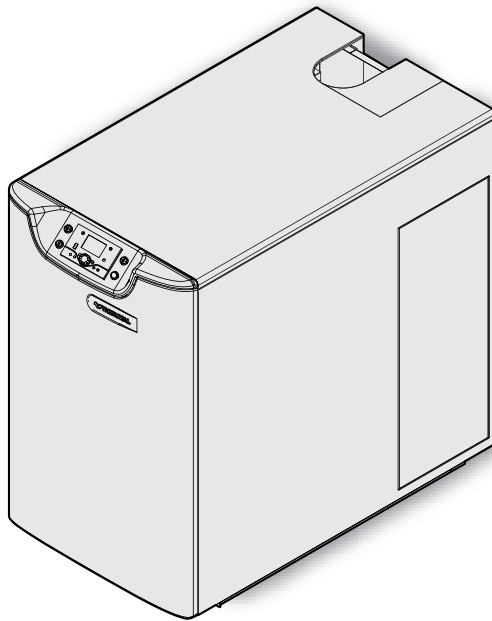


THERMITAL

INSTRUCTION FOR THE USER

THC V E OIL BLU



CONTENTS

General safety information	4
Precautions	4
Control panel	5
Mode selection	8
User levels	10
Start-up	12
Temporary shutdown	15
Preparing for extended periods of disuse	15
Cleaning	16
Maintenance	16
Useful information	17

The following symbols are used in this manual:



= Identifies actions that require caution and adequate preparation.



= Identifies actions that you **MUST NOT** do

This manual, Code 20091450 Rev. 1 (05/17) is made up of 20 pages.

Dear Customer,

*Thank you for choosing **THC V E OIL BLU** boiler. You have purchased a modern, quality product that is designed to give dependable and safe service and to provide comfort for many years to come. Arrange for your boiler to be serviced regularly by **THERMITAL**'s Technical Assistance Service. Their personnel are specially trained to keep your boiler efficient and cheap to run. Technical Assistance Centres also stock any original spare parts that might be required.*

*This instruction manual contains important instructions and precautions that must be observed to ensure the trouble-free installation and efficient functioning of your boiler.
Please accept our renewed thanks for your purchase.*

Thermital

GENERAL SAFETY INFORMATION

The operation of any appliance that uses electrical power demands that a number of fundamental safety precautions be respected.

- ❗ Do not allow children or infirm persons to operate the boiler unsupervised.
- ❗ Do not operate any electrical devices or equipment, including switches or domestic appliances, etc., if you can smell fuel or fumes. If you detect any suspicious smells:
 - Ventilate the room by opening all doors and windows.
 - Close the fuel shut-off cock.
 - Report the fault immediately to the **THERMITAL** Technical Assistance Service or a professionally qualified heating engineer.
- ❗ Never clean the boiler without first disconnecting it from the mains electricity supply by turning the main power switch OFF.



- ❗ Never pull, disconnect, or twist the electrical cables coming from the boiler even if it is disconnected from the mains electricity supply.
- ❗ Do not obstruct or restrict the vents in the room where the appliance is installed. Adequate ventilation is essential for correct combustion.
- ❗ Do not leave flammable substances or containers in the room where the boiler is installed.
- ❗ Do not touch the boiler when barefoot or wet.
- ❗ Do not switch the boiler off if outside temperature drops below ZERO (risk of freezing).



PRECAUTIONS

- ⚠ This instruction manual and that for the installer and Technical Assistance Service are integral parts of the boiler. They must be kept safe and must ALWAYS accompany the boiler, even if it is sold to another owner or user or transferred to another installation. If you damage or lose this manual, order a replacement immediately from your local **THERMITAL** Technical Assistance Centre.

- ⚠ The boiler must be installed by a legally qualified heating engineer. On completion of the installation, the heating engineer must issue the owner with a declaration of conformity confirming that the installation has been completed to the highest standards in compliance with the instructions provided by **THERMITAL** in this instruction manual, and that it conforms to all applicable laws and standards.



- ⚠ If you notice any water leaking from the boiler, disconnect it immediately from the mains electricity supply, shut off the water supply, and notify your local **THERMITAL** Technical Assistance Centre or a qualified heating engineer immediately.

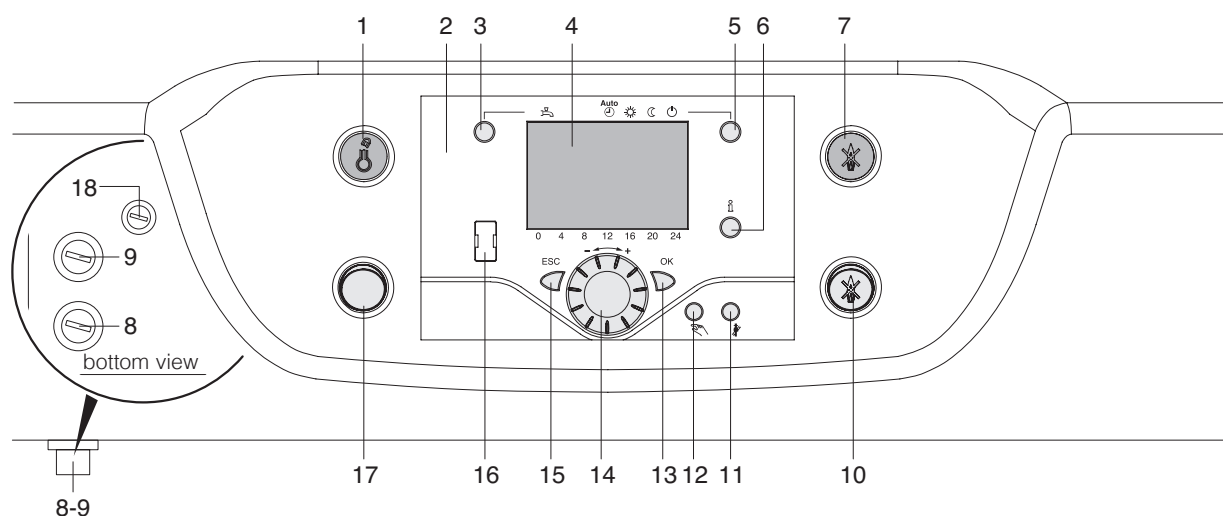
- ⚠ Periodically check that operating pressure in the water circuit is **over 1 bar**. If water pressure is consistently low, contact **THERMITAL**'s Technical Assistance Service or a professionally qualified heating engineer.



- ⚠ If the boiler is not going to be used for an extended period of time, proceed as follows to prepare it for shut-down:
 - Turn the mains power switch OFF.
 - Close the fuel cock and heating circuit water cock.
 - Drain the central heating circuit if there is any risk of freezing.
- ⚠ The boiler must only be used for the purpose specified by **THERMITAL** and for which it is designed. The manufacturer declines all responsibility, contractual or other, for damage to property or injury to persons or animals caused by improper installation, adjustment, maintenance or use.

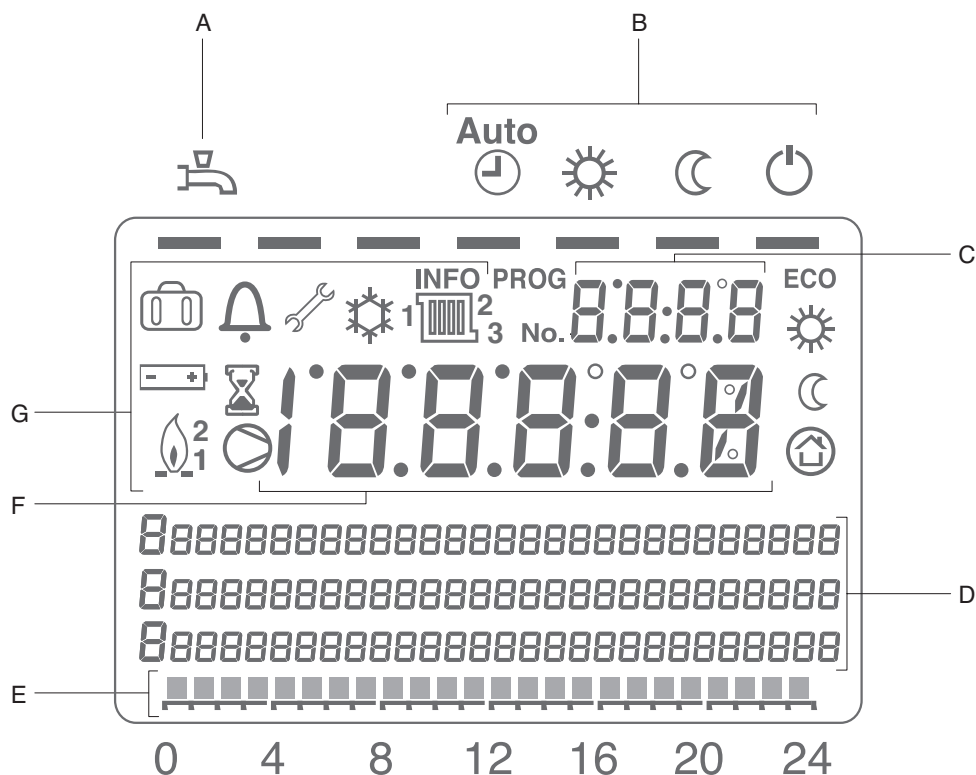
CONTROL PANEL

PRIMARY USER INTERFACE / CONTROLS



- 1 - Safety thermostat trip indicator.
- 2 - Electronic operator unit (controller).
- 3 - DHW production on/off button (only present if the optional remote storage cylinder is installed). A line appears under the "🚿" symbol on the display when DHW production is enabled.
- 4 - Display
- 5 - Central heating mode selection button. A line appears under the symbols:
 - 🕒 AUTOMATIC
 - ☀️ Continuous COMFORT
 - 🌙 Continuous REDUCED
 - ❄️ COOLING
 - 🔌 Frost protection. The "🔌" symbol is displayed.
- 6 - Information button "i"
- 7 - Burner lockout indicator.
- 8 - Manual reset for flue gas thermostat. Unscrew the protective cover to access the reset button.
- 9 - Manual reset for safety thermostat. Unscrew the protective cover to access the reset button.
- 10 - Remote burner reset button.
- 11 - "🚿" button for chimney sweep/safety thermostat test functions
- 12 - "👉" button for manual mode
- 13 - Value confirm (OK) button.
- 14 - Value change knob.
- 15 - ESCape button.
- 16 - PC BUS connector.
- 17 - Main switch.
- 18 - Fuse.

SECONDARY USER INFORMATION / DISPLAY



A - DHW mode: ON or OFF

B - Central heating modes:

⌚ AUTOMATIC

☀ CONTINUOUS COMFORT

☾ Continuous REDUCED

❄ COOLING

⏻ Frost protection. The "⏻" symbol is displayed.

C - Small numeric display: time

D - Message area

E - Daily heating program indicator

F - Large numeric display: current value

G - Display symbols:



Burner running



Change battery (room unit only, not supplied)



Holiday mode active



Error. Press the **i** button to display the error message.
Press **ESC** to return to the main screen.



Wait: process running



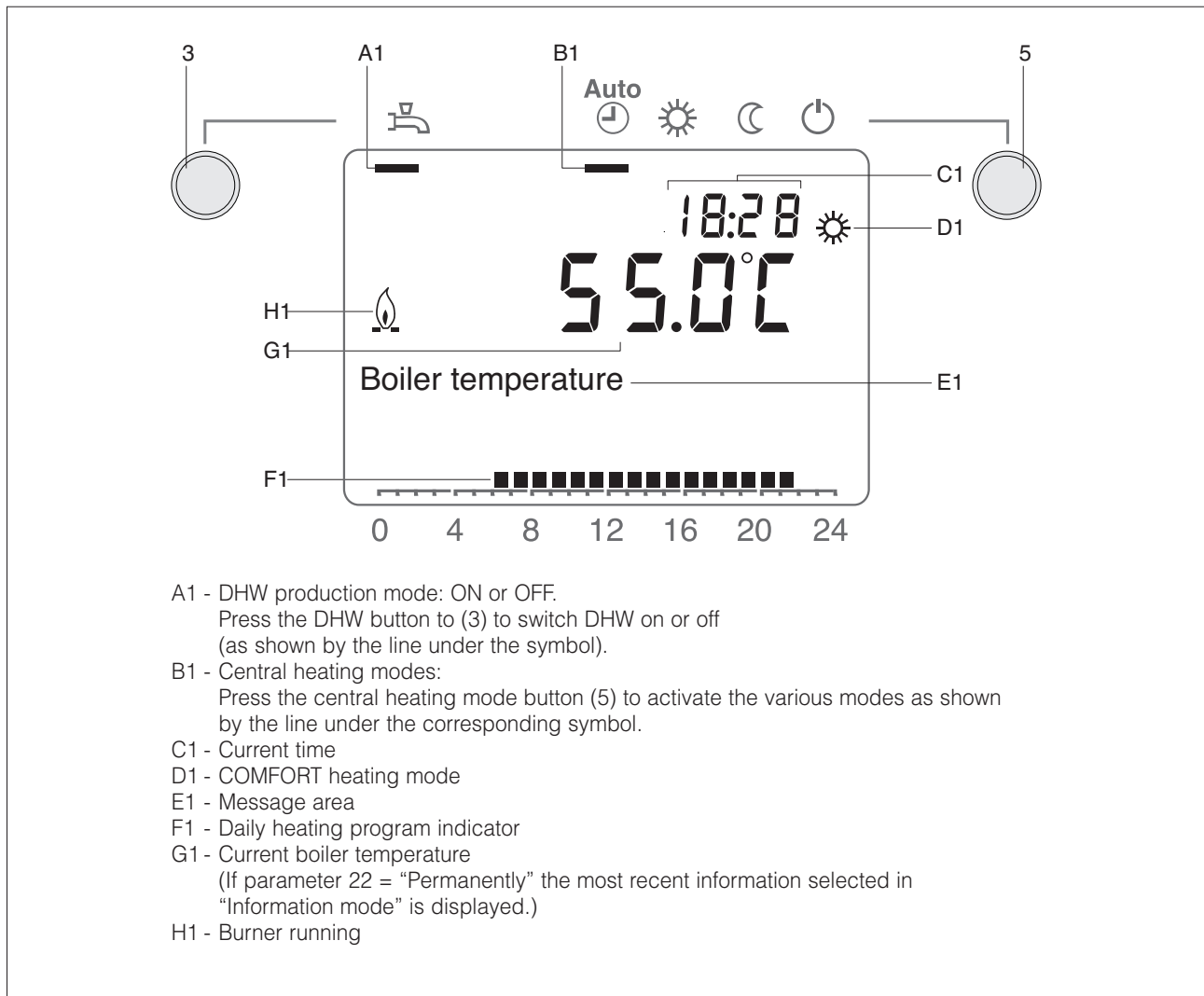
Maintenance - manual or chimney sweep mode



Reference to heating circuit

ECO Heating temporarily OFF - ECO mode active

MAIN SCREEN



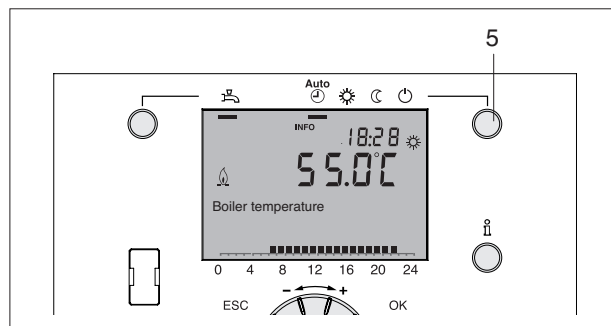
Notes on functioning

The control panel on the **THC V E OIL BLU** boiler controls the following functions.

- **Frost protection:** The pumps are switched on on the basis of outside temperature irrespective of demand for heat.
If outside temperature drops below -4°C the pumps are switched on. If outside temperature is between -5° and 1.5°C, the pumps are switched on for 10 minutes at intervals of 6 hours. If outside temperature is above 1.5°C the pumps are switched off.
- **Chimney sweep:** The burner is ignited to obtain the conditions necessary for combustion analysis. To obtain continuous burner functioning, maximum operating temperature is set at the boiler's maximum setpoint.
All loads are switched off to start with, in order to bring the boiler to its 64°C setpoint as quickly as possible. When the boiler reaches 64°C, the heating circuits are opened one by one to dissipate the heat and allow the burner to continue functioning.
- **Limit thermostat (parameter 2310):** This function shuts the burner down if boiler temperature exceeds the maximum permitted limit, which coincides with the boiler's maximum setpoint (parameter 2212 = 80 °C).
- **DHW charging priority:** if an optional remote storage cylinder is installed and domestic hot water is drawn off while the central heating circuit is also in use, this function directs boiler power mainly to the DHW circuit.
- **Boiler switching differential:** This establishes a minimum run time for the burner, to stop it igniting and shutting down repeatedly. The burner shuts down only if boiler temperature exceeds a predetermined threshold (parameter 2240).
- **Solar collector protection:**
 - Collector frost protection (param. 3840)
 - Collector overtemperature protection (param. 3850)
 - Pump protection against vapour in heat transfer fluid (param. 3860)

MODE SELECTION

Press the central heating mode button (5) to select the various modes. The active mode is shown by a line under the corresponding symbol.



Automatic

In automatic mode, room temperature is controlled by the time program.

Characteristics:

- Central heating operates according to the time program.
- The temperature setpoint is set to comfort "☀" or reduced "☾"
- All protection functions are active.
- Summer/winter switching is automatic (ECO functions) and 24h limit functions are active.

Continuous operation or

In continuous mode, room temperature is controlled on the basis of the comfort/reduced setting:

- ☀ Central heating set to comfort setpoint
- ☾ Central heating set to economy setpoint

Characteristics:

- Central heating is continuously on with no time program.
- All protection functions are active.
- Summer/winter switching is automatic (ECO functions) and 24h limit functions are inactive if comfort level is selected (see parameters 730 and 732).

Protection

In protection mode the central heating is switched off, but the system remains protected against frost (provided the electrical supply remains switched on).

Characteristics:


- Central heating is switched off.
- Temperature is set to the frost protection setpoint.
- All protection functions are active.
- Automatic summer / winter changeover and automatic 24-hour heating limit active (ECO functions)

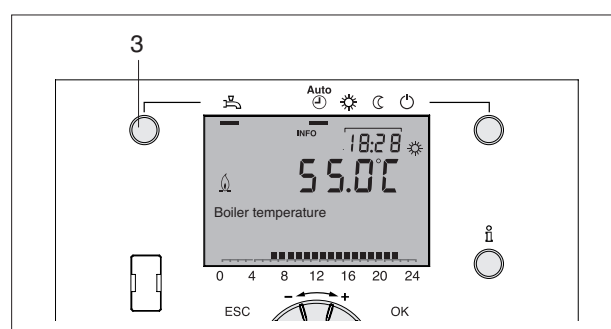
Domestic hot water (DHW)

An optional remote storage cylinder must be installed before DHW production can be enabled. Press the DHW button (3) to activate DHW production, as shown by a line under the corresponding symbol.

ON: DHW is generated according to the DHW time program (parameters 560 to 566).

OFF: DHW production is switched off but the protection functions remain active.

 You can force DHW production (PUSH function) by pressing and holding the DHW button (3) for at least 3 seconds.



Information

Press the information button (6) to display:

- Errors or maintenance codes (see the "Errors/Maintenance codes" section)
- Special messages.

Other screens:

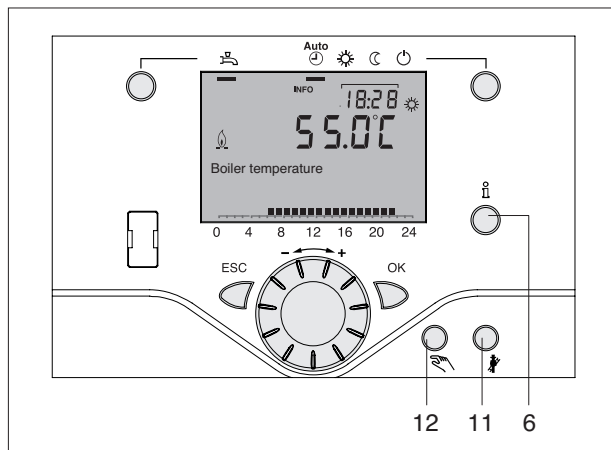


Other screens depend on the system configuration and status. Some of the info lines shown below may not therefore appear.

- | | | |
|------------------------------------|---|---|
| - Room temperature | - Flow 1 temperature | - Heating circuit 3 status |
| - Minimum room temperature | - Flow 1 temperature setpoint | - Cooling circuit state |
| - Maximum room temperature | - Flow 2 temperature | - DHW status |
| - Room 1 setpoint | - Flow 2 temperature setpoint | - Boiler status |
| - Room 2 setpoint | - Flow 3 temperature | - Solar heating status |
| - Room 3 setpoint | - Flow 3 temperature setpoint | - Solid fuel boiler status |
| - Cascade flow temperature | - Collector 1 temperature | - Buffer storage tank status |
| - Boiler temperature | - Wood fuelled boiler temperature | - Pool state |
| - Outside temperature | - Solar flow temperature | - Error message |
| - Minimum outside temperature | - Solar return temperature | - Maintenance message |
| - Maximum outside temperature | - 24 hours solar energy yield | - Floor curing function |
| - DHW 1 temperature | - Total solar energy yield | - Date and time |
| - DHW 2 temperature | - Pool temperature | - Telephone number of technical assistance centre |
| - Buffer tank 1 temperature | - Pool setpoint | |
| - Buffer tank 2 temperature | - Heating circuit 1 status | |
| - Buffer tank temperature setpoint | - Heating circuit 2 status (not active) | |

Chimney sweep mode

When you select manual mode, the "🔧" symbol appears and relays are energised/de-energised not according to any heating program but according to a default manual setting that can be set by pressing the information button (6).



USER LEVELS

There are 4 different user levels:

- End user
- Commissioning
- Heating engineer
- OEM (Manufacturer).

See the "Complete list of parameters" section for a list of the parameters displayed in each level.

Proceed as follows to access the user level you require.

- Go to the main screen.
If necessary, press the **"ESC"** button one or more times to return to the main screen.

Press the **"OK"** button.

Press and hold the information button **"i"** for 3 seconds.

- End user level. Turn the knob to scroll through the menu until you reach the end user programming level. Press **"OK"**.

To enter the OEM level, you need to enter the

Password (12434).

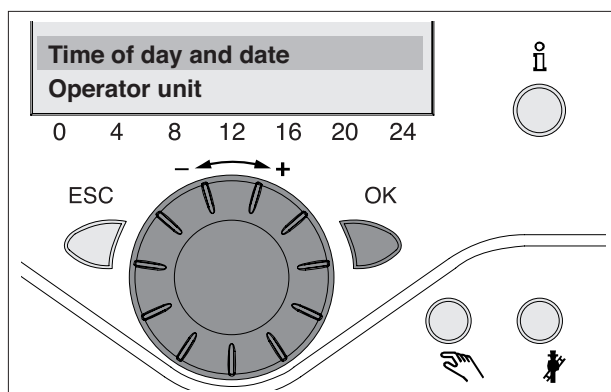
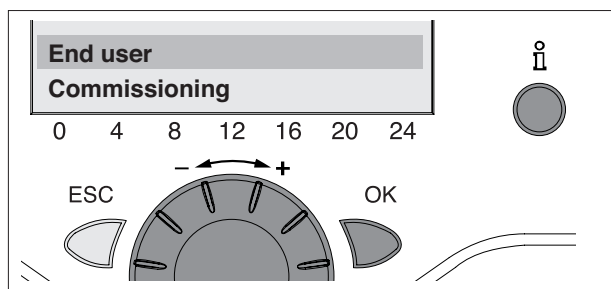
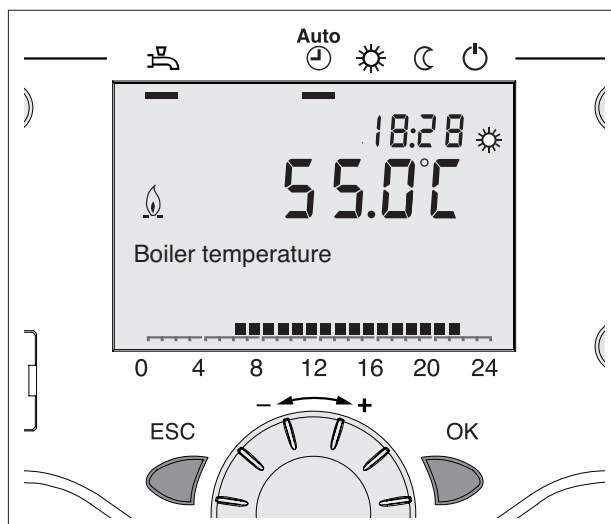
Press the **"OK"** button to confirm each digit. Press **"ESC"** to cancel an entry.

- ⚠ - Pressing the **"ESC"** button takes you just one step back: the value entered is not saved.
- If no change is made for 8 minutes, the system returns to the main screen.
- Programming lines are displayed or hidden according to the system configuration and the user level (User, Commissioning, etc.).

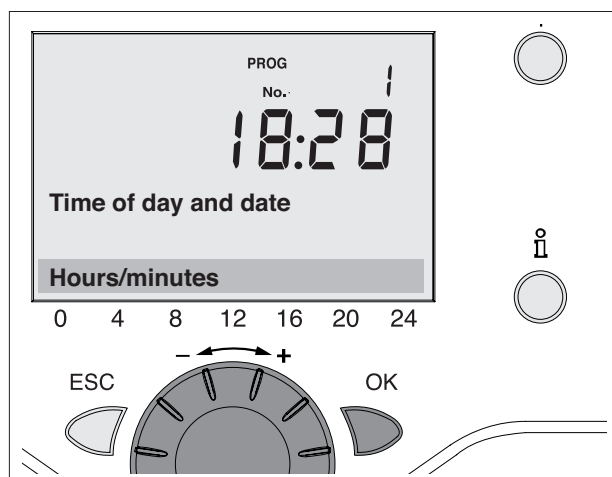
- ⚠ Parameter values on the Commissioning, Heating engineer and OEM levels must only be changed by the **THERMITAL** Technical Assistance Service.

EXAMPLE: SETTING THE CURRENT TIME

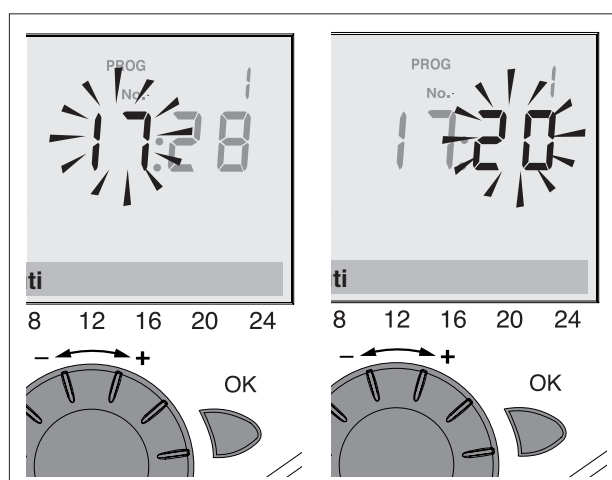
- From the main screen press **"OK"**.
- The message area displays a number of setting pages. Turn the knob until you reach the "Time and date" line. Press **"OK"** to confirm.



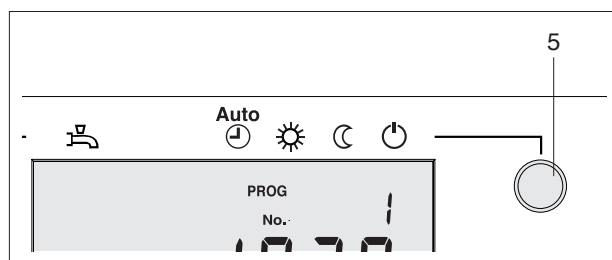
- The message area shows the current hour.
Press **"OK"**.



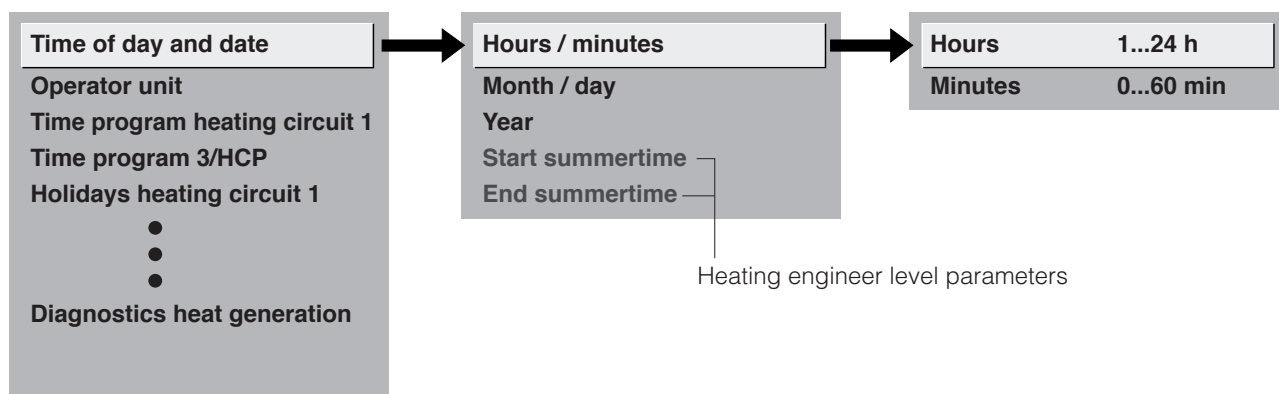
- The display flashes the current hour. Turn the knob to go on or back to the correct value.
Press **"OK"** to confirm.
- The display flashes the current minutes. Turn the knob to go on or back to the correct value.
Press **"OK"** to confirm.



The new time setting is saved and the display stops flashing. At this stage you can continue programming or press the central heating mode button (5) to return to the main screen.



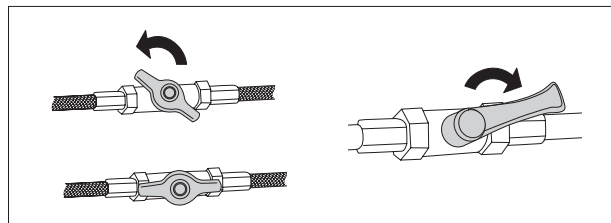
EXAMPLE OF THE MENU STRUCTURE



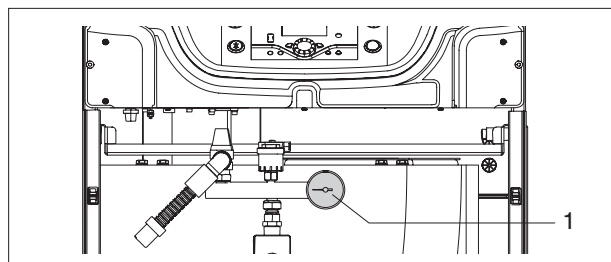
START-UP

Have **THERMITAL**'s Technical Assistance Service start-up your boiler for the first time. Once this has been done, the boiler can be left to function automatically. Under certain circumstances, such as after long periods of disuse, the user may need to re-start it without involving the Technical Assistance Service. Before doing so, perform the following checks and operations:

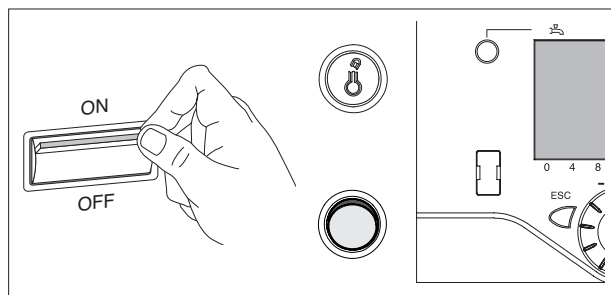
- Check that the fuel cock and heating system water cock are shut.



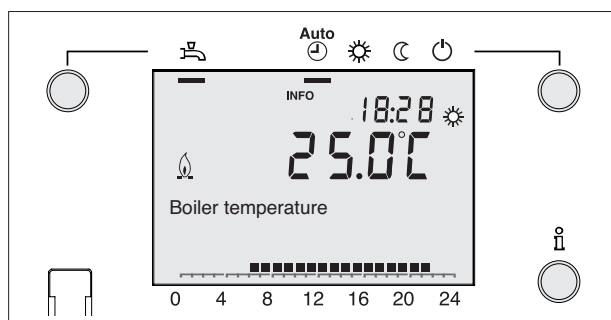
- While the system is still cold, check that the pressure (1) in the heating circuit is **over 1 bar** but below the maximum limit specified for the boiler. If water pressure is low, contact **THERMITAL**'s Technical Assistance Service.



- Switch the electricity supply ON at the system's main switch and at the control panel. Check that the display comes on.



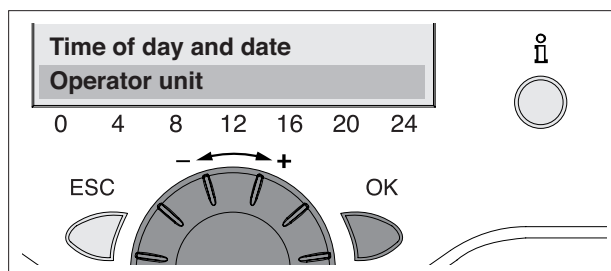
- When the boiler is first powered on, it performs a number of self-tests. These may take a few minutes. When the tests are completed, the display reads out boiler temperature.



Perform the following operations on the boiler control panel.

- Press the "OK" button.
 - Select "Operator unit" and press "OK".
 - Select "Language" and press "OK".
- Set the language you want.

SEE THE "USER PARAMETERS" MANUAL FOR INFORMATION ON CONFIGURATION.



Setting the room temperature setpoint

Turn the knob (14) to set the desired **room temperature comfort setpoint**.

Proceed in a similar way to set the **room temperature reduced setpoint**.

- Press the **"OK"** button (13).
- Select "Heating circuit 1".
- Set the room temperature reduced setpoint.

⚠ After changing a setpoint, you need to wait about 2 hours for the new setting to have any effect on room temperature.

⚠ If no room unit is installed, changing the room temperature setpoint simply shifts the heating curve.

- Press the central heating mode button (5) to select "Automatic" (☀).

- If the central heating system incorporates a room unit, check that this is active and proceed as follows to use the knob to set the room temperature setpoint (~20°C).

- Press the **"Presence"** button (☀/⌚) to display the "☀" symbol.

- Press **"ESC"** to return to the main screen.

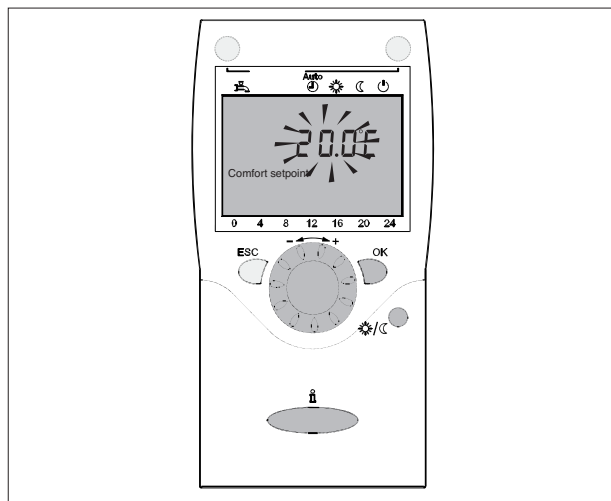
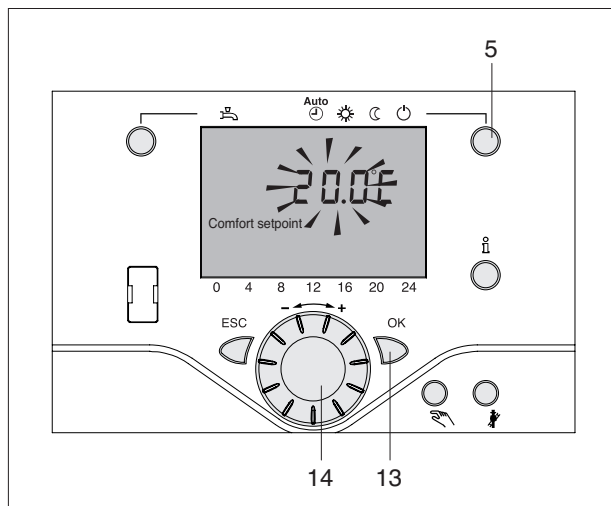
- If the system is made up of a number of different heating circuits, a room temperature setpoint must be set for each of them.

The second circuit (optional) may be either direct or mixed.

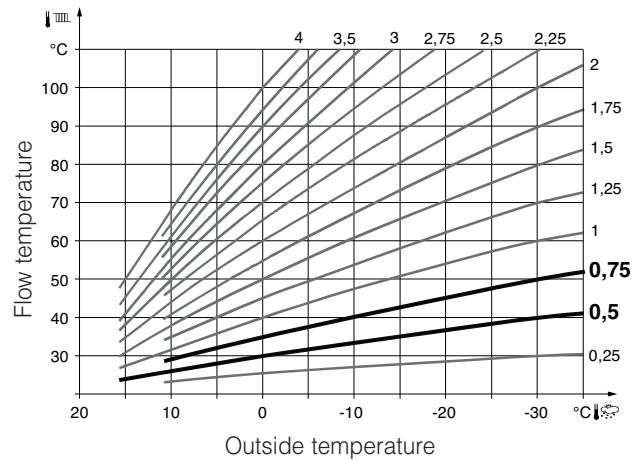
- Press the **"OK"** button.
- Select "Heating circuit 1-2-3" and press **"OK"**.

Set:

- the room temperature comfort setpoint (parameters 710-1010-1310)
- the room temperature reduced setpoint (parameters 712-1012-1312)
- the heating curve slope (parameters 720-1020-1320).



HEATING CURVE SLOPE




Heating curve slope must only be set by the **THERMITAL** Technical Assistance Service.

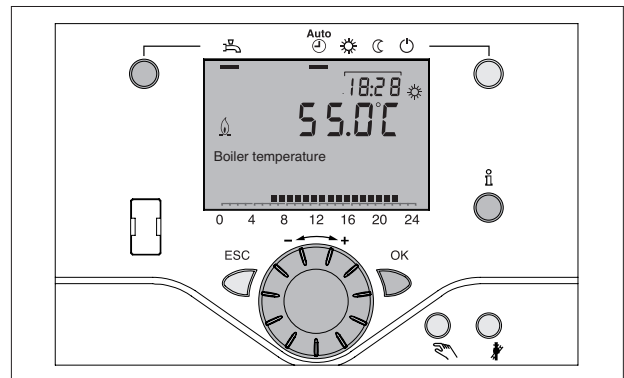




If no room units are installed, the room temperature setpoint set on the control panel simply performs a parallel shift of the heating curves.

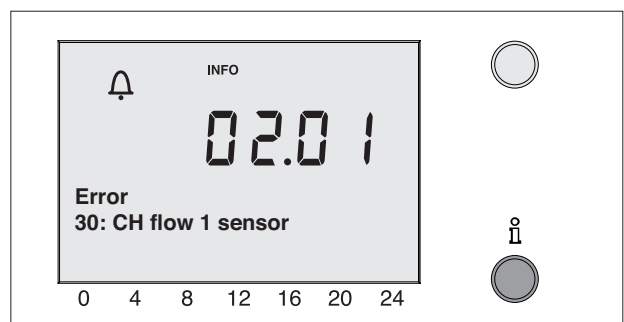
- Proceed as follows to set the weekly heating program.
- Press the **"OK"** button.
- Select **"Time prog heating circuit 1"** and press **"OK"**.

Only for "28/120 B" models with a remote storage cylinder (optional)

- Press the  button to turn on DHW production. A line appears under the DHW symbol.
- Press the **"OK"** button.
- Select **"Domestic hot water"** and press **"OK"**.
- Set:
parameter 1610 "nominal setpoint"
- To set the weekly DHW timer program, select **"Time program 4/DHW"** and press **"OK"**.



If any boiler ignition or operating errors are detected, the  symbol appears on the display. Press the **"Info"** () button to display the type of error. See also "Error/Maintenance codes".



TEMPORARY SHUTDOWN

If you are going to be away for a short period of time like a weekend or a short holiday, etc. proceed as follows.

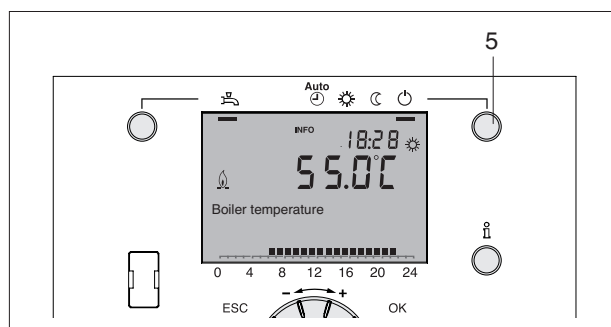
- Press the central heating mode button (5) to select "Protection" mode (☺).

Power to the boiler remains switched on, and the display remains active. The fuel feed also remains open so that the **frost protection** function can protect the boiler against freezing.

Boiler frost protection: if boiler temperature falls below 5°C, the burner starts up at full power until boiler temperature reaches 40°C.

Plant frost protection: This function is only active if an outside temperature sensor is connected.

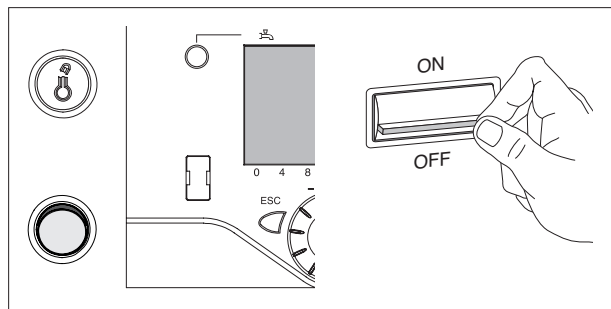
If outside temperature drops below -4°C the pumps are switched on. If outside temperature is between -5° and 1.5°C, the pumps are switched on for 10 minutes at intervals of 6 hours. If outside temperature is above 1.5°C the pumps are switched off.



PREPARING FOR EXTENDED PERIODS OF DISUSE

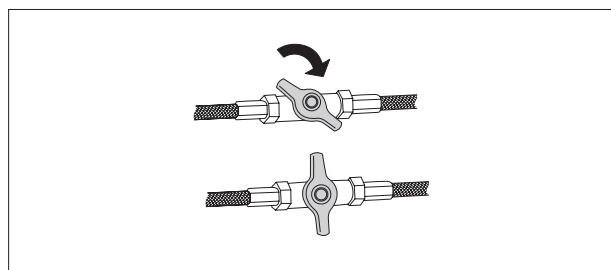
If the boiler is not going to be used for an extended period of time, proceed as follows to prepare it for shut-down.

- Turn the control panel power switch OFF and make sure that the display goes out.
- Turn the mains power switch OFF.



- Close the fuel shut off cock and the central heating and DHW circuit shut off cocks.

⚠ Under these conditions the system is not protected against frost. Drain the central heating circuit and domestic hot water circuit if there is any risk of freezing.



CLEANING

⚠ Remove the protective film (F) from the front panel and the control panel before you start cleaning the boiler's casing panels.

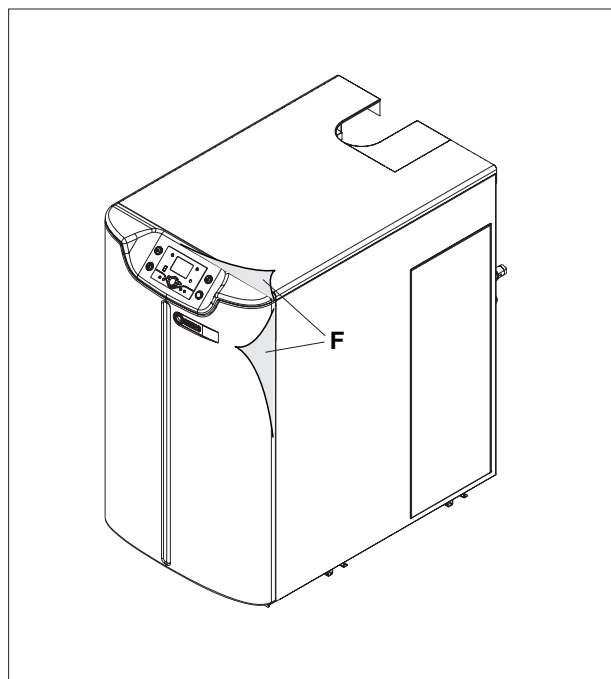
Use a cloth damped in soapy water to clean the boiler's external panelling. To remove stubborn marks, use a cloth damped in a 50% mix of water and denatured alcohol or a suitable cleaning product.

Wipe the boiler dry after cleaning it.

⚠ The combustion chamber and flues must be cleaned periodically by **THERMITAL's** Technical Assistance Service or by a qualified heating engineer.

— Do not use abrasive products, petrol or triethylene.

— Never clean or service the boiler without first disconnecting it from the mains electricity supply by turning the main power switch OFF.



MAINTENANCE

Please remember that THE PERSON RESPONSIBLE FOR SYSTEM MANAGEMENT MUST ENSURE THAT PROFESSIONALLY QUALIFIED PERSONNEL UNDERTAKE PERIODIC MAINTENANCE AND COMBUSTION EFFICIENCY MEASUREMENTS.

THERMITAL's Technical Assistance Service is qualified to satisfy these legal requirements and can also provide useful information on MAINTENANCE PROGRAMMES designed to guarantee:

- greater safety
- compliance with applicable legislation
- freedom from the risk of fines in the event of spot checks.

USEFUL INFORMATION

Seller:

Mr.

Address

Tel.

Installer:

Mr.

Address

Tel.

Technical Assistance Service:

Mr.

Address

Tel.

Date	Work done

Fuel oil supplier:

Mr.

Address

Tel.

Date	Quantity supplied	Date	Quantity supplied	Date	Quantity supplied	Date	Quantity supplied

THERMITAL

**RIELLO S.p.A.
Via Ing. Pilade Riello, 7
37045 - Legnago (VR)
www.thermital.it**

The manufacturer strives to continuously improve all products. Appearance, dimensions, technical specifications, standard equipment and accessories are therefore liable to modification without notice.