ARISTON

The home of sustainable comfort

UNVENTED WATER HEATER

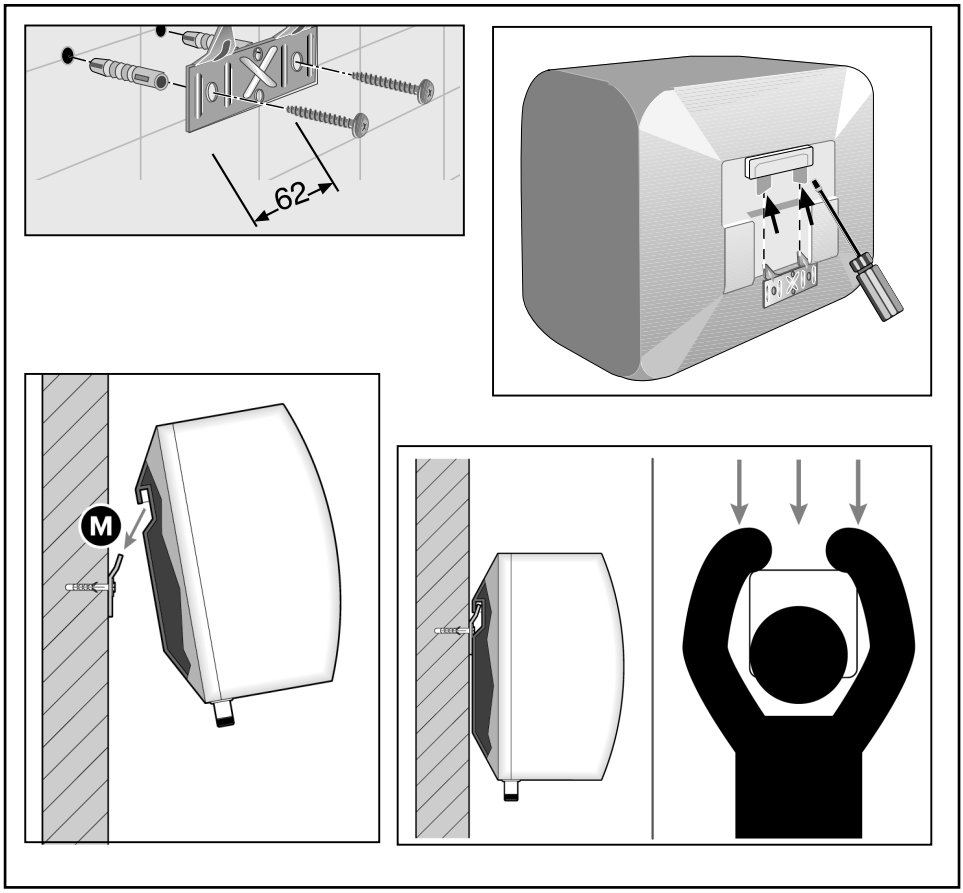
ASSEMBLY AND OPERATION INSTRUCTIONS

ANDRIS ELITE Wi-Fi

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. This electric storage water heater has been designed for domestic use and is specifically built to heat cold water (entering the product) for sanitary use. Any other use of the product is considered improper and therefore potentially dangerous. The manufacturer declines any responsibility arising from the improper use of the product and/ or for purposes other than those indicated in the relevant instruction manual.
4. 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.
5. DO NOT leave the packaging materials (staples, plastic bags, expanded polystyrene, etc.) within the reach of children they can cause serious injury.
6. **The appliance may not be used by persons under 3 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. Children aged 3 to 8 can only operate the tap connected to the appliance. User cleaning and maintenance may not be done by unsupervised children.**
7. **DO NOT** touch the appliance when barefoot or if any part of your body is wet.

8 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.
9. If the appliance is equipped with a power cord, the latter may only be replaced by If the appliance is equipped with a power cord, the latter may only be replaced by a qualified engineer.
10. It is mandatory to screw the water inlet pipe of the unit a safety valve in accordance with Building Regulations. To minimize the danger from excessive pressure, unvented hot water storage systems should incorporate a minimum of two independent safety devices, including at least a control, safety valve and hydraulic load cutout.
11. 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.
12. 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.
13. 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.
14. 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.
15. Do not leave flammable materials in contact with or in the vicinity of the appliance.
16. Do not place anything under the water heater which may be damaged by a leak.



Enactment of Directive 2012/19/EU governing electrical and electronic waste (WEEE)

The barred wheeled bin symbol appearing on the appliance or on its packaging indicates that the product must be collected separately from other waste at the end of its useful life.

The user must therefore deliver the decommissioned product to an appropriate local facility for separate collection of electro-technical and electronic waste. Alternatively, the appliance to be scrapped can be delivered to the dealer when purchasing a new equivalent appliance. Proper separated collection of the decommissioned appliance for its subsequent recycling, treatment and eco compatible disposal helps to prevent negative effects on the environment and human health, besides encouraging reuse and/or recycling of its constituent materials.

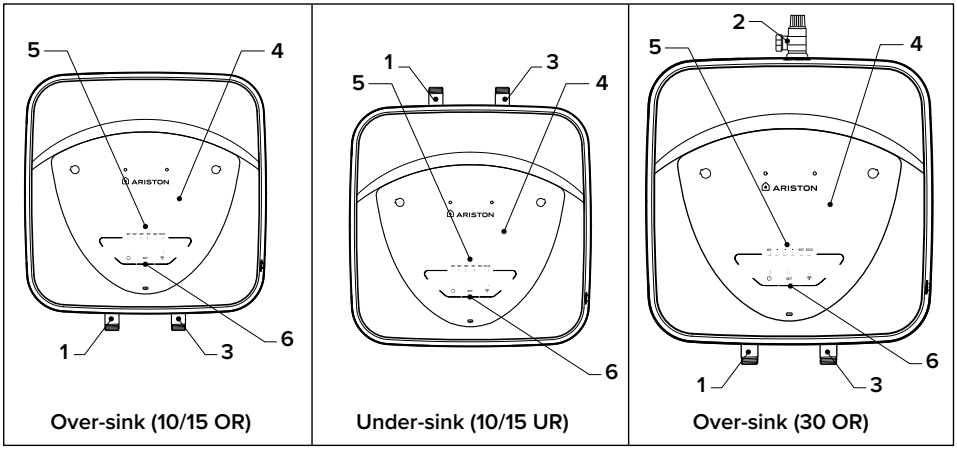
LEGIONELLA BACTERIA FUNCTION

Legionella are small rod shaped bacteria which are a natural constituent of all fresh waters. Legionaries' 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 run to heat the water heater up to 65°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

1) Hot water outlet (1/2" male BSP)
2) Temperature and pressure relief valve (30 litre only)
3) Cold water inlet (1/2" male BSP)
4) Control cove
5) LEDs (40°C -> 80°C for 10/15L) and (40°C -> 65°C for 30L) to the temperature
6) Function buttons



TECHNICAL SPECIFICATIONS

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		10				15				30
Weight	kg	6,6				7,4				12,8
Installation		Oversink		Undersink		Oversink		Undersink		Oversink
Model		Refer to the nameplate								
Q_{elec}	kWh	2,442		2,691		2,462		2,675		2,775
Load profile		XXS				XXS				S
L_{wa}	dB	15								
η_{wh}		35,5%		32,9%		35,3%		33,0%		32,1%
Capacity	L	10				15				30
Heat loss	kWh/day	0,46		0,71		0,61		0,85		0,77
Heat up times [10-60°C]	minutes	20' (*)	15' (**)	20' (*)	15' (**)	26' (*)	20' (**)	26' (*)	20' (**)	35' (**)
Weights when full	bar	17		17		23		23		43
Maximum inlet pressure	bar	3,5								
Maximum operating pressure	bar	5,5								
The radio frequency band equipment operates is 2.4 GHz, and the maximum power of the transmitted signal is < 20dBm										
(*) 2000W / (**) 3000W										

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.
Products equipped with regulator knobs have the thermostat positioned in the setting condition at its set <ready to use> position shown in the Data Sheet (Enclosure A), used by the manufacturer to declare the appliance's energy class.

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.
- RoHS 3 Risk of Hazardous Substances.
- ErP Energy related Products: EN 50440.
- EN 12897:2016

This product is in conformity with REACH regulations.

The UKCA marking of the appliances attests its conformity to the following UK legislations:

- Electromagnetic Compatibility Regulations 2016
- Electrical Equipment (Safety) Regulations 2016
- Radio Equipment Regulations 2017
- The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

USER INSTRUCTIONS

PLEASE KEEP THIS BOOKLET FOR FUTURE REFERENCE

The heater is insulated to a high standard therefore it may be left on all the time.

To turn on the appliance, press the ON/OFF button "⏻", for at least one second. When first switched on, the product is positioned at a temperature of 70°C for the 10/15L model and 65°C for the 30L model. .

Set the desired temperature by choosing by pressing the "SET" button.

During the heating phase, the LEDs relating to the temperature reached by the water are steady on; the following ones, up to the set temperature, flash progressively.

The LED light shows when the heating element is working, under control of the thermostat. If in doubt ring Ariston UK Ltd. Technical department 03332407777 Customer service department 03332408777.

Note: In the event of a power failure, or if the product is turned off using the ON/OFF "⏻" button. The last set temperature is stored.

During the heating phase, a slight noise may occur due to the heating of the water.

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 models are supplied with the following:

Unvented water heater (with factory-fitted T&P model 30L)	x1
Wall bracket	x1
Pressure relief valve set at 6 bar	x1
Dielectric junctions	x2
Tundish (model 30L only)	x1
Expansion Vessel (model 30L only)	x1
Check Valve (model 30L only)	x1
Pressure reducing Valve (model 30L only)	x1

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

HOW THE HEATER WORKS

The heating element is controlled by a thermostat which senses the water temperature.

The operating temperature can be adjusted by the regulation TASTI on the front of the heater.

In addition to the thermostat there is a thermal cut-out which is set to switch off the power to the element if the thermostat fails and the water temperature rises too high.

A magnesium anode is provided to prevent corrosion of the water container.

The 30L model has a temperature and pressure relief valve on top of the heater which is a safety device to back-up the thermostat and thermal cut-out. It works by sensing an excess water temperature or pressure and releasing the hot water to the discharge tundish and drain.

The heater will only work in the vertical position as the element is shaped to heat the water at the bottom of the tank. The inlet pipe needs to deliver cold water to the bottom of the tank and the hot water outlet draws water from the top of the tank. When water is heated it expands, in a small unvented water heater of this type the expansion can normally be accommodated back into the cold water mains.
Where this is not possible the installer will need to fit a set of cold water controls.
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 pages 11 figs 2 & 3).

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

TEMPERATURE ADJUSTMENT AND FUNCTION ACTIVATIONS (Fig. 7)

To turn on the appliance, press the ON / OFF button **ON/OFF** "⏻", for at least one second.
When switched on for the first time, the product is set at a temperature of 70°C (OR) 60°C (UR) for the 10/15L models and 65°C for the 30L model. Set the desired temperature by choosing a level between 40°C and 80°C (10/15L models), 40°C and 65°C (30L model), by pressing the "**SET**" button. After 3 seconds without any action, the set point will be confirmed and stored. During the heating phase, the LEDs relating to the temperature reached by the water are steady on; the following ones, up to the set temperature, flash progressively. If the temperature drops, for example as a result of a water withdrawal, the heating is reactivated automatically and the LEDs between the last steady lit and the one relating to the set temperature start flashing progressively again. In the event of a power failure, or if the product is turned off using the **ON/OFF** "⏻" button. The last set temperature is stored.
During the heating phase, a slight noise may occur due to the heating of the water.

ANTI-FREEZE FUNCTION

The anti-freeze function is the appliances automatic protection to avoid damages caused by very low tempe ratures 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 iiis inactive for a long time.
Attention: the function is enabled, but it is not indicated in case of activation. Once the temperature rises to a safer level such as to avoid damage from ice and frost, the water heating is switched off again.

ECO FUNCTION

The ECO function is activated by pressing the "**SET**" button until the ECO LED is on.
The ECO function aims to produce hot water by learning the user's habits. So, for the first week the product stores the withdrawals and the timings in which these take place. From the following week water heating is performed with respect to what the water heater has previously learnt.
If the user wants to restore the function and start a new learning period it is necessary to press the "**SET**" button for 10 seconds (the ECO LED will flash).
If the ECO function is active and the "**SET**", button is pressed, the function will be disabled and the corresponding selected temperature will be visualised.

BOOST FUNCTION

The BOOST function is activated/deactivated by APP.
The Boost function temporarily sets the setpoint temperature at 80' (10 & 15L) and 65' for 30L models, bypassing the previous operating mode and self-deactivates once the setpoint is reached. In this way, the maximum amount of hot water will be available.
The Boost function is automatically deactivated in the event of: blocking error; if the appliance is in "OFF"; or if the "SET" button is pressed to change the setpoint.

WI-FI FUNCTION

For further information about Wi-Fi configuration and the product registration procedure, refer to the enclosed quick start guide dedicated to connectivity, or visit the website:
https://discover.ariston-net.remotethermo.com

Connection status description

Wi-Fi Button 	Slow flashing	The Wi-Fi module is ON
	Rapid flashing	The Wi-Fi module is in Access Point mode
	Double flashing	The WI-Fi module is connecting to the home network
	ON	The Wi-Fi is ON and connected to the home network
	OFF	The Wi-Fi module is OFF

Wi-Fi RESET: to carry out a reset, press the"  " and "**SET**" buttons simultaneously for 10 seconds

WEEKLY PROGRAM FUNCTION

The weekly program function can only be activated through the App.
Two different setpoint temperatures at two different times can be selected for each day of the week: the product will calculate the heating speed and, depending on the temperature, the best moment to start heating in order to reach the setpoint at the desired time.
Press the "**SET**" button to deactivate the function.

THERMAL DISINFECTION CYCLE function (anti-legionella)

The anti-legionella function is activated by default. It consists of a heating/maintenance cycle of the water at 65°C for 1h so as to carry out thermal disinfection action against the relevant bacteria.
The cycle starts at the first switch on of the product and after each power cycle which follows a lack of mains power. If the product always works at a temperature below 60°C, the cycle is repeated after 30 days. When the product is off, the anti-legionella function is not active. If the appliance is switched off during the anti-legionella cycle, the product turns off and the function is not completed. At the end of each cycle, the operating temperature returns to the value set previously by the user.
The activation of the anti-legionella cycle is displayed by the ON LED SET. To deactivate or activate the anti-legionella function, press and hold the button **ON/OFF** "⏻" ed the "SET" key for 3 sec, to confirm deactivation the 40 °C LED flashes rapidly for 3 sec. To reactivate the anti-legionella function, repeat the operation described above; to confirm that reactivation has taken place, the 60 °C LED flashes rapidly for 3 seconds.
Warning: when this software has been carrying out the thermal disinfection treatment, water temperature can cause burns. Feel water before bathing or showering.

DIAGNOSTICS

When a fault is detected, the appliance identifies three different types of errors:

- **ERROR: all LEDs flash;**
  To reset an error, when possible, carry out the reset by pressing the ON/OFF key "⏻" to switch the product off and on. If the cause of the fault disappears when reset, the appliance resumes its regular operation. Otherwise, all the LEDs to flash again, Assistance must be requested to intervene.
- **NOTICE: THE ON/OFF LED"⏻" flashes;**
  Carry out the reset by pressing the ON/OFF "⏻" button to switch OFF the product, if the malfunction persists, contact the qualified technician
- **TOUCH DISPLAY ERROR: all the temperature LEDs flash and the other LEDs are OFF;**
  Carry out the reset by cutting off the power supply to the product, if the malfunction persists, contact the qualified technician.

INSTALLATION INSTRUCTIONS

Before installing the heater read these instructions in full. If you are unsure please contact our qualified technician service department (03332407777).

Note: For further information please refer to the flow chart on page 19 which gives guidance on choosing controls. 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.

a) SITING & FIXING WARNING:

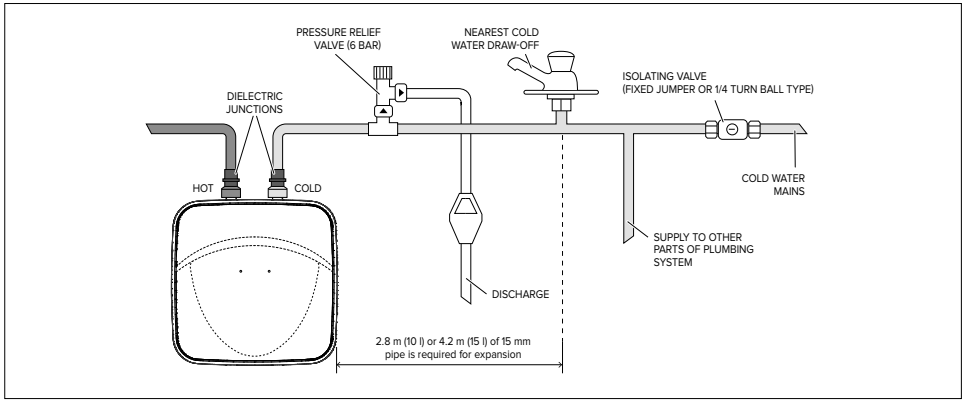
The appliance should be left packed until it is ready to be installed. When unpacking the 30 L model take care not to damage the temperature and pressure relief valve on the top of the heater.
A drain has to be provided for any water discharged through the safety valves.

Access to the heater is not normally needed on a day-to-day basis, but 300 mm clearance to the front of the water heater sould be kept for servicing and maintenance 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.
Position the heater against the wall and mark the position of the hooked wall bracket. Fasten the wall bracket to wall using suitable screws and wall plugs (ensure that wall is suitable to support the unit, allowing for the extra weight of water when it is full). Hang the heater on the bracket making sure that the heater is pulled well down on to the bracket, if necessary by forcing the hooks into the foam insulation.
Ensure the unit is accessible and maintains sufficient clearances to allow for service and maintenance. Ensure the unit is installed in a place where freezing will not occur.
Ensure a suitable low level drain off cock is installed on the hot and cold plumbing system.

b) PLUMBING WARNING:

The appliance must not be supplied with water of hardness less than 120ppm, nor with especially hard water (greater than 250ppm); we recommend installing a water softener, properly calibrated and controlled - do not allow the residual hardness to fall below 150ppm.
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.

Fig. 1 (Note: not suitable for 15l and above)



1) Using the feed pipe to accommodate expansion (Schedule 2, Section 6: Paragraph 15 of the Water Supply (Water Fittings) Regulations 1999 and the Water Byelaws 2000, Scotland) (Fig. 1).

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.

2) Using a set of expansion controls (Fig. 2 & 3).

Fig. 2 The tundish must be installed away from electrical devices. (Models 10/15L)

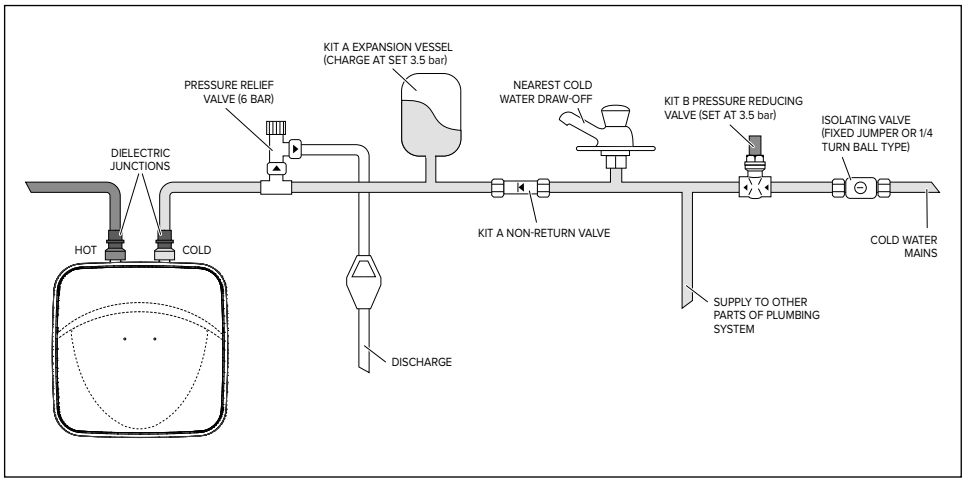
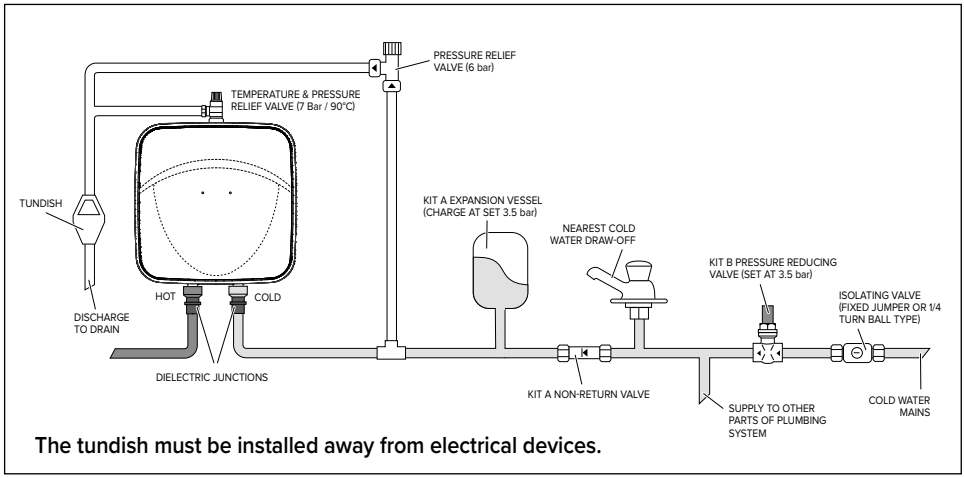


Fig. 3 (Models 30L)



The tundish must be installed away from electrical devices.

The model 30L 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; therefore a tundish (Kit C) is available for 10 and 15 litre units if required.
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). 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 model 30L are supplied as a kit with the appliance: 15mm pressure reducing valve set at 3.5 bar.
Expansion vessel (charge pressure set at 3.5bar).

c) DISCHARGE PIPE WORK NOTE:
The following guidelines refer to Building Regulation G3. It is good practice to follow these guidlines 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 In the same location as the hot water storage system. 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 it's 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 fig. 5 and 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 not 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.

Fig. 4 Suggest ways of terminating discharge pipes safety

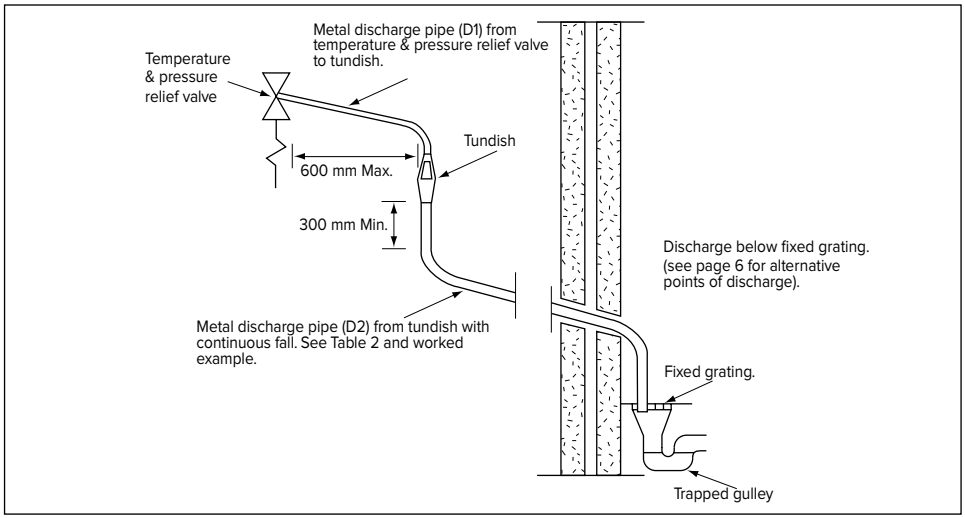


Table 2 Sizing of copper discharge pipe "D2" for common temperature valve outlets.

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.

d) ELECTRICAL WARNING:

The appliance must be earthed

The electrical installation must be in line with the current IEE wiring regulations.

A mains supply of 240 VAC 3 kW, is required (Fig. 5)

Heat resisting cable, minimum round 3 core 1.5 mm (to BS 6141 table 8) should be used to connect to the electrical supply through 20 amp double pole switch (conforming to BS EN 60669-1).

The appliance must have a dedicated incoming supply that must be protected by an industry standard MCB compliant with the current IEE wiring regulations.

The cable enters the terminal compartment through a tube embedded in the foam insulation, the entrance to this tube is on the rear right hand side at the bottom.

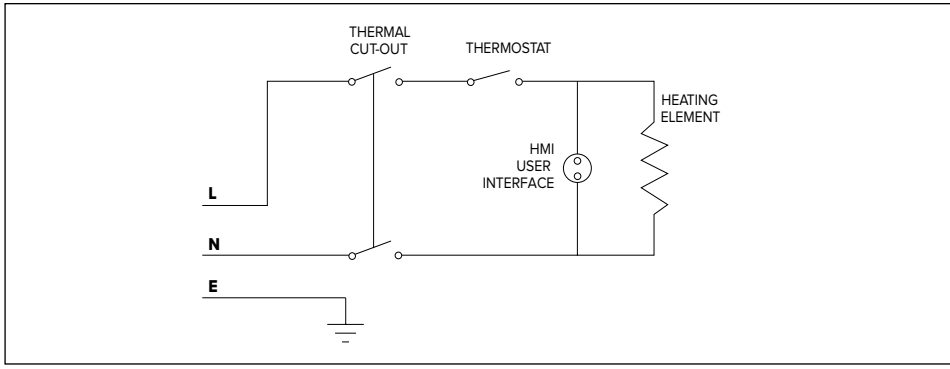
Flexible cables are colour coded as follows:

Brown .....live

Blue .....neutral

Green and yellow ..... earth

Fig. 5 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 front control access panel.

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 (**Fig.6, Rif.M**).).

The appliance must be grounded with a cable (yellow/green and longer than the phase cable) connected to the terminals marked ⏚ (**Fig.6, Rif.G**).

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 65°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 (FOR QUALIFIED PERSONNEL)

All interventions and maintenance operations must be carried out by qualified personnel(in possession of qualification required by the regulations in force on the subject).
Before calling your qualified technician, check that the fault is not due to lack of water or power failure
WARNING: DISCONNECT THE APPLIANCE FROM THE MAINS BEFORE CONDUCTING ANY MAINTENANCE WORK.

EMPTYING THE APPLIANCE

The appliance must be emptied if it is to be left unused for a long period and/or in premises subject to frost.
To drain the appliance, proceed as follows:
- disconnect the appliance from the electricity mains;
- close the tap, if installed (**Fig. 1, Ref. D**), otherwise the central tap domestic power supply;
- turn on the hot water tap (wash basin or bathtub);
- open the drain valve (**Fig. 1, Ref.B**).

REPLACING PARTS (WHEN NECESSARY)

Remove the enclosure to access the electrical equipment.
To work on the electronic thermostat (**Fig. 6, Ref. T**) disconnecting the power cable (**Fig. 6, Ref. C**) and the cable (**Fig. 6, Ref. Y**) of the control panel. Then remove it from its seat, taking care not to bend the sensor holder rod excessively (**Fig. 6, Ref. K**).
To replace the electronic board (**Fig. 6, Ref. W**) disconnect the cable (**Fig. 6, Ref. Y**) and unscrew the screws.
During reassembly, make sure that all components are put back in their original positions.

In order to work on the heating element and the anode, the appliance must first be emptied.
Undo the 4 bolts (**A Fig. 4**) and remove the flange. The heating element and anode are attached to the flange. During reassembly, make sure that the flange gasket, the thermostat and the heating element are put back in their original positions. We recommend replacing the flange gasket (**Z Fig. 5**).

Use only original parts from authorised by the manufacturer.

PERIODICAL MAINTENANCE

The heating element (**Fig. 5, Rif.R**) should be de scaled every year (the frequency must be increased, if water is very hard) to ensure it works properly. If you do not wish to use a liquid de scaler (in this case please read the safety data sheets of de scaling), you can simply break off the deposit, taking care not to damage the heating element's cladding. The magnesium anode (**Fig. 5, Rif.N**) must be replaced every year, otherwise the decay of the warranty. In the presence of aggressive or waters rich in chloride it is recommended to check the status of the anode annually. To remove this, disassemble the heating element and unscrew from the support bracket.

USEFUL INFORMATION

Before you clean the unit, make sure you have turned it off by setting its external switch to OFF. Do not use insecticides, solvents or aggressive detergents: these can damage the unit's painted and plastic parts.

If the water delivery is cold, have the following checked:

- that the device is connected to the power supply and the external switch is in the ON position;
- that at least led 40°C (**Fig. 3**) is turned on.

If there is presence of steam output from the taps:

Remove power from the electrical appliance and contact technical support.

If the hot water delivery is insufficient, have the following checked:

- the pressure of the water mains;
- eventual obstruction of the inlet and outlet pipes (deformation or sediment).

Water trickling from the pressure safety device

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:

- Check the pressure of the expansion vessel.
- Check the Pressure Reducing Valve.
- Check the Pressure Relief Valve.

If the spill continues during the non-heating period, have the following checked:

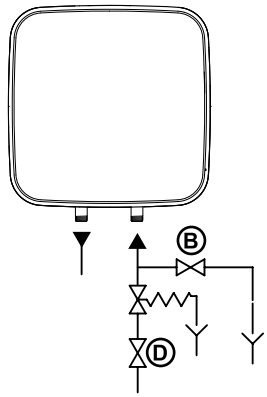
- device calibration;
- the pressure of the water mains.

Caution: Never obstruct the appliance outlet!

IF THE PROBLEM PERSISTS, NEVER ATTEMPT TO REPAIR THE APPLIANCE YOURSELF, BUT ALWAYS CONTACT 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.

1


B
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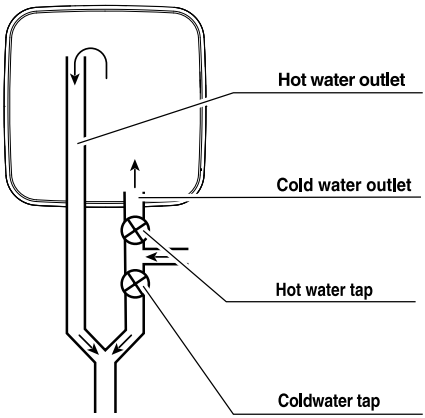
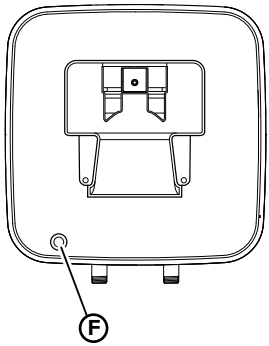
2


Hot water outlet
Cold water outlet
Hot water tap
Coldwater tap

3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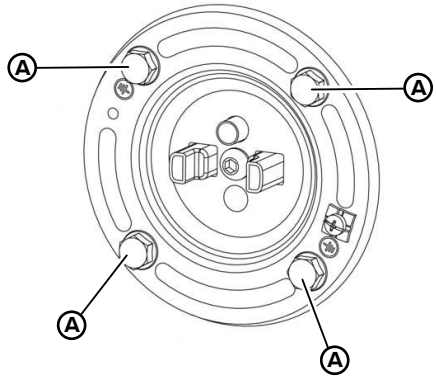
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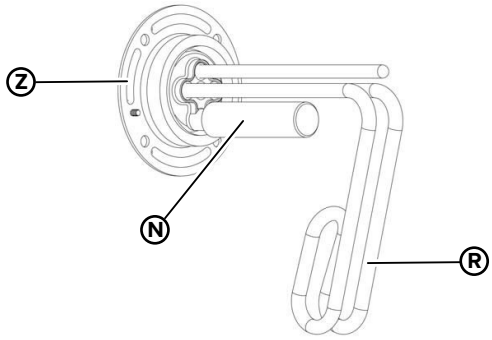
5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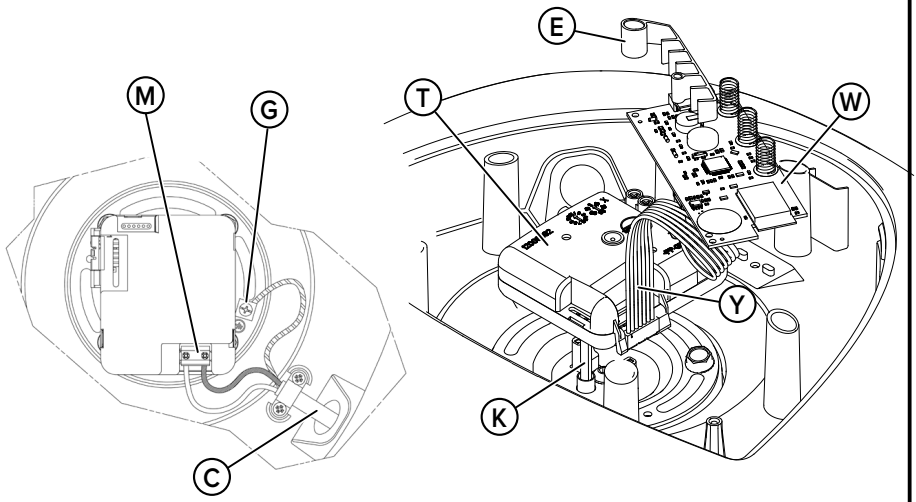

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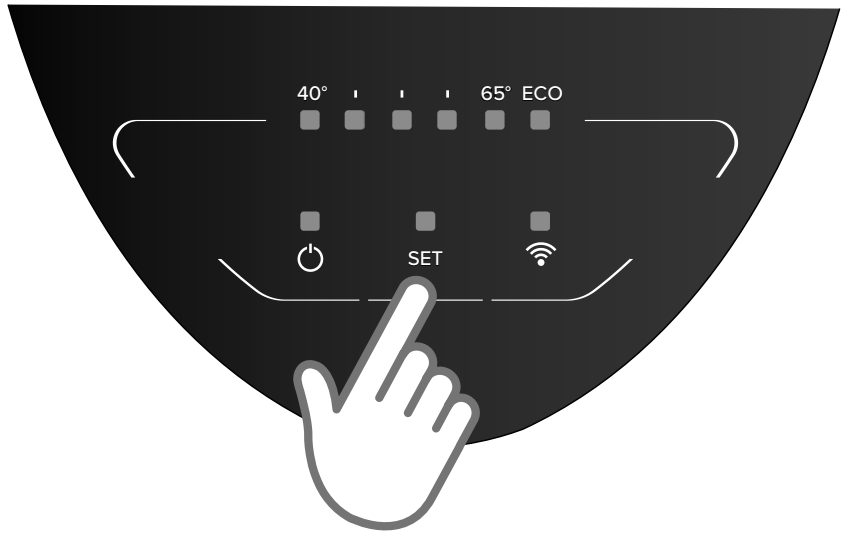
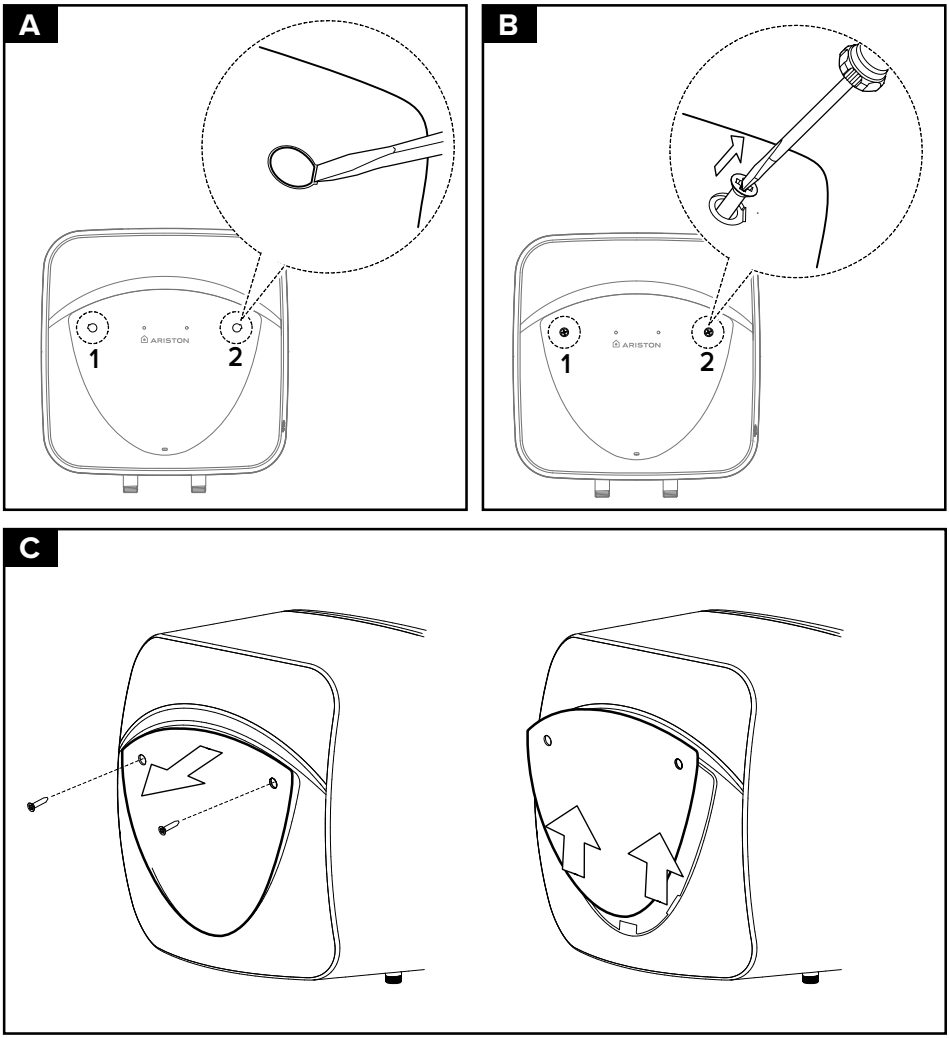


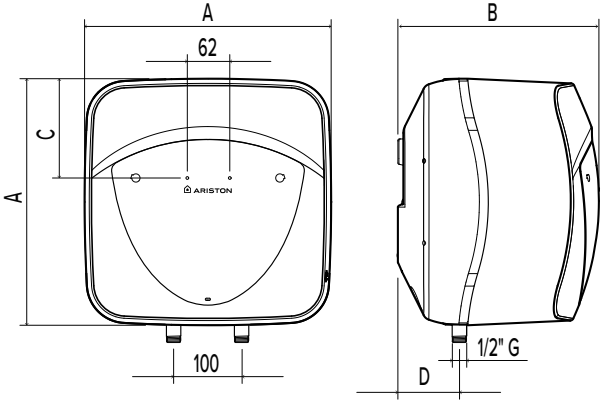
HOLD THE BUTTON TO SELECT THE DESIRED TEMPERATURE

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).



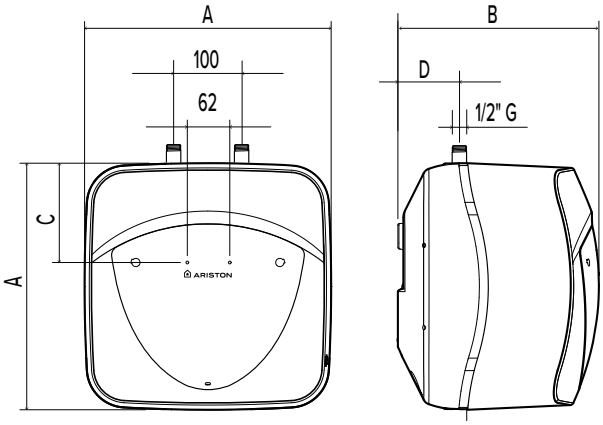
INSTALLATION SCHEME

OVERSINK



MOD.	10	15	30
A	360	360	446
B	294	342	406
C	144	144	165
D	92	78	115

UNDERSINK



MOD.	10	15
A	360	360
B	294	342
C	144	144
D	92	78

MAINS PRESSURE HOT WATER STORAGE SYSTEM COMMISSIONING CHECKLIST

This Commissioning Checklist is to be completed in full by the competent person who commissioned the boiler as a means of demonstrating compliance with the appropriate Building Regulations and then handed to the customer to keep for future reference.

Failure to install and commission this equipment to the manufacturer's instructions may invalidate the warranty but does not affect statutory rights.

Customer Name _____ Telephone Number _____

Address _____

Boiler Make and Model _____

Boiler Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Commissioned by *(print name)* _____ CORGI ID Number _____

Company Name _____ Telephone Number _____

Company Address _____

_____ Commissioning Date _____

To be completed by the customer on receipt of a Building Regulations Compliance Certificate*:

Building Regulations Notification Number *(if applicable)*

ALL SYSTEMS PRIMARY SETTINGS (indirect heating only)

Is the primary circuit a sealed or open vented system?	Sealed ☐	Open ☐	
What is the maximum primary flow temperature?			°C

ALL SYSTEMS

What is the incoming static cold water pressure at the inlet to the system?			bar
Has a strainer been cleaned of installation debris (if fitted)?	Yes ☐	No ☐	
Is the installation in a hard water area (above 200ppm)?	Yes ☐	No ☐	
If yes, has a water scale reducer been fitted?	Yes ☐	No ☐	
What type of scale reducer has been fitted?			
What is the hot water thermostat set temperature?			°C
What is the maximum hot water flow rate at set thermostat temperature (measured at high flow outlet)?			l/min
Time and temperature controls have been fitted in compliance with Part L of the Building Regulations?		Yes ☐	
Type of control system (if applicable)	Y Plan ☐ S Plan ☐	Other ☐	
Is the cylinder solar (or other renewable) compatible?	Yes ☐	No ☐	
What is the hot water temperature at the nearest outlet?			°C
All appropriate pipes have been insulated up to 1 metre or the point where they become concealed		Yes ☐	

UNVENTED SYSTEMS ONLY

Where is the pressure reducing valve situated (if fitted)?			
What is the pressure reducing valve setting?			bar
Has a combined temperature and pressure relief valve and expansion valve been fitted and discharge tested?	Yes ☐	No ☐	
The tundish and discharge pipework have been connected and terminated to Part G of the Building Regulations		Yes ☐	
Are all energy sources fitted with a cut out device?	Yes ☐	No ☐	
Has the expansion vessel or internal air space been checked?	Yes ☐	No ☐	

THERMAL STORES ONLY

What store temperature is achievable?		°C
What is the maximum hot water temperature?		°C

ALL INSTALLATIONS

The hot water system complies with the appropriate Building Regulations	Yes ☐
The system has been installed and commissioned in accordance with the manufacturer's instructions	Yes ☐
The system controls have been demonstrated to and understood by the customer	Yes ☐
The manufacturer's literature, including Benchmark Checklist and Service Record, has been explained and left with the customer	Yes ☐

Commissioning Engineer's Signature

Customer's Signature

(To confirm satisfactory demonstration and receipt of manufacturer's literature)

*All installations in England and Wales must be notified to Local Authority Building Control (LABC) either directly or through a Competent Persons Scheme. A Building Regulations Compliance Certificate will then be issued to the customer.

benchmark
THE MARK OF QUALITY FOR THE INSTALLATION, COMMISSIONING AND SERVICING OF DOMESTIC HEATING AND HOT WATER SYSTEMS

SERVICE RECORD

It is recommended that your hot water system is serviced regularly and that the appropriate Service Record is completed.

Service Provider
Before completing the appropriate Service Record below, please ensure you have carried out the service as described in the manufacturer's instructions.

SERVICE 1 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 2 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 3 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 4 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 5 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 6 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

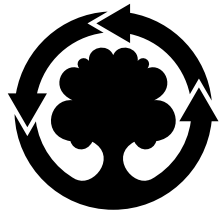
SERVICE 7 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 8 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 9 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

SERVICE 10 Date
Engineer Name
Company Name
Telephone Number
Comments
Signature

NOTE



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Ariston U.K. Ltd
Ariston U.K. Ltd - Kings House,
101 – 135 Kings Road,
Brentwood, Essex, CM14 4DR - UK
ariston.com

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