Power

EN

Use of control panel

User manual

7643484-001-03 2018/02

BAXI

CONTENTS

1 SAFETY INSTRUCTIONS

1.1 General safety instructions

Danger
If any smoke is given off:
1. Switch off the unit.
2. Open the windows.
3. Call a qualified professional to search for the probable leak and correct it immediately.

Warning
Do not touch the flue gas ducts. Depending on the unit's settings, the flue gas duct temperature may exceed 60°C.

Warning
Do not touch the radiators for any lengthy periods of time. Depending on the unit's settings, the radiator temperature may reach 85°C.

Warning
Be careful with domestic hot water. Depending on the unit's settings, the domestic hot water temperature may reach 65°C.

Caution
Do not leave the unit without servicing. Contact a qualified professional or subscribe to a maintenance contract for the unit's annual servicing.

Warning
This unit is not intended to be used by people (including children) whose physical, sensory or mental capacities are reduced or by people who do not have any experience or knowledge of the unit, unless they are monitored or have been provided with prior instructions on the use of the unit by someone who is responsible for their safety.
Children should be supervised to ensure they do not play with the unit.

1.2 Recommendations

Caution
Only qualified professionals are authorised to work on the unit and the installation.

Comment
Check regularly that the installation is full of water and under pressure (minimum pressure 0.5 bars, recommended pressure between 1.5 and 2.0 bars).

Comment
Ensure that the unit is accessible at all times.

Comment
Never remove or cover the information labels and plates on the unit. The information plates and labels must be legible for the unit's full lifetime.

Caution
Do not store explosive or easily-flammable materials in the boiler room or near the boiler, even temporarily.

Caution
Use Antifreeze mode rather than power down the unit to carry out the following functions:
- Pump sticking release
- Antifreeze protection
- ACI function (depending on version)

1.3 Specific safety instructions

This unit has been designed according to European standards and directives and in particular is equipped with the following elements:

- **Safety thermostat**
  A safety thermostat turns off the boiler if the water temperature is too high in the primary circuit. It is imperative to find the cause of overheating before resetting. Contact your installer.
  Caution
  It is forbidden to deactivate this safety device.

- **NTC flue gas sensor**
  This device is placed on the water-exchanger flue gas.
  The electronic card on the control panel turns off the boiler if the temperature exceeds 90°C.
  The MMI indicates that the flue gas temperature has been exceeded. Switch off the boiler. It is imperative that you find the cause before restarting it. Contact your installer.

- **Flame ionisation electrode**
  The flame detection electrode guarantees safety in the event of gas disconnection or poor burner ignition. In this case it turns off the boiler.

- **Hydraulic pressure controller**
  This device allows the burner to start only if the water pressure is above 0.5 bars.

- **Heating circulator with post-circulation**
  The electronic control allows the heating pump a post-circulation of 3 minutes after stopping the burner in heating mode if the room thermostat calls for the burner to stop.

- **Antifreeze protection**
  The boiler's electronic control system included in heating mode or domestic hot water production has a protection against frost. If the water temperature falls below 6°C the burner starts working to reach a temperature of 30°C.
  This function is only valid if the boiler is lit, gas is open, and water pressure is correct.

- **Circulator blockage protection**
  If no request for heating or domestic hot water is received for 24 hours, the circulator starts automatically for 10 seconds to avoid any blockage.

- **Blockage protection in 3-way valve**
  If no heating demand is received for 24 hours, the 3-way valve automatically performs a complete operating cycle.

- **Safety valve (heating circuit)**
  This device limits the pressure in the heating circuit to 3 bars.

  Do not use to drain the heating circuit.

- **Heating circulator with pre-circulation**
  In the case of heat in heating mode, the unit can operate the pre-circulation pump before lighting the burner. This precirculation phase may last a few minutes depending on the operating temperature and the installation conditions.

1.4 Responsibilities

1.4.1 User's responsibility

You must respect the following instructions to guarantee the optimum operation for the installation:
- Read and follow the instructions provided in the manuals supplied with the unit.
- Call on a qualified professional to carry out the installation and start the unit up for the first time.
- Have the installation explained by the installer.
- Have the necessary inspections and servicing carried out by a qualified professional.
- Keep the manuals in good condition and close to the unit.

1.4.2 Installer's responsibility

The installer is responsible for installing the unit and for starting it up for the first time. The installer is required to respect the following instructions:
- Read and follow the instructions provided in the manuals supplied with the unit.
- Install the unit in accordance with current legislation and standards.
- Start up the unit for the first time and carry out all the necessary checks.
- Explain the installation to the user.
- Alert the user to the obligation to have the unit inspected and serviced each year.
- Hand over all the manuals to the user.

1.4.3 Manufacturer's responsibility

Our products are manufactured according to the different applicable directives. Therefore, they are delivered with CE marking and all the necessary documents. To ensure the quality of our products we are constantly seeking to improve them. We therefore reserve the right to modify the characteristics indicated in this document.
As manufacturer, we cannot be held responsible in the following cases:
- Failure to follow the unit's usage instructions.
- Insufficient or lack of servicing of the unit.
- Failure to follow the unit's installation instructions.

2 APPROVALS

2.1 Directives

This product is manufactured and placed in circulation in accordance with the requirements and standards in the following European directives:

- Gas appliance directive (2009/142/EC) applicable until 20th April 2018
  Gas appliance regulation (2016/426) applicable from 21st April 2018
- Pressurised equipment directive (2014/68/EU)
- Electromagnetic Compatibility directive (2014/35/EU)
- Low Voltage directive (2014/35/EU)
- Output directive (94/42/EEC)
- Ecodesign directive (2009/125/CE)
  Regulation (EU) (813/2013)

  Energy labelling regulation (EU) (2017/1369)
  EU regulation (811/2013)

In addition to the legal requirements and directives, the complementary directives described in this manual must also be observed.
For all the requirements and directives targeted in this manual, it is agreed that the additional information or later requirements are applicable when the unit is installed.

2.2 Certifications

EC certification No.	**CE-0085CT0008**
Type of boiler	Condensation
NOx class	6
Flue gas connection type	B23(p)-C13(x)-C33(x)-C43(x)-C63(x)-C93(x)

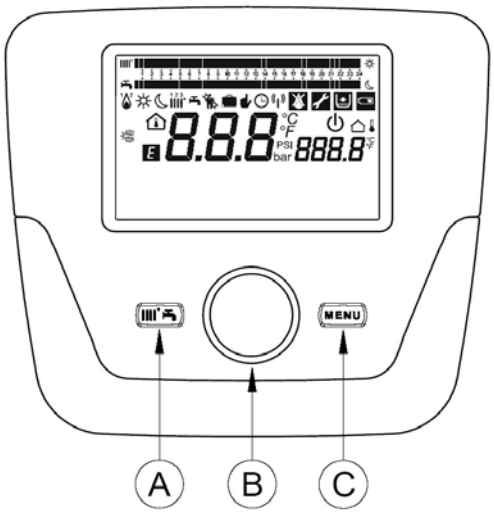
2.3 Gas categories

Country	Gas	Minimum pressure [mbar]	Nominal pressure [mbar]	Maximum pressure [mbar]
FR, ES, PT, IT, SK, CZ, GB, AT	G20	17	20	25
FR, HU	G25	17	25	30
IT	G230	17	20	25
FR, ES, PT, IT, SK, CZ, GB, HU	G31	25	37	45
AT	G31	42,5	50	57,5

3 CONTROL PANEL

3.1 Description of the control panel display

SYMBOL	DESCRIPTION
1 2	Burner on (Power %: 1< 70% - 2> 70 %)
	Operating mode: comfort room temperature
	Operating mode: reduced room temp (only if installed in the room)
1 2 3	Operating mode in heating: 1 = zone 1 - 2 = zone 2 - 3 = zone 3
	Operating mode: DHW (Domestic Hot Water) activated
	Operating mode: AUTOMATIC
	Operating mode: MANUAL
	Room temperature (°C)
	Outdoor temperature (°C)
	Off: heating and DHW deactivated (only the boiler anti-freeze protection is activated)
	Sweeping function activated
	Holiday program function activated
	Transmission given (only when the wireless device is connected)



	SOLAR installation integration
E	Anomaly
	Anomaly that prevents the burner from switching on
	Request technical assistance intervention
	Boiler/installation water pressure low
°C, °F, bar,PSI	Programmed measurement units (IS/US)

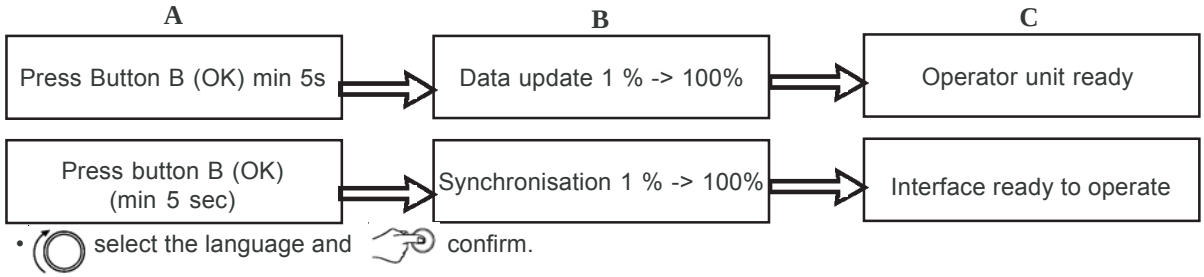
Symbols used			
	Turn button **B**		Display
	Press button **B**		Press keys **A** and **C** at the same time
	Press key **A** or **C**		

3.2 Initialising the control panel

Configuration procedure before first commissioning

The first time you commission the boiler, you must carry out the following procedure (the text is in **ENGLISH** until the language selection request) as indicated in the sequence **A-B-C** in the figure below:

- **B** for 5 seconds ;
- an increasing value, as a percentage from 1 to 100, is displayed on the Control Panel. The data synchronisation operation requires a few minutes' wait time;
- select the language, date and time.

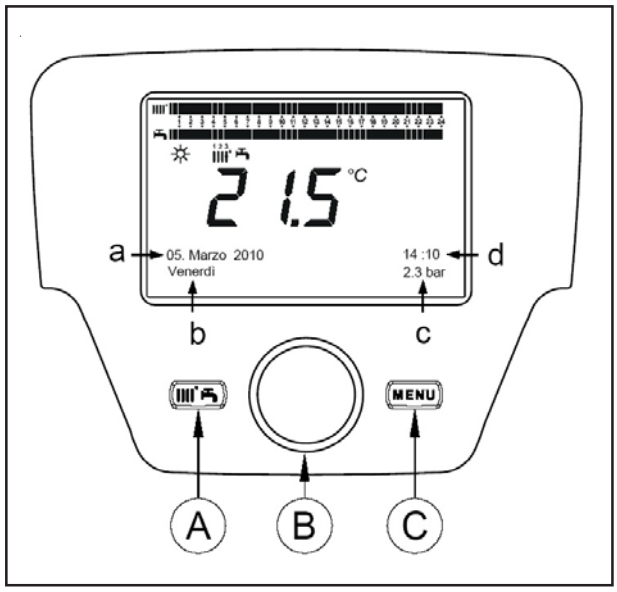


- select the language and confirm.

4 ACCESSING THE PARAMETER CONFIGURATION MENUS

Display key

a	Date: day, month, year
b	Day of the week
c	Boiler pressure / Heating circuit
d	Clock: hour and minute



The list of configuration menus is as follows:

- Info (chapter 2.1)
- Time and date (chapter 2.2)
- User interface (chapter 2.3)
- Hour programming(1, 2 - chapter 6)
- Hour programming 3 / CC3 (chapter 6)
- Hour programming 4 / DHW (chapter 6.3)
- Hour programming 5
- CC circuit holidays (1,2,3 - chapter 4.2)
- Heating circuit (1,2,3 - chapter 4.1.1)
- Domestic hot water
- Instant DHW water heater (not used on this type of boiler)
- Error (chapter 9)
- Generator diagnostic

The procedure below must be followed to acces the list of configuration menus (refer to the «Symbol description» chapter:

C then **B** to choose the menu you want;

B to confirm or **C** to exit without saving.

4.1 Information menu

If an anomaly occurs, the first item of data displayed is its code.

To display the boiler's information, select the **«Info» menu** key **C** -> **B** -> **B** to confirm.

Boiler temperature	°C	Boiler flow-back temperature
Outdoor temperature	°C	Outdoor temperature
Min. outdoor temperature	°C	Minimum outdoor temperature value stored (with Outdoor Probe connected)
Max. outdoor temperature	°C	Maximum outdoor temperature value stored (with Outdoor Probe connected)
DHW temperature	°C	DHW temp (value read by the boiler's domestic circuit sensor)
Collector temperature	°C	Instant collector probe temp. (with solar installation coupling)
Heating circuit state (1,2,3)	On/Off"	Heating circuit operating mode (circuits: 1,2,3)
DHW circuit state	Load	Domestic circuit operating mode
Boiler state	On/Off"	Boiler operating mode
Solar installation state	-	Indicates the solar operation (with solar installation integration)
Customer service telephone	No.	xxxxxxxxxx

4.2 Setting the date and time

To set the date and time, proceed as follows:

- **C** **B** select the menu **Time and date** **B** **1** (Hours / minutes) **B** (the hour flashes)
- **B** to modify the hour **B** to confirm (the minutes flash) **B** to modify **B** to confirm.
- **B** to modify **2** (Day / month) and **3** (Year) by carrying out the procedure above again.
- **C** to return to the previous menu.

4.3 Modifying the language (user interface menu)

To select the language, proceed as follows:

- **C** **B** select the menu to select the program line **20** (Langue)
- **B** to choose the language **B** to save.
- **C** to return to the previous menu.

4.4 Temporary heating temperature setting

The temperature is set by turning the **B** button to the right to increase the value and to the left to reduce it and **B** to confirm.

The temperature to be set, for the heating circuit, may be:

- **Original setpoint temperature:** if the control unit is installed in the boiler.
- **Ambient temperature:** if the control unit is attached to the wall.

5 FUNCTIONS ASSOCIATED WITH THE QUICK MENU KEY

Press the **A** key and turn **B** to scroll through the following functions:

- On/Off then **B** to change the status
- DHW forcing then **B** to force the DHW mode
- CC1 regime
- CC1 comfort setting
- DHW regime
- DHW comfort setting

} then **B** to activate the function selected, **B** to modify the value and **B** to confirm.

- **On/Off**
  When this function is activated, the display shows the symbol and the operation of the boiler in DHW regime and heating is deactivated (the anti-freeze protection function is activated). To start the boiler up again, repeat the procedure described above.
- **DHW forcing**
  This function is used to raise the hot water tank's temperature, if there is one, until it reaches the programmed temperature, independently of the hourly range programmed (the symbol is present on the display)
- **CC1 regime**
  The boiler operating mode can be selected from this menu, as indicated in chapter 4.
- **CC1 comfort setting**
  Select this menu to modify the comfort ambient temperature value.
- **DHW regime**
  Select this menu to activate (**On**) or deactivate (**Off**) the DHW production. The «Eco» function is not used for this boiler model.
- **DHW comfort setting**
  Select this menu to modify the maximum DHW temperature value.

When the DHW production is deactivated, the symbol disappears from the display.

6 OPERATING MODES

6.1 Heating

The boiler has 4 heating operatingfmodes : Comfort - Reduced - Automatic - Protection.
To program one of the operating modes, proceed as follows:
From the main menu **A** **B** **CC1 regime** **B** to confirm.

- **B** (anti clockwise) **Comfort - Reduced - Automatic - Protection**
  B to confirm or **C** exit without saving.

CASE 1: the control unit is installed in the boiler
Turn the **B** button to set the boiler's start temperature.

OPERATING MODE DESCRIPTION

- **Comfort** : the heatingf is always activated (symbols displayed).
- **Reduced** : the heatingf is deactivated (symbols displayed) ;
- **Automatic** : the heatingf depends on the hourly range programmed (symbols displayed) ;
- **Protection** : the boiler shuts down and the anti-freeze protection is activated (symbol displayed)

CASE 2: the control unit is attached to the wall

- **B** to set the ambient temperature in the room to be heated.

OPERATING MODE DESCRIPTION

- **Comfort** : the temperature in the room to be heated corresponds to the comfort temperature; the factory-set value is 20 °C (symbols) ;
- **Reduced** : the temperature in the room to be heated corresponds to the reduced temperature; the factory-set value is 16 °C (symbols displayed) ;
- **Automatic** : the temperature in the room to be heated depends on the hourly range programmed (symbols displayed) ;
- **Protection** : the boiler switches on when the ambient temperature falls below 6 °C (symbol displayed)

While the boiler is operating in Automatic mode, turn button B to set the temperature temporarily. This modification remains valid until the next hourly range is changed.

The boiler's anti-freeze is always activated; the boiler starts up when the heating start temperature is under 5°C. This function is operational if the appliance is powered electrically and if there is gas.

6.1.1 Ambient temperature setting in reduced mode

To program the ambient temperature in **Reduced** mode, proceed as follows:

- **C** **B «Heating circuit 1»** **B**.
- **B** the programe line **712** (Reduced setpoint), then **B** (the temperature value starts to flash);
- **B** to modify the temperature and **B** to confirm.
- **C** to return to the previous menu.

The comfort ambient temperature may be set not only using the **A** key in chapter 3, but also by modifying the **710** parameter as indicated above.

6.2 Holiday program

This function enables users to choose the ambient temperature value to be programmed when they are going away for several days (for example during holidays). The minimum **anti-freeze** temperature or the **Reduced** mode temperature (program line **648**) may be programmed. In program line **641** (Preselection), 8 programming levels named **Period 1** (next 8 days to be programmed in on and off) are available. When the function is activated, the display shows the symbol
The following procedure activates the function and programs the hourly ranges:

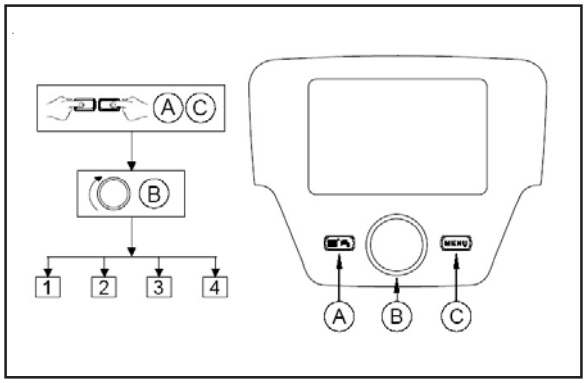
- **C** **CC1 circuit holidays**
- **B** program line **641** («Preselection») **B** **Period 1** (flashes) **B** and choose the day to program (from 1 to 8), then **B** program line **642**.
- **B** to program the start period (**642**) **B** **B** to program the month **B** and **B** to program the day **B** to confirm.
- Repeat the same sequence of instructions to also program the program line **643** (at the end of the range, the boiler starts working on the next day).
- Once the start and end of the range have been programmed **B** the program line **648** **B** **B** to program the minimum operating temperature, if **anti-freeze**, or **Reduced** mode, then **B** to confirm.
- Repeat these three points to program other ranges or **C** to return to the previous menu.

7 PARAMETER PROGRAMMING

WE RECOMMEND THAT YOU WRITE DOWN ALL THE PARAMETERS YOU CHANGE AT THE BACK OF THIS MANUAL.

Menu key

1	End user	**3**	Specialist
2	Commissioning	**4**	OEM



The procedure for accessing the four menus to program the boiler is as follows:

- from the main menu **C**.
- **A** and **C** (hold down for around 6 seconds)
- menu **1**-**2**-**3**-**4** (see the figure opposite and the key).
- **C** press several times to go back one menu at a time to the main menu.

8 HOURLY PROGRAMMING

Before accessing the programming, you must activate the Automatic operating mode (chapter 4).

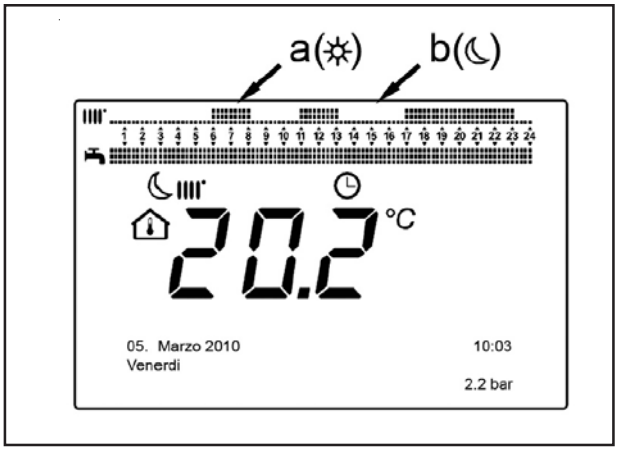
The hourly heating (**CC1 hourly programming**) and DHW (**Hourly program 4 / DHW**) programming is used to program the boiler's automatic operation during determined daily hourly ranges and during the days of the week. The example in the figure below refers to the daily hourly range 1 (below) where « **a** » is the operating period at comfort temperature and « **b** » is the operating period in Reduced mode (chapter 4). The boiler operating programming may be performed by **groups of days** or by **individual days** (every day from Monday to Sunday).

Preset weekly intervals
(Program line 500 for the heating and 560 for the DHW)

- Mon-Sun (groups of days)
- Mon-Fri (groups of days)
- Sat-Sun (groups of days)
- Monday-Tuesday-Wednesday-Thursday-Friday-Saturday-Sunday (individual days)

Preset daily hourly ranges
(Program line 514 for the heating and 574 for the DHW)

- 06:00-08:00 .. 11:00-13:00 .. 5pm - 11pm (example in the figure opposite)
- 06:00-08:00 .. 5pm-11pm0
- 06:00-23:00



8.1 Groups of days

This function is used to program one of the 3 weekly intervals availabe, each with three preset daily hourly ranges to switch the boiler on and off, which may be modified by the user - program program **501...506**. The intervals are the following: **Mon-Sun** (default value) **/ Mon-Fri / Sat-Sun**.

If the installation is divided into zones, with each one controlled by its control unit/room thermostat, each zone must be programmed separately on each device.

8.2 Individual days

All of the daily boiler switch on/off phases may be modified by the user. For each day selected, 3 preset hourly ranges are available, as stated in the summary table at the end of this chapter.

8.3 Hourly programming modification procedure (heating/DHW)

After performing the hourly programming using the preset programs, you can modify the periods of the three hourly ranges - program lines**501...506** for the heating and **561...566** for the DHW, as described below.

Heating circuit programming modification procedure

- C B **CC1 hourly program** **B** program line **500** (Day selection).
- **B** : the **groups of days** field (chapter 4.1) starts to flash **B** to scroll through the days («Groups of days» or «Individual days») **B** to confirm.
- **B** program line **514** (Default value selection?) **B** and **B** to select one of the 3 programs preset for the daily «Groups of days» (chapter 7.1) programming or **B** a position anto-clockwise to switch to manual programming: program lines **501....506.**

DHW circuit programming modification procedure

The procedure to activate the hourly programming for the domestic hot water is the same as for the hourly programming for the heating. The only difference is with the name of the menu**Hourly program 4 / DHW** and the program lines to be programmed **560** (Day selection). To deactivate this function, you must run the procedure described below in the «Restoring the original default programming» section.

Summary table

Groups of days	Program line 514 (heating) - 574 (DHW)		
Preset programs	Preset programs		
	On 1 - Off 1	On 2 - Off 2	On 3 - Off 3
Mon-Sun	06:00 - 08:00	11:00 - 13:00	17:00 - 23:00
Mon-Fri	06:00 - 08:00		17:00 - 23:00
Sat-Sun	06:00 - 23:00		

Individual days	Prog. lines 501 502 503 504 505 506 (heating) - 561 562 563 564 565 566 (DHW)		
Day interval	Preset programs		
	On 1 - Off 1	On 2 - Off 2	On 3 - Off 3
Monday-Tuesday-Wednesday Thursday-Friday	06:00 - 08:00	11:00 - 13:00	17:00 - 23:00

To facilitate programming, the existing programs may be copied to the other days of the week. The procedure is as follows:

Copying a program to another day

After programming the hourly range for a set day, it may be copied to one or more days of the week.

*The parameter in brackets « **( )** » refers to the hourly programing in* DHW

- From program line **514 (574)** (if one of the 3 preset hourly ranges is used) or from the program line **501(561)** (if the manual programming was executed), turn the button to the right to the program line **515 (575).**

- The display shows **Copy?**.
- **B** **Copy to** : the day of the week flashes.
- **B** To scroll through the days of the week, choose the day where the program is to be copied then **B** to confirm.
- Repeat the point above if you want to copy the same daily program to other days.
- **C** to return to the previous menu.

Restoring the original programming (default)

The weekly programming may be deleted and the comfort heating activated (the value which will be programmed is **00-24**, identical for all the days of the week).

- **C** **B** **CC1 hourly program** **B** the program line **500** (CC1 hourly program) or **560** (Hourly program 4 / DHW).
- **B** a position anti-clockwise,the program line **516** (**Default** **values**) for the heating and program line **576** for the DHW.
- **B** a position until **Yes** is displayed, **B** to confirm.
- **C** to return to the previous menu.

When the main menu is displayed once the procedure is complete, you will note that the daily programming bar changes. The heating is still active for 24 hours. To reprogram the boiler, you must repeat the procedure described in chapter 6.

9 UNIT LOCKING/UNLOCKING FUNCTION

In order to prevent unauthorised people from programming, it is possible to lock all the functions associated with the **C** key.

9.1 Locking procedure

- C B **User interface** B press to confirm.
- B program line **27** (Programming locking), B to c
- B **On** to activate the locking function.

9.2 Unlocking procedure

- C **A** and **B** (hold down for approx. 6 seconds) **Locking programming temporarily inact.** ».

This unlocking phase is temporary, it lasts 1 minute, then the unlocking is reactivated automatically. To deactivate the function permanently, you must activate the temporary unlocking procedure then **B** **Off** in the program line **27** (Programming locking) and **B** to confirm the unlocking.

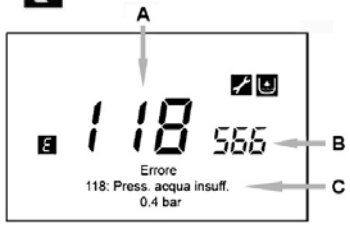
10 SHUTTING DOWN THE BOILER

To shut down the boiler, you must cut the electricity supply to the appliance by pressing the two-pole switch. When the «Protection mode» operation is activated, the boiler remains off but the electrical circuits are still powered up and the anti-freeze function is activated

11 ERRORS

The errors on the display are identified by the E svmbol. th information displayed is:

- An error code (**A**)
- A secondary error code (**B**)
- A brief description of the error (**C**) ;



- The following symbols may appear on the display: their meanings are explained in the table below.

If an error occurs, to display the main menu, **C**. The symbol E remains on the display to indicate that the appliance has an error; after one minute, the display shows the error page again, as indicated in the figure.

11.1 Error reset

The errors may be reset AUTOMATICALLY, MANUALLY or require the APPROVED TECHNICAL ASSISTANCE SERVICE. Below are the different commands in detail:

AUTOMATIC

If the flashing symbol appears on teh display, the error is reset automatically (temporary error) as soon as the element which caused it stops.
Often, errors of this type are generated by water outlet/return temperatures that are too high in the boiler, then they are reset automatically as soon as the temperature falls below the critical value. If the same error is repeated frequently and/or it is not automatically restet by the boiler, contact the approved Technical Assistance Service.

MANUAL

To reset the error manually when the corresponding code appears **B** **B** « **Yes** » **B** to confirm. The error code disappears after a few seconds.

REQUEST FOR INTERVENTION FROM THE APPROVED TECHNICAL ASSISTANCE SERVICE

If the display shows the symbol and the symbol, you must contact the **APPROVED TECHNICAL ASSISTANCE SERVICE**. Before calling, we recommend that you note down the code(s), error(s) and a brief description.

If the error code displayed is not on the list or when an error occurs with a certain frequency, we recommend that you contact the APPROVED TECHNICAL ASSISTANCE SERVICE.

Error table

(A)	(C)	(A)	(C)
E	**Error description**	E	**Error description**
10	Outdoor probe sensor	**125**	Safety disconnection due to lack of circulation (check made by a temperature sensor)
20	NTC flow -back sensor	**128**	Flame extinguishing
28	Flue gas NTC sensor	**130**	Disconnection by flue gas NTC probe for overheating
40	NTC return sensor	**133**	Ignition fault (4 attempts)
50	DHW sensor (only for heating only model w ith hot w ater tank)	**151**	Internal heating board error
52	Solar DHW sensor (for integration of a solar installation)	**152**	General configuration error
73	Solar collector sensor (for integration of a solar installation)	**160**	Fan operating error
83	Communication problem betw een boiler board and control unit. Probable short-circuit on the heating	**171**	ACI board fault
84	Address conflict betw een several control units (internal anomaly)	**321**	DHW NTC sensor damaged
109	Presence of air in the boiler circuit (temporary anomaly)	**343**	General solar installation configuration error (for integration of a solar installation)
110	Disconnection of the safety thermostat due to overheating (pump blocked or air in the heating circuit)	**384**	Incorrect light (interfering flame - internal anomaly)
111	Disconnection of the safety thermostat due to overheating	**385**	Supply voltage too low
117	Hydraulic circuit pressure too high	**386**	Fan speed threshold not reached
118	Hydraulic circuit pressure too low	**430**	Safety disconnection due to lack of circulation (check made by a pressure sensor)

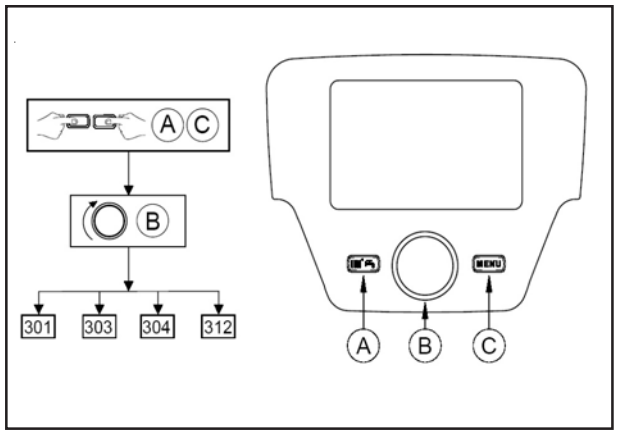
12 SPECIAL FUNCTIONS

The functions available are:

- **Manual regime** (**301**) - Options: 25 - 90 (°C) When this function is activated, the boiler runs on heating according to the temperature setpoint value.
- **Sweeping function** (**303**) - Options: Total load (max thermal power of the boiler), Partial load (reduced thermal power), Total heating load (maximum thermal power in heating function).
- **Regulator shutdown function** (**304**) - Options: from 100 % (maximum thermal power) to 0 % (reduced thermal power). Activate this function to facilitate the gas valve calibration operations.
- **Drain function** (**312**) - Options: On (function activation) - Off (function exit). See chapter 11.1 «Installation drain function»

The procedure to follow to activate these functions is

- From the main menu **A** and **C** (hold down for approx. 6 seconds) names of FUNCTIONS (see the figure opposite: 301 - 303 - 304 - 312)
- **B** to select the FUNCTION **B** to ACTIVATE the selected function then **B** menu in the FUNCTION to modify (see the example below).



Example: *turn button **B** to activate the CALIBRATION function (program line **304**), press button B, the function is now operational and preset to 100 % (the boiler reaches the maximum thermal power). Press the button and turn it to set the desired power level as a percentage (0% corresponds to the reduced thermal power)*

To interrupt the function manually, repeat the procedure described above, when the function deactivated the display shows «Off».

12.1 Drain function

This function is used to facilitate the elimination of air inside the heating circuit when the boiler is installed or after primary circuit water drainage maintenance operations. The electronic board will activate an on/off cycle for the pump lasting 10 minutes. The function will stop automatically at the end of the cycle.

To interrupt the function manually, repeat the procedure described above, when the function is deactivated the display shows «Off».

13 ADJUSTMENT AND SAFETY DEVICES

This unit is designed in accordance with European standards and directives and in particular with the following elements:

- **Safety thermostat**
  A safety thermostat turns off the boiler if the water temperature is too high in the primary circuit. It is imperative to find the cause of overheating before resetting.

  IT IS FORBIDDEN TO DEACTIVATE THIS SAFETY DEVICE

- **NTC flue gas sensor**
  This device is placed on the water-exchanger flue gas.
  The electronic card on the control panel turns off the boiler if the temperature exceeds 110°C.

  NB: the reset operation is only possible if the temperature is below 90°C.

  IT IS FORBIDDEN TO DEACTIVATE THIS SAFETY DEVICE

- **Flame ionisation electrode**
  The flame detection electrode guarantees safety in the event of gas starvation or poor burner ignition.
  In this case it turns off the boiler.

- **Hydraulic pressure controller**
  This device allows the burner to start only if the water pressure is above 0.5 bar.

- **Heating circulator with post-circulation**
  The electronic control allows the heating pump a post-circulation of 3 minutes after the burner shuts down in heating mode if the room thermostat calls for the burner stop.

- **Antifreeze protection**
  The boiler's electronic control system included in heating mode or domestic hot Sanitary water production has a protection against frost. If the water temperature falls below 6°C the burner starts up to reach a temperature of 30°C.
  This function is only valid if the boiler is lit, gas is open, and water pressure is correct.

- **Circulator blockage protection**
  If no request for heating or domestic hot water is received for 24 hours, the circulator starts automatically for 10 seconds to avoid any blockage.

- **Blockage protection in 3-way valve**
  If no heating demand is received for 24 hours, the 3-way valve automatically performs a complete operating cycle.

- **Safety valve (heating circuit)**
  This device limits the pressure in the heating circuit to 3 bar.

  Do not use to drain the heating circuit.

- **Heating circulator with pre-circulation**
  In the case of a heat request in heating mode, the unit can operate the circulator in pre-circulation before lighting the burner. This pre-circulation phase may last a few minutes depending on the operating temperature and the installation conditions.

14 SERVICING

- The boiler must be serviced and cleaned at least once per year by a qualified professional.

The annual servicing must be carried out in accordance with the decree of 15th September 2009 relative to the annual servicing of boilers whose nominal power is between 4 and 400 kW.
The professional must deliver a certificate to the end user.

- Sweep out **at least once per year**, or more depending on current regulations.
- All the maintenance operations must be carried out by a qualified professional.
- We recommend subscribing to a servicing contract.
- Only original spare parts must be used.
- Do not clean the casing with abrasive and/or easily-flammable products (e.g. petrol, alcohol, etc.). Always disconnect the unit's electrical power supply before cleaning it.

15 ENVIRONMENT

15.1 Energy saving

Tips to save energy
- Fully ventilate the room where the boiler is installed.
- Do not block the air vents.
- Do not cover the radiators. Do not position curtains in front of the radiators.
- Put reflective panels behind the radiators to avoid heat loss.
- Insulate the pipes in rooms which are not heated (cellars and attics).
- Close the radiators in rooms which are not used.
- Do not let hot (and cold) water run unnecessarily.
- Install an economical shower head to save up to 40% energy.
- Take showers rather than baths. A bath consumes twice as much energy.

15.2 Atmosphere thermostats and settings

There are different types of atmosphere thermostat. The type of thermostat used and the parameter selected have an impact on total energy consumption.
- A modulating regulator, potentially combined with thermostat taps, saves energy and offers excellent comfort levels. This combination enables the temperature to be adjusted separately in each room. However, do not install thermostat radiator taps in the room where the atmosphere thermostat is located.
- Opening or closing fully the thermostat radiator taps causes undesired variations in temperature. Consequently, these taps must be opened/closed gradually.
- Set the atmosphere thermostat to a temperature of around 20°C to reduce heating costs and energy consumption.
- Lower the thermostat to around 16°C at night or when you are away. This enables you to reduce heating costs and energy consumption.
- Lower the thermostat before airing out the rooms.
- Set the water temperature to a lower level in summer than in winter (for example, 60°C and 80°C respectively) when an on/off thermostat is used.
- When clock thermostats and programmable thermostats need to be set, do not forget to take account of holidays and days when there is no-one at home.

16 DISMANTLING, DISPOSAL AND RECYCLING

Only qualified technicians are authorised to service the device and system.

Before dismantling the appliance, make sure to have cut out the power supply, closed the gas inlet valve and secured all the boiler and system connections.
Dispose of the appliance correctly according to the laws and regulations in force. The appliance and accessories cannot be discarded along with normal household waste.

17 TECHNICAL SPECIFICATIONS

ErP technical parameters

BAXI - Power			**1.32**	**32 Combi 160**	**32 Solar 220**
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			No	Yes	Yes
Rated heat output	Prated	kW	32	32	32
Useful heat output at rated heat output and high temperature regime(2)	P_4	kW	32	32	32
Useful heat output at 30% of rated heat output and low temperature regime(1)	P_1	kW	5,5	5,5	5,5
Seasonal space heating energy efficiency	η_s	%	92	92	92
Useful efficiency at rated heat output and high temperature regime(2)	η_4	%	87,9	87,9	87,9
Useful efficiency at 30% of rated heat output and low temperature regime(1)	η_1	%	97,3	97,3	97,3
Auxiliary electricity consumption					
Full load	elmax	kW	0,075	0,075	0,075
Part load	elmin	kW	0,015	0,015	0,015
Standby mode	P_{SB}	kW	0,004	0,004	0,004
Other items					
Standby heat loss	P_{stby}	kW	0,081	0,081	0,081
Ignition burner power consumption	P_{ign}	kW	-	-	-
Annual energy consumption	Q_{HE}	GJ	100	100	100
Sound power level, indoors	L_{WA}	dB	56	56	56
Emissions of nitrogen oxides	NO_x	mg/kWh	28	28	28
Domestic hot water parameters					
Declared load profile				XL	XL
Daily electricity consumption	Q_{elec}	kWh		0,287	0,317
Annual electricity consumption	AEC	kWh		63	70
Water heating energy efficiency	η_{wh}	%		82	83
Daily fuel consumption	Q_{fuel}	kWh		23,681	23,105
Annual fuel consumption	AFC	GJ		18	18

(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.

18 APPENDIX

18.1 ErP information

18.1.1 Product fiche

BAXI - Power		**1.32**	**32 Combi 160**	**32 Solar 220**
Space heating - Temperature application		Medium	Medium	Medium
Water heating - Declared load profile			XL	XL
Seasonal space heating energy efficiency class		A	A	A
Water heating energy efficiency class			A	A
Rated heat output (Prated or Psup)	kW	32	32	32
Space heating - Annual energy consumption	GJ	100	100	100
Space heating - Annual energy consumption	kWh(1) GJ(2)		63 18	70 18
Seasonal space heating energy efficiency	%	92	92	92
Water heating energy efficiency	%		82	83
Sound power level L_{WA} Indoors	dB	56	56	56

(1) Electricity
(2) Fuel

18.1.2 Package fiche

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.

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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.

Psup / (Prated + Psup)[1][2]	II, package without hot water storage tank	II, package with hot water storage tank
0	0	0
0,1	0,30	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 betw een the tw o adjacent values.		
(2) Prated is related to the preferential space heater or combination heater.		

III The value of the mathematical expression: 294/(11xPrated), 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.

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