


**ideal**  
HEATING  
**C24 Ideal  
Logic Combi  
Boiler**



## Ideal HEATING C24 Ideal Logic Combi Boiler User Guide

[Home](#) » [ideal HEATING](#) » Ideal HEATING C24 Ideal Logic Combi Boiler User Guide 

### Contents

- 1 Ideal HEATING C24 Ideal Logic Combi Boiler
- 2 INTRODUCTION
- 3 BOILER OPERATION
- 4 CONTROL OF WATER TEMPERATURE
- 5 SYSTEM WATER PRESSURE
- 6 POINTS FOR THE BOILER USER
- 7 FROZEN CONDENSATE DRAIN
- 8 GENERAL INFORMATION
- 9 TROUBLESHOOTING
- 10 DISPLAY FUNCTIONS – NORMAL OPERATION MODE
- 11 CONTACT
- 12 Documents / Resources
  - 12.1 References



**Ideal HEATING C24 Ideal Logic Combi Boiler**



When replacing any part on this appliance, use only spare parts that you can be assured conform to the safety and performance specifications that we require. Do not use reconditioned or copied parts that have not been authorized by Ideal Heating.

For the very latest copy of literature for specification and maintenance practices visit our website [idealheating.com](http://idealheating.com) where you can download the relevant information in PDF format.

#### **WEEE DIRECTIVE 2012/19/EU**

Waste Electrical and Electronic Equipment Directive

- At the end of the product life, dispose of the packaging and product in a corresponding recycle center.
- Do not dispose of the unit with the usual domestic refuse.
- Do not burn the product.
- Remove the batteries.
- Dispose of the batteries according to the local statutory requirements and not with the usual domestic refuse.



All Gas Safe Register installers carry a Gas Safe Register ID card and have a registration number. Both should be recorded in the Benchmark Commissioning Checklist. You can check your installer by calling Gas Safe Register direct on 0800 4085500.

Ideal Heating is a member of the Benchmark scheme and fully supports the aims of the program. Benchmark has been introduced to improve the standards of installation and commissioning of central heating systems in the UK and to encourage the regular servicing of all central heating systems to ensure safety and efficiency.

## **INTRODUCTION**

- The Logic MAX Combi2 is a combination boiler providing both central heating and instantaneous domestic hot water.
- Featuring full-sequence automatic ignition and fan-assisted combustion.
- Due to the high efficiency of the boiler, condensate is produced from the flue gases and this is drained to a suitable disposal point through a plastic waste pipe at the base of the boiler. A condensate 'plume' will also be visible at the flue terminal.

## **Safety**

- Current Gas Safety (Installation & Use) Regulations or rules in force.
- It is the law that this appliance installation and any work carried out on the appliance is carried out by a Gas Safe Registered engineer under the above Regulations.
- The instructions in this booklet must be strictly followed, for the safe and economical operation of the boiler.

## **Electricity Supply**

- This appliance must be earthed.
- Supply: 230 V ~ 50 Hz. The fusing should be 3 A.

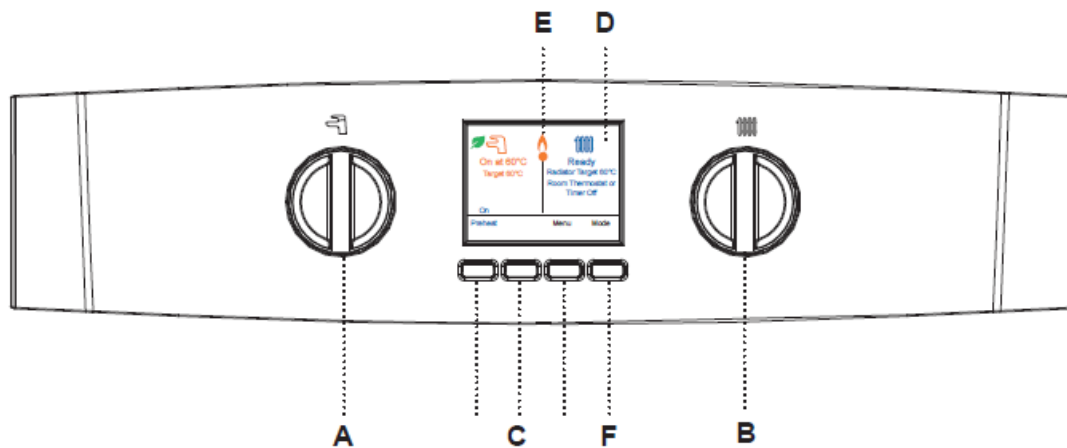
## **Important Notes**

- This appliance must not be operated without the casing correctly fitted and forming an adequate seal.
- If the boiler is installed in a compartment then the compartment **MUST NOT** be used for storage purposes.
- If it is known or suspected that a fault exists on the boiler then it **MUST NOT BE USED** until the fault has been corrected by a Gas Safe Registered Engineer.
- Under **NO** circumstances should any of the sealed components on this appliance be used incorrectly or tampered with.
- This appliance can be used by children 8 years and above. Also persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, provided 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.

## **CARBON MONOXIDE ALARMS**

Carbon monoxide detectors are installed near to the boiler to detect a gas leak. If a leak is detected the alarm will make a very loud noise. If you suspect that there is a fault with the alarm, you should first change the batteries. If you change the batteries and the fault does not clear, you must speak to your landlord or replace the device with another that complies to BS EN 50291-1:2010.

## **BOILER OPERATION**



## Legend

- **A.** Domestic Hot Water Temperature Knob
- **B.** Central Heating Temperature Knob
- **C.** Hot Keys
- **D.** Boiler Status Display
- **E.** Burner On Indicator
- **F.** Mode Button

## TO START THE BOILER


Start the boiler as follows:

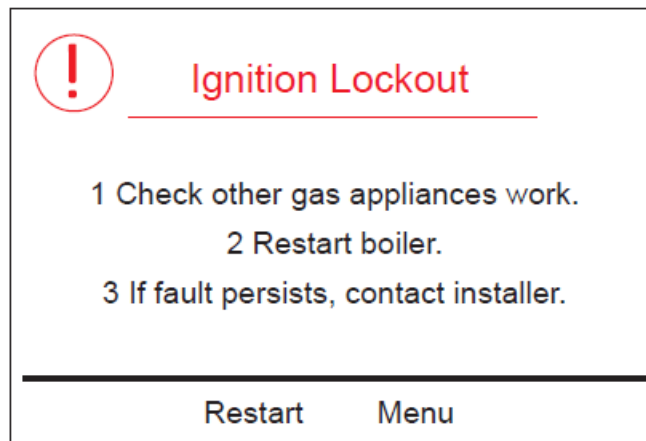
1. Ensure that all hot water taps are turned off.
2. Switch on the electricity to the boiler and check that all external controls, e.g. programmer and room thermostat, are on.
3. Press the Mode Button until Ready or On is shown underneath both the Tap and Radiator symbols.
4. Turn the Domestic Hot water temperature knob (A) clockwise until a 65°C target temperature is shown. Turn the Central Heating temperature Knob (B) clockwise until an 80°C target temperature is shown.

The boiler will commence the ignition sequence, supplying heat to the central heating, if required.

**Note.** In normal operation, the boiler status display (D) will display messages.





Refer to Section  
**1.8**

- Boiler frost protection – The boiler will fire if the temperature is below 5°C.
- During normal operation, the burner on a symbol  (E) will remain illuminated when the burner is lit.
- If the boiler fails to light after five attempts the following fault messages will be displayed:



To restart the boiler, press 'Restart'. The boiler will repeat the ignition sequence. If the boiler still fails to light consult a Registered Gas Installer.

## OPERATION MODES

- Winter Conditions – (Central Heating and Domestic Hot Water required)
- Press the Mode Button until either Ready or On is shown under both the Tap and Radiator symbols [   ].
- The boiler will fire and supply heat to the radiators.
- The domestic hot water preheat will operate with the preheat button set to 'Preheat On'.
- Summer Conditions – (Domestic Hot Water only required) Press the Mode button until Ready or On is shown under the Tap symbol [  ] and Off is shown under the Radiator symbol [  ].
  - **OR**
- Set the central heating demand on the external controls to OFF.
- The domestic hot water preheat will operate with the preheat button set to 'Hot Water On'.

## Boiler Off

- Set the mode button (C) to 'BOILER OFF'. The boiler mains power supply must be left on to enable frost protection (see Frost Protection).

## PREHEAT – DOMESTIC HOT WATER

- The domestic hot water heat exchanger within the boiler can be preheated to provide faster delivery of hot water at the tap.
- The boiler is factory set with the preheat turned off to give standard hot water delivery and reduce gas usage.
- If required, the preheat can be switched on for faster domestic hot water delivery. It can be turned to either 'On' or 'Timed'.
- With preheat turned On, the boiler will operate periodically to maintain the domestic hot water heat exchanger in a preheated condition at all times.
- If 'Timed' is selected then the intelligent preheat function is active which learns the usage pattern for domestic hot water over 7 days. It then fires the boiler to maintain the temperature of the domestic hot water heat in the boiler, as required to meet the predicted hot water draw-off. This improves the speed of response for DHW whilst minimizing the use of gas.

## CONTROL OF WATER TEMPERATURE

### Domestic Hot Water

The domestic hot water temperature is limited by the boiler controls to a maximum temperature of 65°C, adjustable via the domestic hot water temperature knob (A). At low DHW draw off rates the maximum temperature may exceed 65°C.

Approximate temperatures for domestic hot water:


Knob Setting	Hot Water Temperature (approx.)
Minimum	40°C
Maximum	65°C

- Due to system variations and seasonal temperature fluctuations, domestic hot water flow rates/temperature rise will vary, requiring adjustment at the tap: the lower the flow rate the higher the temperature, and vice versa.


## CENTRAL HEATING

- The boiler controls the central heating radiator temperature to a maximum of 80°C, adjustable via the central heating temperature knob (B).
- Approximate temperatures for central heating:

Knob Setting	Central Heating Radiator Temperature (approx.)
Minimum	30°C
Maximum	80°C

For economy setting [] refer to Efficient Heating System Operation.


## EFFICIENT HEATING SYSTEM OPERATION

- The boiler is a high-efficiency, condensing appliance that will automatically adjust its output to match the demand for heat.
- Therefore gas consumption is reduced as the heat demand is reduced.
- The boiler condenses water from the flue gases when operating most efficiently. To operate your boiler efficiently (using less gas) turn the central heating knob (B) until the leaf symbol is shown []. In winter periods it may be necessary to turn the knob clockwise towards a higher temperature e.g.
  - 80, to meet your heating requirements. This will depend on the house and radiators used.
  - Reducing the room thermostat setting by 1°C can reduce gas consumption by up to 10%.

## WEATHER COMPENSATION

When the Weather Compensation option is fitted to the system then the central heating temperature knob (B) becomes a method of controlling room temperature. Turn the knob clockwise to increase room temperature and anti-clockwise to decrease room temperature. Once the desired setting has been achieved, leave the knob in this position and the system will automatically achieve the desired room temperature for all outside weather conditions.

## BOILER FROST PROTECTION

- The boiler is fitted with frost protection that operates in all modes, provided the power supply to the boiler is always turned on. If the water in the boiler falls below 5°C, the frost protection will activate and run the boiler to avoid freezing.
- The process does not guarantee that all other parts of the system will be protected.
- If a system frost thermostat has been installed, the boiler must be set in winter mode, [  ], for the system frost protection to run.
- If no system frost protection is provided and frost is likely during a short absence from home it is recommended to leave the system heating controls or built-in programmer (if fitted) switched on and running at a reduced temperature setting. For longer periods, the entire system should be drained.

## BOILER RESTART

- To restart the boiler, when directed in the listed fault messages press the “Restart” button.
- The boiler will repeat its ignition sequence. If the boiler still fails to start consult a Gas Safe Registered Engineer.

## MAINS POWER OFF

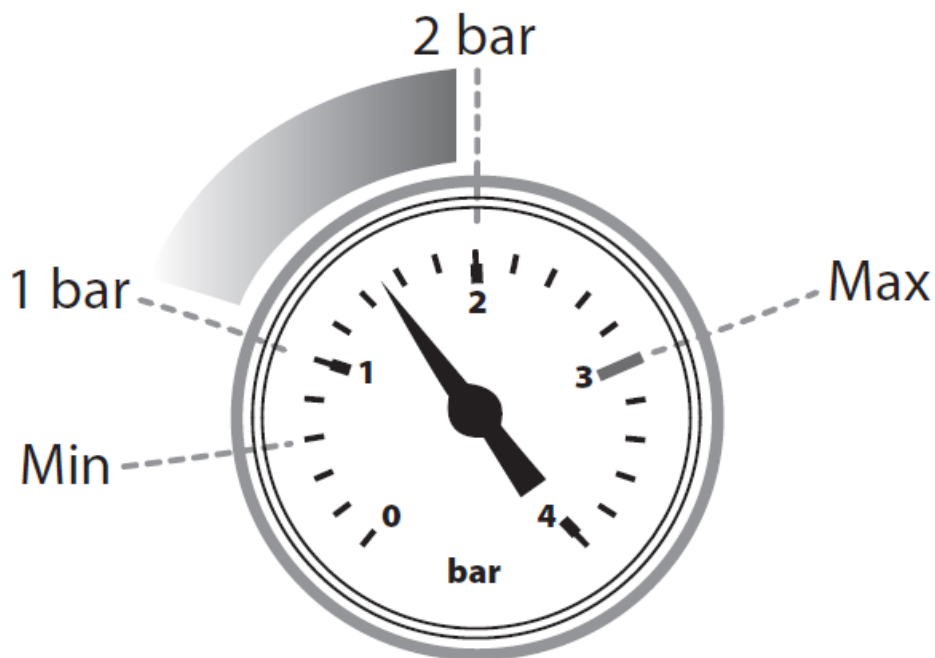
- To remove all power to the boiler the mains power switch must be turned off.

## SYSTEM WATER PRESSURE

The system pressure gauge which can be viewed by lowering the drop-down door, indicates the central heating system pressure. If the pressure is seen to fall below the original installation pressure of 1-2 bar over a while and continues to fall then a water leak may be indicated.

In this event re-pressurise the system as shown below. If unable to do so or if the pressure continues to drop a Gas Safe Registered Engineer should be contacted.

THE BOILER WILL NOT OPERATE IF THE PRESSURE HAS REDUCED TO LESS THAN 0.3 BAR UNDER THIS CONDITION.



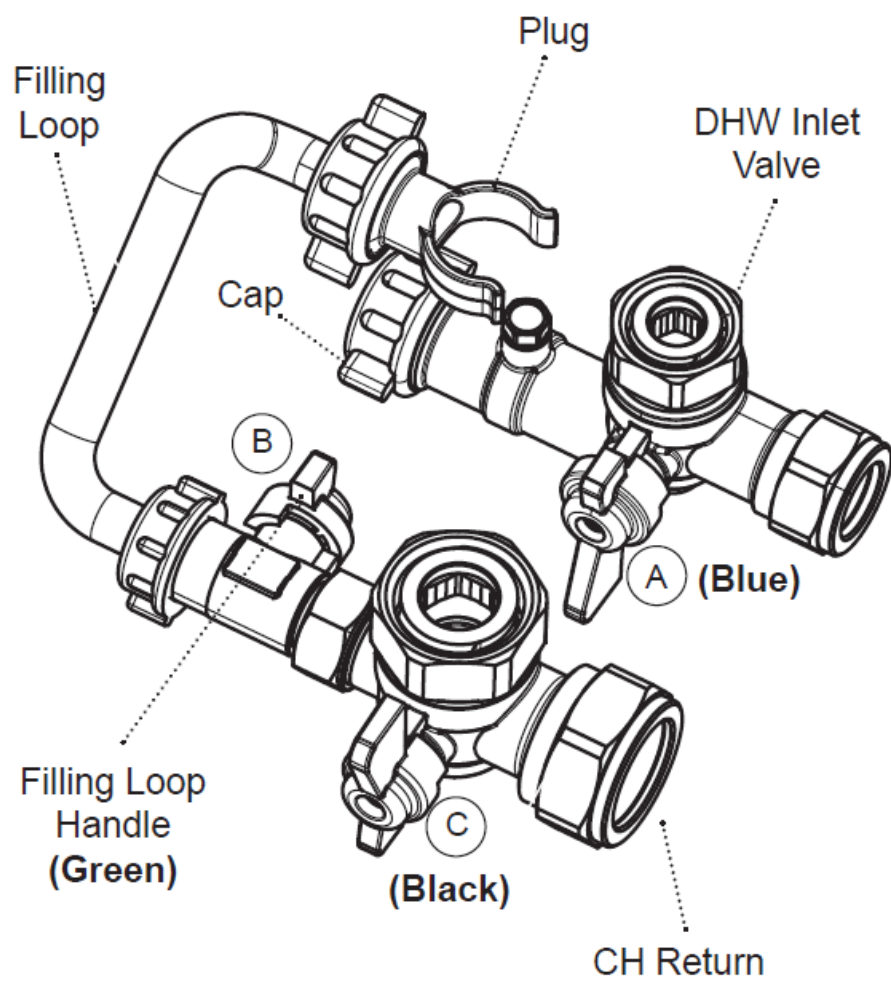
### To Top up the system

1. Ensure both (A) & (B) handles (blue & green) are in closed position (as shown below)
2. Remove the plug and cap and retain.
3. Connect the filling loop to the Domestic Hot Water (DHW) inlet and tighten. Also, ensure that the other end of the filling loop is hand-tight.
4. Turn the Domestic Hot Water (DHW) Inlet (A) blue handle to the horizontal position.
5. Ensuring no leaks are seen, gradually turn the filling loop handle (green) (B) to the horizontal position.
6. Wait for the pressure gauge to reach 1 to 1.5 bar.
7. Once pressure is reached turn valves (A) & (B) back to the closed position.
8. Disconnect the filling loop, and replace the cap and plug. There can be some water spillage at this point.

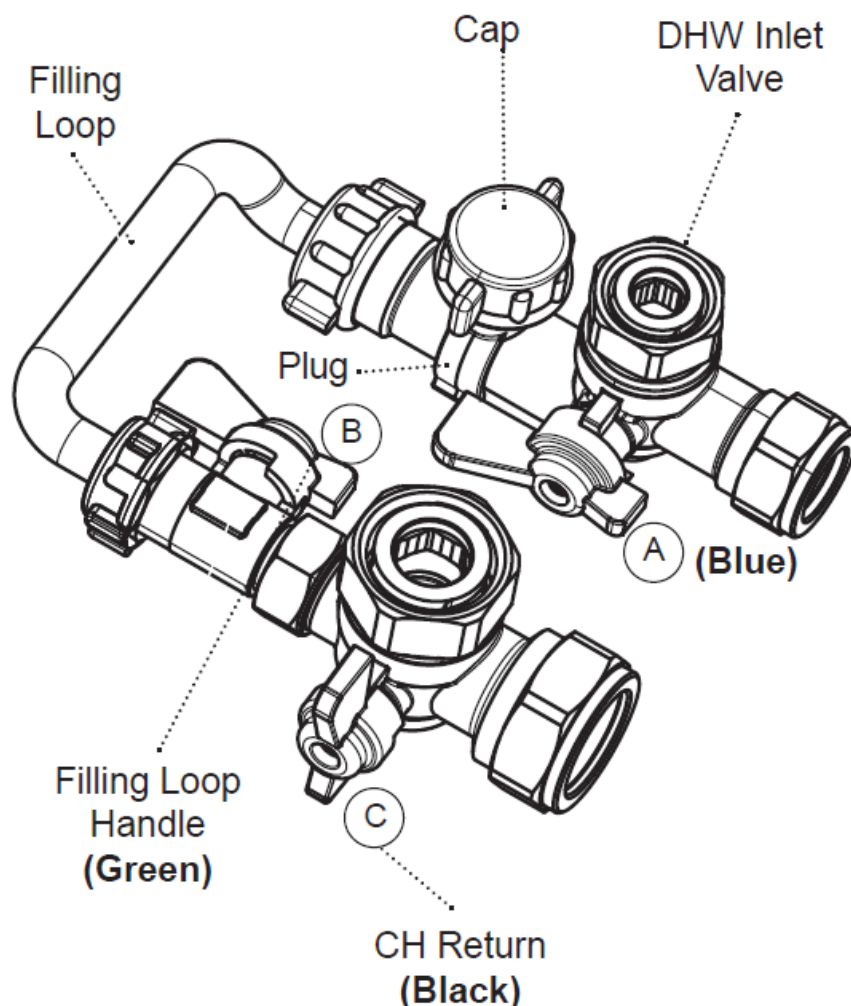


Filling Positions shown





Top Up Positions shown



## POINTS FOR THE BOILER USER

- In line with our current warranty policy, we would ask that you check through the following guide to identify any problems external to the boiler prior to requesting a service engineer's visit.
- Should the problem be found to be other than with the appliance we reserve the right to levy a charge for the visit, or for any pre-arranged visit where access is not gained by the engineer.

FOR ANY QUERIES PLEASE RING THE IDEAL CONSUMER HELPLINE: 01482 498660  
**BOILER RESTART PROCEDURE** – To restart the boiler press the restart button

## FROZEN CONDENSATE DRAIN

This appliance is fitted with a siphonic condensate trap system that reduces the risk of the appliance condensate from freezing. However, should the condensate pipe to this appliance freeze, please follow these instructions:

- If you do not feel competent to carry out the defrosting instructions below please call your local Gas Safe Registered installer for assistance.
- If you do feel competent to carry out the following instructions please do so with care when handling hot utensils. DO NOT attempt to thaw pipework above ground level.

If this appliance develops a blockage in its condensate pipe, its condensate will build up to a point where it will make a gurgling noise before locking out displaying "Ignition Lockout" on the display. If the appliance is restarted it will make a gurgling noise prior to it locking out displaying "Ignition Lockout" on the display.

To unblock a frozen condensate pipe;

1. Follow the routing of the plastic pipe from its exit point on the appliance, through its route to its termination point. Locate the frozen blockage. The pipe is likely frozen at the most exposed point external to the building or where there is some obstruction to flow. This could be at the open end of the pipe, at a bend or elbow, or where there is a dip in the pipe in which condensate can collect. The location of the blockage should be identified as closely as possible before taking further action.
2. Apply a hot water bottle, microwaveable heat pack, or a warm damp cloth to the frozen blockage area. Several applications may have to be made before it fully defrosts. Warm water can also be poured onto the pipe from a watering can or similar. DO NOT use boiling water.
3. Caution when using warm water as this may freeze and cause other localized hazards.
4. Once the blockage is removed and the condensate can flow freely, restart the appliance. (Refer to “To Start the boiler”)
5. If the appliance fails to ignite, call your Gas Safe Registered engineer.

### **Preventative Solutions**

During cold weather, set the central heating temperature knob (B) to “MAX”, (Remember to return to the original setting once the cold spell is over).

Place the heating on continuously and turn the room thermostat down to 15°C overnight or when unoccupied. (Return to normal after the cold spell).



## **GENERAL INFORMATION**

### **BOILER PUMP**

- The boiler pump will operate briefly as a self-check once every 24 hours, regardless of system demand.

### **MINIMUM CLEARANCES**

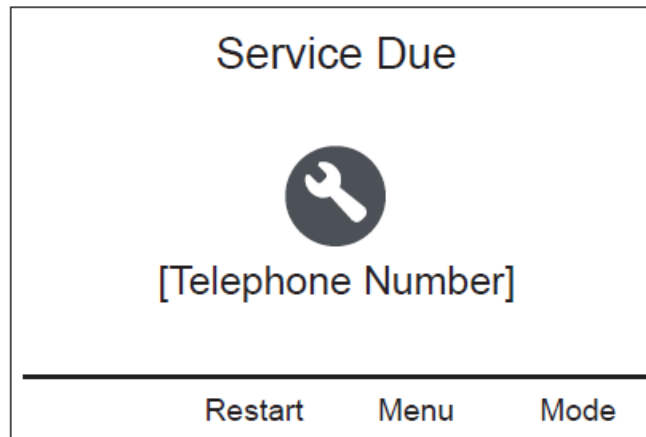
- Clearance of 165 mm above, 100 mm below, 25 mm at the sides and 450 mm at the front of the boiler casing must be allowed for servicing.

### **BOTTOM CLEARANCE**

- Bottom clearance after installation can be reduced to 5 mm.
- This must be obtained with an easily removable panel, to enable the system pressure gauge to be visible and to provide the 100 mm clearance required for servicing.

## SERVICE REQUEST FUNCTION

- When the boiler has been installed for more than 1 year the following message will appear on the screen:



## ESCAPE OF GAS

- Should a gas leak or fault be suspected contact the National Gas Emergency Service without delay.
- Telephone 0800 111 999.

## Ensure that

- All naked flames are extinguished.
- Do not operate electrical switches.
- Open all windows and doors.

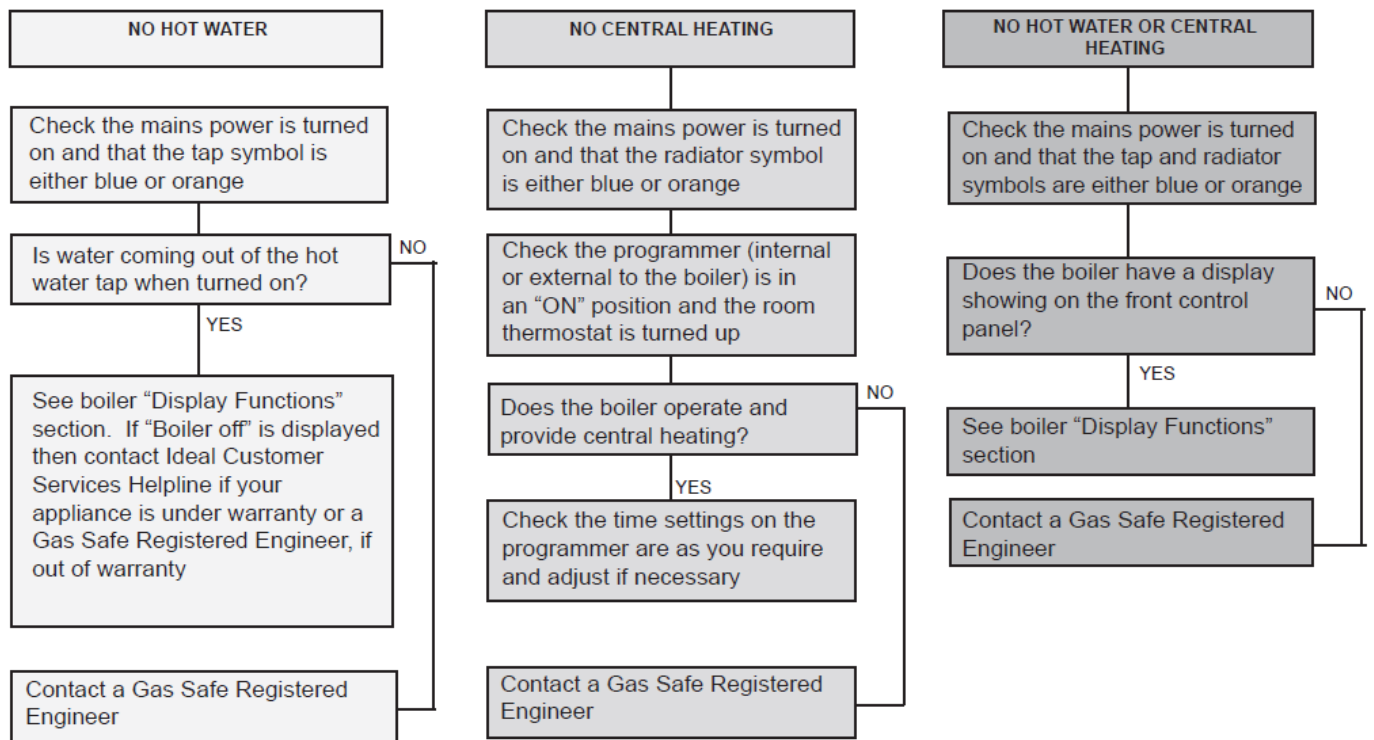
## CLEANING

For normal cleaning simply dust with a dry cloth. To remove stubborn marks and stains, wipe with a damp cloth and finish off with a dry cloth. DO NOT use abrasive cleaning materials.

## MAINTENANCE

- The frequency of servicing will depend upon the installation condition and usage but should be carried out at least annually by a Gas Safe Registered Engineer.





## TROUBLESHOOTING






## DISPLAY FUNCTIONS – NORMAL OPERATION MODE

### Normal Operation Screens




### Off Mode

 <b>Off</b> To Switch On Press Mode Button & then  On	 <b>Off</b> To Switch On Press Mode Button & then  On
Menu    Mode	




### Winter Mode, DHW Demand

  <b>On at 60°C</b> <b>Target 60°C</b>	 <b>Ready</b> Radiator Target 60°C Room Thermostat or Timer Off
<b>On</b>	
Preheat    Menu    Mode	





### Summer Mode, No Heat Demand

 <b>Ready</b> Target 60°C	 <b>Off</b> To Switch On Press Mode Button & then  On
<b>On</b>	
Preheat    Menu    Mode	



### Winter Mode, DHW & CH Demands

  <b>On at 60°C</b> <b>Target 60°C</b>	 <b>Ready</b> Radiator Target 60°C Hot Water Priority
<b>Off</b>	
Preheat    Menu    Mode	




### Summer Mode, DHW Demand

  <b>On at 60°C</b> <b>Target 60°C</b>	 <b>Off</b> To Switch On Press Mode Button & then  On
<b>On</b>	
Preheat    Menu    Mode	




### Winter Mode, CH Demand

 <b>Ready</b> Target 60°C	 <b>On at 60°C</b> Radiator Target 60°C Set by Room Stat
<b>On</b>	
Preheat    Menu    Mode	


### Winter Mode, No Heat Demand

  <b>Ready</b> Target 60°C	 <b>Ready</b> Radiator Target 60°C Room Thermostat or Timer Off
<b>Off</b>	
Preheat    Menu    Mode	


### Winter Mode, Pre-heat Demand

  <b>Preheat Active</b> Switch Off at 60°C	 <b>Ready</b> Radiator Target 60°C Room Thermostat or Timer Off
<b>On</b>	
Preheat    Menu    Mode	

### Boiler Frost Protection

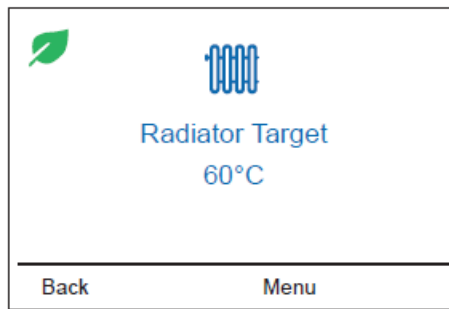
 <b>Boiler Frost Protection Active</b> Switch Off Temperature 19°C
Menu    Mode

### Service Required

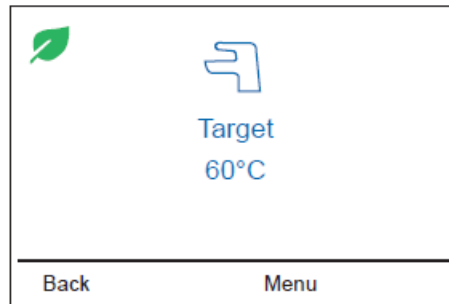
<b>Service Due</b>  Phone 01482 498660
Restart    Menu    Mode

## How to adjust Boiler Temperatures

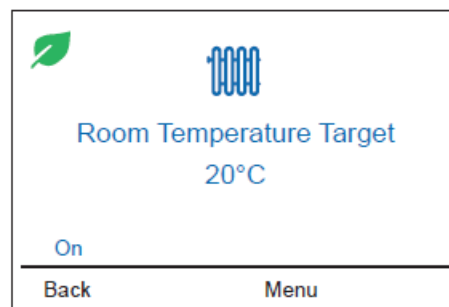
CH Knob Rotated  
(without outside sensor connected)



DHW Knob Rotated



CH Knob Rotated  
(outside sensor connected)



The display scrolls through a maximum of 3 messages under any operational condition, as shown above

**Note.** The temperatures shown below are for illustration purposes only. The measured temperatures will be shown on the boiler.

## DISPLAY FUNCTIONS – FAULT MESSAGES



### Overheat Lockout

- 1 With boiler off & system cold, fill system to 1.0 bar.
- 2 Bleed radiators, refill system to 1.0 bar.
- 3 Check radiator valves & boiler valves are open.
- 4 Restart boiler.
- 5 If fault persists contact installer.

---

Restart    Menu



### Outside Sensor Fault

Contact Installer

---

Menu



### Room Thermostat Fault

Check room thermostat batteries

---

Menu



### Ignition Lockout

- 1 Check other gas appliances work.
- 2 Restart boiler.
- 3 If fault persists, contact installer.

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Restart    Menu



### Return Thermistor Fault

Contact Installer

---

Restart    Menu



### Spare PCB Not Set

Contact Installer

---

Menu



### Flame Loss

Contact Installer

---

Menu



### Fan Fault

Contact Installer

---

Menu



### No Water Flow

- 1 With boiler off & system cold, fill system to 1.0 bar.
- 2 Bleed radiators, refill system to 1.0 bar.
- 3 If fault persists, contact installer.

---

Menu



### Too Many Restarts

Contact Installer

---

Menu



### PCB Fault

Contact Installer

---

Menu



### Pump Rotor Blocked

Contact Installer

---

Menu



### Flame On Before Gas On

Contact Installer

---

Restart    Menu



### Low Mains Voltage

Contact electricity provider

---

Menu



### Pump Dry Run

- 1 With boiler off & system cold, fill system to 1.0 bar.
- 2 Bleed radiators, refill system to 1.0 bar.
- 3 If fault persists, contact installer.

---

Menu



### Flow Thermistor Fault

Contact Installer

---

Restart    Menu



### Low Water Pressure

- 1 With boiler off & system cold, fill system to 1.0 bar.
- 2 Bleed radiators, refill system to 1.0 bar.
- 3 If fault persists, contact installer.

---

Menu



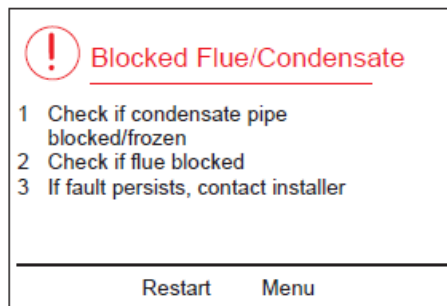
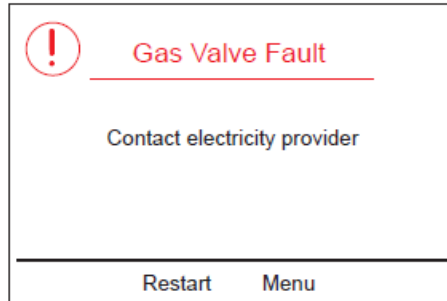
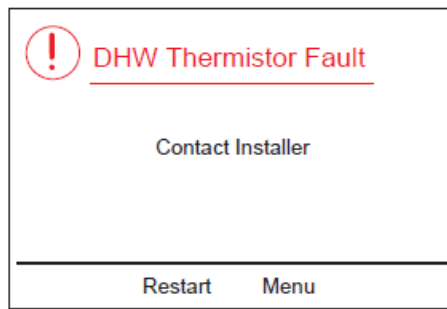
### Pump Fault

Contact Installer

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Menu





At Ideal Heating we take our environmental impact seriously, therefore when installing any Ideal Heating product please make sure to dispose of any previous appliance in an environmentally conscious manner. Households can contact their local authority to find out how.

See <https://www.gov.uk/managing-your-waste-an-overview> for guidance on how to efficiently recycle your business waste.

### Technical Training

Our Expert Academy offers a range of training options designed and delivered by our experts in heating. For details please visit: [expert-academy.co.uk](https://expert-academy.co.uk)


Ideal Boilers Ltd., pursues a policy of continuing improvement in the design and performance of its products. The right is therefore reserved to vary specifications without notice.

### CONTACT

- Ideal is a trademark of Ideal Boilers.
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- Ideal Consumer Helpline: 01482 498660
- Ideal Parts: 01482 498665
- [idealheating.com](http://idealheating.com)

## Documents / Resources

	<p><a href="#">Ideal HEATING C24 Ideal Logic Combi Boiler</a> [pdf] User Guide C24, C30, C35, C24 Ideal Logic Combi Boiler, C24, Ideal Logic Combi Boiler, Logic Combi Boiler, Combi Boiler, Boiler</p>
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## References

- [User Manual](#)

### Manuals+, Privacy Policy

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