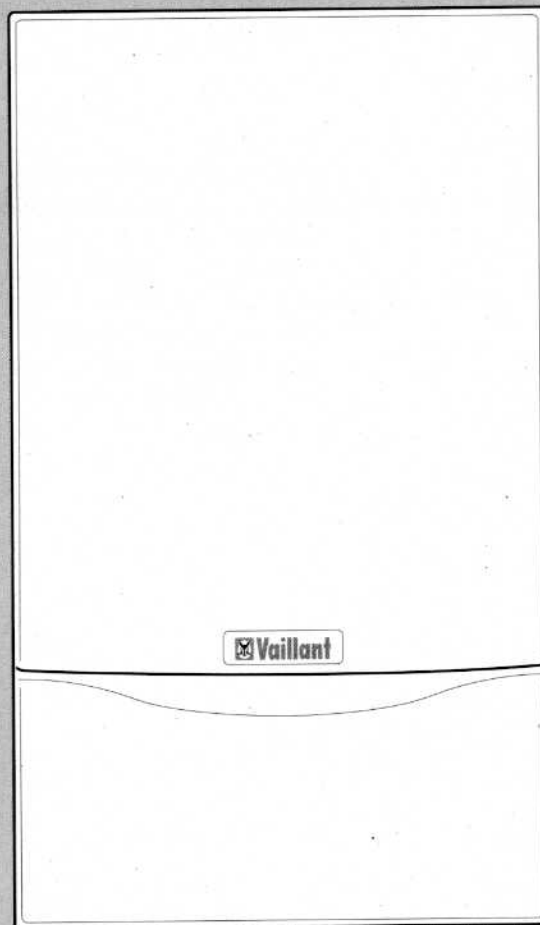


INSTRUCTIONS FOR USE

TURBOmax Plus 824 E, 828 E
THERMOcompact 615 E, 620 E, 624 E, 628 E



benchmark

The code of practice for the installation,
commissioning & servicing of central heating systems

 **Vaillant**



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For your information

Thank you for choosing a Vaillant boiler. The information given in this booklet will enable you to obtain the best performance from your boiler.

TURBOmax Plus provides both central heating and domestic hot water, with the domestic hot water supplied directly from the boiler. The boiler will operate automatically to provide domestic hot water whenever a hot water tap is opened, and automatically adjusts to meet the demand for both central heating and domestic hot water in the most economical way.

THERMOcompact provides central heating and domestic hot water where a separate indirect hot water cylinder is also incorporated to the system.

If, after reading these instructions, you have any questions on the operation of the boiler, please contact either your installer or Vaillant Technical Department.

The benchmark logbook should be completed by the installer and/or the commissioning engineer and handed to the user.

All CORGI registered installers carry a CORGI ID card, and have a registration number.

Both should be recorded in your Benchmark Log Book. You can check your installer by calling CORGI direct on 01256 372300.

Key to symbols



Important Note



This symbol is used to indicate important instructions.



This symbol is used to indicate a required step.

Liability



We can accept no liability whatsoever for damage or injury resulting from failure to observe these instructions.



OPERATION

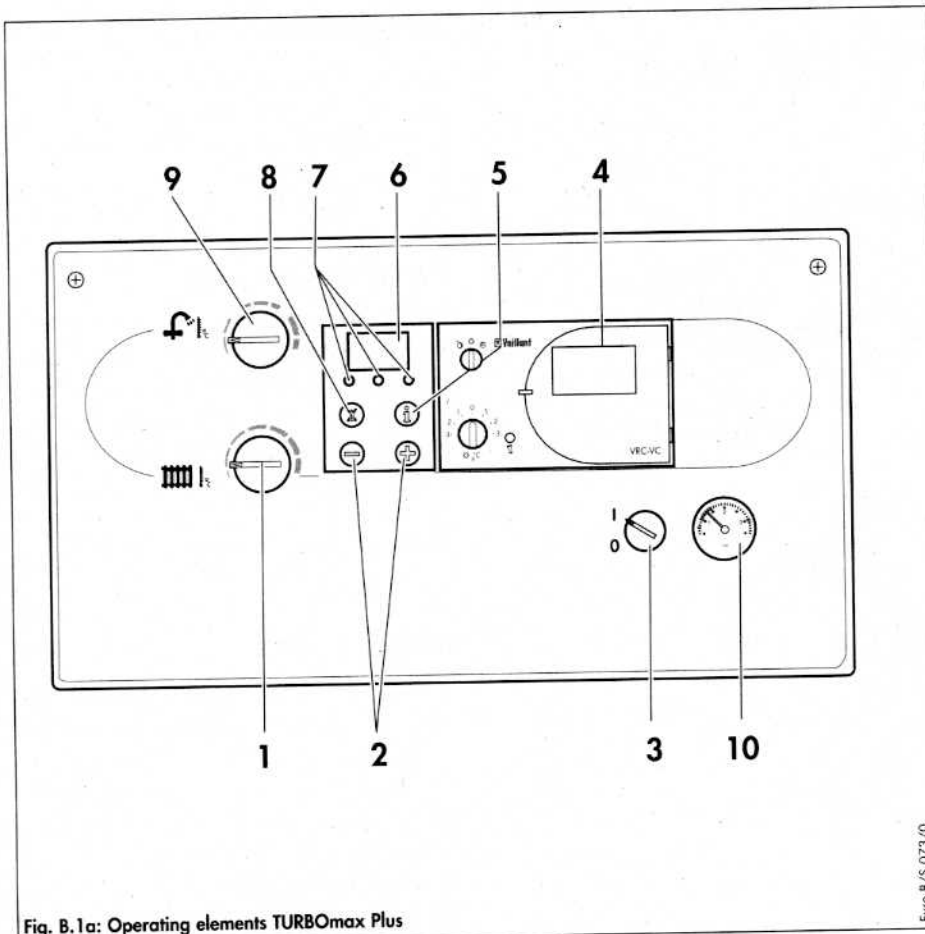


Fig. B.1a: Operating elements TURBOmax Plus

Euro B/S 073/0

Overview

TURBOmax Plus

Operating controls

For access to the controls press the upper middle of the lower front panel and drop it down.

The following can be seen:

- 1 Maximum radiator temperature control (page 13)
- 2 The „+“ and „-“ buttons for the display panel
- 3 Main ON/OFF control (pages 10 and 15)
- 4 Built in control/timer module (if fitted)
- 5 The „i“ information button
- 6 Boiler display
- 7 Indicator lights to display the current operating mode
- 8 „Reset“ button: (see page 14)
- 9 Maximum hot water temperature control and warmstart ON/OFF control (page 11)
- 10 Pressure gauge displaying the pressure in the heating system

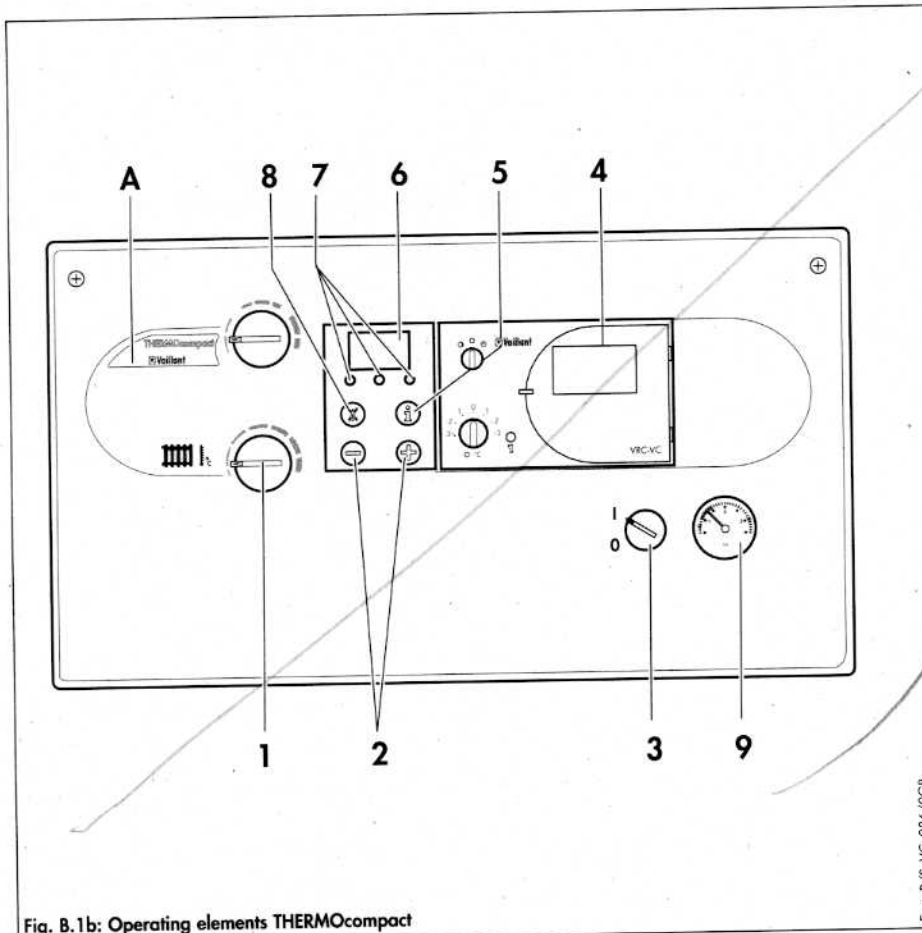


Fig. B.1b: Operating elements THERMOcompact

Euro B/S_VC_086/0GB

THERMOcompact

You can identify a THERMOcompact boiler by the sticker which is situated at the top left hand side of the control panel (see A, Fig. 1.b)

Operating controls

For access to the controls press the upper middle of the lower front panel and drop it down.

The following can be seen:

- 1 Maximum radiator temperature control (page 13)
- 2 The „+“ and „-“ buttons for the display panel
- 3 Main ON/OFF control (pages 10 and 16)
- 4 Built in control/timer module (if fitted)
- 5 The „i“ information button
- 6 Boiler display
- 7 Indicator lights to display the current operating mode
- 8 „Reset“ button: (see page 14)
- 9 Pressure gauge displaying the pressure in the heating system



Indicator lights/boiler display

TURBOmax Plus and THERMOcompact boilers have an advanced multifunction boiler display (1). When the main ON/OFF control is in the „ON“ position the display will normally show the temperature of water in the boiler circuit (45 °C in the example), which confirms that the boiler is functioning correctly.

- 1 In the unlikely event of a fault developing which prevents the boiler from operating, the display may show a fault code (page 14).
- 2 Red indicator
Illuminated = Boiler has locked out
- 3 Yellow indicator
Illuminated = Main burner ignited
- 4 **TURBOmax Plus**
Green warmstart indicator (3)
Illuminated = Warmstart switched ON
Not illuminated = Warmstart is switched OFF and there is no demand for hot water
Flashing = There is either a demand for hot water or warmstart
- 4 **THERMOcompact**
Green indicator (3) is illuminated but has no function.

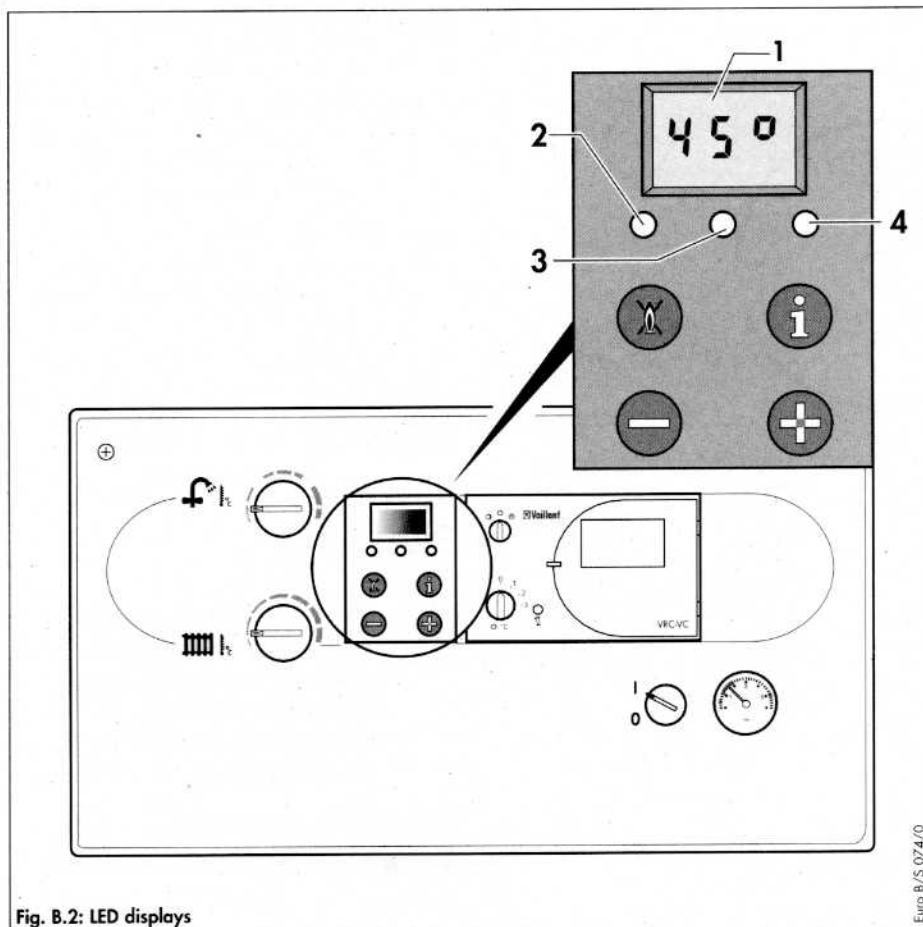


Fig. B.2: LED displays

Euro B/S 074/0

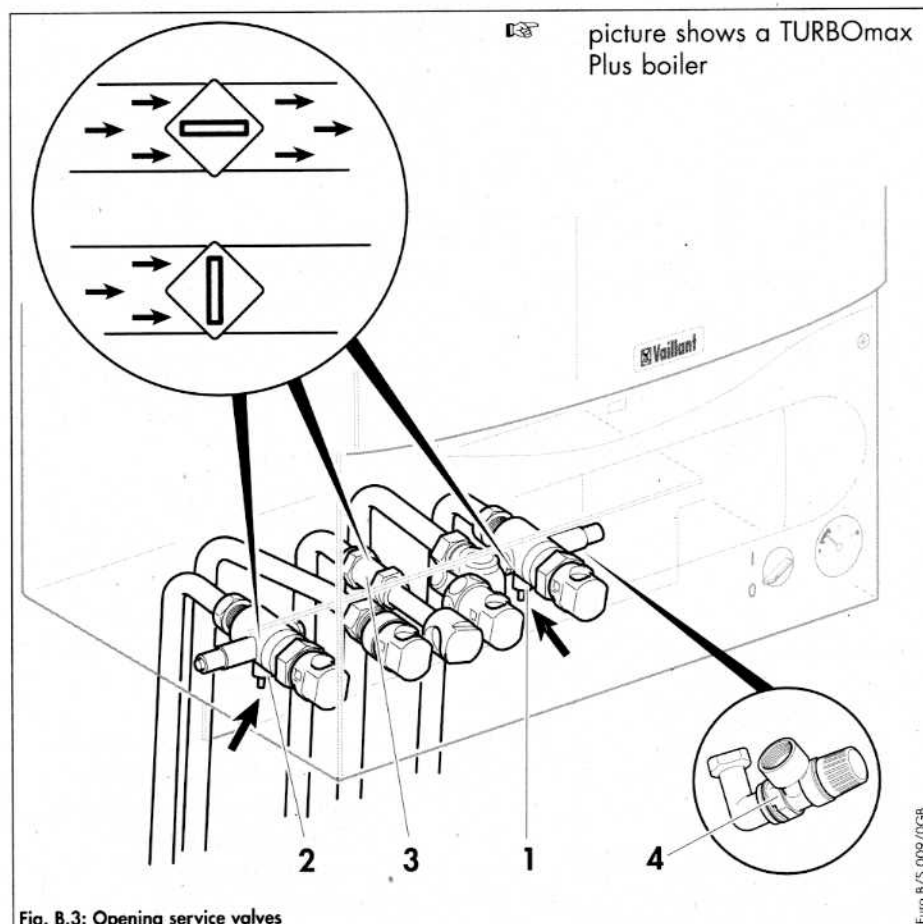


Fig. B.3: Opening service valves

Euro B/S 009/DGB

Initial checks before turning ON

Open the service valves

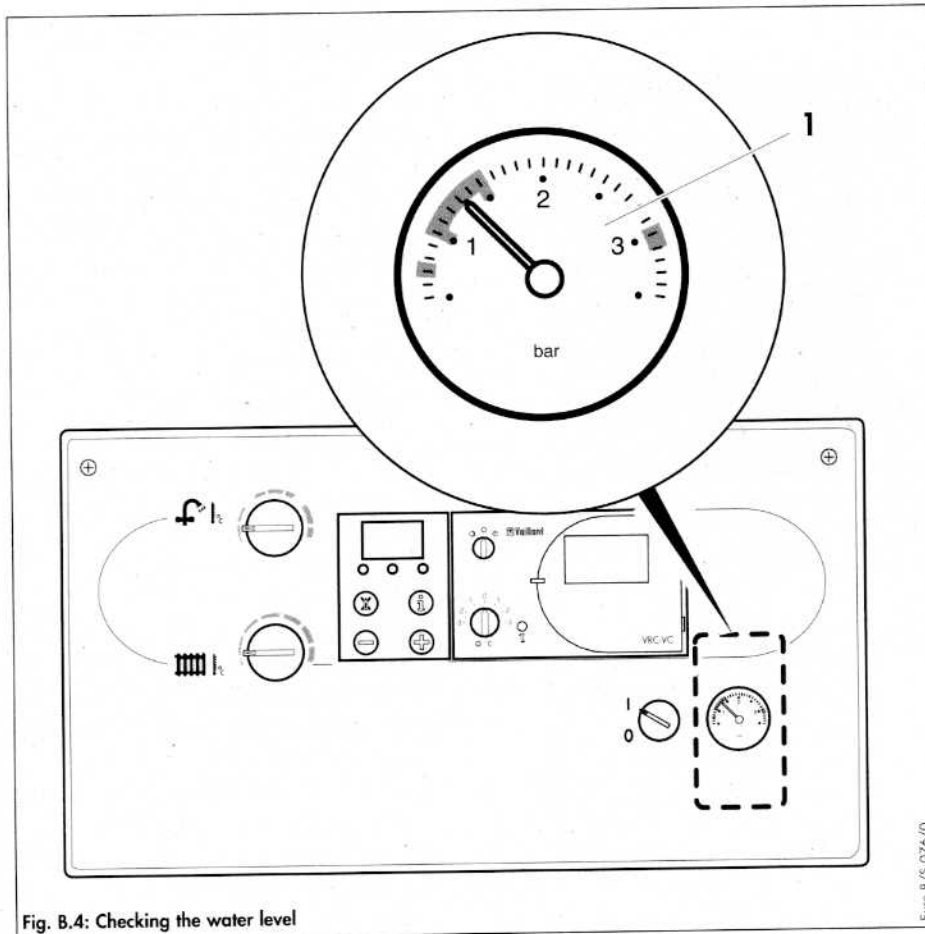
- Ensure the cold water service valve is open. This can be checked by opening a hot water tap and ensuring water flows.
- Ensure that the service valves in the heating flow and return (2 and 1) and the gas service valve (3) are open.
- ☞ The flow, return and gas service valves are open when the line marking has the same direction as the pipe.
- The pressure relief valve (4) is provided for safety reasons and must not be interfered with.

Note:

A bottom cover is fitted to the appliance. The service valves can be seen through the cover.



OPERATION



Check the water contents

- Check the water contents of the system on the pressure gauge (1). The needle on the pressure gauge should be within the green band (between 1 and 1.5 bar). If the needle displays a value below 0.8 bar when the appliance is cold, follow the instructions left by your installer to refill the system. Alternatively, your installer should be called to refill the system.

Domestic hot water operation (TURBOmax Plus only)

- ⚠ The boiler should only be used when the heating system contains water. Use of the boiler without water may cause damage to the boiler or its components.

Setting the maximum domestic hot water temperature control

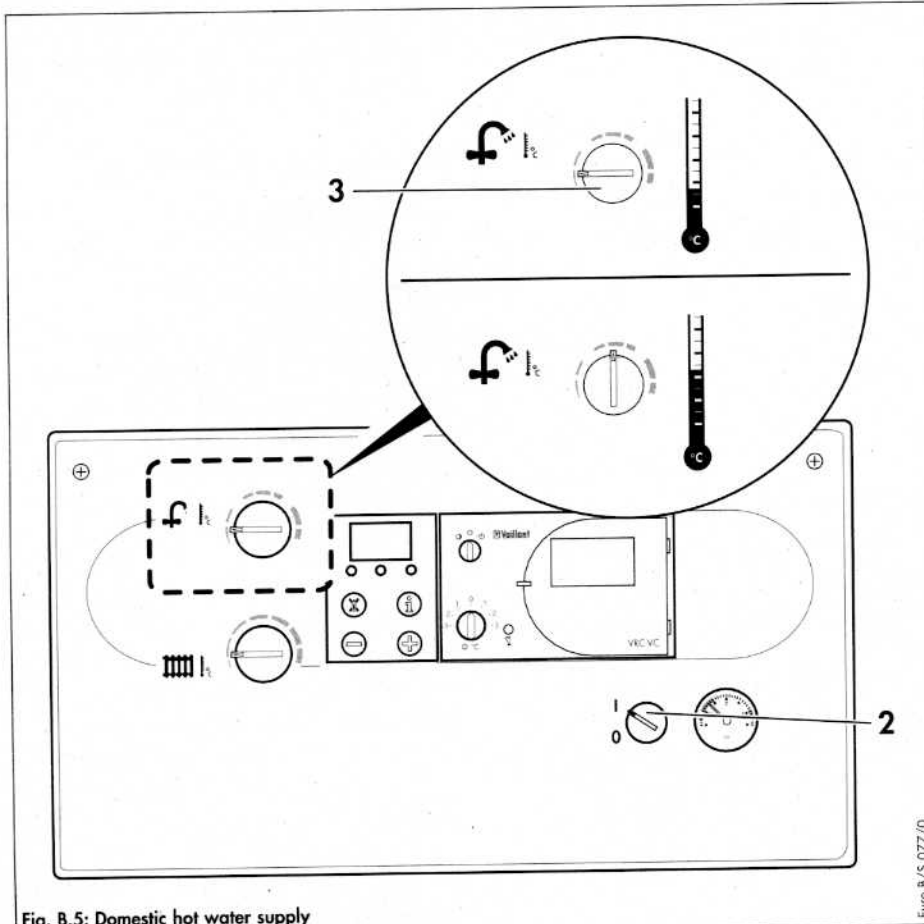
- Turn the main switch (2) to the „I“ position.
- The display will show the boiler flow temperature which indicates electrical power to the boiler.
- The domestic hot water temperature can be adjusted using the hot water temperature control (3).
- Turn the control clockwise to increase the temperature and anti-clockwise to decrease the temperature.

As a guide for normal circumstances set the knob to the one o'clock position.

Note:

This control adjusts the maximum domestic hot water temperature. If adjusting the control upwards appears to have no effect on the temperature, then the boiler is already operating at full output for the selected flow rate.

- ⚠ If you live in a hard water area please do not set the control knob above the mid (12 o'clock) position to prevent excessiv scale formation (fig. B.5).





Warmstart operation (TURBOMax Plus only)

The warmstart facility provides instantaneous delivery of domestic hot water from the TURBOMax Plus boiler.

When the warmstart system is switched ON the boiler will automatically light periodically to maintain the internal temperature of the boiler at approximately 40 °C. When the warmstart system is switched OFF a short delay may be experienced in obtaining hot water at the tap.

- The warmstart system is activated by turning the hot water temperature control knob (1) all the way to the very right for a short time. The green indicator light will now illuminate. Reset the hot water temperature control knob to the desired setting. The boiler will now provide instantaneous delivery of hot water directly when a hot water tap is turned ON.

- The warm start system is switched OFF by turning the hot water temperature control knob (1) all the way to the very left for a short time. The green indicator light is NOT illuminated. Reset the hot water temperature control knob to the desired setting.

Note:

Irrespective of whether the warmstart facility is switched ON or OFF, the boiler will automatically operate to provide hot water whenever a hot water tap is opened.

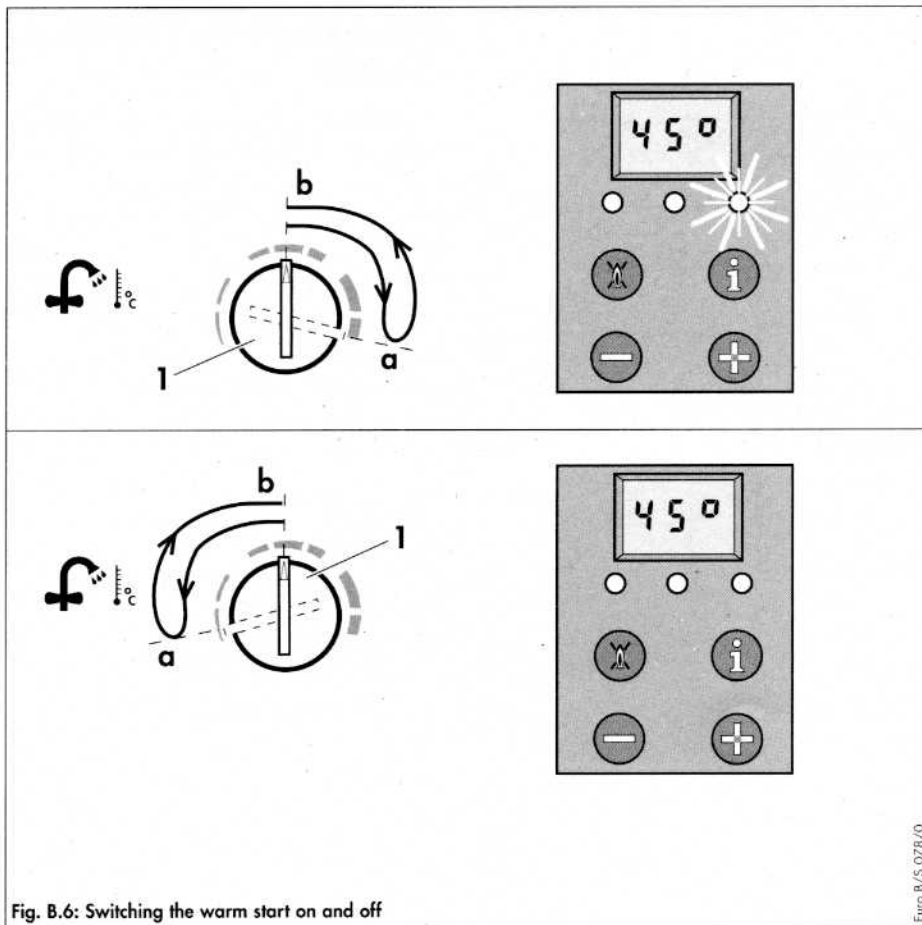


Fig. B.6: Switching the warm start on and off

Euro B/S 078/0



OPERATION

TURBOMax Plus

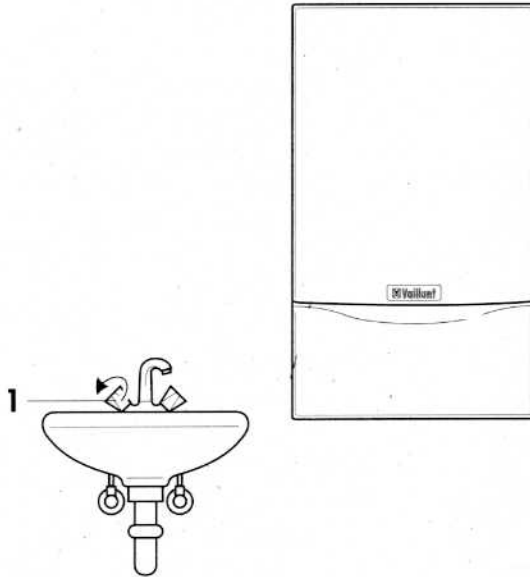


Fig. B.7: Drawing off hot water

Euro B/5 079/0

Obtaining hot water (TURBOMax Plus only)

On opening a hot water tap (1) at a supply point (basin, shower, bath, etc.) the TURBOMax Plus boiler will automatically operate to deliver hot water.

On closing the tap the boiler switches OFF (or continues to operate for central heating if required). The pump and fan will continue to operate for a short period.



Heating operation

Setting the maximum radiator temperature control

- Turn the main switch (1) to the „I“ position.
- Set the maximum radiator temperature control to the desired setting using the control knob (2). We recommend the following settings:
 - **Left setting** during spring and autumn,
 - **Middle setting** during mild winter,
 - **Right setting** during cold winter.

Setting the external controls

- Set the room thermostat (3) and/or the thermostatic radiator valves (4) according to the instructions supplied with the control(s).

HINT! Vaillant offer room thermostat/time control accessories which give accurate and economic room temperature control as well as improved comfort.

Ask your installer!

The boiler will now operate automatically to provide central heating for the conditions selected on the external controls (TURBOmax Plus will also provide domestic hot water on demand).

Whilst the boiler is operating, the boiler display (1, fig. B.2) indicates the temperature of the water within the boiler circuit. After the boiler stops operating the pump and fan will continue to operate for a short period to fully disperse the heat from the boiler.

Note:

The boiler incorporates an anti-cycling economiser control to prevent energy wasteful ON and OFF operation of the boiler for short periods when in the central heating mode. When turning the room thermostat to a higher setting there may therefore be a short delay before the boiler operates.

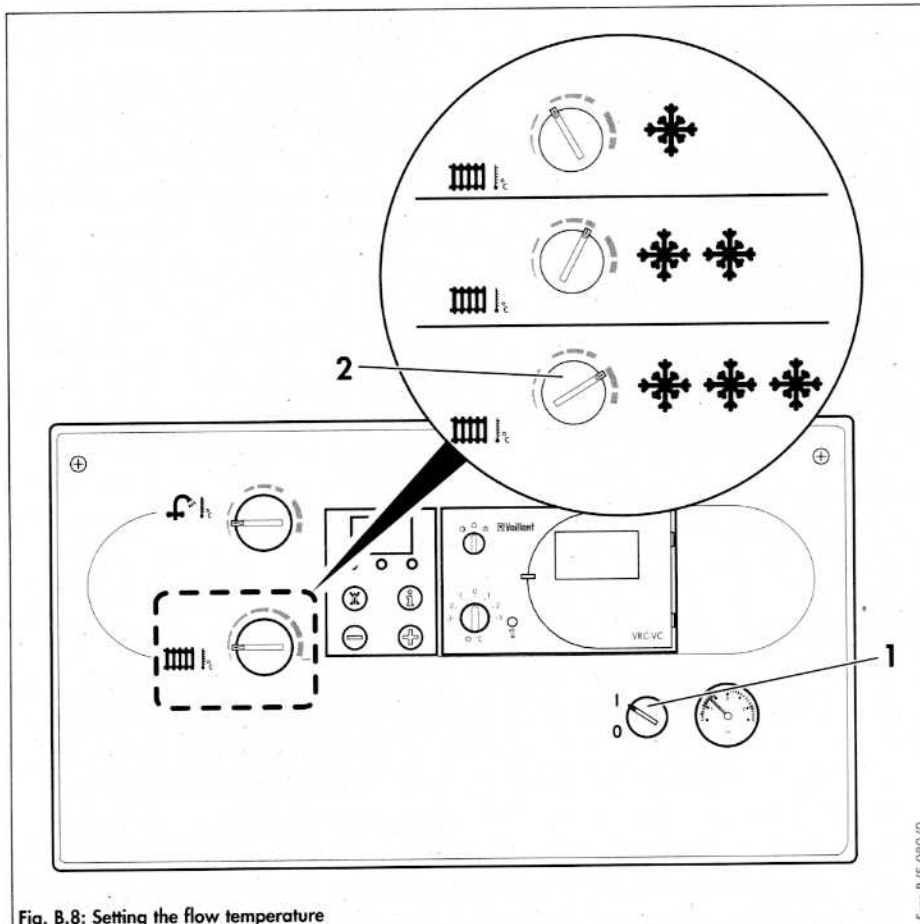


Fig. B.8: Setting the flow temperature

Euro B/S 080/0

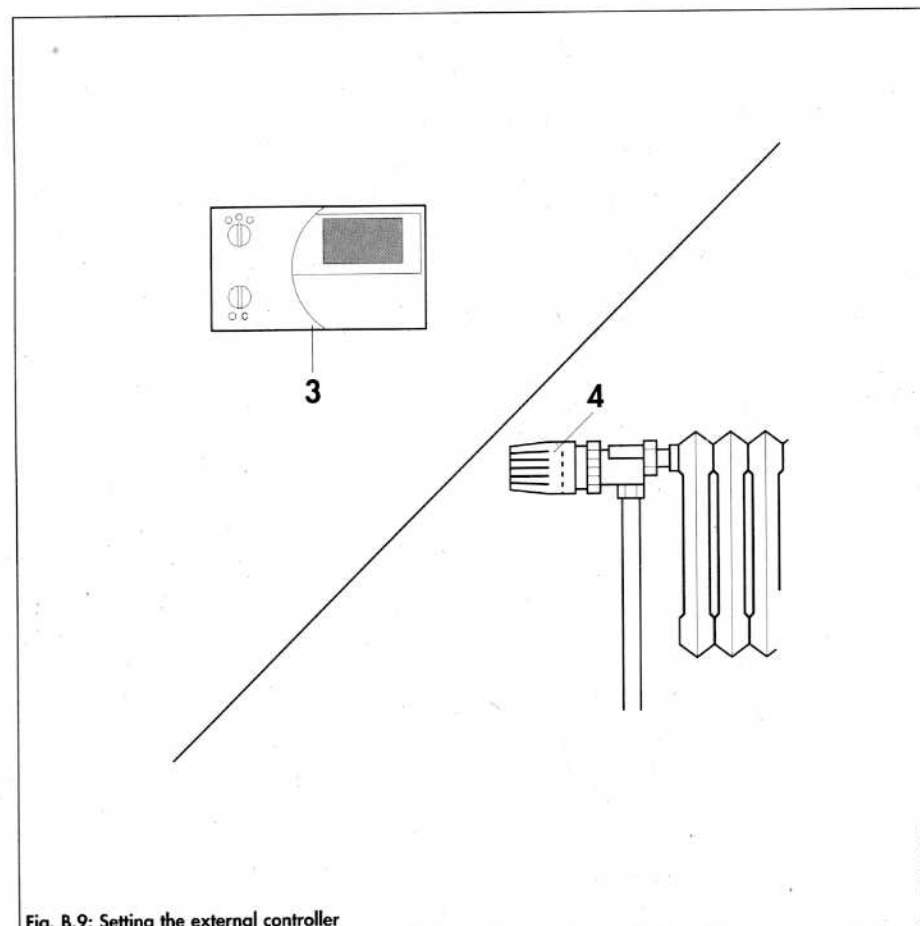


Fig. B.9: Setting the external controller

Euro B/S 014/0



OPERATION

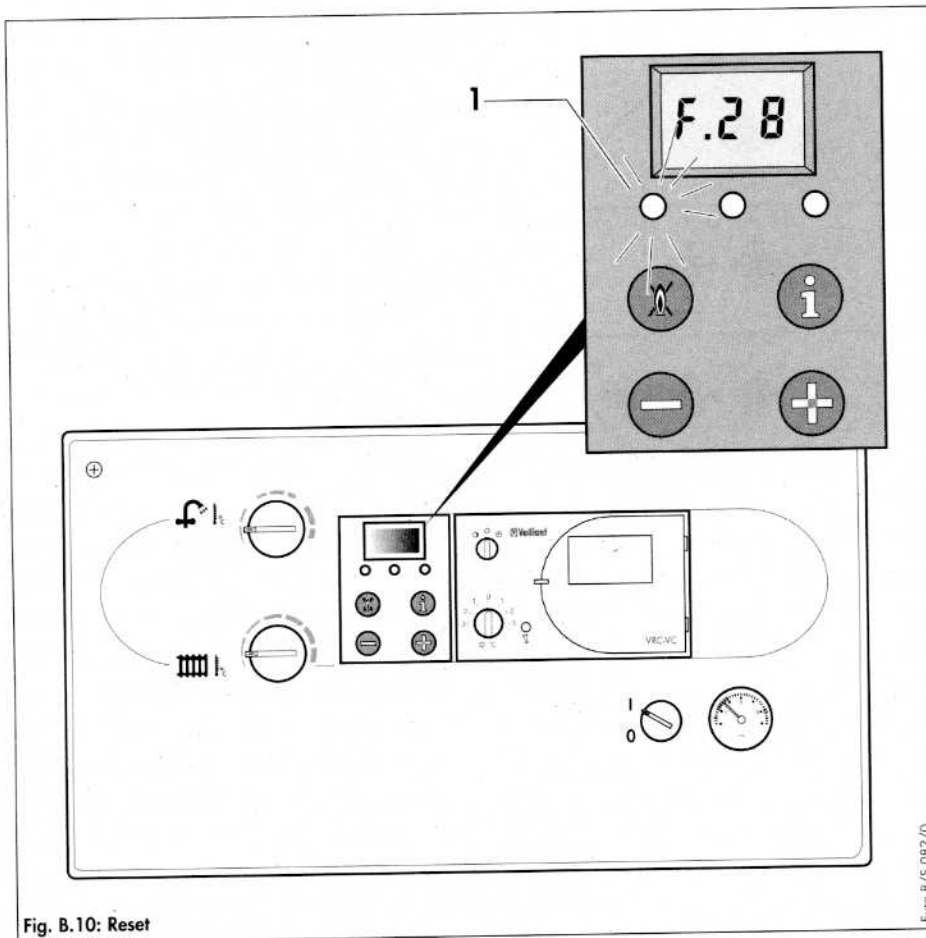


Fig. B.10: Reset

Euro B/S 082/0

Resetting the appliance

When a hot water tap (TURBOmax Plus only) or the central heating system requires heat, the boiler automatically ignites and starts to operate. If the automatic ignition is not successful within 10 seconds, then the boiler does not go into operation and switches to „Lock out“. This is indicated visually by the red indicator light (1) and the displaying of fault code „F.28“ or „F.29“ (flame extinguished during operation). A new attempt to ignite the flame can then only be performed after pressing the „Reset“ button.

- Press the „Reset“ button (2) and hold for approx. 1 second.



If the boiler still shuts off after a third attempt, then please consult your installer or Vaillant Service Solutions.

The boiler also switches to „Fault“ when there is not enough water in the system. This fault is indicated by fault code „F 22“. The boiler can only be placed back in operation after the heating system has been properly refilled with water (see page 10).

In the unlikely event of any other fault developing, which prevents the boiler from operating, the display will also show other fault codes. If a fault code is displayed please contact your installer or Vaillant Service Solutions.

Note:

If contacting Vaillant Service Solutions please remember to quote the fault code, as this will help to pinpoint the fault.

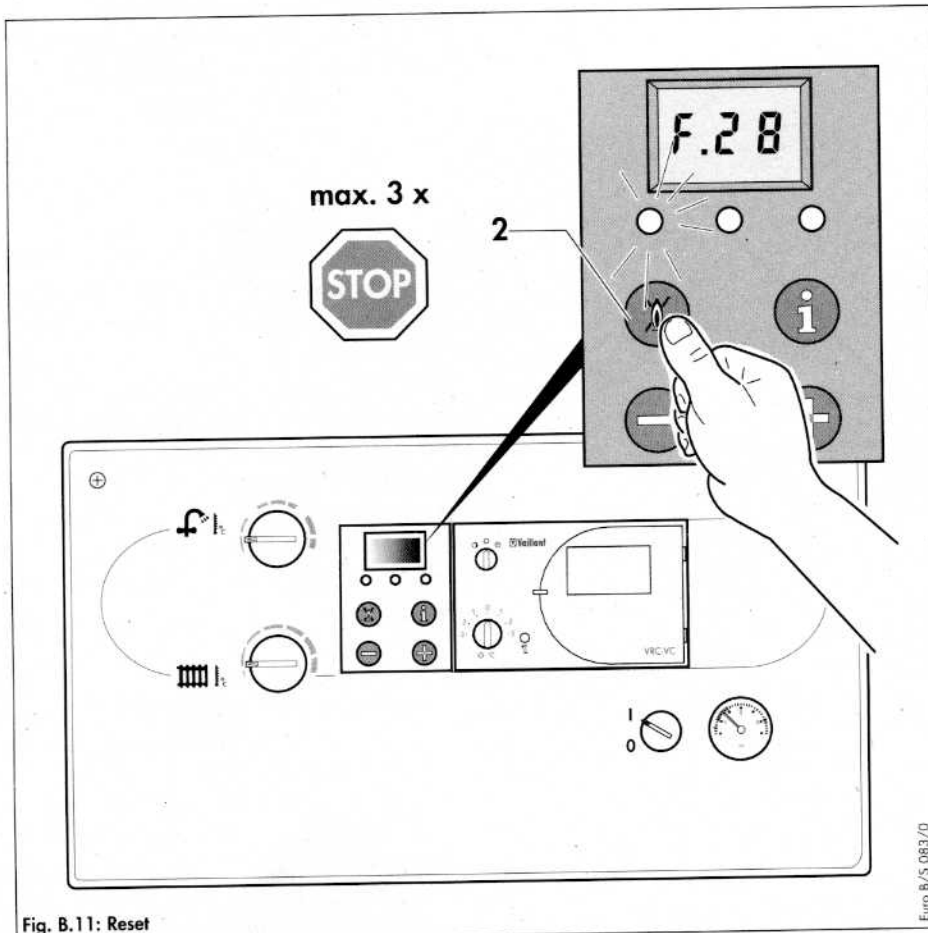


Fig. B.11: Reset

Euro B/S 083/0

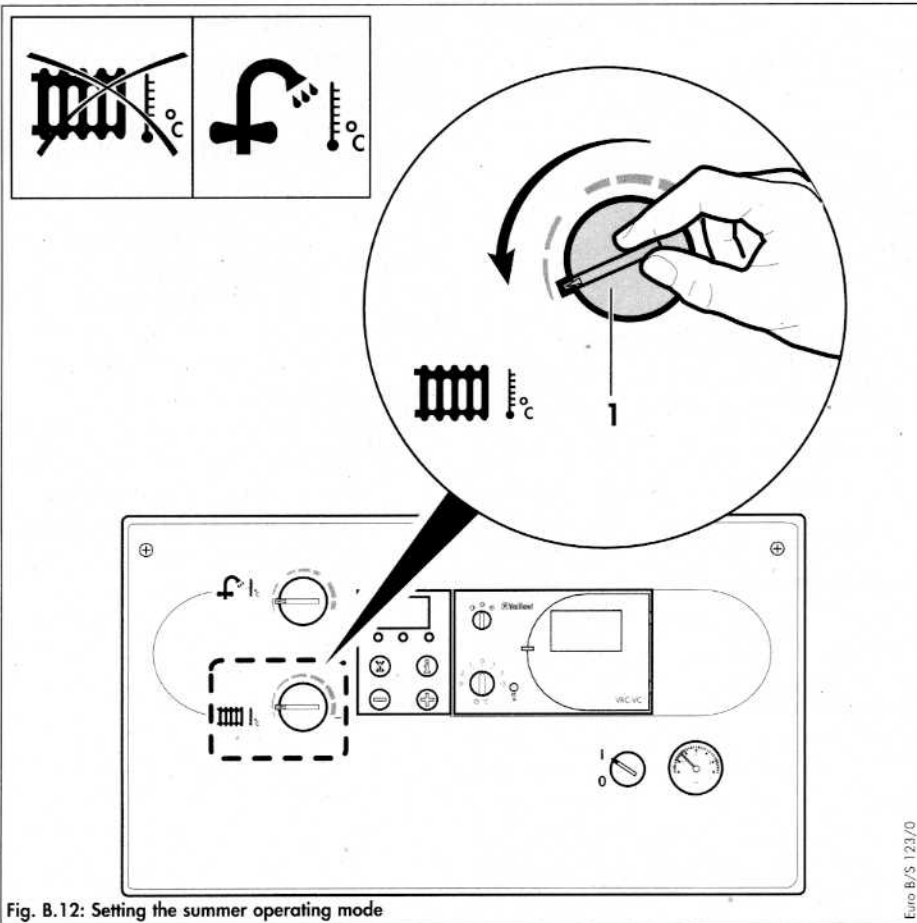


Fig. B.12: Setting the summer operating mode

Turning the boiler OFF (TURBOMax Plus only)

To turn OFF the central heating only (Summer mode)

- Turn the maximum radiator temperature control knob used to control the heating supply temperature (1) all the way to the left.

HINT! You can switch off the heating operation in summer, for example, but the boiler will continue to provide domestic hot water whenever a hot water tap is opened.

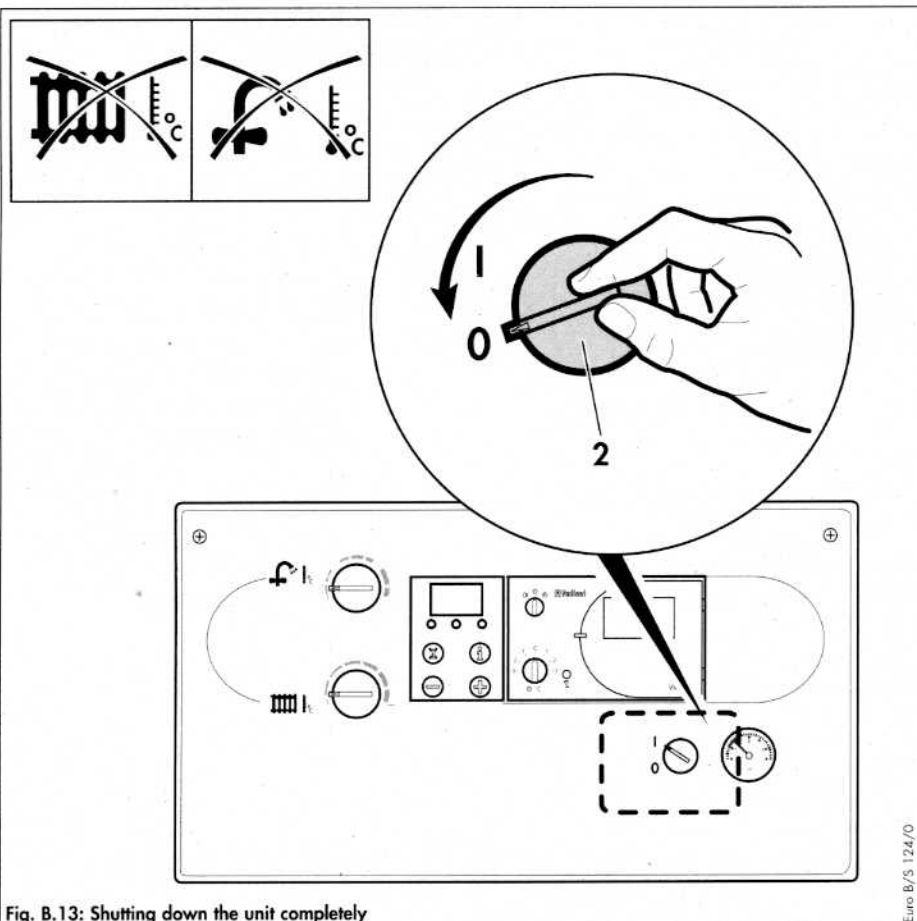


Fig. B.13: Shutting down the unit completely

To turn OFF central heating and hot water for short periods of time

- Turn the main ON/OFF control (2) to the „0“ position.

HINT! If you want to turn the TURBOMax Plus boiler OFF for a longer period of time (e.g. holidays), and there is no danger of frost, then you should also turn off the gas supply, the cold water service valve (see page 9) and the electrical supply. Please note the frost protection hints in this regard (page 17).

Euro B/S 123/0

Euro B/S 124/0



OPERATION

THERMOcompact

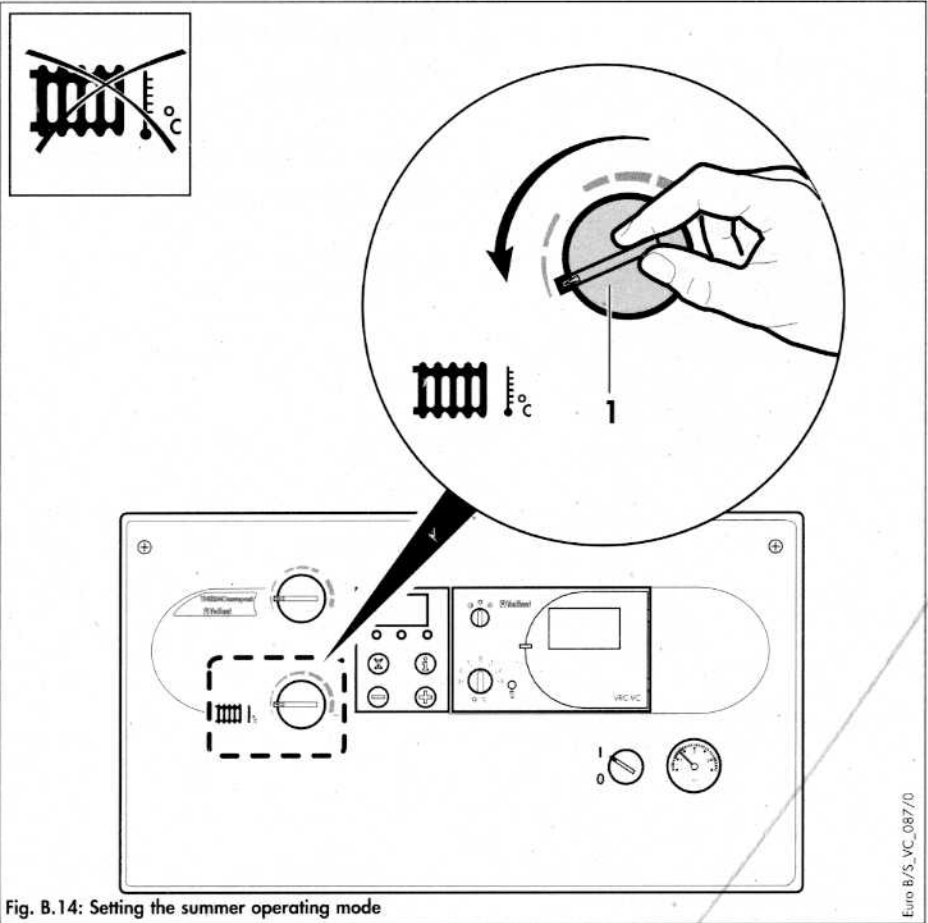


Fig. B.14: Setting the summer operating mode

Euro B/S_V_C_087/0

Turning the boiler OFF (THERMOcompact only)

To turn OFF the central heating

- Turn the maximum radiator temperature control knob used to control the heating supply temperature (1) all the way to the left.

HINT! Do not turn the THERMOcompact boiler OFF if a hot water cylinder is also incorporated in the system unless there is no demand for domestic hot water.

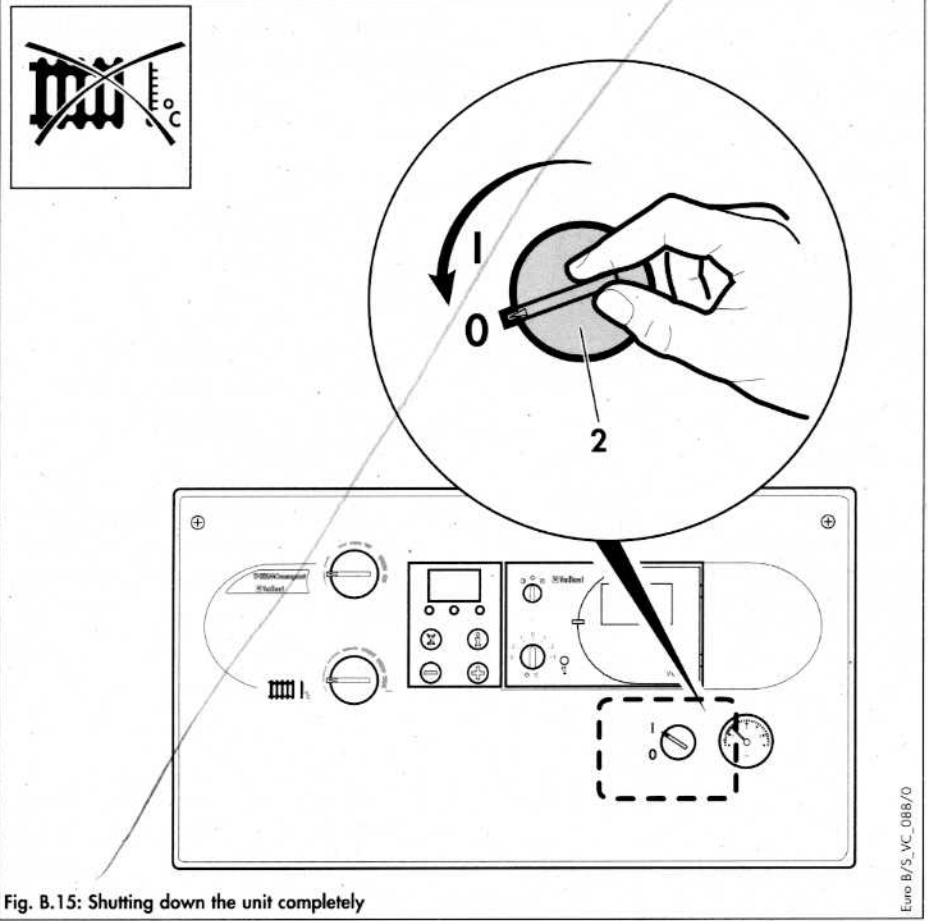


Fig. B.15: Shutting down the unit completely

Euro B/S_V_C_088/0

To turn boiler OFF for short periods of time

- Turn the main ON/OFF control (2) to the „0“ position.

HINT! Do not turn the THERMOcompact boiler OFF if a hot water cylinder is also incorporated in the system unless there is no demand for domestic hot water.



Care and maintenance

Clean the outer casing of your boiler with a damp cloth and a little soap. Do not use abrasive or solvent cleaning agents that may damage the case or the plastic fittings.

The appliance should be serviced at least once per year. To ensure regular servicing, it is strongly recommended that arrangements are made with your service agent or Vaillant Ltd. For further details please contact Vaillant Service Solutions: (0870 6060777).

Frost protection

Your boiler is equipped with a frost protection function:

If the heating water temperature drops below 5 °C when the main switch is ON, then the boiler goes into operation and heats the boiler circuit to approx. 30 °C.



It cannot be guaranteed that water will circulate throughout the entire heating system.

If the boiler is not operated for several hours during very cold weather there is therefore the possibility of the system freezing. Please ensure that if you are absent during a period of frost the central heating remains in operation and all rooms are kept above freezing point.

It must be remembered, however, that the boiler will be automatically switched off by the built in monitoring devices if certain faults occur, e.g. interruption in the gas or electricity supply or faults in the flue gas system. To overcome this possibility you can drain both the central heating system and boiler.



Frost protection and monitoring devices can only function when the main switch of the unit is set to the „I“ position and the boiler is connected to the electrical supply.

Troubleshooting

In the unlikely event that a problem occurs with the operation of the TURBOmax Plus or THERMOcompact boiler, the following points should be checked:

1. Boiler fails to operate:

- Is the gas supply turned on? (see page 9)
- Is the water supply turned on? (see page 9)
- Is there enough water in the heating system? (see page 10)
- Is the electrical supply switched ON?
- Is the main ON/OFF control in the „ON“ position? (switch position „I“) (see page 10)
- Is the burner lock out indicator light illuminated? (see page 14)

2. Hot water operates but no central heating (TURBOmax Plus only)

- Is the heating turned ON? (see page 13).
- Are all external heating controls ON? (see page 13)

If your boiler still does not operate then please consult your installer or Vaillant Service Solutions (0870 6060 777).



OPERATION

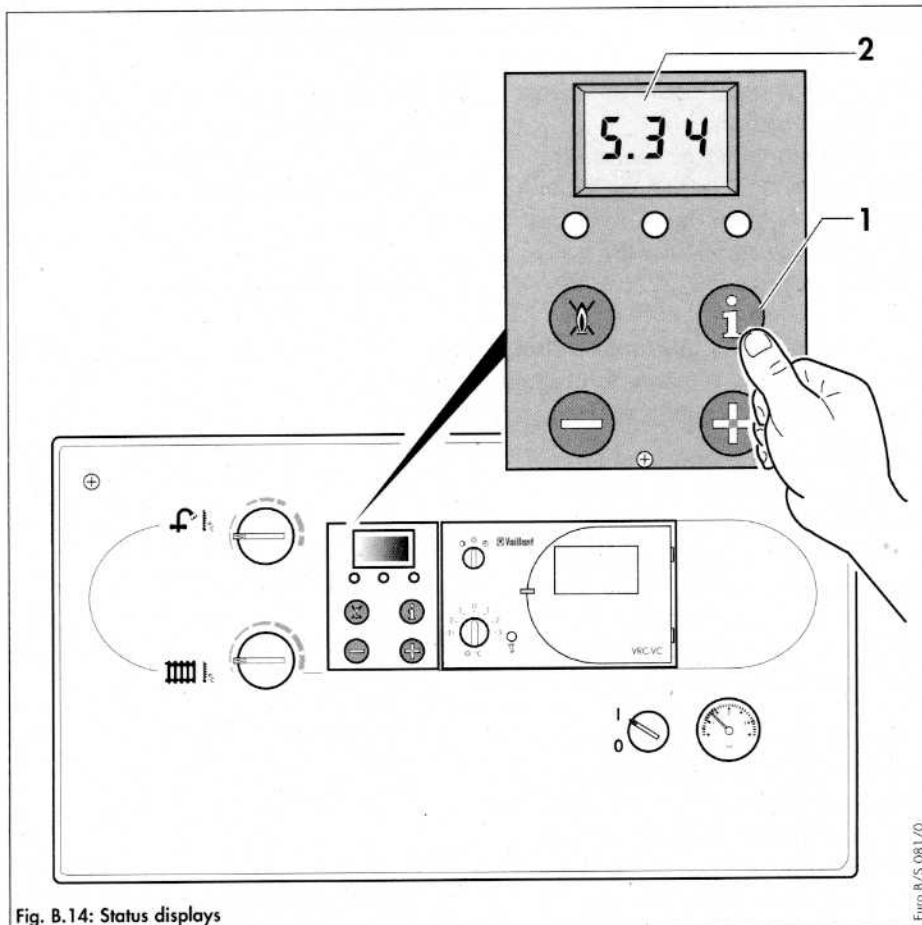


Fig. B.14: Status displays

Euro B/S 08170

Status display

(For maintenance and service work performed by your installer or service agent)

The status displays are activated by pressing the „i“ button (1). The current status code, e.g. „S.34“ for the frost protection mode, is shown on the display (2). Pressing the „i“ button again will switch you back to the normal mode. The „+“ and „-“ buttons will only be used by your installer or service agent during service and maintenance work.

Display	Meaning
S.00*	No heating required
S.01*	Fan running
S.03*	Ignition sequence
S.04*	Burner ignited
S.05*	Fan and water pump over run
S.07*	Water pump over run
S.08*	Anti cycling mode (after heating operation)
S.10**	Hot water demand
S.14**	Burner ignited
S.34*	Frost protection mode

Table B.1: Status displays (A complete overview of the status codes can be found in the installation instructions).

* Heating operation

** Hot water operation (TURBOmax Plus only)