

CLAS ONE CAL5 SYSTEM ONE

USER'S MANUAL

CONDENSING WALL-HUNG GAS BOILER

Country of Destination: GB/IE

- G.C.N.: **47-116-85** (24 kW)
- G.C.N.: **47-116-86** (30 kW)
- G.C.N.: **47-116-87** (38 kW)
- G.C.N.: **41-116-49** (18 kW)
- G.C.N.: **41-116-50** (24 kW)
- G.C.N.: **41-116-51** (30 kW)



kiwa
approved
product



UK WATER SUPPLY
REGULATIONS



Dear Customer,

Thank you for choosing an ARISTON boiler.
We warranty that your boiler is a reliable and technically sound product.
This manual provides detailed instructions and recommendations for proper installation, use and maintenance.
Remember to keep this manual in a safe place for future reference.

WARRANTY

This appliance is in warranty from the date of installation. Proof of installation or purchase and annual servicing must be provided upon request. The installation must have been carried out by a Gas Safe Registered engineer.

Ariston is obliged under this warranty to repair or replace a faulty appliance under our terms and conditions.

Any repair or replacement will be at Ariston's discretion. This warranty will only apply where the fault arises from defects in the appliance, caused either by material or workmanship of the manufacturer.

This warranty does not cover malfunction or damage arising from incorrect installation, commissioning or maintenance procedures as advised in the Installation and Servicing manual, inefficient flue system, poor or incorrect electricity and wiring, incorrect gas supply or pressure, tampering by inexperienced persons and any other cause not directly related to manufacture.

Ariston Thermo Uk Ltd cannot accept responsibility for any cost arising from repair or maintenance carried out by any third party.

This warranty does not affect your statutory rights.

The appliance must be registered with Ariston within 30 days from date of installation.

The boiler must be serviced annually either by a local Gas Safe Registered engineer or managed by Ariston directly which can be arranged by calling **0333 240 8777**.

If the boiler is not serviced directly through Ariston then proof service must be sent in to **Ariston UK** (address on back cover of manual)."

Registration is online at www.ariston.com/uk

The Benchmark commissioning checklist, which can be found at the back of the Installation instructions, must be completed in full by the installer.

READY FOR



Thank you for choosing an **Ariston** boiler compatible with **Ariston Net**, the service designed and manufactured by **Ariston**, to provide a whole new experience in using a domestic heating system. **Ariston Net** allows you to start, stop and check the temperature of domestic heating and water anytime, anywhere from a smartphone, tablet or PC. It allows you to constantly monitor energy consumption to ensure you save on your gas bill. It also notifies you in real time if there is a boiler failure. If a remote diagnostic service is activated, the service centre will be able to solve problems remotely where possible or arrange an appointment at your earliest convenience.

* The installation must have been carried out by a Gas Safe Registered engineer.
For more information call us on **0333 240 8777**.

If you smell gas or are worried about gas safety, you can call the National Gas Emergency Service free on 0800 111 999 at any time, day or night.

SAFETY REGULATIONS

Key to symbols:



Failure to comply with this warning implies the risk of personal injury, in some circumstances even fatal



Failure to comply with this warning implies the risk of damage, in some circumstances even serious, to property, plants or animals.

Do not perform operations which involve opening the appliance.

Electrocution from live components.

Personal injury caused by burns due to overheated components, or wounds caused by sharp edges or protrusions.



Do not perform operations which involve removing the appliance from its installation space .

Electrocution from live components.

Flooding caused by water leaking from disconnected piping.



Explosions, fires or intoxication caused by gas leaking from disconnected piping.



Do not damage the power supply cable.

Electrocution from live uninsulated wires.



Do not leave anything on top of the appliance.

Personal injury caused by an object falling off the appliance as a result of vibrations.



Damage to the appliance or items underneath it caused by the object falling off as a result of vibrations.



Do not climb onto the appliance.

Personal injury caused by the appliance falling.



Damage to the appliance or any objects underneath it caused by the appliance falling away from its installation space.



Do not climb onto chairs, stools, ladders or unstable supports to clean the appliance.

Personal injury caused by falling from a height or cuts (stepladders shutting accidentally).



Do not attempt to clean the appliance without first switching it off and turning the external switch to the OFF position.

Electrocution from live components.



Do not use insecticides, solvents or aggressive detergents to clean the appliance.

Damage to plastic and painted parts.



Do not use the appliance for any use other than normal domestic use.

Damage to the appliance caused by operation overload.



Damage caused to objects treated inappropriately.

Do not allow children or inexperienced individuals to operate the appliance.

Damage to the appliance caused by improper use.



If you detect a smell of burning or smoke coming from the appliance, disconnect it from the electricity supply, turn off the main gas valve, open all windows and call for assistance.

Personal injury caused by burns, smoke inhalation, intoxication.



If there is a strong smell of gas, turn off the main gas valve, open all windows and call for assistance.

Explosions, fires or intoxication.



This appliance can be used by children aged from 8 years and above and person with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

THE INSTALLATION AND FIRST IGNITION OF THE BOILER MUST BE PERFORMED BY QUALIFIED GAS SAFE REGISTERED ENGINEER IN COMPLIANCE WITH GAS SAFETY (INSTALLATION & USE) REGULATIONS AND ALL OTHER NATIONAL REGULATIONS REGARDING INSTALLATION, AND IN CONFORMITY WITH ANY REQUIREMENTS ESTABLISHED BY LOCAL AUTHORITIES AND PUBLIC HEALTH ORGANISATIONS.

AFTER THE BOILER HAS BEEN INSTALLED, THE INSTALLER MUST ENSURE THAT THE END USER RECEIVES THE DECLARATION OF CONFORMITY AND THE OPERATING MANUAL, AND SHOULD PROVIDE ALL NECESSARY INFORMATION AS TO HOW THE BOILER AND THE SAFETY DEVICES SHOULD BE HANDLED.

Ariston is a licensed member of the Benchmark Scheme which aims to improve the standards of installation and commissioning of domestic heating and hot water systems in the UK and to encourage regular servicing to optimise safety, efficiency and performance. Benchmark is managed and promoted by the Heating and Hotwater Industry Council.

For more information visit

www.benchmark.org.uk.

The Benchmark commissioning checklist, which can be found at the back of the installation instructions, must be completed in full by the installer and be left with the boiler or be made available upon request by any attending Ariston representative.

This appliance is designed to produce hot water for domestic use (combi version).

It should be connected to a heating system and a distribution network for domestic hot water, both of which must be compatible with its performance and power levels.

The use of the appliance for purposes other than those specified is strictly forbidden. The manufacturer cannot be held responsible for any damage caused by improper, incorrect and unreasonable use of the appliance or by the failure to comply with the instructions given in this manual.

Installation, maintenance and all other interventions must be carried out in full conformity with the governing legal regulations and the instructions provided by the manufacturer. Incorrect installation can harm persons, animals and possessions; the manufacturing company shall not be held responsible for any damage caused as a result.

In the event of any maintenance or other structural work in the immediate vicinity of the ducts or flue gas exhaust devices and their accessories, switch the appliance off by switching the external bipolar switch to the "OFF" position and shutting off the gas valve.

When the work has been completed, ask a qualified technician to check the efficiency of the ducting and the devices.

If the boiler should be out of use for a prolonged period, it is recommended that the electrical power supply be disconnected and that the external gas cock be closed. If low temperatures are expected, the boiler and system pipe work should be drained in order to prevent frost damage.

Turn the boiler off and turn the external switch "OFF" to clean the exterior parts of the appliance.

Do not allow children or inexperienced persons to use the appliance without supervision.

UKCA labelling

The UKCA mark guarantee that the appliance conform to the following UK regulations:

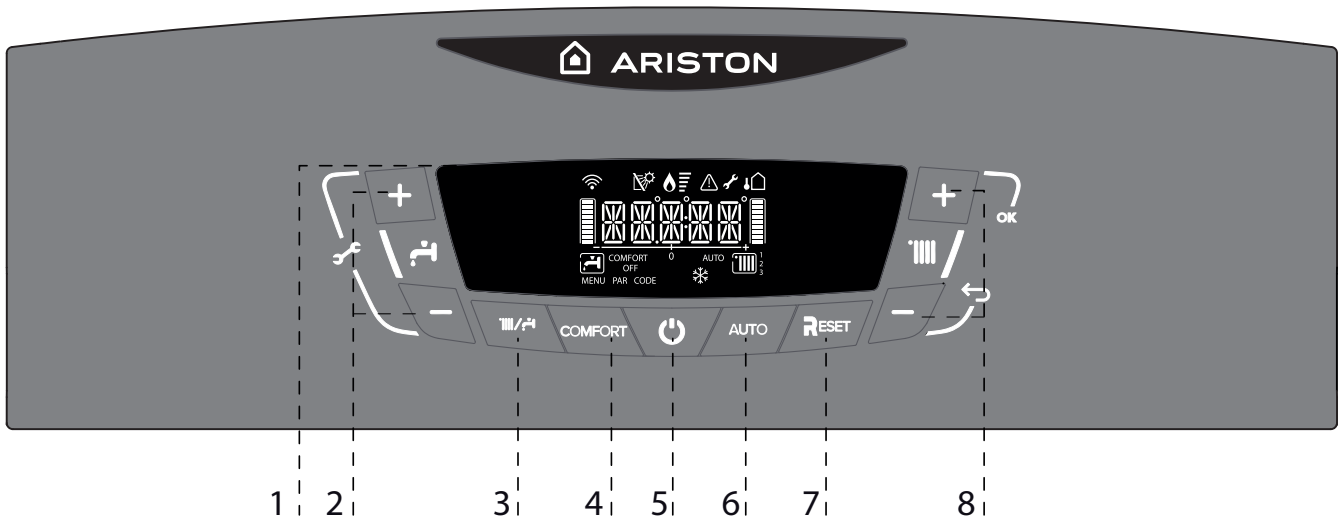
- Gas Appliances Regulation (Regulation (EU) 2016/426 as brought into GB law and amended) and the Gas Appliances (Enforcement) and Miscellaneous Amendment Regulations 2018 (S.I. 2018 No. 389, as amended)
- The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019 (S.I. 2019 No. 539, as amended)
- BED (Boiler Efficiency Directive) - only art.7 (2), art.8 and annex III, IV, V
- Electrical Equipment (Safety) Regulations 2016 (S.I. 2016 No 1101, as amended)
- Electromagnetic Compatibility Regulations 2016 (S.I. 2016 No. 1091, as amended)
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (S.I. 2012 No. 3031, as amended).

CE labelling

The CE mark guarantees that the appliance conforms to the following directives:

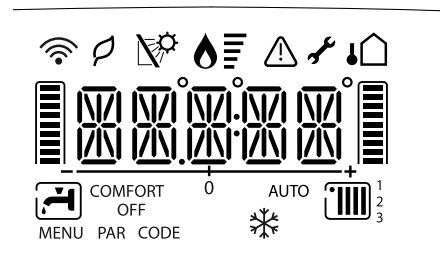
- 2016/426/EU relating to gas appliances
- 2014/30/EU relating to electromagnetic compatibility
- 92/42/CEE relating to energy efficiency
- 2014/35/EU relating to electrical safety
- 2009/125/CE Energy related Products
- 813/2013 Commission regulation (EU)

CONTROL PANEL



Legend:

1. Display
2. Domestic Hot Water adjustment button +/- (a)
3. MODE button
(Operation mode selection summer/winter)
4. COMFORT button
5. ON/OFF button
6. Auto button (To activate Thermoregulation)
7. RESET button
8. Heating temperature adjustment button +/- (b)



Legend:

	Digits indicating: - boiler status - temperature indication with bar level - error code signals (ERROR) - Request press RESET button (boiler block) - menu settings
	Technical assistance request
	Flame detected with indication of power used
	Heating operation set
	Heating operation active
	Hot water operation set
	Hot water operation active
COMFORT	Hot Water Comfort activated
OFF	Boiler off with antifreeze function active
	Anti-frost Function Active

AUTO	AUTO function activated
	High efficiency operation (low C.H. flow temperature)
	Solar temperature probe connected - optional
	Error signals The display shows the code
	External temperature displayed (with external sensor optional)
	Wi-Fi active (Kit Optional - CLAS ONE)

Initial operating procedures

Check the water pressure on the pressure gauge and make sure that the figure is between 0.6 and 1.5 bar when the system is cold. If the pressure is just under the minimum value the display will request a filling procedure - see note below.

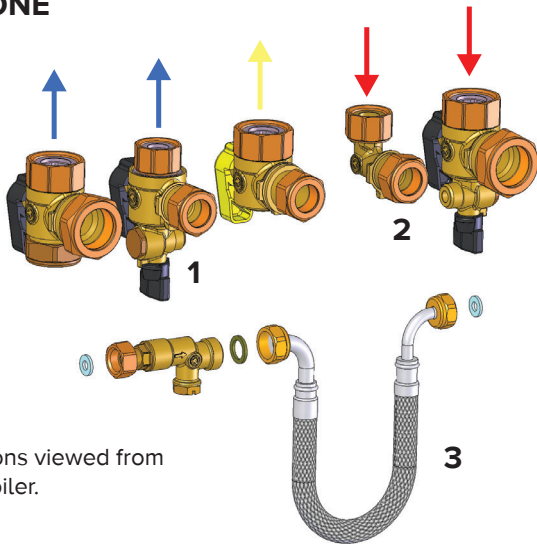
FILLING PROCEDURE

RE-ESTABLISH THE CORRECT PRESSURE USING THE FILLING LOOP (POSITIONED UNDERNEATH THE BOILER). WHEN THE PRESSURE GAUGE INDICATES A PRESSURE OF 1 BAR, CLOSE THE FILLING VALVE. DURING FILLING, THE BOILER ACTIVATES AUTOMATICALLY THE DEAERATION CYCLE, THE DISPLAY SHOWS "PURGE". AT THE END OF THE FUNCTION (7 MINUTES) THE DISPLAY RETURNS TO NORMAL VIEW.



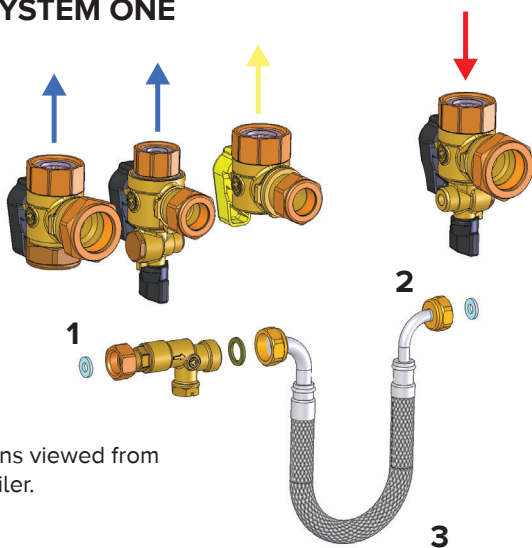
Re-establish the correct pressure by filling loop. If the pressure drops very frequently, there may be a water leak at some point in the system. If this is the case a plumber should be contacted.

CLAS ONE



Note.
Connections viewed from behind boiler.

CLAS SYSTEM ONE



Note.
Connections viewed from behind boiler.

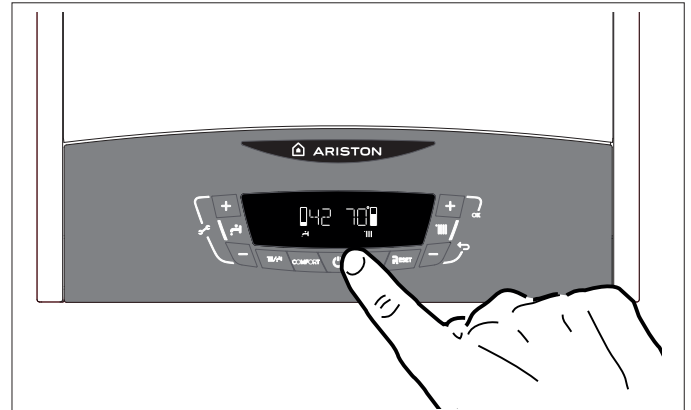
1. To repressurise the system ensure flexible hose 3 is connected
2. Slowly open taps 1 & 2 (see diagrams above)
3. Water will be heard entering the system
4. When the pressure gauge reads 1.5 bar close taps 1 & 2

ATTENTION!
DEAERATION CYCLE

THE DEAERATION CYCLE IS AUTOMATICALLY ACTIVATED WHEN THE BOILER IS POWERED ON FOR THE FIRST TIME OR AFTER THE ERROR 108 "FILL" - INSUFFICIENT WATER PRESSURE.

Ignition procedure

Press the ON/OFF button on the control panel to switch on the boiler



The display shows :

- the operating mode:
- the set temperature in central heating mode
- the set temperature of the hot water in domestic hot water

Operating mode selection

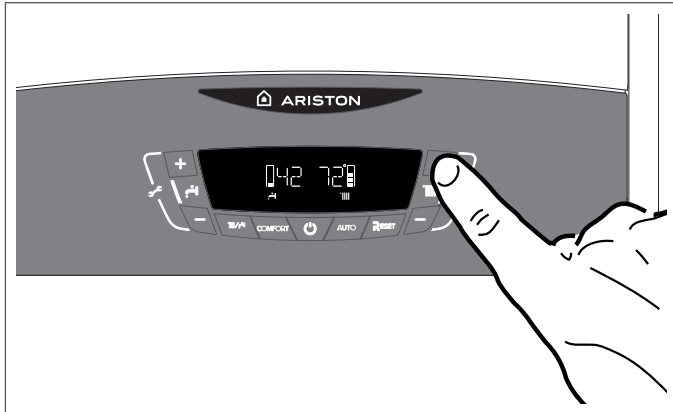
Use the MODE button **3** to select the desired operating mode.

Operating mode	Display
heating + hot water production for domestic use - WINTER	
hot water production for domestic use only - SUMMER	
ONLY HEATING CLAS SYSTEM ONE	

The ignition of the burner is indicated on the display by the symbol the dashes underneath indicate the power utilised.

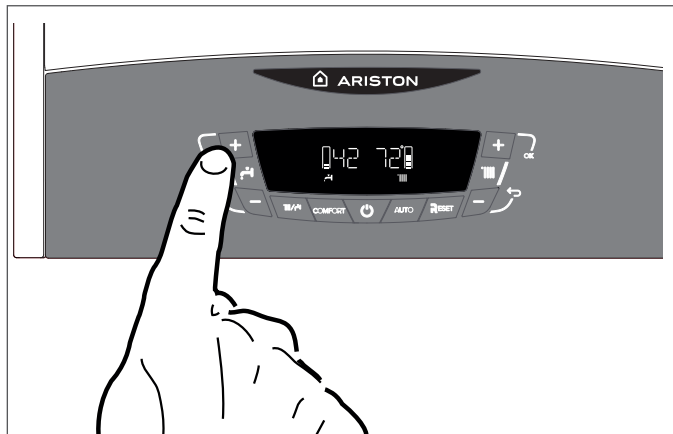
Adjusting the heating

It is possible to set the temperature of the heating water by pressing the buttons **8**. The temperature that may be obtained, which varies from 20°C to 45°C (low temperature) and 35°C to 82°C (high temperature).



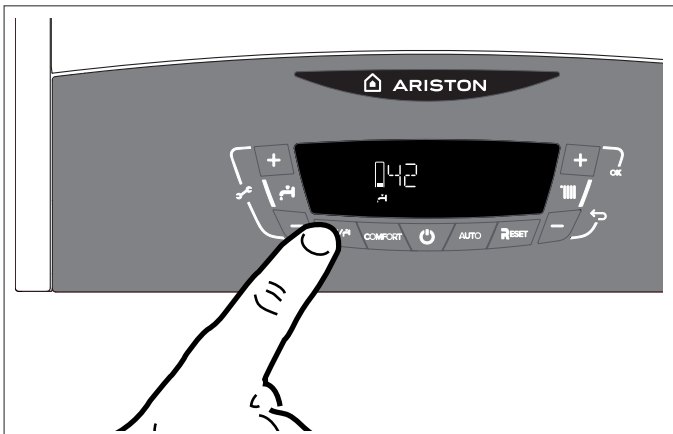
Domestic hot water temperature adjustment only for CLAS ONE MODELS

It is possible to set the temperature of the domestic hot water by pressing the buttons **2** a temperature may be obtained which varies from 36°C to 60°C. The value set previously will flash on the display.



Switching off the heating

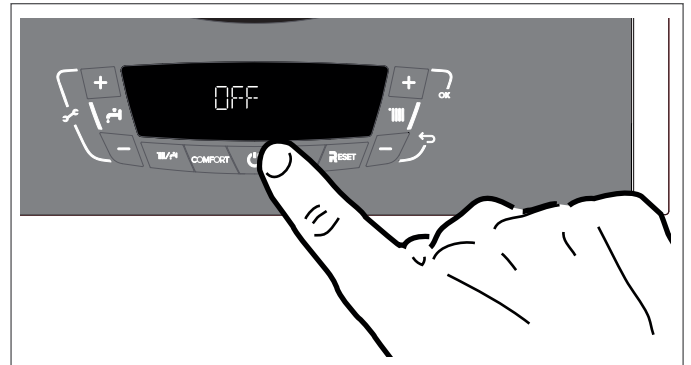
To switch off the heating, press the MODE button **3**; the heating operation symbol will disappear from the display. The Mode button can be used to keep the domestic hot water production process active or to place it in standby (modes deactivated). In the figure below the boiler remains active only for the production of domestic hot water, indicating the set temperature.



Switching off the boiler

To switch off the boiler press the ON/OFF button, the display will switch off.

The Anti-Frost Function remains active.



ATTENTION!!

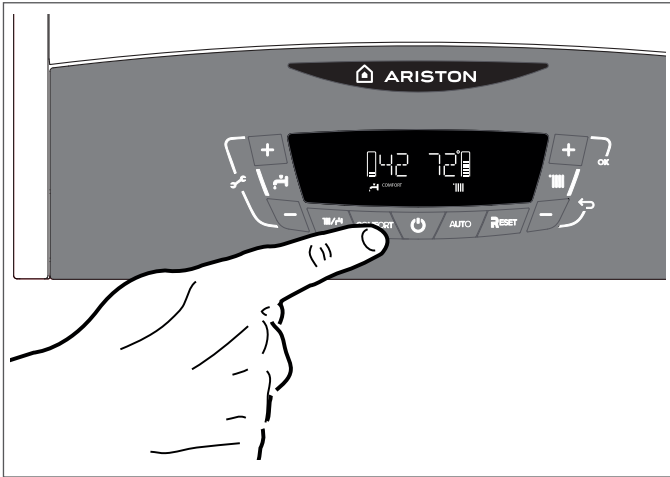
Switch off the boiler completely by switching the external electrical switch to the OFF position. Shut off the gas valve.

COMFORT function

The boiler allows the 'comfort' level for the output of domestic hot water to be increased through the "COMFORT" function. This function keeps the secondary exchanger (or an external tank) warm during the periods in which the boiler is inactive, thereby bringing the initial thermal condition of the water drawn to a higher temperature.

This function may be enabled by pressing the COMFORT button **4**.

When the function is enabled the text COMFORT appears on the display..



Auto button - Temperature adjustment activation

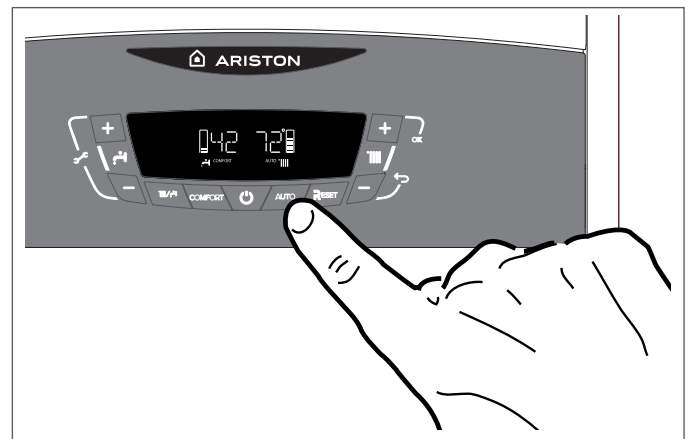
The AUTO function enables boiler operation to be adapted to environmental conditions and to the type of system it is installed on.

Comfortable temperature is reached inside the room in the quickest way possible, without wasting money, energy or efficiency, while substantially reducing the amount of wear experienced by the components.

Your installer will advise you on the devices connectable to the boiler and will program it according to the system.

In normal boilers the water temperature inside the heating elements is usually set to a high value (70-80°C), thereby ensuring effective heating during the few really cold winter days. It then becomes excessive on less cold days (of which there are many) more typical of the autumn and winter seasons. This leads to excessive room heating after the thermostat has been switched off, resulting in energy waste and uncomfortable conditions inside the room.

The AUTO function "takes control" of the boiler and selects the best operating regime based on environmental conditions, external devices connected to the boiler and the performance required. It constantly decides at which power level to operate based on the environmental conditions and the room temperature required.




Appliance shut-off conditions

The boiler is protected from malfunctions by means of internal checks performed by the electronic P.C.B., which stops the boiler from operating if necessary. In the event of the boiler being shut off in this manner, a code appears on the control panel display which refers to the type of shut-off and the reason behind it.

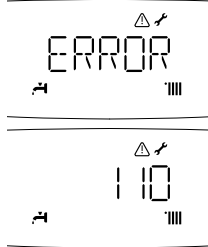
Two types of shut-off may occur:

Safety shut-off

This type of error is “volatile”, which means that the boiler starts up again automatically as soon as the problem which caused the shut-off is removed; ERROR and the error code (e.g. ERROR / 1 10) flash on the display and the  symbol appears.

In fact, soon as the cause of the shut-off disappears, the boiler starts up again and continues to operate normally.

If the boiler still indicates a safety shut-off, switch it off. Make sure the external electric switch is in the OFF position, shut off the gas valve and contact a qualified technician.



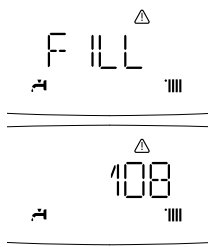
Safety shut-off due to insufficient water pressure

If the water pressure inside the heating circuit is insufficient, the boiler will perform a safety shut-off.

Code 108 (F I L L / 108) will appear on the display.

The system may be restarted, re-balancing the water pressure, by using the filling procedure - see note 1.

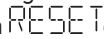
If the re-balancing request is performed on a frequent basis, switch the boiler off, bring the external electric switch to the OFF position, shut off the gas valve and contact a qualified technician to check for any leaks of water.




NOTE 1 - FILLING PROCEDURE
RE-ESTABLISH THE CORRECT PRESSURE USING THE FILLING LOOP (POSITIONED UNDERNEATH THE BOILER). WHEN THE PRESSURE GAUGE INDICATES A PRESSURE OF 1 BAR, CLOSE THE FILLING VALVE. DURING FILLING, THE BOILER ACTIVATES AUTOMATICALLY THE DEAERATION CYCLE, THE DISPLAY SHOWS “PURGE”.
AT THE END OF THE FUNCTION (7 MINUTES) THE DISPLAY RETURNS TO NORMAL VIEW.

Operation shutdown

This type of error is “non-volatile”, which means that it is not removed automatically.


On the display flash  and the error code , e.g.

Err/501 and appears the symbol .

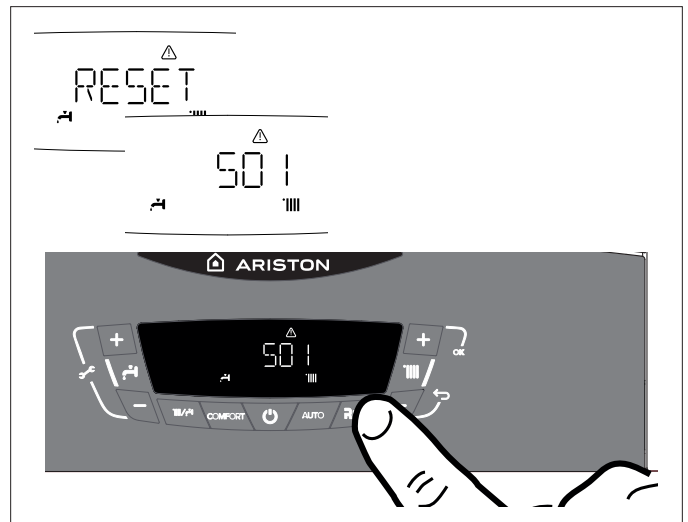
In this case the boiler does not restart automatically, but it may be reset by pressing the .

If the problem manifests itself again after several attempts to reset the appliance, contact a qualified technician.

Important

If this shutdown occurs frequently, contact an authorised service centre for assistance. For safety reasons, the boiler will allow a maximum of 5 reset operations to take place in 15 minutes (individual presses of the  button).

If the shutdown is occasional or an isolated event, this is not Necessarily a problem.



Operation shutdown error table


Display	Description
1 01	Overheating
1 03	Insufficient circulation
1 04	
1 05	
1 06	
1 07	
1 08	Insufficient water pressure - see Note 1
3 05	P.C.B. error
3 06	P.C.B. error
3 07	P.C.B. error
5 01	No flame detection

Anti-frost Device.

The anti-frost function acts on the central heating flow temperature probe, independently from other settings, when the electrical supply is turned on. If the primary circuit temperature falls below 8°C the pump will run for 2 minutes.

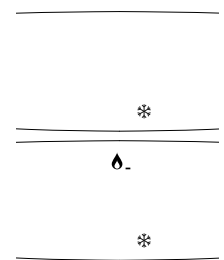
After the two minutes of circulation (fixed) the boiler will check the following:

- a - if the central heating flow temperature is > 8°C, the pump stops;
- b - if the central heating flow temperature is between 4 and 8°C, the pump will run for another two minutes;
- c - if the central heating flow temperature is < 4°C, the burner will fire (heating position) at minimum power until the temperature reaches 33°C, the burner will go off and the pump will continue to run for two minutes.

The activation of the Anti-Frost feature is symbolised by .

The anti-frost device activates only when (with the boiler operating correctly):

- the system pressure is correct;
- the boiler is electrically powered;
- there is a supply of gas.



Disposal and recycling boiler.

Our products are designed and manufactured by using components made from recyclable materials where possible.

The boiler and its accessories have to be adequately disposed of and the various materials separated where possible.

The packaging used for the transport of the boiler must be disposed of by the installer.

ATTENTION!!

Recycling and disposal of the boiler and the accessories must be made as required by regulations.

Change of gas type

Our boilers are designed to function either with Natural Gas (Methane, G20) or LPG (Propane, G31).

If you need to change from one gas to another then you should speak to a Gas Safe Registered engineer or please call **Ariston** on **0333 240 8777**.

Maintenance

Schedule an annual service for the boiler with a Gas Safe Registered engineer.

Correct maintenance always results in savings in the cost of running the system.

Failure to arrange an annual service for the appliance will invalidate the warranty of the appliance.

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



The symbol of the crossed waste paper basket on the appliance indicates that at the end of its working life the product should be disposed of separately from normal domestic household rubbish, it must be disposed of at a waste disposal centre with dedicated facilities for electric and electronic appliances or returned to the retailer when a new replacement product is purchased.

The user is responsible for the disposal of the product at the end of its life at an appropriate waste disposal centre.

The waste disposal centre (which using special treatment and recycling processes effectively dismantles and disposes of the appliance) helps to protect the environment by recycling the material from which the product is made.

For further information about waste disposal systems visit your local waste disposal centre or the retailer from which the product was purchased.

Warranty

Terms & Conditions

WHAT ARISTON REQUIRES

- The boiler must be registered with Ariston within 30 days from date of installation. Registration is on line at www.ariston.com/uk
- The boiler must be installed in accordance with the manufacturers instructions
- The boiler must be installed by a Gas Safe Registered engineer.
- The installer must arrange for a Building Regulations Compliance Certificate to be issued to the boiler owner.
- The Building Regulations Compliance Certificate is to be made available upon request by any attending Ariston service representative.
- The Benchmark commissioning checklist, which can be found at the back of the Installation instructions, must be completed in full by the installer.
- The completed Benchmark checklist must be left with the boiler or be made available upon request by any attending Ariston representative.
- The boiler must be serviced by the 12 month anniversary of the installation. This must be carried out by a Gas Safe Registered engineer.
- Proof of annual service must be made available upon request by any attending Ariston representative.
- The boiler must be installed on a clean system and corrosion inhibitors added. Fitting a magnetic filter is suggested.

All of the above are standard procedures which a competent installer will be aware of.
Failure to comply with any of the above will result in any warranty being withdrawn.

CONDITIONS OF THE WARRANTY

- Ariston must be contacted immediately following any malfunction. Access must be granted for an Ariston approved engineer to inspect the appliance and it's installation. We are unable to cover any costs under warranty where Ariston have not been contacted and allowed access to inspect the appliance and installation. Removal or repair of the appliance by any other party than Ariston without prior inspection or authorisation will void this warranty.
- The warranty is only applicable to appliances installed in the United Kingdom.
- The following is not covered under the warranty:
 - Any external boiler controls (other than those supplied by Ariston), pipework and radiators
 - Loss or damage caused by using the boiler in a non-domestic or commercial environment.
 - Loss or damage caused by accident, theft, attempted theft, malicious damage or damage caused by fire or explosion.
 - Damage caused by any disaster affecting the equipment including neglect without limitation.
 - Clearing airlocks and partially or fully blocked pipes or work caused by equipment, which has not installed correctly.
 - Dirty systems/dirt particles degradation of the boiler from other parts of the system.
 - Claims arising from any problem with the supply of electricity, gas or water.
 - Consequential loss or damage arising directly or indirectly caused by the boiler not working. Cosmetic damage.
 - Costs arising from difficulties in getting to the boiler. This includes: pipe work under floor boards or pipe work contained in the fabric of the building. Ariston requires the warranty holder to carry out whatever works are necessary to enable Ariston staff or nominated representatives to gain access the boiler prior to arrival.
 - Any water pressure adjustments on sealed systems, Claims arising from scale damage.
 - Any modification, alteration to the boiler carried out without permission or authority from Ariston.

Manufactured by

Ariston S.p.A.

✉ **Viale Aristide Merloni 45**
60044 Fabriano (AN)
ITALY

ariston.com

Imported by

Ariston UK Ltd

✉ **3 Juniper West**
Basildon
SS15 6SJ
UK

ariston.com/uk

ariston.com