



User Guide

Oil-fired condensing boilers

MODULENS O

AFC 18

AFC 24

AFC 30

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1 Safety

1.1 Safety



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. Cleaning and user maintenance shall not be made by children without supervision.



Important

This manual can also be found on our internet site.



Caution

A disconnection method must be allowed in the fixed pipes in accordance with the rules on installation in force in the country.



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

Respect the maximum water inlet pressure to ensure correct operation of the appliance, referring to the chapter "Technical Specifications".



Danger

If you smell flue gases:

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

**Warning**

According to the appliance settings:

- The temperature of the flue gas pipes may exceed 60 °C.
- The radiator temperature may reach 95 °C.
- The temperature of the domestic hot water may reach 80 °C (depending on the set point temperature and the activation of the anti-legionella function).

**Caution**

- Do not neglect to service the appliance. For completely safe and optimum operation, you must have your boiler regularly serviced by an approved installer.
- Before any work, switch off the power supply to the appliance.
- Avoid direct contact with the flame inspection window.

1.2 Recommendations

**Danger**

Only qualified persons are authorised to assemble, install and maintain the installation.

- Regularly check the hydraulic pressure in the circuit:
 - Minimum pressure: 0.8 bar (0.08 MPa)
 - Recommended pressure: between 1.5 and 2 bar (0.15 and 0.2 MPa)
- Keep the appliance accessible at all times.
- Never remove or cover the labels and data plates affixed to appliances. Labels and data plates must be legible throughout the entire lifetime of the appliance.
- The appliance should be on Summer or Frost protection mode rather than switched off to guarantee the following functions:
 - Anti blocking of pumps
 - Frost Protection

1.3 Liabilities

1.3.1 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.

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 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.


2 About this manual


2.1 Symbols used


2.1.1 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.

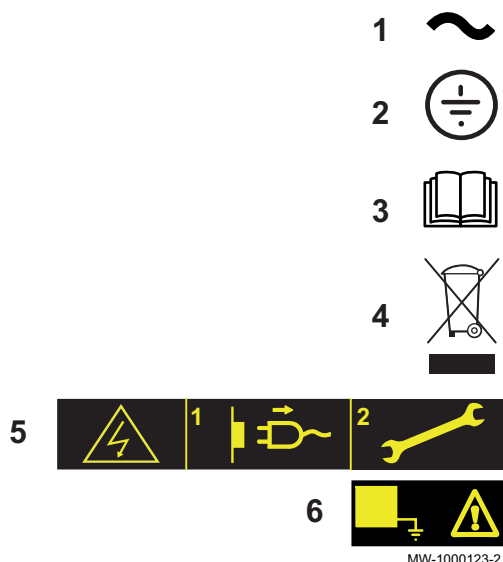
 **Important**
Please note: important information.

 **See**
Reference to other manuals or pages in this manual.

2.1.2 Symbols used on the appliance

- 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.
- 6 Connect the appliance to the protective earthing.

Fig.1



MW-1000123-2

2.2 Abbreviations

- **3CE**: Collective piping for sealed boiler
- **3WV**: Three-way valve
- **PCU**: Primary Control Unit - Burner management PCB
- **PSU**: Parameter Storage Unit - Storage of parameters for the PCU and SU PCBs
- **SCU**: Secondary Control Unit – DIEMATIC iSystem control panel PCB
- **SU**: Safety Unit – Safety PCB

- **DHW:** Domestic Hot Water
- **Hi:** Lower heating value LHV
- **Hs:** Higher heating value HHV
- **HL:** High Load – DHW tank plate heat exchanger
- **SL:** Standard Load – Coiled DHW tank
- **SHL:** Solar High Load – Solar DHW tank plate heat exchanger
- **BM:** Boiler module
- **CFC:** Chlorofluorocarbon

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

Tab.1

CE identification no.	CE : 1312 CN 5691
Type of connection	Chimney : B ₂₃ , B _{23P} Forced flue: C _{13(x)} , C _{33(x)} , C _{93(x)}

Tab.2

Germany	The boilers are compliant with the 1. BImSchV regulation, 2010 version.
Switzerland	AEAI (Association of Cantonal Fire Insurance) approval no.: 24502
Belgium	<ul style="list-style-type: none"> The boilers comply with the specifications of the Optimaz-Elite quality label. The boilers comply with the requirements and standards laid down in the Royal Decrees of 8 January 2004 and 17 July 2009.

3.2 Technical data

3.2.1 Technical data - Boiler space heaters

Tab.3 Technical parameters for boiler space heaters

Product name			AFC 18	AFC 24	AFC 30
Condensing boiler			Yes	Yes	Yes
Low-temperature boiler ⁽¹⁾			No	No	No
B1 boiler			No	No	No
Cogeneration space heater			No	No	No
Combination heater			Yes	Yes	Yes
Rated heat output	<i>P_{rated}</i>	kW	17	23	29
Useful heat output at rated heat output and high temperature regime ⁽²⁾	<i>P₄</i>	kW	17.1	22.8	28.6
Useful heat output at 30% of rated heat output and low temperature regime ⁽¹⁾	<i>P₁</i>	kW	5.4	7.2	8.9
Seasonal space heating energy efficiency	<i>η_s</i>	%	90	90	90
Useful efficiency at rated heat output and high temperature regime ⁽²⁾	<i>η₄</i>	%	92.0	91.6	91.9
Useful efficiency at 30% of rated heat output and low temperature regime ⁽¹⁾	<i>η₁</i>	%	96.9	96.1	95.7
Auxiliary electricity consumption					
Full load	<i>e_{lmax}</i>	kW	0.162	0.165	0.189
Part load	<i>e_{lmin}</i>	kW	0.072	0.082	0.086
Stand-by	<i>P_{SB}</i>	kW	0.006	0.006	0.006
Other specifications					
Standby heat loss	<i>P_{stby}</i>	kW	0.109	0.109	0.128
Ignition burner power consumption	<i>P_{ign}</i>	kW	-	-	-
Annual energy consumption	<i>Q_{HE}</i>	GJ	54	74	93

Product name			AFC 18	AFC 24	AFC 30
Sound power level, indoors - for a type B air/flue gas connection	L_{WA}	dB	61	61	61
Sound power level, indoors - for a type C air/flue gas connection	L_{WA}	dB	58	63	59
Emissions of nitrogen oxides	NO_x	mg/kWh	79	72	78
(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.

3.2.2 Boiler specifications

Tab.4 Test conditions:

O ₂	5% at minimum output and 3% at maximum output
Maximum operating pressure - Primary circuit (heating water)	3 bar (0.3 MPa)
Maximum operating temperature	85 °C
Boiler temperature	Can be set from 30 to 90 °C
Safety thermostat	105 °C
Min flow temperature	20 °C
Min. return temperature	20 °C
Room temperature	20 °C

Tab.5

Boiler		Unit	AFC 18		AFC 24		AFC 30	
			Minimum output	Full output	Minimum output	Full output	Minimum output	Full output
Power input (LHV)		kW	10.4	17.6	13.9	23.5	17.4	29.4
Nominal output (Pn) at 50/30 °C		kW	10.6	18.0	14.1	24.0	17.6	30.0
Nominal output (Pn) at 80/60 °C		kW	10.0	17.1	13.4	22.8	16.7	28.6
Hi efficiency	100% Nominal output (Pn) at 80/60 °C	%	96.3	97.2	96.4	97.1	95.9	97.4
	Flue gas temperature	°C	< 60	< 70	< 60	< 70	< 65	< 75
	100% Nominal output (Pn) at 50/30 °C	%	101.5	102.1	101.4	102.0	101.1	101.6
	Flue gas temperature	°C	<40	<45	<40	<45	<45	<50
	Flue gas temperature	°C	<40	<45	<40	<45	<45	<50
Hi annual efficiency	at 75/60 °C	%	101.1		100.9		100.7	
	at 40/30 °C	%	105.3		105.1		104.6	
Pressure available at the flue gas nozzle (Pn)		mbar ⁽¹⁾	0.14		0.22		0.33	
		Pa	14		22		33	

Boiler	Unit	AFC 18		AFC 24		AFC 30	
		Minimum output	Full output	Minimum output	Full output	Minimum output	Full output
O ₂ content (Minimum output - start-up - maximum output)	%	7 - 4.5 - 4		7 - 5 - 4		4 - 3 - 3	
CO ₂ content ⁽²⁾ (Minimum output - start-up - maximum output)	%	10.2 - 12.1 - 12.5		10.2 - 11.7- 12.5		12.5 - 13.2 - 13.2	
Nominal water flow rate at Pn (50/30°C)	ΔT = 20K m ³ /h	0.773		1.032		1.291	
Stand-by losses	ΔT = 30 K W	109		109		128	
Percentage of losses through the casing compared with the stand-by losses	ΔT = 30 K %	61		61		63	
Hydraulic circuit pressure drop (Pn)	ΔT = 10K mbar ⁽³⁾	66.0		117.0		183.0	
Hydraulic circuit pressure drop (Pn)	ΔT = 15K mbar ⁽³⁾	29.0		52.0		81.0	
Hydraulic circuit pressure drop (Pn)	ΔT = 20K mbar ⁽³⁾	16.0		29.0		46.0	
Electrical output of the boiler only with no accessories	W	128	272	128	272	128	272
Water content	litres	47		47		58	
Flue gas mass flow rate (Nominal output Pn)	kg per sec	0.0075		0.01		0.0125	
	kg/h	27		36		45	
Net weight (without packaging)	kg	117		117		135	
<p>(1) These values apply to 80 mm flexible flue gas discharge systems. For Germany: These pipes are rigid. The length of rigid flue gas discharge systems is limited to 18 metres for technical reasons relating to start-up.</p> <p>(2) Content values given as a guideline for oil with max. CO₂ equal to 15.4%</p> <p>(3) 1 mbar = 10 mm CE = 100 Pa</p>							

4 Description of the product

4.1 General description

Floor-standing condensing oil boiler

- Heating only (with possibility to produce domestic hot water by combining them with a domestic hot water tank).
- High-efficiency heating.
- Low pollutant emissions.
- Modulating oil burner preassembled and preset.
- Stainless steel heating body.
- DIEMATIC iSystem top of the range electronic control panel.
- Flue gas discharge by a forced flue or chimney type connection.
- Flue gas discharge via a chimney type connection.

4.2 Circulating pump

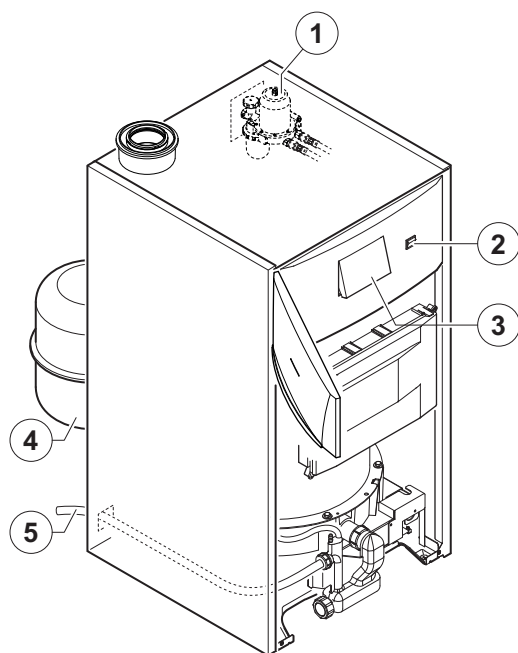


Important

The benchmark for the most efficient circulating pumps is EEI ≤ 0.20.

4.3 Main components

Fig.2



- 1 Oil filter, deaerator and stop valve
- 2 On/Off switch
- 3 Control module
- 4 18-litre expansion vessel

Belgium: optional expansion vessel

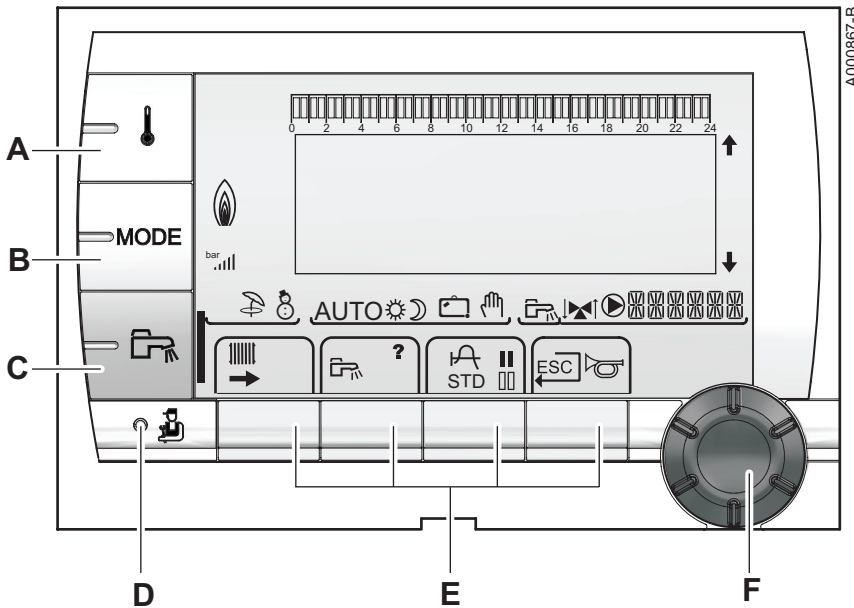
- 5 Condensates evacuation pipe

C003260-B

4.4 Control panel description

4.4.1 Description of the keys

Fig.3



- A Temperature setting key (heating, DHW, swimming pool)
- B Operating mode selection key
- C DHW override key
- D Key to access the parameters reserved for the installer
- E Keys on which the function varies as and when selections are made

- F Rotary setting button:
 - Turn the rotary button to scroll through the menus or modify a value
 - Press the rotary button to access the selected menu or confirm a value modification

4.4.2 Description of the display

■ Functions of the keys

- ➔ Access to the various menus
- 📄 Menu scrolling
- 📄 Parameter scrolling
- ? Help available
- 📈 Display the curve of the selected parameter
- STD Resetting the timer programs to zero
- || Selection of the time range in comfort mode
- || Selection of the time range in reduced mode
- ↶ Back to the previous level
- ESC Back to the previous level without saving the modifications made
- 🔔 Manual reset

■ Flame output level



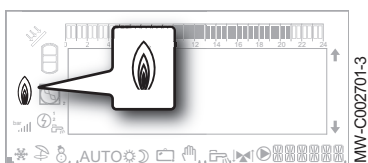
-  Entire symbol flashes: Burner start-up but no flame
-  Part of the symbol flashes: output increase

Fig.4

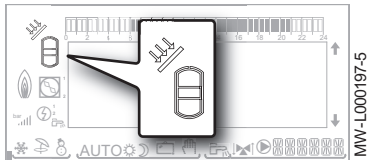


Fig.5



- Fixed symbol: requested output attained
- Part of the symbol flashes: output decrease

Fig.6

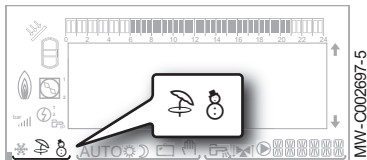


■ Solar

The indicator is present if a solar domestic hot water tank is connected.

- Solar booster pump running
- Top part of the tank reheated to the solar domestic hot water set point
- Top and middle part of the tank reheated to the solar domestic hot water set point
- Entire tank reheated to the solar domestic hot water set point
- Tank not loaded and solar control system present

Fig.7



■ Summer / Winter Modes

- Summer mode on:
 - heating off,
 - domestic hot water continues to be produced.
- Winter mode on:
 - heating running,
 - domestic hot water continues to be produced.

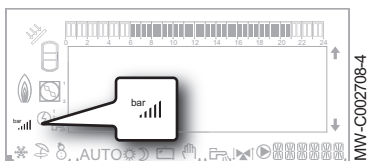
Fig.8



■ Operating modes

- AUTO** Operation in automatic mode according to the timer programme
- COMFORT** mode: the symbol is displayed when a **DAY** override (comfort) is activated
 - Steady symbol: permanent override
 - Flashing symbol: temporary override
- REDUCED** mode: the symbol is displayed when a **NIGHT** override (reduced) is activated
 - Steady symbol: permanent override
 - Flashing symbol: temporary override
- HOLIDAYS** mode: the symbol is displayed when a **HOLIDAYS** override (frost protection) is activated
 - Steady symbol: **HOLIDAYS** mode active
 - Flashing symbol: **HOLIDAYS** mode programmed.
- MANUEL** mode: the boiler operates with the set point displayed. All of the pumps operate. The three-way valves are not controlled.

Fig.9



■ Installation pressure

- bar** Pressure indicator: hydraulic pressure sensor connected
 - Steady symbol: hydraulic pressure sufficient
 - Flashing symbol: hydraulic pressure insufficient
- Hydraulic pressure level
 - 0.9 to 1.1 bar
 - 1.2 to 1.5 bar
 - 1.6 to 1.9 bar



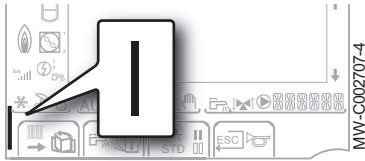
-  2.0 to 2.3 bar
-  > 2.4 bar

Fig.10



■ Domestic hot water override

A vertical bar is displayed at bottom left when a domestic hot water override is activated.



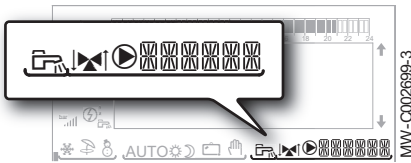






-  Steady symbol: permanent override
-  Flashing symbol: temporary override

Fig.11



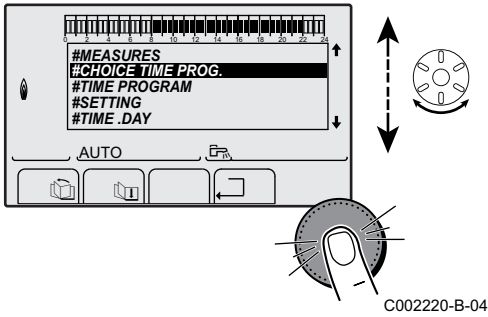
■ Information about the circuits

-  Domestic hot water production running
-  Three-way valve connected:
 -  3-way valve open
 -  3-way valve closed
-  Pump running
-  Name of the circuit for which the parameters are displayed

5 Operation

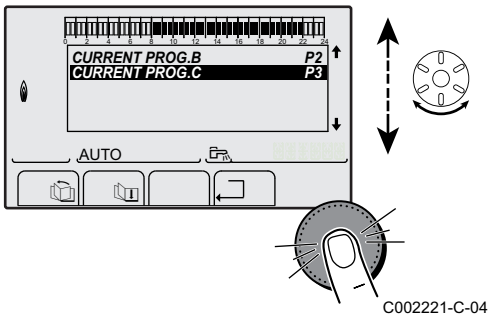
5.1 Browsing in the menus

Fig.12



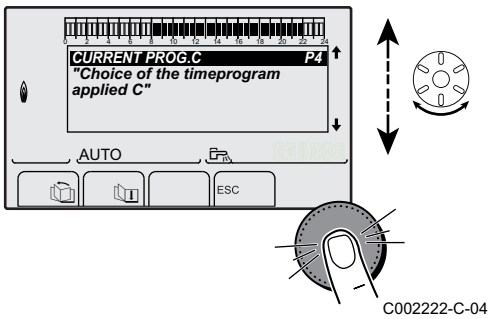
1. To select the desired menu, turn the rotary button.
2. To access the menu, press the rotary button.
To go back to the previous display, press the key.

Fig.13



3. To select the desired parameter, turn the rotary button.
4. To modify the parameter, press the rotary button.
To go back to the previous display, press the key.

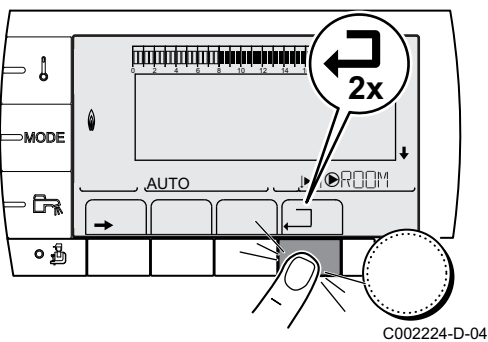
Fig.14



5. To modify the parameter, turn the rotary button.
6. To confirm, press the rotary button.

i Important
To cancel, press the ESC key.

Fig.15

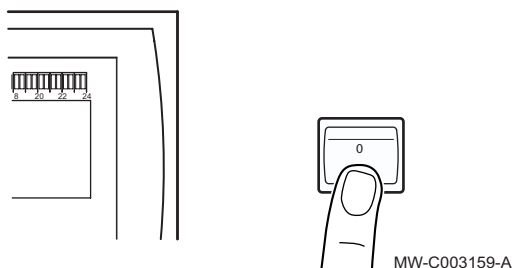


7. To go back to the main display, press the key twice.

i Important
It is possible to use the and keys instead of the rotary button.

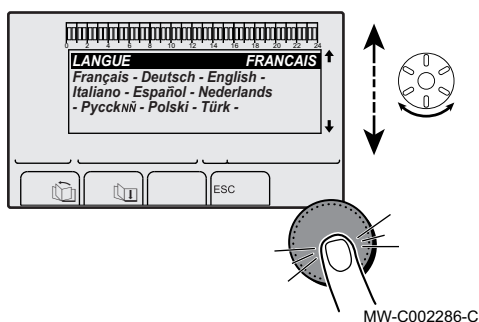
5.2 Start-up

Fig.16



1. Turn on the boiler using the on/off switch.

Fig.17



2. The first time the boiler is powered up, the **LANGUAGE** parameter is displayed. Select the desired language by turning the rotary button.
3. Press the rotary button to confirm.
 - ⇒ The boiler begins an automatic venting cycle that lasts around 3 minutes and is repeated each time the power is cut. If there is a problem, the error is displayed on the screen.
4. Check the hydraulic pressure in the installation shown on the control panel display.

- ⇒ **i Important**
If the hydraulic pressure is less than 0.8 bar, add more water (recommended hydraulic pressure: between 1.5 and 2.0 bar).

5.3 Shut-down

If the central heating system is not used for a long period of time, we recommend switching off the boiler.

1. Switch the On/Off switch to Off.
2. Switch off the power supply to the boiler.
3. Close the oil inlet.
4. Ensure that the boiler and system are protected against frost damage.
5. Have the boiler and the chimney carefully swept.
6. Close the door of the boiler to prevent air circulating inside it.
7. Remove the pipe connecting the boiler to the chimney and plug the flue gas nozzle.
8. Empty the tank and the domestic hot water piping (for modules with domestic hot water production).

5.4 Frost protection

When the heating water temperature in the boiler is too low, the integrated boiler protection system starts up. This protection functions as follows:

- If the water temperature is lower than 7 °C, the heating pump starts up.
- If the water temperature is lower than 4 °C, the boiler starts up.
- If the water temperature is higher than 10 °C, the boiler shuts down and the circulation pump continues to run for a short time (pump post-circulation active).
- If the water temperature in the buffer tank is less than 4 °C, it is reheated to its set point.



Caution

- Frost protection does not function if the appliance is switched off.
- The boiler protection only protects the boiler, not the system. To protect the installation, set the appliance to **HOLIDAYS** mode.

The **HOLIDAYS** mode protects:

- The installation if the outdoor temperature is lower than 3 °C (factory setting).

- The room temperature if a remote control is connected and the room temperature is lower than 6 °C (factory setting).
- The domestic hot water tank if the domestic hot water tank temperature is lower than 4 °C (the water is reheated to 10 °C).



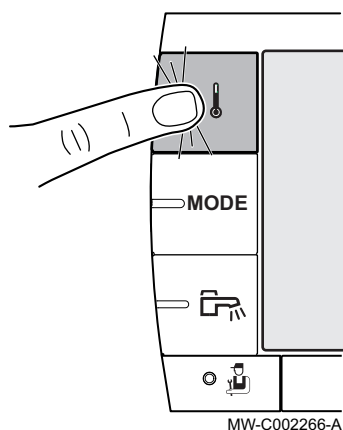
See

To configure the **HOLIDAYS** mode: See the chapter "Selecting the operating mode".

6 Settings



6.1 Setting the parameters

Fig.18



6.1.1 Setting the set point temperatures

To set the various heating, domestic hot water and swimming pool temperatures, proceed as follows:

1. Press the  key.
2. To select the desired parameter, turn the rotary button.
3. To modify the parameter, press the rotary button.
To go back to the previous display, press the  key.
4. To modify the parameter, turn the rotary button.
5. To confirm, press the rotary button.



Important

To cancel, press the ESC key.

■  menu

Tab.6

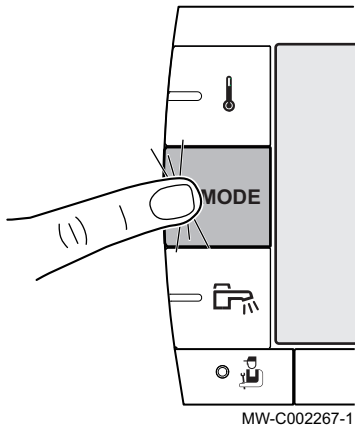
Parameter	Adjustment range	Description	Factory setting
DAY TEMP.A	5 to 30 °C	Desired room temperature in comfort mode on circuit A	20 °C
NIGHT TEMP.A	5 to 30 °C	Desired room temperature in reduced mode on circuit A	16 °C
DAY TEMP.B ⁽¹⁾	5 to 30 °C	Desired room temperature in comfort mode on circuit B	20 °C
NIGHT TEMP.B ⁽¹⁾	5 to 30 °C	Desired room temperature in reduced mode on circuit B	16 °C
DAY TEMP.C ⁽¹⁾	5 to 30 °C	Desired room temperature in comfort mode on circuit C	20 °C
NIGHT TEMP.C ⁽¹⁾	5 to 30 °C	Desired room temperature in reduced mode on circuit C	16 °C
DHW TEMP. ⁽¹⁾	10 to 80 °C	Desired domestic hot water temperature in the domestic hot water circuit.	55 °C
TEMP.TANK AUX ⁽¹⁾	10 to 90 °C	Desired domestic hot water temperature in the auxiliary circuit	55 °C
TEMP.DHW A ⁽¹⁾	10 to 90 °C	Desired domestic hot water temperature in the tank connected to circuit A	55 °C
TEMP.SOL.TANK ⁽¹⁾	20 to 80 °C	Maximum load temperature of the tank's solar zone	65 °C
SWIMMING P.T.B ⁽¹⁾	HG, 0.5 to 39 °C	Desired temperature for swimming pool B	20 °C
SWIMMING P.T.C ⁽¹⁾	HG, 0.5 to 39 °C	Desired temperature for swimming pool C	20 °C
WATER T.NIGHT	10 to 80 °C	Desired domestic hot water temperature in the domestic hot water circuit.	10 °C
WATER T.NIGHTAUX	10 to 90 °C	Desired domestic hot water temperature in the auxiliary circuit	10 °C
WATER T.NIGHT.A	10 to 90 °C	Desired domestic hot water temperature in circuit A	10 °C

(1) The parameter is only displayed for the corresponding options, circuits or sensors actually connected.

6.1.2 Selecting the operating mode

To select an operating mode, proceed as follows:

Fig.19



1. Press the **MODE** key.
2. To select the desired parameter, turn the rotary button.
3. To modify the parameter, press the rotary button.
To go back to the previous display, press the key.
4. To modify the parameter, turn the rotary button.
5. To confirm, press the rotary button.

i Important
To cancel, press the ESC key.

■ **MODE menu**

Tab.7

Parameter	Adjustment range	Description	Factory setting
AUTOMATIQUE		The comfort mode ranges are determined by the timer programme.	
DAY	7/7, xx:xx	Comfort mode is forced until the time indicated or all the time (7/7).	Current time + 1 hour
NIGHT	7/7, xx:xx	Reduced mode is forced until the time indicated or all the time (7/7).	Current time + 1 hour
HOLIDAYS	7/7, 1 to 364	The frost protection mode is active on all boiler circuits. Number of days' holiday: xx ⁽¹⁾ Stop heating: xx:xx ⁽¹⁾ Start heating again: xx:xx ⁽¹⁾	Current date + 1 day
SUMMER		The heating is off. Domestic hot water continues to be produced.	
MANUEL		The generator operates according to the set point setting. All of the pumps operate. Possibility of setting the set point by simply turning the rotary button.	
FORCE AUTO⁽²⁾	ON/ OFF	An operating mode override is activated on the remote control (optional). To force all circuits to run on AUTOMATIQUE , select ON .	

(1) The start and end days and the number of days are calculated in relation to each other.
(2) The parameter is only displayed if a room sensor is connected.

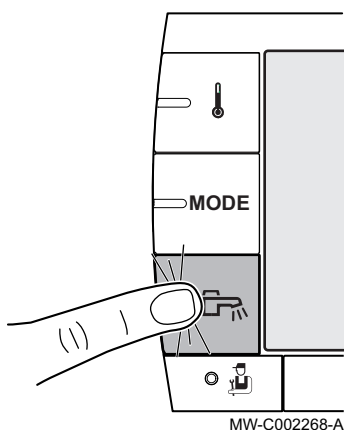
6.1.3 Forcing domestic hot water production

To force domestic hot water production, proceed as follows:

1. Press the key.
2. To select the desired parameter, turn the rotary button.
3. To modify the parameter, press the rotary button.
To go back to the previous display, press the key.
4. To modify the parameter, turn the rotary button.
5. To confirm, press the rotary button.

i Important
To cancel, press the ESC key.

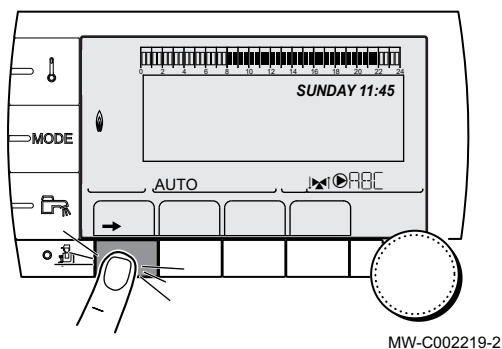
Fig.20



■ menu

Parameter	Description	Factory setting
AUTOMATIQUE	The domestic hot water comfort mode ranges are determined by the timer programme.	
COMFORT	The domestic hot water comfort mode is forced until the time indicated or at all times (24/7).	Current time + 1 hour

Fig.21



6.1.4 Setting the contrast and brightness of the display

1. Access the User level: press the  key.
2. Select the **#SETTING** menu.



Important

- Turn the rotary button to scroll through the menus or modify a value.
- Press the rotary button to access the selected menu or confirm a value modification.



See

For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus".

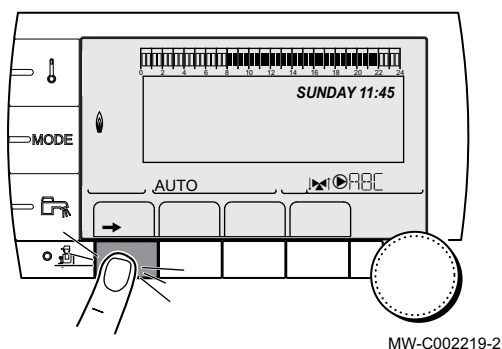
3. Set the following parameters:

■ User level – Menu **#SETTING**

Tab.8

Parameter	Adjustment range	Description	Factory setting	Customer setting
CONTRAST DISP.		Adjusting the display contrast.		
BACK LIGHT	COMFORT	The screen is illuminated continuously in daytime periods.	ECO	
	ECO	The screen is illuminated for 2 minutes whenever pressed.		

Fig.22



6.1.5 Setting the time and date

1. Access the User level: press the  key.
2. Select the **#TIME .DAY** menu.



Important

- Turn the rotary button to scroll through the menus or modify a value.
- Press the rotary button to access the selected menu or confirm a value modification.



See

For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus".

3. Set the following parameters:

■ User level – **#TIME .DAY** menu



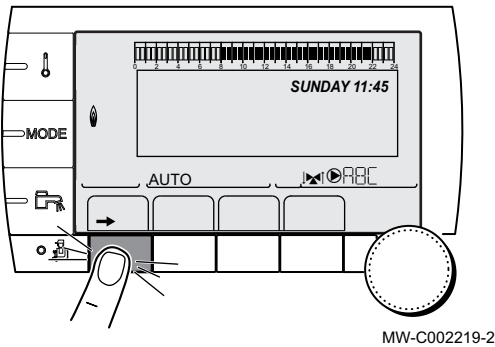
Important

Depending on the configuration

Tab.9

Parameter	Adjustment range	Description	Factory setting	Customer setting
HOURS	0 to 23	Setting the hours		
MINUTE	0 to 59	Setting the minutes		
DAY	Monday to Sunday	Setting the day of the week		
DATE	1 to 31	Setting the date		
MONTH	January to December	Setting the month		
YEAR	2008 to 2099	Setting the year		
SUM.TIME	AUTO	Automatic switch to summer time (last Sunday in March) and winter time (last Sunday in October).	AUTO	
	MANU	For countries where the time change is done on other dates or is not in use.		

Fig.23



MW-C002219-2

6.1.6 Selecting a timer programme

1. Access the User level: press the → key.
2. Select the #CHOICE TIME PROG. menu.



Important

- Turn the rotary button to scroll through the menus or modify a value.
- Press the rotary button to access the selected menu or confirm a value modification.



See

For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus".

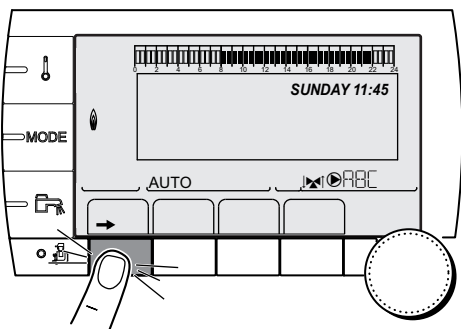
3. Select the desired parameter.
4. Assign the desired timer programme (P1 to P4) to the circuit using the rotary button.

■ **User level – #CHOICE TIME PROG. menu**

Tab.10

Parameter	Adjustment range	Description
CURRENT PROG.A	P1 / P2 / P3 / P4	Comfort programme active (Circuit A)
CURRENT PROG.B	P1 / P2 / P3 / P4	Comfort programme active (Circuit B)
CURRENT PROG.C	P1 / P2 / P3 / P4	Comfort programme active (Circuit C)

Fig.24



MW-C002219-2

6.1.7 Customising a timer programme

1. Access the User level: press the → key.
2. Select the #TIME PROGRAM menu.



Important

- Turn the rotary button to scroll through the menus or modify a value.
- Press the rotary button to access the selected menu or confirm a value modification.



See

For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus".

3. Select the desired parameter.
4. Select the timer programme to be modified.

Fig.25

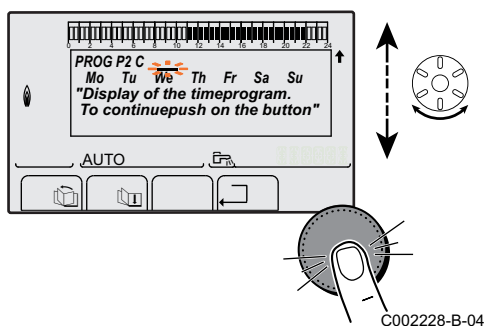


Fig.26

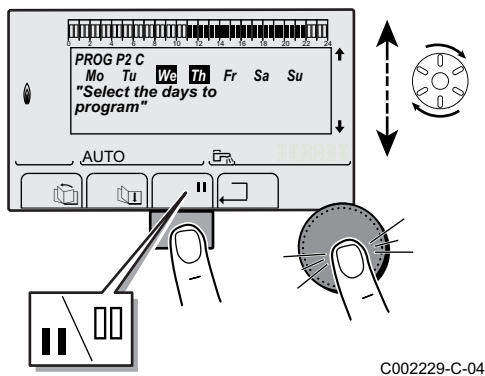
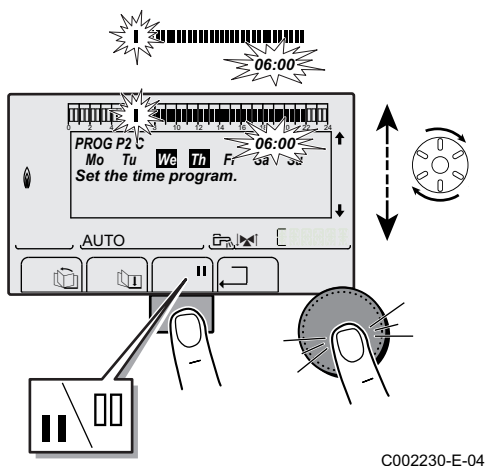


Fig.27



5. **Select the days for which the timer programme is to be modified:** turn the rotary button to the left until you reach the desired day. To confirm, press the rotary button.

6. **|| : Day selection**

Press the **|| / |||** key until the **||** symbol is displayed. Turn the rotary button to the right to select the day(s) desired.

||| : Cancelling the day selection

Press the **|| / |||** key until the **|||** symbol is displayed. Turn the rotary button to the right to cancel selection of the relevant day(s).

7. When the days desired for the programme have been selected, press the rotary button to confirm.

8. **To define the time ranges for the comfort mode and reduced mode:**

Turn the rotary button to the left until **0:00** is displayed. The first segment of the graphic bar for the timer programme flashes.

9. **|| : Comfort mode selection**

Press the **|| / |||** key until the **||** symbol is displayed. To select a comfort time range, turn the rotary button to the right.

||| : Reduced mode selection

Press the **|| / |||** key until the **|||** symbol is displayed. To select a reduced time range, turn the rotary button to the right.

10. When the times for the comfort mode have been selected, press the rotary button to confirm.

■ User level – #TIME PROGRAM menu

Tab.11

Parameter	Timer programme	Description
TIME PROG.A	PROG P2 A PROG P3 A PROG P4 A	Circuit A timer programme
TIME PROG.B	PROG P2 B PROG P3 B PROG P4 B	Circuit B timer programme
TIME PROG.C	PROG P2 C PROG P3 C PROG P4 C	Circuit C timer programme
TIME PROG.DHW		Timer programme for the domestic hot water circuit
TIME PROG.AUX		Auxiliary circuit timer programme

■ User level – #TIME PROGRAM menu

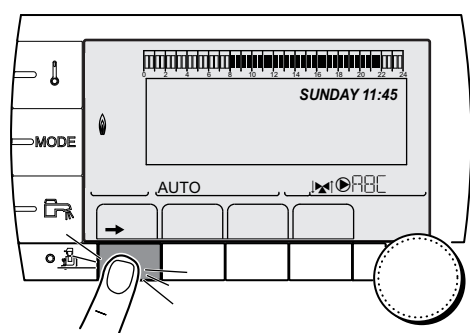
Tab.12

	Day	Comfort periods/Loading enabled:			
		P1 _____	P2 _____	P3 _____	P4 _____
TIME PROG.A	Monday	6:00 to 22:00			
	Tuesday	6:00 to 22:00			
	Wednesday	6:00 to 22:00			
	Thursday	6:00 to 22:00			
	Friday	6:00 to 22:00			
	Saturday	6:00 to 22:00			
	Sunday	6:00 to 22:00			
TIME PROG.B	Monday	6:00 to 22:00			
	Tuesday	6:00 to 22:00			
	Wednesday	6:00 to 22:00			
	Thursday	6:00 to 22:00			
	Friday	6:00 to 22:00			
	Saturday	6:00 to 22:00			
	Sunday	6:00 to 22:00			
TIME PROG.C	Monday	6:00 to 22:00			
	Tuesday	6:00 to 22:00			
	Wednesday	6:00 to 22:00			
	Thursday	6:00 to 22:00			
	Friday	6:00 to 22:00			
	Saturday	6:00 to 22:00			
	Sunday	6:00 to 22:00			
TIME PROG.DHW	Monday	6:00 to 22:00			
	Tuesday	6:00 to 22:00			
	Wednesday	6:00 to 22:00			
	Thursday	6:00 to 22:00			
	Friday	6:00 to 22:00			
	Saturday	6:00 to 22:00			
	Sunday	6:00 to 22:00			
TIME PROG.AUX	Monday	6:00 to 22:00			
	Tuesday	6:00 to 22:00			
	Wednesday	6:00 to 22:00			
	Thursday	6:00 to 22:00			
	Friday	6:00 to 22:00			
	Saturday	6:00 to 22:00			
	Sunday	6:00 to 22:00			

6.2 Displaying the measured values

6.2.1 Access

The various values measured by the appliance are displayed in the #MEASURES menu.



MW-C002219-2

1. Access the User level: press the → key.
2. Select the #MEASURES menu.

**Important**

- Turn the rotary button to scroll through the menus.
- Press the rotary button to access the selected menu.

**See**

For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus".

6.2.2 User level – #MEASURES menu

Tab.13

Parameter	Description	Unit
OUTSIDE TEMP.	Outdoor temperature	°C
ROOMTEMP.A ⁽¹⁾	Room temperature on circuit A	°C
ROOMTEMP.B ⁽¹⁾	Room temperature on circuit B	°C
ROOMTEMP.C ⁽¹⁾	Room temperature on circuit C	°C
BOILER TEMP	Water temperature in the boiler	°C
PRESSURE	Water pressure in the system	bar (MPa)
OIL PRESSURE	Injection nozzle oil pressure	bar (MPa)
DHW TEMP. ⁽¹⁾	Water temperature in the DHW tank	°C
TEMP DHW INST ⁽¹⁾	Instantaneous hot water temperature	°C
STOR.TANK.TEMP ⁽¹⁾	Water temperature in the buffer tank	°C
SWIMMING P.T.B ⁽¹⁾	Water temperature of the swimming pool on circuit B	°C
SWIMMING P.T.C ⁽¹⁾	Water temperature of the swimming pool on circuit C	°C
OUTLET TEMP.B ⁽¹⁾	Water flow temperature in circuit B	°C
OUTLET TEMP.C ⁽¹⁾	Water flow temperature in circuit C	°C
TEMP.SYSTEM ⁽¹⁾	Water flow temperature in the system if multi-generator	°C
T.DHW BOTTOM ⁽¹⁾	Water temperature at the bottom of the DHW tank	°C
TEMP.TANK AUX ⁽¹⁾	Water temperature in the second DHW tank connected to the AUX circuit	°C
TEMP.DHW A ⁽¹⁾	Water temperature in the second DHW tank connected to the A circuit	°C
TEMP.SOL.TANK ⁽¹⁾	Temperature of the hot water produced by solar power (TS)	°C
SOLAR.COLL.T. ⁽¹⁾	Solar panel temperature (TC)	°C
SOLAR PROD. ⁽¹⁾	Solar energy accumulated in the tank	kWh
BACK TEMP	Temperature of the boiler return water	°C
POWER	Relative instantaneous output of the boiler (0%: burner off or running at minimum output)	%
CONSO CH ⁽²⁾	Boiler energy consumption in heating mode	kWh
CONSO DHW ⁽²⁾	Boiler energy consumption in DHW mode	kWh
POWER KW	Instantaneous boiler output in kW	kWh
NB IMPULS.	Number of burner start-ups (cannot be reset). The meter increases by 8 every 8 start-ups	
RUNTIME	Number of burner operating hours (cannot be reset). The meter is incremented by 8 every 8 hours	h
IN 0-10V ⁽¹⁾	Voltage on the 0--10 V input	V
SEQUENCE	Control system sequence	
CTRL	Software inspection number	

(1) The parameter is only displayed for the corresponding options, circuits or sensors actually connected.
(2) The parameter is only displayed if the function is activated (**ENERGY COUNTERS** parameter in the #CONFIGURATION menu)

7 Maintenance

7.1 General instructions

The boiler does not require a lot of maintenance.

Nevertheless, we recommend having the boiler inspected and serviced at regular intervals.

- Boiler maintenance and cleaning must be carried out at least once a year by a qualified professional.
- Have the flues swept **at least once a year** or more, depending on the regulations in force in your country.

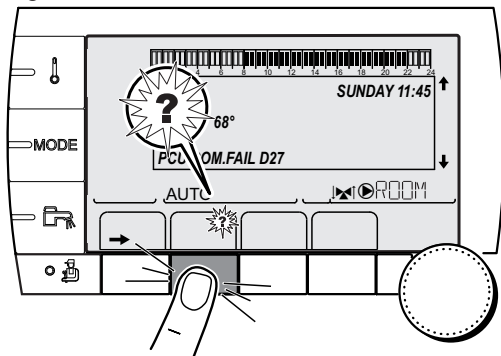


Caution

- Maintenance operations must be completed by a qualified installer.
- Taking out a maintenance contract is recommended.
- Only original spare parts must be used.
- Make certain that the flues and chimneys are connected, in good condition and not blocked.
- Do not modify or block the condensate outlet(s).
- If a condensate neutralisation system is installed, follow the instructions delivered with the neutralisation system for cleaning and servicing of this system.

7.2 Specific instructions for the control panel

Fig.28



1. When the **REVISION** message is displayed, press **?** to display the telephone number of the installer (only if the installer has entered data for this parameter).
2. Contact the installer.
3. Have the required inspections and maintenance carried out by a qualified installer.

C002302-D-04

7.3 Periodic checks

1. Check the water pressure in the installation (**MEASURE** mode).

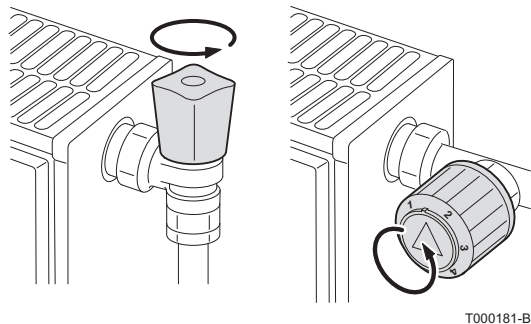


Important

If the water pressure is lower than 0.8 bar, top up the water level in the heating installation (recommended hydraulic pressure between 1.5 and 2 bar).

2. Carry out a visual check for any water leaks.

Fig.29



T000181-B

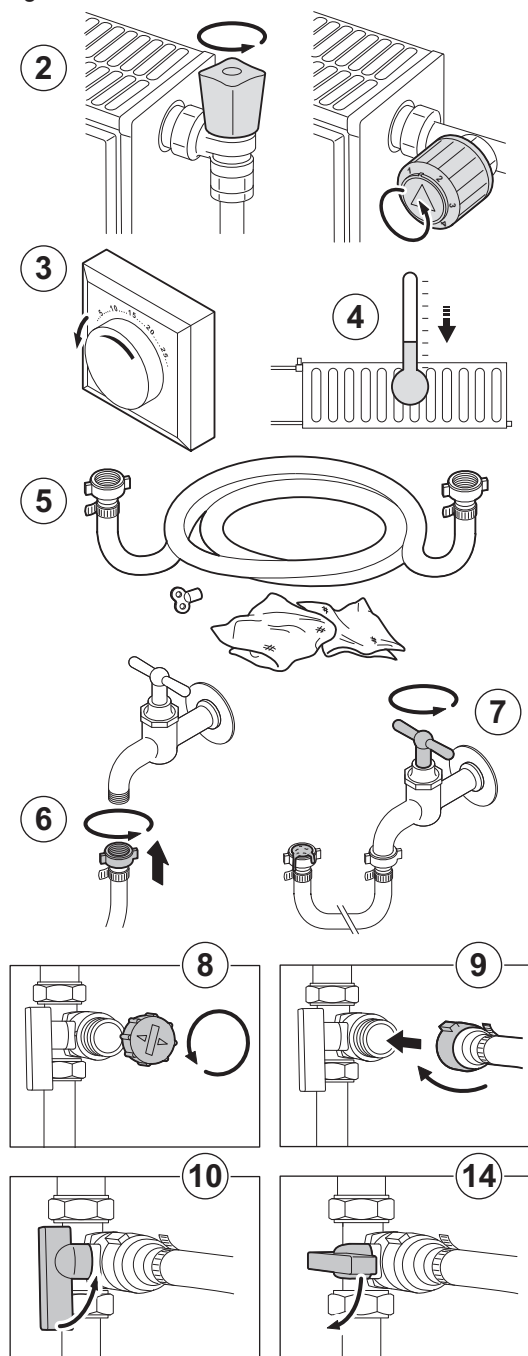
3. Open and close the radiator valves several times a year (this prevents the valves from seizing up).
4. Clean the outside of the boiler using a damp cloth and a light detergent.

**Caution**

Only a qualified professional is authorised to clean the inside of the boiler.

7.4 Filling the installation

Fig.30



AD-3000483-A

1. Check the installation's water pressure shown on the control panel display.

**Important**

If the water pressure is lower than 0.8 bar, top up the water level in the heating installation (recommended hydraulic pressure between 1.5 and 2 bar).

2. Open the valves on all radiators connected to the heating system.
3. Set the room thermostat to as low a temperature as possible.
4. Wait until the temperature drops below 40 °C and the radiators seem cold before filling the central heating system.
5. To add water, use the filling tube with a valve fitting, a cloth and a bleed key.
6. Connect the filling tube to a cold water tap.
7. Eliminate the air from the filling tube. Slowly fill the tube with water. Hold the end of the tube up, above a bucket. Turn off the tap as soon as water runs out of the pipe.
8. Unscrew the plug from the filling/draw-off valve.
9. Attach the tube to the filling/draw-off valve. Firmly tighten the nut on the filling tube.
10. Open the filling/draw-off valve on the heating system.
11. Open the running water tap.
12. Check the installation's water pressure shown on the control panel display.
13. Close the water tap when the water pressure reaches 2 bar.
14. Close the filling/draw-off valve on the heating system. Leave the tube on the filling/draw-off valve until the air is vented from the installation.

**Important**

When water is added, air gets into the heating system. Vent the installation. After the air has been vented, the water pressure can drop below the required level. Check the installation's water pressure shown on the control panel display. If the water pressure is lower than 0.8 bar, add more water.

15. After filling the installation, switch the boiler on.

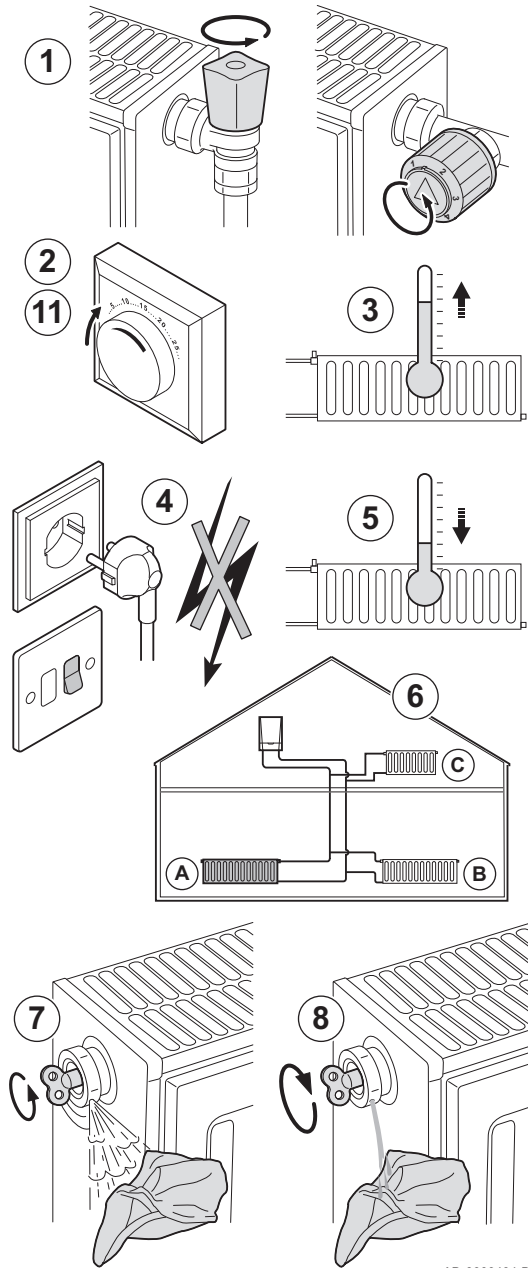
7.5 Venting the heating system

It is essential that any air in the boiler, pipes or fittings is vented to prevent noises occurring during heating or water draw-off.

To do this, proceed as follows:

1. Open the valves on all radiators connected to the heating system.
2. Set the heating set point to as high a temperature as possible.
3. Wait until the radiators are warm.
4. Switch the boiler off.
5. Wait around ten minutes until the radiators are cold.
6. Bleed the radiators. Start with the lower floors.
7. Open the bleed connection using the bleed key provided whilst keeping a rag pressed against the connection.
8. Wait until water begins to come out of the bleed valve, then close the bleed connection.

Fig.31



Caution
The water may still be hot.

9. Switch on the boiler.
10. Check whether the pressure in the installation is still sufficient.

Important
If the water pressure is lower than 0.8 bar, top up the water level in the heating installation (recommended hydraulic pressure between 1.5 and 2 bar).

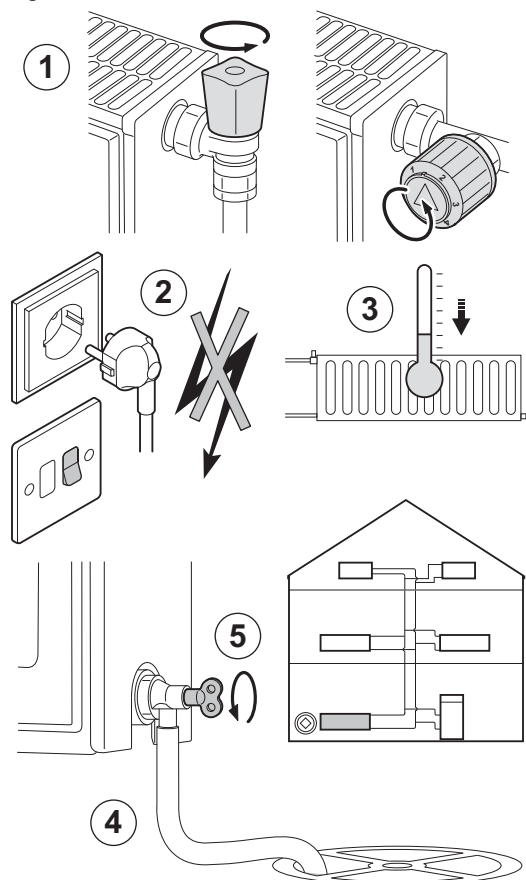
11. Set the heating set point.

For more information, see
Filling the installation, page 27

AD-3000484-B

7.6 Draining the heating system

Fig.32



MW-2000561-1

It may be necessary to drain the central heating system if radiators need to be replaced, if there is a major water leak or if there is a risk of freezing.

1. Open the valves on all the radiators connected to the system.
2. Shut down the boiler.
3. Wait approximately 10 minutes, until the radiators feel cold.
4. Connect a drain hose to the lowest draining point. Place the end of the hose in a drain or at a place where drained pipe water will not cause any damage.
5. Open the central heating system filling/draining valve. Drain the installation.



Warning

The water may still be hot.

6. Close the drain valve when no more water comes from the draining point.

8 Troubleshooting

8.1 Anti-short cycle

When the boiler is in the anti-short cycle operating mode, the ? symbol flashes.

1. Press the "?" key.
The **Operation assured when the restart temperature will be reached** message is displayed.



Important

This message is not an error message but an item of information.

8.2 Messages (Bxx or Mxx-type codes)

If an error occurs, the control panel displays a message and a corresponding code.

1. Make a note of the code displayed.
The code is important for the correct and rapid diagnosis of the type of malfunction and for any technical assistance that may be needed.
2. Switch the boiler off and switch it back on.
⇒ The boiler starts up again automatically when the reason for the disruption has been eradicated.
3. If the code is displayed again, resolve the problem by following the instructions in the table below.

8.2.1 List of Bxx or Mxx type error codes

Tab.14

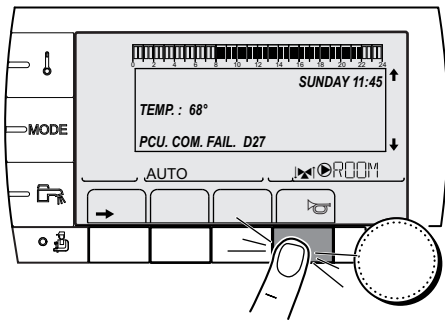
Code	Messages	Description	Checking / solution
B00	BL.CRC.PSU	The PSU integrated into the PCU is incorrectly configured	Parameter error on the PSU PCB. • Contact the professional who handles maintenance of the appliance.
B01	BL.BOILER MAX	Maximum flow temperature exceeded	The water flow rate in the installation is insufficient • Contact the professional who handles maintenance of the appliance.
B02	BL.HEATING SPEED	The increase in flow temperature has exceeded its maximum limit.	The water flow rate in the installation is insufficient • Contact the professional who handles maintenance of the appliance. Sensor error • Contact the professional who handles the maintenance for the appliance
B03	BL.FLAME LOS	Flame disappeared during operation	No flame detection. Air present in the oil circuit. • Contact the professional who handles the maintenance for the appliance
B04	BL.SMOKE.TEMP	The maximum flue gas temperature has been exceeded. If this message is generated five times in 24 hours, the boiler locks down in L31.	• Contact the professional who handles maintenance of the appliance.

Code	Messages	Description	Checking / solution
B10 B11	BL.SC.IN.OPEN	The BL input on the PCU PCB is open:	The contact connected to the BL input is open <ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance. Poor connection <ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance. Parameter error <ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance. Poor connection <ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance.
B12	BL.SMOKE.PRES	The flue gas pressure switch is open. If this message is generated five times in 24 hours, the boiler locks down in L30.	<ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance.
B13	BL.COM PCU-D4	Communication error with the SCU PCB.	Bad connection <ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance. SCU PCB not installed in the boiler <ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance.
B14	BL.WATER MIS.	The water pressure is lower than 0.8 bar (0.08 MPa).	Not enough water in the circuit <ul style="list-style-type: none"> Contact the professional who handles maintenance of the appliance.
B15	BL.GAS PRESS	Internal fault	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B16	BL.BAD SU	Incorrect configuration	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B17	BL.BAD PSU	The parameters saved on the PCU PCB are damaged.	Parameter error on the PCU PCB. <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B18	BL.BAD PSU	The PSU integrated into the PCU is not recognised	Incorrect PSU for this boiler <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B19	BL.NO CONFIG	The boiler has not been configured	The PCU PCB has been changed <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B21	BL.COM SU	Communication error between the PCU and SU PCBs (burner control and safety box)	Poor connection <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B22	BL.PARAM.BURNER	Wrong burner parameters	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B23	BL.VOLTAGE<190	Mains voltage too low	Contact the professional who handles the maintenance for the appliance
B25	BL.OUTSIDE.S	The outdoor temperature sensor connected to the PCU has been disconnected	<ul style="list-style-type: none"> Switch the boiler off and switch it back on.
B26	BL.DHW. S.	The DHW tank sensor is disconnected or short circuited	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
B27	BL.DHW INST	The sensor on the plate exchanger outlet is disconnected or short circuited	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance

Code	Messages	Description	Checking / solution
B28	BL.BAD.CONFIG	An HL tank has been detected but the boiler cannot control it. This message will disappear after ten seconds if the boiler can control the HL tank.	<ul style="list-style-type: none"> • Wait for ten seconds to see whether the fault persists • Contact the professional who handles the maintenance for the appliance
B29 to B34	BL.UNKNOWN Bxx	Incorrect configuration of the PCU	<ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance
M08	REVISION AUTO	An automatic service is requested	<p>The date scheduled for the service has been reached.</p> <ul style="list-style-type: none"> • If the ? symbol flashes, press the ? key. The installer's contact details are displayed. • Contact the professional who handles the maintenance for the appliance
M23	CHANGE OUTSI.S	The outdoor temperature sensor is defective.	<ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance
M30	BL.SYSTEM NETWORK	No communication with the master control system via the MODBUS network	<ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance
M31	BL.COM MODBUS	Incorrect configuration of the MODBUS network	<ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance

8.3 Faults (Lxx or Dxx-type codes)

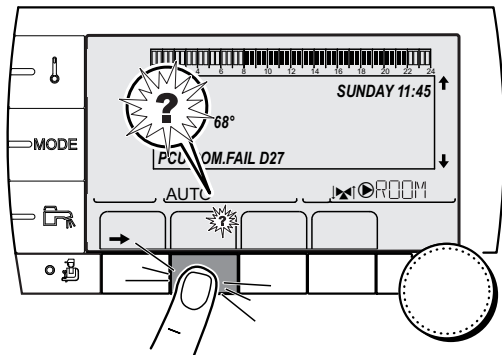
Fig.33



C002604-B-04

1. Make a note of the code displayed.
The code is important for the correct and rapid diagnosis of the type of malfunction and for any technical assistance that may be needed.
2. Press the key.
⇒ If the code is displayed again, switch off the boiler and then switch it back on.

Fig.34



C002302-D-04

3. Press the ? key.
⇒ Follow the instructions displayed to solve the problem.
4. Consult the meaning of the codes in the table below.



8.3.1 List of Lxx or Dxx type error codes

Tab.15

Code	Faults	Cause of the fault	Description	Check/solution
L00	PSU FAIL	SU	The PSU integrated into the SU is defective	Parameter error <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L01	PSU PARAM FAIL	PCU	The safety parameters are incorrect	Parameter error <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L02	STB OUTLET	SU	Boiler temperature too high	Poor connection Sensor failure <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance No water circulation <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L03	DEF.OIL.SENSOR	SU	The oil pressure measurement sensor is faulty	Poor connection The oil pressure measurement sensor is faulty <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L04	BURNER FAILURE	SU	Burner start-up failure	No ignition arc <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance No flame signal. Air present in the oil circuit. <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance Flame present but insufficient ionisation (<3μA) <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L05 L10 L11 L12 L13 L14	DEF.INTERN.SU	SU	Internal SU fault	The control and safety box on the burner is defective <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L06	DEF.SPEED.MOT	SU	Fault on the burner motor	The control and safety box on the burner is defective <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance The burner motor is defective <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L07	DEF.T.WARM UP	SU	Preheating period exceeded	The oil preheater is defective <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance The control and safety box on the burner is defective <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance

Code	Faults	Cause of the fault	Description	Check/solution
L08	PARASIT FLAME	SU	Detection of a parasite flame	Signal present whilst there is no flame <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L09	OIL.PRES FAIL.	SU	Oil pressure exceeds limit	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L30	SMOKE PRE.FAIL	PCU	The flue gas pressure switch opened five times in 24 hours.	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L31	DEF.SMOKE.TEMP	PCU	The maximum flue gas temperature was exceeded five times in 24 hours.	Contact the professional who handles the maintenance for the appliance
L32	DEF.OUTLET S.	PCU	The boiler flow sensor has short circuited	Poor connection Sensor failure <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L33	DEF.OUTLET S.	PCU	The boiler flow sensor is on an open circuit	Poor connection Sensor failure <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L34	BACK S.FAILURE	PCU	The return temperature sensor has short circuited	Poor connection Sensor failure <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L35	BACK S.FAILURE	PCU	The return temperature sensor is on an open circuit	Poor connection Sensor failure <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L36	DEF.FLAME LOS	PCU	Three flame losses during a heating demand	<ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L37	SU COM.FAIL	PCU	Communication failure with the safety box	Poor connection <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L38	PCU COM.FAIL	PCU	Communication failure between the PCU and SCU PCBs.	Poor connection SCU PCB not connected or defective. <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L39	BL OPEN FAIL	PCU	The BL input opened for a short period of time	Poor connection External cause Incorrectly set parameter <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L250	DEF.WATER MIS.	PCU	The water pressure is too low	Hydraulic circuit incorrectly vented Water leak Measurement error <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance
L251	MANOMETRE FAIL	PCU	Fault on the water pressure sensor	Wiring problem Water pressure sensor defective Sensor PCB defect <ul style="list-style-type: none"> Contact the professional who handles the maintenance for the appliance

Code	Faults	Cause of the fault	Description	Check/solution
D03 D04	OUTL S.B FAIL. OUTL S.C FAIL.	SCU	Fault on flow sensor circuit B Fault on flow sensor circuit C Remarks: - The circuit pump is running. - The three-way valve motor on the circuit is no longer supplied with power and can be adjusted manually.	Poor connection Sensor failure • Contact the professional who handles the maintenance for the appliance
D05	OUTSI.S.FAIL.	SCU	Outdoor temperature sensor fault Remarks: - The boiler set point is equal to the BOILER MAX parameter. - The valve setting is no longer guaranteed but monitoring of the maximum temperature of the circuit after the valve is still guaranteed. - The valves can be manually operated. - Heating the domestic hot water continues to be guaranteed.	Poor connection Sensor failure • Contact the professional who handles the maintenance for the appliance
D07	SYST.SENS.FAIL	SCU	System sensor fault	Poor connection Sensor failure • Contact the professional who handles the maintenance for the appliance
D09	DHW S.FAILURE	SCU	Domestic hot water sensor fault Remarks: - Domestic hot water heating is no longer guaranteed. - The booster pump is running. - The load temperature of the DHW tank is the same as the boiler temperature.	Poor connection Sensor failure • Contact the professional who handles the maintenance for the appliance
D11 D12 D13	ROOM S.A FAIL. ROOM S.B FAIL. ROOM S.C FAIL.	SCU	Fault on room temperature sensor circuit A Fault on room temperature sensor circuit B Fault on room temperature sensor circuit C Note: The circuit concerned runs without any influence from the room sensor.	Poor connection Sensor failure • Contact the professional who handles the maintenance for the appliance
D14	MC COM.FAIL	SCU	Communication failure between the SCU and the boiler radio module	Poor connection • Contact the professional who handles the maintenance for the appliance Boiler module failure • Contact the professional who handles the maintenance for the appliance
D16	SWIM.B S.FAIL SWIM.C S.FAIL	SCU	Fault on pool sensor circuit B Fault on pool sensor circuit C Note: Swimming pool heating runs all the time during the circuit's comfort period.	Poor connection Sensor failure • Contact the professional who handles the maintenance for the appliance

Code	Faults	Cause of the fault	Description	Check/solution
D17	DHW 2 S.FAIL	SCU	Sensor fault on tank 2	Poor connection Sensor failure <ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance
D18	SOL.HW S.FAIL	SCU	Solar tank sensor fault	Poor connection Sensor failure <ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance
D19	SOL.COL.S.FAIL	SCU	Header sensor fault	Poor connection Sensor failure <ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance
D20	SOL COM.FAIL	SCU		<ul style="list-style-type: none"> • Switch the boiler off and switch it back on. • Contact the professional who handles the maintenance for the appliance
D27	PCU COM.FAIL	SCU		Communication failure between the SCU and PCU PCBs. <ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance
D37	TA-S SHORT-CIR	SCU		The Titan Active System® has short circuited. <ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance <p>Remarks: Domestic hot water production has stopped but can nonetheless be restarted using the  key. The tank is no longer protected. - If a tank without Titan Active System® is connected to the boiler, check that the TAS simulation connector (delivered with package AD212) is fitted to the sensor PCB.</p>
D38	TA-S DISCONN	SCU		The Titan Active System® is on an open circuit. <ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance <p>Remarks: Domestic hot water production has stopped but can nonetheless be restarted using the  key. The tank is no longer protected. - If a tank without Titan Active System® is connected to the boiler, check that the TAS simulation connector (delivered with package AD212) is fitted to the sensor PCB.</p>
D99	DEF.BAD PCU	SCU		The SCU software version does not recognise the PCU connected <ul style="list-style-type: none"> • Contact the professional who handles the maintenance for the appliance

9 Environmental

9.1 Disposal and recycling

Fig.35



Recycling



Warning

Removal and disposal of the boiler must be carried out by a qualified installer in accordance with local and national regulations.

9.2 Energy savings

Energy-saving advice:

- 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).
- Close the radiators in rooms not in use.
- Do not run hot (or cold) water pointlessly.
- Install an energy-saving shower head, which can save up to 40 % energy.
- Take showers rather than baths. A bath consumes twice as much water and energy.

9.3 Recommendations

The remote control is available in the following versions:

- Wired
- Radio

The control panel and/or the remote control setting has a considerable influence on energy consumption.

A few tips:

- In the room in which the room thermostat is installed, it is advised that thermostatic valve radiators are not used. If a thermostatic valve is used the valve must be fully opened.
- Completely closing and opening thermostatic valve radiators causes undesirable temperature fluctuations. Open and close thermostatic valves in small steps.
- Lower the setpoint to approx. 20°C. This will help reduce heating costs and energy consumption.
- Lower the set point when you air the rooms.
- When setting a timer programme, bear in mind days when you are absent or will be on holiday.

10 Warranty

10.1 General

You have just purchased one of our appliances and we thank you for the trust you have placed in our products.

Please note that your appliance will provide good service for a longer period of time if it is regularly checked and maintained.

Our customer support network is at your disposal at all times.

10.2 Terms of warranty


Tab.16

Belgium	The following provisions regarding the contractual warranty are not exclusive of the buyer being able to benefit from the legal provisions applicable in Belgium regarding hidden defects.
Germany	The following provisions are not exclusive of the buyer being able to benefit from the legal warranty stipulated in Articles 1641 to 1648 of the Civil Code.
Portugal	The following provisions do not adversely affect consumers' rights, as laid down in Decree-Law 67/2003 of 8 April amended by Decree-Law 84/2008 of 21 May, warranties on sales of consumer goods and other implementing rules.
Russia, Ukraine	The foregoing provisions in no way affect the rights of the consumer, which are guaranteed by the legislation of the Russian Federation as regards hidden defects.
Other countries	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.

Tab.17

Italy, Portugal	The duration of our warranty is shown on the certificate delivered with the appliance.
Switzerland	The warranty is applied in accordance with the terms of sale, delivery and warranty of the company marketing De Dietrich products.
Russia, Ukraine	The terms and conditions of warranty and the terms and conditions of application of the warranty are indicated on the warranty form. The warranty shall not apply as regards the replacement or repair of wearing parts under normal use. Such parts include thermocouples, injection nozzles, flame control and ignition systems, fuses and gas-kets.
Other countries	Our warranty is valid for two years.
All countries: Except Germany and Russia	Your appliance is covered by a contractual guarantee against manufacturing defects as of the date of purchase stated on the installer's invoice. 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.
All countries: Except Germany, Italy, Poland, Russia and Turkey	The warranty period is stated in our price list.
All countries: Except Germany, Austria, Portugal and Russia	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.

Tab.18

Germany	<p>Refer to the contractual terms of warranty stated in on pre-sales documents (for example: current price list)</p> <div style="background-color: #e0e0e0; padding: 5px;">  <p>Warning INFORMATION regarding obligatory maintenance: Maintenance of this appliance must be carried out once a year, according to the codes of practice. If this requirement is not respected, the warranty term is limited to 12 months.</p> </div>
Austria	<p>The supply of spare parts is guaranteed ten years from the date of purchase stated on the installer's invoice.</p>
All countries except: Germany and Russia	<p>The warranty is only valid for sub-sets such as motors, pumps, electrical valves, etc. if these parts have never been dismantled.</p> <p>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.</p>

Tab.19

Italy	<p>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 and maintenance works are carried out by a qualified professional and by an after-sales service company, respectively).</p> <p>In particular, we cannot be held liable for material damage, intangible losses or physical injury resulting from an installation that does not comply with:</p> <ul style="list-style-type: none"> • the legal and regulatory requirements laid down by national laws and the regulations of local authorities, • our instructions and prescriptions on installation and maintenance in accordance with prevailing legislation.
Turkey	<p>In accordance with legislation and regulations, the product life for this appliance is 10 years. During that time the manufacturer and/or the distributor is required to provide after sales services and spare parts.</p>
Other countries	<p>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 professional).</p>
All countries: Except Germany, Italy and Russia	<p>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).</p> <p>In particular, we cannot be held liable for material damage, intangible losses or physical injury resulting from an installation that does not comply with:</p> <ul style="list-style-type: none"> • 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, • All countries: Except The Netherlands: the codes of practice.

11 Appendix

11.1 Product fiche

Tab.20 Product fiche for boiler space heaters

		AFC 18	AFC 24	AFC 30
Seasonal space heating energy efficiency class		A	A	A
Rated heat output (<i>Prated or Psup</i>)	kW	17	23	29
Seasonal space heating energy efficiency	%	90	90	90
Annual energy consumption	GJ	54	74	93
Sound power level L_{WA} , indoors - for a type B air/flue gas connection	dB	61	61	61
Sound power level L_{WA} , indoors - for a type C air/flue gas connection	dB	58	63	59

**See**

For specific precautions about assembling, installing and maintaining: See Safety

11.2 Product fiche - Temperature Controls

Tab.21 Product fiche for the Temperature controls

		DIEMATIC iSystem
Class		II
Contribution to space heating energy efficiency	%	2

11.3 Package fiche - Boilers

Fig.36 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 %)

③
(- 'I') x 0.1 = ± %

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 %)

⑤
(- 'I') x 'II' = + %

Solar contribution AND Supplementary heat pump
 select smaller value

0.5 x OR 0.5 x = - %

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.

- 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: $294/(11 \cdot \text{Prated})$, whereby "Prated" is related to the preferential space heater.
- IV The value of the mathematical expression $115/(11 \cdot \text{Prated})$, whereby "Prated" is related to the preferential space heater.

Tab.22 Weighting of boilers

$P_{sup} / (P_{rated} + P_{sup})^{(1)(2)}$	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.23 Package efficiency

		AFC 18	AFC 24	AFC 30
Seasonal space heating energy efficiency	%	90	90	90
Temperature control	%	+ 2	+ 2	+ 2
Seasonal space heating energy efficiency of package	%	92	92	92

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