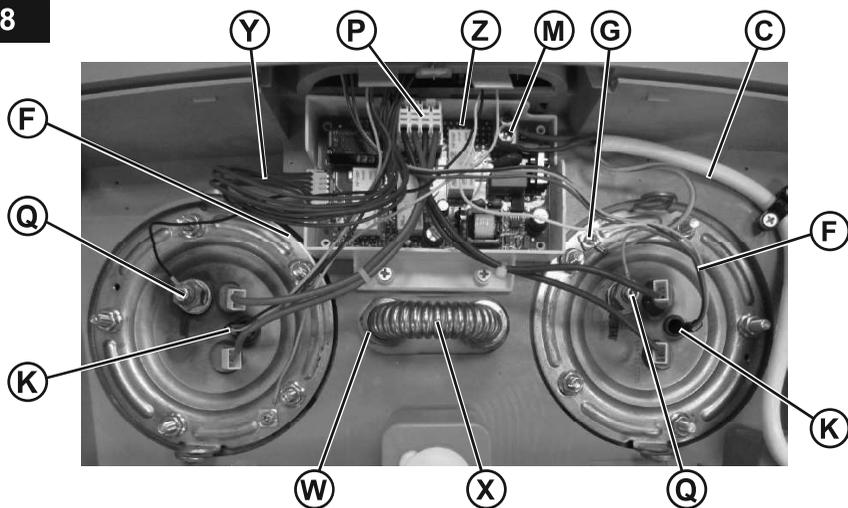
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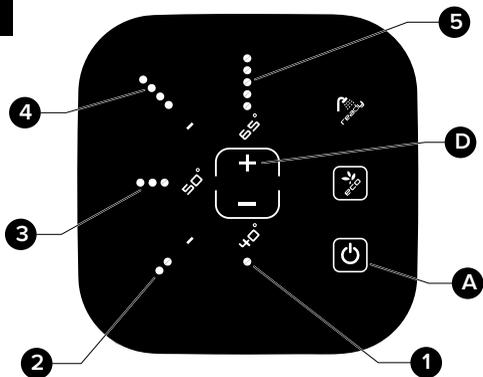
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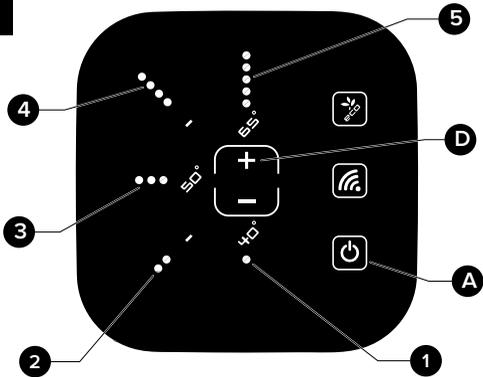
8



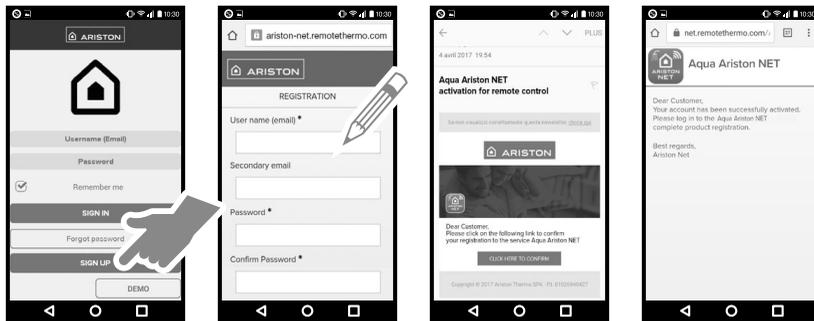
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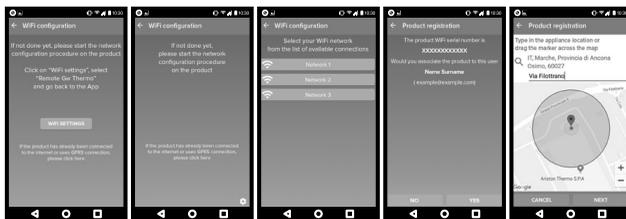
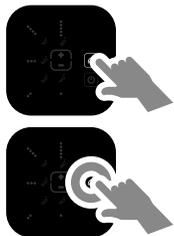
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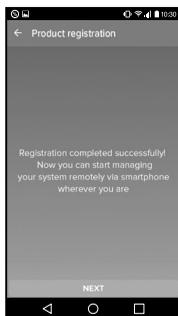
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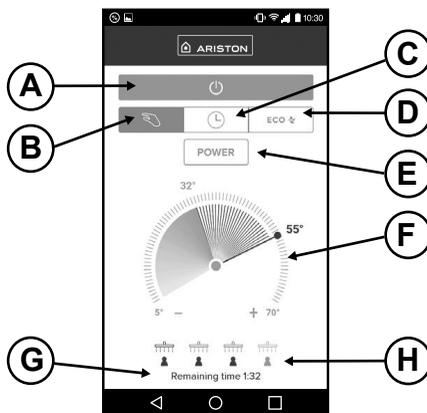
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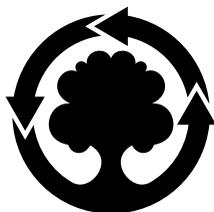


# 13



# 14





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