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PROJECT

EVODENS PRO

Service Manual

Control panel & High-efficiency wall-hung gas boiler

AMC Pro 45 - 65 - 90 - 115

Diematic Evolution

De Dietrich

SUSTAINABLE COMFORT®

Contents

1 Safety

1.1 Liabilities

1.1.1 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.

1.1.2 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.

1.1.3 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 Additional documentation

The following documentation is available in addition to this manual:

- Installation and user manual
- Water quality instructions

2.2 Symbols used in the manual

This manual contains special instructions, marked with specific symbols. Please pay extra attention when these symbols are used.

Caution
Risk of material damage.

Important
Please note: important information.

See
Reference to other manuals or pages in this manual.

3 Description of the product

The AMC Pro boiler is delivered with a combination of the control panel, control unit and extension PCB. The contents of this manual are based on the following software and navigation information:

Tab.1 Software and navigation information

	Name visible in display	Software version
Boiler **AMC Pro**	CU-GH08	1.7
Control panel **Diematic Evolution**	MK3	1.29
PCB **SCB-10**	SCB-10	1.03

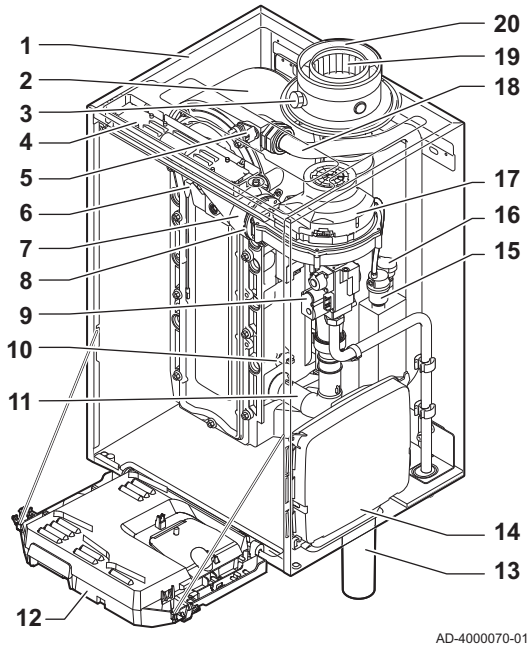
3.1 General description

The AMC Pro boiler is a high-efficiency wall-hung gas boiler with the following properties:

- High-efficiency heating.
- Limited emissions of polluting substances.
- Ideal choice for cascade configurations.

3.2 Main components

Fig.1 Main components

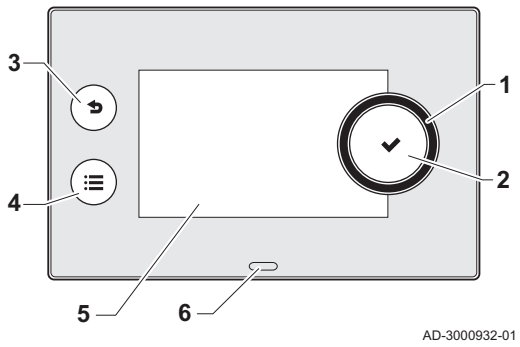


1 Casing/air box
2 Heat exchanger (CH)
3 Interior light
4 Type plate
5 Flow sensor
6 Ionisation/ignition electrode
7 Mixing tube
8 Non-return valve
9 Combined gas valve unit
10 Return sensor
11 Air intake silencer
12 Instrument box
13 Siphon
14 Expansion box for the control PCBs
15 Automatic air vent
16 Hydraulic pressure sensor
17 Fan
18 Supply line
19 Flue gas measuring point
20 Flue gas discharge pipe
21 Air supply
▶ Heating circuit flow
Heating circuit return ▶

4 Use of the control panel

4.1 Control panel components

Fig.2 Control panel components



1 Rotary knob to select a tile, menu or setting
2 Confirm button ✔ to confirm the selection
3 Back button ⮌:
   - **Short button press**: Return to the previous level or previous menu
   - **Long button press**: Return to home screen
4 Menu button ☰ to go to the main menu
5 Display
6 Status LED

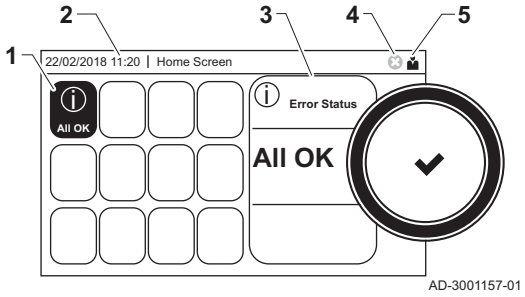
4.2 Description of the home screen

This screen is shown automatically after start-up of the appliance. The control panel goes automatically in standby mode (black screen) if the screen is not touched for 5 minutes. Press one of the buttons on the control panel to activate the screen again.

You can navigate from any menu to the home screen by pressing the back button ⮌ for several seconds.

The tiles on the home screen provide quick access to the corresponding menus. Use the rotary knob to navigate to the menu of your choice and press the button ✔ to confirm the selection.

Fig.3 Icons on home screen

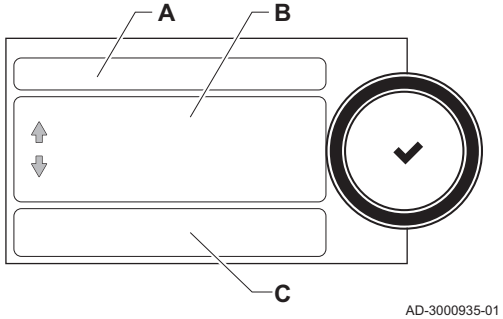


1 Tiles: the selected tile is highlighted
2 Date and time | Name of the screen (actual position in the menu)
3 Information about the selected tile
4 Error indicator (only visible if an error has been found)
5 Icon showing the navigation level:
   - : Chimney sweeper level
   - : User level
   - : Installer level
     The installer level is protected by an access code. When this level is active, the status of the tile [ ] changes from **Off** into **On**.

4.3 Description of the main menu

You can navigate from any menu directly to the main menu by pressing the menu button ☰. The number of accessible menus depends on the access level (user or installer).

Fig.4 Items in the main menu



A Date and time | Name of the screen (actual position in the menu)
B Available menus
C Brief explanation of the selected menu

Tab.2 Available menus for the user

Description	Icon
System Settings	⚙
Version Information	i

Tab.3 Available menus for the installer

Description	Icon
Installation Setup	
Commissioning Menu	
Advanced Service Menu	
Error History	
System Settings	
Version Information	

5 User instructions

5.1 Changing the display settings

1. Press the ☰ button.
2. Select **System Settings** ⚙.
3. Perform one of the operations described in the table below:

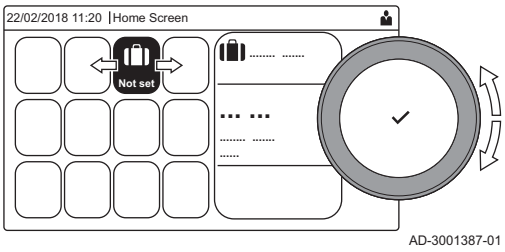
Tab.4 Display settings

System Settings menu	Settings
Set Date and Time	Set the currrent date and time
Select Country and Language	Select your country and language
Daylight Saving Time	Enable or disable daylight saving time
Installer Details	Read out the name and phone number of the installer
Set Heating Activity Names	Create the names for the activities of the timer program
Set Screen Brightness	Adjust the brightness of the screen
Set click sound	Enable or disable the click sound of the rotary knob
License Information	Read out detailed license information from the device platform application

5.2 Accessing the user level menus

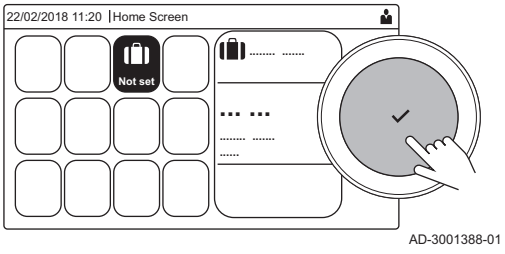
The tiles on the home screen provide quick access for the user to the corresponding menus.

Fig.5 Menu selection



1. Use the rotary knob to select the required menu.

Fig.6 Confirm menu selection



2. Press the ✔ button to confirm the selection.
   ⇨ The available settings of this selected menu appear in the display.
3. Use the rotary knob to select the desired setting.
4. Press the ✔ button to confirm the selection.
   ⇨ All options for change will appear in the display (if a setting cannot be changed, **Cannot edit read-only datapoint** will appear in the display).
5. Use the rotary knob to change the setting.
6. Press the ✔ button to confirm the selection.
7. Use the rotary knob to select the next setting or press the ⮌ button to return to the home screen.

5.3 Home screen

The tiles on the home screen provide quick access to the corresponding menus. Use the rotary knob to navigate to the menu of your choice and press the ✔ button to confirm the selection. All options for change will appear in the display (**Cannot edit read-only datapoint** will appear in the display if a setting cannot be changed).

Tab.5 Selectable tiles for the user

Tile	Menu	Function
	Information menu.	Read out various current values.
	Error indicator.	Read out details about the current error. With some errors the icon will appear with installer contact details (when filled in).
	Holiday mode.	Set the start and end date of your holiday to lower the room and domestic hot water temperatures of all zones.
	Gas boiler indicator.	Read out burning details of the boiler and switch the heating function of the boiler on or off.
	Water pressure indicator.	Shows the water pressure. Top up the installation when the water pressure is too low.
	Heating circuit set-up.	Configure the settings per heating circuit.
	DHW setup.	Configure the domestic hot water temperatures.
	Outdoor sensor setup.	Configure the temperature regulation using the outdoor sensor.

5.4 Activating holiday programs for all zones

If you go on holiday, the room temperature and domestic hot water temperature can be reduced to save energy. With the following procedure you can activate the holiday mode for all zones and domestic hot water temperature.

1. Select the tile [ ].
2. Set the following parameters:

Tab.6 Holiday program settings

Parameter	Description
Start date holiday	Set the start time and date of your holiday
End date holiday	Set the end time and date of your holiday
Wished room zone temperature on holiday period	Set the room temperature for the holiday period
Reset	Reset or cancel the holiday program

5.5 Heating circuit configuration

For every heating circuit there is a quick user settings menu available.
Select the heating circuit you want to configure by selecting the tile [ ], [ ], [ ], [ ], [ ], [ ] or [ ]

Tab.7 Menu to configure a heating circuit

Icon	Menu	Function
	Scheduling	Set the scheduling mode and choose a timer program already created
	Manual	Set the manual mode; the room temperature setpoint is set to a fixed setting
	Short temperature change	Set the temporary mode; the room temperature setpoint is changed temporarily
	Holiday	Set the start and end date of your holiday to lower the room temperature setpoint.
	Antifrost	Set the frost protection mode; the minimum room temperature protects your system from freezing

Icon	Menu	Function
	Set Heating Activity Temperatures	Set the room temperature setpoint for each activity of the timer program. See: Timer program to control the room temperature, page 13
⚙	**Zone configuration**	Access the settings for the configuration of the heating circuit.

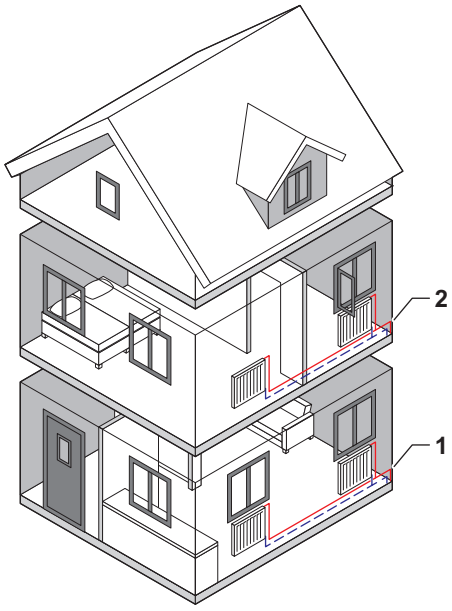
Tab.8 Extended menu to configure a heating circuit ⚙ **Zone configuration**

Menu	Function
Short temperature change	Change the room temperature temporarily, if required
OperatingZoneMode	Select the heating operating mode: Scheduling, Manual or Antifrost
Manu ZoneRoomTempSet	Set the room temperature manually to a fixed setting
Heating Schedule	Create a timer program (up to 3 programs allowed). See: Creating a timer program, page 13
Set Heating Activity Temperatures	Set the room temperature for each activity of the timer program
ZoneTimeProg Select	Select a timer program (3 options)
Holiday Mode	Set the start and end date of your holiday and the reduced temperature for this zone
Zone friendly Name	Create or change the name of the heating circuit
Icon display zone	Select the icon of the heating circuit
OperatingZoneMode	Read the current operating mode of the heating circuit

5.6 Changing the room temperature of a zone

5.6.1 Definition of zone

Fig.7 Two zones



Zone is the term given to the different hydraulic circuits CIRCA, CIRCB and so on. It designates several rooms of the house served by the same circuit.

Tab.9 Example of two zones

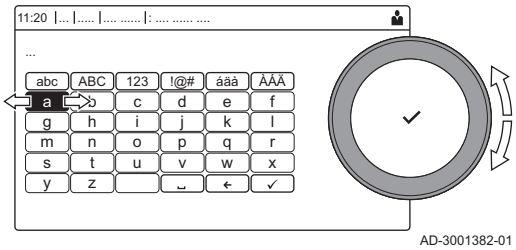
	Zone	Factory name
1	Zone 1	CIRCA
2	Zone 2	CIRCB

5.6.2 Changing the name and symbol of a zone

The zones have a factory symbol and factory name. You can change the name and symbol of a zone.

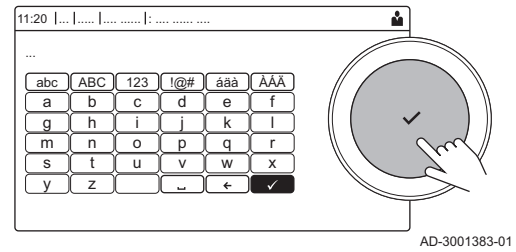
1. Select the tile of the zone you want to change.
2. Select **Zone configuration** ⚙
3. Select **Zone friendly Name**
   ⇨ A keyboard with letters, numbers and symbols is shown.

Fig.8 Letter selection



4. Change the name of the zone (20 characters maximum):
   4.1. Use the rotary button to select a letter, number or action.
   4.2. Select ← to delete a letter, number or symbol.
   4.3. Press the rotary knob ✔ to confirm or to repeat a letter, number or symbol.
   4.4. Select ␣ to add a space.

Fig.9 Confirm sign



5. Select the ✔ sign on the screen when the name is complete.
6. Press the rotary knob ✔ to confirm the selection.
7. Use the rotary button to select **Icon display zone**.
8. Press the ✔ knob to confirm the selection.
   ⇨ All available icons appear in the display.
9. Use the rotary knob to select the desired symbol of the zone.
10. Press the rotary knob ✔ to confirm the selection.

5.6.3 Changing the operating mode of a zone

To regulate the room temperature of the different areas of the house, you can choose from 5 operating modes:

1. Select the tile of the zone you want to change.
   ⇨ The **Zone QuickSelect** menu opens.
2. Select the desired operating mode:

Tab.10 Operating modes

Icon	Mode	Description
	Scheduling	The room temperature is controlled by a timer program
	Manual	The room temperature is set to a fixed setting
	Short temperature change	The room temperature is changed temporarily
	Holiday	The room temperature is reduced during your holiday to save energy
	Antifrost	Protect the boiler and installation from freezing in winter

5.6.4 Timer program to control the room temperature

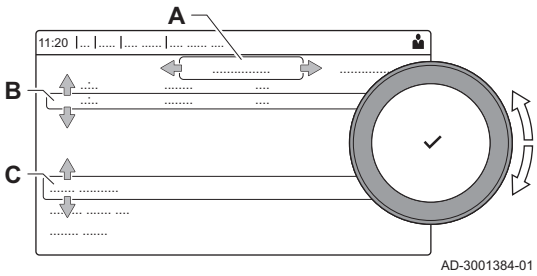
■ Creating a timer program

A timer program allows you to vary the room temperature per hour and per day. The room temperature is linked to the activity of the timer program.

Important
You can create up to three timer programs per zone. For example, you can create a program for a week with normal working hours and a programme for a week when you are at home most of the time.

1. Select the tile of the zone you want to change.
2. Select ⚙ **Zone configuration > Heating Schedule**.
3. Select the timer program you want to modify: **Schedule 1**, **Schedule 2** or **Schedule 3**.
   ⇨ Activities scheduled for Sunday are displayed. The last scheduled activity of a day is active until the first activity of the next day. At initial start-up, all weekdays have two standard activities; **Home** starting at 6:00 and **Sleep** starting at 22:00.

Fig.10 Weekday



4. Select the weekday you want to modify.

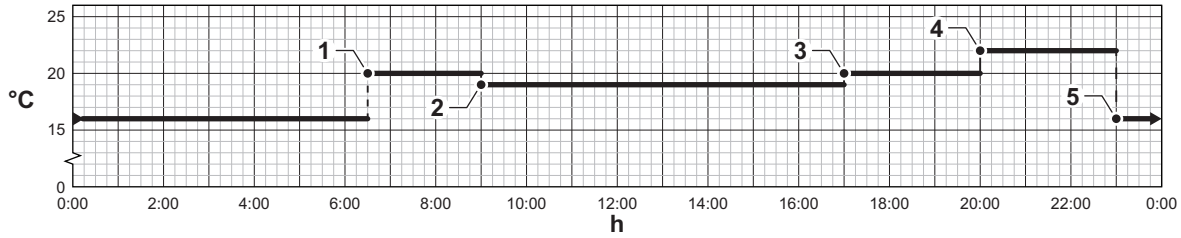
   A Weekday
   B Overview of scheduled activites
   C List of actions

5. Perform the following actions, if necessary:
   5.1. **Edit** the start time and/or activity of a scheduled activity.
   5.2. **Add** a new activity.
   5.3. **Delete** a scheduled activity (select the activity **Delete**).
   5.4. **Copy** the scheduled activities of the weekday to other days.
   5.5. **Change the temperature** linked to an activity.

■ Definition of activity

Activity is the term used when programming time slots in a timer program. The timer program sets the room temperature for different activities during the day. A temperature setpoint is associated with each activity. The last activity of the day is valid until the first activity of the next day.

Fig.11 Activities of a timer program



Tab.11 Example of activities

	Start of the activity	Activity	Temperature setpoint
1	6:30	Morning	20 °C
2	9:00	Away	19 °C
3	17:00	Home	20 °C
4	20:00	Evening	22 °C
5	23:00	Sleep	16 °C

■ Changing the name of an activity

You can change the names of the activities in the timer program.

1. Press the ☰ button.
2. Select **System Settings** ⚙.
3. Select **Set Heating Activity Names**.
   ⇨ A list of 6 activities and their standard names is shown:

Activity 1	Sleep
Activity 2	Home
Activity 3	Away
Activity 4	Morning
Activity 5	Evening
Activity 6	Custom

4. Select an activity.
   ⇨ A keyboard with letters, numbers and symbols is shown.
5. Change the name of the activity:
   5.1. Press the rotary knob ✔ to repeat a letter, number or symbol.
   5.2. Select ← to delete a letter, number or symbol.
   5.3. Select ␣ to add a space.
6. Select the ✔ sign on the screen when the name is complete.
7. Press the rotary knob ✔ to confirm the selection.

Activating a timer program

In order to use a timer program, it is necessary to activate the operating mode **Scheduling**. This activation is done separately for each zone.

1. Select the tile of the zone you want to change.
2. Select **Scheduling**.
3. Select timer program **Schedule 1**, **Schedule 2** or **Schedule 3**.

5.6.5 Changing the heating activity temperatures

You can change the heating temperatures of each activity.

1. Select the tile of the zone you want to change.
2. Select **Set Heating Activity Temperatures**.
   ⇨ A list of 6 activities and their temperatures is shown.
3. Select an activity.
4. Set the heating activity temperature.

5.6.6 Changing the room temperature temporarily

Regardless of the operating mode selected for a zone, it is possible to change the room temperature for a short period. After this period has elapsed, the selected operating mode resumes.

Important
The room temperature can only be adjusted in this way if a room temperature sensor/thermostat is installed.

1. Select the tile of the zone you want to change.
2. Select **Short temperature change**.
3. Set the duration in hours and minutes.
4. Set the temporary room temperature.
   ⇨ The **Short temperature change** menu shows the duration and the temporary temperature.

5.7 Changing the domestic hot water temperature

5.7.1 Changing the domestic hot water operating mode

For hot water production, you can choose from 5 operating modes:

1. Select the tile [ ].
   ⇨ The **DHW QuickSelect** menu opens.
2. Select the desired operating mode:

Tab.12 DHW operating modes

Icon	Mode	Description
	Scheduling	The domestic hot water temperature is controlled by a timer program
	Manual	The domestic hot water temperature is set to a fixed setting
	Hot water boost	The domestic hot water temperature is increased temporarily
	Holiday	The domestic hot water temperature is reduced during your holiday to save energy
	Antifrost	Protect the boiler and installation from freezing in winter

5.7.2 Increasing the domestic hot water temperature temporarily

Regardless of the operating mode selected for domestic hot water production, it is possible to increase the domestic hot water temperature for a short period. After this period the hot water temperature decreases to the **Reduced** setpoint.

Important
The domestic hot water temperature can only be adjusted in this way if a domestic hot water sensor is installed.

1. Select the tile [].
2. Select **Hot water boost**.
3. Set the duration in hours and minutes.
   ⇨ The temperature is increased to the **DHW comfort setpoint**.

5.7.3 Timer program to control the DHW temperature

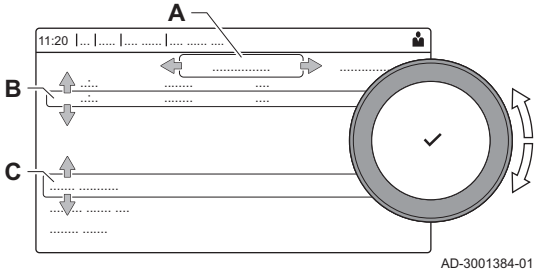
Creating a timer program

A timer program allows you to vary the domestic hot water temperature per hour and per day. The hot water temperature is linked to the activity of the timer program.

Important
You can create up to three timer programs. For example, you can create a program for a week with normal working hours and a programme for a week when you are at home most of the time.

1. Select the tile [].
2. Select **Zone configuration > DHW Schedule**.
3. Select the timer program you want to modify: **Schedule 1**, **Schedule 2** or **Schedule 3**.
   ⇨ Activities scheduled for Sunday are displayed. The last scheduled activity of a day is active until the first activity of the next day. The scheduled activities are shown. At initial start-up, all weekdays have two standard activities; **Comfort** starting at 6:00 and **Reduced** starting at 22:00.
4. Select the weekday you want to modify.

Fig.12 Weekday



A Weekday
B Overview of scheduled activites
C List of actions

5. Perform the following actions, if necessary:
   5.1. **Edit** the start time and/or activity of a scheduled activity.
   5.2. **Add** a new activity.
   5.3. **Delete** a scheduled activity (select the activity **Delete**).
   5.4. **Copy** the scheduled activities of the weekday to other days.
   5.5. **Change the temperature** linked to an activity.

Activating a DHW timer program

In order to use a DHW timer program, it is necessary to activate the operating mode **Scheduling**. This activation is done separately for each zone.

1. Select the tile [].
2. Select **Scheduling**.
3. Select DHW timer program **Schedule 1**, **Schedule 2** or **Schedule 3**.

5.7.4 Changing the comfort hot water temperature

You can change the comfort hot water temperature in the timer program.

1. Select the tile [].
2. Select **DHW comfort setpoint**: The DHW temperature when the hot water production is switched on.
3. Set the comfort hot water temperature.

You can also change the reduced hot water temperature via: **Zone configuration > Domestic Hot Water Setpoints > DHW reduced setpoint**: The DHW temperature when the hot water production is switched off.

5.8 Switching the central heating on or off

You can switch off the central heating function of the boiler to save energy, for example during the summer period.

1. Select the tile [ ].
2. Select **CH function on**.
3. Select the following setting:
   3.1. **Off** to switch off the central heating function.
   3.2. **On** to switch the central heating function on again.

Important
Frost protection is not available when the central heating function is switched off.

5.9 Reading the installer's name and phone number

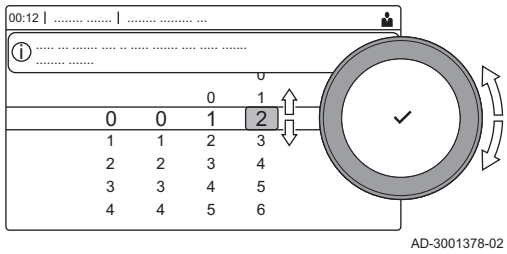
The installer can set his name and phone number in the control panel. You can read this information when you want to contact the installer.

1. Press the ≡ button.
2. Select **System Settings** ⚙ > .Installer Details
   ⇨ The installer’s name and phone number is shown.

6 Installer instructions

6.1 Accessing the installer level

Fig.13 Installer level



Some parameters that may affect the operation of the boiler are protected by an access code. Only the installer is allowed to modify these parameters.

1. Select the tile [ ].
2. Press the ✔ button to confirm the selection.
3. Use the rotary knob to select code: **0012**.
4. Press the ✔ button to confirm the selection.
   ⇨ When the installer level is enabled, the status of the tile [ ] changes from **Off** into **On**.
5. To leave the installer level, select the tile [ ] .
6. Use the rotary knob to select **Confirm** or **Cancel**.
7. Press the ✔ button to confirm the selection.
   ⇨ When the installer level is disabled, the status of the tile [ ] changes from **On** into **Off**.

When the control panel is not used for 30 minutes, the installer level is left automatically.

6.2 Configuring the installation at installer level

Configure the installation by pressing the ☰ button and selecting **Installation Setup** . Select the control unit or circuit board you want to configure:

Tab.13 CU-GH08

Icon	Zone or function	Description
	CIRCA / CH	Central heating circuit
	Gas fired appliance	Gas boiler

Tab.14 SCB-10

Icon	Zone or function	Description
	CIRCA	Central heating circuit A
	CIRCB	Central heating circuit B
	DHW	Domestic hot water external circuit
	CIRCC	Central heating circuit C
	0-10 volt input	0–10 volt input signal
	Digital Input	Digital input signal
	Analogue input	Analogue input signal
	Cascade management B	Management of a cascade of multiple boilers
	Buffer Tank Schedule	Enable a buffer tank with one or two sensors
	Outdoor temperature	Outdoor sensor
	Status information	PCB SCB-10 status information

Tab.15 Configuring a zone or function of CU-GH08 or SCB-10

Parameters, counters, signals	Description
Parameters	Set the parameters at installer level
Counters	Read the counters at installer level
Signals	Read the signals at installer level
Adv. Parameters	Set the parameters at advanced installer level

Parameters, counters, signals	Description
Adv. Counters	Read the counters at advanced installer level
Adv. Signals	Read the signals at advanced installer level

6.2.1 Setting the installer details

You can store your name and phone number in the control panel to be read by the user.

1. Press the ☰ button.
2. Select **System Settings** ⚙ > Installer Details.
3. Enter the following data:

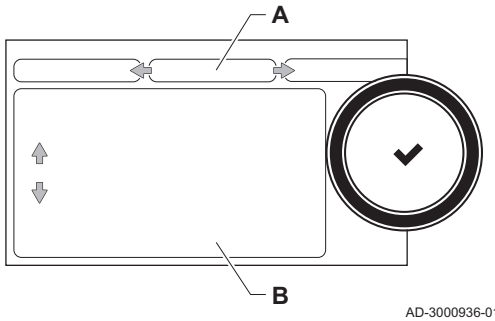
Installer name	Name of the installer
Installer phone	Phone number of the installer

6.2.2 Setting the parameters

You can change the parameters and settings of the appliance and the connected control boards, sensors etc. to configure the installation.

1. Press the ☰ button.
2. Select **> Installation Setup**.
3. Select the zone or device you want to configure.
4. Select **Parameters, counters, signals > Parameters** to change a parameter.
5. If available, select **Adv. Parameters** to change a parameter at the advanced installer level.

Fig.14 Parameters, counters, signals



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A
- **Parameters**
- **Counters**
- **Signals**
- **Adv. Parameters**
- **Adv. Counters**
- **Adv. Signals**

B List of settings or values

The boiler's control unit is set for the most common central heating systems. These settings will ensure that virtually every central heating system operates effectively. The user or the installer can optimise the parameters as required.

Caution
Changing the factory settings may adversely affect the operation of the boiler.

For more information, see
List of parameters, page 56

6.2.3 Changing boiler parameters when SCB-10 is fitted

When the boiler is fitted with the SCB-10 the following boiler CU-GH08 parameter(s) at installer level must be checked and adjusted, if necessary:

Tab.16 Installation Setup > CU-GH08 > CIRCA > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Adjust-ment
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	0

Tab.17 Installation Setup > CU-GH08 > Gas fired appliance > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Adjust-ment
AP102	Boiler Pump function	Configuration of the boiler pump as zone pump or system pump (feed lowloss header)	0 = No 1 = Yes	0

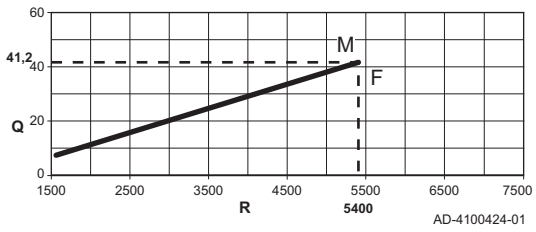
Tab.18 Installation Setup > CU-GH08 > Tank DHW > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Adjust-ment
DP007	Dhw 3wv Standby	Position of three way valve during standby	0 = CH position 1 = DHW position	0

6.2.4 Setting the maximum load for CH operation

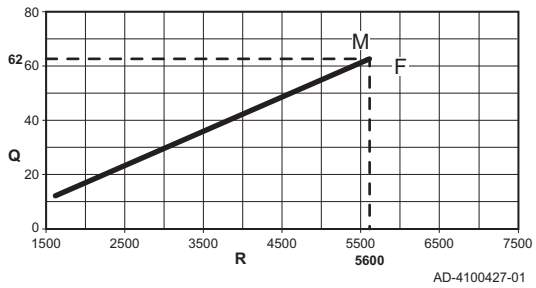
See the graphs for the relationship between load and speed for natural gas. The speed can be changed using parameter **GP007**.

Fig.15 Load AMC Pro 45



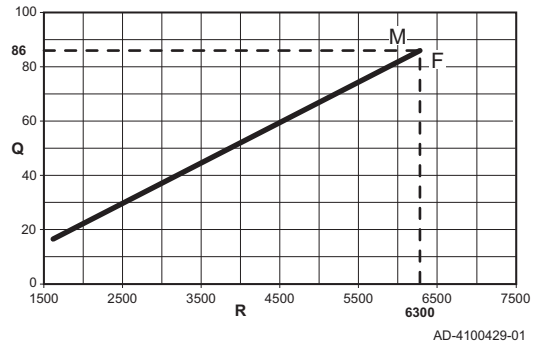
M Maximum heat input
F Factory setting
Q Input (Hi) (kW)
R Fan speed (rpm)

Fig.16 Load AMC Pro 65



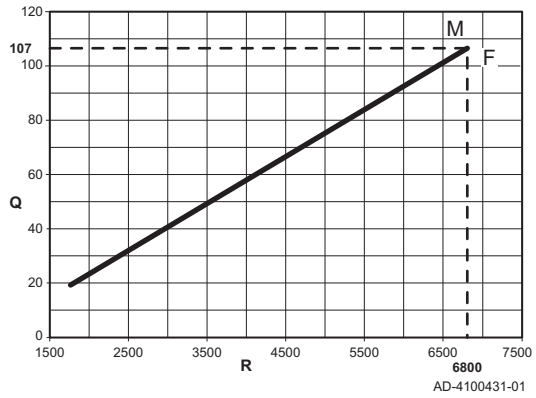
M Maximum heat input
F Factory setting
Q Input (Hi) (kW)
R Fan speed (rpm)

Fig.17 Load AMC Pro 90



M Maximum heat input
F Factory setting
Q Input (Hi) (kW)
R Fan speed (rpm)

Fig.18 Load AMC Pro 115



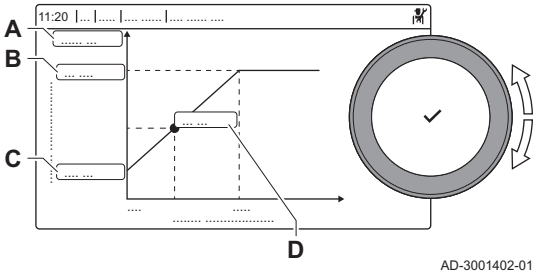
M Maximum heat input
F Factory setting
Q Input (Hi) (kW)
R Fan speed (rpm)

6.2.5 Setting the heating curve

When an outdoor temperature sensor is connected to the installation, the relation between the outdoor temperature and the central heating flow temperature is controlled by a heating curve. This curve can be adjusted to the requirements of the installation.

1. Select the tile of the zone you want to configure.
2. Select **Control strategy**.
3. Select the setting **Outdoor Temp. based** or **Outdoor & room based**.
   ⇨ The option **Heating Curve** appears in the **Zone setup** menu.
4. Select **Heating Curve**.
   ⇨ A graphic display of the heating curve is shown.
5. Adjust the following parameters:

Fig.19 The heating curve



Tab.19 Settings

A	**Slope:**	Slope of the heating curve: • Floor heating circuit: slope between 0.4 and 0.7 • Radiator circuit: slope at approximately 1.5
B	**Max:**	Maximum temperature of the heating circuit
C	**Base:**	Ambient temperature setpoint
D	xx°C ; xx °C	Relationship between the heating circuit flow temperature and the outdoor temperature. This information is visible throughout the slope.

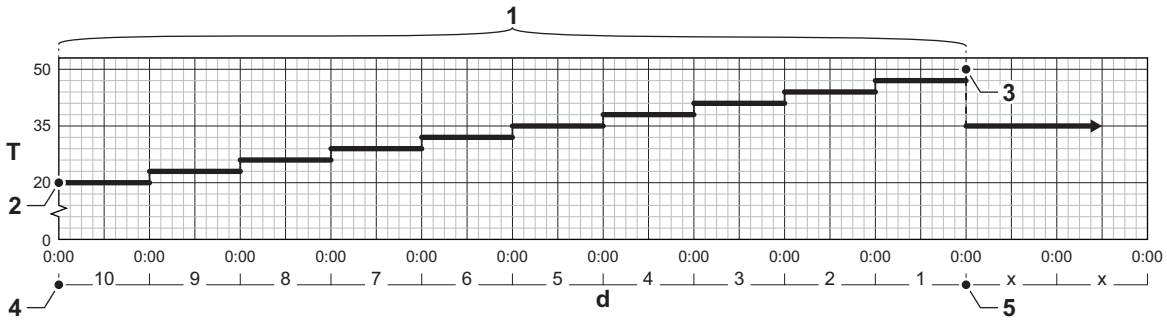
6.2.6 Screed drying

The screed drying function is used to force a constant flow temperature or a series of successive temperature levels to accelerate screed drying on underfloor heating.

Important

- The settings for these temperatures must follow the screed layer's recommendations.
- Activation of this function via the parameter **CP470** forces the permanent display of the screed drying function and deactivates all other regulator functions.
- When the screed drying function is active on one circuit, all other circuits and the domestic hot water circuit continue to run.
- It is possible to use the screed drying function on circuits A and B. The parameter settings must be made on the PCB that controls the circuit concerned.

Fig.20 Screed drying curve



d Number of days
T Heating set point temperature
1 Number of days on which the screed drying function is activated (parameter **CP470**)
2 Screed drying start temperature (parameter **CP480**)
3 Screed drying stop temperature (parameter **CP490**)
4 Start of the screed drying function
5 End of the screed drying function, back to normal running

Important
Every day at midnight, the screed drying start temperature set point is recalculated and the remaining number of days on which the screed drying function is running decreases.

6.3 Commissioning the installation

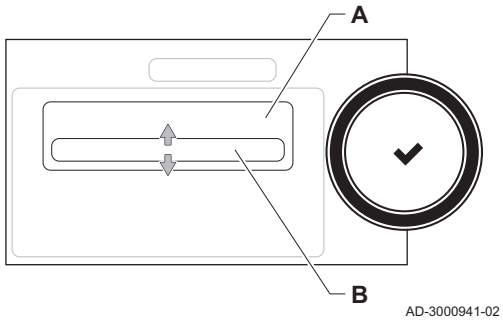
The commissioning menu shows submenus and tests needed for the commissioning of the appliance.

1. Press the ☰ button.
2. Select **Commissioning Menu**.
3. Select the submenu with settings you want to change or the test you want to perform.

6.3.1 Chimney sweep menu

Select the tile [🧹] to open the chimney sweep menu. The **Change load test mode** menu will appear:

Fig.21 Load test



A Change load test mode
B Load test mode

Tab.20 Load tests in the chimney sweep menu

Change load test mode	Settings
Off	No test
MinimumPower	Part load test
MaximumPowerCH	Full load test for Central Heating mode
MaximumPowerDhw	Full load test for Central Heating + Domestic Hot Water mode

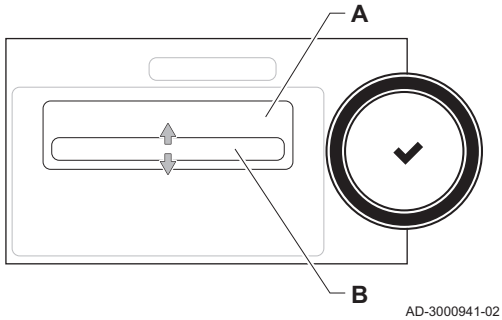
Tab.21 Load test settings

Load Test menu	Settings
ChimneyModeStatus	Select the load test to start the test.
System Flow Temp	Read the central heating flow temperature
T return	Read the central heating return temperature
Actual fan RPM	Read the actual fan speed
Actual flame current	Read the actual flame current
Fan RPM Max CH	Adjust the maximum fan speed during Central Heating mode
Fan RPM Min	Adjust the minimum fan speed during Central Heating + Domestic Hot Water mode
Fan RPM Start	Adjust the start fan speed

■ Performing the full load test

1. Select the tile [🧹].
   ⇨ The **Change load test mode** menu appears.
2. Select the test **MaximumPowerCH**.

Fig.22 Full load test



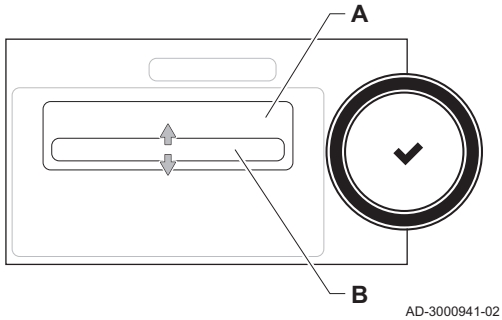
A Change load test mode
B MaximumPowerCH

   ⇨ The full load test starts. The selected load test mode is shown in the menu and the icon 🧹 appears in the top right of the screen.
3. Check the load test settings and adjust if necessary.
   ⇨ Only the parameters shown in bold can be changed.

■ Performing the part load test

1. If the full load test is still running, press the ✔ button to change the load test mode.
2. If the full load test was finished, select the tile [🧹] to restart the chimney sweep menu.

Fig.23 Part load test



A **Change load test mode**
B **MinimumPower**

3. Select the **MinimumPower** test in the menu **Change load test mode**.
   ⇨ The part load test starts. The selected load test mode is shown in the menu and the icon 🧹 appears in the top right of the screen.
4. Check the load test settings and adjust if necessary.
   ⇨ Only the parameters shown in bold can be changed.
5. End the part load test by pressing the ⮌ button.
   ⇨ The message **Running load test(s) stopped!** is displayed.

6.3.2 Saving the commissioning settings

You can save all current settings on the control panel. These settings can be restored if necessary, for example after replacement of the control unit.

1. Press the ≡ button.

2. Select **> Advanced Service Menu > Save as commissioning settings**.
3. Select **Confirm** to save the settings.

When you have saved the commissioning settings, the option **Revert commissioning settings** becomes available in the **Advanced Service Menu**.

6.4 Maintaining the installation

6.4.1 Viewing the service notification

When a service notification appears on the display, you can view the details of the notification.

1. Select the tile [ ].
   ⇨ The **View Service Notification** menu opens.
2. Select the parameter or value you want to view.

6.4.2 Reading out measured values

The control unit continually registers various values from the boiler and the connected sensors. These values can be read on the control panel of the boiler.

1. Select the tile [ ].
2. Press the ✔ button to confirm the selection.
3. Use the rotary knob to select code: **0012**.
4. Press the ✔ button to confirm the selection.
   ⇨ When the installer level is enabled, the status of the tile [ ] changes from **Off** into **On**.
5. Press the ≡ button.
6. Select **> Installation Setup**.
7. Select the zone or device you want to read out.
8. Select **Parameters, counters, signals > Counters** or **Signals** to read out a counter or signal.
9. If available, select **Adv. Counters** or **Adv. Signals** to read out counters or signals at the advanced installer level.

Fig.24 Installer level

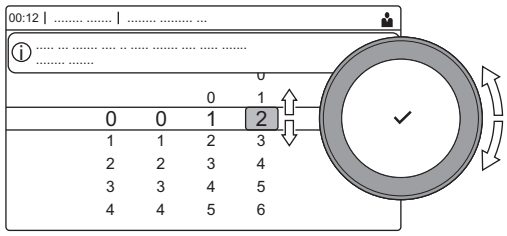
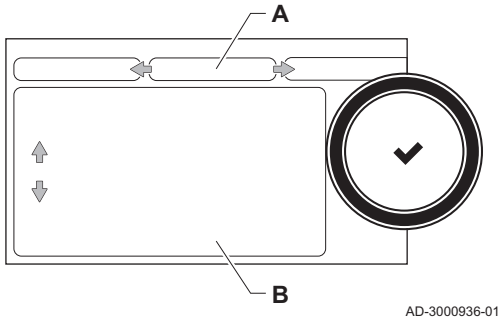


Fig.25 Parameters, counters, signals



A
- **Parameters**
- **Counters**
- **Signals**
- **Adv. Parameters**
- **Adv. Counters**
- **Adv. Signals**

B List of settings or values

For more information, see
List of measured values, page 77

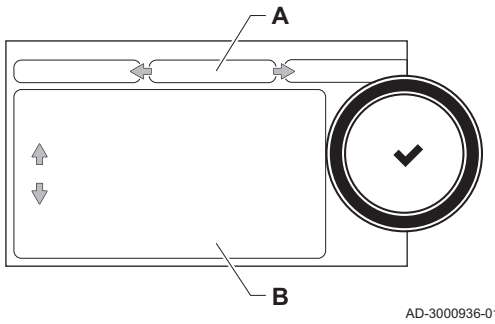
6.4.3 Viewing production and software information

You can read details about the production dates, hardware and software versions of the appliance and all connected devices.

1. Press the ≡ button.
2. Select **Version Information**.

3. Select the appliance, control board or any other device you want to view.

Fig.26 Version information



A Select the appliance, control board or device
B List of information

4. Select the information you want to view.

6.4.4 Changing the domestic hot water temperature temporarily

When the timer program is active with a reduced domestic hot water temperature, you can temporarily increase the hot water temperature for e.g. testing of the hot water production.

1. Press the ≡ button.
2. Select **Installation Setup > Internal DHW > Hot water boost**.
3. Select **Duration of temporary overwrite** .
4. Set the duration in hours and minutes.
   ⇨ The hot water temperature is increased to the **DHW comfort setpoint**.

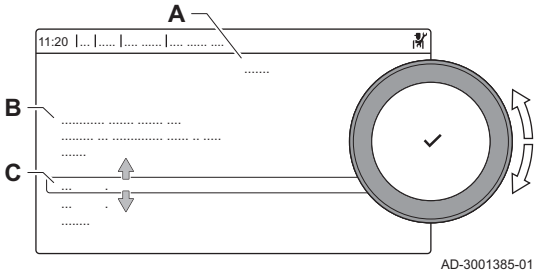
You can delete or abort the temporary overwrite by selecting **Reset**.

6.5 Resetting or restoring settings

6.5.1 Resetting the configuration numbers CN1 and CN2

The configuration numbers must be reset when indicated by an error message or when the control unit has been replaced. The configuration numbers can be found on the data plate of the appliance.

Fig.27 Configuration numbers



A Select the control unit
B Extra information
C Configuration numbers

1. Press the ≡ button.
2. Select **Advanced Service Menu > Set Configuration Numbers.**
3. Select the control unit you want to reset.
4. Select and change the **CN1** setting.
5. Select and change the **CN2** setting.
6. Select **Confirm** to confirm the changed numbers.

6.5.2 Carrying out an auto-detect for the CAN matrix

When a control board has been replaced or removed from the boiler, this function must be used to detect all devices connected to the CAN bus.

1. Press the ≡ button.
2. Select **Advanced Service Menu > Auto Detect**.
3. Select **Confirm** to carry out the auto-detect.

6.5.3 Restoring the commissioning settings

This option is only available when the commissioning settings were saved on the control panel and allows you to restore these settings.

1. Press the ≡ button.
2. Select **Advanced Service Menu > Revert commissioning settings**.
3. Select **Confirm** to restore the commissioning settings.

6.5.4 Resetting to factory settings

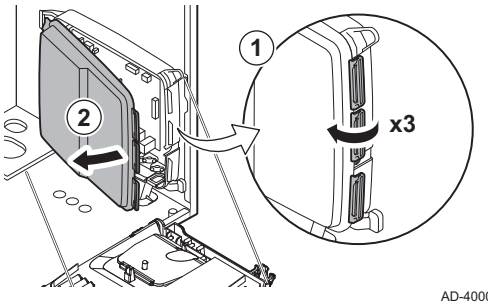
You can reset the boiler to the default factory settings.

1. Press the ☰ button.
2. Select **Advanced Service Menu > Reset to Factory Settings**.
3. Select **Confirm** to restore the factory settings.

7 Installation examples

7.1 Access to the expansion box

Fig.28 Access to the expansion box



AD-4000062-01

If there is no space in the boiler's instrument box to install an (optional) expansion PCB, install the PCB in the electronics expansion box This is available as an accessory.

1. Unclip the housing cover.
2. Remove the cover.
3. Install the expansion PCB in accordance with the instructions supplied.

The following is installed in the expansion box:

- the **SCB-10** PCB.

7.2 Connection options for the expansion PCB - SCB-10

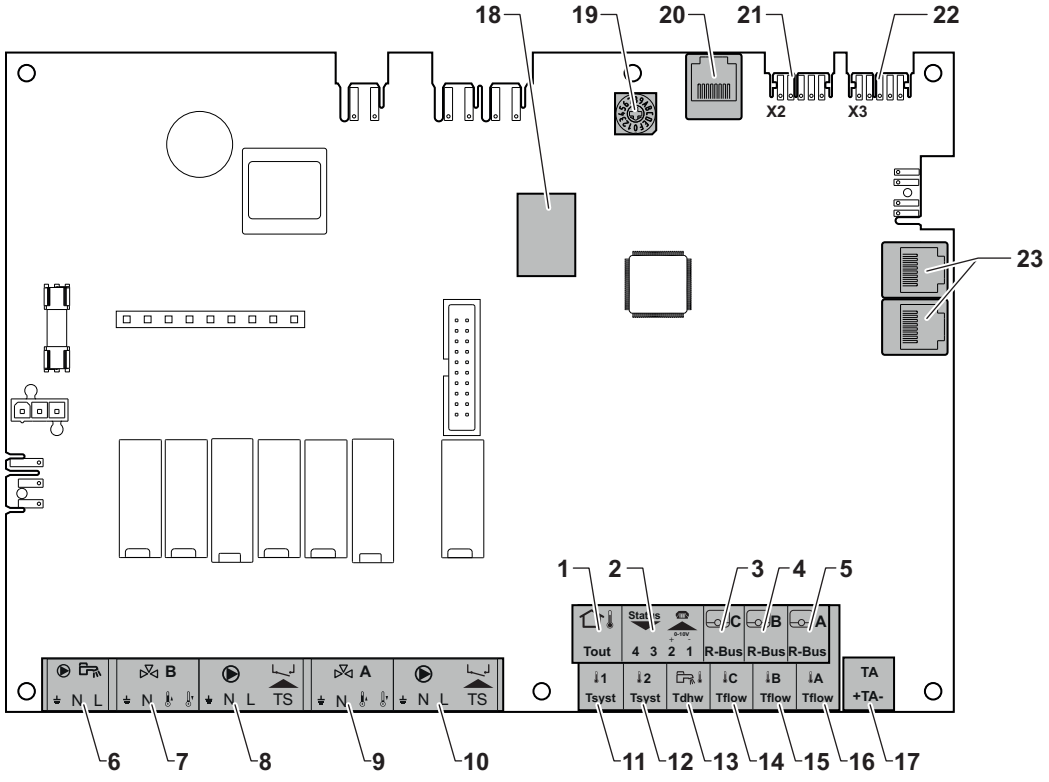
Different heating zones can be connected to the SCB-10 PCB.

- control of 2 (mixing) zones fitted on connector **X15**
- control of a third (mixing) zone via an PCB (= accessory) fitted on connector X8
- control of one domestic hot water (DHW) zone
- cascade layout (add sensor on sensor system 1 or 2)

Important

- If the boiler is fitted with the SCB-10 PCB, then this is automatically recognised by the automatic control unit of the boiler.
- On removing this control board, the boiler will show an error code. To prevent this error, carry out an auto-detect immediately after removing this board.

Fig.29 SCB-10 PCB



AD-3001210-01

1 Outdoor temperature sensor
2 Programmable and 0-10 V input
3 Room temperature sensor - circuit C
4 Room temperature sensor - circuit B

5 Room temperature sensor - circuit A
6 Domestic hot water tank pump
7 Mixing valve - circuit B
8 Pump and safety thermostat - circuit B
9 Mixing valve - circuit A
10 Pump and safety thermostat - circuit A
11 System sensor 1
12 System sensor 2
13 Domestic hot water sensor
14 Flow sensor - circuit C
15 Flow sensor - circuit B
16 Flow sensor - circuit A
17 Impressed current anode
18 Connectors Mod-BUS
19 Coding wheel, selects the generator number in the cascade in Mod-Bus
20 S-BUS connector
21 END connector for L-BUS connection
22 L-BUS connection to control unit (CU-GH08)
23 S-BUS cable connector

7.3 Zone functions of SCB-10

The SCB-10 with the **AD249** option has following basic functions with default zone settings:

- CIRCA1 with parameter **CP020** set as Direct circuit
- CIRCB1 with parameter **CP021** set as Disable
- DHW1 with parameter **CP022** set as Disable
- CIRCC1 with parameter **CP023** set as Disable
- AUX1 with parameter **CP024** set as Disable

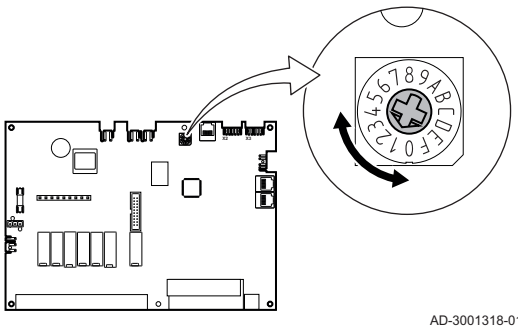
To configure your specific installation, make sure to check and adjust the parameter settings for the selected zones. The zone function table shows which parameter settings are available for which zones.

Tab.22 Parameter setting for zone function

Zone	CIRCA 1(1)	CIRCB 1(1)	DHW 1(1)	CIRCC 1(1)(2)	AUX 1(1)(2)
Parameter to set zone function	CP020(3)	CP021(3)	CP022(3)	CP023(3)	CP024(3)
0 = Disable	x	x	x	x	x
1 = Direct	x	x		x	
2 = Mixing Circuit	x	x		x	
3 = Swimming pool	x	x		x	
4 = High Temperature	x	x		x	
5 = Fan Convector	x	x		x	
6 = DHW tank	x	x	x	x	x
7 = Electrical DHW	x	x		x	
8 = Time Program	x	x	x	x	x
9 = ProcessHeat	x	x	x	x	x
10 = DHW Layered			x		
11 = DHW Internal tank	x	x	x	x	x

(1) The number refers to the circuit number which can be set with the rotary dial on the SCB-10.
(2) With AD249 option.
(3) The last number of the parameter is related to the zone. The code can be used to identify the parameter settings in the connection examples.

Fig.30 Rotary dial



AD-3001318-01

You can use the rotary dial to identify multiple SCB-10s, for example in a cascade situation. The default position of the rotary dial is 1. In this case zone A will appear in the display as CIRCA1 (circuit A 1).

Tab.23 Zone function settings explanation

Zone setting	Explanation
0 = Disable	Removes the circuit display, the circuit is not used, but its pump output can be used as a status output.
1 = Direct	Setting to manage a heating pump on the selected zone, cooling is not possible.
2 = Mixing Circuit	Setting to manage a valve and a pump with the flow sensor, in heating or cooling (example underfloor heating).
3 = Swimming pool	Setting to manage the pool heat pump according to the flow sensor (if the sensor is present) and also the pool filter pump.
4 = High Temperature	Setting to manage a pump, heats 365 days with program time, no stop in summer
5 = Fan Convector	Setting to manage a pump, to warm and refresh
6 = DHW tank	Setting to manage a pump and a sensor for domestic hot water
7 = Electrical DHW	Setting to manage a pump, a sensor and to use the valve connector to control a relay for the electric resistance of the tank. When switching to summer mode the tank automatically switches to electric.
8 = Time Program	Setting to create a time schedule on the pump connectors.
9 = ProcessHeat	Setting to manage a pump, heats 365 days 24/24, no stop in summer, priority on all circuits. The boiler will remove all protections to produce maximum power in a minimum of time
10 = DHW Layered	Setting to manage domestic hot water with 2 sensors, a tank top sensor (Tsyst 1 or 2) triggers the load and the bottom sensor of the tank (Tdhw) triggers the stop of the charge.
11 = DHW Internal tank	Setting to manage domestic hot water for boilers with internal tank.

7.4 Setting the 0-10 Volt input function of SCB-10

There are three options for the 0-10 Volt input control of the SCB-10 print:

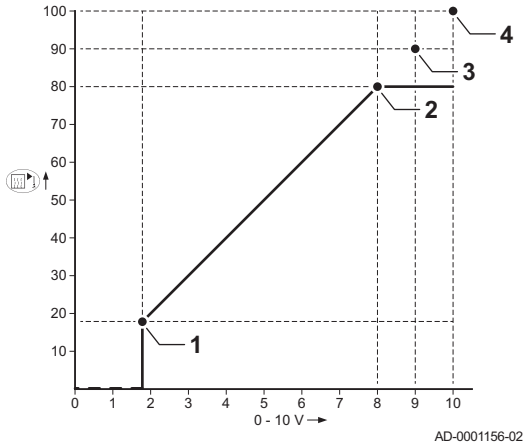
- disable the input function.
- the input is temperature based.
- the input is heat output based

Tab.24 ≡ button > Installation Setup > SCB-10 > 0-10 volt input > Parameters

Code	Display text	Description	Range
EP014	SCB func. 10V PWMin	Smart Control Board function 10 Volt PWM input	0 = Off 1 = Temperature control 2 = Power control
EP030	Min Setp Temp 0-10V	Sets the minimum set point temperature for 0 - 10 volts for the Smart Control Board	0 °C - 100 °C
EP031	Max Setp Temp 0-10V	Sets the maximum set point temperature for 0 - 10 volts for the Smart Control Board	0.5 °C - 100 °C
EP032	Min Setp Power 0-10V	Sets the minimum set point power for 0 - 10 volts for the Smart Control Board	0 % - 100 %
EP033	Max Setp Power 0-10V	Sets the maximum set point power for 0 - 10 volts	5 % - 100 %
EP034	Min Setp Volt 0-10V	Sets the minimum set point voltage for 0 - 10 volts for the Smart Control Board	0 V - 10 V
EP035	Max Setp Volt 0-10V	Sets the maximum set point voltage for 0 - 10 volts	0 V - 10 V

7.4.1 Analogue temperature regulation (°C)

Fig.31 Temperature regulation



1 Boiler on
2 Parameter **CP010**
3 Maximum flow temperature
4 Calculated value

The 0–10 V signal controls the boiler supply temperature. This control modulates on the basis of flow temperature. The output varies between the minimum and maximum value on the basis of the flow temperature set point calculated by the controller.

Tab.25 Temperature regulation

Input signal (V)	Temperature °C	Description
0–1.5	0–15	Boiler off
1.5–1.8	15–18	Hysteresis
1.8–10	18–100	Desired temperature

7.4.2 Analogue output-based control

The 0 - 10 V signal controls the boiler output. This control modulates on the basis of the heat output. The minimum output is linked to the boiler's modulation depth. The output varies between the minimum and maximum value on the basis of the value defined by the controller.

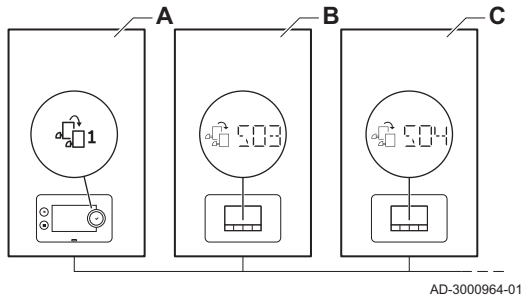
Tab.26 Control based on heat output

Input signal (V)	Heat output (%)	Description
0–2.0	0	Boiler off
2.0–2.2	0	Heat demand
2.0–10	0–100	Desired heat output

7.5 Cascade control

With the Diematic Evolution mounted in the master boiler it is possible to manage up to 7 boilers equipped with the Inicontrol 2 in cascade. The system sensor is connected to the master boiler. All the boilers in the cascade are connected by an S-BUS cable. The boilers are automatically numbered:

Fig.32 Cascade numbering



A The master boiler is number 1.
B The first slave boiler is number 3 (number 2 does not exist).
C The second slave boiler is number 4; and so on.

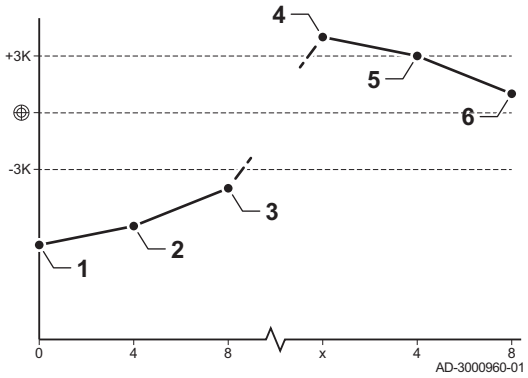
There are two options for cascade control management:

- Adding supplementary boilers successively (traditional control).
- Adding supplementary boilers simultaneously (parallel control).

Tab.27 ☰ > Installation Setup > SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

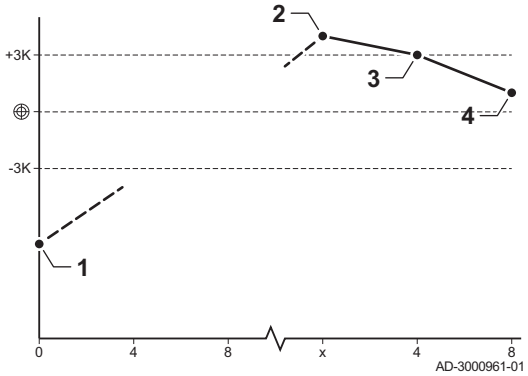
Code	Display text	Description	Model series
NP006	Cascade Type	Cascading boilers by adding successively or in parallel, the boilers function simultaneously	0 = Traditional 1 = parallel
NP009	CascInterStageTime	Switch on and switch off timing for the producer of the cascade	1 Min - 60 Min
NP011	CascadeTypeAlgo	Choice of Cascade Algorithm type, power or temperature	0 = Temperature 1 = Power

Fig.33 Traditional cascade control management



1 First boiler starts running when system temperature is 3°C below set point.
2 After 4 minutes the second boiler starts running if ΔT< 6K and the system temperature is still more than 3°C below set point.
3 After 8 minutes the third boiler starts running if ΔT< 6K and the system temperature is still more than 3°C below set point.
4 First boiler stops running when system temperature is 3°C above set point.
5 After 4 minutes the second boiler stops running if ΔT< 6K and the system temperature is still more than 3°C above set point.
6 After 8 minutes the third boiler stops running if ΔT< 6K and the system temperature is still more than 3°C above set point.

Fig.34 Parallel cascade control management



1 All boilers in cascade start running when system temperature is 3°C below set point.
2 First boiler stops running when system temperature is 3°C above set point.
3 After 4 minutes the second boiler stops running if ΔT< 6K and the system temperature is still more than 3°C above set point.
4 After 8 minutes the third boiler stops running if ΔT< 6K and the system temperature is still more than 3°C above set point.

Temperature type cascade algorithm; the setpoint sent to the running boiler is:

- Output; requested by the zones.
- Temperature; output setpoint requested by the zones + error calculation.

Output type cascade algorithm; the setpoint sent to the running boiler is:

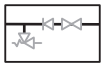
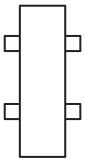
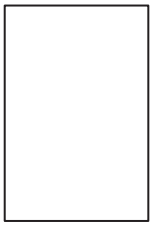
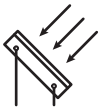
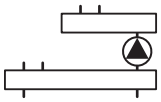
- Output; according to PI algorithms.
- Temperature; -90°C

7.6 Connecting diagrams

7.6.1 Symbols used

Tab.28 Explanation of symbols in the hydraulics flow diagram

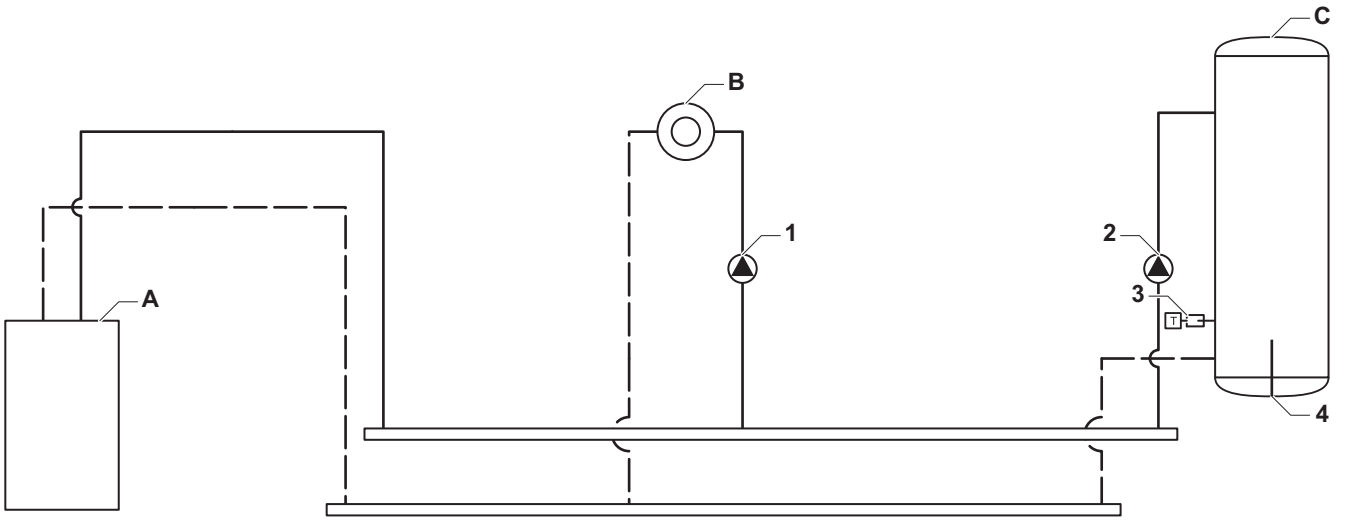
Symbol	Explanation
	Return pipe
	Flow pipe
	Mixing valve
	Pump
	Domestic hot water
	Make contact
	Outdoor temperature sensor
	Sensor
	Safety thermostat
	Room thermostat
	Plate heat exchanger

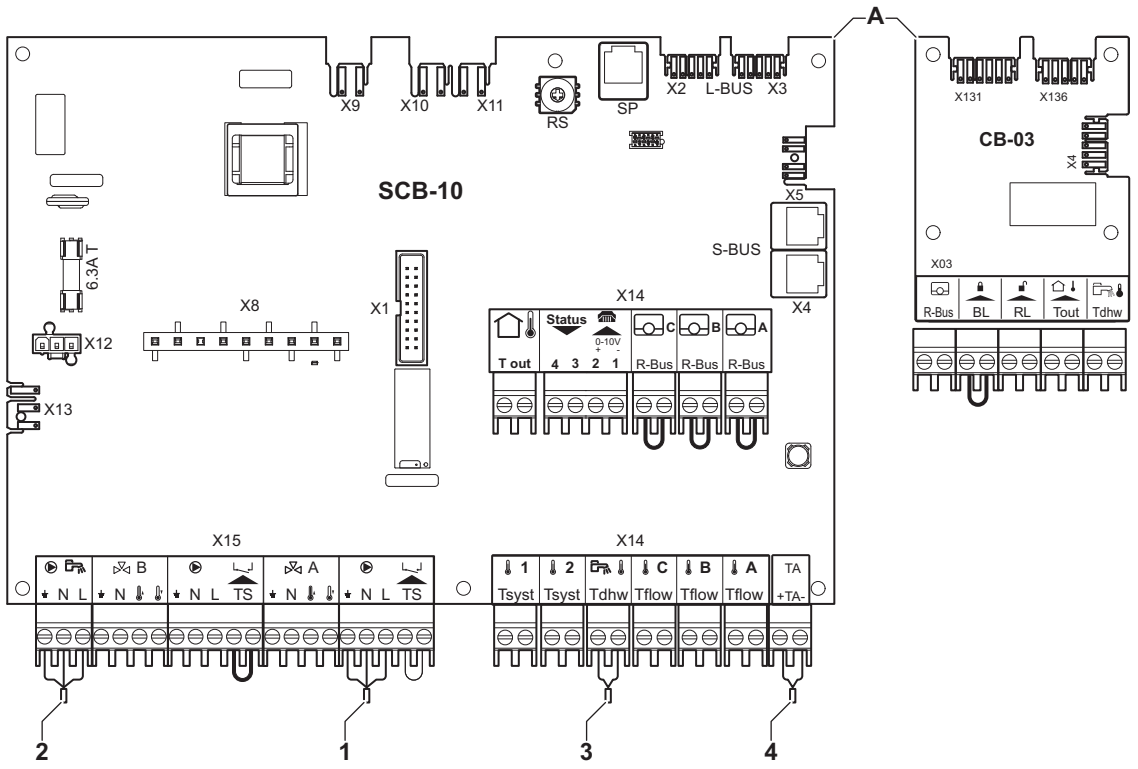
Symbol	Explanation
	Safety group
	Low-loss header
	Instant boiler
	Primary heating circuit connection
	Solar collector
	Domestic hot water storage tank
	Titanium anode(1)
	Electrical heating element
	Shower
	Heating zone
	Underfloor heating
	Underfloor heating manifold
	Hot-air heater
	Swimming pool

(1) Fitted in domestic hot water storage tank.

7.6.2 Connection example 1

Fig.35 1 boiler + 1 direct zone + domestic hot water (DHW) zone



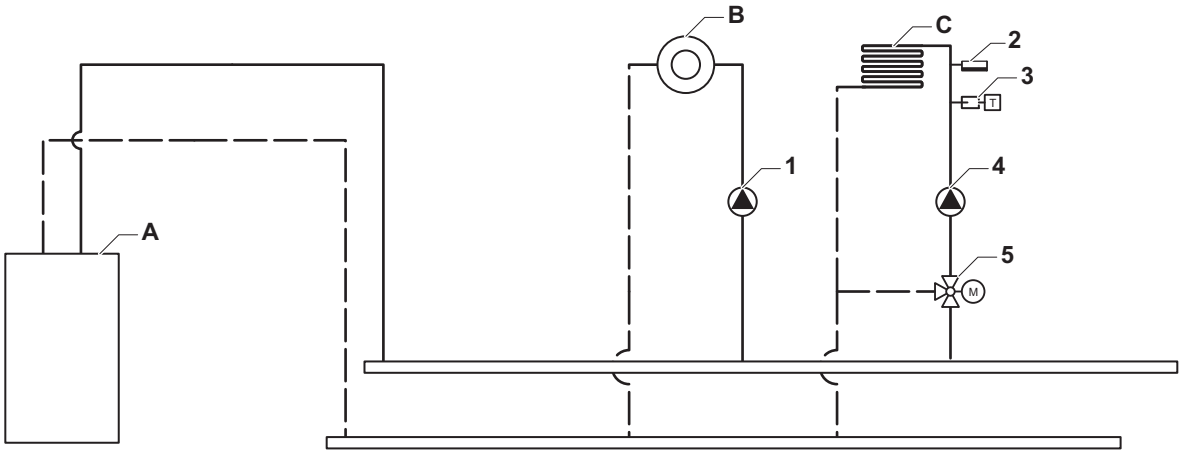


A Boiler
B Direct zone-CircA1
C Domestic Hot water zone-DHW (1 sensor)

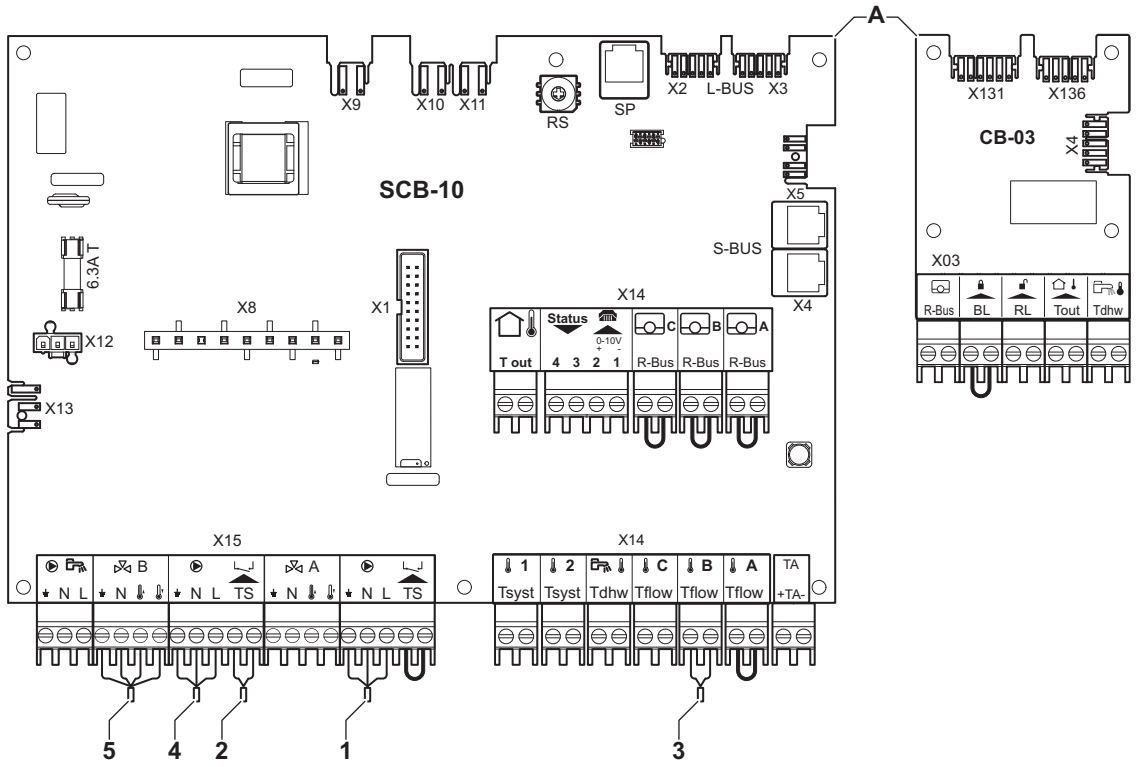
Important
All the factory settings of the SCB-10 are adequate for this connection.

7.6.3 Connection example 2

Fig.36 1 boiler + 1 direct zone + 1 mixing zone



AD-4100035-01



AD-4100137-01

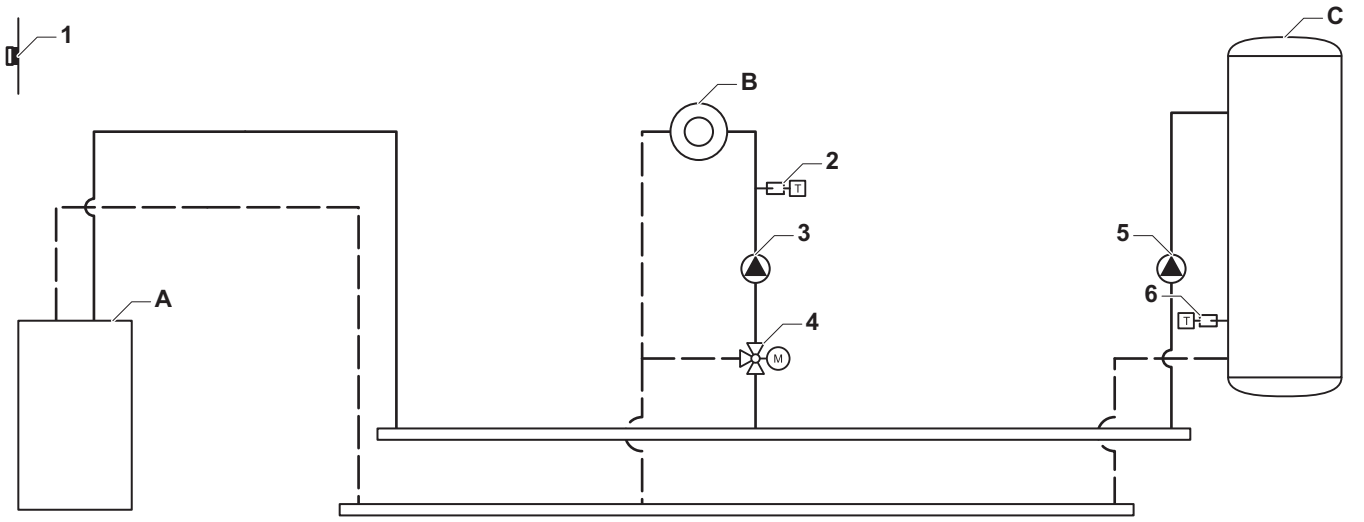
A Boiler
B Direct zone - CircA1

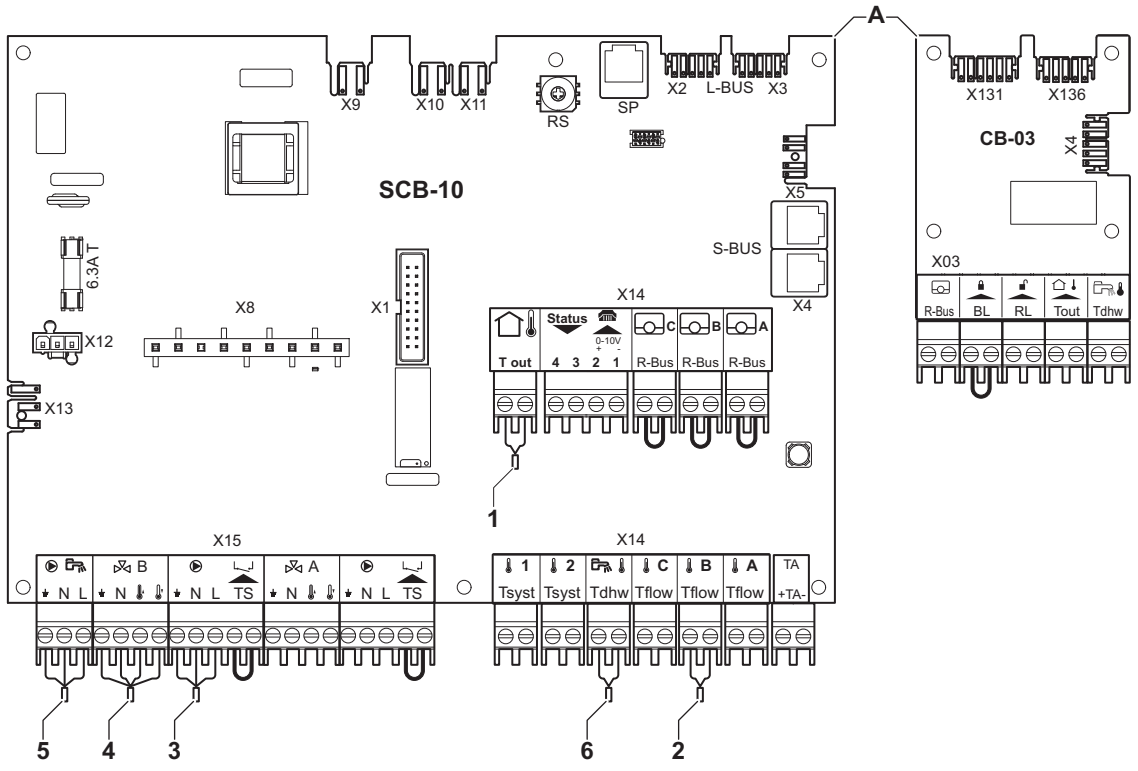
A Mixing zone - CircB1

Important
All the factory settings of the SCB-10 are adequate for this connection.

7.6.4 Connection example 3

Fig.37 1 boiler + 1 mixing zone + domestic hot water (DHW) zone



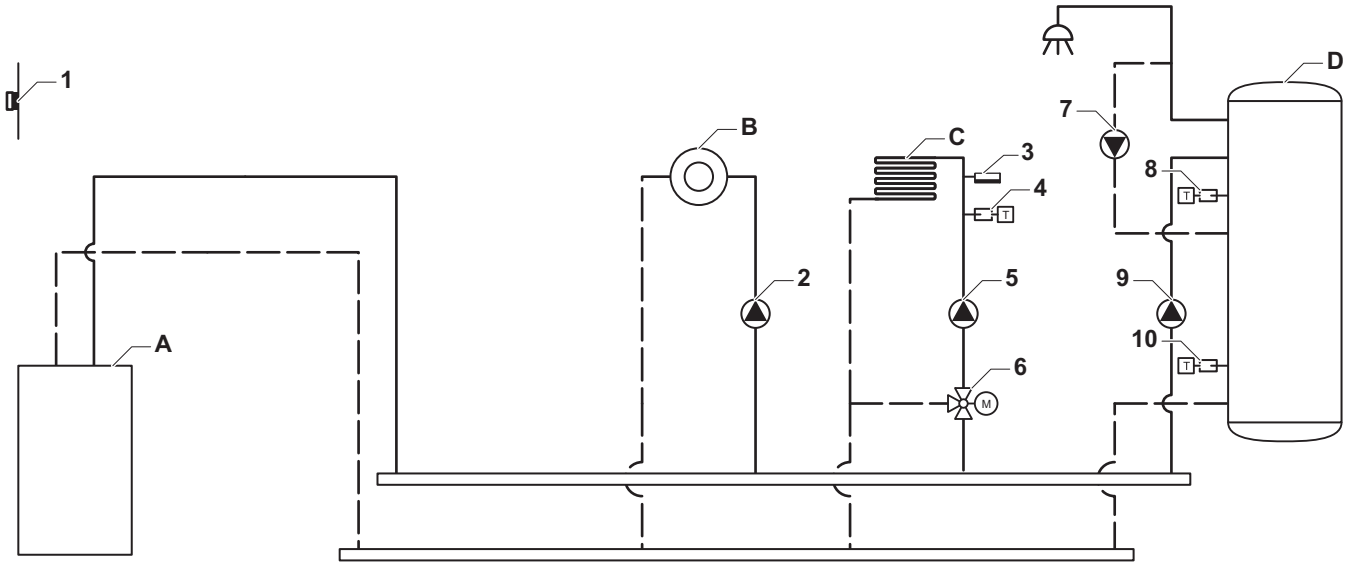


A Boiler
B Mixing zone - CircB1
C DHW zone - DHWA (1 sensor)

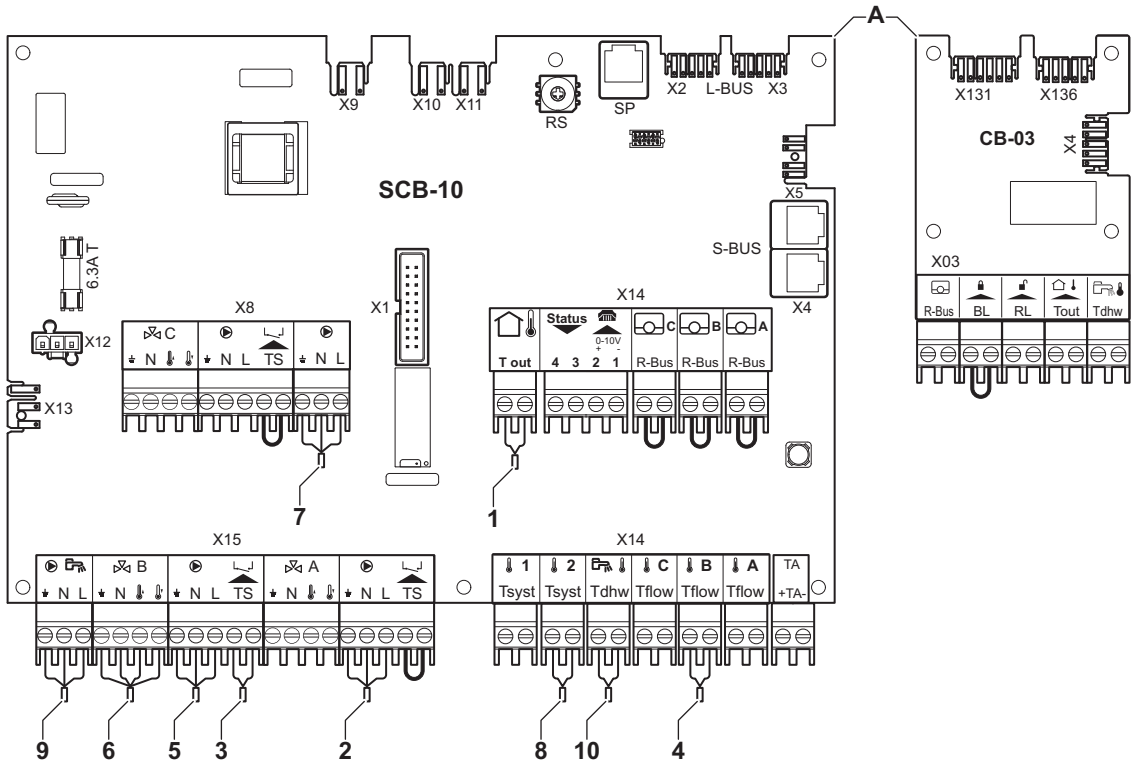
Important
All the factory settings of the SCB-10 are adequate for this connection.

7.6.5 Connection example 4

Fig.38 1 boiler + 1 direct zone + 1 mixing zone + domestic hot water (DHW) zone



AD-4100037-01



AD-4100139-01

A Boiler
B Direct zone - CircA1
C Mixing zone - CircB1 (underfloor heating)
D DHW zone - DHWA (layered calorifier - 2 sensors)

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10 PCB.

Tab.29 On > ☰ > Installation Setup > SCB-10 > **DHWA** > Parameters, counters, signals > Parameters

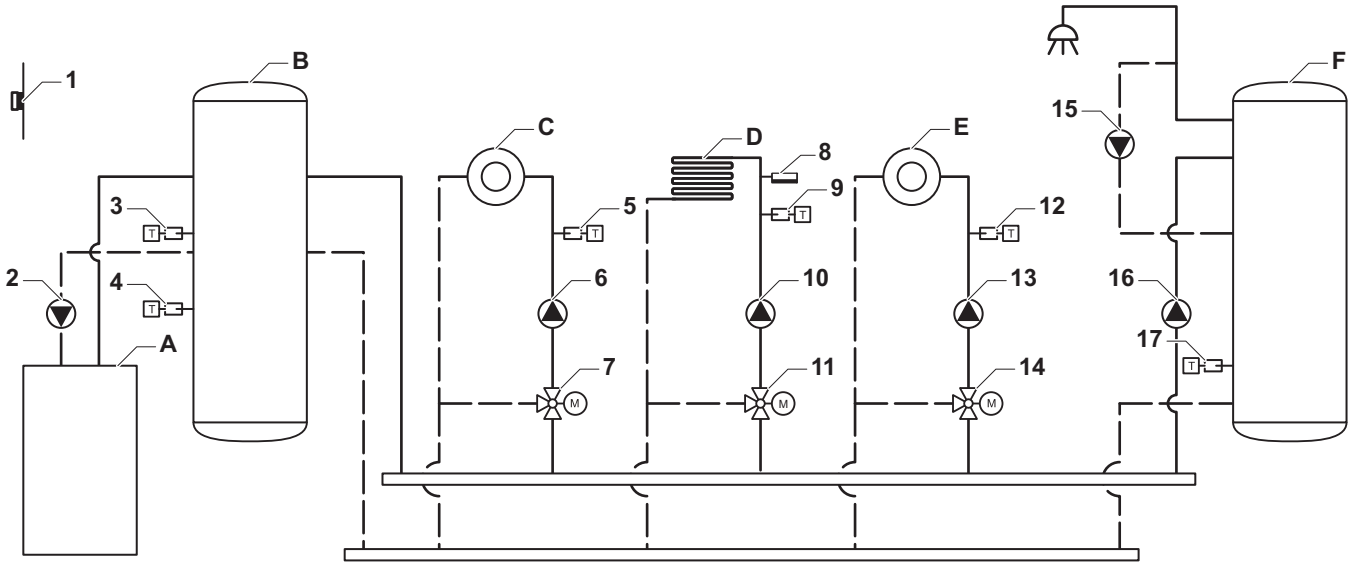
Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.30 On > ☰ > Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

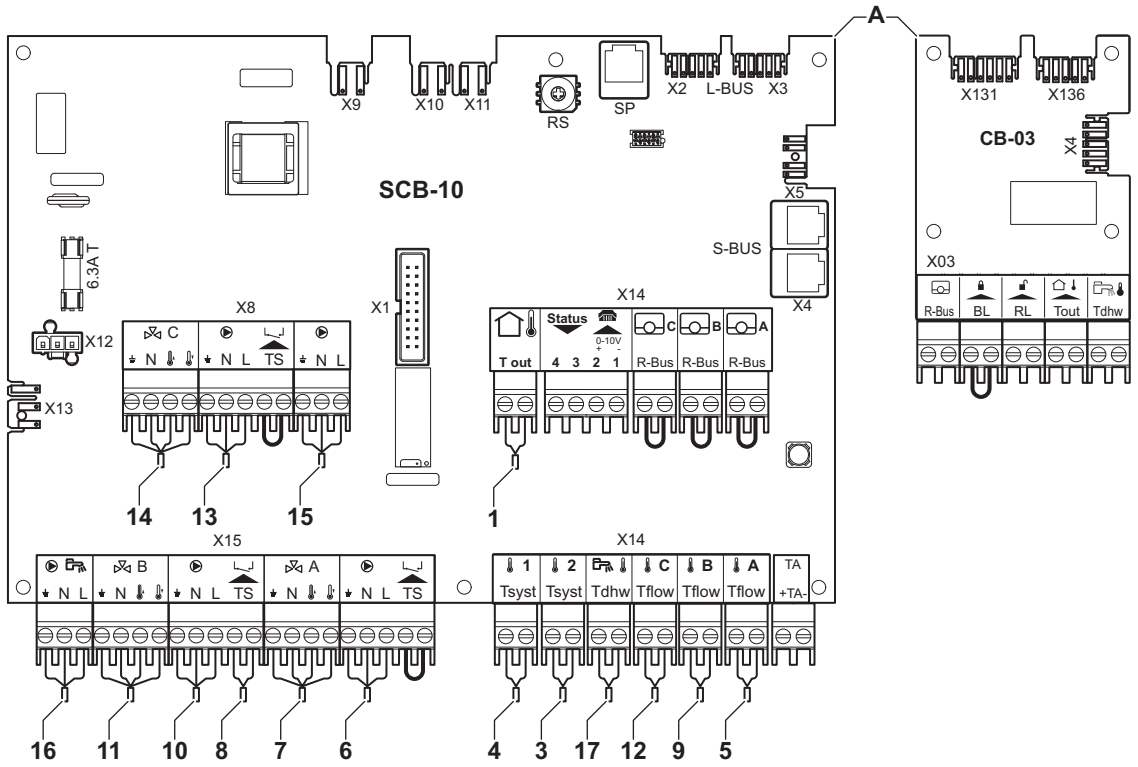
Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

7.6.6 Connection example 5

Fig.39 1 boiler + buffer tank + 3 mixing zones + domestic hot water (DHW) zone



AD-4100038-01



AD-4100140-01

A Boiler
B Buffer tank
C Mixing zone - CircA1
D Mixing zone - CircB1 (underfloor heating)
E Mixing zone - CircC1
F DHW zone - DHWA (1 sensor)
2 Pump connection via cablesX81 and X112, which can be found in the boiler instrument box

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10.

Tab.31 On > ☰ > Installation Setup > SCB-10 > **Pass.buff.tank 2sens** > Parameters, counters, signals > Parameters

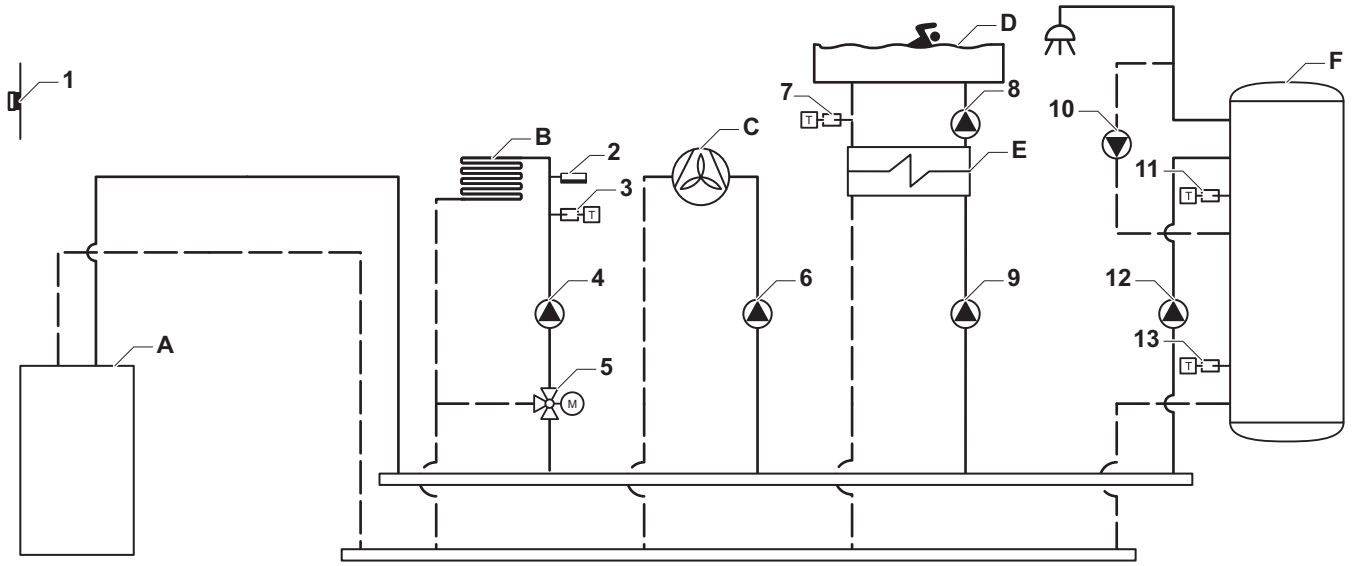
Code	Display text	Description	Range	Setting
BP001	Type Buffer Tank	Type of buffer tank	0 = Disabled 1 = One sensor 2 = Two sensors	2

Tab.32 On > ☰ > Installation Setup > SCB-10 > **CIRCA1** > Parameters, counters, signals > Parameters

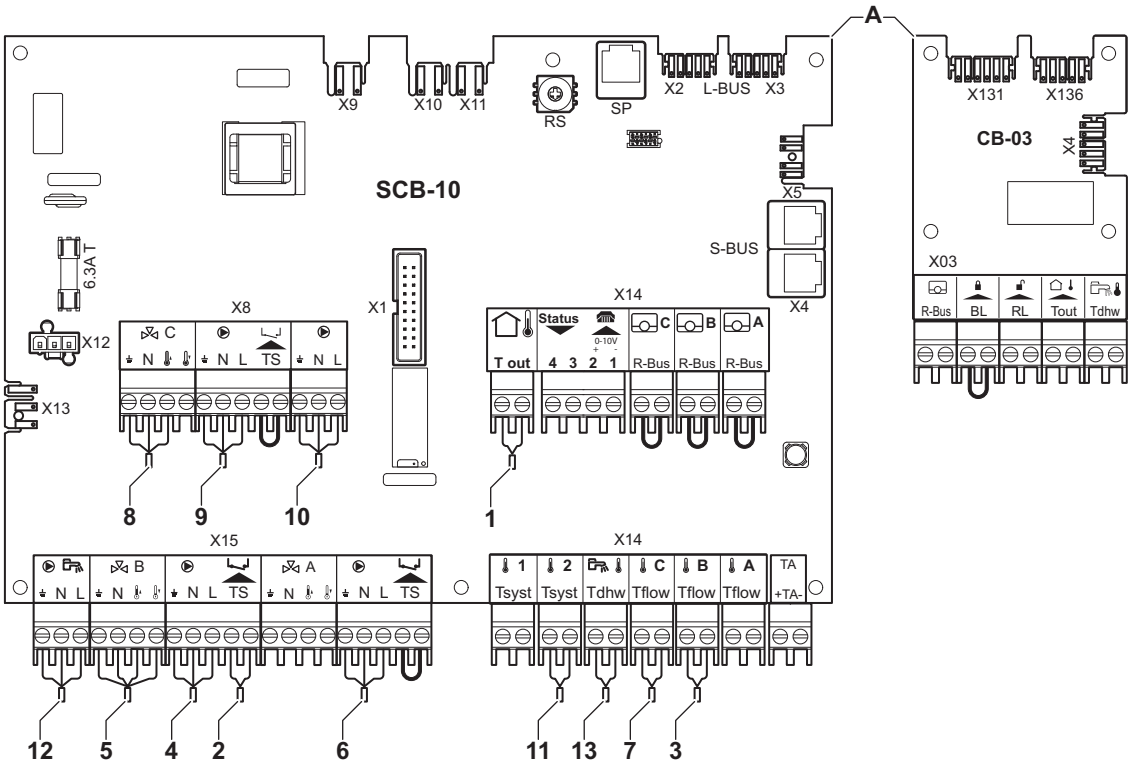
Code	Display text	Description	Range	Setting
CP000	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C - 100 °C	50
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C - 100 °C	40
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	2
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	0.7

7.6.7 Connection example 6

Fig.40 1 boiler + 1 mixing zone + 1 direct zone + swimming pool zone + domestic hot water (DHW) zone



AD-4100039-01



AD-4100141-01

A Boiler
B Mixing zone - CircB1 (underfloor heating)
C Direct zone - CircA1 (fan convector)
D Direct zone - CircC1 (swimming pool)
E Plate heat exchanger
F DHW zone - DHWA (layered calorifier - 2 sensors)

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10 PCB.

Tab.33 On > ☰ > Installation Setup > SCB-10 > **CIRCA1**> Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	5

Tab.34 On > ☰ > Installation Setup > SCB-10 > **CIRCC1** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP023	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	3

Tab.35 On > ☰ > Installation Setup > SCB-10 > **DHWA** > Parameters, counters, signals > Parameters

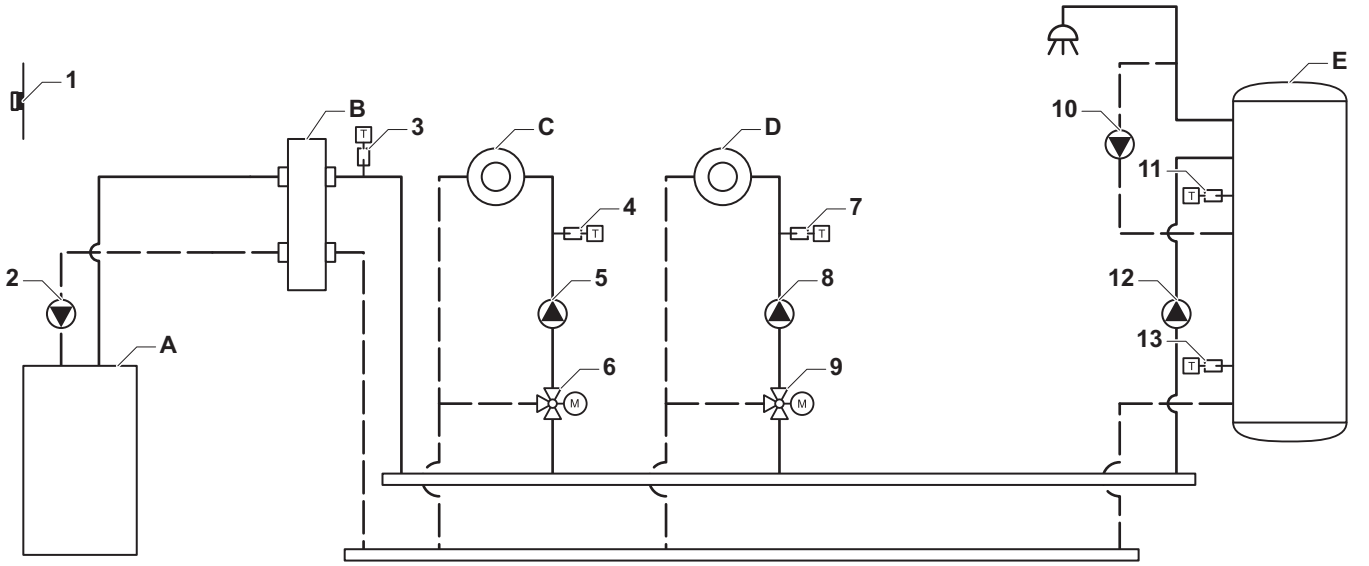
Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.36 On > ☰ > Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

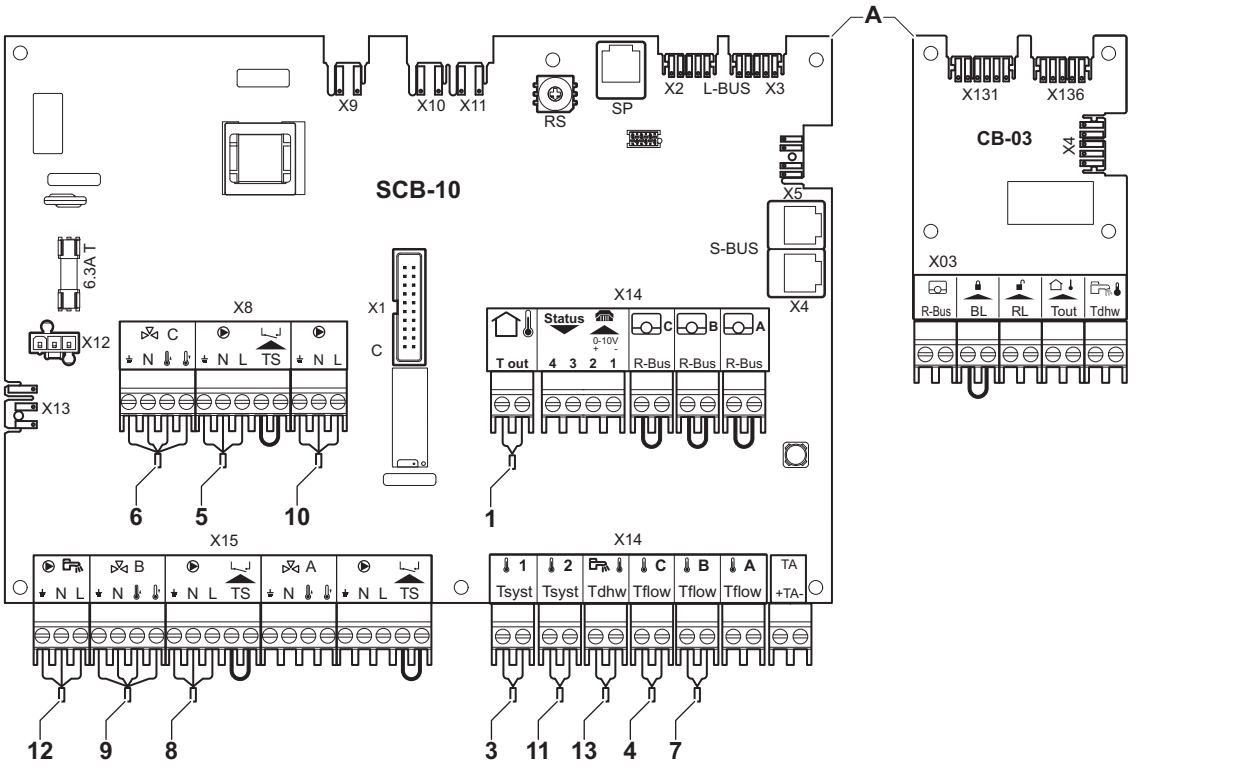
Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

7.6.8 Connection example 10

Fig.41 1 boiler (A) + low-loss header + 2 mix groups (B, C) + boiler group (D)



AD-4100040-01



AD-4100142-01

A Boiler
B Low-loss header
C Mixing zone - CircA1
D Mixing zone - CircB1
E DHW zone - DHWA (layered calorifier - 2 sensors)
2 Pump connection via cables X81 and X112, which can be found in the boiler instrument box

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10 PCB.

Tab.37 On > ☰ > Installation Setup >SCB-10 > **CIRCA1**> Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP020	Zone Function	Functionality of the zone	0 Disable 1 Direct 2 Mixing Circuit 3 Swimming pool 4 High Temperature 5 Fan Convector 6 DHW tank 7 Electrical DHW 8 Time Program 9 ProcessHeat 10 DHW Layered 11 DHW Internal tank 31 DHW FWS EXT	0

Tab.38 On > ☰ > Installation Setup > SCB-10 > **DHWA** > Parameters, counters, signals > Parameters

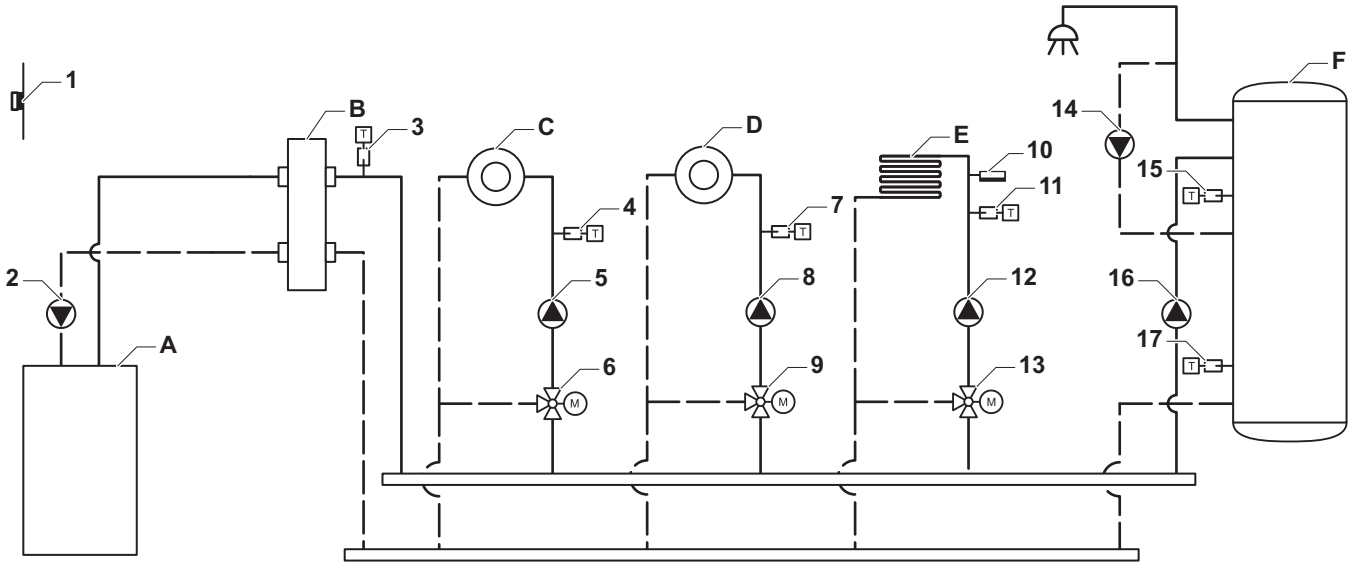
Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

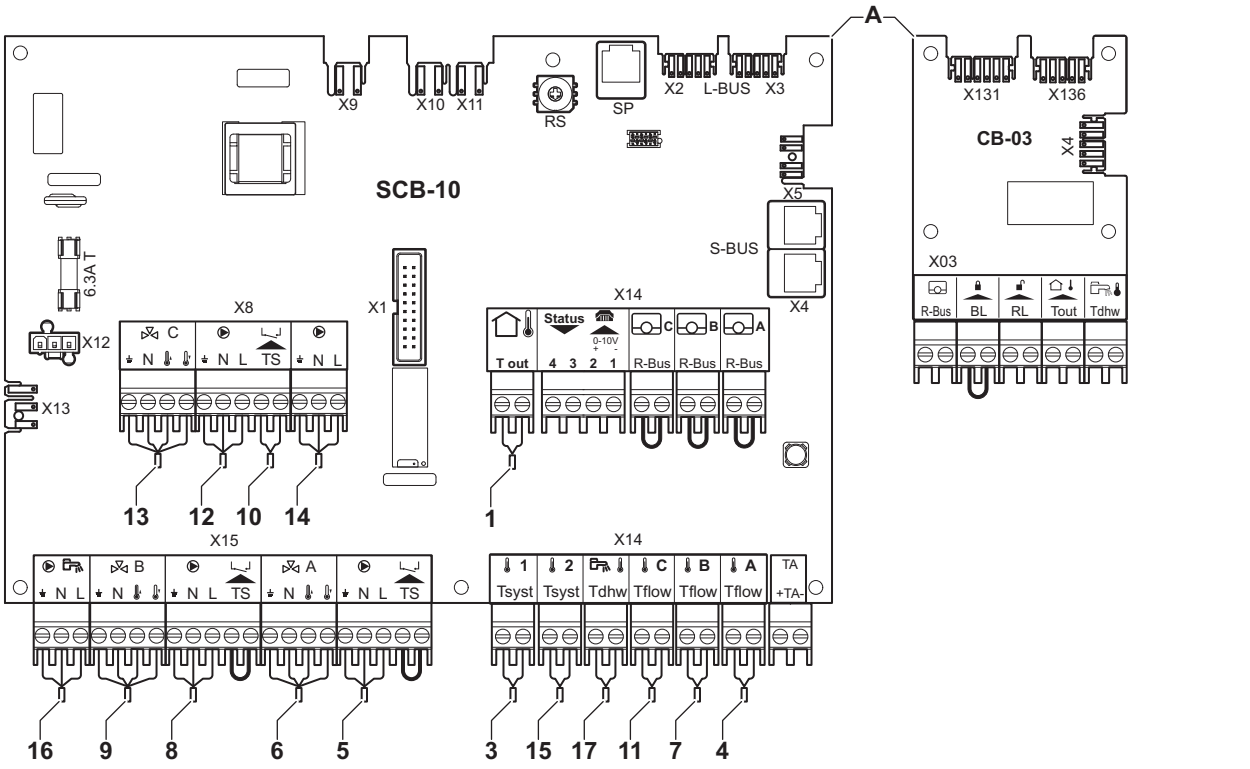
Tab.39 On > ☰ > Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

7.6.9 Connection example 11

Fig.42 1 boiler + low-loss header + 3 mixing zones + domestic hot water (DHW) zone





A Boiler
B Low-loss header
C Mixing zone - CircA1
D Mixing zone - CircB1
E Mixing zone - CircC1 (underfloor heating)
F DHW zone - DHWA (layered calorifier - 2 sensors)
2 Pump connection via cables X81 and X112, which can be found in the boiler instrument box

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10 PCB.

Tab.40 On > ☰ > Installation Setup >SCB-10 > **CIRCA1**> Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP000	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C - 100 °C	50
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C - 100 °C	40
CP020	Zone Function	Functionality of the zone	0 Disable 1 Direct 2 Mixing Circuit 3 Swimming pool 4 High Temperature 5 Fan Convector 6 DHW tank 7 Electrical DHW 8 Time Program 9 ProcessHeat 10 DHW Layered 11 DHW Internal tank 31 DHW FWS EXT	2
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	0.7

Tab.41 On > ☰ > Installation Setup > SCB-10 > **DHWA** > Parameters, counters, signals > Parameters

Coding unit	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.42 On > ☰ > Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

Tab.43 On > ☰ > Installation Setup >SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

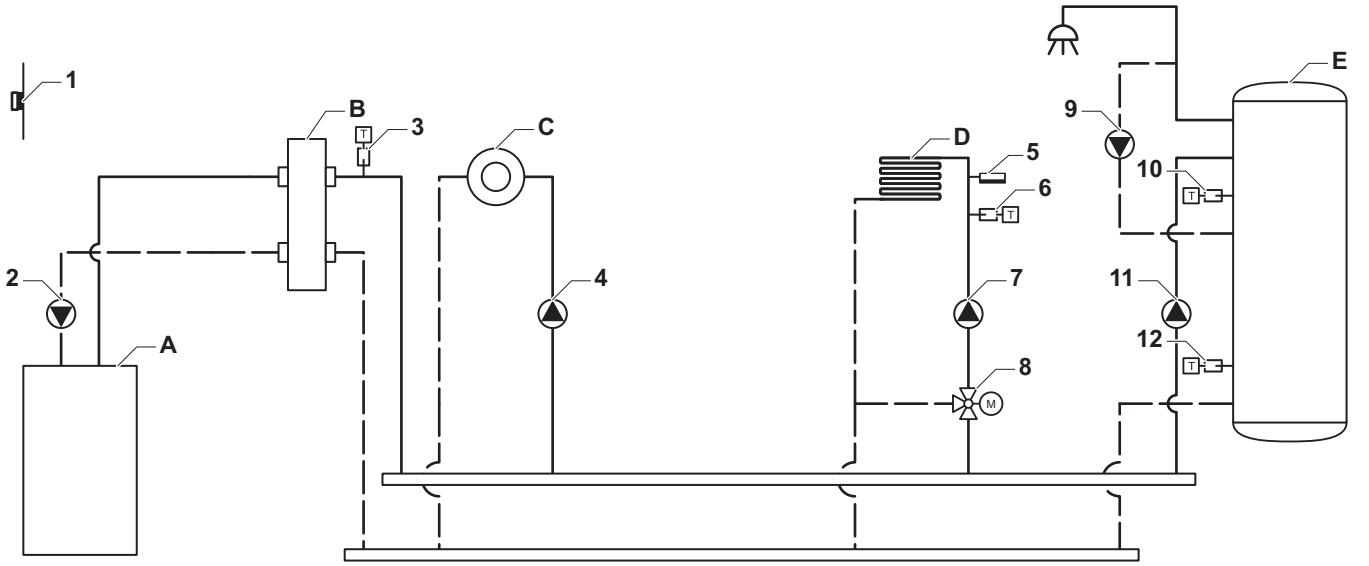
Code	Display text	Description	Range	Setting
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	1

Tab.44 On > ☰ > Installation Setup > SCB-10 > **Analogue input** > Parameters, counters, signals > Adv. Parameters

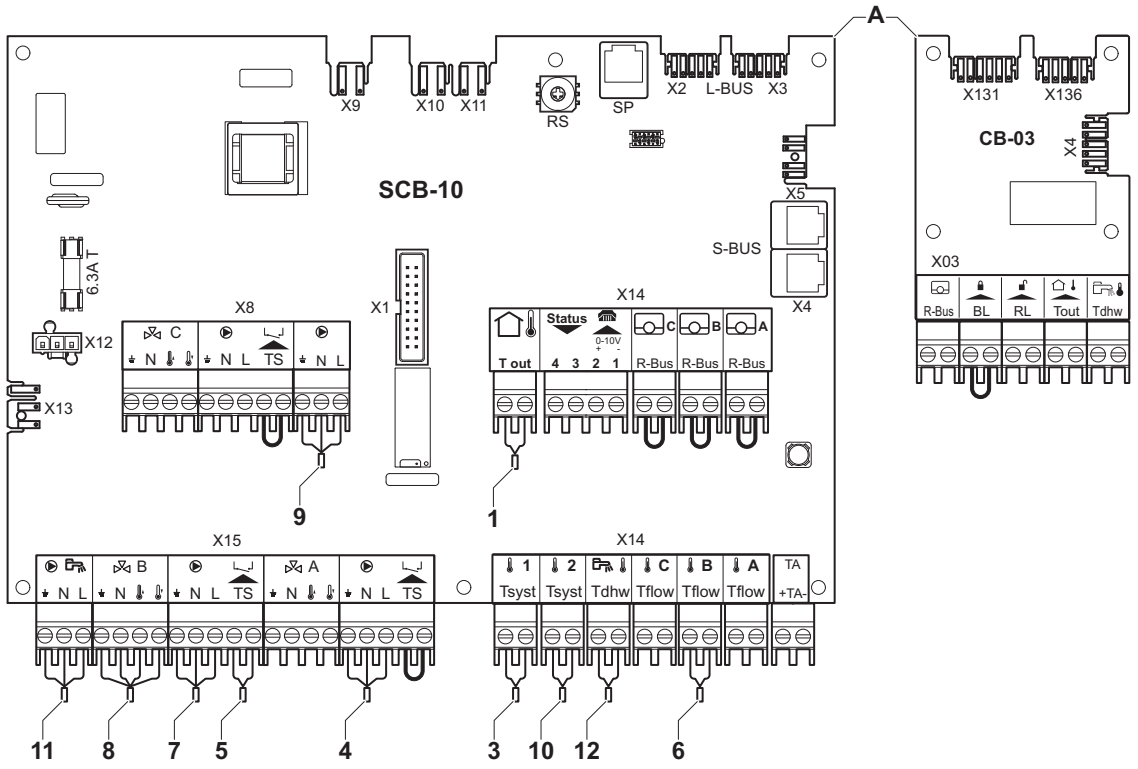
Code	Display text	Description	Range	Setting
EP036	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	2
EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	3

7.6.10 Connection example 12

Fig.43 1 boiler + low-loss header + 1 direct zone + 1 mixing zone + domestic hot water (DHW) zone



AD-4100042-01



AD-4100144-01

A Boiler
B Low-loss header
C Direct zone - CircA1
D Mixing zone - CircB1 (underfloor heating)
E DHW zone - DHWA (layered calorifier - 2 sensors)
2 Pump connection via cables X81 and X112, which can be found in the boiler instrument box

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10 PCB.

Tab.45 Installation Setup > SCB-10 > **DHW tankA** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.46 Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

Tab.47 Installation Setup > SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

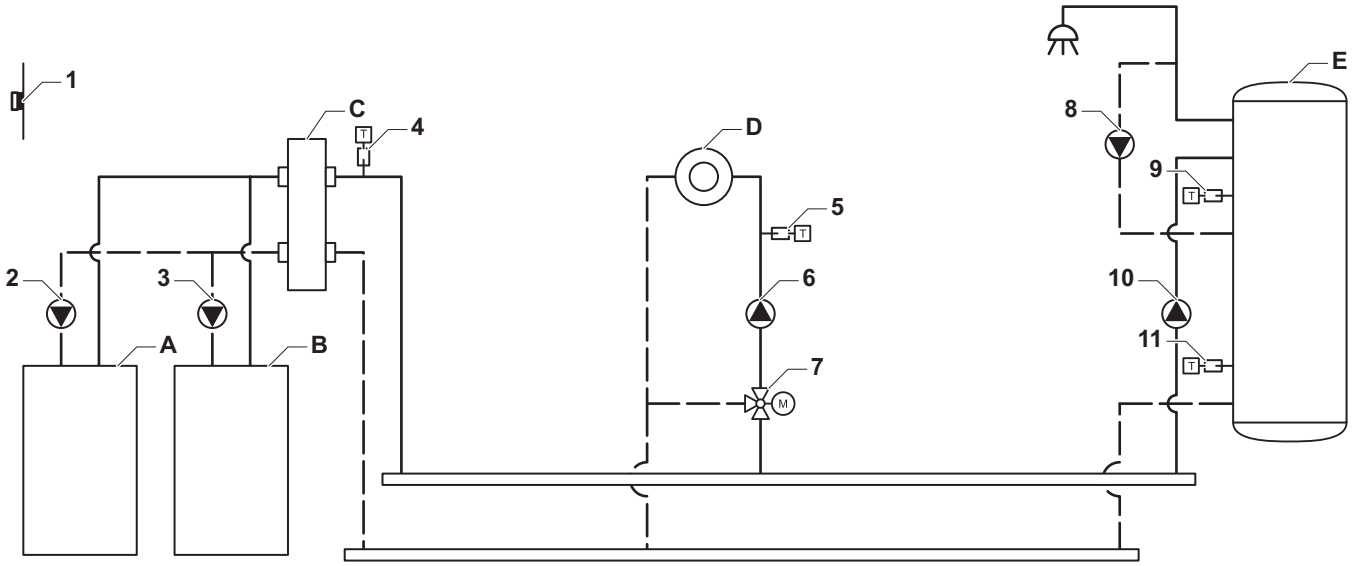
Code	Display text	Description	Range	Setting
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	1

Tab.48 Installation Setup > SCB-10 > **Analogue input** > Parameters, counters, signals > Adv. Parameters

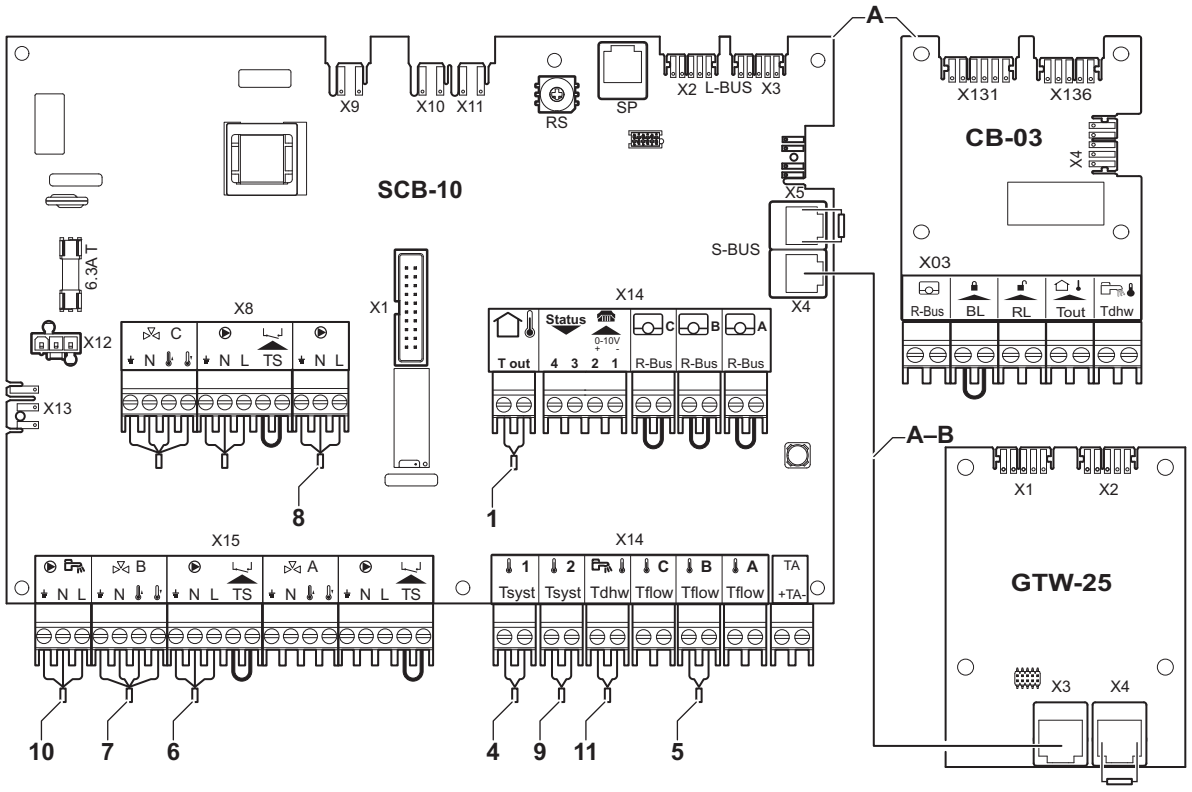
Code	Display text	Description	Range	Setting
EP036	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	2
EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	3

7.6.11 Connection example 14

Fig.44 2 boiler cascade + low-loss header + 1 mixing zone + domestic hot water (DHW) zone



AD-4100043-01



AD-4100145-01

- **A** Boiler (master)
- **B** Boiler (slave)
- **C** Low-loss header
- **D** Mixing zone - CircC1
- **E** DHW zone - DHWA (layered calorifier - 2 sensors)
- **A-B** S-BUS cable (comes with 2 resistors; one on connector X5 on the SCB-10 and one on connector X4 on the GTW-25 PCB from boiler B)
- **2** Pump connection via cables X81 and X112, which can be found in boiler A's instrument box
- **3** Pump connection via cables X81 and X112, which can be found in boiler B's instrument box

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10.

Tab.49 Installation Setup > SCB-10 > **DHWA** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.50 Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

Tab.51 Installation Setup > SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

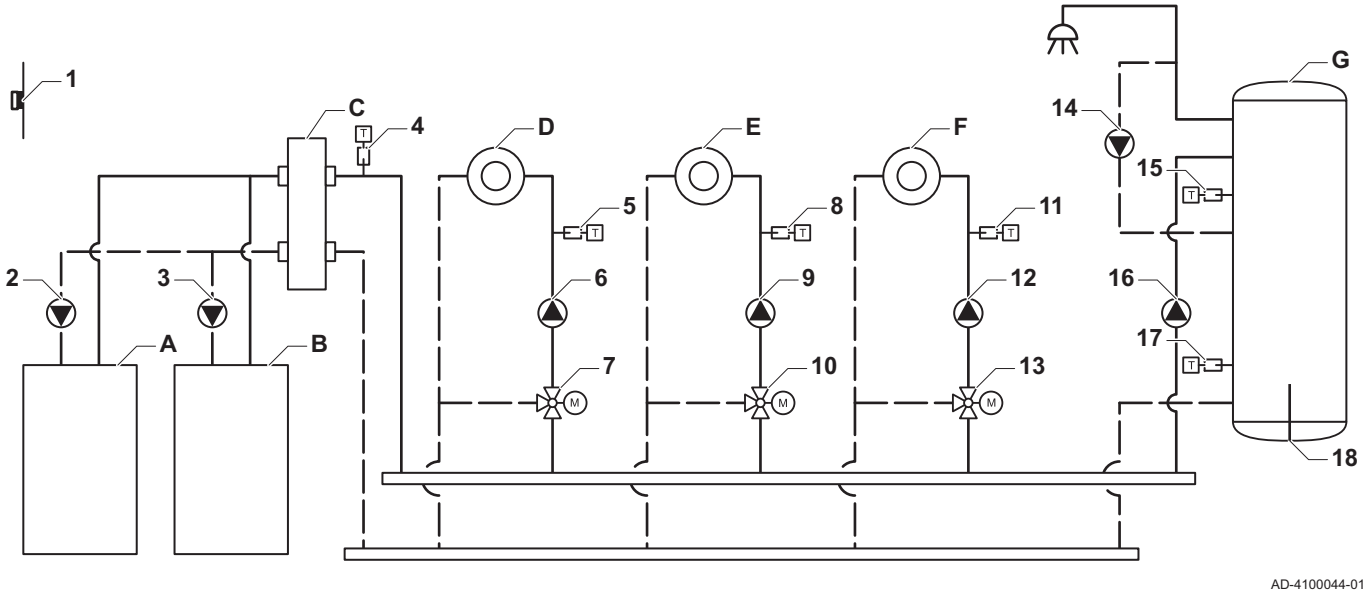
Code	Display text	Description	Range	Setting
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	1

Tab.52 Installation Setup > SCB-10 > **Analogue input** > Parameters, counters, signals > Adv. Parameters

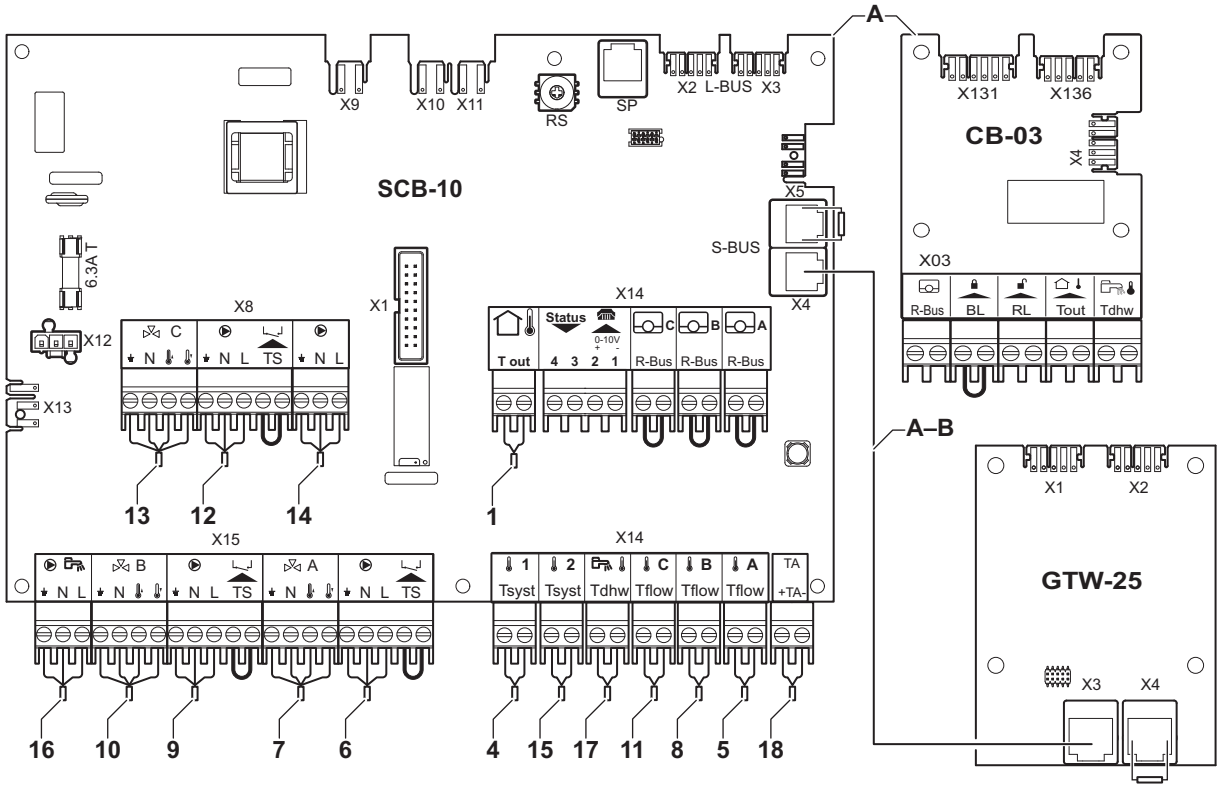
Code	Display text	Description	Range	Setting
EP036	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	2
EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	3

7.6.12 Connection example 16

Fig.45 2 boiler cascade + low-loss header + 3 mixing zones + domestic hot water (DHW) zone



AD-4100044-01



AD-4100146-01

A Boiler (master)
B Boiler (slave)
C Low-loss header
D Mixing zone - CircA1
E Mixing zone - CircB1
F Mixing zone - CircC1
G DHW zone - DHWA (layered calorifier - 2 sensors)
A-B S-BUS cable (comes with 2 resistors; one on connector X5 on the SCB-10 and one on connector X4 on the GTW-25 PCB from boiler B)
2 Pump connection via cables X81 and X112, which can be found in boiler A's instrument box
3 Pump connection via cables X81 and X112, which can be found in boiler B's instrument box

Important
For this configuration an additional PCB (accessory AD249) is placed on connector X8 of the SCB-10.

Tab.53 Installation Setup > SCB-10 > **CIRCA1** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP000	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C – 100 °C	50
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C – 100 °C	40
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	2
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 – 4	0.7

Tab.54 Installation Setup > SCB-10 > **DHWA** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.55 Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

Tab.56 Installation Setup > SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

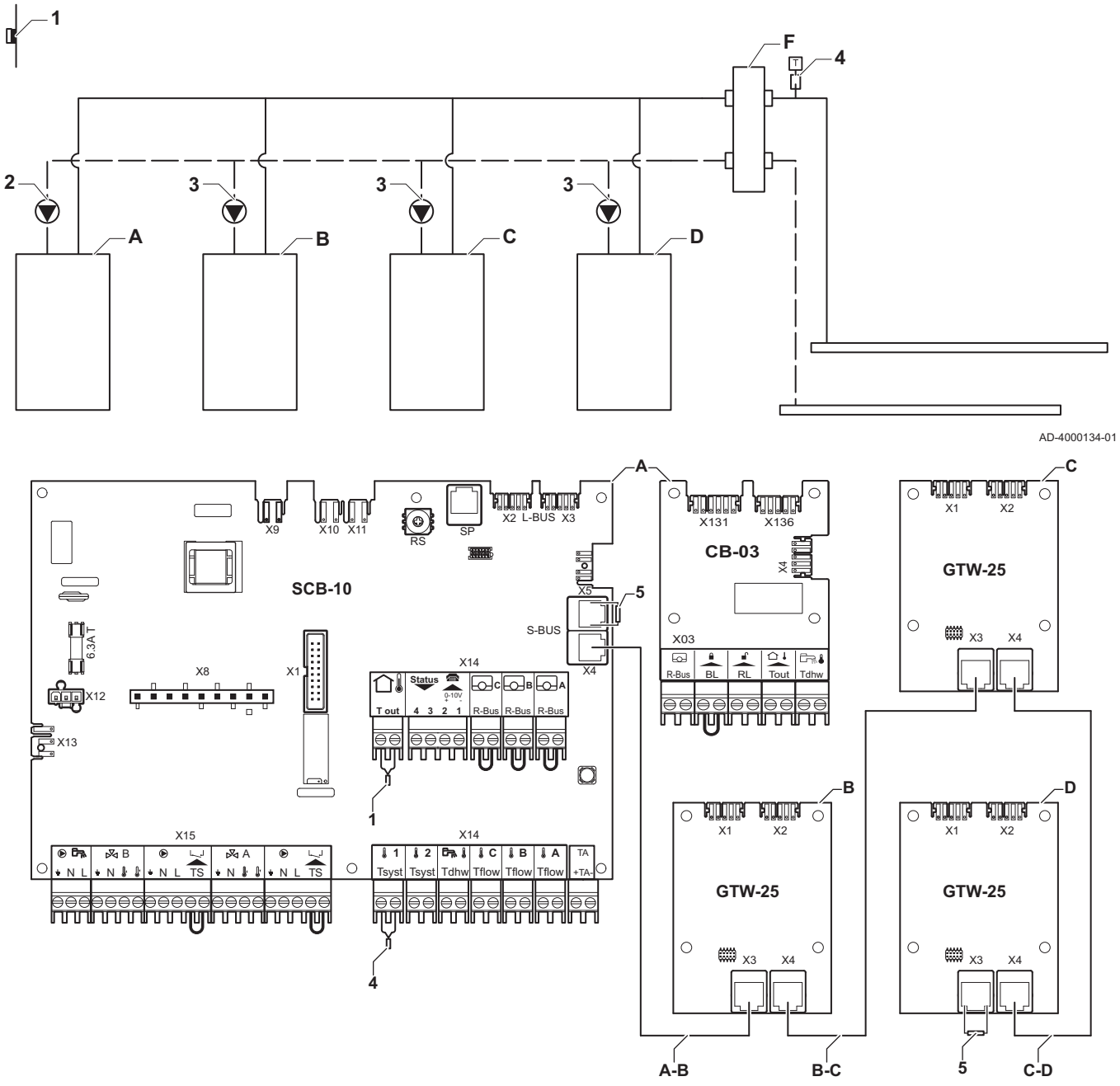
Code	Display text	Description	Range	Setting
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	1

Tab.57 Installation Setup > SCB-10 > **Analogue input** > Parameters, counters, signals > Adv. Parameters

Code	Display text	Description	Range	Setting
EP036	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	2
EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	3

7.6.13 Connection example 18

Fig.46 4 boilers cascade + low-loss header



A Boiler (master)
B:C:D: Boiler (slave)
A-B:B-C:C-D S-BUS cable (comes with 2 resistors; one on connector X5 on the SCB-10 and one on connector X3 on the GTW-25 PCB from last boiler D)
2 Pump connection via cables X81 and X112, which can be found in instrument box of the master boiler (A)
3 Pump connection via cables X81 and X112, which can be found in instrument box of each slave boiler (B, C, D)

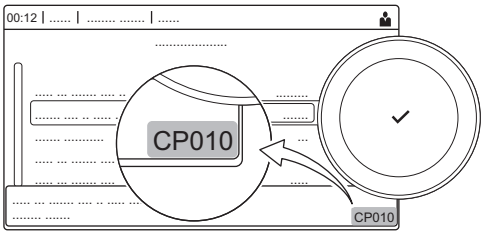
Tab.58 Installation Setup > SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	1

8 Settings

8.1 Introduction to parameter codes

Fig.47 Code on a Diematic Evolution



AD-3001373-02

The controls platform makes use of an advanced system to categorise parameters, measurements and counters. Knowing the logic behind these codes, makes it easier to identify them. The code consists of two letters and three numbers.

Fig.48 First letter

AD-3001375-01

The first letter is the category the code relates to.

A	Appliance: Appliance
C	Circuit: Zone
D	Domestic hot water: Domestic hot water
G	Gas fired: Gas-fired heat engine
P	Producer: Central heating

Category D codes are appliance controlled only. When the domestic hot water is controlled by an SCB, it is handled like a circuit, with C-category codes.

Fig.49 Second letter

AD-3001376-01

The second letter is the type.

P	Parameter: Parameters
C	Counter: Counters
M	Measurement: Signals

Fig.50 Number

AD-3001377-01

The number is always three digits. In certain cases, the last of the three digits relates to a zone.

8.2 List of parameters

8.2.1 Control unit settings

Important

- All tables show the factory setting for the parameters.
- The tables also list parameters that are only applicable if the boiler is combined with other equipment such as an outdoor sensor.
- All possible options are indicated in the adjustment range. The display of the boiler only shows the relevant settings for the appliance.

Tab.59 Navigation for basic installer level

Level	Menu cascade
Basic installer	≡ > Installation Setup > CU-GH08 > Submenu(1) > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.60 Factory settings at basic installer level

Code	Display text	Description	Range	Submenu	45	65	90	115
AP016	CH function on	Enable central heating heat demand processing	0 = Off 1 = On	Gas fired appliance	1	1	1	1
AP017	DHW function on	Enable domestic hot water heat demand processing	0 = Off 1 = On	Gas fired appliance	1	1	1	1

Code	Display text	Description	Range	Submenu	45	65	90	115
AP073	Summer Winter	Outdoor temperature: upper limit for heating	10 °C - 30 °C	Outdoor temperature	22	22	22	22
AP074	Force summer mode	The heating is stopped. Hot water is maintained. Force Summer Mode	0 = Off 1 = On	Outdoor temperature	0	0	0	0
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	Mandatory bus master	0	0	0	0
AP089	Installer name	Name of the installer		Mandatory bus master	None	None	None	None
AP090	Installer phone	Telephone number of the installer		Mandatory bus master	0	0	0	0
AP107	Color display Mk2	Color display Mk2	0 = White 1 = Red 2 = Blue 3 = Green 4 = Orange 5 = Yellow 6 = Violet	Mandatory bus master	2	2	2	2
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	0 °C - 90 °C	Direct zone	80	80	80	80
CP080	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	16	16	16	16
CP081	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	20	20	20	20
CP082	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	6	6	6	6
CP083	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	21	21	21	21
CP084	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	22	22	22	22
CP085	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	20	20	20	20
CP200	Manu ZoneRoomTempSet	Manually setting the room temperature setpoint of the zone	5 °C - 30 °C	Direct zone	20	20	20	20
CP320	OperatingZoneMode	Operating mode of the zone	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone	1	1	1	1
CP510	Temporary Room Setp	Temporary room setpoint per zone	5 °C - 30 °C	Direct zone	20	20	20	20
CP550	Zone, fire place	Fire Place mode is active	0 = Off 1 = On	Direct zone	0	0	0	0

Code	Display text	Description	Range	Submenu	45	65	90	115
CP660	Icon display zone	Choice icon to display this zone	0 = None 1 = All 2 = Bedroom 3 = Livingroom 4 = Study 5 = Outdoor 6 = Kitchen 7 = Basement 8 = Swimming Pool 9 = DHW Tank 10 = DHW Electrical Tank 11 = DHW Layered Tank 12 = Internal Boiler Tank 13 = Time Program	Direct zone	3	3	3	3
DP060	DHW timeprog. select	Time program selected for DHW.	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	Internal DHW	0	0	0	0
DP070	DHW comfort setpoint	Comfort temperature setpoint from the Domestic Hot Water tank	40 °C - 65 °C	Internal DHW	60	60	60	60
DP080	DHW reduced setpoint	Reduced temperature setpoint from the Domestic Hot Water tank	7 °C - 50 °C	Internal DHW	15	15	15	15
DP200	DHW mode	DHW primary mode current working setting	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Internal DHW	1	1	1	1
DP337	DHW holiday setpoint	Holiday temperature setpoint from the Domestic Hot Water tank	10 °C - 60 °C	Internal DHW	10	10	10	10

Tab.61 Navigation for installer level

Level	Menu cascade
Installer	≡ > Installation Setup > CU-GH08 > Submenu(1) > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.62 Factory settings at installer level

Code	Display text	Description	Range	Submenu	45	65	90	115
AP001	BL input setting	Blocking input setting (1: Full blocking, 2: Partial blocking, 3: User reset locking)	1 = Full blocking 2 = Partial blocking 3 = User reset locking 4 = Backup relieved 5 = Generator relieved 6 = Gen.&Backup relieved 7 = High, Low Tariff 8 = Photovoltaic HP Only 9 = PV HP And backup 10 = Smart Grid ready 11 = Heating Cooling	Gas fired appliance	1	1	1	1
AP003	Flue Valve Wait Time	Wait time after burner command to open flue gas valve	0 Sec - 255 Sec	Gas fired appliance	0	0	0	0

Code	Display text	Description	Range	Submenu	45	65	90	115
AP006	Min. water pressure	Appliance will report low water pressure below this value	0 bar - 6 bar	Gas fired appliance	0,8	0,8	0,8	0,8
AP008	Time release signal	The appliance will wait x sec (0=off) for the release contact to close in order to start the burner	0 Sec - 255 Sec	Gas fired appliance	0	0	0	0
AP009	Service hours burner	Burning hours before raising a service notification	0 Hours - 51000 Hours	Gas fired appliance	6000	6000	6000	6000
AP010	Service notification	The type of service needed based on burn and powered hours	0 = None 1 = Custom notification 2 = ABC notification	Gas fired appliance	0	0	0	0
AP011	Service hours mains	Hours powered to raise a service notification	0 Hours - 51000 Hours	Gas fired appliance	35000	35000	35000	35000
AP063	CH Set Max System	Maximum flow temperature setpoint for burning at central heating	20 °C - 90 °C	Gas fired appliance	90	90	90	90
AP079	Building Inertia	Inertia of the building used for heat up speed	0 - 15	Outdoor temperature	3	3	3	3
AP080	Frost min out temp	Outside temperature below which the antifreeze protection is activated	-60 °C - 25 °C	Outdoor temperature	-10	-10	-10	-10
AP082	Enable daylight save	Enable daylight saving for the system to save energy during winter	0 = Off 1 = On	Mandatory bus master	1	1	1	1
AP091	Outside Sens. Source	Type of outside sensor connection to be used	0 = Auto 1 = Wired sensor 2 = Wireless sensor 3 = Internet measured 4 = None	Outdoor temperature	0	0	0	0
AP108	OutsideSensorEnabled	Enable the function Outside Sensor	0 = Auto 1 = Wired sensor 2 = Wireless sensor 3 = Internet measured 4 = None	Outdoor temperature	0	0	0	0
CP000	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	0 °C - 90 °C	Direct zone	80	80	80	80
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 12 = DHW Commercial Tank 31 = DHW FWS EXT	Direct zone	1	1	1	1
CP060	RoomT. Holiday	Wished room zone temperature on holiday period	5 °C - 20 °C	Direct zone	6	6	6	6
CP070	MaxReduced RoomT.Lim	Max Room Temperature limit of the circuit in reduced mode, that allows switching to comfort mode	5 °C - 30 °C	Direct zone	16	16	16	16

Code	Display text	Description	Range	Submenu	45	65	90	115
CP210	Zone HCZP Comfort	Comfort footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	Direct zone	15	15	15	15
CP220	Zone HCZP Reduced	Reduced footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	Direct zone	15	15	15	15
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	Direct zone	1,5	1,5	1,5	1,5
CP340	TypeReduced NightMode	Type of reduced night mode, stop or maintain heating of circuit	0 = Stop heat demand 1 = Continue heat demand	Direct zone	1	1	1	1
CP470	Zone screed drying	Setting of the screed drying program of the zone	0 Days - 30 Days	Direct zone	0	0	0	0
CP480	ScreedStartTemp	Setting of the start temperature of the screed drying program of the zone	20 °C - 50 °C	Direct zone	20	20	20	20
CP490	ScreedStopTemp	Setting of the stop temperature of the screed drying program of the zone	20 °C - 50 °C	Direct zone	20	20	20	20
CP570	ZoneTimeProg Select	Time Program of the zone selected by the user	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	Direct zone	0	0	0	0
CP730	Zone Heat up speed	Selection of heat up speed of the zone	0 = Extra Slow 1 = Slowest 2 = Slower 3 = Normal 4 = Faster 5 = Fastest	Direct zone	3	3	3	3
CP740	Zone cool down speed	Selection of cool down speed of the zone	0 = Slowest 1 = Slower 2 = Normal 3 = Faster 4 = Fastest	Direct zone	2	2	2	2
CP750	MaxZone Preheat time	Maximum zone preheat time	0 Min - 240 Min	Direct zone	90	90	90	90
CP780	Control strategy	Selection of the control strategy for the zone	0 = Automatic 1 = Room Temp. based 2 = Outdoor Temp. based 3 = Outdoor & room based	Direct zone	0	0	0	0
DP004	Legionella calor.	Legionella mode protection calorifier	0 = Disabled 1 = Weekly 2 = Daily	Tank DHW	1	1	1	1
DP007	Dhw 3wv Standby	Position of three way valve during standby	0 = CH position 1 = DHW position	Tank DHW	0	0	0	0
DP035	Start pump DHW calo	Start pump for Domestic Hot Water calorifier	-20 °C - 20 °C	Tank DHW	-3	-3	-3	-3
DP150	DHW Thermostat	Set DHW Thermostat function On or Off	0 = Off 1 = On	Tank DHW	1	1	1	1
DP160	DHW AntiLeg Setpoint	Setpoint for DHW anti legionella	50 °C - 90 °C	Internal DHW	70	70	70	70
DP170	Start time holiday	Start time of holiday Time stamp		Internal DHW	-	-	-	-
DP180	End time holiday	End time of holiday Timestamp		Internal DHW	-	-	-	-
GP017	Max power	Maximum power percentage in kilo Watt	0 kW - 80 kW	Gas fired appliance	71,5	103,6	124,5	140,9

Code	Display text	Description	Range	Submenu	45	65	90	115
GP050	Power Min	Minimum power in kilo Watt for RT2012 calculation	0 kW - 80 kW	Gas fired appliance	4,7	6,7	10,8	11,4
PP015	CH Pump postrun time	Central heating pump post run time	0 Min - 99 Min	Gas fired appliance	1	1	1	1

Tab.63 Navigation for advanced installer level

Level	Menu cascade
Advanced installer	≡ > Installation Setup > CU-GH08 > Submenu(1) > Parameters, counters, signals > Parameters > Adv. Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.64 Factory settings at advanced installer level

Code	Display text	Description	Range	Submenu	45	65	90	115
AP002	Manual Heat Demand	Enable manual heat demand function	0 = Off 1 = With setpoint 2 = TOutdoor Control	Gas fired appliance	0	0	0	0
AP026	Setpoint manual HD	Flow temperature setpoint for manual heat demand	10 °C - 90 °C	Gas fired appliance	40	40	40	40
AP056	Outdoor sensor	Enable outdoor sensor	0 = No outside sensor 1 = AF60 2 = QAC34	Outdoor temperature	1	1	1	1
AP102	Boiler Pump function	Configuration of the boiler pump as zone pump or system pump (feed lowloss header)	0 = No 1 = Yes	Gas fired appliance	0	0	0	0
AP111	Can line length	Can line length	0 = < 3m 1 = < 80m 2 = < 500m	Mandatory bus master	0	0	0	0
CP130	T.OutdoorToZone	Assigning the outdoor sensor to zone …	0 - 4	Direct zone	0	0	0	0
CP240	ZoneRoomUnitInfl	Adjustment of the influence of the zone room unit	0 - 10	Direct zone	3	3	3	3
CP250	CalSondeAmbZone	Calibration of Zone Room Unit	-5 °C - 5 °C	Direct zone	0	0	0	0
CP770	Zone Buffered	The zone is after a Buffer tank	0 = No 1 = Yes	Direct zone	0	0	0	0
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	1000 Rpm - 7000 Rpm	Gas fired appliance	5400	5600	6300	6700
DP005	Calorifier Tf offset	Flow setpoint offset for loading calorifier	0 °C - 50 °C	Tank DHW	20	20	20	20
DP006	Hyst calorifier	Hysteresis to start heating calorifier	2 °C - 15 °C	Tank DHW	5	5	5	5
DP020	Postrun DHW pump/3wv	Post run time of the DHW pump/3 way valve after DHW production	0 Sec - 99 Sec	Gas fired appliance	10	10	10	10
DP034	DhwCalorifier Offset	Offset for calorifier sensor	0 °C - 10 °C	Tank DHW	2	2	2	2
DP140	DHW load type	DHW load type (0 : Combi, 1 : Solo)	0 = Combi 1 = Solo 2 = Layered cylinder 3 = Process heat 4 = External	Internal DHW Tank DHW Gas fired appliance	1	1	1	1
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	1400 Rpm - 7000 Rpm	Gas fired appliance	5400	5600	6300	6800

Code	Display text	Description	Range	Submenu	45	65	90	115
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1400 Rpm - 4000 Rpm	Gas fired appliance	1550	1600	1600	1750
GP009	Fan RPM Start	Fan speed at appliance start	1000 Rpm - 4000 Rpm	Gas fired appliance	2500	2500	2500	2500
GP010	GPS Check	Gas Pressure Switch check on/off	0 = No 1 = Yes	Gas fired appliance	0	0	0	0
GP021	Temp diff Modulating	Modulate back when delta temperature is large then this treshold	10 °C - 40 °C	Gas fired appliance	25	25	25	20
GP022	Tfa Filter Tau	Tau factor for average flow temperature calculation	1 - 255	Gas fired appliance	1	1	1	1
PP014	ChPumpDTR eduction	Reduction of temperature delta modulating for pump modulation	0 °C - 40 °C	Gas fired appliance	18	18	18	18
PP016	Max. CH pump speed	Maximum central heating pump speed (%)	20 % - 100 %	Gas fired appliance	100	100	100	100
PP017	ChPumpSpee dMaxFactor	Maximum central heating at minimum load as percentage of max pump speed	0 % - 100 %	Gas fired appliance	100	100	100	100
PP018	Min CH pump speed	Minimum central heating pump speed (%)	20 % - 100 %	Gas fired appliance	30	30	30	30
PP023	Start hysteresis CH	Hysteresis to start burner in heating mode	1 °C - 10 °C	Gas fired appliance	10	10	10	10

8.2.2 SCB-10 expansion PCB settings

Important
The table shows the factory setting for the parameters.

Tab.65 Navigation for basic installer level

Level	Menu path
Basic installer	≡ > Installation Setup > SCB-10 > Submenu (1) > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.66 Factory settings at basic installer level

Code	Display text	Description	Range	Submenu	Default setting
AP074	Force summer mode	The heating is stopped. Hot water is maintained. Force Summer Mode	0 = Off 1 = On	Outdoor temperature	0
AP077	Max. display level	Maximum Level of parameters and signals to display on MK	1 = End user 2 = Installer 3 = Installer advanced 4 = Lab 5 = Controls Development	System Functionality	3
AP081	Device short name	Shortname of the device		System Functionality	S10
AP089	Installer name	Name of the installer		Mandatory bus master	
AP090	Installer phone	Telephone number of the installer		Mandatory bus master	

Code	Display text	Description	Range	Submenu	Default setting
CP010 CP011 CP012 CP013 CP014	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C - 100 °C	Direct zone Mixed zone High temp. zone Fan convector zone	75
CP080 CP081 CP082 CP083 CP084 CP085	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	16
CP086 CP087 CP088 CP089 CP090 CP091	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	16
CP092 CP093 CP094 CP095 CP096 CP097	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	16
CP098 CP099 CP100 CP101 CP102 CP103	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	16
CP104 CP105 CP106 CP107 CP108 CP109	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	16
CP140 CP141 CP142 CP143 CP144 CP145	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	Mixed zone Fan convector zone	30
CP146 CP147 CP148 CP149 CP150 CP151	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	Mixed zone Fan convector zone	30
CP152 CP153 CP154 CP155 CP156 CP157	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	Mixed zone Fan convector zone	30

Code	Display text	Description	Range	Submenu	Default setting
CP158 CP159 CP160 CP161 CP162 CP163	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	Mixed zone Fan convector zone	30
CP164 CP165 CP166 CP167 CP168 CP169	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	Mixed zone Fan convector zone	30
CP200 CP201 CP202 CP203 CP204	Manu ZoneRoomTempSet	Manually setting the room temperature setpoint of the zone	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	20
CP320 CP321 CP322 CP323 CP324	OperatingZoneMode	Operating mode of the zone	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	0
CP350 CP351 CP352 CP353 CP354	ComfortZoneDHWtemp	Comfort Domestic Hot Water Temperature Setpoint of zone	40 °C - 80 °C	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	55
CP360 CP361 CP362 CP363 CP364	ReducedZoneDHWtemp.	Reduced Domestic Hot Water Temperature Setpoint of zone	10 °C - 60 °C	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	10

Code	Display text	Description	Range	Submenu	Default setting
CP510 CP511 CP512 CP513 CP514	Temporary Room Setp	Temporary room setpoint per zone	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	20
CP540 CP541 CP542 CP543 CP544	Zone TSwimmPool setp	Setpoint of swimming pool when Zone is configured on Swimming Pool	0 °C - 39 °C	Swimming pool	20
CP550 CP551 CP552 CP553 CP554	Zone, fire place	Fire Place mode is active	0 = Off 1 = On	Direct zone Mixed zone High temp. zone Fan convector zone	0
CP570 CP571 CP572 CP573 CP574	ZoneTimeProg Select	Time Program of the zone selected by the user	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program DHW layered tank DHW tank internal DHW Commercial Tank	0

Code	Display text	Description	Range	Submenu	Default setting
CP660 CP661 CP662 CP663 CP664	Icon display zone	Choice icon to display this zone	0 = None 1 = All 2 = Bedroom 3 = Livingroom 4 = Study 5 = Outdoor 6 = Kitchen 7 = Basement 8 = Swimming Pool 9 = DHW Tank 10 = DHW Electrical Tank 11 = DHW Layered Tank 12 = Internal Boiler Tank 13 = Time Program	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank	0
CP670 CP671 CP672 CP673 CP674	ConfPairing RU Zone	Configuration of pairing room unit per zone		Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank	

Tab.67 Navigation for installer level

Level	Menu path
Installer	≡ > Installation Setup > SCB-10 > Submenu (1) > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.68 Factory settings at installer level

Code	Display text	Description	Range	Submenu	Default setting
AP056	Outdoor sensor	Enable outdoor sensor	0 = No outside sensor 1 = AF60 2 = QAC34	Outdoor temperature	1
AP073	Summer Winter	Outdoor temperature: upper limit for heating	15 °C - 30.5 °C	Outdoor temperature	22

Code	Display text	Description	Range	Submenu	Default setting
AP075	NeutralBandSum Winter	Outdoor temperature neutral band between heating and cooling. The generator is stopped.	0 °C - 10 °C	Outdoor temperature	4
AP079	Building Inertia	Inertia of the building used for heat up speed	0 - 10	Outdoor temperature	3
AP080	Frost min out temp	Outside temperature below which the antifreeze protection is activated	-30 °C - 20 °C	Outdoor temperature	3
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	Mandatory bus master Producer Manager Cascade management B	0
AP091	Outside Sens. Source	Type of outside sensor connection to be used	0 = Auto 1 = Wired sensor 2 = Wireless sensor 3 = Internet measured 4 = None	Outdoor temperature	0
BP001	Type Buffer Tank	Type of buffer tank	0 = Disabled 1 = One sensor 2 = Two sensors 3 = Three sensors 4 = Four sensors	Disabled buffer tank Pass.buff.tank 1sens Pass.buff.tank 2sens	0
BP002	Buff Tank HC Strat.	Heating Cooling Control strategy used with buffer tank	0 = Fixed setpoint 1 = Calculated setpoint 2 = Dedicated slope	Pass.buff.tank 1sens Pass.buff.tank 2sens	0
BP003	Stp Buffertank Heat	Temperature setpoint for buffer tank in heating mode	5 °C - 100 °C	Pass.buff.tank 1sens Pass.buff.tank 2sens	70
BP004	Setp Buffertank Cool	Temperature setpoint for Buffer tank in cooling mode	5 °C - 25 °C	Pass.buff.tank 1sens Pass.buff.tank 2sens	18
BP005	Buffer Tank Slope	Buffer Tank Slope	0 - 4	Pass.buff.tank 1sens Pass.buff.tank 2sens	1.5
BP013	BufferTankTcalOffset	Offset to add to the calculate Setpoint of the Buffer Tank	0 °C - 20 °C	Pass.buff.tank 1sens Pass.buff.tank 2sens	5
BP014	BufferTank HystStart	Hysteresis of temperature which determines the start of Buffer Tank storage	1 °C - 20 °C	Pass.buff.tank 1sens Pass.buff.tank 2sens	6
BP015	Buf.Tank post run	Minimum duration of post-operation of the buffer tank pump	0 Min - 20 Min	Pass.buff.tank 1sens Pass.buff.tank 2sens	4
BP019	BufferTank HystStop	Hysteresis of temperature which determines the stop of buffer tank storage	-30 °C - 30 °C	Pass.buff.tank 1sens Pass.buff.tank 2sens	0

Code	Display text	Description	Range	Submenu	Default setting
CP000 CP001 CP002 CP003 CP004	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C - 100 °C	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank	90
CP020 CP021 CP022 CP023 CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 12 = DHW Commercial Tank 13 = DHW FWS 31 = DHW FWS EXT 255 = Occupied	Zone manager Zone disabled Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank	1
CP030 CP031 CP032 CP033 CP034	Bandwidth Mix. Valve	Bandwidth of mixing valve zone where modulation takes place.	4 °C - 16 °C	Mixed zone	12

Code	Display text	Description	Range	Submenu	Default setting
CP040 CP041 CP042 CP043 CP044	Postrun zone pump	Pump post runtime of the zone	0 Min - 20 Min	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank	4
CP050 CP051 CP052 CP053 CP054	Mixing Valve shift	Shift between calculated setpoint and mixing valve circuit setpoint	0 °C - 16 °C	Mixed zone	4
CP060 CP061 CP062 CP063 CP064	RoomT. Holiday	Wished room zone temperature on holiday period	5 °C - 20 °C	Direct zone Mixed zone High temp. zone Fan convector zone	6
CP070 CP071 CP072 CP073 CP074	MaxReducedRoomT.Lim	Max Room Temperature limit of the circuit in reduced mode, that allows switching to comfort mode	5 °C - 30 °C	Direct zone Mixed zone High temp. zone Fan convector zone	16
CP210 CP211 CP212 CP213 CP214	Zone HCZP Comfort	Comfort footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	Direct zone Mixed zone High temp. zone Fan convector zone	15
CP220 CP221 CP222 CP223 CP224	Zone HCZP Reduced	Reduced footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	Direct zone Mixed zone High temp. zone Fan convector zone	15
CP230 CP231 CP232 CP233 CP234	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	Direct zone Mixed zone High temp. zone Fan convector zone	1.5

Code	Display text	Description	Range	Submenu	Default setting
CP240 CP241 CP242 CP243 CP244	ZoneRoomUnitInfl	Adjustment of the influence of the zone room unit	0 - 10	Direct zone Mixed zone High temp. zone Fan convector zone	3
CP270 CP271 CP272 CP273 CP274	CoolMixTflowZoneSet	Mixing flow temperature setpoint cooling of the zone	11 °C - 23 °C	Mixed zone	18
CP280 CP281 CP282 CP283 CP284	FanCoolTflowZoneSet	Fan flow setpoint cooling of the zone	7 °C - 23 °C	Fan convector zone	10
CP340 CP341 CP342 CP343 CP344	TypeReducedNightMode	Type of reduced night mode, stop or maintain heating of circuit	0 = Stop heat demand 1 = Continue heat demand	Direct zone Mixed zone High temp. zone Fan convector zone	0
CP370 CP371 CP372 CP373 CP374	Holiday ZoneDHWtemp	Holiday Domestic Hot Water Temperature Setpoint of zone	10 °C - 40 °C	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	10
CP380 CP381 CP382 CP383 CP384	Antileg ZoneDHWtemp	Antilegionellosis Domestic Hot Water Temperature Setpoint of zone	40 °C - 80 °C	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	65
CP390 CP391 CP392 CP393 CP394	Start Antileg	Start time of the function Antilegionellosis	0 HoursMinutes = 143 HoursMinutes	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	18

Code	Display text	Description	Range	Submenu	Default setting
CP400 CP401 CP402 CP403 CP404	Zone Dhw antileg.	Duration of the function Antilegionellosis	10 Min - 600 Min	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	60
CP420 CP421 CP422 CP423 CP424	ZoneDhwHysteris is	Trip differential for DHW production	1 °C - 60 °C	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	6
CP430 CP431 CP432 CP433 CP434	Optimise DHW Zone	Used to force DHW tank loading according to the primary temperature	0 - 1	DHW tank Electrical DHW tank DHW layered tank	0
CP440 CP441 CP442 CP443 CP444	Release DHW zone	Prevents the cooling of the Tank at the start	0 - 1	DHW tank Electrical DHW tank DHW layered tank	0
CP460 CP461 CP462 CP463 CP464	DHW Zone Priority	Choice of DHW Priority 0:TOTAL 1:RELATIVE 2:NONE	0 = Total 1 = Relative 2 = None	DHW tank Electrical DHW tank DHW layered tank	0
CP470 CP471 CP472 CP473 CP474	Zone screed drying	Setting of the screed drying program of the zone	0 Days - 30 Days	Direct zone Mixed zone High temp. zone Fan convector zone	0
CP480 CP481 CP482 CP483 CP484	ScreedStartTemp	Setting of the start temperature of the screed drying program of the zone	20 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone	20
CP490 CP491 CP492 CP493 CP494	ScreedStopTemp	Setting of the stop temperature of the screed drying program of the zone	20 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone	20

Code	Display text	Description	Range	Submenu	Default setting
CP500 CP501 CP502 CP503 CP504	Tflow Sensor Enable	Enable/Disable Flow temperature sensor of the zone	0 = Off 1 = On	Mixed zone Swimming pool DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank	0
CP560 CP561 CP562 CP563 CP564	ZoneConfigDHW Antileg	Configuration of the Domestic Hot Watter Antilegionnella Protection of the zone	0 = Disabled 1 = Weekly 2 = Daily	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	0
CP600 CP601 CP602 CP603 CP604	ProcessHeat Spt zone	Heat demand setpoint during process heat of zone	20 °C - 100 °C	Process heat	60
CP610 CP611 CP612 CP613 CP614	Hys PH on per zone	Hysteresis switched on for process heat per zone	1 °C - 15 °C	Process heat	6
CP620 CP621 CP622 CP623 CP624	Hys PH off per zone	Hysteresis switched off for process heat per zone	1 °C - 15 °C	Process heat	6
CP630 CP631 CP632 CP633 CP634	StartdayAntileg zone	Startday of the function antilegionella of the zone	1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday	DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	6
CP640 CP641 CP642 CP643 CP644	OTH LogicLev contact	Opentherm Logic level contact of the zone	0 = Open 1 = Closed 2 = Off	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone	1

Code	Display text	Description	Range	Submenu	Default setting
CP650 CP651 CP652 CP653 CP654	RedRoomTempCool Zone	Desired reduced room temperature setpoint in cooling mode per zone	20 °C - 30 °C	Mixed zone Fan convector zone	29
CP690 CP691 CP692 CP693 CP694	RevContactOTHcool	Reversed OpenTherm contact in cooling mode for heat demand per zone	0 = No 1 = Yes	Mixed zone Fan convector zone	0
CP700 CP701 CP702 CP703 CP704	DHW Cal Offset zone	Offset for calorifier sensor per zone	0 °C - 30 °C	DHW tank Electrical DHW tank DHW layered tank DHW tank internal	0
CP710 CP711 CP712 CP713 CP714	Zone IncTFlowStp DHW	Increase primary temperature setpoint for heating DHW calorifier of the zone	0 °C - 40 °C	DHW tank Electrical DHW tank DHW layered tank	20
CP720 CP721 CP722 CP723 CP724	Zone, IncFT ProcHeat	Increase Primary Temperature setpoint for process heat calorifier of the zone	0 °C - 40 °C	Process heat	20
CP750 CP751 CP752 CP753 CP754	MaxZone Preheat time	Maximum zone preheat time	0 Min - 240 Min	Direct zone Mixed zone High temp. zone Fan convector zone	0
CP760 CP761 CP762 CP763 CP764	Zone DHW TAS enable	The calorifier of the zone is equipped with a Titan Active System anode	0 = No 1 = Yes	DHW tank Electrical DHW tank DHW layered tank	0
CP780 CP781 CP782 CP783 CP784	Control strategy	Selection of the control strategy for the zone	0 = Automatic 1 = Room Temp. based 2 = Outdoor Temp. based 3 = Outdoor & room based	Direct zone Mixed zone High temp. zone Fan convector zone	0
EP014	SCB func. 10V PWMin	Smart Control Board function 10 Volt PWM input	0 = Off 1 = Temperature control 2 = Power control	0-10 volt input	0
EP018	Status relay func.	Status relay function	0 = No Action 1 = Alarm 2 = Alarm Inverted 3 = Burning 4 = Not burning 5 = Reserved 6 = Reserved 7 = Service request 8 = Boiler on CH 9 = Boiler on DHW 10 = CH pump on 11 = Locking or Blocking 12 = Cooling mode	Status information	11

Code	Display text	Description	Range	Submenu	Default setting
EP030	Min Setp Temp 0-10V	Sets the minimum set point temperature for 0 - 10 volts for the Smart Control Board	0 °C - 100 °C	0-10 volt input	0
EP031	Max Setp Temp 0-10V	Sets the maximum set point temperature for 0 - 10 volts for the Smart Control Board	0.5 °C - 100 °C	0-10 volt input	100
EP032	Min Setp Power 0-10V	Sets the minimum set point power for 0 - 10 volts for the Smart Control Board	0 % - 100 %	0-10 volt input	0
EP033	Max Setp Power 0-10V	Sets the maximum set point power for 0 - 10 volts	5 % - 100 %	0-10 volt input	100
EP034	Min Setp Volt 0-10V	Sets the minimum set point voltage for 0 - 10 volts for the Smart Control Board	0 V - 10 V	0-10 volt input	0.5
EP035	Max Setp Volt 0-10V	Sets the maximum set point voltage for 0 - 10 volts	0 V - 10 V	0-10 volt input	10
EP046	Digital input config	Sets the general configuration of the digital input	0 = Stop heating + DHW 1 = Stop heating 2 = Stop DHW 3 = Forced setpoint 4 = Buffer Tank input	Digital Input	0
EP056	Logic level Digi In	Sets the logic level contact of the Smart Control Board digital input	0 = Open 1 = Closed 2 = Off	Digital Input	1
EP066	Req FlowSetp digi In	Requested flow setpoint when digital input is configured to forced heat	7 °C - 100 °C	Digital Input	80
EP076	Req PowSetp digi In	Requested power setpoint when digital input is configured to forced heat	0 % - 100 %	Digital Input	100
NP005	Cascade Permutation	Choice of the leading generator,.AUTO: Switching of order every 7 days	0 - 127	Cascade management B	0
NP006	Cascade Type	Cascading boilers by adding successively or in parallel, the boilers function simultaneously	0 = Traditional 1 = parallel	Cascade management B	0
NP007	CascTOutsideHeatParl	Outdoor start temperature heating of all stages in parallel mode	-10 °C - 20 °C	Cascade management B	10
NP008	CascTPostRunGenePump	Duration of post operation of the cascade generator pump	0 Min - 30 Min	Cascade management B	4
NP009	CascInterStageTime	Switch on and switch off timing for the producer of the cascade	1 Min - 60 Min	Cascade management B	4
NP010	CascTOutsideCoolPara	Outdoor start temperature cooling of all stages in parallel mode	10 °C - 40 °C	Cascade management B	30
NP011	CascadeTypeAlgo	Choice of Cascade Algorithm type, power or temperature	0 = Temperature 1 = Power	Cascade management B	0
NP012	CascPowerRiseTime	Cascade, Time to reach Temperature Septoint	1 = 10	Cascade management B	1
NP013	CascForceStopPprim	Force Primary Pump to Stop on cascade	0 = No 1 = Yes	Cascade management B	0
NP014	Cascade Mode	Functionnement Mode of cascade : automatic, heating or cooling	0 = Automatic 1 = Heating 2 = Cooling	Cascade management B	0

Tab.69 Navigation for advanced installer level

Level	Menu path
Advanced installer	≡ > Installation Setup > SCB-10 > Submenu (1) > Parameters, counters, signals > Adv. Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.70 Factory settings at advanced installer level

Code	Display text	Description	Range	Submenu	Default setting
AP111	Can line length	Can line length	0 = < 3m 1 = < 80m 2 = < 500m	Mandatory bus master	0
AP112	Can line length	Can line length	0 = < 3m 1 = < 80m 2 = < 500m	Mandatory bus master	1
CP290 CP291 CP292 CP293 CP294	ConfigZonePump Out	Configuration of Zone Pump Output	0 = Zone output 1 = CH mode 2 = DHW mode 3 = Cooling mode 4 = Error report 5 = Burning 6 = Service flag 7 = System error 8 = DHW looping 9 = Primary pump 10 = Buffer pump	Zone disabled Direct zone High temp. zone Fan convector zone	0
CP330 CP331 CP332 CP333 CP334	Opening Valve Time	The time needed by the valve to be fully opened	0 Sec - 240 Sec	Mixed zone	60
CP520 CP521 CP522 CP523 CP524	Zone Power setpoint	Power setpoint per zone	0 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank	100

Code	Display text	Description	Range	Submenu	Default setting
CP530 CP531 CP532 CP533 CP534	Zone PWM Pump speed	Pulse Width Modulation pump speed per zone	20 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank	100
CP730 CP731 CP732 CP733 CP734	Zone Heat up speed	Selection of heat up speed of the zone	0 = Extra Slow 1 = Slowest 2 = Slower 3 = Normal 4 = Faster 5 = Fastest	Direct zone Mixed zone High temp. zone Fan convector zone	2
CP740 CP741 CP742 CP743 CP744	Zone cool down speed	Selection of cool down speed of the zone	0 = Slowest 1 = Slower 2 = Normal 3 = Faster 4 = Fastest	Direct zone Mixed zone High temp. zone Fan convector zone	2
CP770 CP771 CP772 CP773 CP774	Zone Buffered	The zone is after a Buffer tank	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank	1
EP036 EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	Analogue input	0
NP001	CascProdMan Hys.High	Hysterese high for Producer Manager	0.5 °C - 10 °C	Cascade management B	3

Code	Display text	Description	Range	Submenu	Default setting
NP002	CascProdMan Hys.Low	Hysterese low for Producer Manager	0.5 °C - 10 °C	Cascade management B	3
NP003	CascProdManErr Range	Maximum error gain for Producer Manager	0 °C - 10 °C	Cascade management B	10
NP004	CascPFactorAlgo Temp	Proportional Factor for cascade with Temperature algorithm	0 - 10	Cascade management B	1

8.3 List of measured values

8.3.1 Control unit counters

Tab.71 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > CU-GH08 > Submenu (1) > Parameters, counters, signals > Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.72 Counters at basic installer level

Code	Display text	Description	Range	Submenu
AC005	CH Energy Consumed	Energy consumed for central heating	0 kWh - 4294967294 kWh	Gas fired appliance
AC006	DHW Energy Consumed	Energy consumed for domestic hot water	0 kWh - 4294967294 kWh	Gas fired appliance

Tab.73 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > CU-GH08 > Submenu (1) > Parameters, counters, signals > Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.74 Counters at installer level

Code	Display text	Description	Range	Submenu
AC002	Service Burning hrs	Number of hours that the appliance has been producing energy since last service	0 Hours - 131068 Hours	Gas fired appliance
AC003	Hours Op. Service	Number of hours since the previous servicing of the appliance	0 Hours - 131068 Hours	Gas fired appliance
AC004	Burner Starts	Number of generator startings since the previous servicing.	0 - 4294967294	Gas fired appliance
AC026	Pump running hours	Counter that shows the number of pump running hours	0 Hours - 65534 Hours	Gas fired appliance
AC027	Pump starts	Counter that shows the number of pump starts	0 - 65534	Gas fired appliance
DC002	DHW valve cycles	Numbers of Domestic Hot Water diverting valve cycles	0 - 4294967294	Tank DHW Gas fired appliance
DC003	Hrs DHW 3wv	Number of hours during which the diverting valve is in DHW position	0 Hours - 65534 Hours	Tank DHW Gas fired appliance
DC004	DHW burner starts	Number of burner starts for Domestic Hot Water	0 - 65534	Tank DHW Gas fired appliance

Code	Display text	Description	Range	Submenu
DC005	DHW burning hours	Number of burning hours in Domestic Hot Water	0 Hours - 65534 Hours	Tank DHW Gas fired appliance
GC007	Failed starts	Number of failed starts	0 - 65534	Gas fired appliance
PC001	ChCtrTotalPower Cons.	Total power consumption used by Central Heating	0 kW - 4294967294 kW	Gas fired appliance
PC002	Burner starts total	Total number of burner starts. For heating and domestic hot water	0 - 4294967294	Gas fired appliance
PC003	Hrs Burning total	Total number of burning hours. For heating and domestic hot water	0 Hours - 65534 Hours	Gas fired appliance
PC004	Burner flame loss	Number of burner flame loss	0 - 65534	Gas fired appliance

8.3.2 SCB-10 expansion PCB counters

Tab.75 Navigation for basic installer level

Level	Menu path
Basic installer	≡ > Installation Setup > SCB-10 > Submenu (1) > Parameters, counters, signals > Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.76 counters at basic installer level

Code	Display text	Description	Range	Submenu
AC001	Hours on mains	Number of hours that the appliance has been on mains power	0 Hours - 4294967294 Hours	System Functionality
CC001 CC002 CC003 CC004 CC005	Zone Pump Run Hours	Numbers of pump operating hours of the zone	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CC010 CC011 CC012 CC013 CC014	Zone Nbr Pump Starts	Numbers of times the pump of the zone has started	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank

8.3.3 Control unit signals

Tab.77 Navigation for basic installer level

Level	Menu path
Basic installer	≡ > Installation Setup > CU-GH08 > Submenu (1) > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.78 Signals at basic installer level

Code	Display text	Description	Range	Submenu
AM001	DHW active	Is the appliance currently in domestic hot water production mode?	0 = Off 1 = On	Gas fired appliance
AM010	Pump speed	The current pump speed	0 % - 100 %	Gas fired appliance
AM011	Service required?	Is service currently required?	0 = No 1 = Yes	Gas fired appliance
AM015	Pump running?	Is the pump running?	0 = Inactive 1 = Active	Gas fired appliance
AM016	System Flow Temp	Flow temperature of appliance.	-25 °C - 150 °C	Producer Generic Gas fired appliance
AM018	T return	Return temperature of appliance. The temperature of the water entering the appliance.	-25 °C - 150 °C	Gas fired appliance
AM019	Water pressure	Water pressure of the primary circuit.	0 bar - 4 bar	Gas fired appliance
AM022	On / Off heat demand	On / Off heat demand	0 = Off 1 = On	Gas fired appliance
AM027	Outside temperature	Instantaneous outside temperature	-60 °C - 60 °C	Outdoor temperature Gas fired appliance
AM033	Next Service Ind.	Next service indication	0 = None 1 = A 2 = B 3 = C 4 = Custom	Gas fired appliance
AM037	3 way valve	Status of the three way valve	0 = CH 1 = DHW	Gas fired appliance
AM040	Control temperature	Temperature used for hot water control algorithms.	0 °C - 250 °C	Gas fired appliance
AM046	Internet T.Outside	Outside temperature received from an internet source	-70 °C - 70 °C	Outdoor temperature
AP078	Out sensor detected	Outside sensor detected in the application	0 = No 1 = Yes	Outdoor temperature
GM001	Actual fan RPM	Actual fan RPM	0 Rpm - 12000 Rpm	Gas fired appliance
GM002	Fan RPM setpoint	Actual fan RPM setpoint	0 Rpm - 12000 Rpm	Gas fired appliance
GM008	Actual flame current	Actual flame current measured	0 µA - 25 µA	Gas fired appliance

Tab.79 Navigation for installer level

Level	Menu path
Installer	≡ > Installation Setup > CU-GH08 > Submenu (1) > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.80 Signals at installer level

Code	Display text	Description	Range	Submenu
AM024	Actual rel. Power	Actual relative power of the appliance	0 % - 100 %	Gas fired appliance
AM036	Flue gas temperature	Temperature of the exhaust gas leaving the appliance	0 °C - 250 °C	Gas fired appliance
AM043	Pwr dwn reset needed	A power down reset is needed	0 = No 1 = Yes	Gas fired appliance
AM101	Internal setpoint	Internal system flow temperature setpoint	0 °C - 250 °C	Gas fired appliance
GM025	STB status	High limit status (0 = open, 1 = closed)	0 = Open 1 = Closed 2 = Off	Gas fired appliance
GM027	Flame Test Active	Flame test 1=active, 0=inactive	0 = Inactive 1 = Active	Gas fired appliance
GM044	ControlledStopReason	Possible reason for Controlled Stop	0 = None 1 = CH Blocking 2 = DHW Blocking 3 = Wait for burner 4 = TFlow > absolute max 5 = TFlow > start temp. 6 = Theat exch. > Tstart 7 = Avg Tflow > Tstart 8 = TFlow > max setpoint 9 = T difference too big 10 = TFlow > stop temp. 11 = Anti cycle on off HD	Gas fired appliance
PM002	CH Setpoint	External winning Central Heating setpoint	0 °C - 250 °C	Gas fired appliance
PM003	ChTflowAverage	Actual average flow temperature	-25 °C - 150 °C	Gas fired appliance

Tab.81 Navigation for advanced installer level

Level	Menu path
Advanced installer	≡ > Installation Setup > CU-GH08 > Submenu (1) > Parameters, counters, signals > Signals > Adv. Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.82 Signals at advanced installer level

Code	Display text	Description	Range	Submenu
AM091	SeasonMode	Seasonal mode active (summer / winter)	0 = Winter 1 = Frost protection 2 = Summer neutral band 3 = Summer	Outdoor temperature
GM003	Flame detection	Flame detection	0 = Off 1 = On	Gas fired appliance
GM004	Gas valve 1	Gas valve 1	0 = Open 1 = Closed 2 = Off	Gas fired appliance
GM006	GPS status	Gas Pressure Switch status	0 = Open 1 = Closed 2 = Off	Gas fired appliance
GM007	Ignite	Appliance is igniting	0 = Off 1 = On	Gas fired appliance
GM010	Power available	Available power in % of maximum	0 % - 100 %	Gas fired appliance
GM011	Power setpoint	Power setpoint in % of maximum	0 % - 100 %	Gas fired appliance

Code	Display text	Description	Range	Submenu
GM012	Release Input	Release signal for the CU	0 = No 1 = Yes	Gas fired appliance
GM013	Blocking Input	Blocking input status	0 = Open 1 = Closed 2 = Off	Gas fired appliance

8.3.4 SCB-10 expansion PCB signals

Tab.83 Navigation for basic installer level

Level	Menu path
Basic installer	≡ > Installation Setup > SCB-10 > Submenu (1) > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.84 Signals at basic installer level

Code	Display text	Description	Range	Submenu
AM012	Status Appliance	Current main status of the appliance.	DeviceState	System Functionality
AM014	Sub status Appliance	Current sub status of the appliance.	DeviceSubStatus	System Functionality
AM027	Outside temperature	Instantaneous outside temperature	-70 °C - 70 °C	Outdoor temperature
AM046	Internet T.Outside	Outside temperature received from an internet source	-70 °C - 70 °C	Outdoor temperature
AM091	SeasonMode	Seasonal mode active (summer / winter)	0 = Winter 1 = Frost protection 2 = Summer neutral band 3 = Summer	Outdoor temperature
CM030 CM031 CM032 CM033 CM034	Zone RoomTemperature	Measure of the room temperature of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM040 CM041 CM042 CM043 CM044	Zone Tflow /DHW temp	Measure Zone Flow Temperature or DHW temperature	-10 °C - 140 °C	Mixed zone Swimming pool DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM060 CM061 CM062 CM063 CM064	ZonePumpSpeed	Current Pump speed of zone	0 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM070 CM071 CM072 CM073 CM074	Zone Tflow Setpoint	Current Flow temperature setpoint of zone	0 °C - 150 °C	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM120 CM121 CM122 CM123 CM124	ZoneCurrentMode	Zone Current Mode	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank
CM130 CM131 CM132 CM133 CM134	ZoneCurrent activity	Current activity of the zone	0 = Anti frost 1 = Reduced 2 = Comfort 3 = Anti legionella	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program DHW layered tank DHW tank internal DHW Commercial Tank
CM190 CM191 CM192 CM193 CM194	Zone Troom setpoint	Wished room temperature setpoint of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM200 CM201 CM202 CM203 CM204	ZoneCurrentHeatMode	Displaying current operating mode of the zone	0 = Standby 1 = Heating 2 = Cooling	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone

Code	Display text	Description	Range	Submenu
CM210 CM211 CM212 CM213 CM214	ZoneTout temp	Current outdoor temperature of the zone	-70 °C - 70 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM250 CM251 CM252 CM253 CM254	Zone temp DHW top	Measurement of the DHW tank temperature (top sensor) of the zone	-10 °C - 120 °C	DHW layered tank

Tab.85 Navigation for installer level

Level	Menu path
Installer	≡ > Installation Setup > SCB-10 > Submenu (1) > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.86 Signals at installer level

Code	Display text	Description	Range	Submenu
BM001 BM002	Meas Btank temp	Measured buffer tank temperature	-1 °C - 150 °C	Passive buffer tank Pass.buff.tank 1sens Pass.buff.tank 2sens
BM020	Btank mode	Actual operating mode for the buffer tank	0 = Decoupling Tank 1 = Storage Tank	Pass.buff.tank 1sens Pass.buff.tank 2sens
CM160 CM161 CM162 CM163 CM164	Zone Mod HeatDemand	Presense of modulating heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM290 CM291 CM292 CM293 CM294	ZoneSecSwimPoolPump	Status of the secondary pump used for the swimming pool of the zone	0 = Off 1 = On	Swimming pool
CM300 CM301 CM302 CM303 CM304	ZoneElecBackupOutput	Status of the outputs used for the electrical backup of the zone	0 = Off 1 = On	Electrical DHW tank
EM000 EM001	Sensor in config SCB	Sensor input current configuration of the Smart Control Board	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	Analogue input
EM010	Meas 0-10V input SCB	Measurement of the Voltage on the 0-10V input of the Smart Control Board	0 V - 10 V	0-10 volt input
EM018	Tsetp 0-10V input	Temperature set point required by 0-10V Input	0 °C - 100 °C	0-10 volt input
EM021	Power setp 0-10V	Power setpoint required by 0-10V input	0 % - 100 %	0-10 volt input

Code	Display text	Description	Range	Submenu
EM024	Tas status	Titan anti corrosion system status	0 = Short circuited 1 = Open circuit 2 = Out of order 3 = OK	TAS settings
EM046	Digi input stat SCB	Digital input status of the Smart Control Board	0 = Off 1 = On	Digital Input
NM000	CascadeNbProducer	Cascade number of active producer	0 - 17	Cascade management B
NM001	CascSystemTF	Cascade system flow temperature	-10 °C - 120 °C	Producer Manager Cascade management B Producer<>Consumer
NM022	CascNbStageAvailable	Number of stage available on the Cascade	0 - 255	Cascade management B
NM023	CascNbStageRequired	Number of stage required on the Cascade	0 - 255	Cascade management B
NM028	CascNbProdPresent	Cascade Number of Producer present recognized in the cascade	0 - 255	Cascade management B

Tab.87 Navigation for advanced installer level

Level	Menu path
Advanced installer	≡ > Installation Setup > SCB-10 > Submenu (1) > Parameters, counters, signals > Signals > Adv. Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.88 Signals at advanced installer level

Code	Display text	Description	Range	Submenu
AP078	Out sensor detected	Outside sensor detected in the application	0 = No 1 = Yes	Outdoor temperature
BM021	Btank pump stat	Buffer tank pump status	0 = Off 1 = On	Pass.buff.tank 1sens Pass.buff.tank 2sens
CM010 CM011 CM012 CM013 CM014	Zone 3WV closing	Mixing valve closing status of zone	0 = No 1 = Yes	Mixed zone
CM020 CM021 CM022 CM023 CM024	Zone 3WV opening	Mixing valve opening status of zone	0 = No 1 = Yes	Mixed zone Swimming pool Electrical DHW tank

Code	Display text	Description	Range	Submenu
CM050 CM051 CM052 CM053 CM054	Status Pump zone	Status of the Pump of zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM110 CM111 CM112 CM113 CM114	ZoneTRoomUnit setp	Room Unit temperature setpoint of zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM140 CM141 CM142 CM143 CM144	ZoneOTContr present	OpenTherm controller is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM150 CM151 CM152 CM153 CM154	ZoneState Heatdemand	State of On Off heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM180 CM181 CM182 CM183 CM184	Zone RU present	Presense of Room Unit in this zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM240 CM241 CM242 CM243 CM244	Zone Tout connected	Outdoor temperature sensor is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone

Code	Display text	Description	Range	Submenu
CM280 CM281 CM282 CM283 CM284	ZoneRTC TcalcRoomStp	Internal room temperature setpoint calculated by the room temperature controller of the zone	0 °C - 100 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM320 CM321 CM322 CM323 CM324	Time Start Backup	Estimated time before starting the electrical backup for DHW tank Loading	0 Min - 1200 Min	DHW Commercial Tank
EM014	Tas voltage meas	Titan anti corrosion system voltage measurement	0 V - 250 V	TAS settings
EM023	Tas Actual Current	Titan anti corrosion system measurement of the actual current	0 A - 655.35 A	TAS settings
EM026 EM027	Input meas sensor	Measurement of the input sensor of the Smart Control Board	-15 °C - 120 °C	Analogue input
EM036 EM037	Av input meas sensor	Average measurement of the input sensor of the Smart Control Board	-15 °C - 120 °C	Analogue input
NM002	CascTempoBetw Stage	Temporistation between start next stage	0 Min - 60 Min	Cascade management B

9 Maintenance

9.1 Maintenance regulations

Important
The boiler must be maintained by a qualified installer in accordance with local and national regulations.

- An annual inspection is mandatory.
- Perform the standard checking and maintenance procedures once a year.
- Perform the specific maintenance procedures if necessary.

Caution

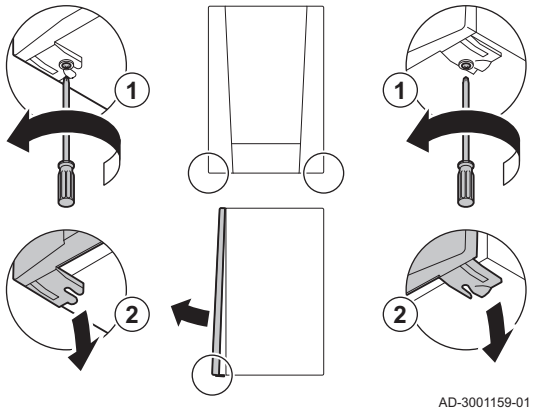
- Replace defective or worn parts with original spare parts.
- During inspection and maintenance work, always replace all gaskets on the parts removed.
- Check whether all gaskets have been positioned properly (absolutely flat in the appropriate groove means they are gas, air and water tight).
- During the inspection and maintenance work, water (drops, splashes) must never come into contact with the electrical parts.

Warning
Always wear safety goggles and a dust mask during cleaning work (involving compressed air).

Danger of electric shock
Ensure that the boiler is switched off.

9.2 Opening the boiler

Fig.51 Opening the boiler



1. Remove the two screws at the bottom of the front casing.
2. Remove the front panel.

9.3 Standard inspection and maintenance operations

For a service, always perform the following standard inspection and maintenance operations.

9.3.1 Checking the water pressure

1. Check the water pressure.

Important
The recommended water pressure is between 1.5 bar and 2 bar.

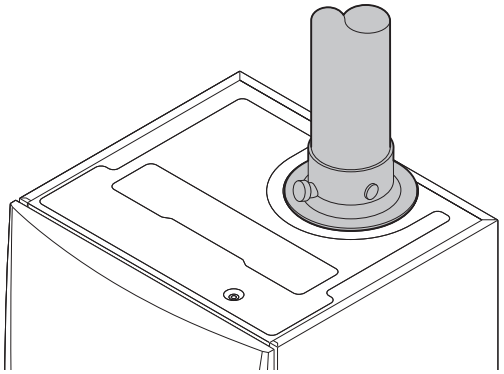
⇨ The water pressure must be at least 0.8 bar.
2. If necessary, top up the central heating system.

9.3.2 Checking the ionisation current

1. Check the ionisation current at full load and at low load.
   ⇨ The value is stable after 1 minute.
2. Clean or replace the ionisation/ignition electrode if the value is lower than 4 µA.

9.3.3 Checking the flue gas outlet/air supply connections

Fig.52 Checking flue gas outlet/air supply connections

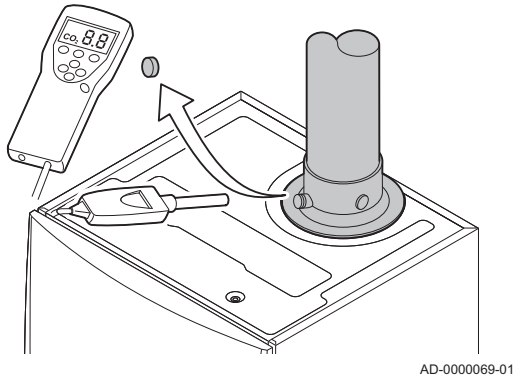


1. Check the flue gas outlet and air supply connections for condition and tightness.

9.3.4 Checking the combustion

Combustion is checked by measuring the O_2percentage in the flue gas outlet duct.

Fig.53 Flue gas measuring point



1. Unscrew the cap from the flue gas measuring point.
2. Insert the probe for the flue gas analyser into the measurement opening.

Warning
During measurement, seal the opening around the sensor fully.

Caution
The flue gas analyser must have a minimum accuracy of ±0.25% O_2.

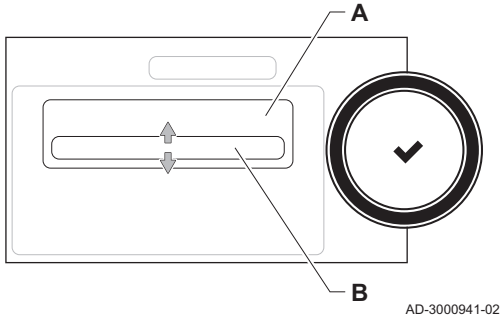
3. Measure the percentage of O_2 in the flue gases. Take measurements at full load and at part load.

Important
Measurements must be taken with the front casing off.

■ Performing the full load test

1. Select the tile [ ].
   ⇨ The **Change load test mode** menu appears.
2. Select the test **MaximumPowerCH**.

Fig.54 Full load test

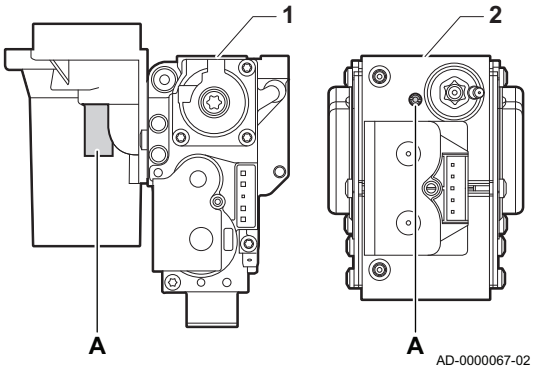


A Change load test mode
B MaximumPowerCH

⇨ The full load test starts. The selected load test mode is shown in the menu and the icon appears in the top right of the screen.

3. Check the load test settings and adjust if necessary.
   ⇨ Only the parameters shown in bold can be changed.

Fig.55 Position of adjusting screw A



■ Checking/setting values for O_2 at full load

1 AMC Pro 45 - 65 - 90
2 AMC Pro 115

1. Measure the percentage of O_2 in the flue gases.
2. Compare the measured value with the checking values in the table.
3. If the measured value is outside of the values given in the table, correct the gas/air ratio.

Warning
Only a qualified installer may carry out the following operations.

4. Using adjusting screw **A**, adjust the percentage of O_2 for the gas type being used to the nominal value. This should always be inside the highest and lowest setting limit.

Tab.89 Checking/setting values for O_2 at full load for G20 (H gas)

Values at full load for G20 (H gas)	O_2 (%)(1)
AMC Pro 45	4,3 - 4,8(1)
AMC Pro 65	4,3 - 4,8(1)
AMC Pro 90	4,3 - 4,7(1)
AMC Pro 115	4,2 - 4,7(1)
(1) Nominal value	

Tab.90 Checking/setting values for O_2 at full load for G20 (H gas) (Switzerland)

Values at full load for G20 (H gas)	O_2 (%)(1)
AMC Pro 45	4,3 - 4,8(1)
AMC Pro 65	4,3 - 4,8(1)
AMC Pro 90	4,3 - 4,7(1)
AMC Pro 115	4,2 - 4,7(1)
(1) Nominal value	

Tab.91 Checking/setting values for O_2 at full load for G31 (propane)

Values at full load for G31 (propane)	O_2 (%)(1)
AMC Pro 45	4,4 - 4,9(1)
AMC Pro 65	4,6 - 4,9(1)
AMC Pro 90	5,1 - 5,2(1)
AMC Pro 115	4,9 - 5,4(1)
(1) Nominal value	

Tab.92 Checking/setting values for O_2 at full load for G30/G31 (butane/propane)

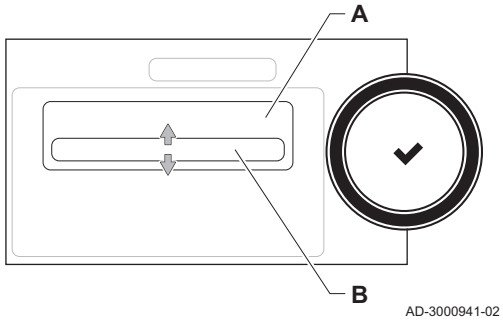
Values at full load for G30/G31 (butane/propane)	O_2 (%)(1)
AMC Pro 45	4,7 - 5,2(1)
AMC Pro 65	4,9 - 5,4(1)
AMC Pro 90	4,9 - 5,4(1)
AMC Pro 115	4,9 - 5,4(1)
(1) Nominal value	

Caution
The O_2 values at full load must be lower than the O_2 values at part load.

Performing the part load test

1. If the full load test is still running, press the ✔ button to change the load test mode.
2. If the full load test was finished, select the tile [🧹] to restart the chimney sweep menu.

Fig.56 Part load test

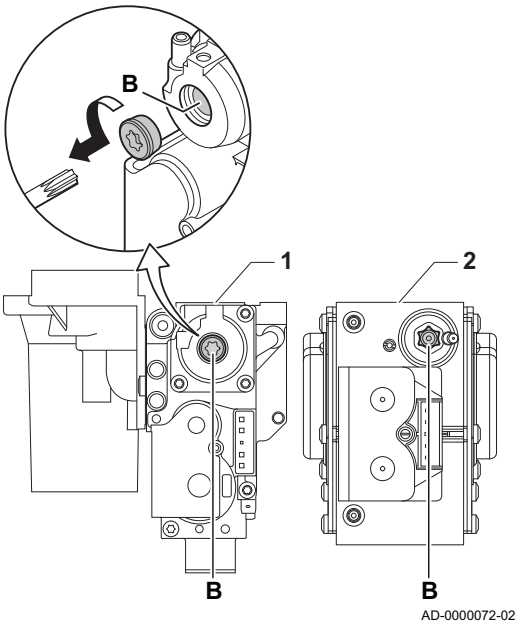


A Change load test mode
B MinimumPower

3. Select the **MinimumPower** test in the menu **Change load test mode**.
   ⇨ The part load test starts. The selected load test mode is shown in the menu and the icon 🧹 appears in the top right of the screen.
4. Check the load test settings and adjust if necessary.
   ⇨ Only the parameters shown in bold can be changed.
5. End the part load test by pressing the ⮌ button.
   ⇨ The message **Running load test(s) stopped!** is displayed.

Checking/setting values for O_2 at part load

Fig.57 Position of adjusting screw B



1 AMC Pro 45 - 65 - 90
2 AMC Pro 115

1. Measure the percentage of O_2 in the flue gases.
2. Compare the measured value with the checking values in the table.
3. If the measured value is outside of the values given in the table, correct the gas/air ratio.

Warning
Only a qualified installer may carry out the following operations.

4. Using adjusting screw **B**, adjust the percentage of O_2 for the gas type being used to the nominal value. This should always be inside the highest and lowest setting limit.
5. Set the boiler back to the normal operating status.

Tab.93 Checking/setting values for O_2 at part load for G20 (H gas)

Values at part load for G20 (H gas)	O_2 (%)(1)
AMC Pro 45	5,7(1) - 6,2
AMC Pro 65	4,8(1) - 5,3
AMC Pro 90	5,2(1) - 4,8
AMC Pro 115	5,6(1) - 6,1
(1) Nominal value	

Tab.94 Checking/setting values for O_2 at part load for G20 (H gas) (Switzerland)

Values at part load for G20 (H gas)	O_2 (%)(1)
AMC Pro 45	5,7(1) - 6,2
AMC Pro 65	4,8(1) - 5,3
AMC Pro 90	5,2(1) - 4,8
AMC Pro 115	5,6(1) - 6,1
(1) Nominal value	

Tab.95 Checking/setting values for O_2 at part load for G31 (propane)

Values at part load for G31 (propane)	O_2 (%)(1)
AMC Pro 45	5,7(1) - 6,2
AMC Pro 65	5,4(1) - 5,7

Values at part load for G31 (propane)	O_2 (%)(1)
AMC Pro 90	5,5(1) - 5,8
AMC Pro 115	5,8(1) - 6,3
(1) Nominal value	

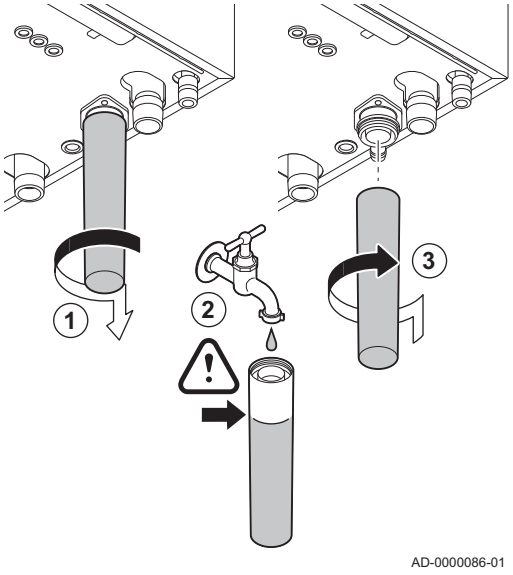
Tab.96 Checking/setting values for O_2 at part load for G30/G31 (butane/propane)

Values at part load for G30/G31 (butane/propane)	O_2 (%)(1)
AMC Pro 45	5,7(1) - 6,2
AMC Pro 65	5,7(1) - 6,2
AMC Pro 90	5,7(1) - 6,2
AMC Pro 115	5,7(1) - 6,2
(1) Nominal value	

Caution
The O_2 values at part load must be higher than the O_2 values at full load.

9.3.5 Cleaning the siphon

Fig.58 Cleaning the siphon

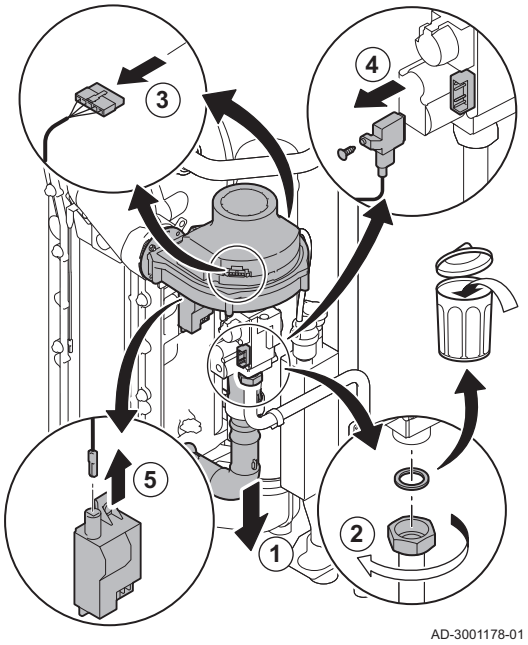


Danger
The siphon must always be sufficiently filled with water. This prevents flue gases from entering the room.

1. Dismantle the siphon and clean it.
2. Fill the siphon up with water.
3. Fit the siphon.

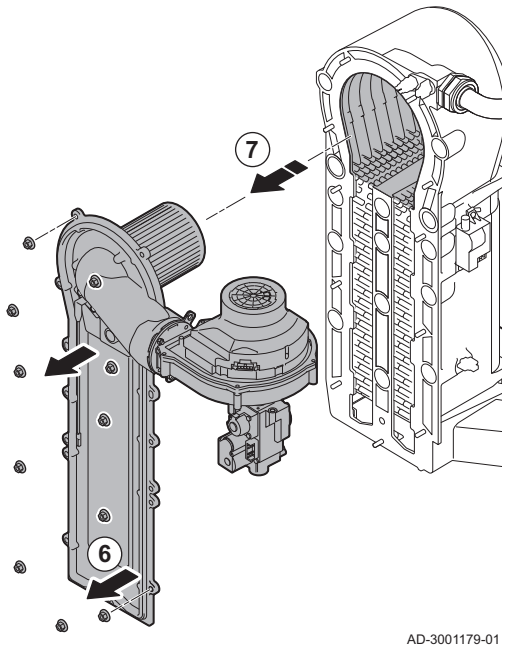
9.3.6 Checking the burner and cleaning the heat exchanger

Fig.59 Removing the fan



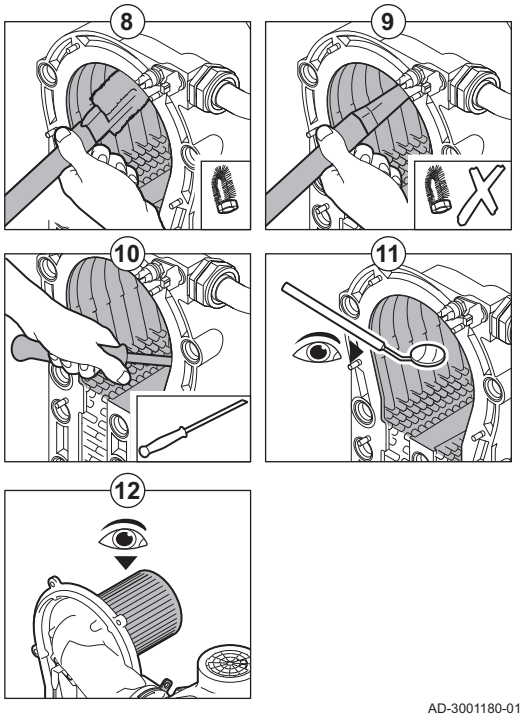
1. Remove the air inlet flue on the venturi.
2. Loosen the gland on the gas valve unit.
3. Disconnect the fan plugs (on the front and rear).
4. Remove the screwed-on plug from the gas valve unit.
5. Remove the ignition electrode plug from the ignition transformer.

Fig.60 Removing the front plate, fan and burner



6. Remove the front plate from the heat exchanger.
7. Carefully lift the front plate, including the burner and fan, away from the heat exchanger.

Fig.61 Cleaning the heat exchanger

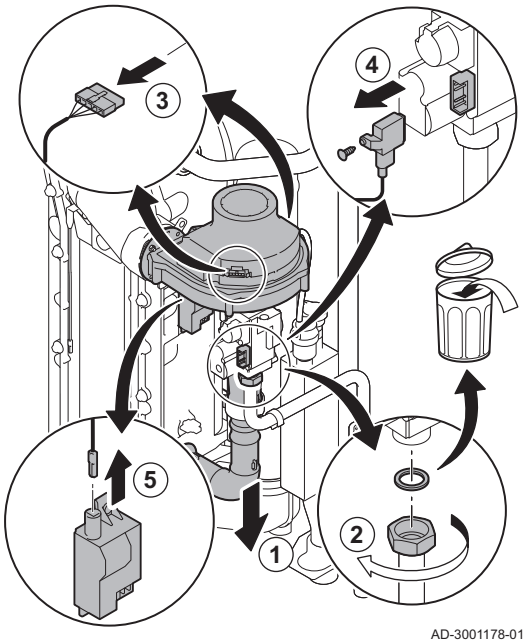


8. Use a vacuum cleaner fitted with a special endpiece (accessory) to clean the top part of the heat exchanger (combustion chamber).
9. Vacuum again without the top brush on the end piece.
10. Clean the lower section of the heat exchanger with the special cleaning blade (accessory).
11. Check (e.g. using a mirror) whether any visible contamination has been left behind. If it has, remove it with the vacuum cleaner.
12. Check that the burner cover of the dismantled burner is free from cracks and/or damage. If not, replace the burner.
    ⇨ Servicing the burner is usually not necessary, it is self-cleaning. Use compressed air to carefully blow away any dust.
13. Reassemble the unit in reverse order.

Caution
- Remember to reconnect the fan plug.
- Check that the gasket is correctly positioned between the mixing elbow and the heat exchanger (the gasket must lie absolutely flat in the appropriate groove to ensure that no gas can leak).
- Tighten the gland on the gas valve unit with a torque wrench to the firmness of 27,5 Nm.
- Tighten the front plate nuts with a torque wrench to the firmness of 10 Nm.

14. Open the gas supply and switch the power supply to the boiler back on.

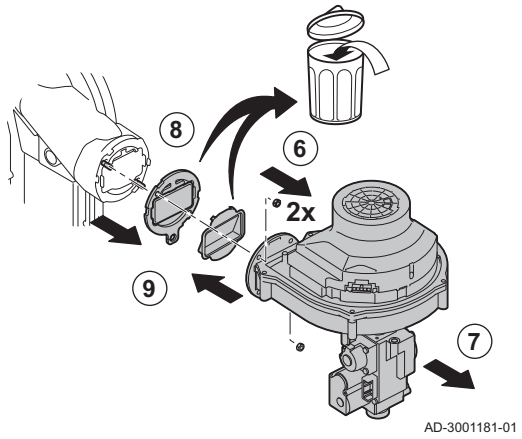
Fig.62 Disconnecting the fan



9.3.7 Checking the non-return valve

1. Remove the air inlet pipe from the venturi.
2. Unscrew the gland of the gas valve unit.
3. Disconnect the fan plugs (on the front and rear).
4. Remove the screwed-on plug from the gas valve unit.
5. Remove the ignition electrode plug from the ignition transformer.

Fig.63 Checking the non-return valve



6. Dismantle the fan.
7. Remove the fan together with the gas valve unit.
8. Inspect the non-return valve and replace it in the event of a defect or damage, or if the maintenance kit contains a non-return valve.
9. Reassemble in the reverse order.

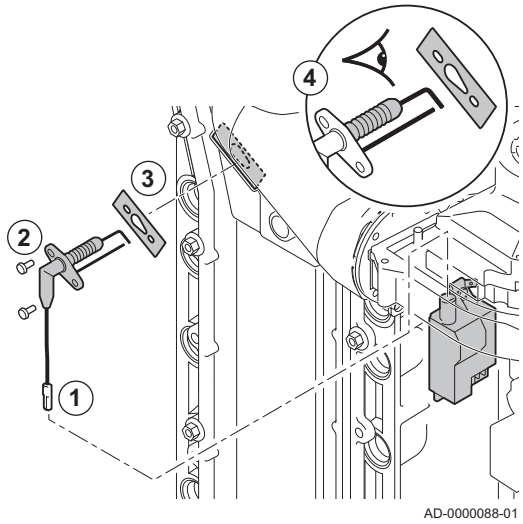
Caution
- Remember to reconnect the fan plug.
- Tighten the gland on the gas valve unit with a torque wrench to the firmness of 27,5 Nm.
- Tighten the two fan nuts with a torque wrench to the firmness of 3,8 Nm.

9.4 Specific maintenance work

Perform the specific maintenance work if this proves to be necessary following the standard inspection and maintenance work. To conduct the specific maintenance work:

9.4.1 Replacing the ionisation/ignition electrode

Fig.64 Replacing the ionisation/ignition electrode



The ionisation/ignition electrode must be replaced if:

- The ionisation current is < 4 µA.
- The electrode is damaged or worn.
- The electrode is included in the service kit.

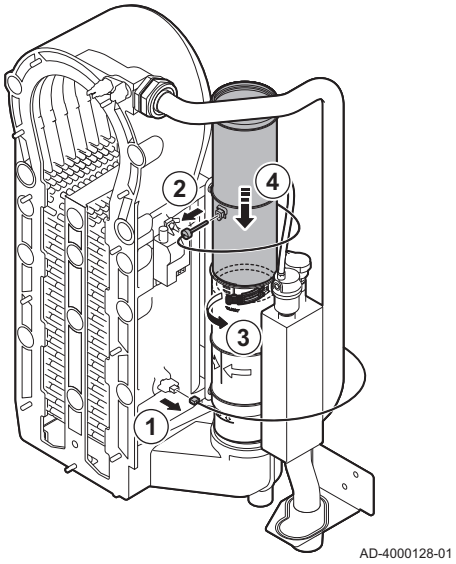
1. Remove the plug of the electrode from the ignition transformer.

Important
The ignition cable is fixed to the electrode and therefore may not be removed.

2. Remove the two screws.
3. Remove the entire component.
4. Fit the new ionisation/ignition electrode.
5. Reassemble the unit in the reverse order.

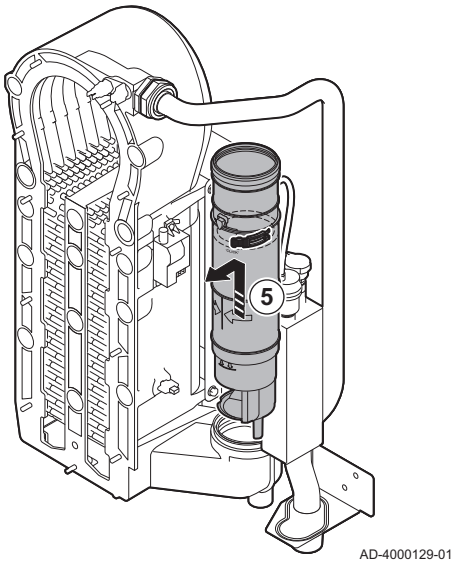
9.4.2 Cleaning the condensate collector

Fig.65 Open clicker flue gas pipe



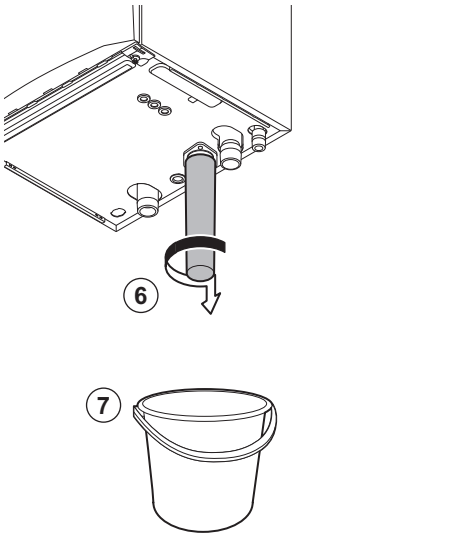
1. Remove the return sensor connector.
2. Remove the flue gas temperature sensor (if connected)
3. Open the clicker from the flue gas pipe.
4. Push the upper part of the telescopic flue gas pipe down as far as possible.

Fig.66 Remove flue gas pipe



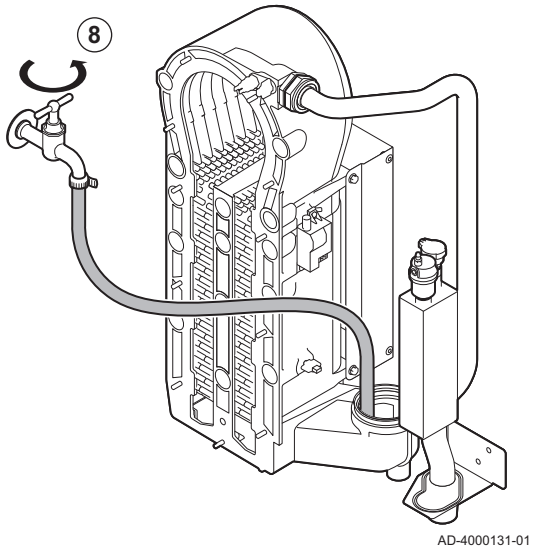
5. Pull up the flue gas pipe and remove it.

Fig.67 Remove siphon



6. Remove the siphon.
7. Place a bucket under the boiler.

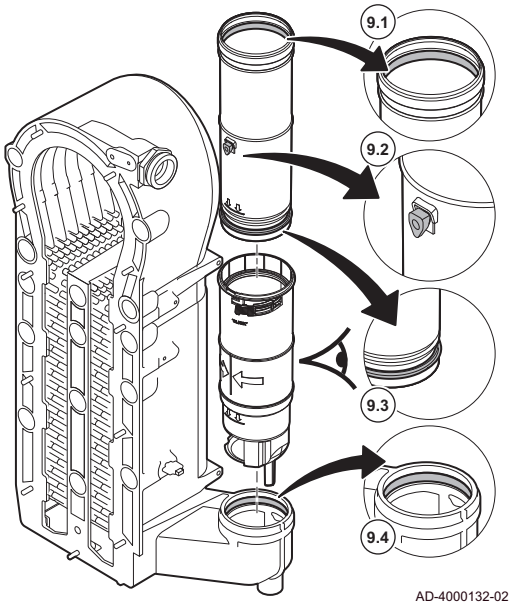
Fig.68 Flush the condensate collector



8. Flush the condensate collector gently with water, via the opening of the flue gas pipe.

Warning
When flushing, prevent water from getting into the boiler.

Fig.69 Place new gaskets

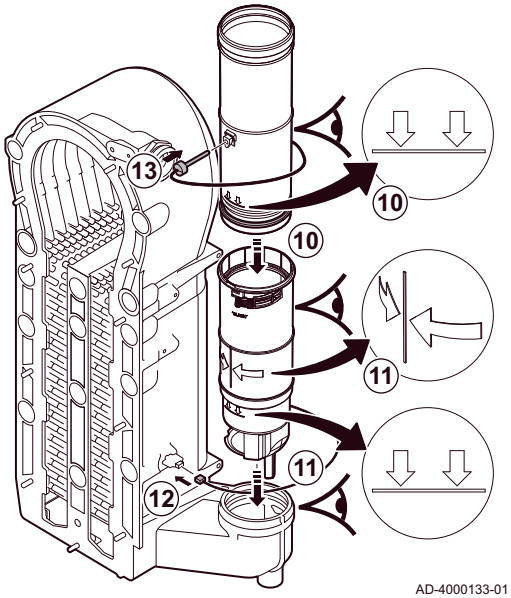


9. Place the new gaskets:

Warning
Take care to place the gasket at the clicker level in the bottom ring.

9.1. The gasket at the top of the flue gas pipe.
9.2. The grommet of the flue gas sensor (if connected).
9.3. The gasket in the middle of the flue gas pipe (at the clicker level).
9.4. The gasket in the condensate collector.

Fig.70 Re-assemble and place the flue gas pipe



10. Place the upper part of the flue gas pipe into the lower part up to the mark.
11. Place the flue gas pipe with the line between the two arrows facing forward into the condensate collector up to the mark.
12. Place the return sensor connector.
13. Place the flue gas temperature sensor (if connected).

9.5 Finalising work

1. Fit all removed parts in the reverse order.

Caution
During inspection and maintenance operations, always replace all gaskets on the parts removed.

2. Fill the siphon with water.
3. Put the siphon back in place.
4. Carefully open the water tap.
5. Fill the central heating system with water.
6. Vent the central heating system.
7. Top up with more water if necessary.
8. Check the tightness of the gas and water connections.
9. Put the boiler back into operation.
10. Carry out an auto-detect when a control board has been replaced or removed from the boiler.

10 Troubleshooting

10.1 Error codes

The boiler is fitted with an electronic regulation and control unit. The heart of the control is a microprocessor, which controls and also protects the boiler. In the event of an error, a corresponding code is displayed.

Tab.97 Error codes are displayed at three different levels

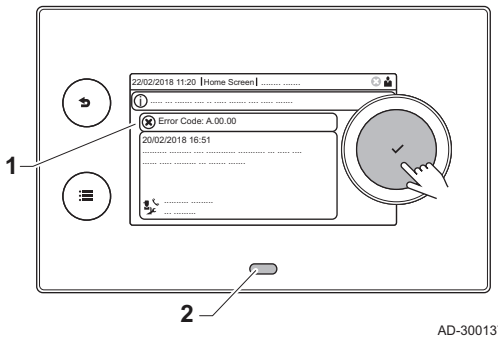
Code	Type	Description
A00.00(1)	Warning	The boiler continues to operate but the cause of the warning must be investigated. A warning can change into a blocking or lock-out.
H00.00(1)	Blocking	The boiler starts up again automatically when the cause of the blocking has been rectified. A blocking can become a lock-out.
E00.00(1)	Lock out	The boiler starts up again only when the cause of the lock-out has been rectified and reset manually.
(1) The first letter indicates the type of error.		

The meaning of the code can be found in the various error code tables.

Important
The error code is needed to find the cause of the error quickly and correctly and for any support from De Dietrich.

10.1.1 Display of error codes

Fig.71 Diematic Evolution



When an error occurs in the installation, the control panel shows:

1 The display will show a corresponding code and message.
2 The status LED of the control panel will show:

- Continuous green = Normal operation
- Flashing green = Warning
- Continuous red = Blocking
- Flashing red = Lock out

1. Press and hold the ✔ button to reset the boiler.
   ⇨ The boiler starts up again only when the cause of the error has been rectified.
2. If the error code reappears, correct the problem by following the instructions in the error code tables.
   ⇨ The error code remains visible until the problem is solved.
3. Note the error code when the problem cannot be solved.

10.1.2 Warning

Tab.98 Warning codes

Code	Display text	Description	Solution
A00.32	TOutside Open	Outside temperature sensor is either removed or measures a temperature below range	Outdoor temperature sensor open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
A00.33	TOutside Closed	Outside temperature sensor is either shorted or measures a temperature above range	Outdoor temperature sensor short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
A00.34	TOutside Missing	Outside temperature sensor was expected but not detected	Outdoor sensor not detected: • Outdoor sensor is not connected: Connect the sensor • Outdoor sensor is not connected correctly: Connect the sensor correctly
A00.42	WaterPressureMissing	Water pressure sensor was expected but not detected	Water pressure sensor not detected • Water pressure sensor is not connected: connect the sensor • Water pressure sensor is not connected correctly: connect the sensor correctly
A01.23	Poor Combustion	Poor combustion	Configuration error: No flame during operation: • No ionisation current: - Purge the gas supply to remove air. - Check whether the gas tap is properly open. - Checking the gas supply pressure. - Check the operation and setting of the gas valve unit. - Check that the air inlet and flue gas discharge flues are not blocked. - Check that there is no recirculation of flue gases.
A02.06	Water Press Warning	Water Pressure Warning active	Water pressure warning: • Water pressure too low; check the water pressure
A02.36	Funct device lost	Functional device has been disconnected	SCB not found: • Bad connection: check the wiring and connectors • Faulty SCB: Replace SCB
A02.37	Uncritic device lost	Uncritical device has been disconnected	SCB not found: • Bad connection: check the wiring and connectors • Faulty SCB: Replace SCB
A02.45	Full Can Conn Matrix	Full Can Connection Matrix	SCB not found: • Carry out an auto-detect
A02.46	Full Can Device Adm	Full Can Device Administration	SCB not found: • Carry out an auto-detect
A02.48	Funct Gr Conf Fault	Function Group Configuration Fault	SCB not found: • Carry out an auto-detect
A02.49	Failed Init Node	Failed Initialising Node	SCB not found: • Carry out an auto-detect
A02.55	Inval or miss SerNR	Invalid or missing device serial number	Contact your supplier.
A02.69	Fair mode active	Fair mode active	Contact your supplier.
A02.76	Memory full	The reserved space in memory for custom parameters value is full. No more user changed possible	Configuration error: • Reset **CN1** and **CN2** • Faulty CSU: Replace CSU • Replace the CU-GH
A08.02	Shower Time Elapsed	The time reserved for the shower has elapsed	Adjust parameter **DP357** to the desired shower time.
A10.33	SDhwTopZoneD Open	Domestic Hot Water tank top temperature sensor Zone DHW open	Domestic hot water top temperature sensor open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
A10.34	SDhwTopZoneD Closed	Domestic Hot Water tank top temperature sensor Zone DHW Closed	Domestic hot water top temperature sensor short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
A10.45	RoomTempZoneA miss	Measure of Room Temperature Zone A is missing	Room temperature sensor not detected in zone A: • Room temperature sensor is not connected: connect the sensor • Room temperature sensor is not connected correctly: connect the sensor correctly • Faulty sensor: replace the sensor
A10.46	RoomTempZoneB miss	Measure of Room Temperature Zone B is missing	Room temperature sensor not detected in zone B: • Room temperature sensor is not connected: connect the sensor • Room temperature sensor is not connected correctly: connect the sensor correctly • Faulty sensor: replace the sensor
A10.47	RoomTempZoneC miss	Measure of Room Temperature Zone C is missing	Room temperature sensor not detected in zone C: • Room temperature sensor is not connected: connect the sensor • Room temperature sensor is not connected correctly: connect the sensor correctly • Faulty sensor: replace the sensor
A10.50	T_DHW top D miss	Domestic Hot Water temperature sensor top zone DHW is missing	Domestic hot water temperature sensor not detected in zone DHW: • Domestic hot water temperature sensor is not connected: connect the sensor • Domestic hot water temperature sensor is not connected correctly: connect the sensor correctly • Faulty sensor: replace the sensor
A10.54	Temp. Zone DHW miss.	Temperature sensor Zone DHW is missing	Temperature sensor not detected in zone DHW: • Temperature sensor is not connected: connect the sensor • Temperature sensor is not connected correctly: connect the sensor correctly • Faulty sensor: replace the sensor
A10.56	T_DHW Zone AUX miss	Domestic Hot Water temperature sensor Zone AUX is missing	Domestic hot water temperature sensor not detected in zone AUX: • Domestic hot water temperature sensor is not connected: connect the sensor • Domestic hot water temperature sensor is not connected correctly: connect the sensor correctly • Faulty sensor: replace the sensor

10.1.3 Blocking

Tab.99 Blocking codes

Code	Display text	Description	Solution
H00.69	TbufferTankOpen	Buffer Tank temperature sensor is either removed or measures a temperature below range	Buffer tank temperature sensor open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H00.70	TbufferTankClosed	Buffer Tank temperature sensor is either shorted or measures a temperature above range	Buffer tank temperature sensor short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H00.71	TbufferTankTopOpen	Buffer Tank top temperature sensor is either removed or measures a temperature below range	Buffer tank top temperature sensor open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H00.72	TbufferTankTopClosed	Buffer Tank top temperature sensor is either shorted or measures a temperature above range	Buffer tank top temperature sensor short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H00.74	TBufferTankMissing	Buffer Tank temperature sensor was expected but not detected	Buffer tank temperature sensor not detected: • Buffer tank temperature sensor is not connected: Connect the sensor • Buffer tank temperature sensor is not connected correctly: Connect the sensor correctly • Faulty sensor: replace the sensor
H00.75	TBufferTankTop Miss	Buffer Tank Top temperature sensor was expected but not detected	Buffer tank top temperature sensor not detected: • Buffer tank top temperature sensor is not connected: Connect the sensor • Buffer tank top temperature sensor is not connected correctly: Connect the sensor correctly
H00.76	TcascadeFlow Open	Cascade Flow temperature sensor is either removed or measures a temperature below range	Cascade flow temperature sensor open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H00.77	TcascadeFlow Closed	Cascade Flow temperature sensor is either shorted or measures a temperature above range	Cascade flow temperature sensor short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
H00.78	TcascadeFlow missing	Cascade Flow temperature sensor was expected but not detected	Cascade flow temperature sensor not detected: • Cascade flow temperature sensor is not connected: Connect the sensor • Cascade flow temperature sensor is not connected correctly: Connect the sensor correctly • Faulty sensor: replace the sensor
H00.81	RoomTempMissing	Room Temperature sensor was expected but not detected	Room temperature sensor not detected: • Room temperature sensor is not connected: Connect the sensor • Room temperature sensor is not connected correctly: Connect the sensor correctly
H01.00	Comm Error	Communication Error occured	Communication error with the security kernel: • Restart the boiler • Replace the CU-GH
H01.05	Max Delta TF-TR	Maximum difference between flow temperature and return temperature	Maximum difference between the flow and return temperature exceeded: • No flow or insufficient flow: - Check the flow (direction, pump, valves) - Check the water pressure - Check the cleanliness of the heat exchanger • Sensor error: - Check that the sensors are operating correctly - Check that the sensor has been fitted properly
H01.08	CH Temp Grad. Level3	Maximum CH temperature gradient level3 exceeded	Maximum heat exchanger temperature increase has been exceeded: • No flow or insufficient flow: - Check the circulation (direction, pump, valves) - Check the water pressure - Check the cleanliness of the heat exchanger - Check that the central heating system has been correctly vented to remove air • Sensor error: - Check that the sensors are operating correctly - Check that the sensor has been fitted properly
H01.14	Max Tflow	Flow temperature has exceeded the maximum operating value	Flow temperature sensor above normal range: • Bad connection: check the wiring and connectors • No flow or insufficient flow: - Check the circulation (direction, pump, valves) - Check the water pressure - Check the cleanliness of the heat exchanger
H01.15	Max Tflue Gas	Flue gas temperature has exceeded the maximum operating value	Maximum flue gas temperature exceeded: • Check the flue gas outlet system • Check the heat exchanger to ensure that the flue gas side is not clogged • Faulty sensor: replace the sensor
H02.00	Reset In Progress	Reset In Progress	Reset procedure active: • No action
H02.02	Wait Config Number	Waiting For Configuration Number	Configuration error or unknown configuration number: • Reset **CN1** and **CN2**

Code	Display text	Description	Solution
H02.03	Conf Error	Configuration Error	Configuration error or unknown configuration number: • Reset **CN1** and **CN2**
H02.04	Parameter Error	Parameter Error	Factory settings incorrect: • Parameters are not correct: - Restart the boiler - Reset **CN1** and **CN2** - Replace the CU-GH PCB
H02.05	CSU CU mismatch	CSU does not match CU type	Configuration error: • Reset **CN1** and **CN2**
H02.09	Partial block	Partial blocking of the device recognized	Blocking input active or frost protection active: • External cause: remove external cause • Wrong parameter set: check the parameters • Bad connection: check the connection
H02.10	Full Block	Full blocking of the device recognized	Blocking input is active (without frost protection): • External cause: remove external cause • Wrong parameter set: check the parameters • Bad connection: check the connection
H02.12	Release Signal	Release Signal input of the Control Unit from device external environment	Waiting time release signal has elapsed: • External cause: remove external cause • Wrong parameter set: check the parameters • Bad connection: check the connection
H02.16	Int CSU Timeout	Internal CSU Timeout	Configuration error: • Reset **CN1** and **CN2** • Replace the PCB
H02.36	Funct device lost	Functional device has been disconnected	Communication error with the SCB PCB: • Bad connection with BUS: check the wiring. • No PCB: reconnect PCB or retrieve from memory using auto-detect.
H02.40	Function unavailable	Function unavailable	Contact your supplier
H02.45	Full Can Conn Matrix	Full Can Connection Matrix	SCB not found: • Carry out an auto-detect
H02.46	Full Can Device Adm	Full Can Device Administration	SCB not found: • Carry out an auto-detect
H02.47	Failed Conn Funct Gr	Failed Connecting Function Groups	Function group not found: • Carry out an auto-detect • Restart the boiler • Replace the CU-GH
H02.48	Funct Gr Conf Fault	Function Group Configuration Fault	SCB not found: • Carry out an auto-detect
H02.49	Failed Init Node	Failed Initialising Node	SCB not found: • Carry out an auto-detect
H02.55	Inval or miss SerNR	Invalid or missing device serial number	Replace the CU-GH PCB
H02.61	Unsupported function	Zone A doesn't support the selected function	Zone A function setting is not correct or is not allowed on this circuit: • Check the setting of parameter **CP020**.
H02.62	Unsupported function	Zone B doesn't support the selected function	Zone B function setting is not correct or is not allowed on this circuit: • Check the setting of parameter **CP021**.
H02.63	Unsupported function	Zone C doesn't support the selected function	Zone C function setting is not correct or is not allowed on this circuit: • Check the setting of parameter **CP023**.

Code	Display text	Description	Solution
H02.64	Unsupported function	Zone D doesn't support the selected function	Zone C function (DHW) setting is not correct or is not allowed on this circuit: • Check the setting of parameter **CP022**.
H02.65	Unsupported function	Zone E doesn't support the selected function	Zone E function (AUX) setting is not correct or is not allowed on this circuit: • Check the setting of parameter **CP024**.
H02.66	TAS not connected	The anti corrosion protection (TAS) of the Domestic Hot Water tank is not connected	Corrosion protection anode (TAS) not detected: • Anode is not connected: Connect the anode • Anode is not connected correctly: Connect the anode correctly
H02.67	TAS short-circuit	The anti corrosion protection (TAS) of the Domestic Hot Water tank is shortend	Corrosion protection anode (TAS) missing or short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H02.70	HRU test error	External heat recovery unit test failed	Check the external heat recovery system.
H02.79	Appliance lost S Bus	There is no appliance present on system bus (cascade).	S-Bus connector devices missing: • Bad connection: check the wiring and connectors • Incorrectly fitted connectors: check that the connectors has been correctly fitted • End connectors (with resistor) are missing or badly connected: check wiring and connectors • Check if connected devices are activated
H03.00	Parameter Error	Safety parameters level 2, 3, 4 are not correct or missing	Parameter error: security kernel • Restart the boiler • Replace the CU-GH
H03.01	CU to GVC data error	No valid data from CU to GVC received	Communication error with the CU-GH: • Restart the boiler
H03.02	Flame loss detected	Measured ionisation current is below limit	No flame during operation: • No ionisation current: - Vent the gas supply to remove air - Check that the gas valve is fully opened - Check the gas supply pressure - Check the operation and setting of the gas valve unit - Check that the air supply inlet and flue gas outlet are not blocked - Check that there is no recirculation of flue gases
H03.05	Internal blocking	Gas Valve Control internal blocking occured	Security kernel error: • Restart the boiler • Replace the CU-GH
H03.17	Safety check	Periodically safety check ongoing	• Restart the boiler • Replace the CU-GH
H10.00	T Flow Zone A Open	Flow temperature sensor Zone A Open	Flow temperature sensor zone A open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
H10.01	T Flow Zone A Closed	Flow temperature sensor Zone A Closed	Flow temperature sensor zone A short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H10.02	T Dhw Zone A Open	Domestic Hot Water temperature sensor Zone A Open	Domestic hot water temperature sensor zone A open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.03	T Dhw Zone A Closed	Domestic Hot Water temperature sensor Zone A Closed	Domestic hot water temperature sensor zone A short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter **CP500** must be set to off (=disable)
H10.04	TSwimmPoolZoneA Open	Swimming Pool Temperature Sensor Zone A Open	Swimming pool temperature sensor A open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.05	TSwimmPoolZoneAClose	Swimming Pool Temperature Sensor Zone A Closed	Swimming pool temperature sensor zone A short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H10.09	T Flow Zone B Open	Flow temperature sensor Zone B Open	Flow temperature sensor zone B open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.10	T Flow Zone B Closed	Flow temperature sensor Zone B Closed	Flow temperature sensor zone B short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H10.11	T Dhw Zone B Open	Domestic Hot Water Temperature Sensor Zone B Open	Domestic hot water temperature sensor zone B open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
H10.12	T Dhw Zone B Closed	Domestic Hot Water temperature sensor Zone B Closed	Domestic hot water temperature sensor zone B short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter **CP501** must be set to off (=disable)
H10.13	TSwimmPoolZoneB Open	Swimming Pool Temperature Sensor Zone B Open	Swimming pool temperature sensor B open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.14	TSwimmPoolZoneBClose	Swimming Pool Temperature Sensor Zone B Closed	Swimming pool temperature sensor zone B short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H10.18	T Flow Zone C Open	Flow temperature sensor Zone C Open	Flow temperature sensor zone C open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.19	T Flow Zone C Closed	Flow temperature sensor Zone C Closed	Flow temperature sensor zone C short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H10.20	T Dhw Zone C Open	Domestic Hot Water Temperature Sensor Zone C Open	Domestic hot water temperature sensor zone C open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.21	T Dhw Zone C Closed	Domestic Hot Water temperature sensor Zone C Closed	Domestic hot water temperature sensor zone C short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter **CP503** must be set to off (=disable)

Code	Display text	Description	Solution
H10.22	TSwimmPoolZoneC Open	Swimming Pool Temperature Sensor Zone C Open	Swimming pool temperature sensor C open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.23	TSwimmPoolZoneCClose	Swimming Pool Temperature Sensor Zone C Closed	Swimming pool temperature sensor zone C short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H10.27	T Flow Zone DHW open	Flow temperature sensor Zone DHW open	Flow temperature sensor zone DHW open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.28	Sens. ZoneDHW closed	Flow temperature sensor Zone DHW closed	Flow temperature sensor zone DHW short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H10.29	Sensor Zone DHW open	Temperature sensor Zone DHW open	Domestic hot water temperature sensor zone DHW open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.30	T Zone DHW closed	Domestic Hot Water temperature sensor Zone DHW closed	Domestic hot water temperature sensor zone DHW short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter **CP502** must be set to off (=disable)
H10.36	Sensor Zone AUX open	Flow temperature sensor Zone AUX open	Flow temperature sensor zone AUX open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.37	Sens. ZoneAUX closed	Flow temperature sensor ZoneAUX closed	Flow temperature sensor zone AUX short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
H10.38	T Dhw Zone AUX open	Domestic Hot Water temperature sensor Zone AUX open	Domestic hot water temperature sensor zone AUX open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H10.39	Sens. ZoneAUX Closed	Domestic Hot Water temperature sensor Zone AUX closed	Domestic hot water temperature sensor zone AUX short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter **CP504** must be set to off (=disable)

10.1.4 Locking

Tab.100 Locking codes

Code	Display text	Description	Solution
E00.04	TReturn Open	Return temperature sensor is either removed or measures a temperature below range	Return temperature sensor open: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E00.05	TReturn Closed	Return temperature sensor is either shorted or measures a temperature above range	Return temperature sensor short-circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E00.06	TReturn Missing	Return temperature sensor was expected but not detected	No connection to temperature return sensor: • Bad connection: check the wiring and connectors. • Faulty sensor: replace the sensor
E00.07	dTReturn Too High	Return temperature difference is too large	Difference between the flow and return temperatures too great: • No circulation: - Vent the central heating system to remove air - Check the water pressure - If present: check the boiler type parameter setting - Check the circulation (direction, pump, valves) - Check that the heating pump is operating correctly - Check the cleanliness of the heat exchanger • Sensor not connected or incorrectly connected: - Check that the sensors are operating correctly - Check that the sensor has been fitted properly • Faulty sensor: replace the sensor if necessary

Code	Display text	Description	Solution
E00.16	DHW sensor Open	Domestic Hot Water tank temperature sensor is either removed or measures a temperature below range	Calorifier sensor open: • Bad connection: check the wiring and connectors • Faulty sensor: replace the sensor
E00.17	DHW sensor Closed	Domestic Hot Water tank temperature sensor is either shorted or measures a temperature above range	Calorifier sensor short-circuited: • Bad connection: check the wiring and connectors • Faulty sensor: replace the sensor
E01.04	5x Flame Loss Error	5x Error of unintended Flame Loss occurance	Flame loss occurs 5 times: • Vent the gas supply to remove air • Check that the gas valve is fully opened • Check the gas supply pressure • Check the operation and setting of the gas valve unit • Check that the air supply inlet and flue gas outlet are not blocked • Check that there is no recirculation of flue gases
E01.11	Fan Out Of Range	Fan speed has exceeded normal operating range	Fan fault: • Bad connection: check the wiring and connectors. • Faulty fan: replace the fan • Fan operates when it should not be operating: check for excessive chimney draught
E01.12	Return Higher Flow	Return tempearture has a higher temperature value than the flow temperature	Flow and return reversed: • Bad connection: check the wiring and connectors • Water circulation in wrong direction: check the circulation (direction, pump, valves) • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Malfunctioning sensor: check the Ohmic value of the sensor • Faulty sensor: replace the sensor
E01.24	Combustion Error	Several combustion errors occurs with 24 hours	Low ionisation current: • Vent the gas supply to remove air. • Check that the gas valve is fully opened. • Check the gas supply pressure. • Check the operation and setting of the gas valve unit. • Check that the air supply inlet and flue gas outlet are not blocked. • Check that there is no recirculation of flue gases.
E02.13	Blocking Input	Blocking Input of the Control Unit from device external environment	Blocking input is active: • External cause: remove external cause • Wrong parameter set: check the parameters
E02.15	Ext CSU Timeout	External CSU Timeout	CSU time out: • Bad connection: check the wiring and connectors • Faulty CSU: Replace CSU
E02.17	GVC CommTimeout	Gas Valve Control unit communication has exceeded feedback time	Communication error with the security kernel: • Restart the boiler • Replace the CU-GH
E02.35	Safety device lost	Safety critical device has been disconnected	Communication fault • Carry out an auto-detect

Code	Display text	Description	Solution
E02.47	Failed Conn Funct Gr	Failed Connecting Function Groups	Function group not found: • Carry out an auto-detect • Restart the boiler • Replace the CU-GH
E04.00	Parameter error	Safety parameters Level 5 are not correct or missing	Replace the CU-GH.
E04.01	TFlow Closed	Flow temperature sensor is either shorted or measuring a temperature above range	Flow temperature sensor short circuited: • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E04.02	TFlow Open	Flow temperature sensor is either removed or measuring a temperature below range	Flow temperature sensor open: • Bad connection: check the wiring and connectors • Faulty sensor: replace the sensor
E04.03	Max Flow temp	Measured flow temperature above savety limit	No flow or insufficient flow: • Check the circulation (direction, pump, valves) • Check the water pressure • Check the cleanliness of the heat exchanger
E04.07	TFlow Sensor	Deviation in flow sensor 1 and flow sensor 2 detected	Flow temperature sensor deviation: • Bad connection: check the connection • Faulty sensor: replace the sensor
E04.10	Unsuccessful start	5 Unsuccessful burners starts detected	Five failed burner starts: • No ignition spark: - Check the wiring between the CU-GH and the ignition transformer - Check the ionisation/ignition electrode - Check breakdown to earth - Check the condition of the burner cover - Check the earthing - Replace the CU-GH • Ignition spark but no flame: - Vent the gas pipes to remove air - Check that the air supply inlet and flue gas outlet are not blocked - Check that the gas valve is fully opened - Check the gas supply pressure - Check the operation and setting of the gas valve unit - Check the wiring on the gas valve unit - Replace the CU-GH • Flame present, but ionisation has failed or is inadequate: - Check that the gas valve is fully opened - Check the gas supply pressure - Check the ionisation/ignition electrode - Check the earthing - Check the wiring on the ionisation/ignition electrode.
E04.12	False flame	False flame detected before burner start	False flame signal: • The burner remains very hot: Set the O_2 • Ionisation current measured but no flame should be present: check the ionisation/ignition electrode • Faulty gas valve: replace the gas valve • Faulty ignition transformer: replace the ignition transformer

Code	Display text	Description	Solution
E04.13	Fan	Fan speed has exceeded normal operating range	Fan fault: • Bad connection: check the wiring and connectors. • Fan operates when it should not be operating: check for excessive chimney draught • Faulty fan: replace the fan
E04.17	GasValve Driver Err.	The driver for the gas valve is broken	Gas valve unit fault: • Bad connection: check the wiring and connectors • Faulty gas valve unit: Replace the gas valve unit
E04.23	Internal Error	Gas Valve Control internal locking	• Restart the boiler • Replace the CU-GH

10.2 Error history

The control panel includes an error memory in which is stored a history of the last 32 errors. Details of the boiler when the error occurred can be read out. For example;

- status
- sub-status
- flow temperature
- return temperature

These details and others can contribute to the error solution.

10.2.1 Reading out and clearing the error memory

The error memory stores the details of the most recent errors.

1. Select the tile [ ].
2. Press the ✔ button to confirm the selection.
3. Use the rotary knob to select code: **0012**
4. Press the ✔ button to confirm the selection.
   ⇨ When the installer level is enabled, the status of the tile [ ] changes from **Off** into **On**.
5. Press the ≡ button.
6. Use the rotary knob to select **Error History**.
7. Press the ✔ button to confirm the selection.
   ⇨ A list up to 32 most recent errors is displayed with the error code, a short description and the date.
8. Use the rotary knob to select the error code you want to investigate.
9. Press the ✔ button to confirm the selection.
   ⇨ The display shows an explanation of the error code and several details of the boiler when the error occurred.
10. To clear the error memory, press and hold the ✔ button.

Fig.72 Installer level

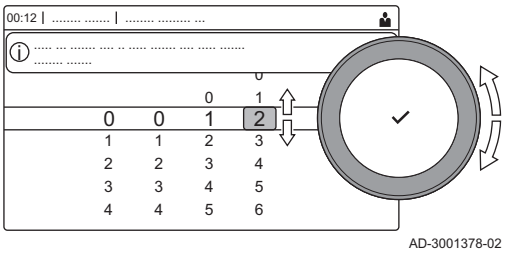
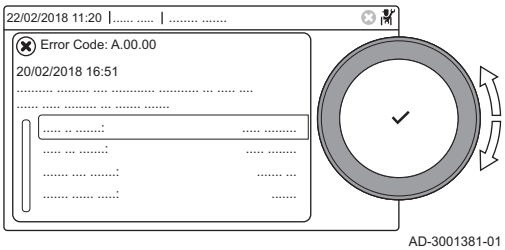


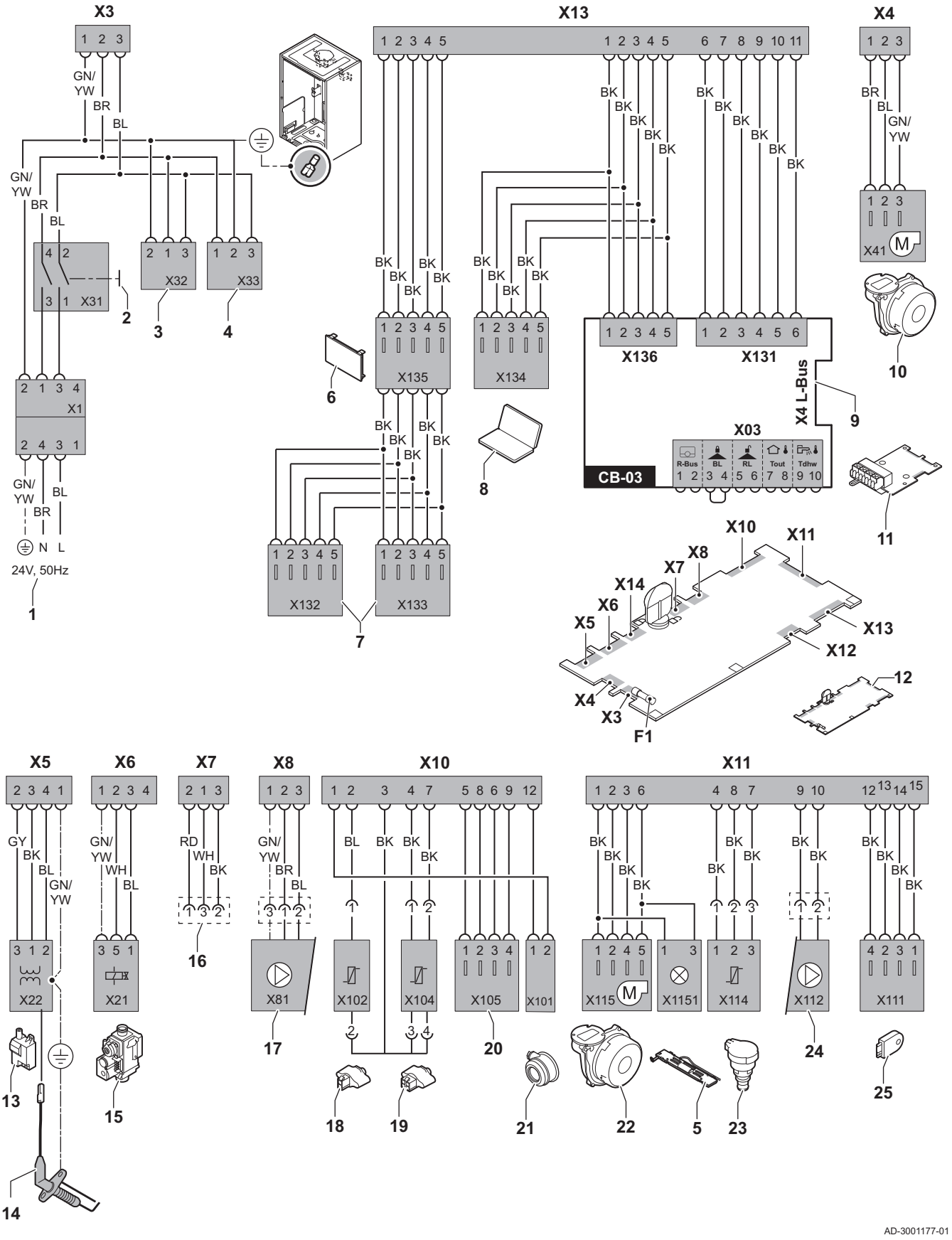
Fig.73 Error details



11 Technical specifications

11.1 Electrical diagram

Fig.74 Electrical diagram



AD-3001177-01

1 Power supply
2 On/off switch
3 Power supply for SCB-xx control PCBs
4 Power supply for IF-01 control PCB
5 Interior lighting
6 Display
7 Connection points for additional SCB-xx control PCBs
8 Service connection
9 L-Bus connection for SCB-xx control PCBs
10 Fan supply
11 Standard CB-03 control PCB
12 CU-GH08 control unit
13 Ignition transformer
14 Ionisation/ignition electrode
15 Combined gas valve unit
16 Connection to CB-08 PCB (for 24 V or 230 V three-way valve)
17 Power supply for pump
18 Return sensor (NTC 10 kΩ/25°C)
19 Flow sensor (NTC 10 kΩ/25°C)
20 Connection point for flue gas sensor (PTC <20Ω/ 25°C)
21 Connection point for air pressure differential switch
22 Fan control
23 Pressure sensor
24 Control for PWM pump
25 Storage information (CSU)
BK Black
BL Blue
BR Brown
GN Green
GY Grey
RD Red
WH White
YW Yellow

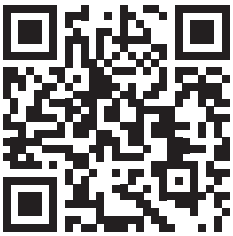
12 Spare parts

12.1 General

Only replace defective or worn boiler parts with original parts or recommended parts.

Information about available parts can be found via the website for professionals.

Fig.75 http://pieces.dedietrich-thermique.fr



MW-3000456-01

Important
When ordering a part, you must state the part number of the required part.
When ordering a part, you must state the part number that appears in the list beside the position number of the required part.

12.2 Parts

Fig.76 AMC Pro 45

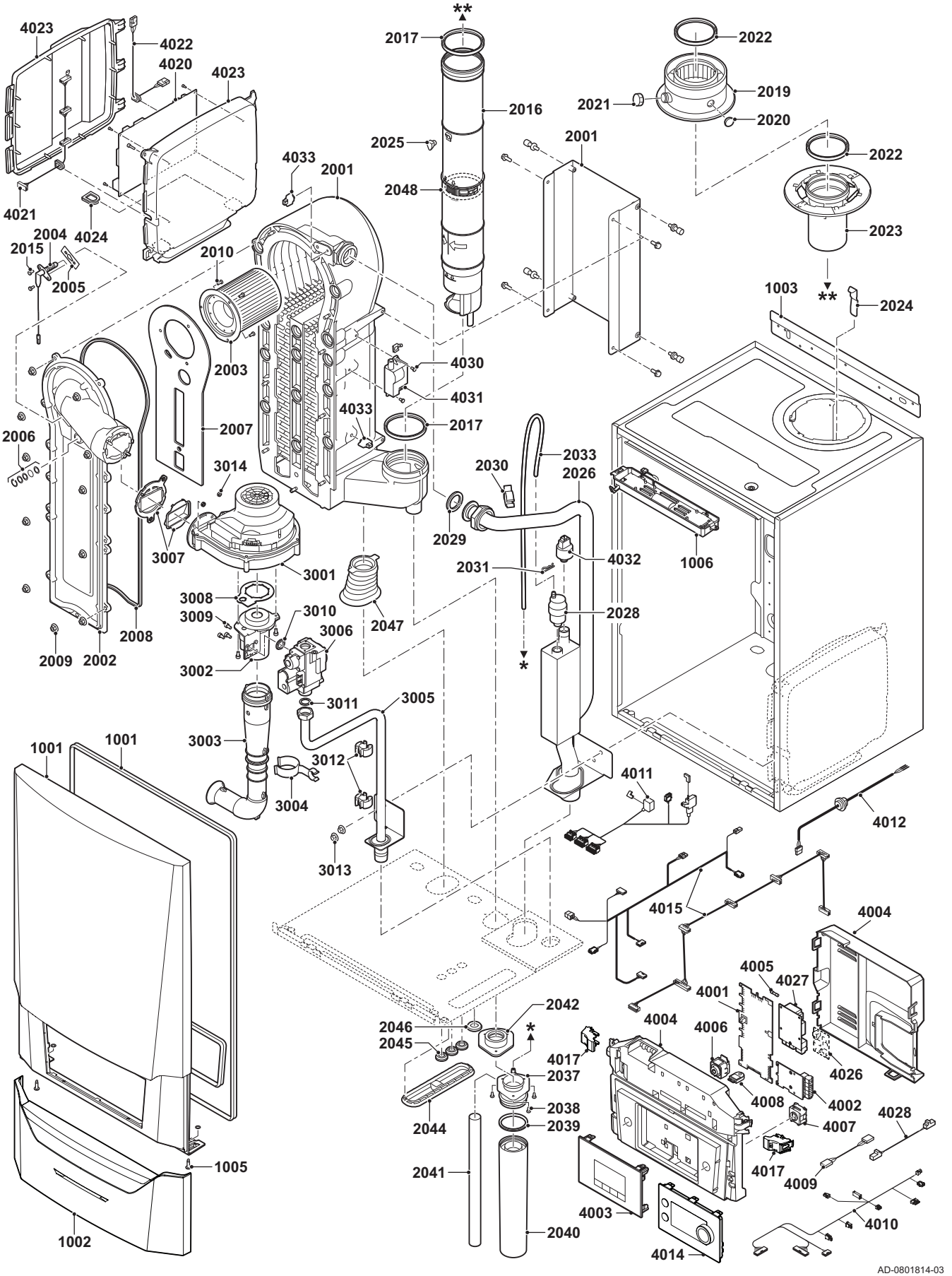


Fig.77 AMC Pro 65

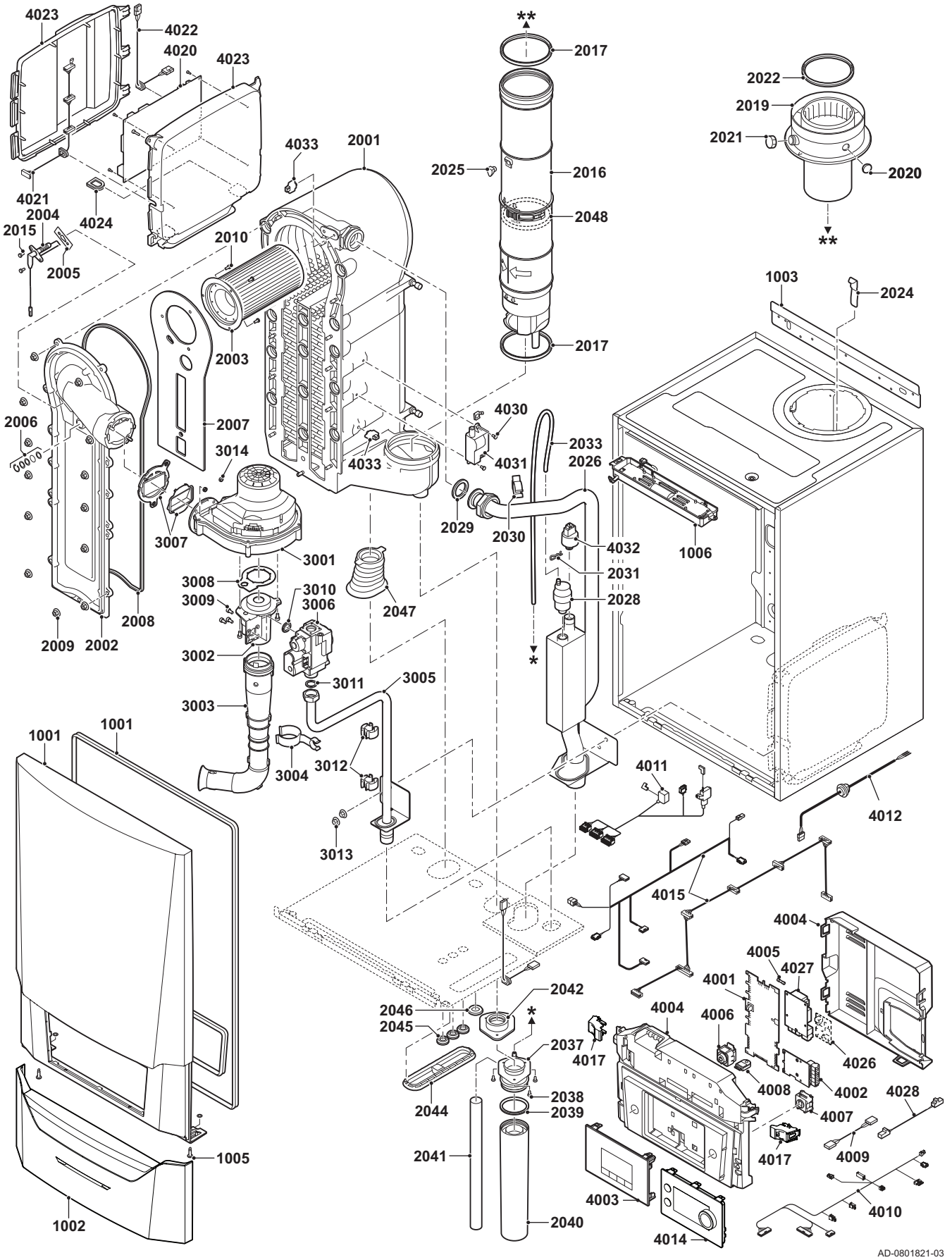


Fig.78 AMC Pro 90

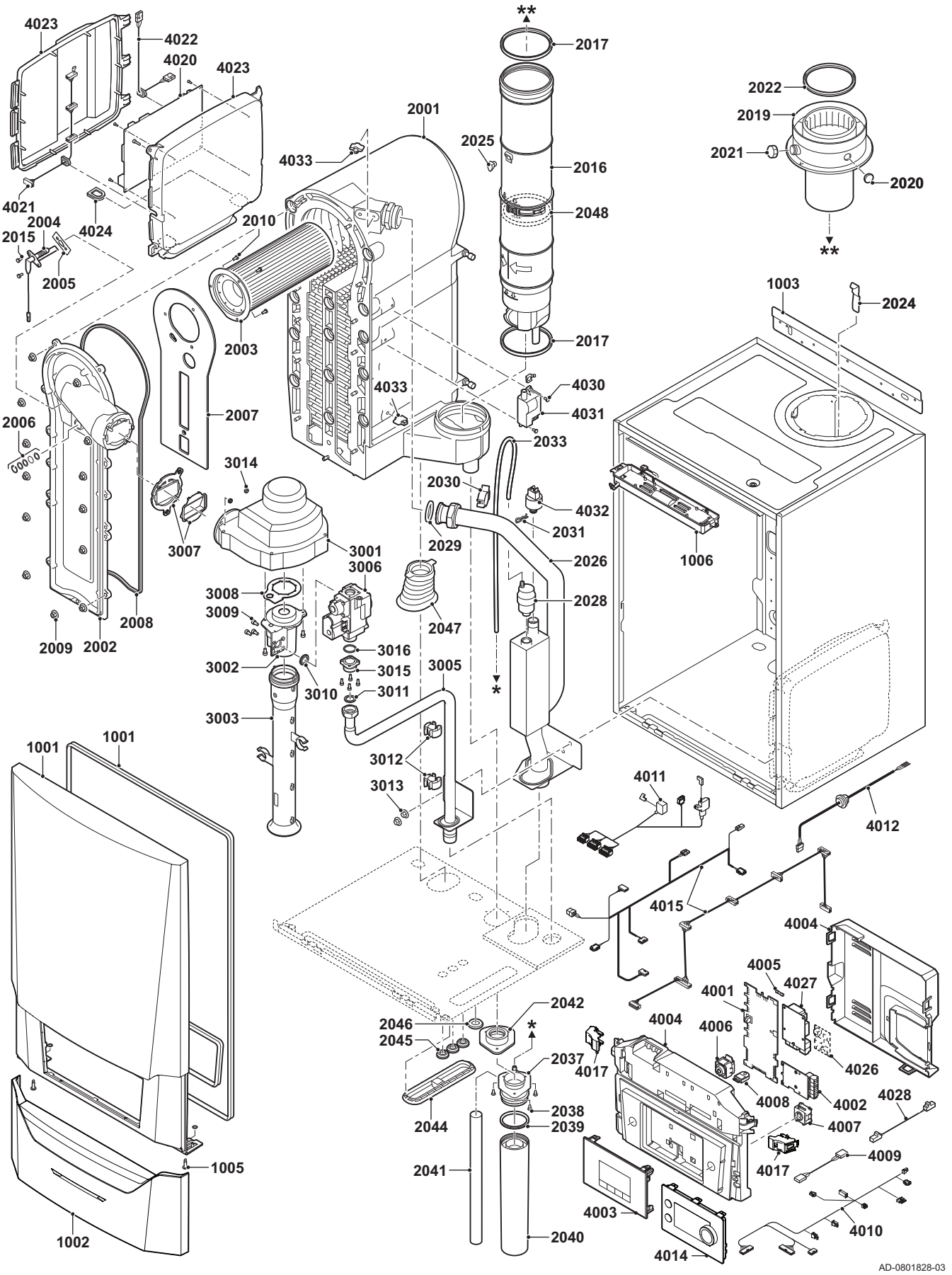
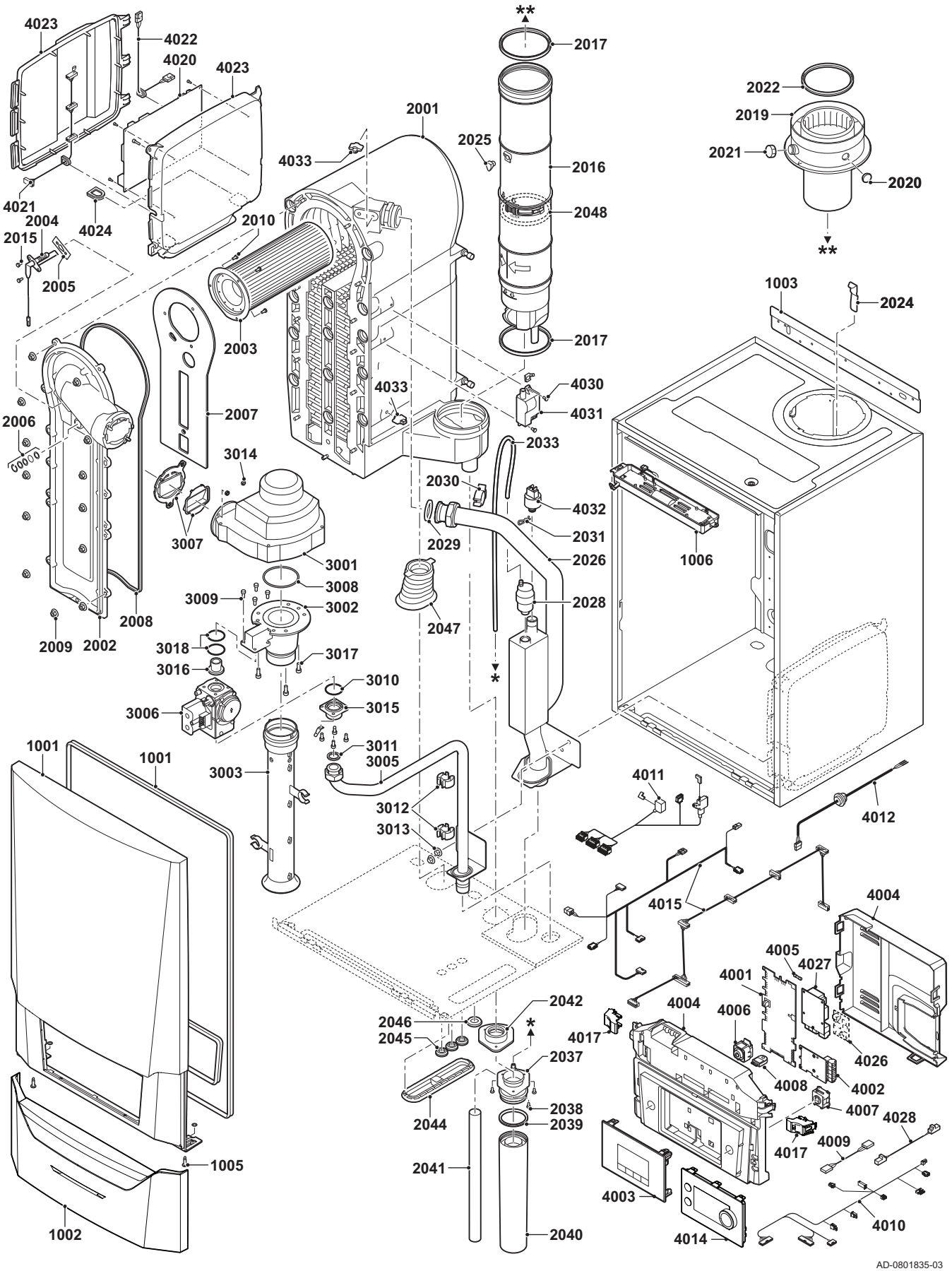


Fig.79 AMC Pro 115



12.3 Spare part list

Tab.101 Casing

Markers	Code no.	Description	45	65	90	115
1001	7699575	Casing front panel	x	x	x	x
1002	7699596	Cover Drop Down	x	x	x	x
1003	S101517	Wall bracket	x	x	x	x
1005	S101403	Stud Quarter Retainer	x	x	x	x
1006	7702357	Boiler light 24V	x	x	x	x

Tab.102 Heat exchanger and burner

Markers	Code no.	Description	45	65	90	115
2001	7699613	Heat exchanger 45 kW	x			
2001	7699615	Heat exchanger 65 kW		x		
2001	7699614	Heat exchanger 90 - 115 kW			x	x
2002	S101564	Inspection hatch heat exchanger	x	x	x	x
2003	S54753	Burner Furigas 45 kW	x			
2003	S54754	Burner Furigas 65 kW		x		
2003	S57477	Burner Furigas 90 – 115 kW			x	x
2004	7702138	Electrode Ignition/Ionisation	x	x	x	x
2005	S53489	Gasket for electrode (10 Pcs.)	x	x	x	x
2006	S59118	Glass inspection set	x	x	x	x
2007	S54731	Insulation Front Plate Heat Exchanger	x	x	x	x
2008	S57241	Gasket Front Plate	x	x	x	x
2009	S54755	Nut Flange M6 (20 Pcs.)	x	x	x	x
2010	S100052	Screw M4 x 10 (20 Pcs.)	x	x	x	x
2015	S48950	Screw M4 x 10 (50 Pcs.)	x	x	x	x
2016	7700494	Flue Gas Pipe Ø 80 mm.	x			
2016	7700499	Flue Gas Pipe Ø 100 mm.		x	x	x
2017	7701758	Sealing Ring Ø 80 (5 Pcs.)	x			
2017	7701752	Sealing Ring Flue Ø 100 (5 Pcs.)		x	x	x
2019	7602132	Flue Gas Discharge Adapter 80/125 mm.	x			
2019	S101627	Flue Gas Discharge Adapter 100/150 mm.		x	x	x
2020	S62233	Plug For Air Inlet Measure Point (5 Pcs.)	x	x	x	x
2021	S62232	Screw Cap Flue Gas Measure Point (5 Pcs.)	x	x	x	x
2022	S100855	Sealing Ring Ø 80 mm (5 Pcs.)	x			
2022	S101643	Sealing Ring Ø 100 mm (5 Pcs.)		x	x	x
2023	S101567	Flue Connection Ø 80 mm	x			
2024	S100901	Fixing Strip Heat Exchanger	x	x	x	x
2025	S62288	Tulle For Flue Gas Pipe	x	x	x	x
2026	S101568	Flow Pipe Central Heating	x	x		
2026	S101572	Flow Pipe Assembly			x	x
2028	7669770	Automatic air vent	x	x	x	x
2029	S100737	Sealing ring 44 x 32 x 4 (5 Pcs.)	x	x	x	x
2030	S101576	Wire clamp 28 - 35 (5 Pcs.)	x	x	x	x
2031	7605371	Hairpin spring 9.4 mm (5 Pcs.)	x	x	x	x
2033	S101570	Hose silicone 8 x 2 x 740 mm	x	x	x	x
2037	S101558	Syphon assembly (upper)	x	x	x	x
2038	S14254	Sheet-metal screw 4,2 x 9,5 (20 Pcs.)	x	x	x	x
2039	S101580	Sealing ring Ø 60 mm	x	x	x	x
2040	S101559	Siphon cup	x	x	x	x
2041	S101606	Hose of syphon	x	x	x	x

Markers	Code no.	Description	45	65	90	115
2042	S101581	Sealing ring syphon	x	x	x	x
2044	S101298	Blind cap Scu	x	x	x	x
2044	S100869	Sealant strip Scu	x	x	x	x
2045	S62727	Grommet 20 mm (15 Pcs.)	x	x	x	x
2046	S101607	Grommet 25 x 35 x 2 mm (5 Pcs.)	x	x	x	x
2047	S101605	Sealant central heating return	x	x	x	x
2048	7701759	Sealing ring flue Ø 80 (5 Pcs.)	x			
2048	7701753	Sealing ring flue Ø 100 (5 Pcs.)		x	x	x

Tab.103 Gas/air

Markers	Code no.	Description	45	65	90	115
3001	S101725	Fan 30 - 45 kW	x			
3001	S101726	Fan 65 – 90 kW		x	x	
3001	S100036	Fan 115 kW				x
3002	S54765	Venturi 30 - 45 kW	x			
3002	S54766	Venturi 65 kW		x		
3002	S57488	Venturi 95 kW			x	
3002	S101595	Venturi 115 kW				x
3003	S101543	Air inlet damper 30 – 65 kW	x	x		
3003	S101520	Air inlet damper 90 kW			x	
3003	S101578	Air inlet damper 115 kW				x
3004	S101590	Clamp air inlet silencer	x	x		
3005	S101569	Gas supply pipe 30 – 65 kW	x	x		
3005	S101573	Gas supply pipe 90 kW			x	
3005	S101515	Gas supply pipe 115 kW				x
3006	S101596	Gas valve unit 30 – 65 kW 230 Volt	x	x		
3006	S101597	Gas valve unit 90 kW 230 Volt			x	
3006	7606393	Gas valve unit 90 kW 230 Volt Propane			x	
3006	S101510	Gas valve unit 115 kW 230 Volt				x
3006	7614500	Coil for gas valve				x
3007	S101565	Seal 83 mm with valve (45 - 115 kW)	x	x	x	x
3008	S54777	Gasket for venturi (5 Pcs.)	x	x	x	
3008	S100058	O-Ring 70 x 3 mm (5 Pcs.)				x
3009	S48512	Screw M5 x 10 (10 Pcs.)	x	x	x	
3009	S100468	Screw M5 x 12 (10 Pcs.)				x
3010	S101591	Gasket set 45 - 65 kW	x	x		
3010	S101592	Gasket set 90 kW			x	
3010	S101593	Gasket set 115 kW				x
3010	S100363	Gasket 33 x 2 mm (10 Pcs.)				x
3011	S56155	Gasket 23.8 x 17,2 x 2 mm (20 Pcs.)	x	x	x	
3011	S56156	Gasket 30 x 21 x 3 mm (10 Pcs.)				x
3012	S101519	Wire clamp (5 Pcs.)	x	x	x	x
3013	S54755	Nut flange M6 (20 Pcs.)	x	x	x	x
3014	S100055	Nut M5 (20 Pcs.)	x	x	x	x
3015	S57827	Flange for gasblock			x	
3016	S101631	Nozzle venturi				x
3016	S57828	O-Ring gas pipe Ø 26,8 x 22 x 2,5 mm (5 Pcs.)			x	
3017	S100054	Screw Din912 M6 x 16 (20 Pcs.)				x
3018	S101664	Gasket set venturi-nozzle				x

Tab.104 Electronic system

Markers	Code no.	Description	45	65	90	115
4001	7726804	PCB CU-GH08	x	x	x	x
4002	7665228	PCB CB-03	x	x	x	x
4004	7700060	Control box grey	x	x	x	x
4005	7701771	Fuse glass 2.5 Amp (5 Pcs.)	x	x	x	x
4006	7700062	Switch On/Off	x	x	x	x
4007	7700064	Service connector	x	x	x	x
4008	7633327	Configuration Storage Unit CSU-01	x	x	x	x
4009	S101554	Cable for pump PCU	x	x	x	x
4010	7701705	Cable set ELV	x	x	x	x
4011	7701699	Cable set 230V (45 - 90 kW)	x	x	x	
4011	7701700	Cable set 230V (115 kW)				x
4012	S100845	Cable power supply (L = 1500 mm)	x	x	x	x
4014	7712175	Control Panel MK3 sw 1.28 grey	x	x	x	x
4015	7665234	Cable set (Control box intern)	x	x	x	x
4017	s101514	Clamp (2 Pcs.)	x	x	x	x
4021	7690425	Cable BUS Interface	x	x	x	x
4022	S101555	Cable power for SCU	x	x	x	x
4023	S101651	Electronic extension box (SCU box)	x	x	x	x
4024	S100862	Tulle Scu (5 Pcs.)	x	x	x	x
4027	S100763	Print Interface 0-10V (IF-01)	x	x	x	x
4028	7701709	Cable IF-01	x	x	x	x
4030	S101509	Screw 7985 M4 x 8 (5 Pcs.)	x	x	x	x
4031	7624619	Ignition transformer	x	x	x	x
4032	S101632	Water pressure sensor	x	x	x	x
4033	7623837	Sensors Set Double NTC 10K (1 Pcs.) and NTC 10K (2 Pcs.)	x	x	x	x

Tab.105 Miscellaneous

Markers	Code no.	Description	45	65	90	115
	7609044	PWM pump power cable	x	x	x	x
	7609017	PWM pump cable	x	x	x	x
	7702097	Service set A 30 - 45 kW	x			
	7702098	Service set B 30 - 45 kW	x			
	7702099	Service set C 30 - 45 kW	x			
	7710047	Service set A 55 - 115 kW		x	x	x
	7710048	Service set B 55 - 115 kW		x	x	x
	7710049	Service set C 55 - 115 kW		x	x	x
	7692707	Outdoor temperature sensor (AF60)	x	x	x	x
	7692707	Connector outdoor temperature sensor	x	x	x	x

DE DIETRICH
FRANCE

Direction de la Marque
57, rue de la Gare - F-67580 Mertzwiller

03 88 80 27 00
03 88 80 27 99
www.dedietrich-thermique.fr

VAN MARCKE
BE

Weggevoerdenlaan 5
B- 8500 KORTRIJK

+32 (0)56/23 75 11
www.vanmarcke.be

DE DIETRICH THERMIQUE Iberia S.L.U
ES

C/ Salvador Espriu, 11
08908 L'HOSPITALET de LLOBREGAT

+34 935 475 850
info@dedietrich-calefaccion.es
www.dedietrich-calefaccion.es

MEIER TOBLER AG
CH

Bahnstrasse 24 - CH - 8603 SCHWERZENBACH

+41 (0) 44 806 41 41
info@meiertobler.ch

+41 (0)8 00 846 846 Serviceline
www.meiertobler.ch

MEIER TOBLER SA
CH

Chemin de la Veyre-d'En-Haut B6,
CH -1806 St-Légier-La-Chiésaz

+41 (0) 21 943 02 22
info@meiertobler.ch

+41 (0)8 00 846 846 Serviceline
www.meiertobler.ch

DE DIETRICH
Technika Grzewcza sp. z o.o.
PL

ul. Północna 15-19, 54-105 Wrocław

+48 71 71 27 400
biuro@dedietrich.pl

801 080 881 Infocentrala 0,35 zł / min
www.facebook.com/DeDietrichPL
www.dedietrich.pl

ООО «БДР Термия Рус»
RU

129164, Россия, г. Москва
Зубарев переулок, д. 15/1
Бизнес-центр «Чайка Плаза»,офис 309

8 800 333-17-18
info@dedietrich.ru
www.dedietrich.ru

NEUBERG S.A.
LU

39 rue Jacques Stas - B.P.12
L- 2549 LUXEMBOURG

+352 (0)2 401 401
www.neuberg.lu
www.dedietrich-heating.com

DE DIETRICH SERVICE
AT

0800 / 201608 freecall
www.dedietrich-heiztechnik.com

DUEDI S.r.l
IT

Distributore Ufficiale Esclusivo
De Dietrich-Thermique Italia Via Passatore, 12
12010 San Defendente di Cervasca CUNEO

+39 0171 857170
+39 0171 687875
info@duediclima.it
www.duediclima.it

DE DIETRICH
CN

Room 512, Tower A, Kelun Building
12A Guanghua Rd, Chaoyang District
C-100020 BEIJING

+86 (0)106 581 4017
+86 (0)106 581 4018
+86 (0)106 581 7056
+86 (0)106 581 4019
contactBJ@dedietrich.com.cn
www.dedietrich-heating.com

BDR THERMEA Czech Republic s.r.o
CZ

Jeseniova 2770/56 - 130 00 Praha 3

+420 271 001 627
dedietrich@bdrthermea.cz
www.dedietrich.cz

CE
EAC
089-18

De Dietrich