en

POTTERTON
COMMERCIAL

User Guide

Floor-standing condensing gas boiler

SIRIUS THREE FS 50
SIRIUS THREE FS 70
SIRIUS THREE FS 90
SIRIUS THREE FS 110

Dear Customer,

Thank you very much for buying this appliance.

Please read through the manual carefully before using the product, and keep it in a safe place for later reference. In order to ensure continued safe and efficient operation we recommend that the product is serviced regularly. Our service and customer service organisation can assist with this.

We hope you enjoy years of problem-free operation with the product.

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1 Safety

1.1 General safety instructions

For the installer and end user:

Danger
This appliance can be used by children aged from 8 years and above and persons 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. Children must not carry out any unsupervised cleaning or maintenance operations.

Caution
Do not touch the flue gas pipes. Depending on the boiler settings, the temperature of the flue gas pipes can rise to over 60°C.

Caution
Do not touch radiators for long periods. Depending on the boiler settings, the temperature of the radiators may exceed 60 °C.

Caution
Take precautions with the domestic hot water. Depending on the boiler settings, the domestic hot water temperature may exceed 65°C.

Danger of electric shock
Before any work, switch off the mains supply to the boiler.

For the installer:

Danger
If you smell gas:

1. Do not use a naked flame, do not smoke, do not operate electrical contacts or switches (doorbell, light, motor, lift, etc.).
2. Shut off the gas supply.
3. Open the windows.
4. Locate the probable leak and seal it immediately.
5. If the leak is before the gas meter, contact the gas supplier.

Danger
If you smell flue gases:

1. Switch off the appliance.
2. Open the windows.
3. Locate the probable source of the flue gas leak and fix it immediately.

Warning
The condensation drain must not be changed or sealed. If a condensate neutralisation system is used, the system must be cleaned regularly in accordance with the instructions provided by the manufacturer.

For the end user:

Danger
If you smell gas:

1. Do not use a naked flame, do not smoke, do not operate electrical contacts or switches (doorbell, light, motor, lift, etc.).
2. Shut off the gas supply.
3. Open the windows.
4. Evacuate the property.
5. Contact a qualified professional.

Danger
If you smell flue gases:

1. Switch off the appliance.
2. Open the windows.
3. Evacuate the property.
4. Contact a qualified professional.

1.2 Recommendations

Danger
For safety reasons, we recommend fitting smoke and CO_2 detectors and alarms at suitable places in your home.

Caution

- The boiler must always be connected to the protective earthing.
- Earthing must comply with the prevailing installation standards.
- Earth the appliance before making any electrical connections.

For the type and calibre of the protective equipment, refer to the chapter Electrical Connections in the Installation and Service Manual.

Caution
If a power cord comes with the appliance and it turns out to be damaged, it must be replaced by the manufacturer, its after sales service or persons with similar qualifications in order to obviate any danger.

Caution
A disconnection device must be fitted to the fixed wiring in accordance with the installation rules.

Caution
Power the appliance via a circuit that includes an omnipolar switch with contact opening distance of 3 mm or more.

Caution
Have the boiler and heating system drained by a qualified professional if the home is left empty for a long period of time and there is a chance of frost.

Caution
Remove the boiler casing only to perform maintenance and repair work. Always put the casing back in place after such work.

Caution
To enjoy warranty cover, no modifications must be made to the boiler.

Caution
The frost protection function only protects the boiler, not the heating system.

Caution
The frost protection function does not work if the boiler is powered off.

Caution
The appliance should be switched to Summer or Frost Protection mode rather than be switched off in order to guarantee the following functions:

- Avoidance of pumps blocking
- Frost Protection

Important
Respect the minimum and maximum water inlet pressure to ensure correct operation of the boiler: refer to the chapter Technical Specifications.

Important
Only qualified professionals are permitted to install the boiler, in accordance with prevailing local and national regulations.

Important

- Never remove or cover labels and data plates affixed to the boiler.
- Labels and data plates must be legible throughout the entire lifetime of the boiler. Immediately replace damaged or illegible instructions and warning labels.

Important
Keep this document close to where the appliance is installed.

1.3 Liabilities

1.3.1 User's liability

To guarantee optimum operation of the system, you must abide by the following instructions:

- Read and follow the instructions given in the manuals provided with the appliance.
- Call on a qualified professional to carry out installation and initial commissioning.
- Get your installer to explain your installation to you.
- Have the required inspections and maintenance carried out by a qualified installer.
- Keep the instruction manuals in good condition close to the appliance.

1.3.2 Installer's liability

The installer is responsible for the installation and initial commissioning of the appliance. The installer must observe the following instructions:

- Read and follow the instructions given in the manuals provided with the appliance.
- Install the appliance in compliance with prevailing legislation and standards.
- Carry out initial commissioning and any checks necessary.
- Explain the installation to the user.
- If maintenance is necessary, warn the user of the obligation to check the appliance and keep it in good working order.
- Give all the instruction manuals to the user.

1.3.3 Manufacturer's liability

Our products are manufactured in compliance with the requirements of the various Directives applicable. They are therefore delivered with the CE marking and any documents necessary. In the interests of the quality of our products, we strive constantly to improve them. We therefore reserve the right to modify the specifications given in this document.

Our liability as manufacturer may not be invoked in the following cases:

- Failure to abide by the instructions on installing and maintaining the appliance.
- Failure to abide by the instructions on using the appliance.
- Faulty or insufficient maintenance of the appliance.

2 About this manual

2.1 General

This manual is intended for the end user of a SIRIUS THREE FS boiler.

2.2 Symbols used

2.2.1 Symbols used in the manual

This manual uses various danger levels to draw attention to special instructions. We do this to improve user safety, to prevent problems and to guarantee correct operation of the appliance.

Danger
Risk of dangerous situations that may result in serious personal injury.

Danger of electric shock
Risk of electric shock.

Warning
Risk of dangerous situations that may result in minor personal injury.

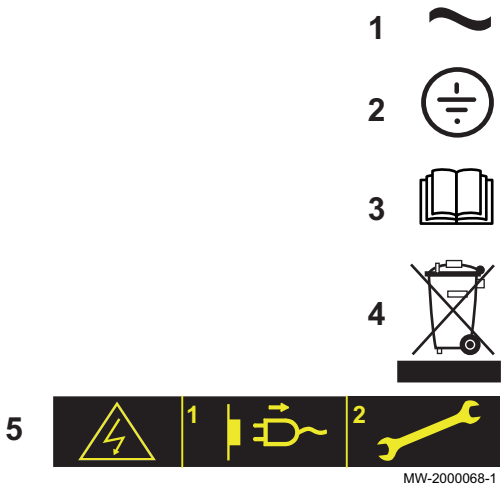
Caution
Risk of material damage.

Important
Please note: important information.

See
Reference to other manuals or pages in this manual.

2.2.2 Symbols used on the appliance

Fig.1



1 Alternating current.
2 Protective earthing.
3 Before installing and commissioning the appliance, carefully read the instruction manuals provided.
4 Dispose of used products through an appropriate recovery and recycling structure.
5 Caution: danger of electric shock, live parts. Disconnect the mains power prior to carrying out any work.

3 Technical specifications

3.1 Homologations

3.1.1 Ecodesign Directive

This product conforms to the requirements of European Directive 2009/125/EC on the ecodesign of energy-related products.

3.1.2 Certifications

We hereby certify that the series of appliances specified below complies with the standard model described in the CE declaration of conformity.

CE number	CE-0085CP0089
UKCA number	UKCA/0558/21/234
NOx class	Class 6
Type of flue gas connection	• B_{23} – B_{23P} • $C_{13(X)}$ • $C_{33(X)}$ • $C_{43(X)}$ • $C_{53(X)}$ • $C_{63(X)}$ • $C_{83(X)}$

3.2 Technical data

Tab.1 General

	Boiler speed	Unit	SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Useful heat output at 80/60°C Heating mode	Minimum	kW	5.0	7.2	9.4	11.4
Useful heat output at 80/60°C Heating mode	Maximum	kW	45	65	85	102
Useful heat output at 50/30 °C Heating mode	Minimum	kW	5.4	7.8	10.2	12.3

	Boiler speed	Unit	SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Useful heat output at 50/30 °C Heating mode	Maximum	kW	48.6	70.2	91.8	110.2
Heat input - Heating mode	Minimum	kW	5.1	7.4	9.7(1)	11.7
Heat input - Heating mode	Maximum	kW	46.3	66.9	87.4	104.9
Heat input - Heating mode	Minimum	kW	5.6	8.2	10.7	12.9
Heat input - Heating mode	Maximum	kW	51.4	74.2	97.0	116.4
Reduced heat input NPG2* - LHV	Minimum	kW	4.8	7.0	9.2	11.1
	Maximum	kW	43.8	63.3	82.7	99.3
Reduced heat input NPG2* - HHV	Minimum	kW	5.4	7.8	10.2	12.3
	Maximum	kW	48.6	70.3	91.8	110.2
Efficiency at 80/60 °C - Heating mode under full load	Maximum	%	97.4	97.2	97.3	97.2
Efficiency at 50/30 °C -	Heating mode under full load	%	105.0	105.0	105.5	105.1
Efficiency - - Return temperature 30°C	Heating mode under part load	%	108.4	108.1	108.2	108.1
*NPG2: Mixture of 80% CH4 + 20% H2						
(1) The heat input with G31 gas is different and is 12.5 kW						

Tab.2 Characteristics of the heating circuit

	Unit	SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Water content (excluding expansion vessel)	litre	2.81	4.98	8.34	9.83
Minimum operating pressure	MPa (bar)	0.05 (0.5)	0.05 (0.5)	0.05 (0.5)	0.05 (0.5)
Maximum operating pressure (MOP)	MPa (bar)	0.38 (3.8)	0.38 (3.8)	0.38 (3.8)	0.38 (3.8)
Maximum water temperature	°C	85	85	85	85
Maximum operating temperature	°C	80	80	80	80

Tab.3 Data on the gases and combustion gases

For gas flow rates at 15 °C and 1013.25 hPA	Boiler speed	Unit	SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Minimum gas pressure (G20)		mbar	17	17	17	17
Nominal pressure (G20)		mbar	20	20	20	20
Maximum pressure (G20)		mbar	25	25	25	25
Minimum gas pressure (G25)		mbar	20	20	20	20
Nominal pressure (G25)		mbar	25	25	25	25
Maximum pressure (G25)		mbar	30	30	30	30
Minimum gas pressure (G31)		mbar	25	25	25	25
Nominal pressure (G31)		mbar	37	37	37	37
Maximum pressure (G31)		mbar	57.5	57.5	57.5	57.5
Consumption of natural gas (G20)	Minimum	m³/h	0.54	0.78	1.03	1.24
Consumption of natural gas (G20)	Maximum	m³/h	4.90	7.07	9.25	11.10
Consumption of natural gas (G25)	Minimum	m³/h	0.63	0.91	1.19	1.44
Consumption of natural gas (G25)	Maximum	m³/h	5.69	8.22	10.75	12.91
Consumption of Propane (G31)	Minimum	kg/h	0.40	0.57	0.97	0.91
Consumption of Propane (G31)	Maximum	kg/h	3.59	5.19	6.79	8.15

For gas flow rates at 15 °C and 1013.25 hPA	Boiler speed	Unit	SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
NOx emission according to EN297A3	Class 5	mg/kWh	29.8	34.8	39.5	24.7
Flue gas mass flow rate (G20)	Minimum	kg/h	7.2	14.4	18	18
Flue gas mass flow rate (G20)	Maximum	kg/h	75.6	111.6	144	169.2
Maximum flue gas temperature	Minimum	°C	92	76	70	70

Tab.4 Electrical specifications

	Unit	SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Power supply voltage	VAC	230V 50Hz	230V 50Hz	230V 50Hz	230V 50Hz
Maximum absorbed power - Full load	W	100	117	146	185
Maximum absorbed power - Part load	W	24	24	24	24
Maximum absorbed power - Stand-by	W	2.7	3	3	3

Tab.5 Other specifications

	Unit	SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Ingress protection rating		IPX1B	IPX1B	IPX1B	IPX1B
Weight empty	kg	60	70	104	109

3.2.1 Other technical parameters

Tab.6 Technical parameters for boiler space heaters

Product name			SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Condensing boiler			Yes	Yes	Yes	Yes
Low-temperature boiler(1)			No	No	No	No
B1 boiler			No	No	No	No
Cogeneration space heater			No	No	No	No
Combination heater			Yes	Yes	Yes	Yes
Rated heat output	*Prated*	kW	45	65	85	102
Useful heat output at rated heat output and high temperature regime(2)	P_4	kW	45.0	65.0	85.0	102.0
Useful heat output at 30% of rated heat output and low temperature regime(1)	P_1	kW	15.0	21.7	28.3	34.0
Seasonal space heating energy efficiency	η_s	%	93	93	-	-
Useful efficiency at rated heat output and high temperature regime(2)	η_4	%	87.7	87.6	87.7	87.6
Useful efficiency at 30% of rated heat output and low temperature regime(1)	η_1	%	97.7	97.4	97.5	97.4
Auxiliary electricity consumption						
Full load	*elmax*	kW	0.100	0.117	0.146	0.185
Part load	*elmin*	kW	0.023	0.024	0.024	0.024
Stand-by	P_{SB}	kW	0.003	0.003	0.003	0.003
Other specifications						
Standby heat loss	P_{stby}	kW	0.045	0.046	0.062	0.072
Ignition burner power consumption	P_{ign}	kW	-	-	-	-
Annual energy consumption	Q_{HE}	GJ	139	201	-	-

Product name			SIRIUS THREE FS 50	SIRIUS THREE FS 70	SIRIUS THREE FS 90	SIRIUS THREE FS 110
Sound power level, indoors	L_{WA}	dB	61	64	-	-
Emissions of nitrogen oxides	NO_X	mg/kWh	27	31	36	22
(1) Low temperature means for condensing boilers 30°C, for low temperature boilers 37°C and for other heaters 50°C return temperature (at heater inlet). (2) High temperature regime means 60°C return temperature at heater inlet and 80°C feed temperature at heater outlet.						

See
The back cover for contact details.

4 Description of the product

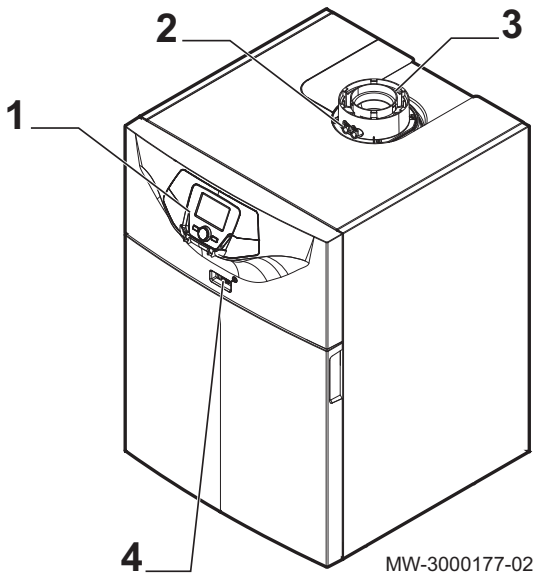
4.1 General description

SIRIUS THREE FS floor-standing condensing gas boilers have the following characteristics:

- Low pollutant emissions
- High efficiency heating
- Electronic control panel
- Flue gas discharge by a concentric connection.
- Perfectly suitable for cascade systems with several boilers.

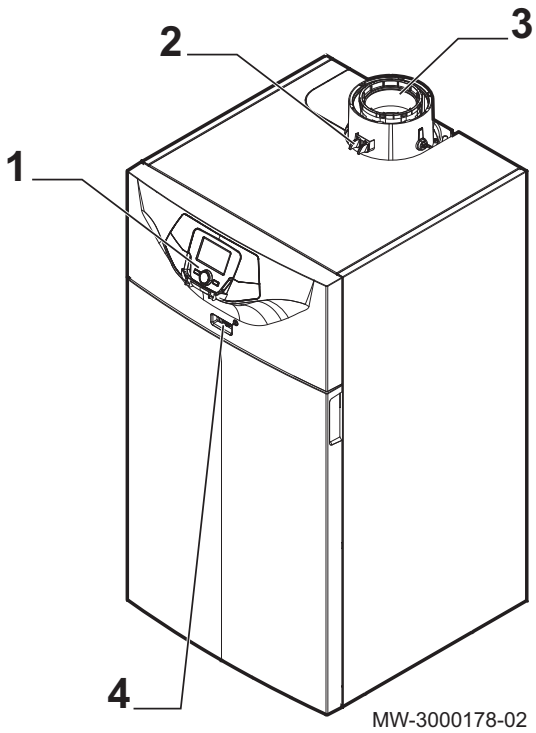
4.2 Main boiler components

Fig.2 SIRIUS THREE FS 50 and SIRIUS THREE FS 70



1 Control panel
2 Flue gas measuring point
3 Flue gas connection
4 On/Off button

Fig.3 SIRIUS THREE FS 90 and SIRIUS THREE FS 110

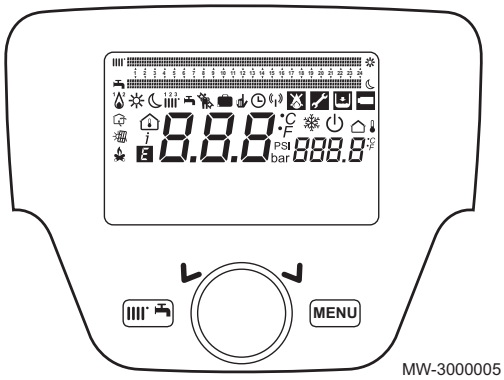


1 Control panel
2 Flue gas measuring point
3 Flue gas connection
4 On/Off button

4.3 Control panel description

4.3.1 Description of the keys

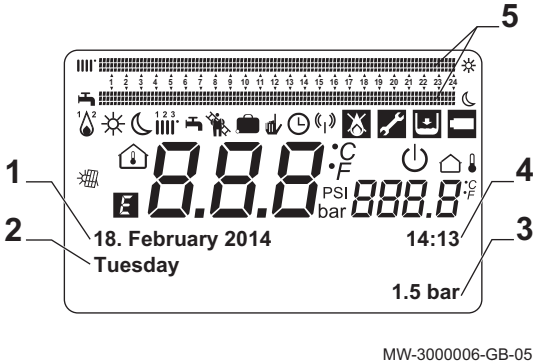
Fig.4



Shortcuts menu key
Quick access to the operating modes
MENU Menu key
Selection and confirmation button
- Rotary button for navigating between menu or parameter screens
- Push button to select a menu/parameter or to confirm a value/ action

4.3.2 Description of the symbols

Fig.5



1 Date: day, month, year
2 Day of the week
3 Boiler / heating circuit pressure
4 Clock: hours and minutes
5 Operating period indicators in Comfort/Eco mode over 24 hours:
- Top line: Heating mode
- Bottom line: Domestic hot water mode

Tab.7 Description of the symbols

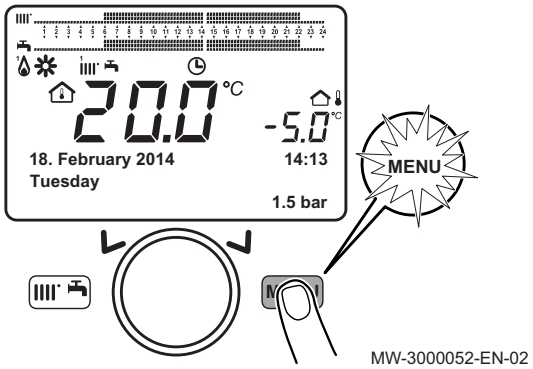
Type of information	Symbol	Description
Information		Room temperature (°C)
		Outdoor temperature (°C)
	°C, °F, bar, PSI	Temperature and hydraulic pressure units: international system or imperial system.
		Data transmission: only when the wireless remote control is connected.
		Solar integration available
Operating modes		Comfort operating mode: comfort room temperature
		Eco operating mode: reduced room temperature
		Operating mode: Heating •  (1): Zone 1 active •  (2): Zone 2 active •  (3): Zone 3 active Symbol displayed: • No symbol: heating circuit not connected • Fixed symbol: heating circuit connected • Flashing symbol: heating requested
		Operating mode: Domestic hot water activated **Important** The heating  is off during production of domestic hot water  .
		Operating mode: Comfort  / Eco  override mode
		Operating mode: Automatic, according to the timer programs
		Sweep Function activated
		Holidays program function activated
		Frost protection mode: the boiler frost protection has been activated
		Burner on: •  (1): Output < 70% •  (2): Output > 70%
error		Error: the burner cannot start up
		Error: After Sales Service intervention required
		Hydraulic pressure too low
		Anomaly/error detected

5 Operation

5.1 Use of the control panel

5.1.1 Modifying the user parameters

Fig.6



MW-3000052-EN-02

1. Press the MENU key to access the parameters.

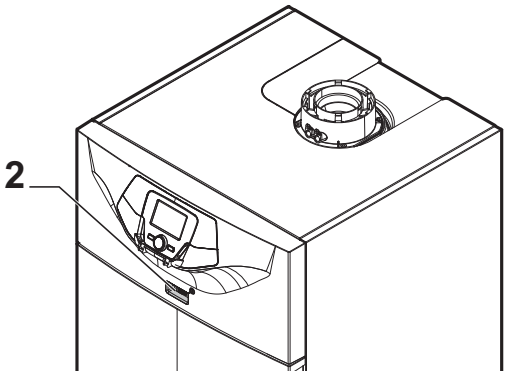
Important
Press the MENU key to return to the main display.

⇨ The user parameters can now be accessed. Use the ◯ button to select and modify them.

See also
List of parameters, page 16

5.2 Starting up the boiler

Fig.7



MW-3000050-2

1. Open the gas cock.
2. Start up the boiler by pressing the ON/OFF switch.
3. Press the key to access the shortcuts menu.
4. Select the **Standby/operation** parameter by turning the ◯ button.
5. Press the ◯ button to start up the boiler.
   ⇨ The ⏻ symbol disappears.

5.3 Stopping the boiler

Important
Choose the operating mode **Off** or **Standby**.

1. Switch off the boiler by pressing the ON/OFF switch.
2. Close the gas cock.

5.3.1 Putting the boiler in Standby mode

1. Press the key to access the shortcuts menu.
2. Select the **Standby/operation** parameter by turning the ◯ button.
3. Press the ◯ button to put the boiler in standby.
   ⇨ The ⏻ symbol is displayed.

5.4 Frost Protection

The electronic management system of the boiler includes protection against frost. If the water temperature falls below 5°C, the burner starts up in order to provide a water temperature of 30°C.

This function only works if the boiler is turned on, the gas supply open and the hydraulic pressure correct.

5.4.1 Activating the Off

1. Press the key to access the shortcuts menu.
2. Select the parameter **Central heating mode CH1** by turning the button.
3. Confirm the selection by pressing the button.
4. Select the parameter **Off** by turning the button.
5. Confirm the selection by pressing the button.
   ⇨ The symbol is displayed.

Important
When the operating mode **Off** is activated:
- The electrical circuits continue to be powered up.
- The frost protection function is activated.

6 Settings

6.1 List of parameters

6.1.1 Shortcuts menu

Tab.8 Functions accessible with the shortcut key

Parameter	Description	Adjustment range
Standby/operation	Boiler standby/Start-up.	• **Standby** : Boiler put on standby. - The symbol is displayed. - The boiler's operating modes are deactivated. - The frost protection function is activated. • On : Putting the boiler into operation
316:Hot water boost	Forcing domestic hot water production.	• **On** : - Activates the domestic hot water override. - The symbol is displayed. - If a domestic hot water tank is connected to the boiler circuit, the boiler will give priority to forcing heating of the DHW tank, independently of the other parameters. • **Off** : Deactivates forcing of domestic hot water.
Central heating mode CH1	Boiler operating mode.	• **On** : - The heating is activated in Comfort mode. - The symbols , and are displayed. • **Reduced**: - The heating is activated in Eco mode. - The symbols , and are displayed. • **Timed** : - The heating operates according to the defined timer programs. - The symbols and are displayed. • **Off** : - The boiler is shut down and frost protection is active. - The symbol is displayed.
Room temperature CH1	Room temperature setpoint in comfort mode.	• Can be adjusted between 16 and 35 °C.

Parameter	Description	Adjustment range
Hot water heating	Setting domestic hot water production.	• **On** : Enables domestic hot water production. • **Off** : - Disables domestic hot water production. - The symbol disappears from the display. • **Eco** : Not used.
Hot water temp setpoint	Domestic hot water temperature set point.	• Can be adjusted between 35 and 60 °C.

6.1.2 Information menu

Tab.9 Information menu

Information	Description	Unit
Room temperature	Is displayed if the control system unit is configured as a room temperature appliance	
Room temperature min		
Room temperature max		
Boiler temperature	Boiler flow temperature	°C
Outside temp	Outdoor temperature	°C
Outside temp min	Minimum outside temperature value memorised **Important** The outside sensor must be connected.	°C
Outside temp max	Maximum outside temperature value memorised **Important** The outside sensor must be connected.	°C
Hot water temp 1	Domestic hot water temperature **Important** The value displayed comes from the sensor on the boiler's domestic hot water circuit.	°C
Collector temp 1	Instantaneous temperature of the solar panel sensor (when associated to a solar system)	°C
State central heating CH1	Operating mode of heating circuit 1	
State central heating CH2	Operating mode of heating circuit 2	
State central heating CH3	Operating mode of heating circuit 3	
State hot water	Domestic hot water circuit operating mode	
State boiler	Boiler operating mode	
State solar	Indicates solar running (when associated to a solar system)	-
Telephone customer service	Telephone number of the After Sales Service	0845 070 1057

6.1.3 List of user parameters

Tab.10 Structure of the user menu

Menu	Feature
Set time and date	Setting the time and date
Operator section	• Change Language • Programming lock
Time program **Time hot water**	Predefined or custom programs with a maximum of 3 comfort or domestic hot water production ranges for each 24 hours
Holiday Settings	Eco heating or frost protection mode for a defined period
Temps / mode CH1 **Temps / mode CH2** **Temps / mode CH3**	Choice of Comfort/Eco/Auto/Standby mode for each heating circuit with reduced or comfort temperature

Tab.11 **Set time and date** menu

Parameter number	Parameter	Description
1	**Hours / minutes**	Setting the time
2	**Day / month**	Setting the day and the month
3	**Year**	Setting the year

Tab.12 **Operator section** menu

Parameter number	Parameter	Description	Factory setting
20	Change Language	Setting the interface language	English
27	Programming lock	Setting the programming lock • Off: the parameters can be displayed and modified • On: the parameters can be displayed but cannot be modified	Off

Tab.13 **Time program** menu

Parameter number			Parameter	Description
Heating circuit 1	Heating circuit 2	Heating circuit 3		
500	520	540	Select days	Selecting the days or group of days for the timer program.
514	534	554	Mon-Sun	Selecting a default timer program.
501	521	541	1st Time ON	Start of timer period 1.
502	522	542	1st Time OFF	End of timer period 1.
503	523	543	2nd Time ON	Start of timer period 2.
504	524	544	2nd Time OFF	End of timer period 2.
505	525	545	3rd Time ON	Start of timer period 3.
506	526	546	3rd Time OFF	End of timer period 3.
516	536	556	Default values	Reset the timer programming parameters (Yes / No)

Tab.14 **Time hot water** menu

Parameter number	Parameter	Description
560	Select days	Selecting the days or group of days for the timer program.
574	Mon-Sun	Selecting a default timer program.
561	1st Time ON	Start of timer period 1.
562	1st Time OFF	End of timer period 1.
563	2nd Time ON	Start of timer period 2.
564	2nd Time OFF	End of timer period 2.
565	3rd Time ON	Start of timer period 3.
566	3rd Time OFF	End of timer period 3.
576	Default values	Reset the timer programming parameters (Yes / No).

Tab.15 **Holiday Settings** menu

Parameter number			Parameter	Description	Factory setting
Heating circuit 1	Heating circuit 2	Heating circuit 3			
641	651	661	Select	Selecting the holiday period	Period 1
642	652	662	Start	Selecting the day and month of the start of the current holiday period.	

Parameter number			Parameter	Description	Factory setting
Heating circuit 1	Heating circuit 2	Heating circuit 3			
643	653	663	End	Selecting the day and month of the end of the current holiday period.	
648	658	668	Operating level	Boiler operating mode during the holiday period. • Off • Reduced	Off

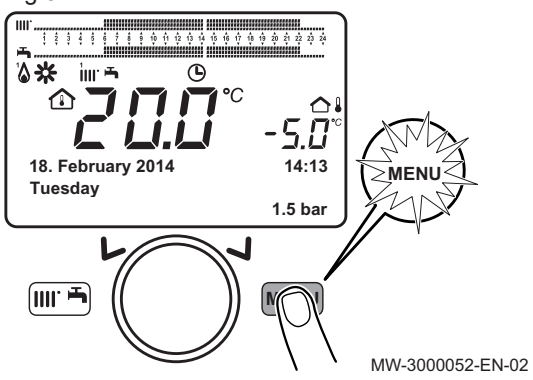
Tab.16 **Temps / mode CH1 – Temps / mode CH2 – Temps / mode CH3** menu

Parameter number			Parameter	Description	Factory setting
Heating circuit 1	Heating circuit 2	Heating circuit 3			
700	1000	1300	Operating mode	The control unit is installed on the boiler: • Off : heating is deactivated. • Timed : the heating is dependent on the timer program. • Reduced : heating is in permanent reduced mode. • On : heating is in permanent reduced mode. The control unit is installed as a room temperature control system: • Off : the boiler starts up when the room temperature falls below the frost protection set point. • Timed : the heating is dependent on the timer program. • Reduced : the room temperature set point is the reduced set point (Parameters 712, 1010, 1310) • On : the room temperature set point is the comfort set point (Parameters 710, 1010, 1310)	On
710	1010	1310	Comfort setpoint		20 °C
712	1012	1310	Reduced temp setpoint		16 °C

6.2 Setting the parameters

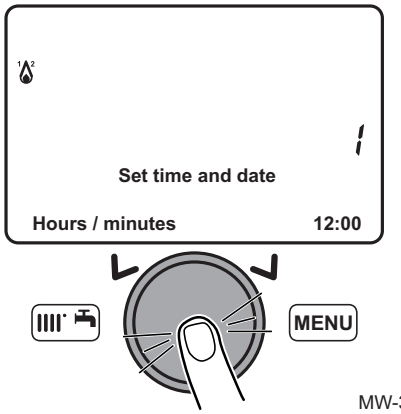
6.2.1 Setting the date and time

Fig.8



1. Press the MENU key to access the parameters.
2. Select the **Set time and date** menu by turning the button.
3. Confirm the menu selection by pressing the button.
   ⇨ The parameter **Hours / minutes** appears.

Fig.9



MW-3000055-EN-02

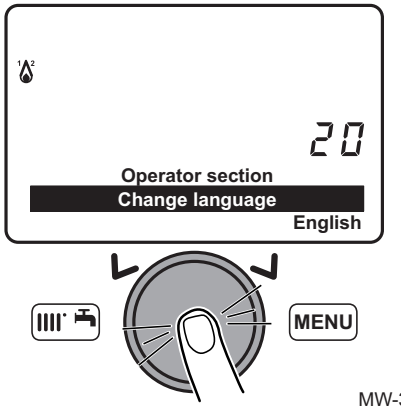
4. Confirm the parameter selection by pressing the ◯ button.
   ⇨ The parameter flashes, it can be modified.
5. Modify the parameter by turning the ◯ button.
6. Confirm the setting by pressing the ◯ button.
7. Set the other parameters if necessary.

Important
Press the MENU key to return to the main display.

See also
List of user parameters, page 17

6.2.2 Selecting the language

Fig.10



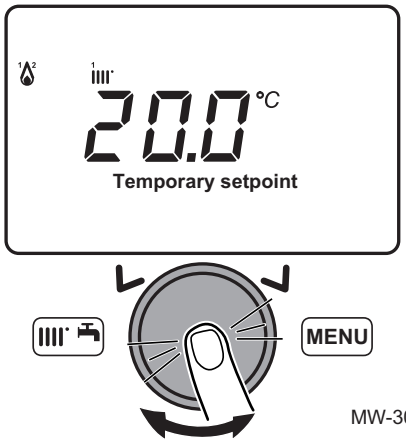
MW-3000058-EN-02

1. Press the MENU key to access the parameters.
2. Select the **Operator section** menu by turning the ◯ button.
3. Confirm the menu selection by pressing the ◯ button.
   ⇨ The **Change Language** parameter appears.
4. Confirm the menu selection by pressing the ◯ button.
   ⇨ The language currently used flashes.
5. Modify the parameter by turning the ◯ button.
6. Confirm the setting by pressing the ◯ button.

Important
Press the MENU key to return to the main display.

6.2.3 Setting a temporary heating flow temperature

Fig.11

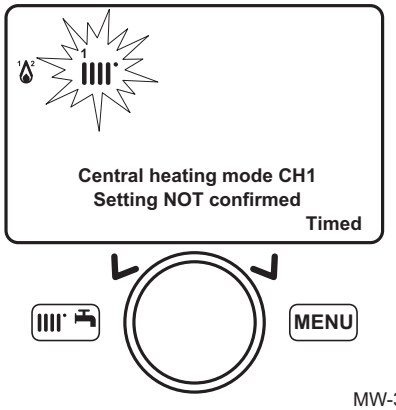


MW-3000143-EN-02

1. From the control panel main screen, turn the ◯ button to increase or reduce the temperature value.
2. Confirm the menu selection by pressing the ◯ button.

6.2.4 Changing the operating mode

Fig.12



MW-3000060-EN-02

1. Press the key to access the shortcuts menu.
2. Select the parameter **Central heating mode CH1** by turning the button.
3. Press the button to confirm.
4. Select the appropriate operating mode.
5. Press the button to confirm.

Important
Press the MENU key to return to the main display.

See also
Shortcuts menu, page 16

6.2.5 Forcing domestic hot water production

1. Press the key to access the shortcuts menu.
2. Select the parameter **316:Hot water boost** by turning the button.
3. Press the button to start forcing domestic hot water.

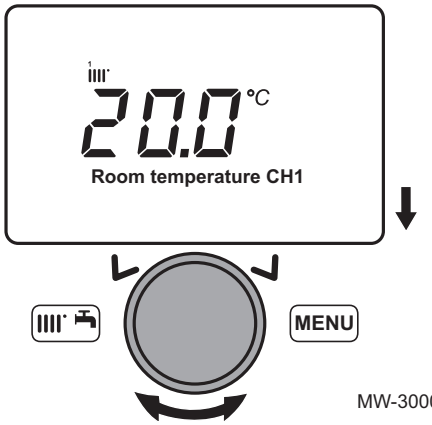
Important
Press the button a second time to stop forcing domestic hot water.

Important
Press the MENU key to return to the main display.

See also
Shortcuts menu, page 16

6.2.6 Setting the room temperature set point (On mode)

Fig.13



MW-3000063-EN-02

1. Press the key to access the shortcuts menu.
2. Select the parameter **Room temperature CH1** by turning the button.
3. Press the button to confirm.
4. Turn the button to modify the temperature set point.
5. Press the button to confirm.

Important
Press the MENU key to return to the main display.

See also
Shortcuts menu, page 16

6.2.7 Modifying the domestic hot water production mode

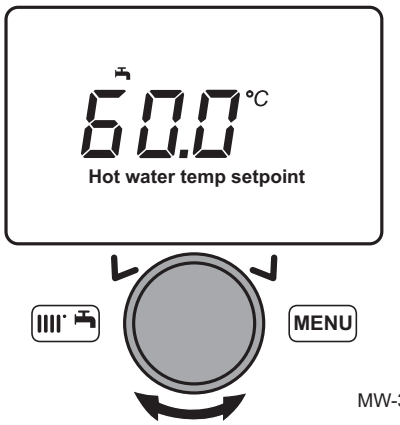
1. Press the key to access the shortcuts menu.
2. Select the parameter **Hot water heating** by turning the button.
3. Press the button to confirm.
4. Select the appropriate operating mode.
5. Press the button to confirm.

Important
Press the MENU key to return to the main display.

See also
Shortcuts menu, page 16

6.2.8 Setting the domestic hot water temperature set point

Fig.14



MW-3000067-EN-03

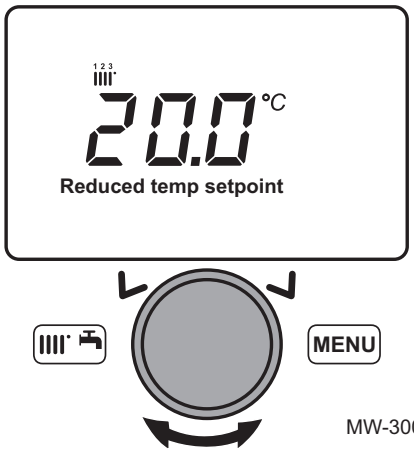
1. Press the key to access the shortcuts menu.
2. Select the parameter **Hot water temp setpoint** by turning the button.
3. Press the button to confirm.
4. Turn the button to modify the temperature set point.
5. Press the button to confirm.

Important
Press the MENU key to return to the main display.

See also
Shortcuts menu, page 16

6.2.9 Setting the room temperature set point (Reduced mode)

Fig.15



MW-3000070-EN-03

1. Press the MENU key to access the parameters.
2. Select the **Temps / mode CH1** menu by turning the button.
3. Confirm the menu selection by pressing the button.
   ⇨ The parameter **Operating mode** appears.
4. Select the **Reduced temp setpoint** menu by turning the button.
5. Confirm the menu selection by pressing the button.
   ⇨ The room temperature set point (Reduced mode) flashes.
6. Turn the button to modify the temperature set point.
7. Press the button to confirm.

Important
Press the MENU key to return to the main display.

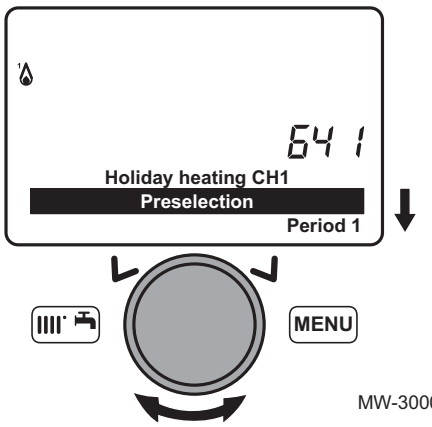
6.2.10 Programming a Holiday period

This series of functions is used to program the boiler's behaviour in holiday periods or during prolonged absences. The various parameters are used to program one of eight Holiday periods.

Important
When the function is activated, the symbol is displayed.

1. Press the MENU key to access the parameters.
2. Select the **Holiday heating CH1** menu by turning the button.
3. Confirm the menu selection by pressing the button .
   ⇨ The **Select** parameter appears.

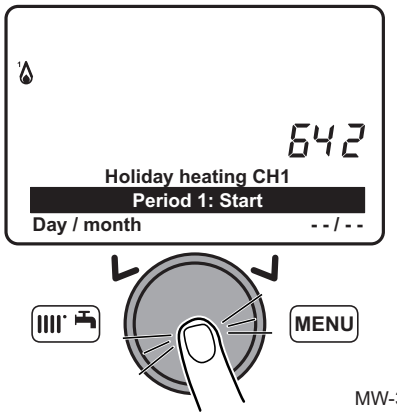
Fig.16



MW-3000073-EN-02

4. Select the Holiday period to be programmed by turning the button.
5. Confirm by pressing the button.

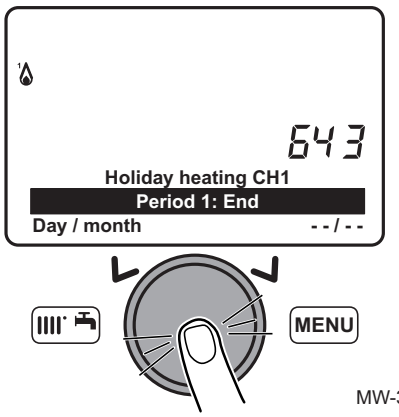
Fig.17



MW-3000075-EN-02

6. Select the **Start** parameter by turning the button.
7. Confirm the menu selection by pressing the button.
8. Select and confirm the start date (day/month) of the holiday period with the button.
9. Confirm by pressing the button.

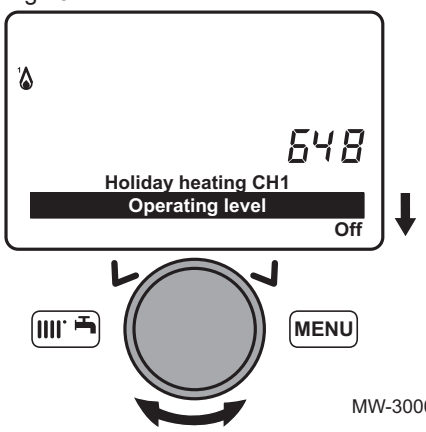
Fig.18



MW-3000078-EN-02

10. Select the End parameter by turning the button.
11. Confirm the menu selection by pressing the button.
12. Select and confirm the end date (day/month) of the holiday period with the button.
13. Confirm by pressing the button.

Fig.19



MW-3000080-EN-02

14. Select the **Operating level** parameter by turning the button.
15. Confirm the menu selection by pressing the button.
16. Select the boiler's operating mode during the holiday period by turning the button.
17. Confirm the menu selection by pressing the button.

See also

Setting the room temperature set point (On mode), page 21
Setting the room temperature set point (Reduced mode), page 22
Activating the Off, page 16

6.2.11 Selecting a heating circuit

The control panel can manage up to three different heating circuits.

1. From the home screen, turn the button to select one of the three heating circuits available.
2. Press the button to confirm.
3. Turn the button to temporarily modify the temperature set point on the selected heating circuit.
4. Press the button to confirm.
   ⇨ The selected heating circuit is active.

6.3 Accessing the information menu

1. Go to the parameters menu by pressing the MENU key.
2. Select the Information menu with the rotary button.
3. Confirm by pressing the rotary button.
4. Use the rotary button to scroll through the various items of information.

See also
Information menu, page 17

7 Maintenance

7.1 General

We recommend having the boiler inspected and serviced at regular intervals.

Caution
Do not neglect to service the boiler. Contact a qualified professional or take out a maintenance contract for the obligatory annual servicing of the boiler.
Failure to service the appliance voids the warranty.

Caution
Adapt the frequency of inspection and maintenance to the conditions of use. This particularly concerns boilers used continuously (for specific processes).

Danger of electric shock
Before starting any maintenance work, switch off the boiler and protect it to ensure it cannot be accidentally switched back on.

Caution
Have an inspection carried out and the flues swept **at least once a year** or more, depending on the regulations in force in your country.

Caution
Only qualified professionals are authorised to carry out maintenance work on the boiler and the heating system.

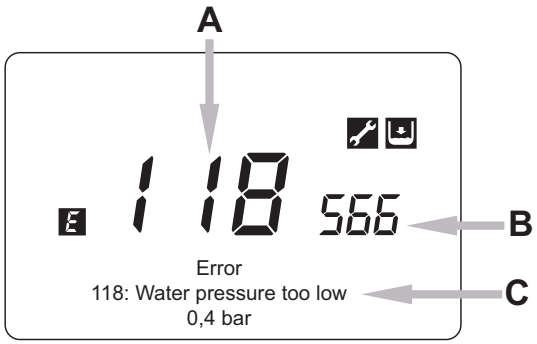
Caution
After maintenance or repair work, check the entire heating system to ensure that there are no leaks.

Caution
Only genuine spare parts may be used.

8 Troubleshooting

8.1 Error codes

Fig.20



BM-0000026-GB-03

A Error code
B Secondary error code
C Description of the error

Important
Press the MENU key to return to the main display.

- The E symbol continues to be displayed on the control panel.
- If the error is not resolved after one minute, the error code is displayed on the control panel a second time.

Important
Contact the installer:

- If an error code different from the ones described is displayed on the screen
- If an error code is displayed on a regular basis

Important
If the error code simultaneously displays the and symbols, contact the accredited technical support service.

8.1.1 List of error codes

Tab.17 List of error codes

E	Display	Description of the error	Probable causes	Check/Solution
10	10:Outside sensor	Outdoor temperature sensor.	The outdoor temperature sensor is not correctly connected to the boiler	Check that the outdoor temperature sensor has been correctly connected to the boiler sensor terminal block
			The outdoor temperature sensor is not compatible with the LMS 14 control system	Contact your manufacturer to check the compatibility of the outdoor temperature sensor with the boiler
			The outdoor temperature sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table (1 K sensor)
50	50:HW sensor 1	DHW sensor	The sensor is not correctly connected to the boiler sensor terminal block	Check that the sensor has been correctly connected to the boiler sensor terminal block
			The DHW temperature sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table (10 K sensor)
110 & 111	110:Lockout SLT	Safety thermostat cut-off for overheating	The water flow is insufficient	Check that the hydraulic circuit circulating pump is correctly operating.
			There is air in the hydraulic circuit	Manually vent the hydraulic circuit
			The safety thermostat is not connected correctly	Check that the safety thermostat is correctly connected to the boiler PCB

E	Display	Description of the error	Probable causes	Check/Solution
133	133:Safety time exceeded	Ignition error (4 attempts).	The boiler has not been supplied with gas	Check that the gas pipe valves are open
			The gas circuit has not been vented	Vent the gas pipe using the control valve located on the boiler
			The power supply has been reversed	Reverse the live-neutral polarity on the boiler power supply terminal block
E110	110:Lockout SLT	Code **E110** displayed	Overheating due to a breach in the insulation	Remove the heat exchanger.
				Replace the insulation behind the burner bracket.
				Replace the safety thermofuse behind the heat exchanger.

8.2 Automatic error code clearing

If the symbol is displayed at the same time as the error code, the error code is automatically cleared when the cause that prompted it stops.

A flow or return temperature in excess of the critical value prompts an error code. The error code is automatically cleared when the temperature drops below the critical value.

8.3 Clearing error codes

If the probable cause of an error code is resolved but the error code continues to be displayed, proceed as follows to clear the error code:

1. Press the ◎ button.
   ⇨ The command **Reset? Yes** is displayed on the control panel.
2. Confirm by pressing the ◎ button.
   ⇨ The error code disappears after a few seconds.

9 Environmental

9.1 Energy savings

Tips on saving energy:

- Keep the room in which the boiler is installed well ventilated.
- Do not block ventilation outlets.
- Do not cover the radiators. Do not hang curtains in front of the radiators.
- Install reflective panels behind the radiators to prevent heat losses.
- Insulate the pipes in rooms that are not heated (cellars and lofts).
- Turn off the radiators in rooms not being used.
- Do not run hot (or cold) water pointlessly.
- Install a water-saving shower head to save up to 40% energy.
- Take showers rather than baths. A bath consumes twice as much water and energy.

9.2 Room thermostat and settings

Various models of room thermostat are available. The type of thermostat used and the parameter selected impact total energy consumption.

- A modulating regulator, which may be combined with thermostatic valves, is eco-friendly in terms of energy and offers an excellent level of comfort. This combination allows you to set the temperature separately for each room. However, do not install thermostatic radiator valves in the room in which the room thermostat is located.

- Complete opening and closing of the thermostatic radiator valves causes undesirable variations in temperature. Therefore, these must be opened/closed progressively.
- Set the room thermostat to a temperature of approximately 20°C to reduce heating costs and energy consumption.
- Lower the thermostat setting to approximately 16°C at night or when you are not at home. This reduces heating costs and energy consumption.
- Lower the thermostat setting well before airing the rooms.
- Set the water temperature to a lower level in summer than in winter (e.g. 60°C and 80°C respectively) when an ON/OFF thermostat is used.
- When clock thermostats and programmable thermostats are to be set, do not forget to take any holidays and days when no one is at home into account.

10 Disposal

10.1 Disposal and recycling

Caution
Only qualified professionals are permitted to remove and dispose of the boiler, in accordance with local and national regulations.

Fig.21

MW-3000179-03

11 Warranty

11.1 General

We would like to thank you for buying one of our appliances and for your trust in our product.

In order to ensure continued safe and efficient operation, we recommend that the product is regularly inspected and maintained.

Your installer and our service department can assist with this.

11.2 Terms of warranty

The following provisions do not affect the application, in favour of the buyer, of the legal provisions with regard to hidden defects that are applicable in the buyer's country.

This appliance comes with a warranty that covers all manufacturing faults; the warranty period will commence on the date of purchase stated on the installer's invoice.

The warranty period is stated in our price list.

As a manufacturer, we can by no means be held liable if the appliance is used incorrectly, is poorly maintained or not maintained at all, or is not installed correctly (it is your responsibility to ensure that installation is carried out by a qualified installer).

In particular, we cannot be held liable for material damage, intangible losses or physical injury resulting from an installation that does not comply with:

- Legal or regulatory requirements or provisions laid down by the local authorities.
- National or local regulations and special provisions relating to the installation.

- Our manuals and installation instructions, in particular in terms of regular maintenance of the appliances.

Our warranty is limited to the replacement or repair of the parts found to be defective by our technical services team, excluding labour, transfer and transport costs.

Our warranty does not cover replacement or repair costs for parts that may become defective due to normal wear, incorrect usage, the intervention of unqualified third parties, inadequate or insufficient supervision or maintenance, a mains supply that is not appropriate or the use of unsuitable or poor quality fuel.

Smaller parts, such as motors, pumps, electrical valves etc., are guaranteed only if these parts have never been dismantled.

The rights established in European Directive 99/44/EEC, implemented by legal decree No. 24 of 2 February 2002 and published in Official Journal No. 57 of 8 March 2002, remain in force.

12 Appendix

12.1 Product fiche - Boiler space heaters

Tab.18 Product fiche for boiler space heaters

Brand name - Product name		SIRIUS THREE FS 50	SIRIUS THREE FS 70
Seasonal space heating energy efficiency class		A	A
Rated heat output *(Prated or Psup)*	kW	45	65
Seasonal space heating energy efficiency	%	93	93
Annual energy consumption	GJ	139	201
Sound power level L_{WA} indoors	dB	61	64

See
For specific precautions on assembly, installation and maintenance: see the chapter on Safety Instructions.

12.2 Product fiche - Temperature Controls

Tab.19 Product fiche for temperature controls

Potterton - SIRIUS THREE FS		HMI text
Class		II
Contribution to space heating energy efficiency	%	2

12.3 Package fiche

Fig.22 Package fiche for boilers indicating the space heating energy efficiency of the package

Seasonal space heating energy efficiency of boiler

(1) ‘I’ %

Temperature control

from fiche of temperature control

Class I = 1%, Class II = 2%, Class III = 1.5%, Class IV = 2%, Class V = 3%, Class VI = 4%, Class VII = 3.5%, Class VIII = 5%

+ (2) %

Supplementary boiler

from fiche of boiler

Seasonal space heating energy efficiency (in %)

( ) - ‘I’) x 0.1 = ± (3) %

Solar contribution

from fiche of solar device

Collector size (in m²) | Tank volume (in m³) | Collector efficiency (in %) | Tank rating (1): A* = 0.95, A = 0.91, B = 0.86, C = 0.83, D - G = 0.81

(‘III’ x) + (‘IV’ x) x 0.9 x (/100) x = + (4) %

(1) If tank rating is above A, use 0.95

Supplementary heat pump

from fiche of heat pump

Seasonal space heating energy efficiency (in %)

( ) - ‘I’) x ‘II’ = + (5) %

Solar contribution AND Supplementary heat pump

select smaller value

0.5 x (4) OR 0.5 x (5) = - (6) %

Seasonal space heating energy efficiency of package

(7) %

Seasonal space heating energy efficiency class of package

G	F	E	D	C	B	A	A+	A++	A+++
<30%	≥30%	≥34%	≥36%	≥75%	≥82%	≥90%	≥98%	≥125%	≥150%

Boiler and supplementary heat pump installed with low temperature heat emitters at 35°C ?

from fiche of heat pump

(7) + (50 x ‘II’) = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

AD-3000743-01

I The value of the seasonal space heating energy efficiency of the preferential space heater, expressed in %.

II The factor for weighting the heat output of preferential and supplementary heaters of a package as set out in the following table.

III The value of the mathematical expression: 294/(11 · Prated), whereby ‘Prated’ is related to the preferential space heater.

IV The value of the mathematical expression 115/(11 · Prated), whereby ‘Prated’ is related to the preferential space heater.

Tab.20 Weighting of boilers

Psup / (Prated + Psup)[1][2]	II, package without hot water storage tank	II, package with hot water storage tank
0	0	0
0.1	0.3	0.37
0.2	0.55	0.70
0.3	0.75	0.85
0.4	0.85	0.94
0.5	0.95	0.98
0.6	0.98	1.00
≥ 0.7	1.00	1.00

(1) The intermediate values are calculated by linear interpolation between the two adjacent values.
(2) Prated is related to the preferential space heater or combination heater.

Tab.21 Package efficiency

Potterton - SIRIUS THREE FS		SIRIUS THREE FS 50	SIRIUS THREE FS 70
Seasonal space heating energy efficiency of boiler	%	93	93
Temperature control	%	2	2
Seasonal space heating energy efficiency of package	%	95	95

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