Modulens

Gas fired floor-standing condensing boiler

AGC 10/15
AGC 15
AGC 25
AGC 35

**Installation and
Service Manual**

300026081-001-B

De Dietrich

Declaration of conformity

The device complies with the standard type described in the EG declaration of conformity. It was manufactured and commissioned in accordance with European directives.

The original of the declaration of compliance is available from the manufacturer.

DÉCLARATION DE CONFORMITÉ CE
EG - VERKLARING VAN OVEREENSTEMMING
EC - DECLARATION OF CONFORMITY
EG - KONFORMITÄTSERKLÄRUNG

Fabricant/Manufacturer/Hersteller/Fabrikant	: De Dietrich Thermique
Adresse/Addres/Adress	: 57 rue de la Gare
Ville, pays Stad,Land/City,Country/Land,Ort	: F-67580 MERTZWILLER

- déclare ici que le(s) produit(s) suivant(s)	: AGC 10 ,AGC 15 ,AGC 25 ,AGC 35
- verklaart hiermede dat de toestel(len)	: EGC 25 ,AGC 25 BE ,AGC 35 BE
- this is to declare that the following product(s)	:
- erklärt hiermit dass das (die) Produkt(e)	

Produit(s) par	: De Dietrich Thermique
	: 57, rue de la Gare,
	: F-67580 Mertzwiller

répond/répondent aux directives CEE suivantes:
voldoet/voldoen aan de bepalingen van de onderstaande EEG-richtlijnen:
is/are in conformity with the following EEC-directives:
den Bestimmungen der nachfolgenden EG-Richtlinien entspricht/entsprechen:

CEE-Directive:	2009/142/CEE	normes appliquées, toegepaste normen:
EEG-Richtlijn:	2009/142/EEG	tested and examined to the following norms:
EEC-Directive:	2009/142/EEC	verwendete Normen:
EG-Richtlinie:	2009/142/EWG	EN 483; EN 297; EN 677; EN 625
	92/42/CEE	
	92/42/EEG	
	92/42/EEC	
	92/42/EWG	
	2006/95/CEE	EN 60335.1
	2006/95/EEG	
	2006/95/EEC	
	2006/95/EWG	
	2004/108/CEE	EN 61000-6-3
	2004/108/EEG	EN 61000-6-1
	2004/108/EEC	
	2004/108/EWG	
	97/23/CEE	(art.3 section 3)
	97/23/EEG	(art. 3, lid 3)
	97/23/EEC	(article 3, sub 3)
	97/23/EWG	(Art. 3, Absatz 3)
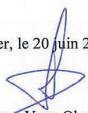
$C\epsilon$
11

Mertzwiller, le 20 juin 2011

Jean-Yves Oberlé
R&D Floor Standing Boiler manager

C003655-A

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9   Spare parts 121

1 Introduction

1.1 Symbols used

1.1.1. Symbols used in the manual

In these instructions, various danger levels are employed to draw the user's attention to particular information. In so doing, we wish to safeguard the user's safety, obviate hazards and guarantee correct operation of the appliance.

> ⚠ **DANGER**
>
> Risk of a dangerous situation causing serious physical injury.

> ⚠ **WARNING**
>
> Risk of a dangerous situation causing slight physical injury.

> ⚠ **CAUTION**
>
> Risk of material damage.

i Signals important information.

☞ Signals a referral to other instructions or other pages in the instructions.

1.1.2. Symbols used on the equipment

⏚ Protective earthing

~ Alternating current

⚡ Caution dangerous live part

Disconnect the appliance from the mains before any work on it

C003453-B

Connect the protective earthing device

D000241-C

📖 Before installing and commissioning the device, read carefully the instruction manuals provided.

1.2   Abbreviations

▸ **3CE**: Collective conduit for sealed boiler

▸ **DHW**: Domestic hot water

▸ **Interscenario switch**: Home automation switch that can be used to centralise and control several scenarios

▸ **Hi**: Lower heating value LHV (Nett)

▸ **Hs**: Higher heating value HHV (Gross)

▸ **PPS**: Polypropylene hardly inflammable

▸ **PCU**: Primary Control Unit - PCB for managing burner operation

▸ **PSU**: Parameter Storage Unit - Parameter storage for PCBs PCU and SU

▸ **SCU**: Secondary Control Unit - control panel PCB

▸ **SU**: Safety Unit - Safety PCB

▸ **3WV**: 3-way valve

▸ **HL**: High Load - DHW tank with plate exchanger

▸ **SL**: Standard Load - DHW tank with coil

▸ **SHL**: Solar High Load - Solar DHW tank with plate exchanger

▸ **SSL**: Solar Standard Load - Solar DHW tank with coil

1.3   General

1.3.1.   Manufacturer's liability

Our products are manufactured in compliance with the requirements of the various applicable European Directives. They are therefore

delivered with $C\,E$ marking and all relevant documentation.

In the interest of customers, we are continuously endeavouring to make improvements in product quality. All the specifications stated in this document are therefore subject to change without notice.

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

▸ Failure to abide by the instructions on using the appliance.

▸ Faulty or insufficient maintenance of the appliance.

▸ Failure to abide by the instructions on installing the appliance.

1.3.2.   Installer's liability

The installer is responsible for the installation and inital start up of the appliance. The installer must respect the following instructions:

▸ Read and follow the instructions given in the manuals provided with the appliance.

▸ Carry out installation in compliance with the prevailing legislation and standards.
▸ Perform the initial start up and carry out any checks necessary.
▸ Explain the installation to the user.
▸ If a maintenance is necessary, warn the user of the obligation to check the appliance and maintain it in good working order.
▸ Give all the instruction manuals to the user.

1.4   Homologations

1.4.1.   Certifications

CE identification no	**CE-0085CM0178**
NOx classification	**5 (EN 297 pr A3, EN 483)**
Type of connection	Chimney: B_{23}, B_{33}
	Flue gas outlet: C_{13}, C_{33}, C_{43}, C_{53}, C_{63}, C_{83}, C_{93}

1.4.2.   Gas categories

Gas category	Gas type	Connection pressure (mbar)
II_{2ESi3P}	Natural gas H (G20)	20
	Natural gas L (G25)	25
	Propane (G31)	37

The boiler is preset in the factory to operate on natural gas H (G20).

☞ For operation on another type of gas, see chapter: "Adapting to another gas type", page 70.

1.4.3.   Additional Directives

Apart from the legal provisions and Directives, the additional Directives described in these instructions must also be observed.

For all provisions and Directives referred to in these instructions, it is agreed that all addenda or subsequent provisions will apply at the time of installation.

⚠ **WARNING**

Installation of the appliance must be done by a qualified engineer in accordance with prevailing local and national regulations.

1.4.4. Factory test

Before leaving the factory, each boiler is set for optimum performance and tested to check the following items:

- ‣ Electrical safety
- ‣ Adjustment (CO_2)
- ‣ Domestic hot water mode
- ‣ Water tightness
- ‣ Gas tightness
- ‣ Parameter settings

2 Safety instructions and recommendations

2.1 Safety instructions

> ⚠️ **DANGER**
>
> If you smell gas:
>
> 1. Do not use a naked flame, do not smoke, do not operate electrical contacts or switches (doorbell, light, motor, lift, etc..).
> 2. Shut off the gas supply.
> 3. Open the windows.
> 4. Trace possible leaks and seal them immediately.
> 5. If the gas leak is before the gas meter, contact the gas supplier.

> ⚠️ **DANGER**
>
> If you smell flue gases:
>
> 1. Switch the appliance off.
> 2. Open the windows.
> 3. Trace possible leaks and seal them immediately.

2.2 Recommendations

> ⚠️ **WARNING**
>
> ▸ Installation and maintenance of the boiler must be carried out by a qualified professional in compliance with prevailing local and national regulations.
> ▸ When working on the boiler, always disconnect the boiler from the mains and close the main gas inlet valve.
> ▸ After maintenance or repair work, check all installations to ensure that there are no leaks.

> ⚠️ **CAUTION**
>
> The boiler must be installed in a frost-free environment.

ℹ️ Keep this document close to the place where the boiler is installed.

Casing components

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Only remove the casing for maintenance and repair operations. Put the casing back in place after maintenance and repair operations.

Instructions stickers

The instructions and warnings affixed to the appliance must never be removed or covered and must remain legible during the entire lifespan of the appliance. Immediately replace damaged or illegible instructions and warning stickers.

Modifications

Modifications may only be made to the boiler after the written permission of **De Dietrich Thermique** to do so.

3 Technical description

3.1 General description

Gas fired floor-standing condensing boiler

▸ High efficiency heating.

▸ Low pollutant emissions.

▸ Top of the range electronic **DIEMATIC iSystem** control panel.

▸ Flue gas evacuation via a forced flue, chimney, bi-flow, 3CE or 3CEP type connection.

▸ Optional domestic hot water production in combination with a DHW tank.

ⓘ The boiler is fitted with an interior light. The interior light comes on in the following cases:

  ▸ The boiler is switched on: The lighting is switched on for 10 minutes.

  ▸ The boiler is switched off: The lighting is switched on for 30 minutes.

3.2 Main parts
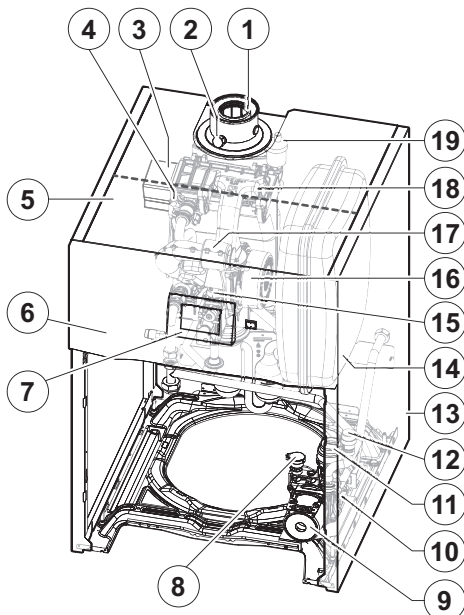
C003072-C

1	Flue gas discharge pipe
2	Flue gas measuring point
3	Heat exchanger
4	Ignition/ionization electrode
5	Box for the control PCBs
6	Control panel
7	Command module
8	Water pressure sensor
9	Shunt pump
10	Hydroblock
11	3-way valve
12	Safety valve
13	Casing
14	Expansion vessel
15	Combined venturi and gas valve unit
16	Fan
17	Air intake silencer
18	Mixer pipe

19   Automatic air vent

3.3   Operating principle

3.3.1.   Skeleton Diagrams

■ **Boiler self-standing**
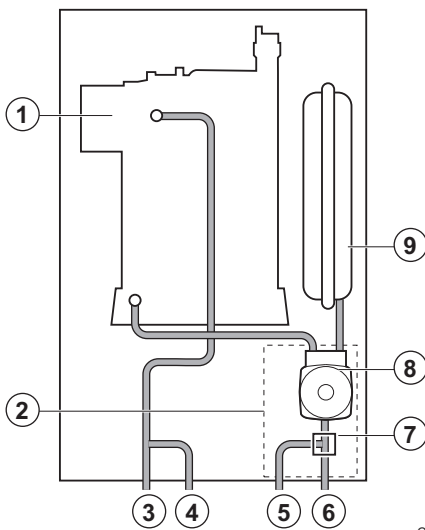
1   Heat exchanger

2   Hydroblock

3   Heating flow

4   Primary DHW tank flow

5   Primary DHW tank return

6   Heating return

7   3-way valve

8   Shunt pump

9   Expansion vessel

C003073-C

■ **Boiler with HL type domestic hot water tank**
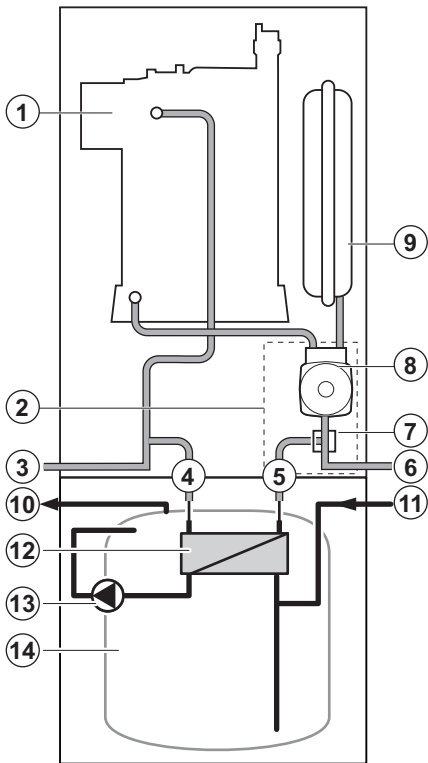
M002513-E

1	Heat exchanger
2	Hydroblock
3	Heating flow
4	Plate exchanger inlet
5	Plate exchanger outlet
6	Heating return
7	3-way valve
8	Shunt pump
9	Expansion vessel
10	Domestic hot water outlet
11	Domestic cold water inlet
12	Plate heat exchanger
13	Domestic hot water pump
14	Domestic hot water tank

■ **Boiler with SL type domestic hot water tank**
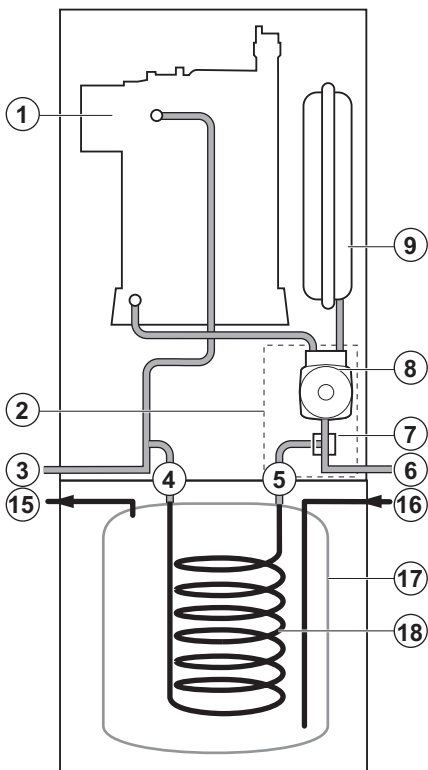
M002514-C

1	Heat exchanger
2	Hydroblock
3	Heating flow
4	Coil exchanger inlet
5	Coil exchanger outlet
6	Heating return
7	3-way valve
8	Shunt pump
9	Expansion vessel
15	Domestic hot water outlet
16	Domestic cold water inlet
17	Domestic hot water tank
18	Domestic water coil

3.3.2.   Shunt pump

AGC 10/15 - 15 - 25

C003452-E
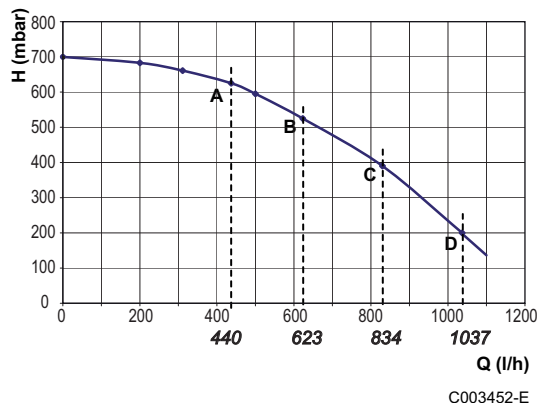
H	Manometric height available for the heating circuit
Q	Water flow
	Useful output (T 20 K)
A	10 kW
B	15 kW
C	20 kW
D	25 kW

C003451-E
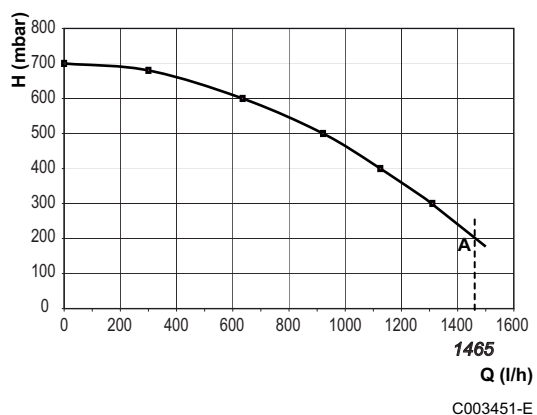
H	Manometric height available for the heating circuit
Q	Water flow
A	Useful output 35 kW (T 20 K)

The boiler is fitted with a modulating pump which is regulated by the control panel as a function of ΔT.

The graph shows the manometric height at various outputs. The parameters **MIN.PUMP SPEED** and **MAX.PUMP SPEED** are used to modify the pump settings.

▸ If flow noise can be heard in the system, it is possible to reduce the maximum pump speed with the parameter **MAX.PUMP SPEED** (First of all, vent the heating system).

▸ If circulation in the radiators is too low or the radiators do not fully heat up, increase the minimum pump speed with the parameter **MIN.PUMP SPEED**.

☞ See chapter: "Professional settings", page 84.

3.3.3.   Water flow rate

The boiler's modulating control system limits the maximum difference in temperature between the heating flow and return and the maximum speed at which the flow temperature increases. In this way, the boiler does not require a minimum water flow rate.

3.4   Technical specifications

Boiler type			AGC 10/15	AGC 15	AGC 25	AGC 35
General						
Nominal output (Pn) Heating System (80/60 °C)	minimum-maximum	kW	3,0 - 10,1	3,0 - 14,5	5,0 - 24,1	6,3 - 34,0
Nominal output (Pn) Heating System (50/30 °C)	minimum-maximum	kW	3,4 - 11,2	3,4 - 15,8	5,6 - 25,5	7,0 - 35,9

Boiler type			AGC 10/15	AGC 15	AGC 25	AGC 35
Nominal output (Pn) Heating System (40/30 °C)	minimum-maximum	kW	3,4 - 16,0	3,4 - 16,0	5,6 - 25,9	7,0 - 36.4
Nominal input (Qn) Heating System (Hi)	minimum-maximum	kW	3,1 - 10,5	3,1 - 15,0	5,2 - 25,0	6,5 - 35,1
Nominal input(Qn) Heating System (Hs)	minimum-maximum	kW	3,4 - 11,7	3,4 - 16,7	5,8 - 27,8	7,2 - 39,0
Nominal input (Qnw) DHW System (Hi)	minimum-maximum	kW	3,1 - 15,0	3,1 - 15,0	5,2 - 29,3	6,5 - 35,1
Nominal input (Qnw) DHW System (Hs)	minimum-maximum	kW	3,4 - 16,7	3,4 - 16,7	5,8 - 32,6	7,2 - 39,0
Heating efficiency under full load (Hi) (80/60 °C)	-	%	96,5	96,5	96,3	96,9
Heating efficiency under full load (Hi) (50/30 °C)	-	%	105,3	105,3	102,0	102,2
Heating efficiency under partial load (Hi) (Return temperature 60°C)	-	%	94,9	94,9	96,1	96,3
Heating efficiency under partial load (EN 92/42) (Return temperature 30°C)	-	%	108,8	108,5	108,0	108,2
Data on the gases and combustion gases						
Gas consumption - Natural gas H (G20)	minimum-maximum	m^3/h	0,33 - 1,59	0,33 - 1,59	0,55 - 3,10	0,69 - 3,71
Gas consumption - Natural gas L (G25)	minimum-maximum	m^3/h	0,38 - 1,85	0,38 - 1,85	0,64 - 3,61	0,80 - 4,32
Gas consumption - Propane G31	minimum-maximum	m^3/h	0,13 - 0,61	0,13 - 0,61	0,21 - 1,20	0,27 - 1,44
NOx-Emission (Scrolls forward EN297A3)		mg/kWh	33	33	38	41
Mass flue gas flow rate	minimum-maximum	kg/h	5,3 - 25,2	5,3 - 25,2	8,9 - 49,3	11,1 - 57,3
Flue gas temperature	minimum-maximum	°C	30 - 65	30 - 65	30 - 80	30 - 75
Maximum counter pressure		Pa	22	80	120	140
Characteristics of the heating circuit						
Water content (ex expansion vessel)		l	1,9	1,9	1,9	2,5
Water operating pressure	minimum	kPa (bar)	80 (0,8)	80 (0,8)	80 (0,8)	80 (0,8)
Water operating pressure (PMS)	maximum	kPa (bar)	300 (3,0)	300 (3,0)	300 (3,0)	300 (3,0)
Water temperature	maximum	°C	110	110	110	110
Operating temperature	maximum	°C	90	90	90	90
Electrical characteristics						
Power supply voltage		VAC	230	230	230	230
Power consumption - Full load	maximum	W	101	101	116	173
Power consumption - Part load	maximum	W	25	25	25	68
Power consumption - Standby	maximum	W	4	4	4	4
Electrical protection index			IP21	IP21	IP21	IP21
Other characteristics						
Weight (empty)		kg	56	56	56	50

3.4.1. Sensor characteristics

Outside sensor												
Temperature in °C	-20	-16	-12	-8	-4	0	4	8	12	16	20	24
Resistance in Ω	2392	2088	1811	1562	1342	1149	984	842	720	616	528	454

Outlet sensor circuit B+C Domestic hot water sensor System sensor Flow sensor - Return sensor NTC										
Temperature in °C	0	10	20	25	30	40	50	60	70	80	90
Resistance in Ω	32014	19691	12474	10000	8080	5372	3661	2535	1794	1290	941

4 Installation

4.1 Regulations governing installation

> ⚠️ **WARNING**
>
> Installation of the appliance must be done by a qualified engineer in accordance with prevailing local and national regulations.

4.2 Package list

4.2.1. Standard delivery

The delivery includes:

- ▸ The boiler, fitted with a connection cable
- ▸ Outside sensor
- ▸ Installation and Service Manual
- ▸ User Guide

4.2.2. Accessories

Various options are available depending on the configuration of the installation.

Boiler options	
Description	**package**
Condensates neutralisation station	DU13
Condensates neutralisation station without lift pump	BP52
Flue gas safety thermostat	JA38
adapter 80/125	HR38
3-way internal valve kit	JA6
External circuit kit	JA7
Direct elbow	JA43
Propane conversion kit AGC 15	JA39
Propane conversion kit AGC 25	JA40
Propane conversion kit AGC 35	JA41

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| Control system options	
Description	**package**
RX12 cable	AD134
TELCOM 2 voice remote monitoring module	AD152
Flow sensor	AD199
DHW sensor	AD212
Optional PCB for 3-way valve	AD249
Hot water storage tank sensor	AD250
Outside radio-controlled temperature sensor	AD251
Boiler radio module	AD252
Radio remote control	AD253
Interactive remote control	AD254
Room sensor	FM52

| Domestic hot water tank options	
Description	**package**
100HL domestic hot water calorifier	ER225
160SL domestic hot water calorifier	ER223
220SHL domestic hot water calorifier	ER220
Boiler and DHW calorifier connection kit SL / SSL	JA8
Boiler and DHW calorifier connection kit HL / SHL	JA9
Boiler and DHW calorifier connection kit	JA10

4.3   Choice of the location

4.3.1.   Data plate

C003074-E

The data plates provide important information on the appliance: serial number, model, gas category, etc.

❶   This data plate is affixed to the inside side panel of the appliance in the factory.

❷   When installation has been completed, affix the data plate provided in the instructions bag to the casing of the appliance in a position where it can be seen.
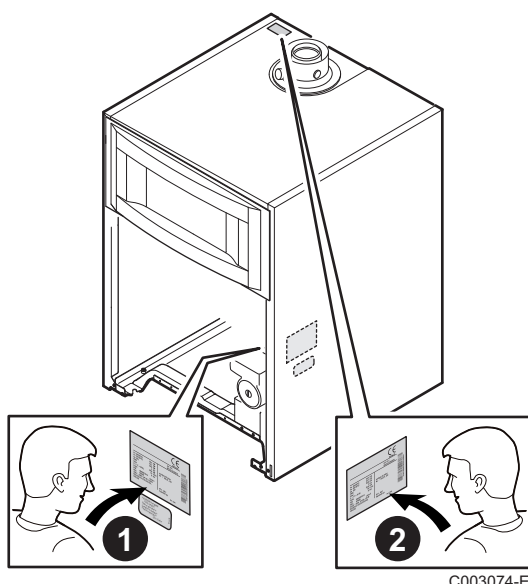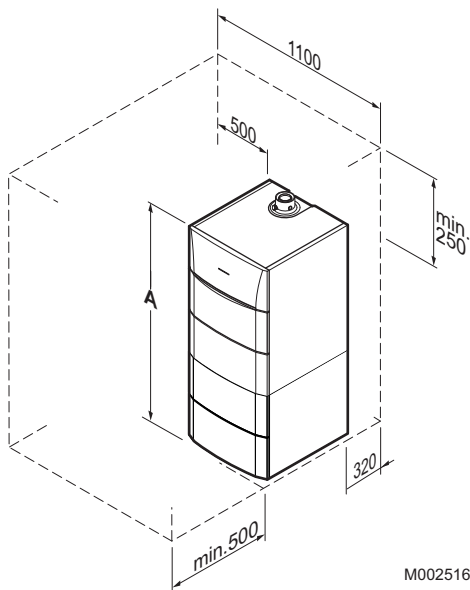
4.3.2.   Location of the appliance
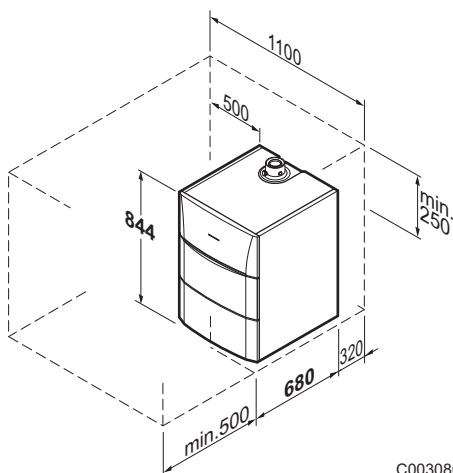
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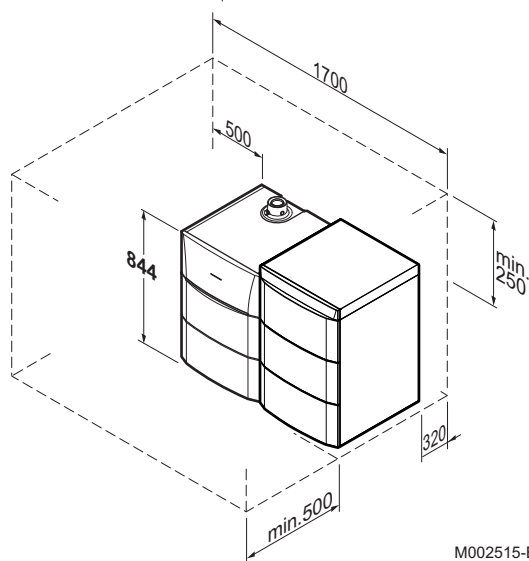
M002515-B

M002516-B

▸ Before mounting the boiler, decide on the ideal position for mounting, bearing the Directives and the dimensions of the appliance in mind.
▸ When choosing the position for mounting the boiler, bear in mind the authorised position of the combustion gas discharge outlets and the air intake opening.
▸ To ensure adequate accessibility to the appliance and facilitate maintenance, leave enough space around the boiler.

⚠ **WARNING**

It is forbidden to store inflammable products and materials in the boiler room or close to the boiler, even temporarily.

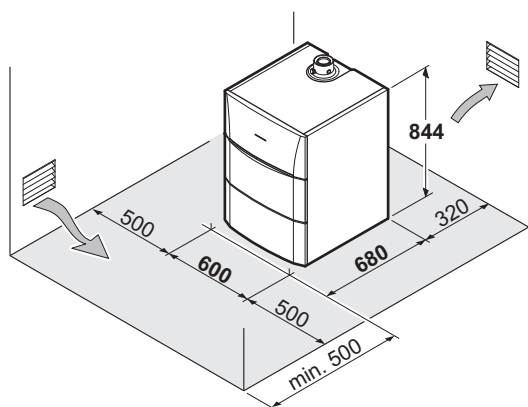⚠ **CAUTION**

▸ The boiler must be installed in a frost-free environment.
▸ A connection to the mains drainage system for the discharge of condensate must be available close to the boiler.

DHW calorifier type	A
100 HL	1408
160 SL	1688
220 SHL	1968

4.3.3.   Ventilation

C003075-D

If the boiler is installed as B_{23} or C_{53}, respect the minimum dimensions given in the diagram opposite.
Also allow openings to obviate the following hazards:

‣ Accumulation of gas

4.3.4.   Main dimensions

■ Key

①	Direct heating circuit return	G¾"
②	Direct heating circuit flow	G¾"
③	Gas supply	G1/2"
④	Condensates discharge - PVC pipe	Ø 24x19 mm
⑤	Primary return independent DHW tank - Package JA10	G¾"
⑥	Primary flow independent DHW tank - Package JA10	G¾"
⑦	Heating flow circuit with mixing valve - Package JA6 / JA7	G¾"
⑧	Heating return circuit with mixing valve - Package JA6 / JA7	G¾"
⑩	Domestic cold water inlet	G¾"
⑪	Domestic hot water outlet	G¾"
⑫	DHW circulation loop return - Pipe	G¾"
⑬	DHW drain valve (on the front of the DHW tank)	ext. Ø 14 mm
⑭	Primary solar coil inlet	ext. Ø 18 mm
⑮	Primary solar coil outlet	ext. Ø 18 mm
⑯	Air/flue gas connection	Ø 60/100 mm
(1)	Adjustable feet	9,5 to 16 mm

■ **Boiler only**

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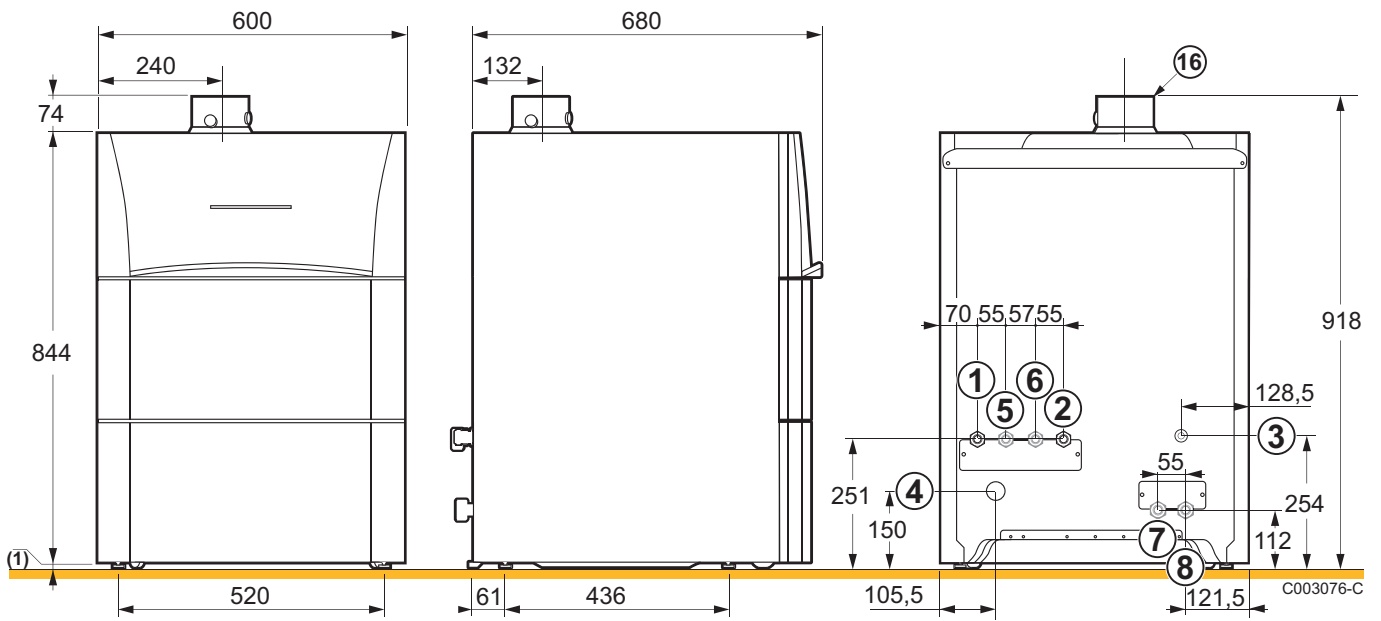
■ **Boiler with 100HL type domestic hot water tank**

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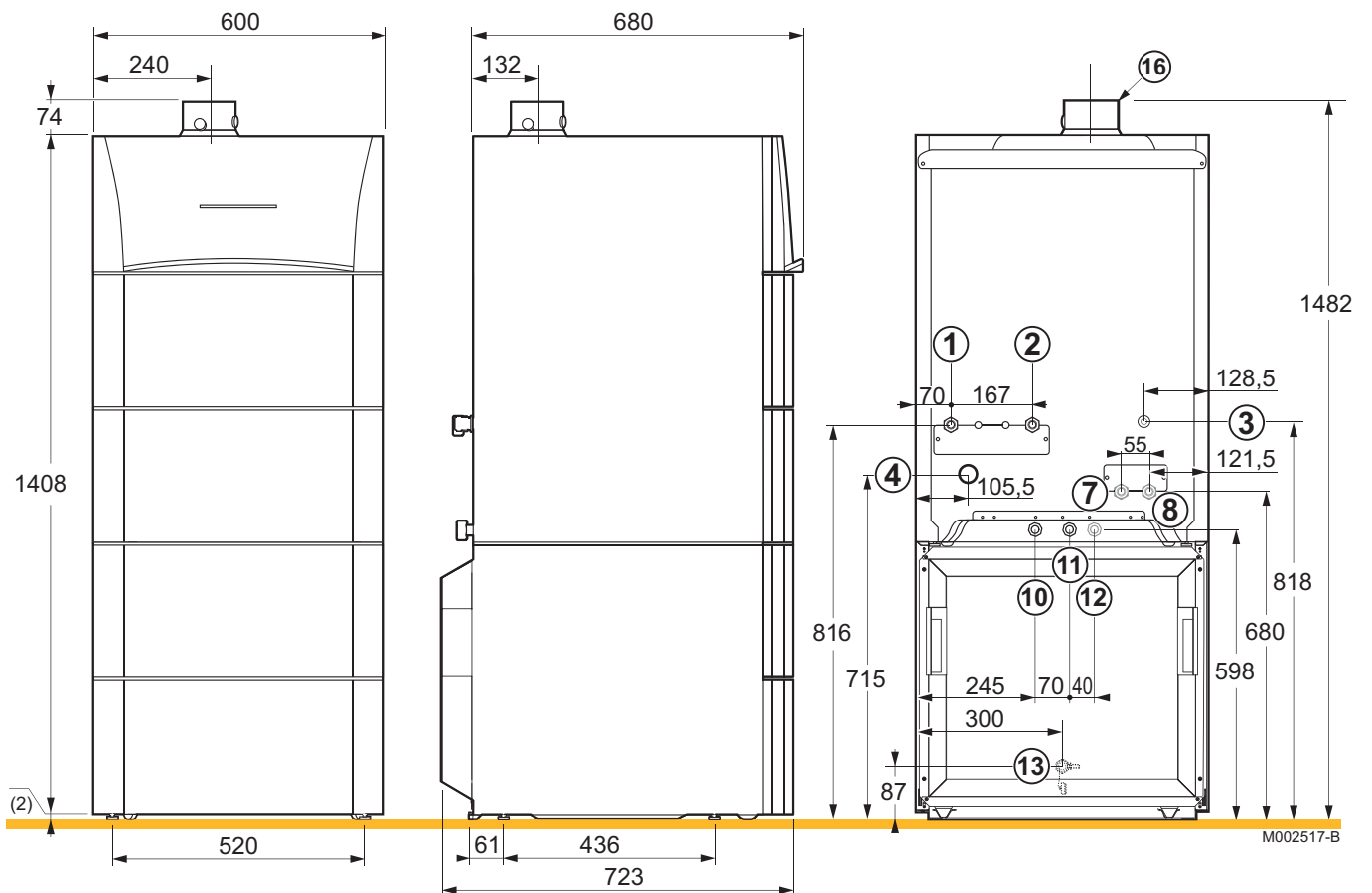
■ Boiler with 160SL type domestic hot water tank

M002518-B

M002519-D
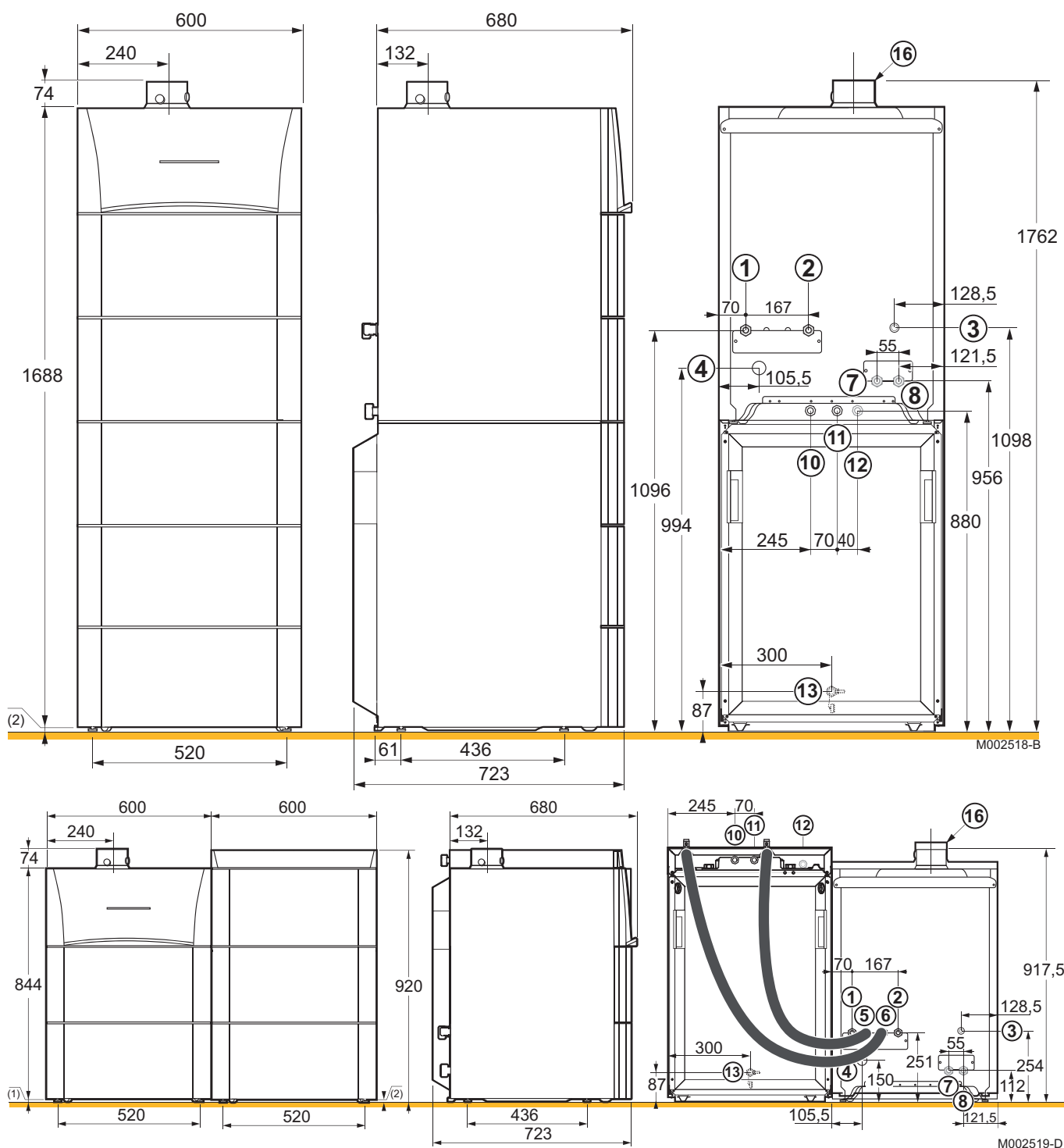
■ **Boiler with 220SHL type domestic hot water tank**

M002520-B

M002521-C
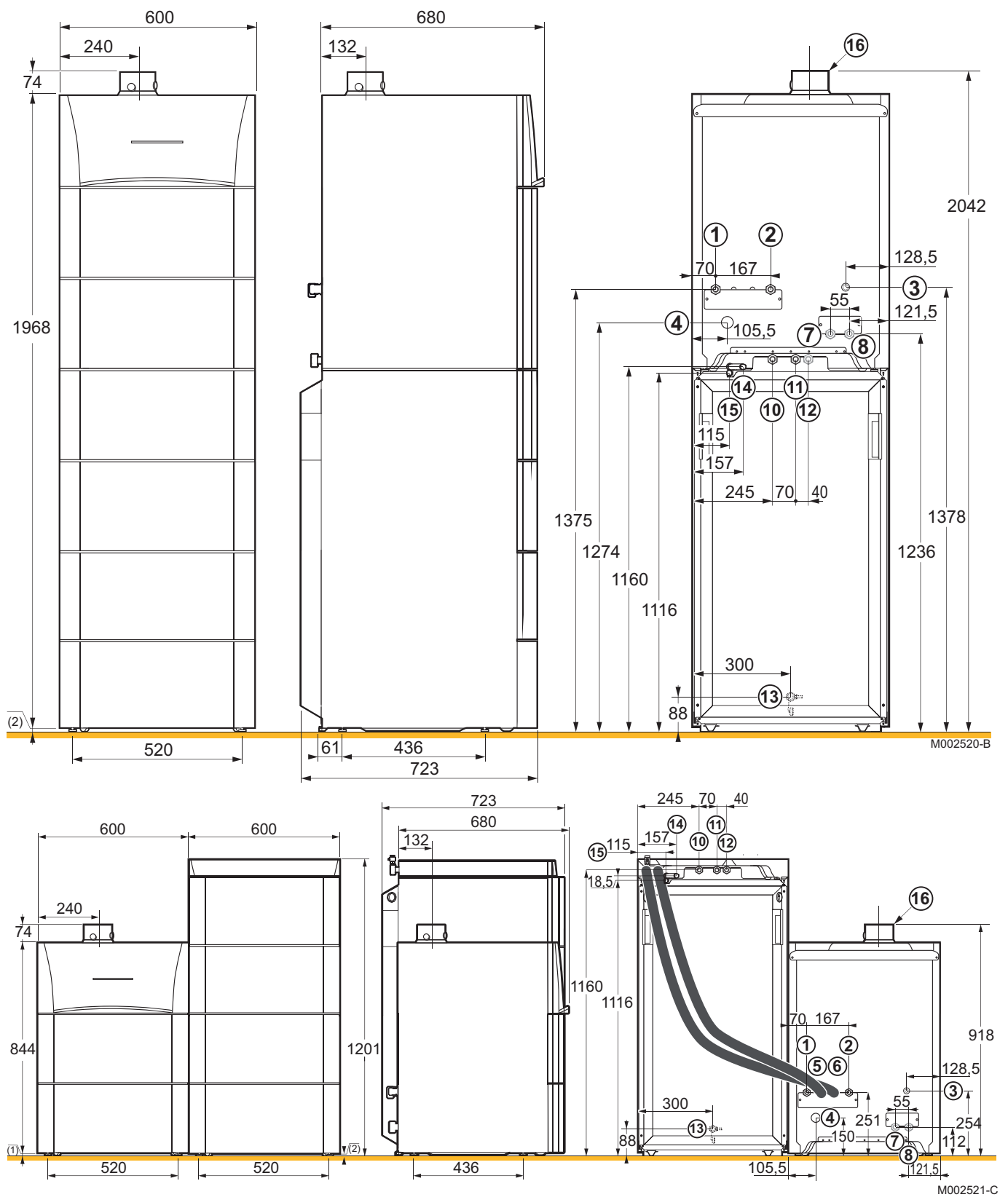
4.4   Positioning the appliance

> ⚠️ **CAUTION**
>
> ‣   Have 2 people on hand.
> ‣   Handle the appliance with gloves.

4.4.1.   Positioning the boiler on its own

1. Remove the packaging from the boiler but leave the shipping pallet in place.
2. Remove the protective packaging.

ℹ️   The technical documentation is housed in the protective block.

C003109-B
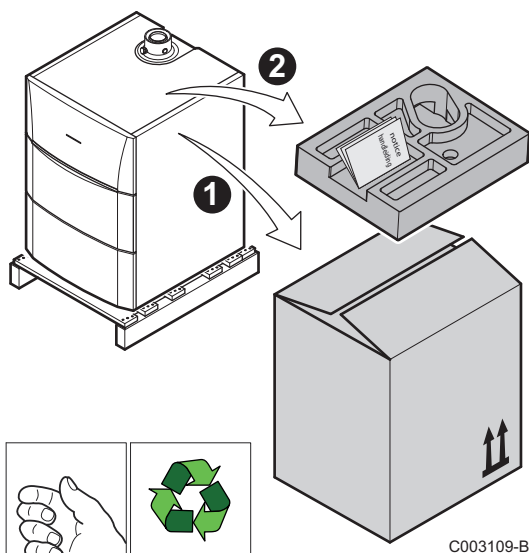
3. Open the access door on the control panel.
4. Insert a screwdriver to unclip the springs at both ends.
5. Remove the front panel.

C003110-B
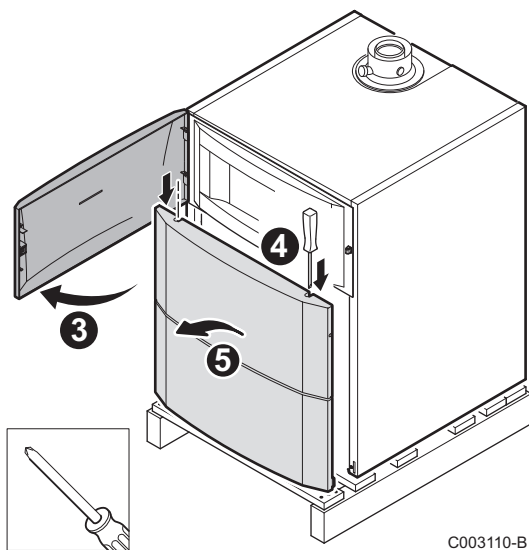
6. Remove the retaining screws.

C003111-C
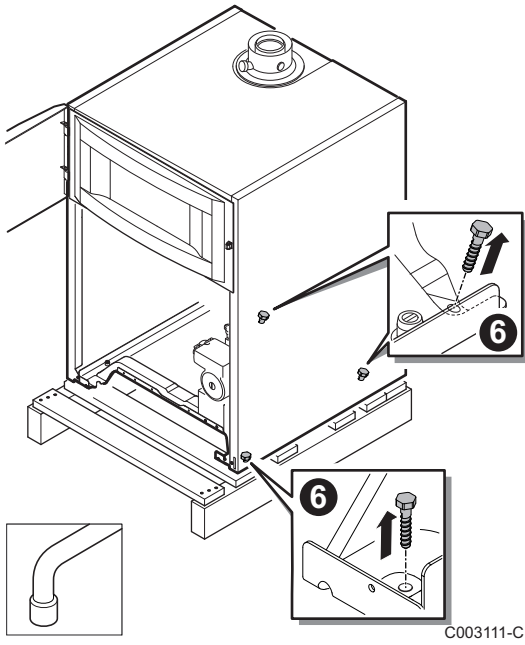
7. Lift the boiler and position it on the ground

C003217-B
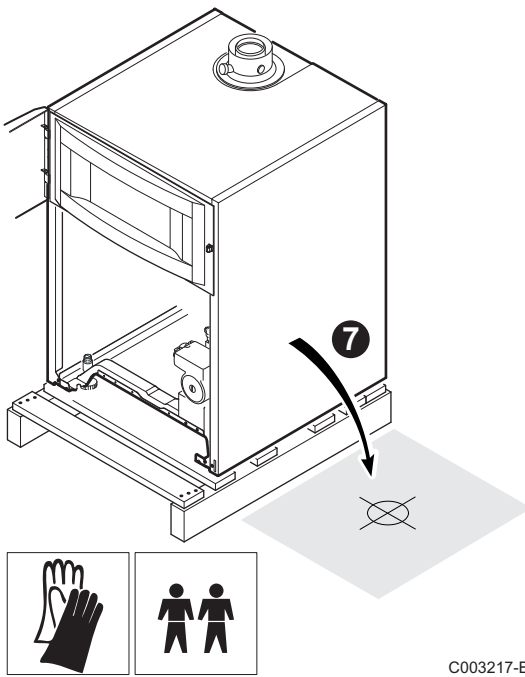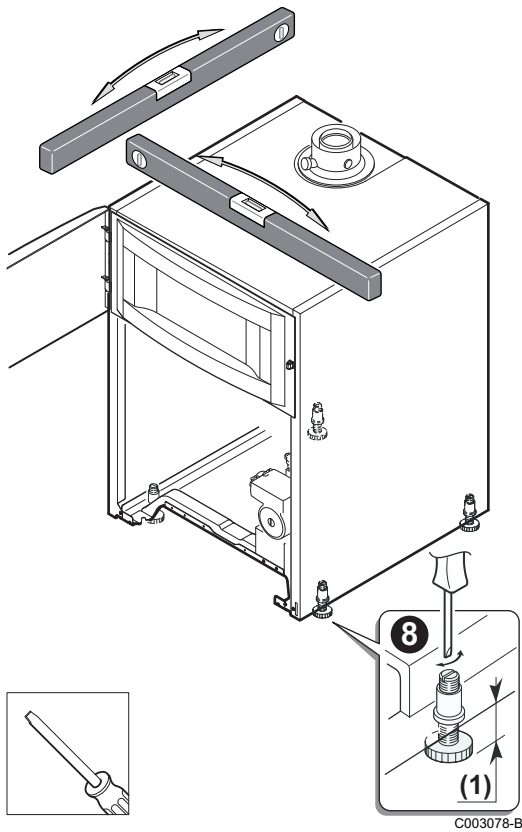
8. Level the appliance using the adjustable feet.
    (1) Adjustment range: 5.5 to 16 mm
9. Refit the front panel.

C003078-B

4.4.2.   Fitting the boiler to a DHW tank

1. Put the DHW tank in place.
    ☞ Refer to the DHW tank's installation, use and maintenance instructions.
2. Carry out steps 1 to 6 described above.
    ☞ See chapter "Positioning the boiler on its own", page 25
3.
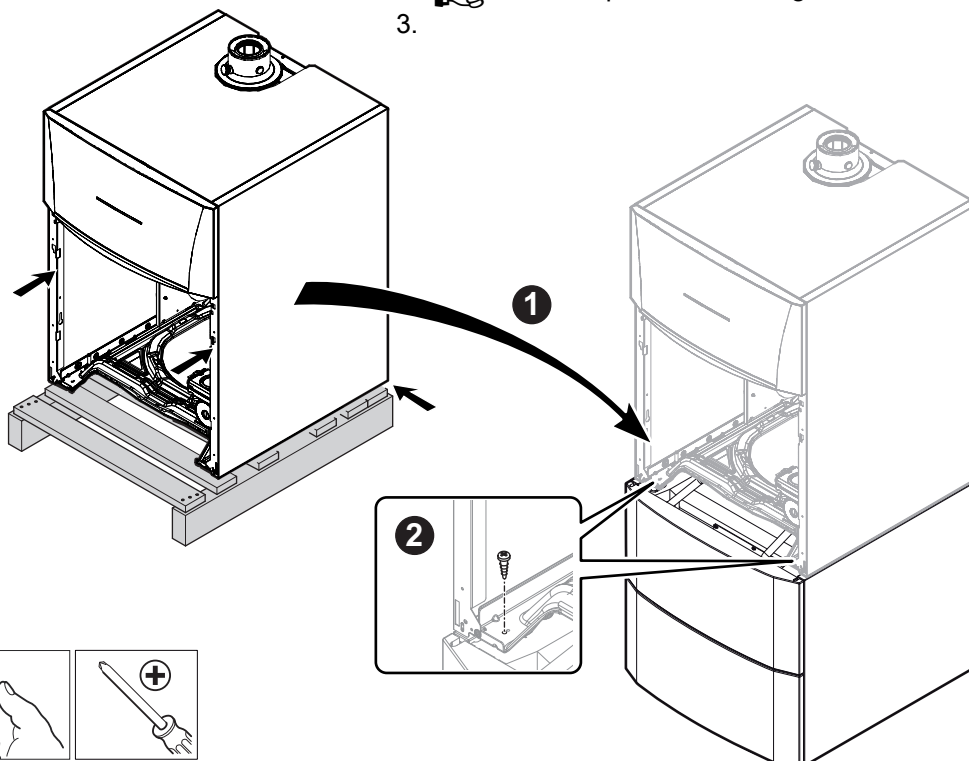
M002522-A

Position the boiler on the DHW tank.

4. Put the 2 screws in place at the front to attach the boiler to the DHW tank.

4.4.3.   Positioning the boiler to the left or right of a DHW tank

1. Put the DHW tank in place.
   ☞ Refer to the DHW tank's installation, use and maintenance instructions.
2. Put the boiler in place.
   ☞ See chapter "Positioning the boiler on its own", page 25

4.4.4.   Reversing the opening direction of the control panel door

As standard, the control panel access door opens to the left. To open the control panel access door to the right, proceed as follows:

1. Open and remove the control panel door.

C003099-D
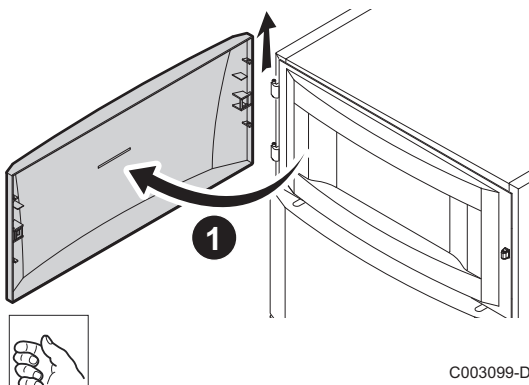
2. Take the control system module out of its housing and disconnect it.
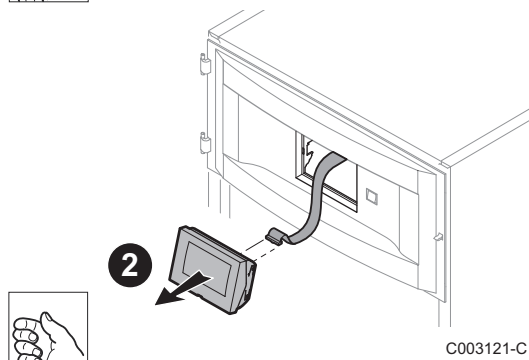
C003121-C

3. Lift and pivot the control system module support.
4. Remove the control panel.

C003122-D

De Dietrich

M002523-B
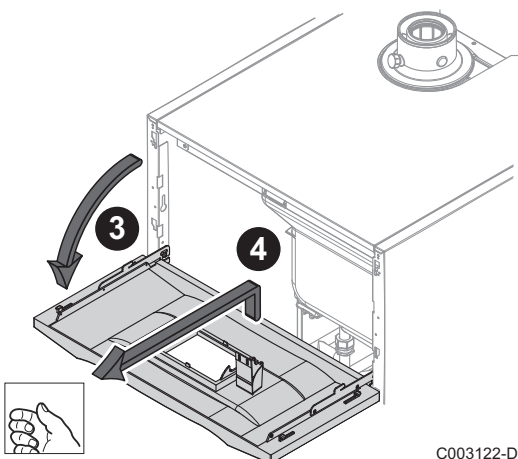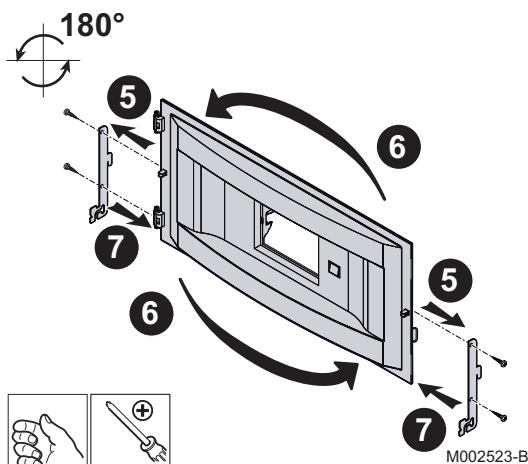
5. Unscrew the 4 lateral holding screws.
6. Pivot the holder by 180°.
7. Screw the 4 lateral holding screws back in.
8. Follow in reverse order for re-assembly.

> ▸ Do not disconnect the switch.
> ▸ The switch remains on the panel and will therefore be to the left of the control panel.

4.5 Hydraulic connections

4.5.1. Flushing the system

Installation must be carried out in accordance with the prevailing regulations, the codes of practice and the recommendations in these instructions.

■ **Fitting the appliance to new installations**

▸ Clean the installation with a universal cleaner to eliminate debris from the appliance (copper, flaxen thread, flux).
▸ Thoroughly flush the installation until the water runs clear and shows no impurities.

■ **Fitting the appliance to existing installations**

▸ Remove sludge from the installation.
▸ Flush the installation.
▸ Clean the installation with a universal cleaner to eliminate debris from the appliance (copper, flaxen thread, flux).
▸ Thoroughly flush the installation until the water runs clear and shows no impurities.
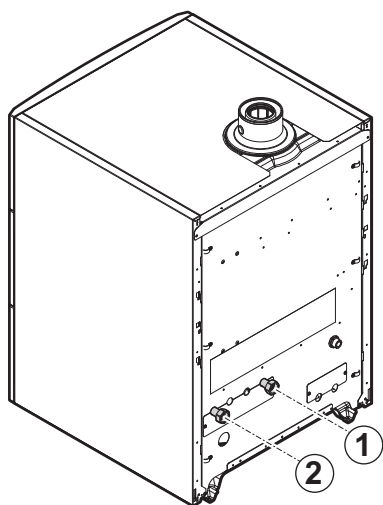
4.5.2. Hydraulic connection of the heating circuit

M002524-A

1. Connect the heating water outlet pipe to the heating flow connection.
2. Connect the heating water return pipe to the heating return connection.
3. Install a filling and drainage valve on the installation for filling and draining the boiler.

ℹ️ ▸ The boiler is equipped with a safety valve.

⚠️ **CAUTION**

▸ The heating pipe must be mounted in accordance with prevailing provisions.

☞ If using thermostatic valves, see chapter: "Connecting the expansion vessel", page 30

4.5.3. Hydraulic connection of the water circuit for domestic use

☞ If need be, refer to the DHW tank's installation, user and maintenance manual.

4.5.4. Connecting the expansion vessel

AGC 15 and AGC 25 boilers are fitted as standard with a 18-litre expansion vessel.
The AGC 35 is not fitted with an expansion vessel. Install the expansion vessel on the heating return pipe (⬓▷).

If the water volume is greater than 225 litres or the static height of the system exceeds 5 metres, an additional expansion vessel must be fitted. Refer to the table below to determine the expansion vessel required for the installation.

Conditions of validity of the table:

▸ 3-bar safety valve

▸ Average water temperature: 70 °C
Supply temperature: 80 °C
Return temperature: 60 °C

▸ The filling pressure in the system is lower than or equal to the initial pressure in the expansion vessel

Initial pressure of the expansion vessel	Volume of the expansion vessel depending on the volume of the installation (in litres)							
	100	125	150	175	200	250	300	> 300
0.5 bar	4,8	6,0	7,2	8,4	9,6	12,0	14,4	Volume of the installation x 0,048
1 bar	8,0	10,0	12,0 [(1)]	14,0	16,0	20,0	24,0	Volume of the installation x 0,080
1.5 bar	13,3	16,6	20,0	23,3	26,6	33,3	39,9	Volume of the installation x 0,133
(1) Factory configuration								

> **i** On an installation in which the flow can be fully disconnected from the return (e.g. by using thermostatic valves), a bypass should be fitted or an expansion vessel placed on the heating flow pipe.

4.5.5.   Connecting the condensate discharge pipe
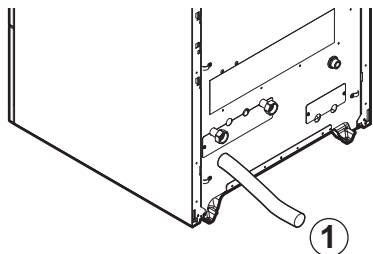
M002535-A

1. Mount a standard drainage pipe, Ø 32 mm or more, leading to the mains drainage system.
2. Mount the flow collector.
3. Into this, insert the condensate collector hose coming from the siphon ⌇.
4. Mount a trap or a siphon in the discharge pipe.

> ⚠ **CAUTION**
>
> Do not make a fixed connection owing to maintenance work on the siphon.

> **i**
> ‣ Do not plug the condensate discharge pipe.
> ‣ Set the discharge pipe at a gradient of at least 30 mm per metre, maximum horizontal length 5 metres.
> ‣ Do not drain condensation water into a roof gutter at any time.
> ‣ Connect the condensate discharge pipe in accordance with prevailing standards.

4.5.6. Filling the siphon
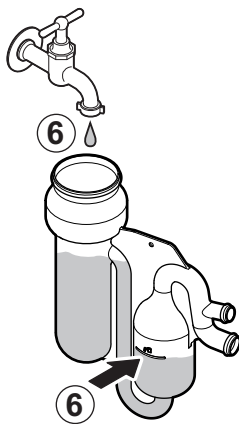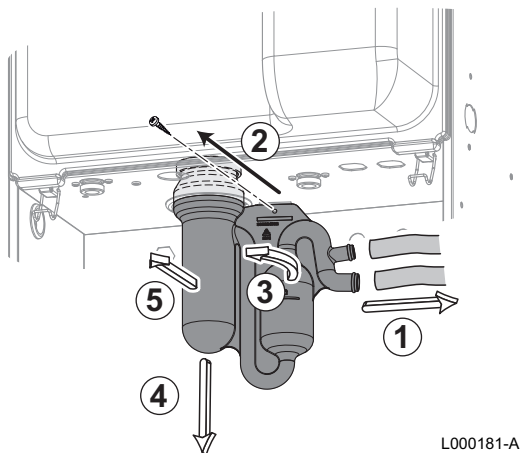
1. Remove the siphon.
2. Fill the siphon with water. This must be filled up to the level markers.
3. Re-assemble the siphon.

> ⚠️ **CAUTION**
>
> Fill the water siphon before starting the boiler to avoid combustion products escaping from the boiler.

L000181-A

C003098-E

4.6 Gas connection

> ⚠️ **DANGER**
>
> Before making the gas connections, ensure that the boiler is immobilised in accordance with prevailing standards.
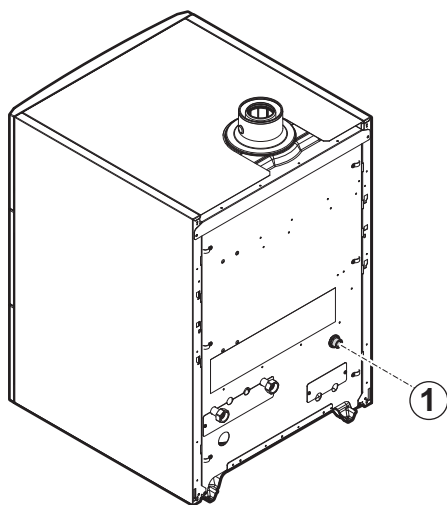
ℹ️ The diameters of the pipes must be defined in accordance with the standards in force in your country.

1. Connect the gas inlet pipe.
2. Fit a gas stop valve to this pipe in such a way that it is visible and easily accessible.
3. Connect the gas pipe to the gas shut off valve.

M002525-A

⚠️ **WARNING**

‣ Close the main gas valve before starting work on the gas pipes.

‣ Before mounting, check that the gas meter has sufficient capacity. To do this, you should keep in mind the consumption of all domestic appliances.

‣ If the gas meter has too low a capacity, inform the energy supply company.

⚠️ **CAUTION**

‣ Ensure that there is no dust in the gas pipe. Blow into the pipe or shake it before mounting.

‣ We recommend installing a gas filter on the gas pipe to prevent clogging of the gas valve unit.

‣ Connect the gas pipe in accordance with prevailing standards and regulations.

4.7   Flue gas system connections

⚠️ **DANGER**

Ensure that the flue gas pipes are held firmly in place in order to prevent any dislocation.

4.7.1.   Classification

C003087-A
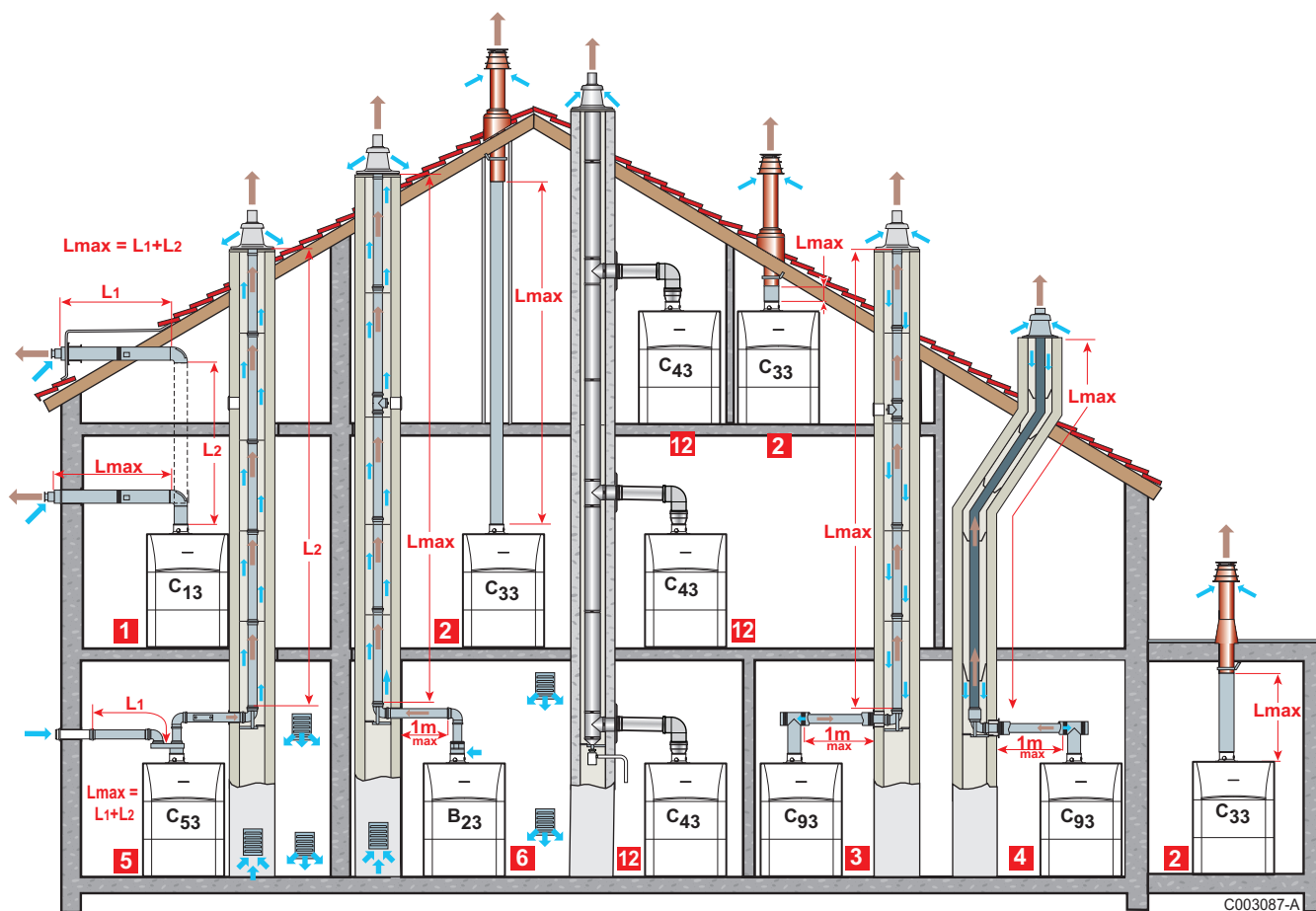
1   **Configuration C_{13}**

Air/flue gas connection by means of concentric pipes to a horizontal terminal (so-called forced flue)

2   **Configuration C_{33}**

Air/flue gas connection by means of concentric pipes to a vertical terminal (roof outlet)

3   **Configuration C_{93}**

Air/flue gas connection by concentric pipes in the boiler room and single pipes in the chimney (combustive air in counter current in the chimney)

4   **Configuration C_{93}**

Air/flue gas connection by concentric pipes in the boiler room and single flex in the chimney (combustive air in counter current in the chimney)

> ⚠ **WARNING**
>
> ▸ Only factory components are authorised for connecting the boiler and the terminal.
> ▸ The clear section must comply with the standard.
> ▸ The chimney must be swept before the installation of the evacuation conduit.

5	**Configuration C$_{53}$**
	Air and flue gas connection separated by means of a bi-flow adapter and single pipes (combustive air taken from outside)

6	**Configuration B$_{23}$**
	Connection to a chimney using a connection kit (combustive air taken from the boiler room)

12	**Configuration C$_{43}$**
	Air/flue gas connection to a collective pipe for sealed boilers (3CE or 3CEP system)

4.7.2.   Lengths of the air/flue gas pipes

i For configurations B23 and C93, the lengths given in the table are valid for horizontal conduits with a maximum length of 1 metre. For each additional metre of horizontal conduit, subtract 1.2 m from the vertical length Lmax

Type of air/flue gas connection			Diameter	Maximum length in metres			
				AGC 10/15	**AGC 15**	**AGC 25**	**AGC 35**
C$_{13}$	Concentric pipes connected to a horizontal terminal	Alu or PPS	60/100 mm	4.1	12.0	3.5	4.2
			80/125 mm	8.0	12.3	20.0	20.0
C$_{33}$	Concentric pipes connected to a vertical terminal	Alu or PPS	60/100 mm	5.9	13.0	4.9	5.5
			80/125 mm	6.8	10.7	20.0	20.0
C$_{93}$	Concentric pipes in the boiler room Single conduits in the chimney (combustive air in counter-current)	Alu or PPS	60/100 mm 60 mm (Rigid duct)	8.5	15.0	8.1	9.0
	Concentric pipes in the boiler room Flexible single conduit in the chimney	PPS	60/100 mm 80 mm (Flexible duct)	5.8	9.9	20.0	20.0
C$_{53}$	Bi-flow adapter and separate single air/flue gas ducts (combustive air taken from outside)	Alu	60/100 mm 2 x 80 mm	40.0	40.0	40.0	40.0
B$_{23}$	Chimney (rigid or flexible duct in chimney, combustive air taken from the premises)	PPS	80 mm (Rigid duct)	40.0	40.0	40.0	40.0
			80 mm (Flexible duct)	40.0	40.0	40.0	40.0
C$_{43}$	Collective conduit for sealed boiler (3 CE or 3 CEP)	To determine the size of such a system, consult the supplier of the 3 CEP conduit.					

⚠ **WARNING**

Maximum length = lengths of the straight air/flue gas ducts + equivalent lengths of other components

For the list of flue gas system accessories and the equivalent lengths, refer to the current price list.

4.8 Installing the outside sensor

4.8.1. Choice of the location

It is important to select a place that allows the sensor to measure the outside conditions correctly and effectively.

Advised positions:

‣ on one face of the area to be heated, on the north if possible
‣ half way up the wall in the room to be heated
‣ under the influence of meteorological variations
‣ protected from direct sunlight
‣ easy to access

A	Recommended position
B	Possible position
H	Inhabited height controlled by the sensor
Z	Inhabited area controlled by the sensor

8800N001-C

8800N002-C
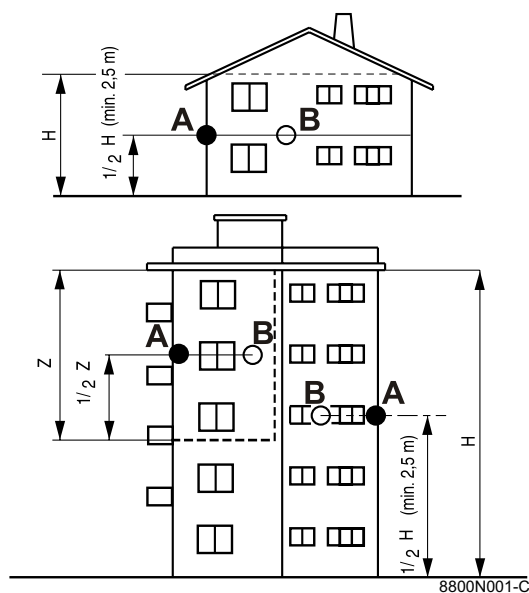
Positions to be avoided:

‣ masked by a building element (balcony, roof, etc.)
‣ close to a disruptive heat source (sun, chimney, ventilation grid, etc.)
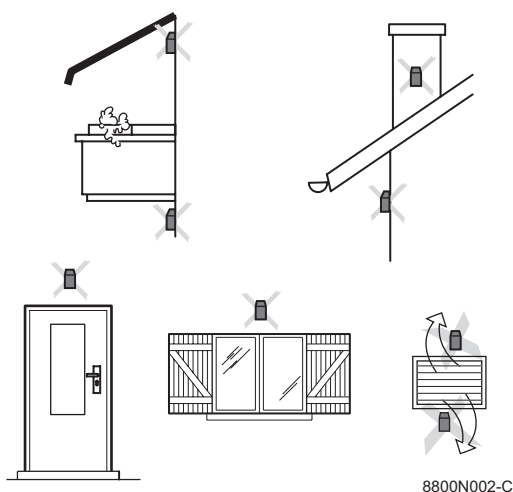
4.8.2. Connecting the outside sensor

Mount the sensor using the screws and dowels provided.

De Dietrich
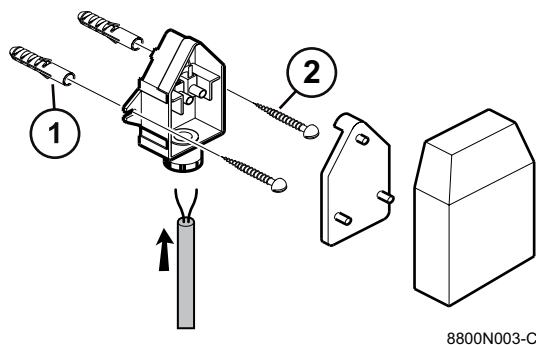
①   Inserts

②   Ø4 wood screw

☞ For the connection of the outside temperature sensor, refer to the chapter "Electrical Connections".

8800N003-C

4.9 Electrical connections

4.9.1. Control unit

The boiler is fully pre-wired. The electricity supply is made via connection cable to the mains (hard mounted). All other external connections can be made to the connection connectors (low voltage). The main characteristics of the control unit are described in the table below.

Power supply voltage	230 V AC / 50 Hz
Rating of the main fuse F1 (230 VAC)	6.3 AT
Fan-DC	27 VDC

⚠ **CAUTION**

Keep to the polarity shown on the terminals: phase (L), neutral (N) and earth ⏚.

①   Routing of the 230 V cables

②   Routing of the sensor cables

⚠ **CAUTION**

The following components of the appliance are at a voltage of 230 V:

▸   Boiler pump

▸   Combined venturi and gas valve unit

▸   3-way valve

▸   The majority of components in the control panel and the terminal box

▸   Power supply cable.

M002532-A

4.9.2. Recommendations

> **⚠ WARNING**
>
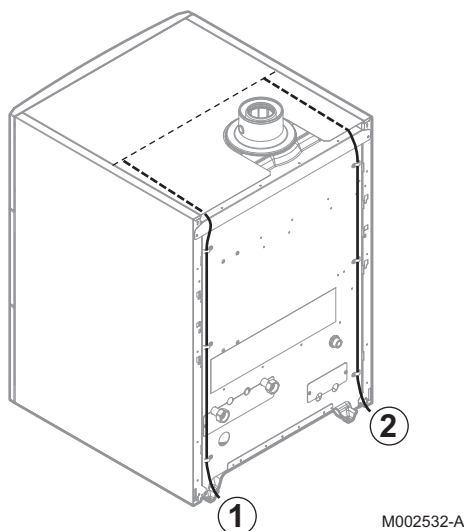> ‣ Only qualified professionnals may carry out electrical connections, always with the power off.
> ‣ The boiler is entirely pre-wired. Do not modify the connections inside the control panel.
> ‣ Earth the appliance before making any electrical connections.

> **⚠ WARNING**
>
> If the power cable is damaged, it must be replaced by the manufacturer, its after sales service or persons with similar qualifications in order to obviate any danger.

Make the electrical connections of the appliance according to:

‣ The instructions of the prevailing standards.
‣ The instructions on the circuit diagrams provided with the appliance.
‣ The recommendations in the instructions.

> **⚠ CAUTION**
>
> Separate the sensor cables from the 230 V cables.
>
> ‣ Outside the boiler: Use 2 pipes or cable guides at least 20 cm apart.

All connections are made with the terminal boxes designed for that purpose on the back of the boiler's command board. The connection cables are threaded into the boiler through the space provided between the top panel and the upper rear panel. These cables will be fixed on to the control panel with cable clips (supplied in a separate bag).

Power the appliance via a circuit which includes a remote omnipolar switch with a gap of more than 3 mm.

The available output per outlet is 450 W (2 A, with cos φ = 0.7) and the inrush current must be lower than 16 A. If the load exceeds either of these values, the control must be relayed using a contactor that must not be installed in the control panel under any circumstances.

> **⚠ CAUTION**
>
> Failure to comply with these instructions could lead to interference and control unit malfunctioning or even damage to the electronic circuitry.

4.9.3. Access to the connection terminal

C003099-D

1. Open and remove the control panel door.

C003101-B
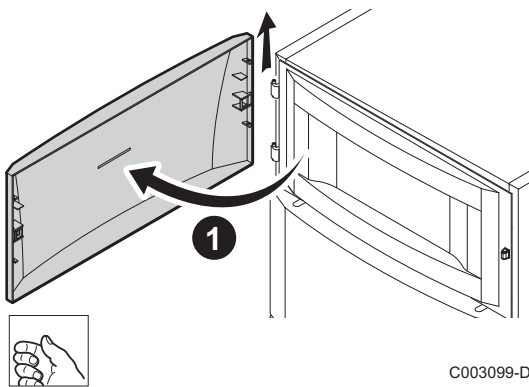
2. Insert a screwdriver to unclip the springs at both ends.
3. Remove the front panel.

C003102-B
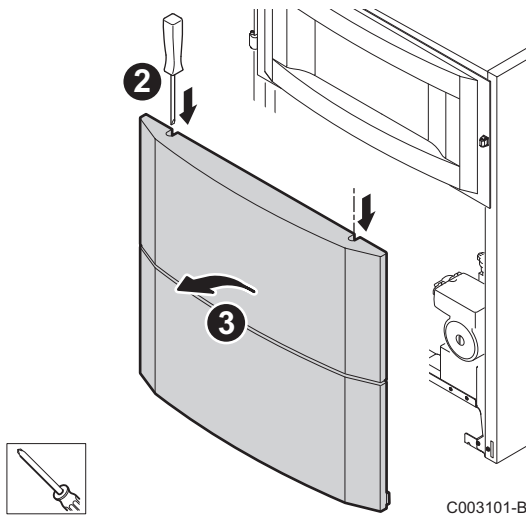
4. Lift and pivot the control system module support.
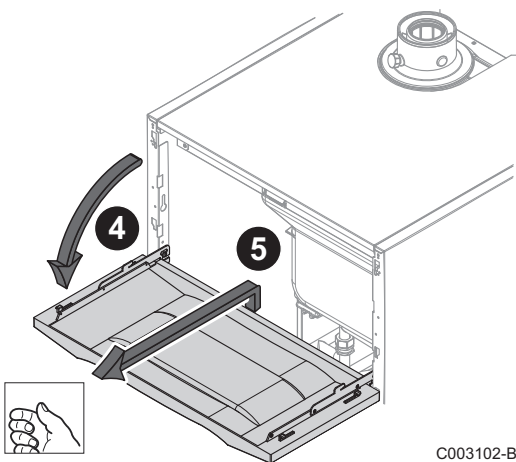
5. Remove the 2 retaining screws.
6. Remove the top panel.

C003103-B
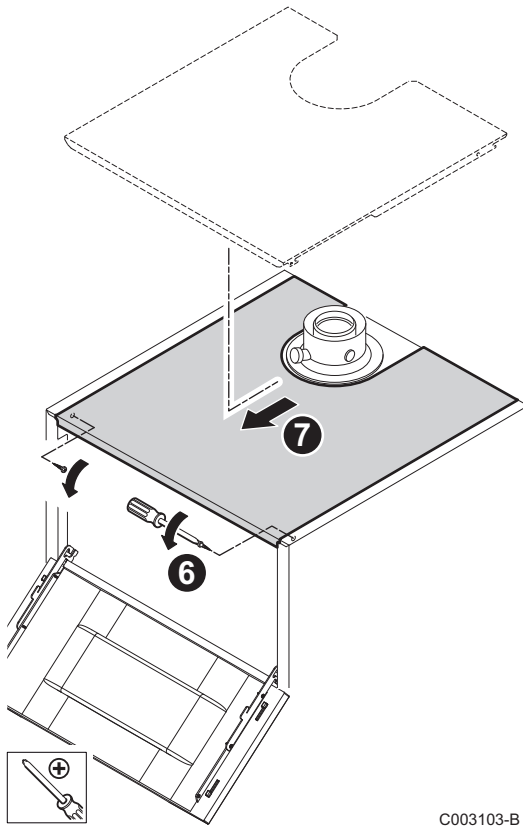
7. Remove the 2 retaining screws.
8. Disassemble the protective cover from the flat bars.

M002533-B
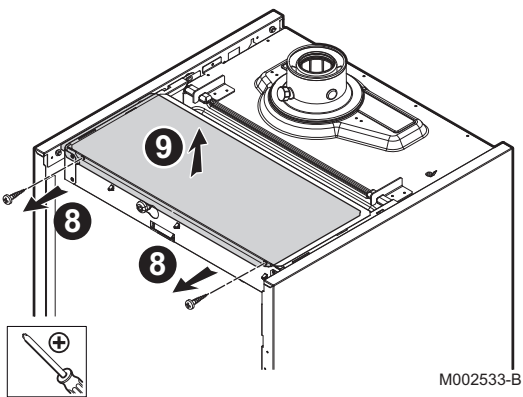
4.9.4.   Position of the PCBs

C003083-D
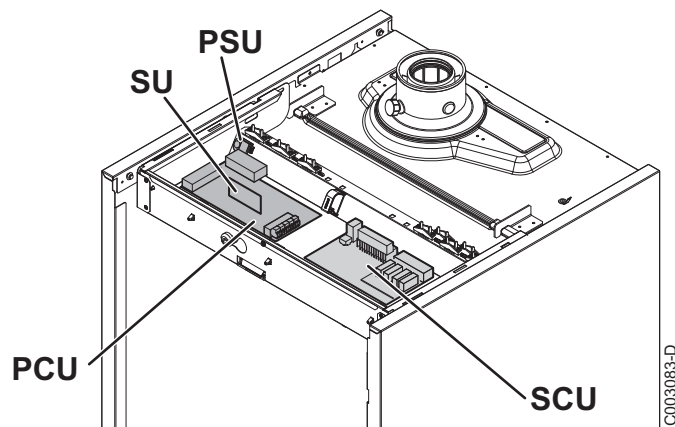
4.9.5.   Connecting a direct heating circuit
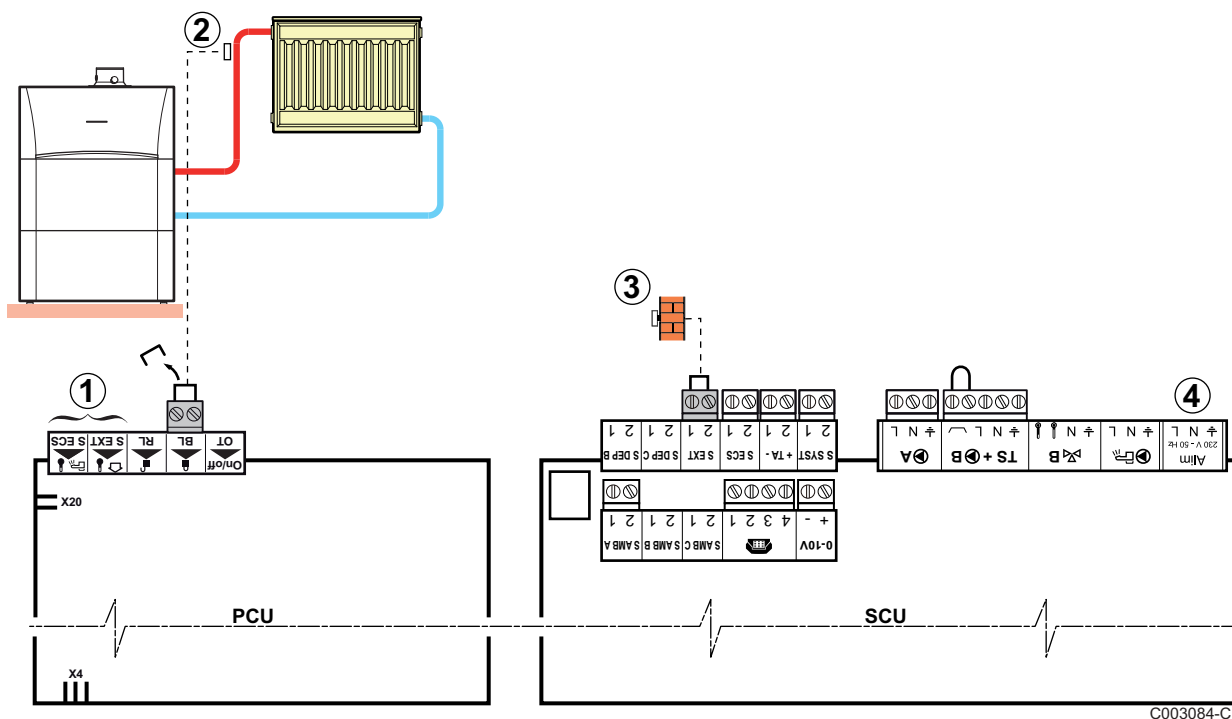
C003084-C

①   Do not connect anything to the terminal block.

②   Connect a safety thermostat if the heating circuit is for underfloor heating.

      ▸   Remove the bridge.

      ▸   Connect the wires from the safety thermostat to the connector.

③   Connect the outside temperature sensor.

④   Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	Access	Settings to be made	See chapter
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	🖝 "Displaying the parameters in extended mode", page 74
If safety thermostat is connected to **BL** on the connection terminal block: **IN.BL**	Installer level **#PRIMARY INSTAL.P** menu	**STOP HEAT**	🖝 "Professional settings", page 84

4.9.6. Connecting a heating circuit and a domestic hot water tank

■ **Connecting a direct heating circuit and a type HL or SHL DHW tank**

L000155-E

①   Do not connect anything to the terminal block.

②   Connect a safety thermostat if the heating circuit is for underfloor heating.

  ▸   Remove the bridge.
  ▸   Connect the wires from the safety thermostat to the connector.

③   Connect the DHW pump.

④   Connect the plate exchanger sensor.

⑤   Connect the DHW sensor.

⑥   Connect the outside temperature sensor.

⑦   Connect the DHW tank anode.

⑧   Connect the domestic hot water looping pump (Option)

⑨
⚠ **CAUTION**

Do not connect anything to the ▶⊡ outlet on the terminal block. The reversal valve is connected to the PCU PCB in the boiler.

⑩   Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	Access	Settings to be made	See chapter
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
If a domestic hot water looping pump is connected to ▷**A** on the terminal block: **O.PUMP A**[(1)]	Installer level **#SYSTEM** menu	**DHW LOOP**	☞ "Setting the parameters specific to the installation", page 75
If safety thermostat is connected to **BL** on the connection terminal block: **IN.BL**	Installer level **#PRIMARY INSTAL.P** menu	**TOTAL STOP**	☞ "Professional settings", page 84
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

■ Connecting a direct heating circuit and a type SL DHW tank

L000157-D
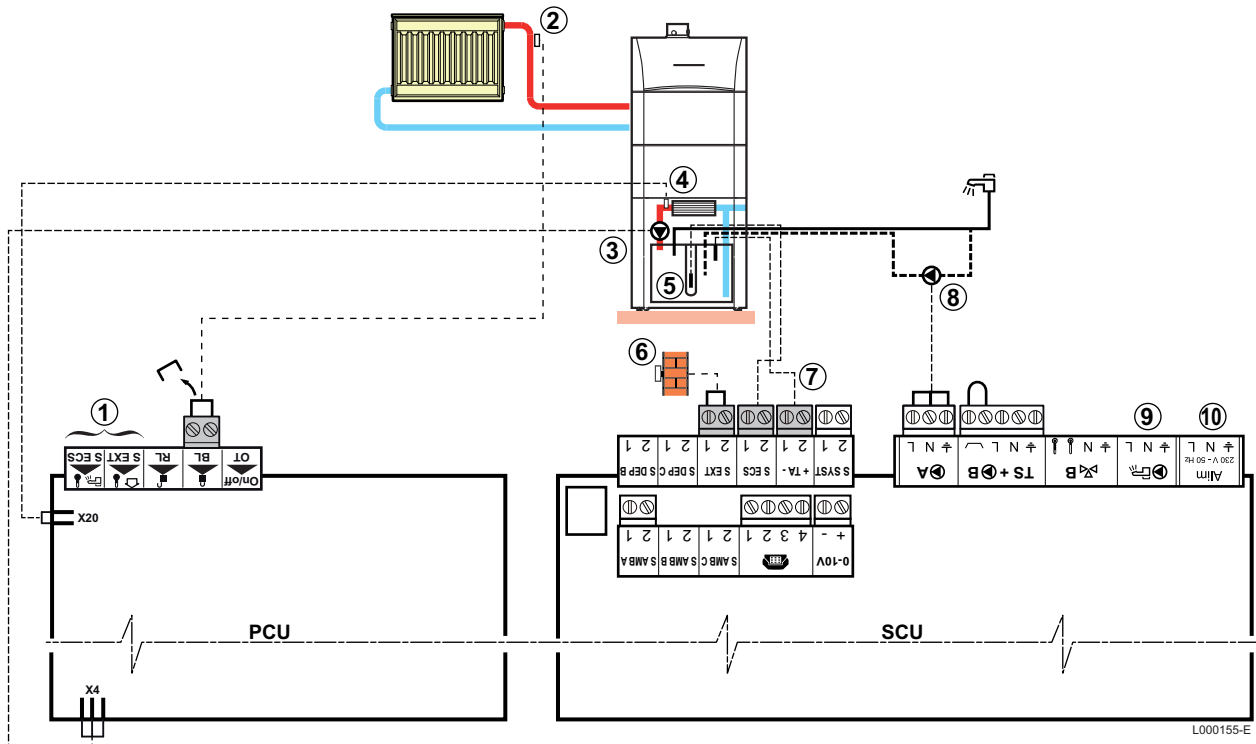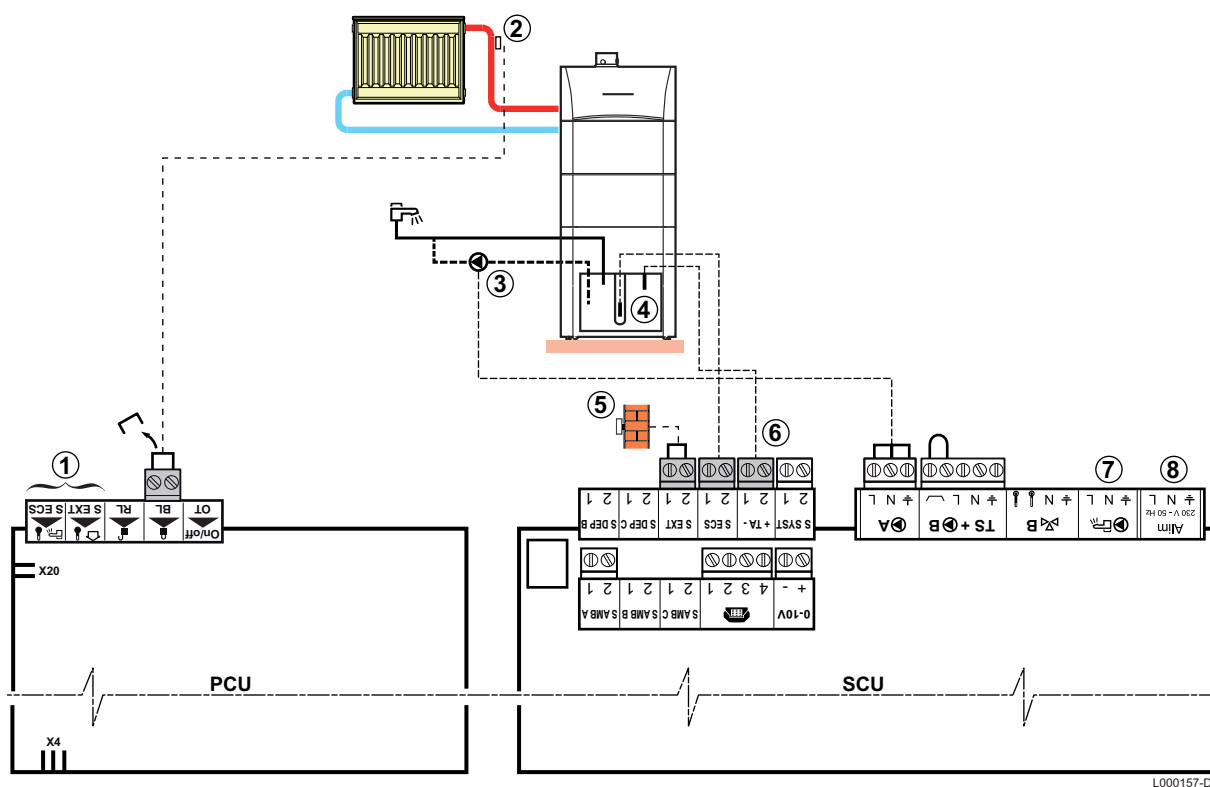
①   Do not connect anything to the terminal block.

②   Connect a safety thermostat if the heating circuit is for underfloor heating.

   ▸   Remove the bridge.

   ▸   Connect the wires from the safety thermostat to the connector.

③   Connect the domestic hot water looping pump (Optional).

④   Connect the DHW sensor.

⑤   Connect the outside temperature sensor.

⑥   Connect the DHW tank anode.

⑦   ⚠ **CAUTION**

Do not connect anything to the ⬤🚰 outlet on the terminal block. The reversal valve is connected to the PCU PCB in the boiler.

⑧   Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	Access	Settings to be made	See chapter
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	🔖 "Displaying the parameters in extended mode", page 74
If a domestic hot water looping pump is connected to ⬤**A** on the terminal block: **O.PUMP A**[(1)]	Installer level **#SYSTEM** menu	**DHW LOOP**	🔖 "Setting the parameters specific to the installation", page 75
If safety thermostat is connected to **BL** on the connection terminal block: **IN.BL**	Installer level **#PRIMARY INSTAL.P** menu	**TOTAL STOP**	🔖 "Professional settings", page 84
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

■ **Connecting a direct heating circuit and an independent domestic hot water tank**

C003085-C

①   Do not connect anything to the terminal block.

②   Connect the domestic hot water looping pump (Optional).

③   Connect the DHW sensor (Package AD212).

④   Connect the outside temperature sensor.

⑤   Connect the DHW tank anode.

> ⚠ **CAUTION**
>
> ▸   If the tank is fitted with a Titan Active System® impressed current anode, connect the anode to the inlet (+ on the anode, - on the tank).
> ▸   If the tank is not fitted with an impressed current anode, put the simulation connector in place (delivered with the DHW sensor - package AD212).

⑥   Connect a safety thermostat if the heating circuit is for underfloor heating.

▸   Remove the bridge.

▸   Connect the wires from the safety thermostat to the connector.

⑦   ⚠ **CAUTION**
>
> Do not connect anything to the ▶🔥 outlet on the terminal block. The reversal valve is connected to the PCU PCB in the boiler.
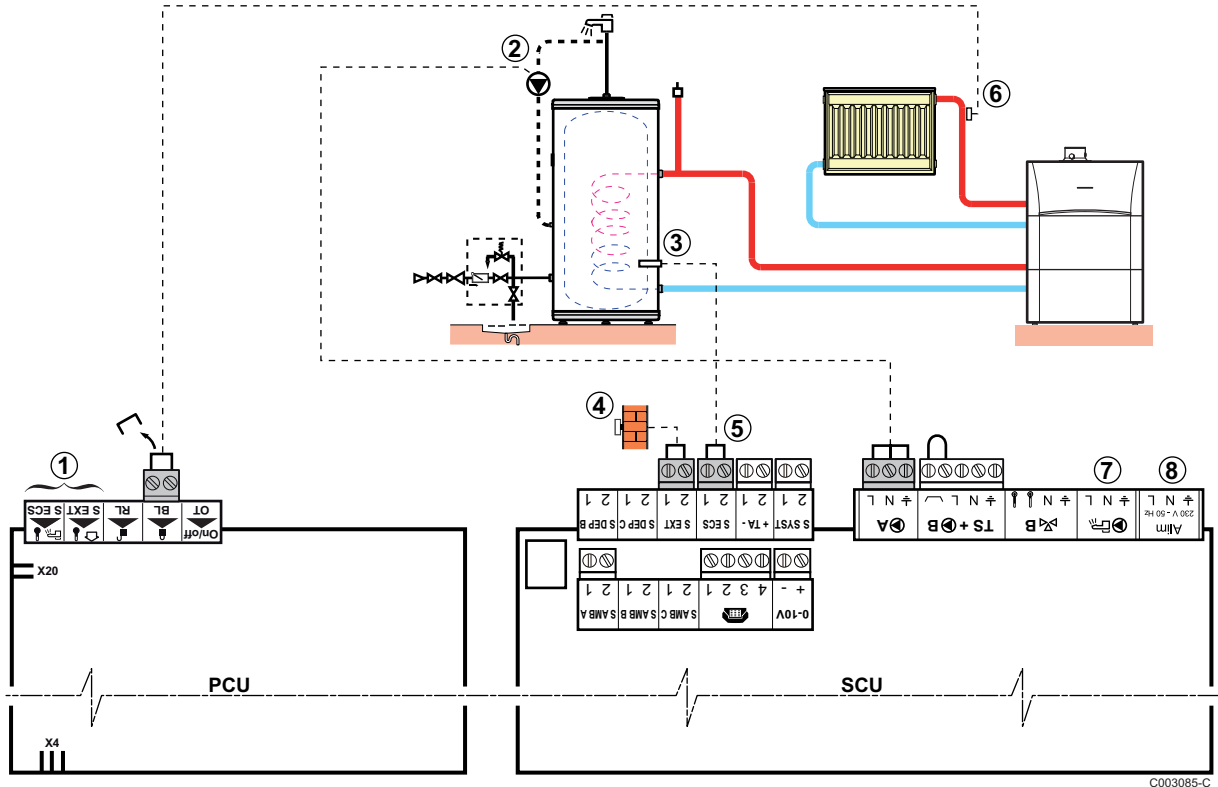
⑧   Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
If a domestic hot water looping pump is connected to ▶A on the terminal block: **O.PUMP A**[(1)]	Installer level **#SYSTEM** menu	**DHW LOOP**	☞ "Setting the parameters specific to the installation", page 75
If safety thermostat is connected to **BL** on the connection terminal block: **IN.BL**	Installer level **#PRIMARY INSTAL.P** menu	**TOTAL STOP**	☞ "Professional settings", page 84
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

4.9.7. Connecting two circuits and a domestic hot water tank
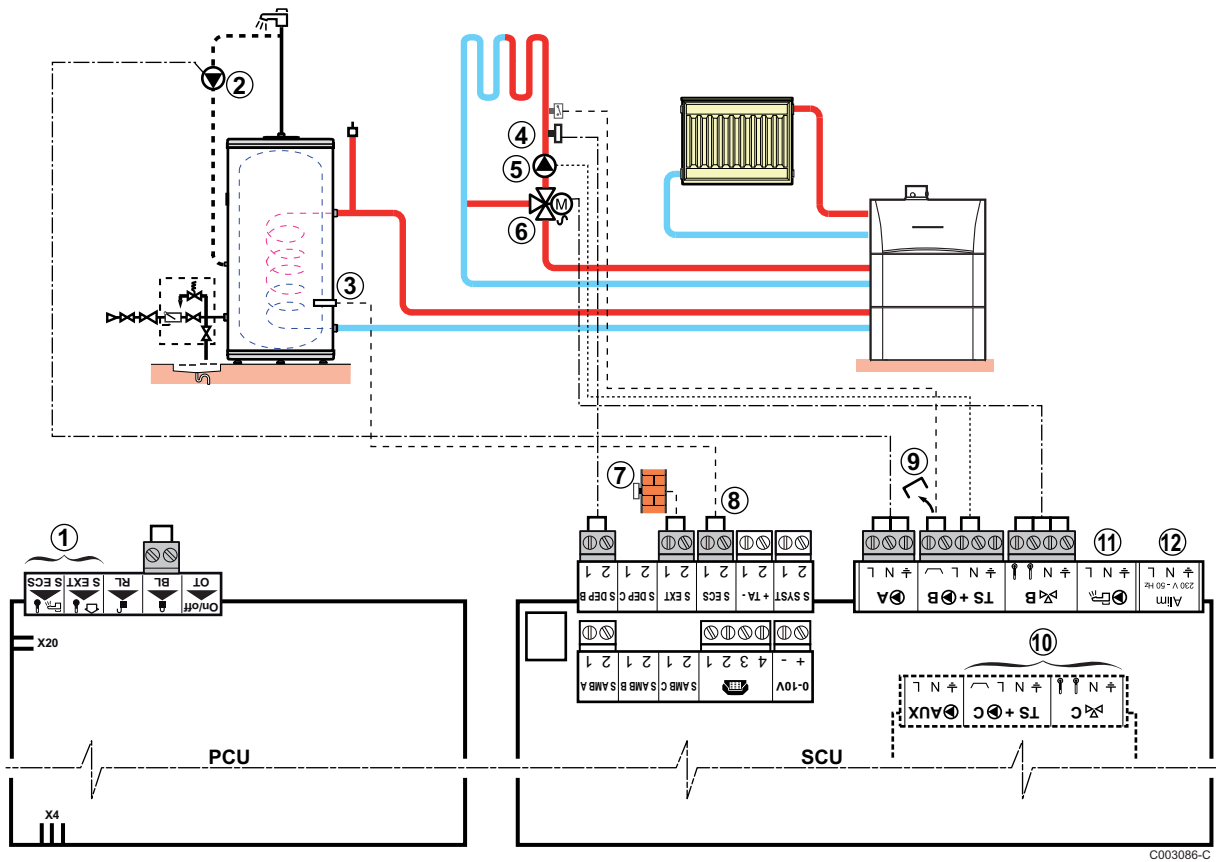
C003086-C

①   Do not connect anything to the terminal block.

②   Connect the domestic hot water looping pump to the ▶A outlet

③   Connect the DHW sensor (Package AD212).

④   Connect the 3-way valve flow sensor (circuit **B**).

⑤   Connect the heating pump (circuit **B**).

⑥   Connect the 3-way valve (circuit **B**).

⑦   Connect the outside temperature sensor.

⑧   Connect the DHW tank anode.

> ⚠ **CAUTION**
>
> ▸ If the tank is fitted with a Titan Active System® impressed current anode, connect the anode to the inlet (+ on the anode, - on the tank).
>
> ▸ If the tank is not fitted with an impressed current anode, put the simulation connector in place (delivered with the DHW sensor - package AD212).

⑨ Connect a safety thermostat if the heating circuit is for underfloor heating.

▸ Remove the bridge.

▸ Connect the wires from the safety thermostat to the connector.

⑩ Connecting an additional C circuit to the AD249 option.

⑪

⚠ **CAUTION**

Do not connect anything to the ⓑ🖵 outlet on the terminal block. The reversal valve is connected to the PCU PCB in the boiler.

⑫ Do not connect anything to the terminal block.

4.9.8. Hot water storage tank connection

■ **QUADRO DU 750 storage tank**

In this installation example, the storage tank (type QUADRO DU 750) incorporates a domestic hot water zone. The boiler starts up systematically to maintain the domestic hot water zone in the storage tank or to maintain the independent tank at temperature.

i If the storage tank does not have a DHW zone, use an independent domestic hot water tank.

C003088-D
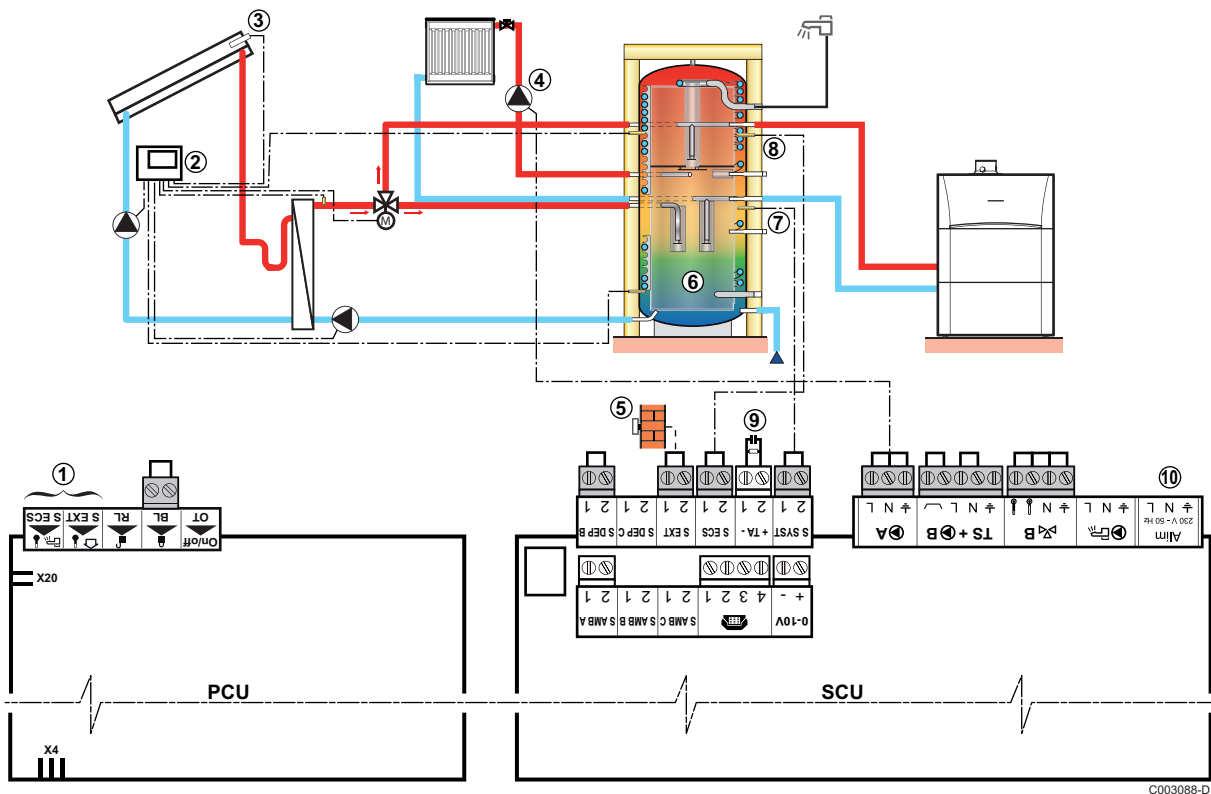
① Do not connect anything to the terminal block.

②   Connect the solar station to the solar collectors.

③   Solar sensor probe.

④   Connect the heating pump (Circuit A).

⑤   Outside sensor.

⑥   Buffer tank.

⑦   Connect the sensor from the storage tank (Package AD250).

⑧   Connect the DHW sensor (Package AD212).

⑨   Connect the DHW tank anode.

          i   If the tank is not fitted with an impressed current anode, put the simulation connector in place (delivered with the DHW sensor - package AD212).

⑩   Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
I.SYST[1]	Installer level **#SYSTEM** menu	**STORAGE TANK**	☞ "Setting the parameters specific to the installation", page 75
P.DHW:[1]	Installer level **#SYSTEM** menu	**PUMP**	
BOILER PUMP	Installer level **#SYSTEM** menu	**ALL**	
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

          i   The DHW part is maintained at the DHW set point by the boiler.
The heating zone is maintained at the set temperature calculated according to the outside temperature. The zone is reheated when the heating buffer temperature sensor ⑦ falls -6°C below the calculated set temperature. Reheating in the heating zone stops when the heating buffer temperature rises above the calculated set temperature.

       ■ **PS storage tank and DHW tank connected to the boiler**

The boiler only starts up if the buffer tank is not hot enough to handle the heating.

C003089-D
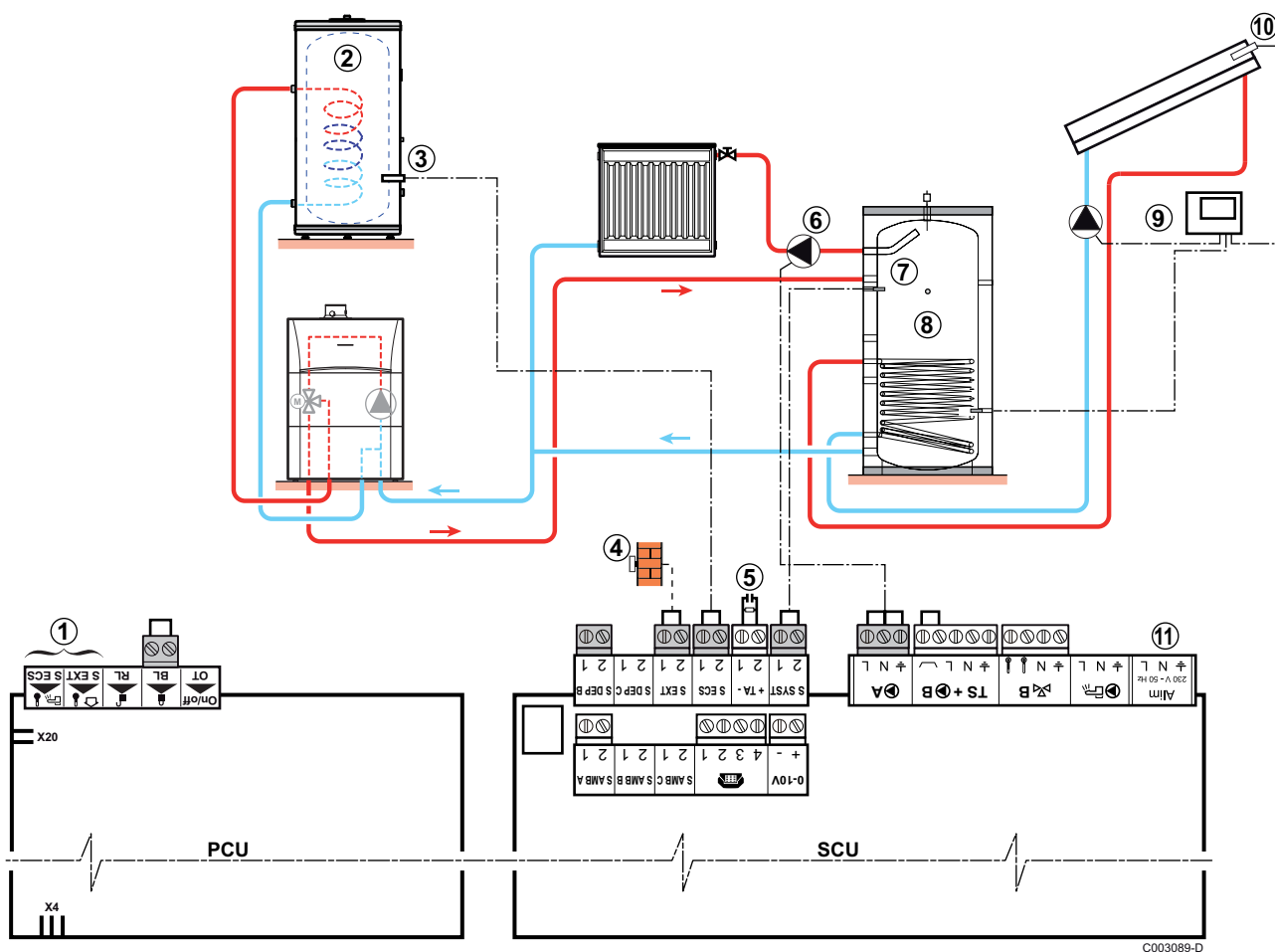
① Do not connect anything to the terminal block.

② Connect a domestic hot water tank if the storage tank ⑧ is only used for heating.

③ Connect the DHW sensor (Package AD212).

④ Outside sensor.

⑤ Connect the DHW tank anode.

> **i** If the tank is not fitted with an impressed current anode, put the simulation connector in place (delivered with the DHW sensor - package AD212).

⑥ Connect the heating pump (Circuit **A**).

⑦ Connect the sensor from the storage tank.

⑧ Buffer tank.

⑨ Connect the solar station to the solar collectors.

⑩ Solar sensor probe.

⑪ Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	👉 "Displaying the parameters in extended mode", page 74
I.SYST[(1)]	Installer level **#SYSTEM** menu	**STORAGE TANK**	👉 "Setting the parameters specific to the installation", page 75
BOILER PUMP	Installer level **#SYSTEM** menu	**ALL**	
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

i The DHW part is maintained at the DHW set point by the boiler.

The heating zone is maintained at the set temperature calculated according to the outside temperature. The zone is reheated when the heating buffer temperature sensor falls -6°C below the calculated set temperature. Reheating in the heating zone stops when the heating buffer temperature rises above the calculated set temperature.

■ **PS storage tank and DHW tank connected to the storage tank**

The boiler only starts up production of domestic hot water if the storage tank is not hot enough to guarantee tank loading.
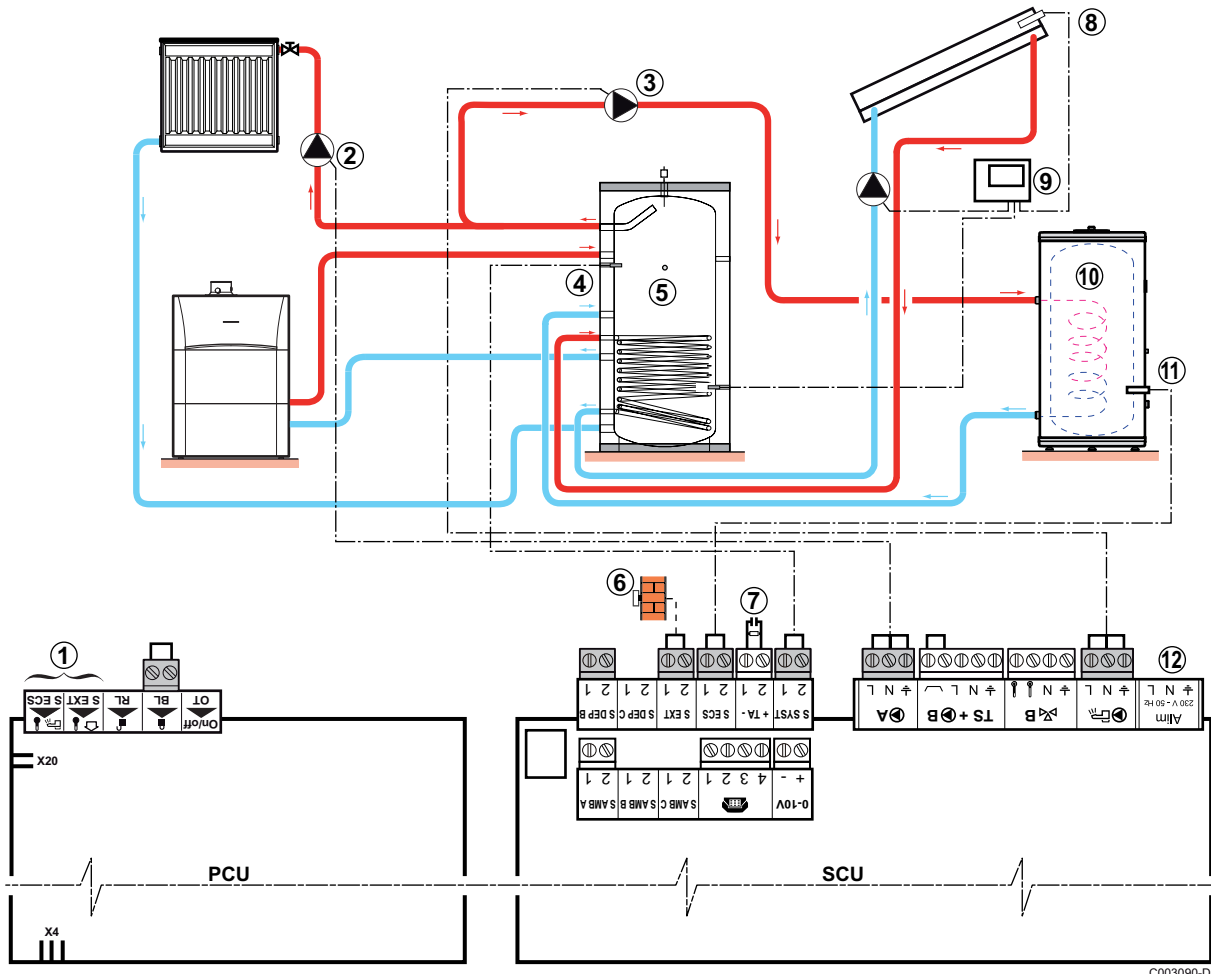
C003090-D

①   Do not connect anything to the terminal block.

②   Connect the heating pump (Circuit **A**).

③   D.H.W. load pump

④   Hot water storage tank sensor

⑤   Buffer tank.

⑥   outside temperature sensor

⑦   Connect the DHW tank anode.

i   If the tank is not fitted with an impressed current anode, put the simulation connector in place (delivered with the DHW sensor - package AD212).

⑧   Solar sensor probe.

⑨   Connect the solar station to the solar collectors.

⑩   Domestic hot water boiler.
         Connect the DHW sensor.

⑪   DHW sensor

⑫   Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
I.SYST[(1)]	Installer level **#SYSTEM** menu	**ST.TANK+DHW**	☞ "Setting the parameters specific to the installation", page 75
P.DHW:[(1)]	Installer level **#SYSTEM** menu	**PUMP**	
BOILER PUMP	Installer level **#SYSTEM** menu	**ALL**	
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

i   The DHW tank is loaded from the storage tank. If, during DHW loading, the temperature of the storage tank falls below the primary DHW set point (parameter PRIM.TEMP.DHW), the boiler maintains the latter at temperature to guarantee the loading of the DHW tank The heating zone is maintained at the set temperature calculated according to the outside temperature. The zone is reheated when the heating buffer temperature sensor falls -6°C below the calculated set temperature. Reheating in the heating zone stops when the heating buffer temperature rises above the calculated set temperature.

4.9.9.   Pool connection

C003091-D
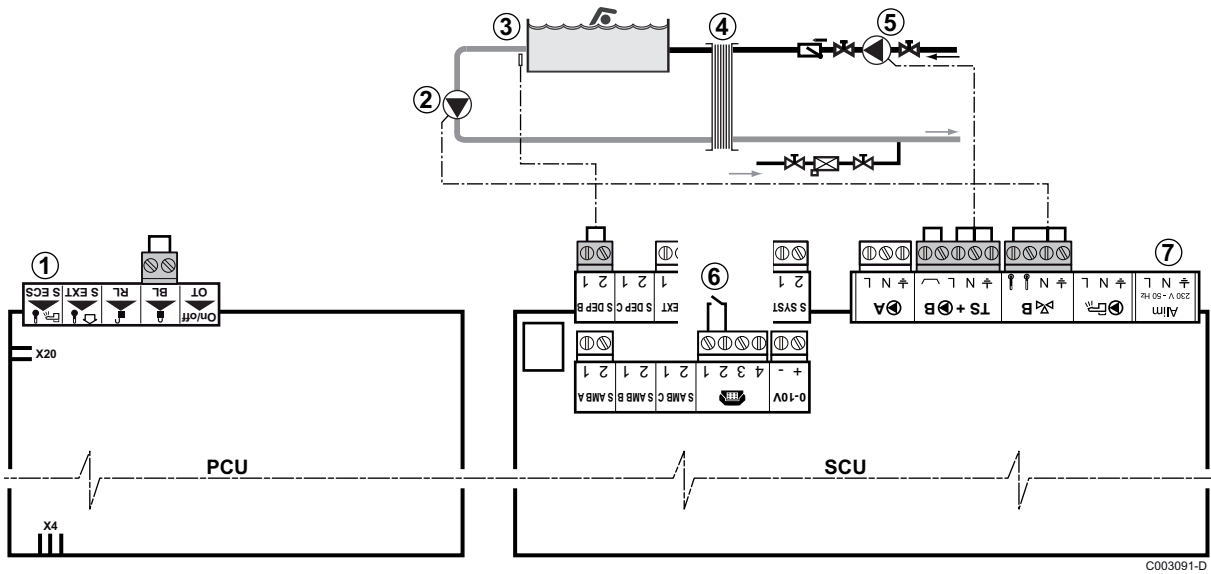
①   Do not connect anything to the terminal block.

②   Connect the secondary swimming pool pump.

③   Connect the swimming pool sensor.

④   Plate heat exchanger.

⑤   Connect the primary swimming pool pump.

⑥   Pool heating cut-off control

> **i**   When the parameter **I.TEL:** is on **0/1 B**, the swimming pool is no longer heated when the contact is open (factory setting), only the antifreeze continues to be active.
> The contact direction can still be adjusted by the parameter **CT.TEL**.

⑦   Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
CIRC. B:	Installer level **#SYSTEM** menu	**SWIM.P.**	☞ "Setting the parameters specific to the installation", page 75
If **I.TEL:** is used **I.TEL:**	Installer level **#SYSTEM** menu	**0/1 B**	
MAX. CIRC. B	Installer level **#SECONDARY LIMITS** menu	Set the value of **MAX.CIRC.B** to the temperature corresponding to the needs of the exchanger	☞ "Professional settings", page 84

■ Controlling the pool circuit

The control system can be used to manage a swimming pool circuit in both cases:

Case 1: The control system regulates the primary circuit (boiler/exchanger) and the secondary circuit (exchanger/pool).

▸ Connect the primary circuit pump (boiler/exchanger) to the ⏺B outlet on the connection terminal block. The temperature **MAX.CIRC.B** is then guaranteed during comfort periods on programme **B** in summer and winter alike.

▸ Connect the swimming pool sensor (package AD212) to the **S DEP B** inlet on the connection terminal block.

▸ Set the set point of the pool sensor using key 🌡 in the range 5 - 39°C.

Case 2: The pool has already a regulation system that is to be kept. The control system only regulates the primary circuit (boiler/exchanger).

▸ Connect the primary circuit pump (boiler/exchanger) to the ⏺B outlet on the connection terminal block.
The temperature **MAX.CIRC.B** is then guaranteed during comfort periods on programme **B** in summer and winter alike.

ℹ The swimming pool can also be connected to circuit **C** by adding the AD249 option:

  ▸ Make the connection to the terminal blocks marked **C**.

  ▸ Set the parameters for circuit **C**.

■ Hourly programming of the secondary circuit pump

The secondary pump operates during programme **B** comfort periods in summer and winter alike.

■ Stopping

To prepare your pool for winter, consult your pool specialist.

4.9.10.   Connecting a mixed tank

ℹ In winter mode, the boiler heats the DHW tank.
In summer mode, the tank is heated by the electrical resistor.

C003092-C
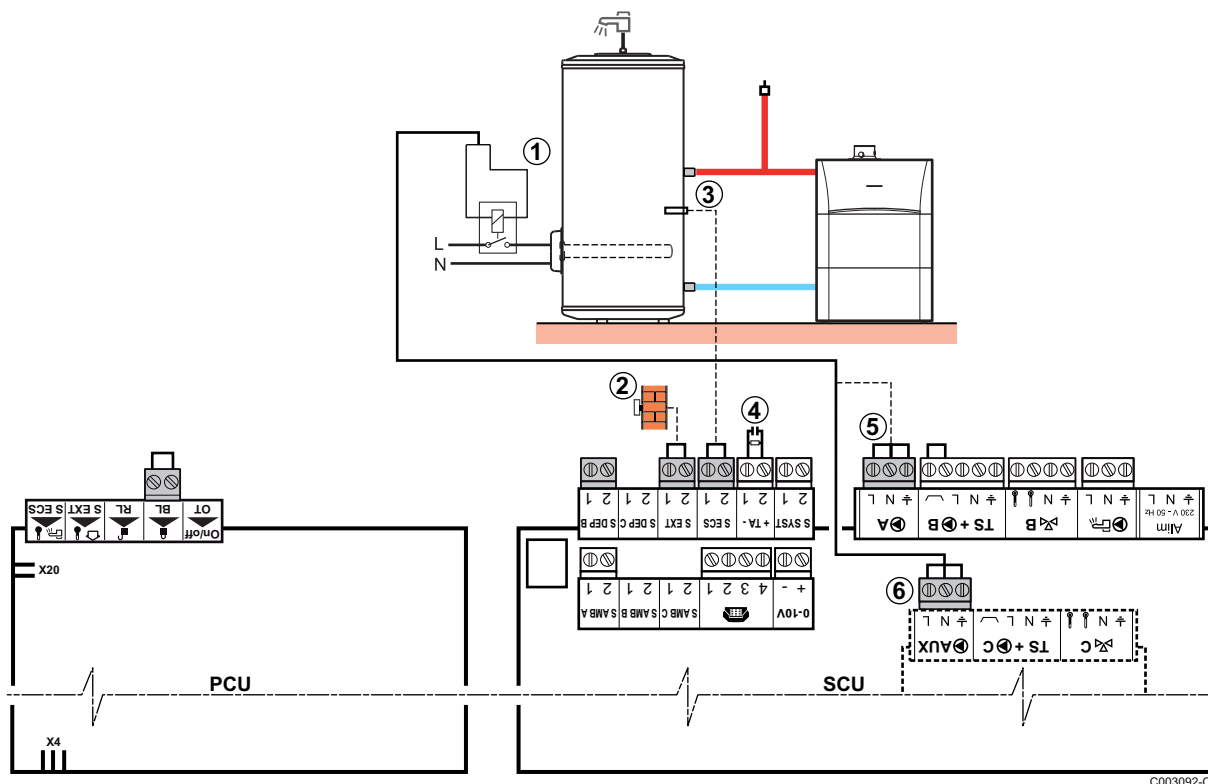
①	Power control relay to the electrical resistor
②	Connect the outside temperature sensor
③	Connect the DHW sensor (Package AD212).
④	Connect the DHW tank anode.

> **i** If the tank is not fitted with an impressed current anode, put the simulation connector in place (delivered with the DHW sensor - package AD212).

⑤	Outlet circuit **A** - Option of connecting the electric tank (or to ⑥)
⑥	Option of connecting the electric tank (with AD249 option) or to ⑤

Settings to be made for this type of installation			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
If the electric tank is connected to ▶A: **CIRC. A:**[(1)]	Installer level **#SYSTEM** menu	**DHW ELEC**	☞ "Setting the parameters specific to the installation", page 75
If the electric tank is connected to ▶AUX: **S.AUX:**[(1)]	Installer level **#SYSTEM** menu	**DHW ELEC**	
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

4.9.11.   Connecting the options

For example: TELCOM remote vocal monitoring module, remote controls for circuits **A** and **B**, second DHW tank

C003093-C
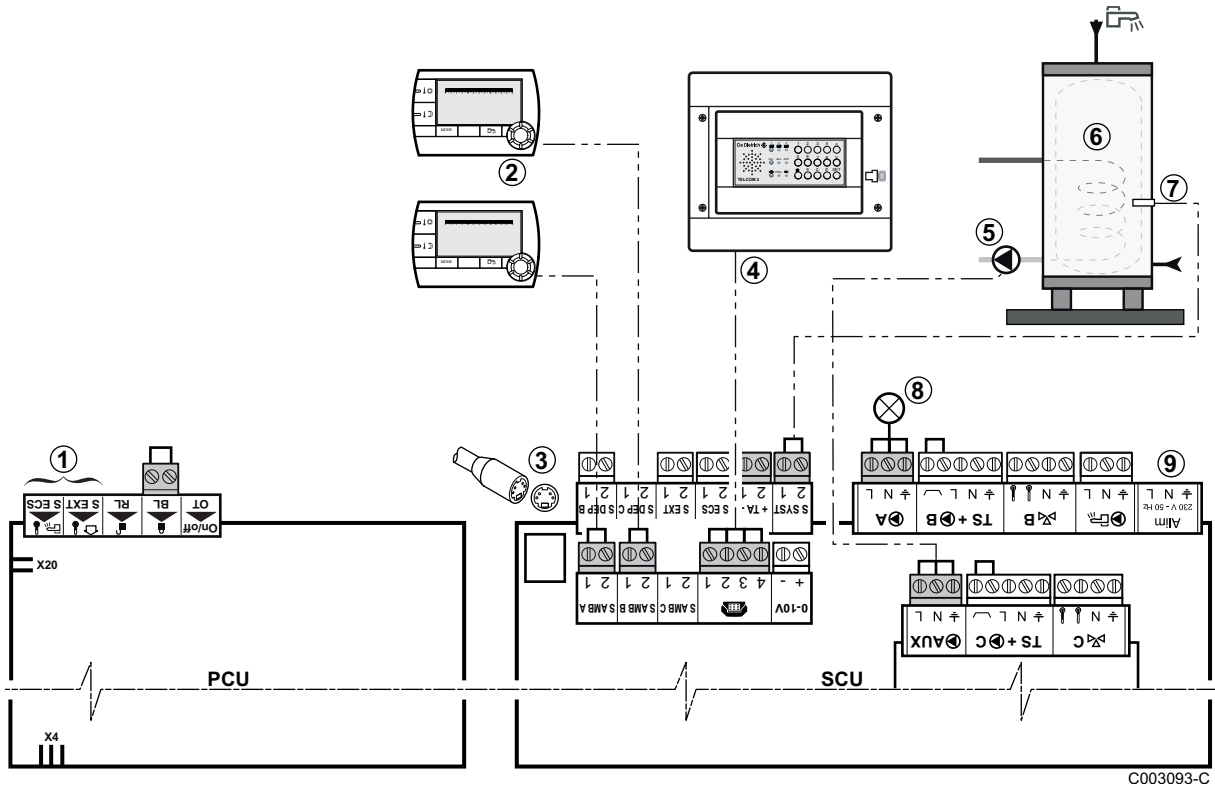
①	Do not connect anything to the terminal block.
②	Connect the remote control (Package AD254/FM52).
③	Connecting the BUS cascade, VM
④	Connect the TELCOM remote vocal monitoring module (depending on its availability in your country).
⑤	Connect the load pump of the second tank.
⑥	Second domestic hot water tank
⑦	Connect the DHW sensor of the second tank.
⑧	Alarm indicator
⑨	Do not connect anything to the terminal block.

Settings to be made for this type of installation			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
O.PUMP A[(1)]	Installer level **#SYSTEM** menu	**FAILURE**	☞ "Setting the parameters specific to the installation", page 75
If second tank connected: **S.AUX:**[(1)]	Installer level **#SYSTEM** menu	**DHW**	
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

4.9.12.   Connection in cascade

■ **DHW tank after the mixing tank**

C003094-A
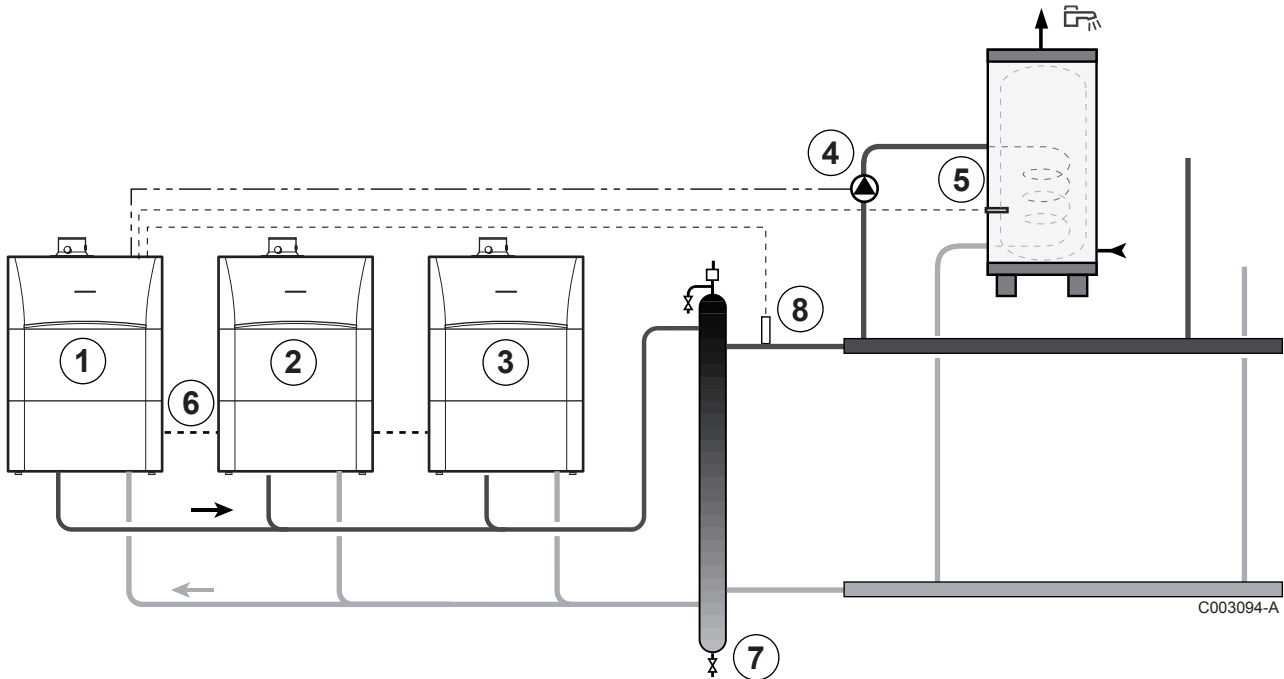
①	Master boiler
②	Secondary boiler
③	Secondary boiler
④	D.H.W. load pump
⑤	Connect the DHW sensor (Package AD212)
⑥	Cable **BUS**
⑦	Low loss header
⑧	Cascade outlet sensor Connect the sensor to the terminal block **S SYST** on the master boiler.

Settings to be made for this type of installation: Master boiler			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
P.DHW:[(1)]	Installer level **#SYSTEM** menu	**PUMP**	☞ "Setting the parameters specific to the installation", page 75
CASCADE:[(1)]	Installer level **#NETWORK** menu	**ON**	☞ "Configuring the network", page 91
MASTER CONTROLLER[(1)]	Installer level **#NETWORK** menu	**ON**	
SYSTEM NETWORK[(1)]	Installer level **#NETWORK** menu	**ADD GENE MANU**	
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

Settings to be made for this type of installation: Follower boilers			
Parameters	**Access**	**Settings to be made**	**See chapter**
INSTALLATION	Installer level **#SYSTEM** menu	**EXTENDED**	☞ "Displaying the parameters in extended mode", page 74
CASCADE:[1]	Installer level **#NETWORK** menu	**ON**	☞ "Configuring the network", page 91
MASTER CONTROLLER[1]	Installer level **#NETWORK** menu	**OFF**	
SLAVE NUMBER[1]	Installer level **#NETWORK** menu	2, 3, ...	
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**			

i   In this case, all of the boilers handle domestic hot water production.

■ DHW tank on master boiler

C003095-A
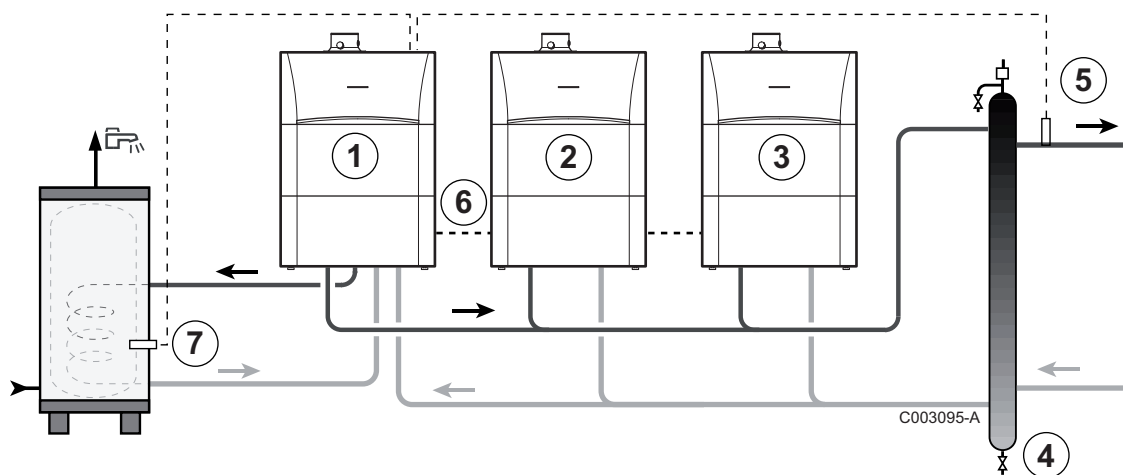
①   Master boiler

②   Secondary boiler

③   Secondary boiler

④   Low loss header

⑤   Cascade outlet sensor
Connect the sensor to the terminal block **S SYST** on the master boiler.

⑥   Cable **BUS**

⑦   Connect the DHW sensor (Package AD212)

Settings to be made for this type of installation: Master boiler

Parameters	Access	Settings to be made	See chapter
INSTALLATION	Installer level #SYSTEM menu	EXTENDED	☞ "Displaying the parameters in extended mode", page 74
P.DHW:(1)	Installer level #SYSTEM menu	RV	☞ "Setting the parameters specific to the installation", page 75
CASCADE:(1)	Installer level #NETWORK menu	ON	☞ "Configuring the network", page 91
MASTER CONTROLLER(1)	Installer level #NETWORK menu	ON	
SYSTEM NETWORK(1)	Installer level #NETWORK menu	ADD GENE MANU	

(1) The parameter is only displayed if INSTALLATION parameter is set to EXTENDED

Settings to be made for this type of installation: Follower boilers

Parameters	Access	Settings to be made	See chapter
INSTALLATION	Installer level #SYSTEM menu	EXTENDED	☞ "Displaying the parameters in extended mode", page 74
CASCADE:(1)	Installer level #NETWORK menu	ON	☞ "Configuring the network", page 91
MASTER CONTROLLER(1)	Installer level #NETWORK menu	OFF	
SLAVE NUMBER(1)	Installer level #NETWORK menu	2, 3, ...	

(1) The parameter is only displayed if INSTALLATION parameter is set to EXTENDED

In this case, the Master boiler alone handles domestic hot water production. The slave boilers continue to operate in heating mode.

4.10 Electrical diagram

230V / 50Hz	Power supply	N	Neutral	X112	Water pressure gauge
0-10 V	Input	PCU	Primary control unit	X114	Return temperature
▶A	Pump circuit A	SONDE AMB A	Room temperature sensor for circuit A	X115	Supply temperature
▶ DHW pump	SONDE DEP	Flow sensor	X116	PWM BO PUMP
▶BO PUMP	Boiler pump	SONDE DHW in	Domestic hot water sensor	X117	Limiter thermostat, top
▶SAN PUMP	DHW pump	SONDE ECS	Domestic hot water sensor	X121	Reversal valve
F6.3AT	6.3A fuse	SONDE EXT	Outside sensor	X21	Gas valve
*	Only with HL tank	SCU	Secondary control unit	X22	Ignition transformer
HMI	Control interface	TA	Titane Active Systeme	X41	BO PUMP 230V
☎	Telephone relay	V3V	3-way valve	X91	Fan
J - / X1...X20	PCB connector SCU / PCU	X111	SU bus connector	ZG	General switch
L	Lane				

4.11   Filling the system

4.11.1.   Water treatment

In most cases, the boiler and the central heating installation can be filled with normal tap water and no water treatment will be necessary.

> ⚠️ **WARNING**
>
> Do not add chemical products to the central heating water without first consulting a water treatment professional. For example: antifreeze, water softeners, products to increase or reduce the pH value, chemical additives and/or inhibitors. These may cause faults in the boiler and damage the heat exchanger.

ℹ️
▸   Rinse the central heating installation with at least 3x the volume of the central heating installation. Flush the DHW pipes with at least 20 times the volume of the pipes.

For an optimum functioning of the boiler, the water of the installation must comply with following characteristics:

		Total installed heat output (kW)			
		≤ 70	70 - 200	200 - 550	> 550
Degree of acidity (water non-treated)	pH	7 - 9	7 - 9	7 - 9	7 - 9
Degree of acidity (water treated)	pH	7 - 8,5	7 - 8,5	7 - 8,5	7 - 8,5
Conductivity at 25°C	µS/cm	≤ 800	≤ 800	≤ 800	≤ 800
Chlorides	mg/l	≤ 150	≤ 150	≤ 150	≤ 150
Other components	mg/l	< 1	< 1	< 1	< 1
Total water hardness[1]	°f	1 - 35	1 - 20	1 - 15	1 - 5
	°dH	0,5 - 20,0	0,5 - 11,2	0,5 - 8,4	0,5 - 2,8
	mmol/l	0,1 - 3,5	0,1 - 2,0	0,1 - 1,5	0,1 - 0,5

(1)   For installations that are heated at constant high temperatures with a total installed heat output; up to 200 kW a maximum total water hardness of 8,4 °dH (1,5 mmol/l, 15 °f) applies and for above 200 kW a maximum total water hardness of 2,8 °dH (0,5 mmol/l, 5 °f) applies

ℹ️
If a water treatment is necessary, **De Dietrich Thermique** recommends the following manufacturers:

▸   Cillit
▸   Climalife
▸   Fernox
▸   Permo
▸   Sentinel

4.11.2. Filling the system
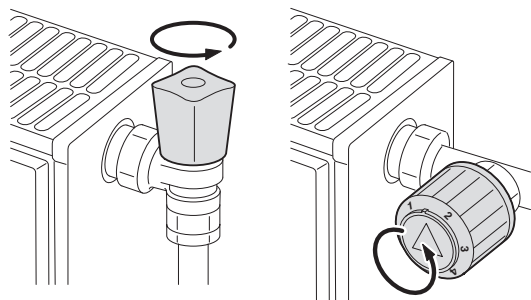
T000181-B

T001507-B

⚠ **CAUTION**

Before filling, open the valves on every radiator in the installation.

ℹ︎ In order to be able to read off the water pressure from the boiler display, the boiler must be switched on.

1. Open the cold water inlet and heating outlet valves.
2. Open the filling/draw-off valve on the heating system.
3. Close the filling valve when the pressure gauge shows a pressure of 2 bar.
4. Check the tightness of the water connections.

5 Commissioning

5.1 Control panel

5.1.1. Description of the keys
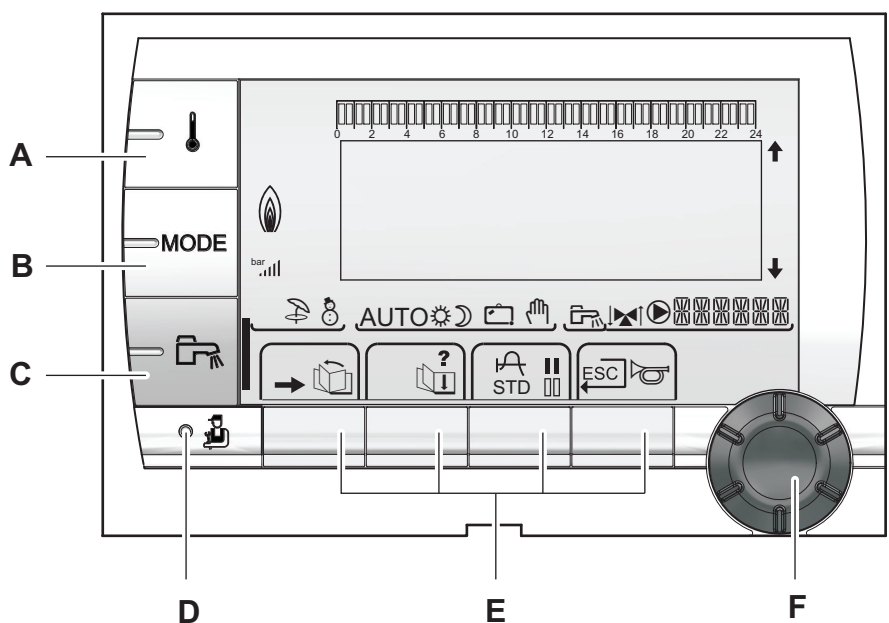
A	Temperature setting key (heating, DHW, swimming pool)
B	Operating mode selection key
C	DHW override key
D	Key to access the parameters reserved for the installer
E	Keys on which the function varies as and when selections are made
F	Rotary setting button:

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

5.1.2.   Description of the display

■ Key functions
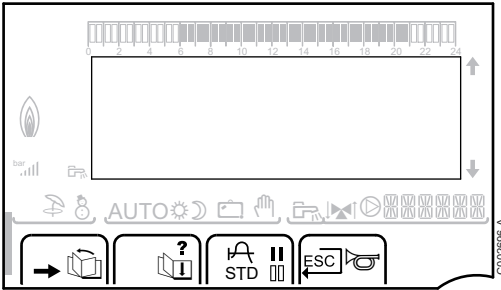
➡	Access to the various menus
◻	Used to scroll through the menus
◻	Used to scroll through the parameters
?	The symbol is displayed when help is available
⏚	Used to display the curve of the parameter selected
STD	Reset of the time programmes
❚❚	Selection of comfort mode or selection of the days to be programmed
❚❚❚	Selection of reduced mode or deselection of the days to be programmed
⏎	Back to the previous level
ESC	Back to the previous level without saving the modifications made
⛟	Manual reset

■ Flame output level
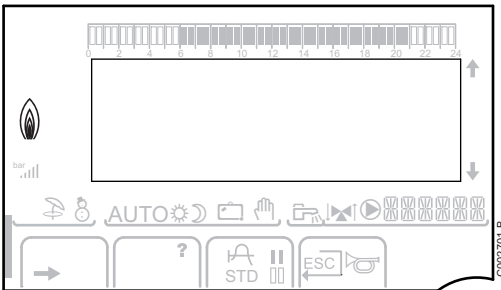
	The whole symbol flashes: The burner starts up but the flame is not yet present
	Part of the symbol flashes: Output is increasing
	Steady symbol: The required output has been reached
	Part of the symbol flashes: Output is dropping

■ **Solar (If connected)**
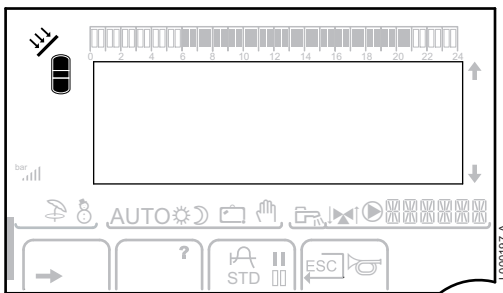
⟆	The solar load pump is running
	The top part of the tank is reheated to the tank set point
	The entire tank is reheated to the tank set point
	The entire tank is reheated to the solar tank set point
	The tank is not loaded - Presence of the solar control system

■ **Operating modes**
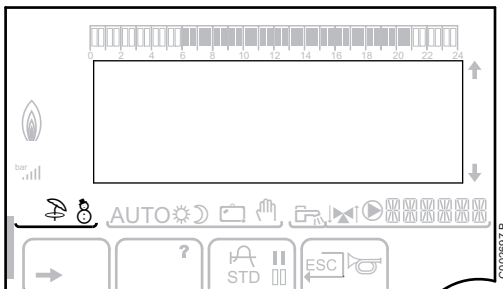
⌀	Summer mode: The heating is off. Domestic hot water continues to be produced
❆	WINTER mode: Heating and domestic hot water working
AUTO	Operation in automatic mode according to the timer programme
☼	Comfort mode: The symbol is displayed when a DAY override (comfort) is activated
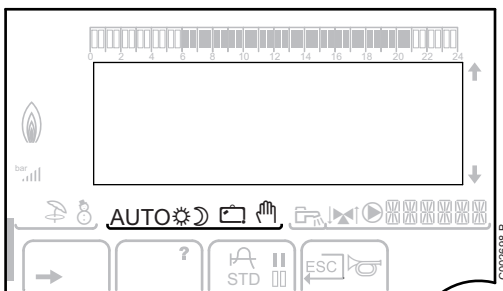
▸ Flashing symbol: Temporary override

▸ Steady symbol: Permanent override

☽	Reduced mode: The symbol is displayed when a NIGHT override (reduced) is activated

▸ Flashing symbol: Temporary override

▸ Steady symbol: Permanent override

⌂	Holiday mode: The symbol is displayed when a HOLIDAY override (antifreeze) is activated

▸ Flashing symbol: Holiday mode programmed

▸ Steady symbol: Holiday mode active

✋	Manual mode

■ System pressure
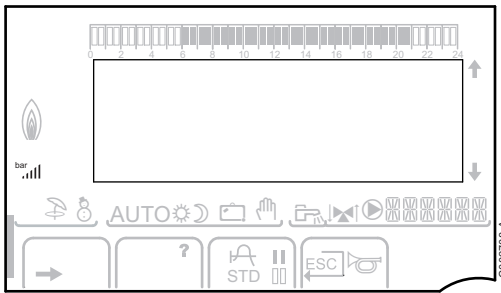
bar   Pressure indicator: The symbol is displayed when a water pressure sensor is connected.

  ▸ Flashing symbol: The water pressure is insufficient.
  ▸ Steady symbol: The water pressure is sufficient.

.ıll   Water pressure level

  ▸ . : 0,9 to 1,1 bar
  ▸ .ı : 1,2 to 1,5 bar
  ▸ .ıl : 1,6 to 1,9 bar
  ▸ .ıll : 2,0 to 2,3 bar
  ▸ .ılll : > 2,4 bar

■ Domestic Hot Water override
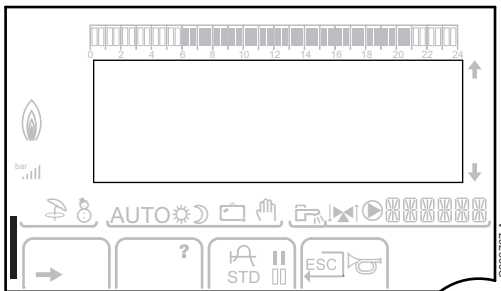
A bar is displayed when a DHW override is activated:

  ▸ Flashing bar: Temporary override
  ▸ Steady bar: Permanent override

■ Other information
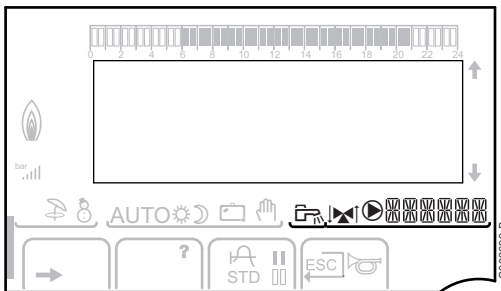
⊓ℝ   The symbol is displayed when domestic hot water production is running.

▶◀   Valve indicator: The symbol is displayed when a 3-way valve is connected.

  ▸ ▶◀ : 3-way valve opens
  ▸ ▶◀ : 3-way valve closes

⦿   The symbol is displayed when the pump is operating.

▨▨▨▨▨ Name of the circuit for which the parameters are displayed.

5.1.3.   Access to the various browsing levels

■ User level

The information and settings in the User level can be accessed by everyone.

1. Press the ➡ key.

C002219-D-04
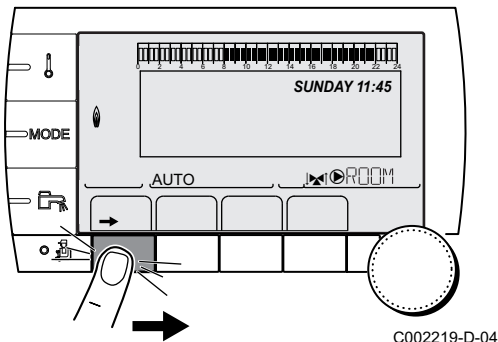
■ Installer level

The information and settings in the Installer level can be accessed by experienced people.

1. Press key 🔧 for around 5 seconds.

> **ℹ** Before the Installer level is displayed, the **#EMISSION MEASUREMENTS** menu will be displayed. Hold down the 🔧 key until **#LANGUAGE** is displayed.

C002235-F-04
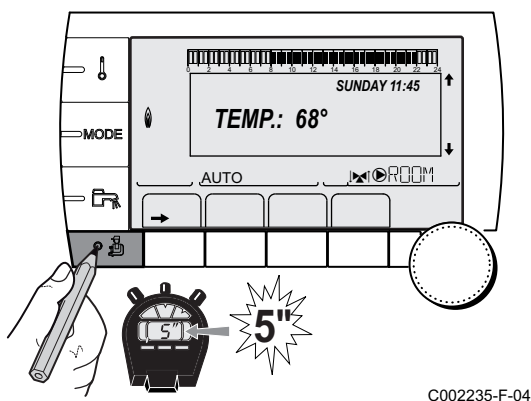
■ After Sales level

The information and settings in the After Sales level can be accessed by initiates.

1. Press key 🔧 for around 10 seconds.

> **ℹ** Before the After Sales level is displayed, the Installer level will be displayed. Hold down the 🔧 key until **#PARAMETERS** is displayed.

C002272-C-04

5.1.4.   Browsing in the menus

#MEASURES
#CHOICE TIME PROG.
#TIME PROGRAM
#SETTING
#TIME .DAY

AUTO
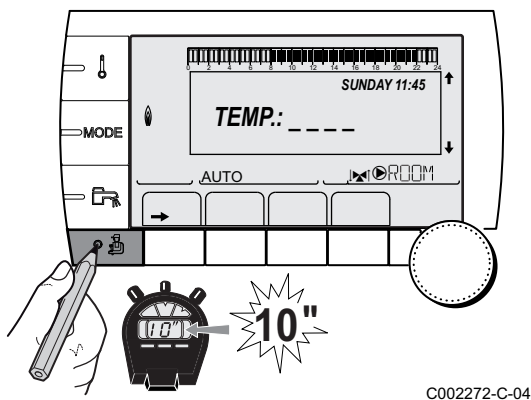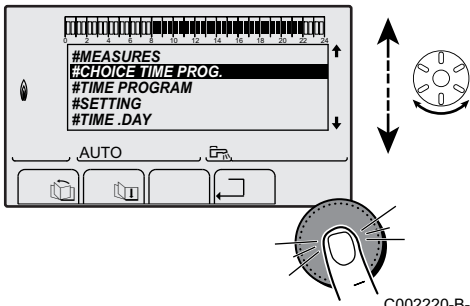
C002220-B-04

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

CURRENT PROG.B   P2
CURRENT PROG.C   P3

AUTO
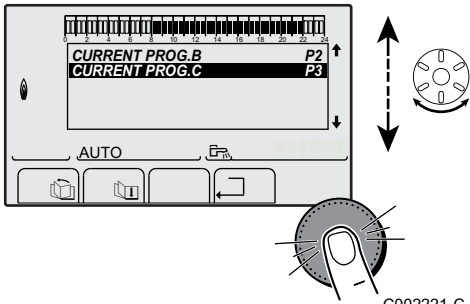
C002221-C-04

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

CURRENT PROG.C   P4
"Choice of the timeprogram
applied C"

AUTO

ESC
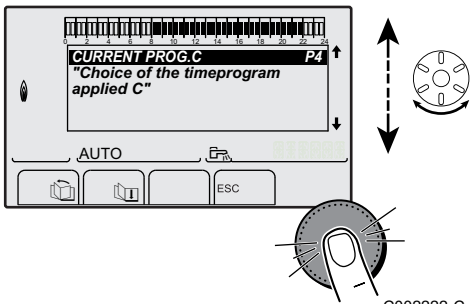
C002222-C-04

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

i   To cancel, press key ESC.

AUTO   ►ROOM
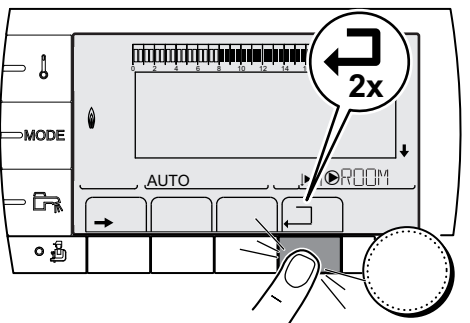
C002224-D-04

7. To go back to the main display, press key ⌐ 2 times.

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

5.2   Check points before commissioning

5.2.1.   Preparing the boiler for commissioning

⚠️ **WARNING**

Do not put the boiler into operation if the supplied gas is not in accordance with the approved gas types.

Preparatory procedure for boiler commissioning:

▸ Check that the gas type supplied matches the data shown on the boiler's data plate.
▸ Check the gas circuit.
▸ Check the hydraulic circuit.
▸ Check the water pressure in the heating system.
▸ Check the electrical connections to the thermostat and the other external controls.
▸ Check the other connections.
▸ Test the boiler at full load. Check the setting of the gas/air ratio and, if necessary, correct it.
▸ Test the boiler at part load. Check the setting of the gas/air ratio and, if necessary, correct it.
▸ Finalizing work.

5.2.2.   Gas circuit

■ **Removing the cover from the sealed chamber**

L000166-A

> ⚠ **WARNING**
>
> Ensure that the boiler is switched off.

1. Open the 2 retaining clips located on the front.
2. Remove the cover from the sealed chamber.

> ⚠ **WARNING**
>
> Check the condition of the tightness gasket when refitting the cover to the sealed chamber.
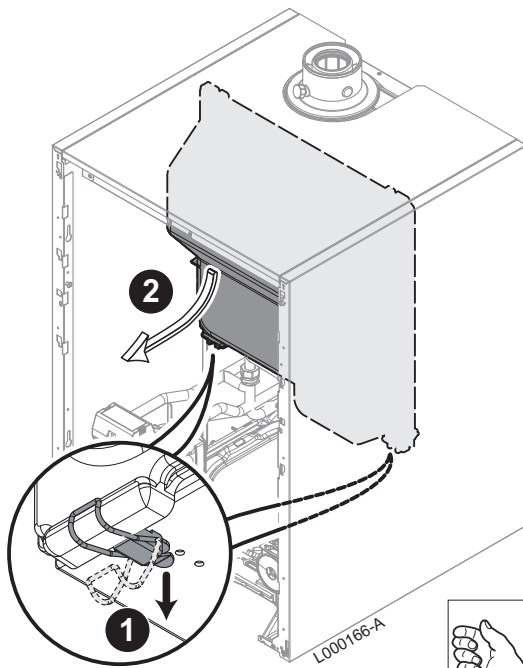
■ **Checking the gas circuit**

> ⚠ **WARNING**
>
> Ensure that the boiler is switched off.

1. Remove the front panel.
2. Remove the cover from the sealed chamber. ☞ See chapter: "Removing the cover from the sealed chamber", page 68
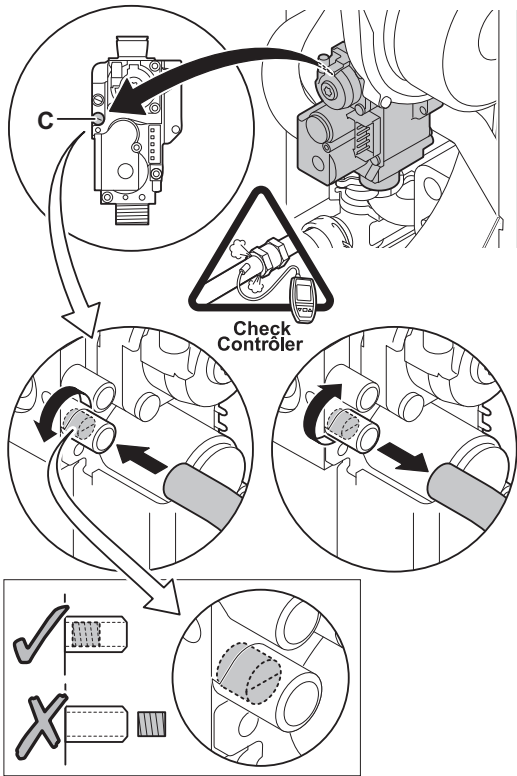
3. Open the main gas supply.
4. Check the gas supply pressure at the pressure outlet **C** on the gas valve unit.

> ⚠️ **WARNING**
>
> 👉 To ascertain the gas types permitted, see chapter: "Gas categories", page 8

5. Check the tightness of the gas connections made after the gas valve unit in the boiler.
6. Check the tightness of the gas line, including the gas valves. The test pressure must not exceed 60 mbar.
7. Purge the gas supply pipe within the boiler by unscrewing the pressure outlet on the gas block. Tighten the measurement point when the pipe has been sufficiently purged.
8. Check the tightness of the gas connections in the boiler.

T001518-B

5.2.3.   Hydraulic circuit

▸ Check the condensate discharge siphon; it must be filled with clean water up to the mark.
▸ Check that there are no leaks on the hydraulic connections.

5.2.4.   Electrical connections

▸ Check the electrical connections.

5.3   Putting the appliance into operation
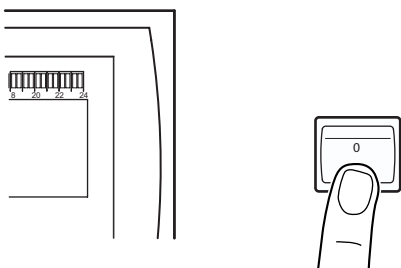
1. Open the main gas supply.
2. Turn on the boiler using the on/off switch.

C003159-A

C002286-C
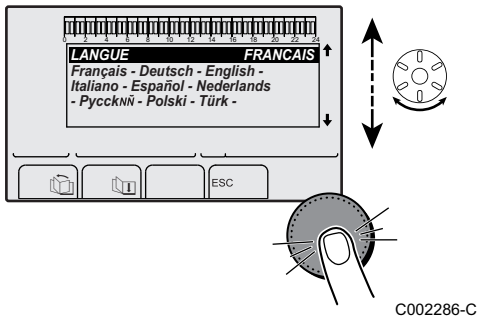
3. The first time the boiler is powered up, the **LANGUAGE** menu is displayed. Select the desired language by turning the rotary button.

4. To confirm, press the rotary button.

The boiler will begin an automatic venting-programme (which lasts approx. 3 minutes) and will do this every time the power supply is isolated.

Error during the start-up procedure:

▸ No information is shown on the display:
  – Check the mains supply voltage
  – Check the fuses
  – Check the connection of the power cable to the connector X1 on the PCU PCB
▸ If there is a problem, the error is displayed on the screen.
  ☞ See chapter: "Messages (Code type Bxx or Mxx)", page 103

5.4   Gas settings

5.4.1.   Adapting to another gas type

L000182-A

⚠ **WARNING**

Only a qualified engineer may carry out the following operations.

The boiler is preset in the factory to operate on natural gas H (G20).

For operation on another group of gases, carry out the following operations:

▸ Set the fan speed using the parameters **MIN.VENT.**, **MAX.VENT.BOIL**, **MAX.VENT.DHW** and **START SP.**:
  ☞ See chapter: "Professional settings", page 84
▸ Set the air/gas ratio.
  ☞ "Setting the air/gas ratio (Full load)", page 71
  ☞ "Setting the air/gas ratio (Part load)", page 72
▸ Affix the label which indicates for which type of gas the boiler is fitted and set.

5.4.2.   Setting the air/gas ratio (Full load)

M002534-A

1. Unscrew the plug of the flue gas measurement point.
2. Connect the flue gas analyser.

> ⚠ **WARNING**
>
> Ensure that the opening around the sensor is completely sealed when taking measurements.

3. Remove the cover from the sealed chamber.
   ☞ see chapter: "Removing the cover from the sealed chamber", page 68

C002271-F-04

4. In the main display, press key 🔧.
   The characteristics of the generator are displayed.

> ℹ If an automatic vent cycle is running, it is not possible to perform these operations.

C002347-E-04
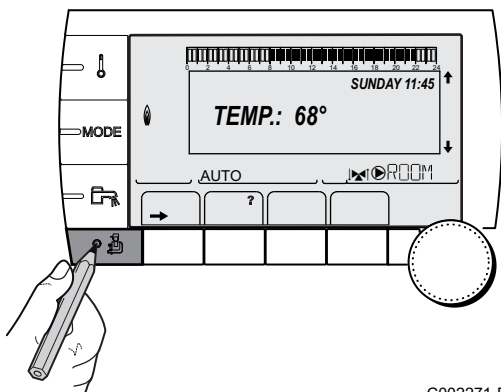
5. Turn the rotary button until **PMAX** is displayed. The full load is set.
6. Measure the percentage of O_2 or CO_2 in the flue gases (with the cover of the watertight housing removed) .

T000932-A
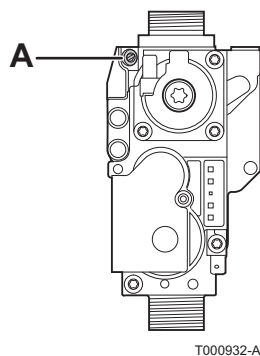
7. If this rate does not match the required value, correct the gas/air ratio using the adjustment screw A on the gas valve unit.
8. Check the flame through the flame inspection window.

> ℹ The flame must not be detached.

O$_2$/CO$_2$ control and setting values for gas H (G20) at full load				
Boiler type	Setting value		Checking value	
	O$_2$ (%)	CO$_2$ (%)	O$_2$ (%)	CO$_2$ (%)
AGC 10/15	5,2 ± 0,4	8,8 ± 0,2	5,2 ± 0,5	8,8 ± 0,3
AGC 15	5,2 ± 0,4	8,8 ± 0,2	5,2 ± 0,5	8,8 ± 0,3
AGC 25	5,2 ± 0,4	8,8 ± 0,2	5,2 ± 0,5	8,8 ± 0,3
AGC 35	4,8 ± 0,4	9,0 ± 0,2	4,8 ± 0,5	9,0 ± 0,3

O$_2$/CO$_2$ control and setting values for propane (G31) at full load					Diameter of the gas diaphragm (x.xx)
Boiler type	Setting value		Checking value		Fit the gas restrictor in the gas block
	O$_2$ (%)	CO$_2$ (%)	O$_2$ (%)	CO$_2$ (%)	Ø mm
AGC 10/15	5,2 ± 0,3	10,3 ± 0,2	5,2 ± 0,5	10,3 ± 0,3	3,00
AGC 15	5,2 ± 0,3	10,3 ± 0,2	5,2 ± 0,5	10,3 ± 0,3	3,00
AGC 25	5,2 ± 0,3	10,3 ± 0,2	5,2 ± 0,5	10,3 ± 0,3	4,00
AGC 35	5,2 ± 0,3	10,3 ± 0,2	5,2 ± 0,5	10,3 ± 0,3	4,40

5.4.3. Setting the air/gas ratio (Part load)
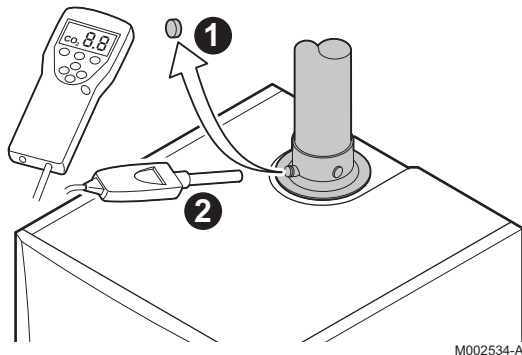
M002534-A

C002271-F-04

1. Unscrew the plug of the flue gas measurement point.
2. Connect the flue gas analyser.

⚠️ **WARNING**

Ensure that the opening around the sensor is completely sealed when taking measurements.

3. Remove the cover from the sealed chamber.
   ☞ see chapter: "Removing the cover from the sealed chamber", page 68

4. In the main display, press key 🛢.
   The characteristics of the generator are displayed.

ℹ️ If an automatic vent cycle is running, it is not possible to perform these operations.

AUTO => PMIN

GENE :   *PMIN*
BOILER TEMP.   68°C
CURRENT   10µA
WIND SPEED   1850 tr/min

AUTO

C002348-F-04
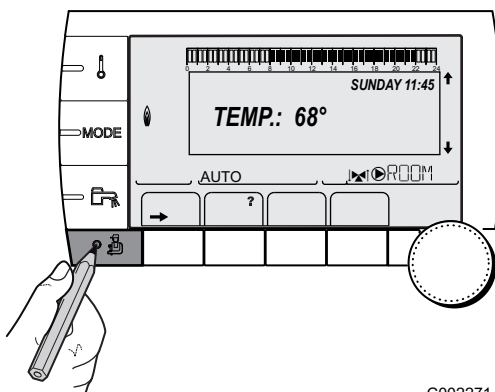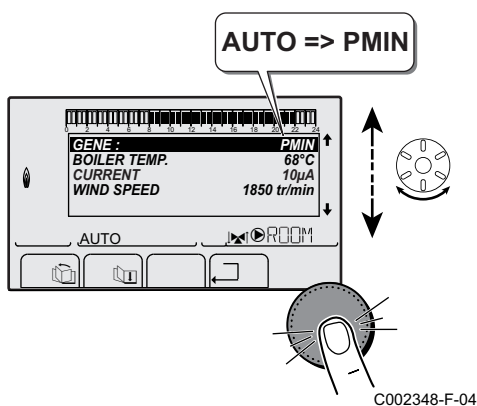
5. Turn the rotary button until **PMIN** is displayed. The part load is set.

  i If an automatic vent cycle is running, it is not possible to perform these operations.

6. Measure the percentage of O_2 or CO_2 in the flue gases (with the cover of the watertight housing removed) .

B

B

T000933-B

7. If this rate does not match the required value, correct the gas/air ratio using the adjustment screw B on the gas valve unit.

  i
  ‣ Turn the screw B anticlockwise to obtain a lower CO_2 value.
  ‣ Turn the screw B clockwise to obtain a higher CO_2 value.

8. Check the flame through the flame inspection window.

  i The flame must be stable and blue in colour with orange particles around the edge of the burner.
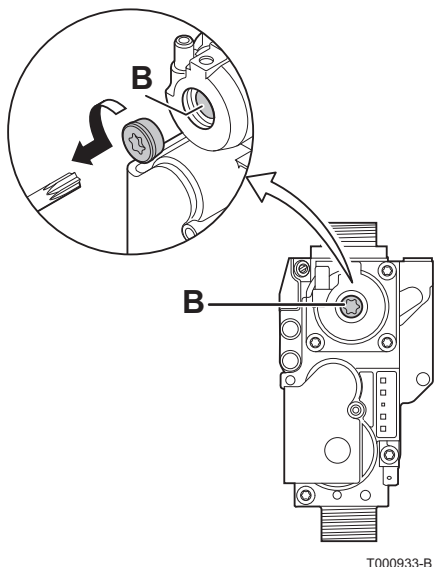
O_2/CO_2 control and setting values for gas H (G20) at low speed				
Boiler type	Setting value		Checking value	
	O_2 (%)	CO_2 (%)	O_2 (%)	CO_2 (%)
AGC 10/15	5,9 ± 0,4	8,4 ± 0,2	5,9 ± 0,4	8,4 ± 0,2
AGC 15	5,9 ± 0,4	8,4 ± 0,2	5,9 ± 0,4	8,4 ± 0,2
AGC 25	5,9 ± 0,4	8,4 ± 0,2	5,9 ± 0,4	8,4 ± 0,2
AGC 35	5,5 ± 0,4	8,6 ± 0,2	5,5 ± 0,5	8,6 ± 0,3

O_2/CO_2 control and setting values for propane (G31) at low speed				
Boiler type	Setting value		Checking value	
	O_2 (%)	CO_2 (%)	O_2 (%)	CO_2 (%)
AGC 10/15	5,8 ± 0,3	9,9 ± 0,2	5,8 ± 0,3	9,9 ± 0,2
AGC 15	5,8 ± 0,3	9,9 ± 0,2	5,8 ± 0,3	9,9 ± 0,2
AGC 25	5,8 ± 0,3	9,9 ± 0,2	5,8 ± 0,3	9,9 ± 0,2
AGC 35	5,8 ± 0,3	9,9 ± 0,2	5,8 ± 0,3	9,9 ± 0,2

  i Repeat the high speed test and the low speed test as often as necessary until the correct values are obtained without having to make additional adjustments.

To exit the mode **EMISSION MEASUREMENTS**, press ⤶ several times.

5.4.4.   Basic setting for the gas/air ratio

If the gas/air ratio is out of adjustment, the gas valve unit has a basic setting. To do this, proceed as follows:
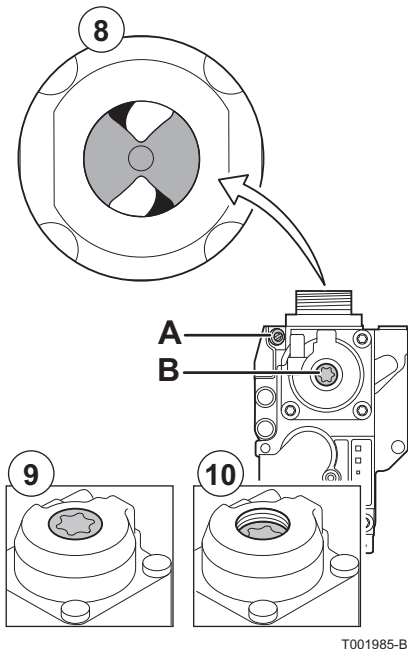
1. Switch off the boiler electrical power supply.
2. Close the gas valve on the boiler.
3. Remove the air inlet flue on the venturi.
4. Unscrew the top connection on the gas valve unit.
5. Disconnect the connector located under the fan.
6. Release the 2 clips holding the fan/mixing elbow unit in place on the heat exchanger.
7. Completely remove the fan/mixing elbow unit.
   ☞ For steps 3 to 7 inclusive, see chapter: "Checking the burner and cleaning the heat exchanger", page 102
8. Turn the setting screw **A** on the gas valve unit to modify the position of the restrictor.
9. Turn the setting screw **B** on the gas valve unit anticlockwise until it matches the front panel.
10. Turn the setting screw **B** on the gas valve unit by 6 turns clockwise.
11. Follow the procedure in reverse to re-assemble all of the components.

T001985-B

5.5   Checks and adjustments after commissioning

5.5.1.   Displaying the parameters in extended mode

The display mode on the control panel is set as standard in such a way as only to show the conventional parameters. It is possible to switch to extended mode by proceeding as follows:
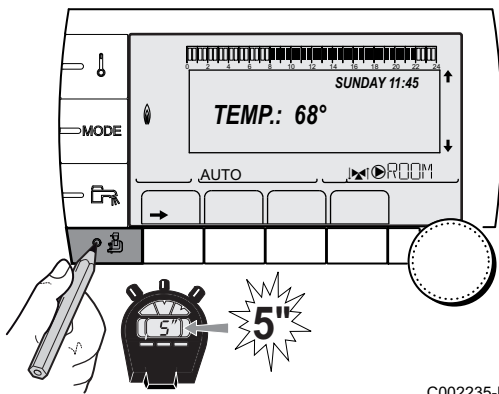
1. Access the installer level: Press key 🔧 for around 5 seconds.
2. Select the menu **#SYSTEM**.

ℹ️
▸ Turn the rotary button to scroll through the menus or modify a value.
▸ Press the rotary button to access the menu selected or confirm a value modification.
   ☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66

3. Set parameter **INSTALLATION** to **EXTENDED**.

C002235-F-04

SUNDAY 11:45
TEMP.: 68°
AUTO

Installer level - Menu #SYSTEM				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
INSTALLATION	**CLASSIC**	Displays the parameters of a conventional installation	**CLASSIC**	
	EXTENDED	Displays all parameters		

> **i** Regardless of what is done to the keys, the regulator switches back to **CLASSIC** mode after 30 minutes.

5.5.2. Setting the parameters specific to the installation

1. Access the installer level: Press key 🔧 for around 5 seconds.
2. Select the menu **#SYSTEM**.

> **i**
> ▸ Turn the rotary button to scroll through the menus or modify a value.
> ▸ Press the rotary button to access the menu selected or confirm a value modification.
>
> ☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66

3. Set the following parameters according to the connections made to the PCBs:

C002235-F-04

Installer level - #SYSTEM menu				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
CIRC. A: [1][2]	**DIRECT**	Use as a direct heating circuit	**DIRECT**	
	PROGRAM.	Use as an independent programmable outlet		
	H.TEMP	Enables operation of circuit A in summer despite manual or automatic summer shutdown		
	DHW	Connection of a second domestic hot water tank		
	DHW ELEC	Used to control the electrical resistor according to the timer programme on circuit A in summer mode		
	DISAB.	No data for circuit A is displayed		
CIRC. B: [1]	**3WV**	Connecting a circuit with 3-way valve (For example: Underfloor heating)	**3WV**	
	SWIM.P.	Using the circuit for pool management		
	DIRECT	Use of circuit in direct heating circuit		
CIRC. C: [1]	**3WV**	Connecting a circuit with 3-way valve (For example: Underfloor heating)	**3WV**	
	SWIM.P.	Using the circuit for pool management		
	DIRECT	Use of circuit in direct heating circuit		
O.PUMP A [1][2]	**CH.PUMP A**	Heating pump circuit A: The **PUMP A** outlet is used to control the pump on circuit A	**CH.PUMP A**	
	CIRC.AUX	Used to resume the functions of the **S.AUX** parameter without adding the PCB + sensor option (Package AD249)		
	DHW LOOP	Used to control the domestic hot water looping pump according to the DHW timer programme and force its operation during an override		
	PRIMARY PUMP	The outlet **PUMP A** is active if a heating demand is present on the secondary pump		
	ORDER BURNER	The outlet **PUMP A** is active when a burner demand is present		
	FAILURE	The outlet **PUMP A** is active if an fault is detected		
(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**				
(2) If the pump incorporated in the boiler is used for circuit A (parameter **CIRC.A** set to **DIRECT**), the **O.PUMP A** outlet is free				
(3) The parameter is only displayed if the parameter **O.PUMP A** is set to **CIRC.AUX** or the 3-way valve PCB option is connected				

Installer level - #SYSTEM menu

Parameter	Adjustment range	Description	Factory setting	Customer setting
BOILER PUMP	**ALL**	The boiler pump runs whenever a secondary circuit is required (A, B, C or DHW)	**CIRC. A:**	
	CIRC. A:	The boiler pump only runs if circuit A is required		
P.DHW: [1]	**PUMP**	Using a tank load pump on the DHW PUMP outlet	**RV**	
	RV	Use of a reversal valve for DHW production		
S.AUX: [1][3]	**DHW LOOP**	Use as a domestic loop pump	**DHW LOOP**	
	PROGRAM.	Use as an independent programmable outlet		
	PRIMARY PUMP	The outlet **AUX PUMP** is active if a heating demand is present on the secondary pump		
	ORDER BURNER	The outlet **AUX PUMP** is active when a burner demand is present		
	DHW	Use of primary circuit of second DHW tank		
	FAILURE	The outlet **AUX PUMP** is active if a fault is detected		
	DHW ELEC	Used to control the electrical resistor according to the timer programme on circuit AUX in summer mode		
I.SYST [1]	**SYSTEM**	The inlet sensor is used to connect the common flow sensor of a cascade system	**SYSTEM**	
	STORAGE TANK	Hot water storage tank affected to heating only		
	DHW STRAT	Using the DHW tank with 2 sensors (top and bottom)		
	ST.TANK+DHW	Hot water storage tank affected to heating and domestic hot water		
O. TEL: [1]	**FAILURE**	The telephone outlet is closed in the event of failure	**FAILURE**	
	REVISION	The telephone outlet is closed in the event of revision display		
	DEF+REV	The telephone outlet is closed in the event of failure or revision display		
CT.TEL [1]	**CLOSE**	See table below.	**CLOSE**	
	OPEN			
I.TEL: [1]	**ANTIFR**	Start anti-freeze in boiler command	**ANTIFR**	
	0/1 A	ON or OFF contact: **I.TEL:** can be used as an antifreeze activation inlet on circuit A		
	0/1 B	ON or OFF contact: **I.TEL:** can be used as an antifreeze activation inlet on circuit B		
	0/1 C	ON or OFF contact: **I.TEL:** can be used as an antifreeze activation inlet on circuit C		
	0/1 DHW	ON or OFF contact: **I.TEL:** can be used as an antifreeze activation inlet on circuit ECS		
	0/1 AUX	ON or OFF contact: **I.TEL:** can be used as an antifreeze activation inlet on circuit AUX (**S.AUX:** if the AD 249 option is connected or the parameter **O.PUMP A** is set to **CIRC.AUX**) When **I.TEL:** is not active, the auxiliary circuit (AUX) follows the maximum boiler temperature (parameter **BOILER MAX**).		

(1) The parameter is only displayed if **INSTALLATION** parameter is set to **EXTENDED**
(2) If the pump incorporated in the boiler is used for circuit A (parameter **CIRC.A** set to **DIRECT**), the **O.PUMP A** outlet is free
(3) The parameter is only displayed if the parameter **O.PUMP A** is set to **CIRC.AUX** or the 3-way valve PCB option is connected

De Dietrich

Influence of the parameter setting CT.TEL on the I.TEL contact

CT.TEL	I.TEL:	I.TEL: contact closed	I.TEL: contact open
CLOSE	ANTIFR	The antifreeze mode is active on all boiler circuits.	The mode selected on the boiler is active.
	0/1 A	The mode selected on the circuit is active.	The antifreeze mode is active on the circuit concerned.
	0/1 B	The mode selected on the circuit is active.	The antifreeze mode is active on the circuit concerned.
	0/1 C	The mode selected on the circuit is active.	The antifreeze mode is active on the circuit concerned.
	0/1 DHW	The mode selected on the DHW circuit is active.	The antifreeze mode is active for the DHW circuit.
	0/1 AUX	▸ The ⏵AUX outlet on the connection terminal block is active. ▸ The boiler operates at a set point temperature equal to **BOILER MAX**.	▸ The ⏵AUX outlet on the connection terminal block is not active. ▸ The boiler operates with a set point temperature as a function of the outside temperature.
OPEN	ANTIFR	The mode selected on the boiler is active.	The antifreeze mode is active on all boiler circuits.
	0/1 A	The antifreeze mode is active on the circuit concerned.	The mode selected on the circuit is active.
	0/1 B	The antifreeze mode is active on the circuit concerned.	The mode selected on the circuit is active.
	0/1 C	The antifreeze mode is active on the circuit concerned.	The mode selected on the circuit is active.
	0/1 DHW	The antifreeze mode is active for the DHW circuit.	The mode selected on the DHW circuit is active.
	0/1 AUX	▸ The ⏵AUX outlet on the connection terminal block is not active. ▸ The boiler operates with a set point temperature as a function of the outside temperature.	▸ The ⏵AUX outlet on the connection terminal block is active. ▸ The boiler operates at a set point temperature equal to **BOILER MAX**.

5.5.3.   Naming the circuits and generators
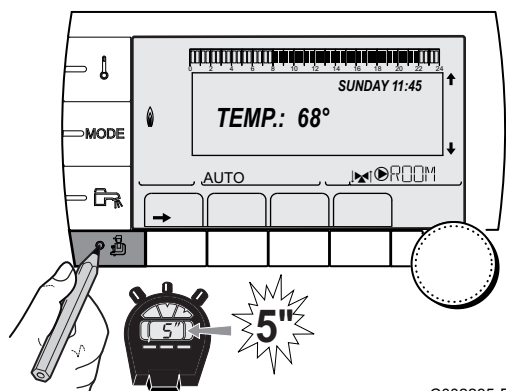
C002235-F-04

1. Access the installer level: Press key 🔧 for around 5 seconds.

2. Select the menu **#NAMES OF THE CIRCUITS**.

ℹ️

   ▸ Turn the rotary button to scroll through the menus or modify a value.

   ▸ Press the rotary button to access the menu selected or confirm a value modification.

👉 For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66
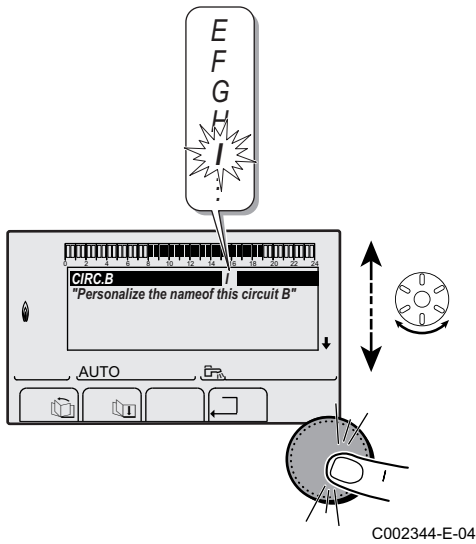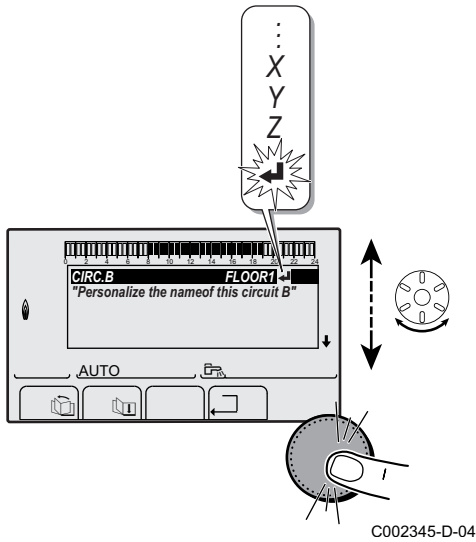
C002344-E-04

3. Select the circuit or generator you wish to rename.

Installer level - Menu #NAMES OF THE CIRCUITS		
Parameter	Description	Name given by the customer
CIRC. A:	Circuit A	
CIRC. B:	Circuit B	
CIRC. C:	Circuit C	
CIRC.AUX	Auxiliary circuit	
CIRC.DHW	Domestic hot water circuit	
GENE	Generator	

4. Turn the rotary button to choose the first character from the list. To confirm, press the rotary button.

5. Then press again to enter a second character or turn the rotary button to leave an empty space.

6. Choose the other characters in the same way. The input zone may contain up to 6 characters.

i To move from one character to another, turn the rotary button. To exit without modifications, press key ESC.

7. To confirm the name, press the rotary button and then turn the button slightly anti-clockwise. When the symbol ↵ appears, press the rotary button. The name is confirmed.

i If the name reaches 6 characters, it is automatically confirmed when the last character is confirmed.
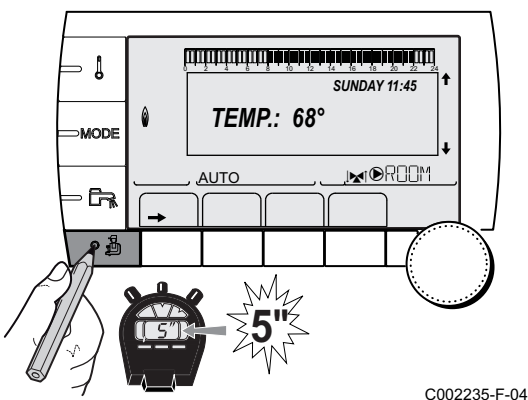
C002345-D-04

5.5.4. Setting the heating curve

1. Access the installer level: Press key 🔒 for around 5 seconds.

2. Select the menu **#SECONDARY INSTAL.P**.

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

  ☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66.

C002235-F-04

C002316-E-04

3. Select the parameter **CIRC. CURVE ...**.

C002317-D-04
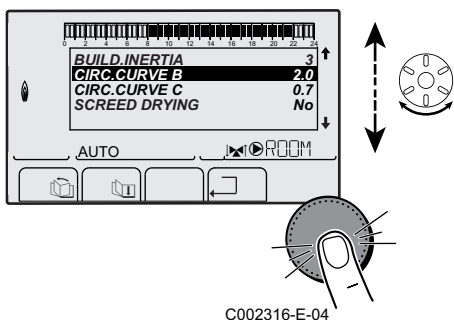
4. To modify the value directly, turn the rotary button.
   To modify the value by displaying the curve, press key ⍾.

C002318-B-04
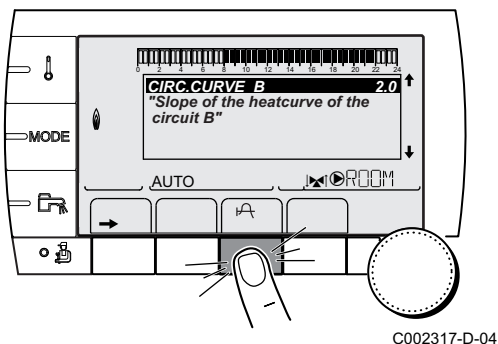
5. To modify the curve, turn the rotary button.
6. To confirm, press the rotary button.
   To cancel, press key ESC.
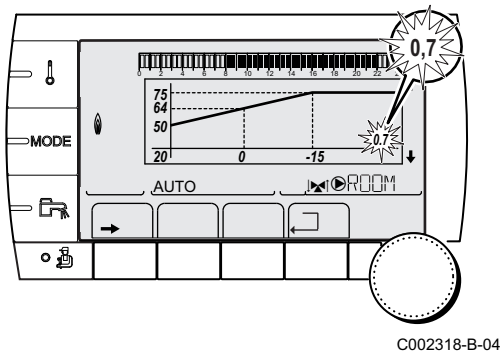
ⓘ   **0.7 =** Heating curve set.

■ Heating curve without BCT

The BCT (Base heat Curve Temperature) allows a minimum operating temperature to be imposed on the heating circuit (this temperature may be constant if the circuit gradient is nil).

C002319-B

①	Maximum temperature of the circuit
②	Water temperature in the circuit for an outside temperature of 0°C
③	**DAY** set point on the circuit
④	Outside temperature for which the maximum water temperature in the circuit is reached
⑤	Value of the heating curve This value corresponds to the parameter **HEAT.CURV.** ☞ See chapter: "Professional settings", page 84.

ⓘ When you modify the heating curve, ② and ⑤ are recalculated and repositioned automatically.

■ **Heating curve with BCT**

The BCT (Base heat Curve Temperature) allows a minimum operating temperature to be imposed on the heating circuit (this temperature may be constant if the circuit gradient is nil).

C002320-B
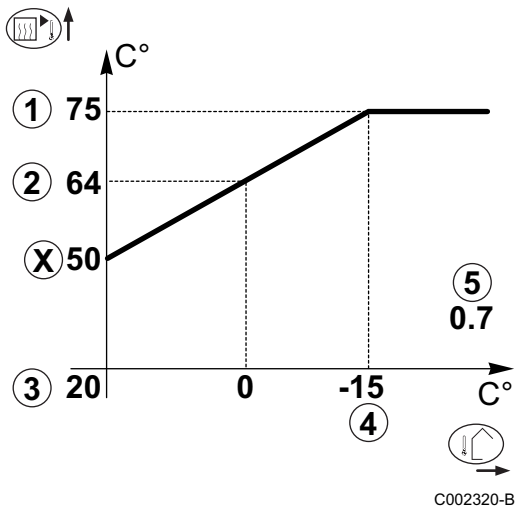
①   Maximum temperature of the circuit

②   Water temperature in the circuit for an outside temperature of 0°C

③   **DAY** set point on the circuit

④   Outside temperature for which the maximum water temperature in the circuit is reached

⑤   Value of the heating curve
This value corresponds to the parameter **HEAT.CURV.**
☞ See chapter: "Professional settings", page 84.

x   Value set to the parameter **HCZP D**

ℹ️ When you modify the heating curve, ② and ⑤ are recalculated and repositioned automatically.

5.5.5.   Finalizing work

T001522-A
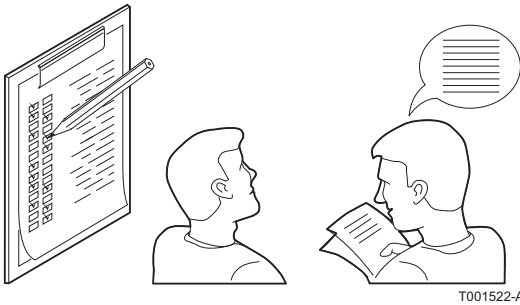
1. Remove the measuring equipment.
2. Put the flue gas sampling plug back in place.
3. Refit the front panel. Tighten the two screws by a quarter turn.
4. Raise the temperature in the heating system to approximately 70°C.
5. Shut down the boiler.
6. After about 10 minutes, vent the air in the heating system.
7. Checking the hydraulic pressure. If necessary, top up the water level in the heating system (recommended hydraulic pressure between 1,5 and 2 bar).
8. Tick the gas category used on the data plate.
9. Complete the checklist.
10. Explain the operation of the installation, the boiler and the regulator to the users.
11. Inform the user of the periodicity of maintenance work to be carried out. Input the service date and the contact details of the installer.
☞ See chapter: "Customising maintenance", page 98.
12. Give all the instruction manuals to the user.

Commissioning of the boiler is now complete.

ℹ️ The various boiler parameters are preset in the factory. These factory settings are suitable for the most common heating systems. For other systems and situations, the parameters can be modified.

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5.6   Reading out measured values

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

1. To access user level: Press the ➜ key.

2. Select the menu **#MEASURES**.

ℹ
▸   Turn the rotary button to scroll through the menus or modify a value.

▸   Press the rotary button to access the menu selected or confirm a value modification.

☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66.
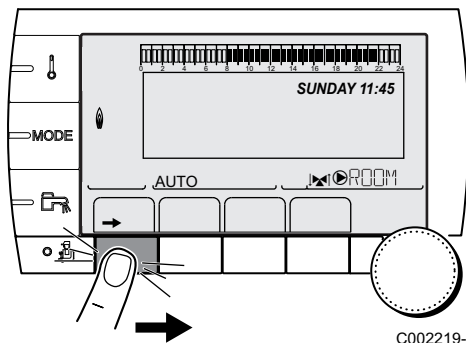
C002219-D-04

User level - #MEASURES menu		
Parameter	**Description**	**Unit**
OUTSIDE TEMP.	Outside temperature	°C
ROOMTEMP. A [1]	Room temperature of circuit A	°C
ROOMTEMP. B [1]	Room temperature of circuit B	°C
ROOMTEMP. C [1]	Room temperature of circuit C	°C
BOILER TEMP.	Water temperature in the boiler	°C
PRESSURE	Water pressure in the installation	bar
WATER TEMP. [1]	Water temperature in the DHW tank	°C
INST DWH TEMP. [1]	Instant hot water temperature	°C
STOR.TANK.TEMP [1]	Water temperature in the storage tank	°C
DCW TEMPERATURE [1]	Domestic cold water temperature	°C
SWIMMING P.T.B [1]	Water temperature of the swimming pool on circuit B	°C
SWIMMING P.T.C [1]	Water temperature of the swimming pool on circuit C	°C
OUTLET TEMP. B [1]	Temperature of the flow water in circuit B	°C
OUTLET TEMP. C [1]	Temperature of the flow water in circuit C	°C
SYSTEM TEMP. [1]	Temperature of the system flow water if multi-generator	°C
T.DHW BOTTOM [1]	Water temperature in the bottom of the DHW tank	°C
TEMP.TANK AUX [1]	Water temperature in the second DHW tank connected to the AUX circuit	°C
DHW A TEMP. [1]	Water temperature in the second DHW tank connected to circuit A	°C
TEMP.SOL.TANK [1]	Temperature of the hot water produced by solar power (TS)	°C
SOLAR.COLL.T. [1]	Solar panel temperature (TC)	°C
SOLA.ENERGY [1]	Solar energy accumulated in the tank	kWh
BACK TEMP	Temperature of the boiler return water	°C
WIND SPEED	Fan rotation speed	rpm
POWER	Instantaneous boiler output (0%: Burner off or running at minimum output)	%
CURRENT (µA)	Ionization current	µA
NB IMPULS.	Number of burner starts (not restartable) The meter is incremented by 8 every 8 start-ups	
RUNTIME	Number of burner operation hours (not restartable) The meter is incremented by 2 every 2 hours	h
IN 0-10V [1]	Voltage at input 0-10 V	V
(1) The parameter is only displayed for the options, circuits or sensors actually connected.		

User level - #MEASURES menu		
Parameter	**Description**	**Unit**
SEQUENCE	Control system sequence	
CTRL	Software control number	
HOURS	Present time	h
MINUTE	Minutes	Min
DAY	Day of the week	
DATE	Date	
MONTH	Month	
YEAR	Year	
SUM. TIME:	Change to summer time	
(1) The parameter is only displayed for the options, circuits or sensors actually connected.		

5.7 Changing the settings

The boiler control panel is set for the most common heating systems. With these settings, practically all heating systems operate correctly. The user or installer can optimise the parameters according to own preferences.

☞ For the user settings, refer to the user instructions.

5.7.1. Language selection

1. Access the installer level: Press key 🔧 for around 5 seconds.

2. Select the menu **#LANGUAGE**.

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

☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66
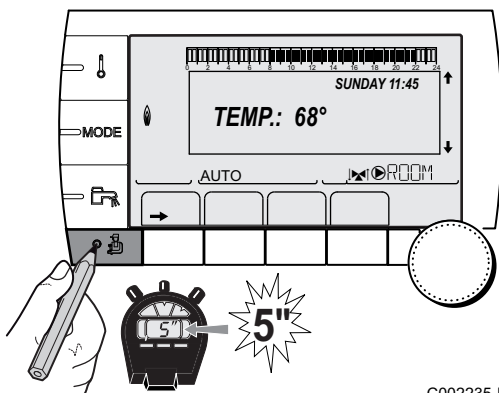
C002235-F-04

Installer level - Menu #LANGUAGE	
Adjustment range	**Description**
FRANCAIS	Display in French
DEUTSCH	Display in German
ENGLISH	Display in English
ITALIANO	Display in Italian
ESPANOL	Display in Spanish
NEDERLANDS	Display in Dutch
POLSKI	Display in Polish
РУССКИЙ	Display in Russian
TÜRK	Display in Turkish

5.7.2.   Calibrating the sensors

1. To access user level: Press the ➜ key.
2. Select the menu **#SETTING**.

ℹ️

▸   Turn the rotary button to scroll through the menus or modify a value.

▸   Press the rotary button to access the menu selected or confirm a value modification.

👉 For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66

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3. To set the following parameters:

User level - Menu #SETTING				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
SUM/WIN	15 to 30 °C	Used to set the outside temperature above which heating will be shut down. ▸ The heating pumps are shut down. ▸ The burner will only start for domestic hot water needs. ▸ The symbol ⌂ appears.	22 °C	
	NO	Heating is never shut down automatically		
CALIBR. OUT		Outside sensor calibration: Used to correct the outside temperature	Outside temperature	
CALIBR. ROOM A (1)(2)		Calibration of the room sensor on circuit A Make this setting 2 hours after switching on, when the room temperature has stabilised	Room temperature of circuit A	
OFFSET ROOM A (1) (3)	-5.0 to +5.0 °C	Room offset on circuit A: Is used to set a room offset Make this setting 2 hours after switching on, when the room temperature has stabilised	0.0	
ANTIFR. ROOM A	0.5 to 20 °C	Room temperature antifreeze activation on circuit A	6 °C	
CALIBR. ROOM B (2)(1)(4)		Calibration of the room sensor on circuit B Make this setting 2 hours after switching on, when the room temperature has stabilised	Room temperature of circuit B	
OFFSET ROOM B (3) (4)(1)	-5.0 to +5.0 °C	Room offset on circuit B: Is used to set a room offset Make this setting 2 hours after switching on, when the room temperature has stabilised	0.0	
ANTIFR. ROOM B (4)	0.5 to 20 °C	Room temperature at which the antifreeze mode is activated on circuit B	6 °C	
(1) The parameter is only displayed if **INSTALLATION** is set to **EXTENDED** (2) The parameter is only displayed if a room sensor is connected to the circuit concerned (3) The parameter is only displayed if no room sensor is connected to the circuit concerned or the sensor has no influence (4) The parameter is only displayed if the circuit concerned is actually connected				

User level - Menu #SETTING				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
CALIBR. ROOM C (4)(1)(2)		Calibration of the room sensor on circuit C Make this setting 2 hours after switching on, when the room temperature has stabilised	Room temperature of circuit C	
OFFSET ROOM C (4) (1)(3)	-5.0 to +5.0 °C	Room offset on circuit C: Is used to set a room offset Make this setting 2 hours after switching on, when the room temperature has stabilised	0.0	
ANTIFR. ROOM C (4)	0.5 to 20 °C	Room temperature antifreeze activation on circuit C	6 °C	
(1) The parameter is only displayed if **INSTALLATION** is set to **EXTENDED** (2) The parameter is only displayed if a room sensor is connected to the circuit concerned (3) The parameter is only displayed if no room sensor is connected to the circuit concerned or the sensor has no influence (4) The parameter is only displayed if the circuit concerned is actually connected				

5.7.3.   Professional settings

1. Access the installer level: Press key 🔧 for around 5 seconds.

2. To set the following parameters:

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ℹ️
▸ Turn the rotary button to scroll through the menus or modify a value.

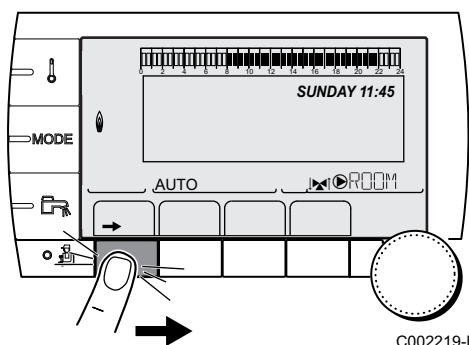▸ Press the rotary button to access the menu selected or confirm a value modification.

☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66.
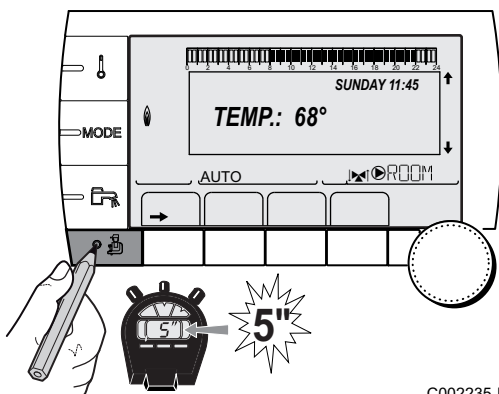
Installer level - Menu (#PRIMARY LIMITS)				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
BOILER MAX	20 to 90 °C	Maximum boiler temperature	80 °C	
MAX.R.HEAT(%) (1)	0-100%	Maximum boiler output during heating	100%	
MAX.DHW(%) (1)(2)	0-100%	Maximum boiler output in DHW	100%	
MIN.VENT. (1)	1000-5000 rpm	Minimum fan speed	See table below	
MAX.VENT.BOIL (1)	1000-7000 rpm	Maximum fan speed setting in heating	See table below	
MAX.VENT.DHW (1)	1000-7000 rpm	Maximum fan speed setting in domestic hot water	See table below	
START RPM (1)	1000-5000 rpm	Optimum start-up speed setting	See table below	
MIN.PUMP SPEED (1)	20-100%	Minimum pump speed	20 %	
MAX.PUMP SPEED (1)	20-100%	Maximum pump speed	60 %	
(1) The parameter is only displayed if **INSTALLATION** is set to **EXTENDED** (2) The parameter is only displayed if **P.DHW:** is set to **PUMP**The parameter is only displayed if **P.DHW** is set to **PUMP**				

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Type of gas used	Parameter	Unit	AGC 10/15	AGC 15	AGC 25	AGC 35
Gas H (G20)	MIN.VENT.	rpm	1800	1800	1800	1700
	MAX.VENT.BOIL	rpm	3300	4500	5600	6200
	MAX.VENT.DHW	rpm	4500	4500	6300	6200
	START SP.	rpm	3300	3700	3000	4000
Gas L (G25)	MIN.VENT.	rpm	1800	1800	1800	1700
	MAX.VENT.BOIL	rpm	3200	4400	5300	6200
	MAX.VENT.DHW	rpm	4400	4400	5900	6200
	START SP.	rpm	3200	3700	3000	4000
Propane (G31)	MIN.VENT.	rpm	2200	2200	1800	1700
	MAX.VENT.BOIL	rpm	3200	4400	5300	6200
	MAX.VENT.DHW	rpm	4400	4400	5900	6200
	START SP.	rpm	3200	3700	3000	4000
All types of gas	MAX.PUMP SPEED	%	60	60	60	60
All types of gas	MIN.PUMP SPEED	%	20	20	20	20

Installer level - Menu #SECONDARY LIMITS			
Parameter	Adjustment range	Description	Factory setting
MAX.CIRC.A	20 to 95 °C	Maximum temperature (Circuit A) ☞ "MAX.CIRC...", page 88	75 °C
MAX.CIRC.B	20 to 95 °C	Maximum temperature (Circuit B) ☞ "MAX.CIRC...", page 88	50 °C
MAX.CIRC.C	20 to 95 °C	Maximum temperature (Circuit C) ☞ "MAX.CIRC...", page 88	50 °C
OUT.ANTIFREEZE	OFF, -8 to +10 °C	Outside temperature at which the installation's antifreeze protection is activated. Below this temperature the pumps are permanently on and the minimum temperatures for each circuit are respected. When NIGHT :STOP is set, the reduced temperature is maintained in each circuit (Menu #SECONDARY INSTAL.P). OFF: Antifreeze protection is not activated	+3 °C
HCZP D A [1] [2]	OFF, 20 to 90 °C	Curve base temperature in Daytime mode (Circuit A)	OFF
HCZP N A [1] [2]	OFF, 20 to 90 °C	Curve base temperature in Nighttime mode (Circuit A)	OFF
HCZP D B [1] [2]	OFF, 20 to 90 °C	Curve base temperature in Daytime mode (Circuit B)	OFF
HCZP N B [1] [2]	OFF, 20 to 90 °C	Curve base temperature in Nighttime mode (Circuit B)	OFF
HCZP D C [1] [2]	OFF, 20 to 90 °C	Curve base temperature in Daytime mode (Circuit C)	OFF
HCZP N C [1] [2]	OFF, 20 to 90 °C	Curve base temperature in Nighttime mode (Circuit C)	OFF
PRIM.TEMP.DHW [1]	50 to 79 °C	Boiler temperature setting if producing domestic hot water	65 °C
(1) The parameter is only displayed if INSTALLATION is set to EXTENDED			
(2) The parameter can be set to the heating curve by pressing key ⌂.			

Installer level - Menu #PRIMARY INSTAL.P[(1)]

Parameter	Adjustment range	Description	Factory setting	Customer setting
BURN.MIN.RUN	0 to 180 seconds	Setting the burner minimum operation time (In heating mode)	30 seconds	
TIMER GENE P.[(1)]	1 to 30 minutes	Maximum post-operation duration of the generator pump	4 minutes	
IN.BL[(1)]	STOP HEAT	Configuration of the PCU BL inlet If the contact is open, the heating is off. If the parameter **P.DHW:** is set to **RV**, DHW production nevertheless remains functional. Automatic restart when the contact closes.	TOTAL STOP	
	TOTAL STOP	Configuration of the PCU BL inlet If the contact is open, heating and DHW production are off. Automatic restart when the contact closes.		
	SAFETY MODE	Configuration of the PCU BL inlet If the contact is open, the boiler goes into safety lockout. The boiler needs to be reset to restart.		

(1) The menu is displayed only if the **INSTALLATION** parameter is set to **EXTENDED**

Installer level - Menu #SECONDARY INSTAL.P

Parameter	Adjustment range	Description	Factory setting	Customer setting
BUILD. INERTIA [(1)]	0 (10 hours) to 10 (50 hours)	Characterisation of building's inertia: 0 for a building with low thermal inertia. 3 for a building with normal thermal inertia. 10 for a building with high thermal inertia. **Modification of the factory setting is only useful in exceptional cases.**	3 (22 hours)	
CIRC.CURVE A[(2)]	0 to 4	Heating curve of the circuit A ☞ "CIRC. CURVE ...", page 89	1.5	
ROOM INFL. A [(1)]	0 to 10	Influence of room sensor A ☞ "ROOM S.INFL", page 90	3	
CIRC.CURVE B[(2)]	0 to 4	Heating curve of the circuit B ☞ "CIRC. CURVE ...", page 89	0.7	
ROOM INFL. B [(1)]	0 to 10	Influence of room sensor B ☞ "ROOM S.INFL", page 90	3	
CIRC.CURVE C[(2)]	0 to 4	Heating curve of the circuit C ☞ "CIRC. CURVE ...", page 89	0.7	
ROOM INFL. C [(1)]	0 to 10	Influence of room sensor C ☞ "ROOM S.INFL", page 90	3	
SCREED DRYING	NO, B, C, B+C	Drying the floor ☞ "SCREED DRYING", page 89	NO	
START DRYING TEMP[(3)]	20 to 50 °C	Screed drying start temperature	20 °C	
STOP DRYING TEMP[(3)]	20 to 50 °C	Screed drying stop temperature	20 °C	

(1) The parameter is only displayed if **INSTALLATION** is set to **EXTENDED**
(2) The parameter can be set to the heating curve by pressing key ⌂
(3) The parameter is only displayed if **SCREED DRYING** is other than **OFF**
(4) The parameter is only displayed if **IN 0-10V** is set to **ON**.
(5) If a reversal valve is connected, DHW priority will always be total regardless of the setting.

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Installer level - Menu #SECONDARY INSTAL.P				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
NB DAYS DRYING[3]	0 to 99		0	
NIGHT [1]	DEC.	The lower temperature is maintained (Night mode) ☞ "NIGHT", page 90	DEC.	
	STOP	The boiler is stopped (Night mode) ☞ "NIGHT", page 90		
IN 0-10V	OFF / TEMPERATURE / POWER %	Activating the control at 0-10 V ☞ "Function 0-10 V", page 90	OFF	
VMIN/OFF 0-10V [1][4]	0 to 10 V	Voltage corresponding to the instruction set minimum	0.5 V	
VMAX 0-10V [1][4]	0 to 10 V	Voltage corresponding to the instruction set maximum	9.5 V	
CONS.MIN 0-10V [1] [4]	10 to 70 °C	Instruction minimum set temperature	20 °C	
CONS.MAX 0-10V [1] [4]	10 to 100 °C	Maximum set temperature	80 °C	
BAND WIDTH [1]	4 to 16 K	Control unit bandwidth for the 3-way valves. Option of increasing the bandwidth if the valves are rapid or of reducing it if they are slow.	**12 K**	
BOIL/3WV SHIFT [1]	0 to 16 K	Minimum temperature difference between the boiler and the valves	**4 K**	
H. PUMP DELAY [1]	0 to 15 minutes	Timing of the shutdown of the heating pumps. The timing of heating pump shutdown prevents the boiler overheating.	**4 minutes**	
HW. PUMP DELAY [1] [2]	2 to 15 minutes	Timing of the shutdown of the domestic hot water pump. The timing of the domestic hot water load pump shutdown prevents the boiler and the heating circuits overheating (Only if a load pump is used).	**2 minutes**	
ADAPT	ON	Automatic adaptation of the heating curves for each circuit with a room sensor with an influence of >0.	**ON**	
	OFF	The heating curves can only be modified manually.		
PRIORITY DHW[5]	TOTAL	Interruption of pool heating and reheating during domestic hot water production.	**TOTAL**	
	SLIDING	Domestic hot water production and heating on the valve circuits if the available output is sufficient and the hydraulic connection allows.		
	NO	Heating and domestic hot water production in parallel if the hydraulic connection allows. ⚠ Risk of overheating in the direct circuit.		

(1) The parameter is only displayed if **INSTALLATION** is set to **EXTENDED**
(2) The parameter can be set to the heating curve by pressing key ↻
(3) The parameter is only displayed if **SCREED DRYING** is other than **OFF**
(4) The parameter is only displayed if **IN 0-10V** is set to **ON**.
(5) If a reversal valve is connected, DHW priority will always be total regardless of the setting.

Installer level - Menu #SECONDARY INSTAL.P				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
LEG PROTEC		The anti legionella function acts to prevent the development of legionella in the dhw tank, these bacteria are responsible for legionellosis.	**OFF**	
	OFF	Anti-legionella function not activated		
	DAILY	The tank is overheated every day from 4:00 o'clock to 5:00 o'clock		
	WEEKLY	The tank is overheated every Saturday from 4:00 o'clock to 5:00 o'clock		
(1) The parameter is only displayed if **INSTALLATION** is set to **EXTENDED**				
(2) The parameter can be set to the heating curve by pressing key ⌐Ꞁ				
(3) The parameter is only displayed if **SCREED DRYING** is other than **OFF**				
(4) The parameter is only displayed if **IN 0-10V** is set to **ON**.				
(5) If a reversal valve is connected, DHW priority will always be total regardless of the setting.				

Installer level - Menu #SOLAR[1]				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
DEC.SOLAR DHW	0 to 30 °C	Maximum drop in the DHW set point when the solar pump is running at 100%	5°C	
REFERENCE DT	10 to 20 °C	Temperature difference that the solar pump tries to maintain between the solar DHW sensor and the panel	10°C	
MAX.T.COLLECTOR	100 to 125 °C	Temperature of the panel above which the solar pump starts up. The pump does not operate if the temperature of the solar tank is higher than 80°C	100°C	
MAX TPS PUMP	1 to 5 min	Minimum operating duration of the solar pump at 100% on start-up	1 minute	
MIN.PUMP SPEED	50 to 100 %	Minimum speed of the solar pump	50%	
TUBULAR COLLECTOR	**YES / NO**	Set to **YES** if tubular collectors are used	**NO**	
MAX FLOW	0 to 20 l/min	Maximum flow rate of the solar pump ☞ **"MAX FLOW"**, page 91	6.7 l/mim.	
(1) The menu is only displayed if the solar control system is connected and the **INSTALLATION** parameter is set to **EXTENDED**				

■ **MAX.CIRC...**

⚠ **WARNING**

If using underfloor heating, do not modify the factory setting (50 °C). To install this, please consult existing legislation.

▸ In the case of a direct circuit, connect a safety thermostat to the BL contact.
▸ In the case of a 3-way valve circuit (B or C), connect a safety thermostat to the TS contact.

■ **CIRC. CURVE ...**

M001678-B
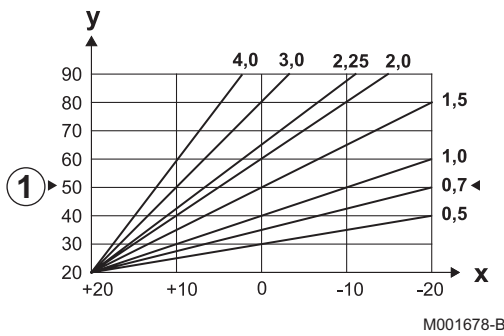
Heating curve circuit A, B or C

x   Outside temperature (°C)

y   Water flow temperature (°C)

①   Maximum temperature of the circuit B - C

■ **SCREED DRYING**

Used to force a constant flow temperature or a train to accelerate screed drying on underfloor heating.
The setting for these temperatures must follow the screed-layer's recommendations.
The activation of this parameter (setting other than **OFF**) forces the permanent display of **SCREED DRYING** and deactivates all other functions on the control unit.
When floor drying is active on a circuit, all other circuits (e.g. DHW) are shut down. The use of this function is only possible on circuits B and C.

C002768-A
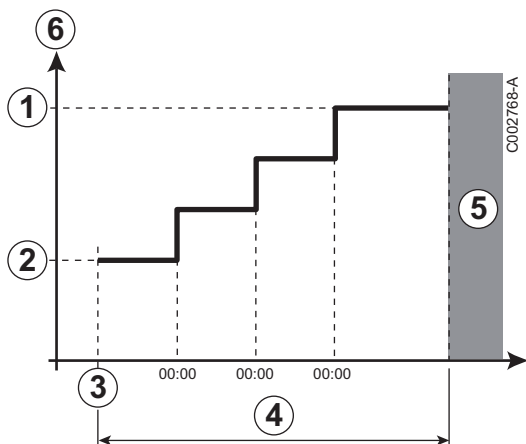
①   **STOP DRYING TEMP**

②   **START DRYING TEMP**

③   Today

④   **NB DAYS DRYING**

⑤   Normal regulation (End of drying)

⑥   Heating temperature setting (°C)

C002769-A
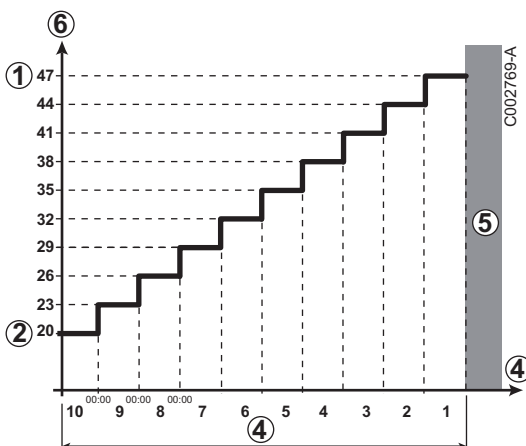
For example

①   **STOP DRYING TEMP**: 47 °C

②   **START DRYING TEMP**: 20 °C

④   **NB DAYS DRYING**

⑤   Normal regulation (End of drying)

⑥   Heating temperature setting (°C)

ℹ   Every day at midnight (00:00): the set point (**START DRYING TEMP**) is recalculated and the remaining number of days (**NB DAYS DRYING**) is decremented.

■ ROOM S.INFL

Used to adjust the influence of the room sensor on the water temperature for the circuit concerned.

0	No influence (remote control fitted in a location with no influence)
1	Slight influence
3	Average influence (recommended)
10	Room thermostat type operation

■ NIGHT

ℹ️ This parameter is displayed if at least one circuit does not include a room sensor.

For circuits without a room sensor:

▸ **NIGHT :DEC.** (Reduced): The reduced temperature is maintained during reduced periods. The circuit pump operates constantly.

▸ **NIGHT :STOP** (Stop): Heating is shut down during reduced periods. When installation antifreeze is active, the reduced temperature is maintained during reduced periods.

For circuits with a room sensor:

▸ When the room temperature is lower than the room sensor set point: The reduced temperature is maintained during reduced periods. The circuit pump operates constantly.

▸ When the room temperature is higher than the room sensor set point: Heating is shut down during reduced periods. When installation antifreeze is active, the reduced temperature is maintained during reduced periods.

■ Function 0-10 V

This function controls the boiler using an external system that includes a 0-10 V output connected to the 0-10 V input. This control imposes an instruction set temperature on the boiler. It will be necessary to ensure that the parameter **BOILER MAX** is higher than **CONS.MAX 0-10V**.

M001679-A
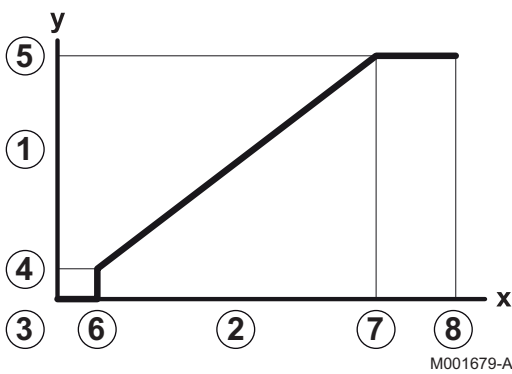
1	Instruction set outlet temperature (°C)
2	Power input signal (V) - DC
3	0 V
4	**CONS.MIN 0-10V**
5	**CONS.MAX 0-10V**
6	**VMIN/OFF 0-10V**
7	**VMAX 0-10V**
8	10 V
x	Voltage at input
y	Boiler temperature

If the input voltage is less than **VMIN/OFF 0-10V**, the boiler is off. The boiler temperature setting corresponds strictly to the 0-10 V input. The secondary boiler circuits continue to operate but have no impact on the water temperature in the boiler. If using the 0-10 V input and a secondary boiler circuit, the external regulator providing this 0-10 V power supply must always request a temperature at least equal to the needs of the secondary circuit.

■ **MAX FLOW**

In order for the regulator to calculate the quantity of heat produced by the installation (parameter kWh), input parameter **MAX FLOW**. The parameter **MAX FLOW** is equal to the flow in litres per minute in the solar circuit.
Establish the **MAX FLOW** value with the help of the table below, according to the configuration of the installation and the number or surface area of collectors.
When the flow is input incorrectly, the display kWh will also be incorrect.

ⓘ The quantity of heat (kWh value) can only be used for checks carried out for personal reasons.

Flat solar panels				
Solar panel installation	Area (m^2)	Number of panels	Flow rate (l/h)	Flow rate (l/min)
	3...5	1 or 2	400	6,7
	6...8	3 or 4	300	5,0
	8...10	4 or 5	250	4,1
	8...10	2x2	750	12,5
	12...15	2x3	670	11,2
	16...20	2x4	450	7,5
	12...15	3x2	850	14,2
	18...23	3x3	800	13,4
	24...30	3x4	650	10,9
	16...20	4x2	1200	20,0
	24...30	4x3	850	14,2

5.7.4. Configuring the network

1. Access the installer level: Press key 🔧 for around 5 seconds.
2. Select the menu **#NETWORK**.

ⓘ
   ▸ Turn the rotary button to scroll through the menus or modify a value.
   ▸ Press the rotary button to access the menu selected or confirm a value modification.
   ☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66

3. To set the following parameters:

C002235-F-04

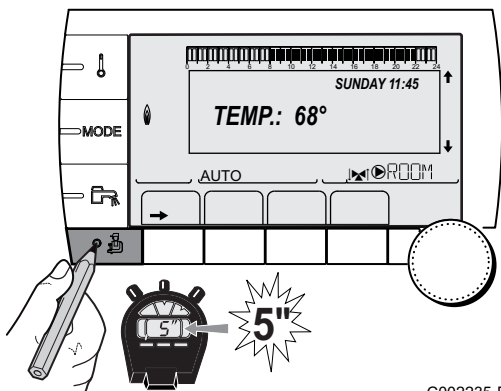| Installer level - Menu #NETWORK[1]				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
CASCADE:	**ON / NO**	**ON**: System in cascade	**NO**	
VM NETWORK [2]		Specific menu: Enlist VMs in cascade mode (See following chapter: "Connect VMs only in cascade")		
MASTER CONTROLLER [3]	**ON / NO**	Configure this control system as master on the bus	**ON**	
SYSTEM NETWORK [4]		Specific menu: Enlist generators or VMs in cascade mode (See following chapter: "Connecting appliances in cascade")		
FUNCT [4]	**CLASSIC**	Operation in cascade: Successive tripping of the various generators in the cascade according to needs	**CLASSIC**	
	PARALLEL	Functioning in parallel cascade: If the outside temperature is lower than the **PARALLEL CASC.** value, all generators are started up at the same time		
PARALLEL CASC. [5]	-10 to 20 °C	Outside temperature triggering all stages in parallel mode	10 °C	
TIMER GENE P. CASC[3]	0 to 30 min	Minimum duration of post-operation of the generator pump	0 mn	
INTER STAGE TIMER [3]	1 to 30 min	Time delay for starting up or shutting down generators.	4 mn	
SLAVE NUMBER [6]	2 to 10	Set the network address of the secondary generator	2	
(1) The menu is displayed only if the **INSTALLATION** parameter is set to **EXTENDED**				
(2) The parameter is only displayed if **CASCADE:** is set to **NO**				
(3) The parameter is only displayed if **CASCADE:** is set to **ON**				
(4) The parameter is only displayed if **MASTER CONTROLLER** is set to **ON**				
(5) The parameter is only displayed if **FUNCT** is set to **PARALLEL**				
(6) The parameter is only displayed if **MASTER CONTROLLER** is set to **OFF**				

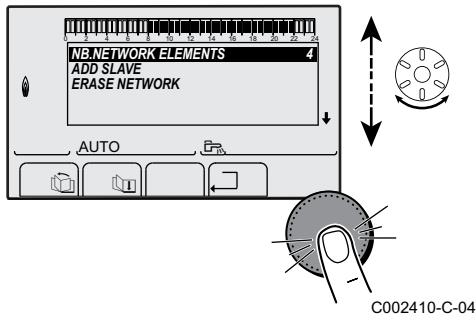| User level - Menu #SETTING				
Parameter	**Adjustment range**	**Description**	**Factory setting**	**Customer setting**
PERMUT[1]	**AUTO** / 1 ... 10	This parameter is used to set the master boiler. ▸ **AUTO**: The master boiler switches automatically every 7 days ▸ 1 ... 10: The master boiler is always the one defined by this value	**AUTO**	
(1) The parameter is only displayed if **CASCADE:** is on **ON** and **MASTER CONTROLLER** on **ON**				

■ Connecting appliances in cascade

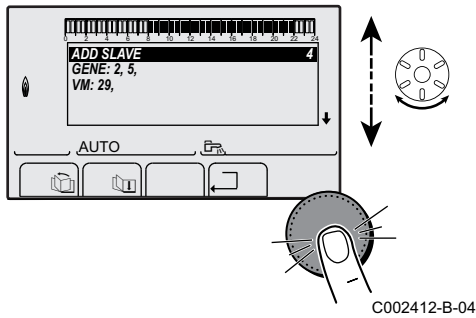It is possible, in a cascade configuration, to enlist generators and/or VM iSystem as slaves. Proceed as follows:

1. Set parameter **CASCADE:** to **ON**.
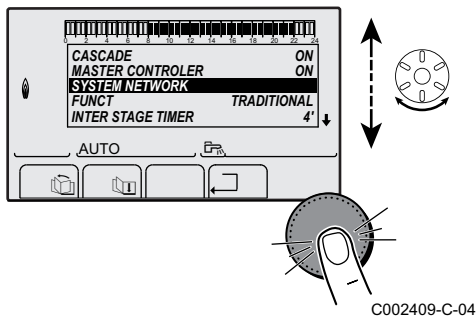
2. Select **SYSTEM NETWORK** and press the rotary button to go to the specific menu.

```
CASCADE                    ON
MASTER CONTROLER           ON
SYSTEM NETWORK
FUNCT              TRADITIONAL
INTER STAGE TIMER          4'
```
AUTO

C002409-C-04

3. To add a slave appliance to the network, select **ADD SLAVE**.

```
NB.NETWORK ELEMENTS         4
ADD SLAVE
ERASE NETWORK
```
AUTO

C002410-C-04

4. The screen displayed allows you to choose numbers for the slave boilers to be added to the network. Numbers 2 to 10 are dedicated to the generators and numbers 20 to 39 to the VM iSystem. Turn the rotary button to scroll through the numbers and press to confirm the number chosen. Press ⌐ to go back to the previous list.

5. To remove a slave appliance from the network, select **ERASE NETWORK**.

```
ADD SLAVE                   4
GENE: 2, 5,
VM: 29,
```
AUTO

C002412-B-04

6. The screen displayed allows you to choose the numbers of the slave boilers to be removed from the network. Turn the rotary button to scroll through the numbers and press to remove the number chosen. Press ⌐ to go back to the previous list.

```
ERASE NETWORK               4
GENE: 2, 5,
VM: 29,
```
AUTO

C002413-B-04

7. Select **NB. ELEMENTS.NETWORK**. This screen summarises the elements in the network recognised by the system. Press ⌐ to go back to the previous list.

```
NB.NETWORK ELEMENTS         4
GENE: 2, 5,
VM: 29,
```
AUTO

C002411-C-04
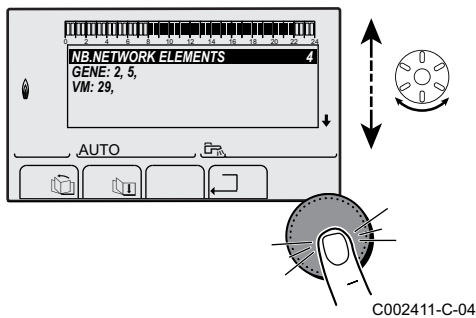
■ **Connecting VM iSystem in cascade**

It is possible to assign VMs only as slaves. Proceed as follows:

1. Set parameter **CASCADE:** to **NO**.

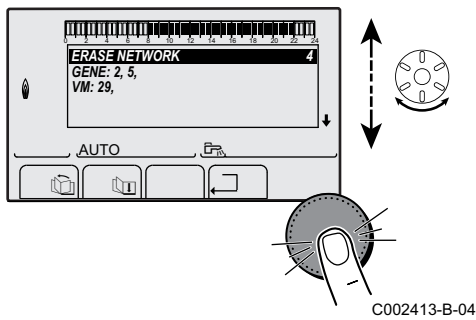2. Select **VM NETWORK** and press the rotary button to go to the specific menu.

3. The screen displayed is used to select the numbers of the slave VMs to be added to the network. Numbers 20 to 39 are dedicated to the VMs. Turn the rotary button to scroll through the numbers and press to confirm the number chosen. Press ⌐ to go back to the previous list.

4. To remove a slave VM from the network, select **DELETE VM**.

5. The screen displayed is used to select the numbers of the slave VMs to be removed from the network. Turn the rotary button to scroll through the numbers and press to remove the number chosen. Press ⌐ to go back to the previous list.

6. Select **NB. ELEMENTS.NETWORK**. This screen summarises the elements in the network recognised by the system. Press ⌐ to go back to the previous list.

5.7.5. Return to the factory settings

To reset the appliance, proceed as follows:

1. Press key 🌡, ➡ and ⌐ simultaneously for 4 seconds. The menu **#RESET** is displayed.

2. To set the following parameters:

C002296-B-04
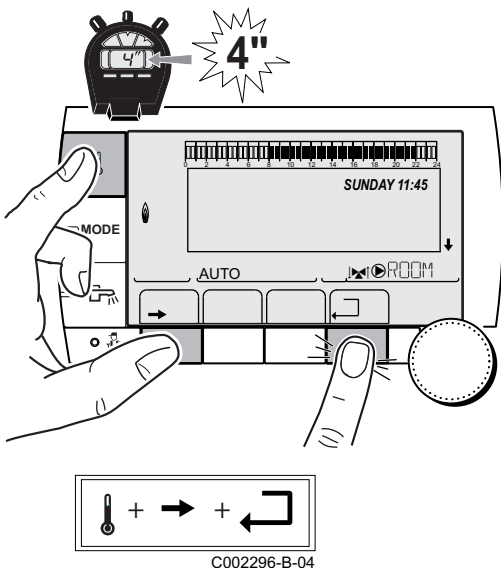
Menu #RESET			
Choice of generator	**Parameter**		**Description**
GENERATOR	**RESET**	**TOTAL**	Performs a TOTAL RESET of all parameters
		EXCEPT PROG.	Performs a parameter RESET but retains the timer programmes
		PROG.	Performs a RESET on the timer programmes but retains the parameters
		SENSOR SCU	Performs a RESET of the generator sensors connected
		ROOM SENSOR	Performs a RESET of the room sensors connected

LANGUE   FRANCAIS
Français - Deutsch - English -
Italiano - Español - Nederlands
- Pусский - Polski - Türk -

ESC

C002286-C
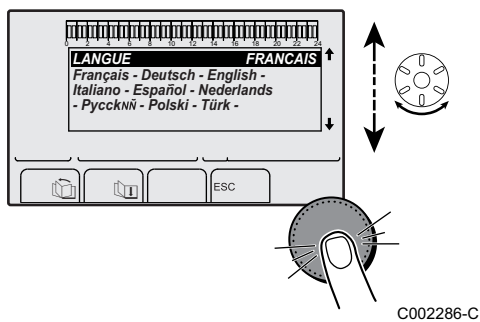
After reset (**TOTAL RESET** and **RESET EXCEPT PROG.**), the control system goes back to the display of the language choice after a few seconds.

1. Select the desired language by turning the rotary button.
2. To confirm, press the rotary button.

6 Switching off the appliance

6.1 Installation shutdown

> ⚠ **CAUTION**
>
> Do not switch off the mains supply to the appliance. If the central heating system is not used for a long period, we recommend activating the **HOLIDAYS** mode (to ensure the anti-grip of the heating pump).

6.2 Frost protection

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

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

> ⚠ **CAUTION**
>
> ▸ The antifreeze protection does not function if the appliance is switched off.
>
> ▸ The integrated protection system only protects the boiler, not the installation. To protect the installation, set the appliance to **HOLIDAYS** mode.

The **HOLIDAYS** mode protects:

- ▸ The installation if the outside temperature is lower than 3°C (factory setting).
- ▸ The room temperature if a remote control is connected and the room temperature is lower than 6 °C (factory setting).
- ▸ The domestic hot water tank if the tank temperature is lower than 4 °C (the water is reheated to 10 °C).

To configure the holidays mode: ☞ Refer to the user instructions.

7 Checking and maintenance

7.1 General instructions

⚠ **WARNING**

▸ Maintenance operations must be done by a qualified engineer.

▸ An annual inspection is compulsory.

▸ Only original spare parts must be used.

▸ Have the flues swept **at least once a year** or more, depending on the regulations in force in your country.

☞ See chapter: "Chimney sweep instructions", page 97

▸ Carry out the inspection and standard maintenance operations once a year.

☞ See chapter: "Standard inspection and maintenance operations", page 99

▸ Carry out specific maintenance operations if necessary:
  – Replacing the ionization/ignition electrode
  – Replacing the 3-way valve
  – Replacing the non-return valve.

7.2 Chimney sweep instructions

⚠ **CAUTION**

Have the flues swept **at least once a year** or more, depending on the regulations in force in your country. Only a qualified engineer may carry out the following operations.

1. Press the 🛠 key.
2. Check the combustion each time the flues are swept.

   ☞ See chapter: "Setting the air/gas ratio (Full load)", page 71 + "Setting the air/gas ratio (Part load)", page 72
3. To go back to the main display, press key ⬜ 2 times.

Menu #EMISSION MEASUREMENTS				
Generator	**Function available**	**Description**	**Values displayed**	
Generator name	**AUTO**	normal operation	**BOILER TEMP.** **CURRENT** **WIND SPEED** **BACK TEMP**	°C µA rpm °C
	PMIN	Operating at minimum output	**BOILER TEMP.** **CURRENT** **WIND SPEED** **BACK TEMP**	°C µA rpm °C
	PMAX	Operating at maximum output	**BOILER TEMP.** **CURRENT** **WIND SPEED** **BACK TEMP**	°C µA rpm °C

7.3   Customising maintenance

7.3.1.   Maintenance message

The boiler incorporates a function that can be used to display a maintenance message. To set the parameters for this function, proceed as follows:

1. Access the "After Sales" level: Hold down the 🛠 key until **#PARAMETERS** is displayed.

2. Select the menu **#REVISION**.

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

☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66

3. To set the following parameters:
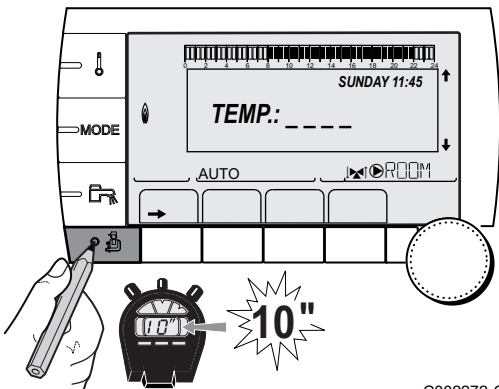
C002272-C-04

After Sales level - Menu #REVISION		
Parameter	**Adjustment range**	**Description**
TYPE	**NO**	Factory setting No message indicating that maintenance is necessary
	MANU	Recommended setting Signals that maintenance is necessary on the date selected. Set the date using the parameters below.
	AUTO	⚠ Not applicable. Do not select this setting.
REVISION HOUR[1]	0 to 23	Time at which the **REVISION** display appears
REV. YEAR[1]	2008 to 2099	Year in which the **REVISION** display appears
REVIS. MONTH[1]	1 to 12	Month in which the **REVISION** display appears
REVISION DATE[1]	1 to 31	Day on which the **REVISION** display appears
(1) The parameter is only displayed if **MANU** is configured.		

Clearing the maintenance message:

After carrying out the maintenance operations, modify the date in the **#REVISION** menu to clear the message.

In the event of maintenance before the maintenance message is displayed:

After carrying out early maintenance operations, it is necessary to set a new date in the **#REVISION** menu.

7.3.2.   Contact details of the professional for After Sales Support

In order to assist the user if an error or service message is displayed, it is possible to provide the contact details of the professional to be contacted. To input the professional's contact details, proceed as follows:

1. Access the "After Sales" level: Hold down the 🔧 key until **#PARAMETERS** is displayed.
2. Select the menu **#SUPPORT**.

C002272-C-04

> ℹ
>   ▸   Turn the rotary button to scroll through the menus or modify a value.
>   ▸   Press the rotary button to access the menu selected or confirm a value modification.
>   ☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66

3. To set the following parameters:

After Sales level - Menu #SUPPORT	
Parameter	**Description**
NAME	Input the installer's name
TELEPHONE NUM.	Input the installer's telephone number

When the message **REVISION** is displayed, press **?** to display the professional's telephone number.
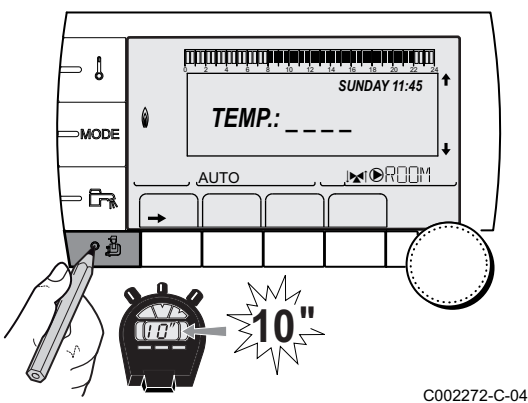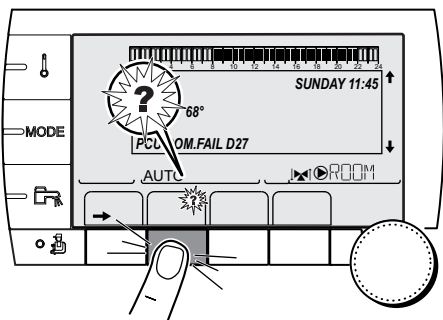
C002302-D-04

7.4   Standard inspection and maintenance operations

> ⚠ **CAUTION**
>
> During inspection and maintenance operations, always replace all gaskets on the parts removed.

7.4.1. Checking the hydraulic pressure

The hydraulic pressure must reach a minimum of 0,8 bar. If the hydraulic pressure is lower than 0,8 bar, the symbol **bar** flashes.

i If necessary, top up the water level in the heating system (recommended hydraulic pressure between 1,5 and 2 bar).

7.4.2. Checking the expansion vessel

1. Remove the cover from the sealed chamber.
   ☞ see chapter: "Removing the cover from the sealed chamber", page 68
2. Check the expansion vessel and replace it if necessary.

7.4.3. Checking the ionization current

The ionization current is displayed in the menu **#MEASURES**.

☞ See chapter: "Reading out measured values", page 81

7.4.4. Checking the tightness of the flue gas evacuation and air inlet connections

Check the tightness of the flue gases evacuation and air inlet connections.

7.4.5. Checking combustion

M002534-A

The check on combustion is done by measuring the percentage of O_2/CO_2 in the flue gas discharge flue. To do this, proceed as follows:

1. Unscrew the plug of the flue gas measurement point.
2. Connect the flue gas analyser.
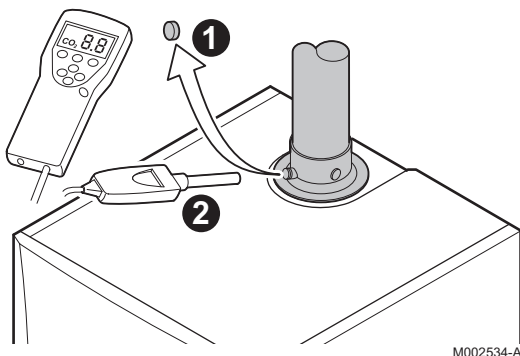
⚠️ **CAUTION**

Ensure that the opening around the sensor is completely sealed when taking measurements.

3. Set the boiler to full load. ☞ See chapter: "Setting the air/gas ratio (Full load)", page 71. The boiler is now operating at full load. Measure the percentage of CO_2 and compare this value with the checking values given.
4. Set the boiler to part load. ☞ See chapter: "Setting the air/gas ratio (Part load)", page 72. The boiler is now operating on part load. Measure the percentage of CO_2 and compare this value with the checking values given.

De Dietrich ◆

7.4.6. Checking and closing the automatic air vent

1. Switch off the boiler electrical power supply.
2. Close the main gas inlet valve.
3. Remove the front panel.
4. Tilt the control panel into the high position.
5. Remove the cover from the sealed chamber.
   ☞ see chapter: "Removing the cover from the sealed chamber", page 68
6. If any leaks are detected, replace the air vent.
7. Close the plug on the automatic air vent.

7.4.7. Checking the safety valve

1. Check whether there is any water in the safety valve flow pipe.
2. If any leaks are detected, replace the safety valve.

7.4.8. Checking the siphon

1. Remove the cover from the sealed chamber.
   ☞ see chapter: "Removing the cover from the sealed chamber", page 68
2. Remove the siphon and clean it.
3. Fill the siphon with water.
4. Put the siphon back in place.

7.4.9. Checking the burner and cleaning the heat exchanger
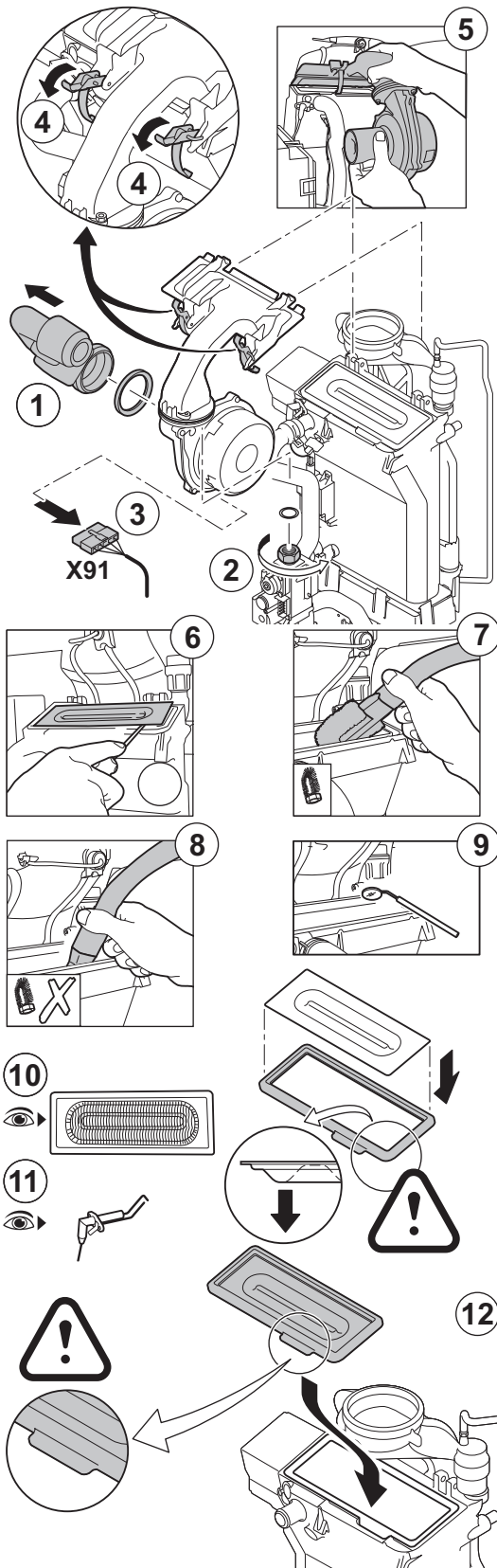
> ⚠️ **CAUTION**
>
> During inspection and maintenance operations, always replace all gaskets on the parts removed.

1. Remove the air inlet flue on the venturi.
2. Unscrew the top connection on the gas valve unit.
3. Disconnect the connector located under the fan.
4. Release the 2 clips holding the fan/mixing elbow unit in place on the heat exchanger.
5. Completely remove the fan/mixing elbow unit.
6. Tilt the burner and remove it, along with the heat exchanger gasket.
7. Use a vacuum cleaner fitted with a special endpiece (accessory) to clean the top part of the heat exchanger (combustion chamber).
8. Thoroughly clean with the vacuum cleaner again without the top cleaning brush on the endpiece.
9. Check (using a mirror, for example) whether any dust can still be seen. If so, hoover it up.
10. The burner does not require any maintenance, it is self-cleaning. Check that there are no cracks and/or other tears on the surface of the dismantled burner. If this is not the case, replace the burner.
11. Checking the ignition electrode / ionization sensor. The gap must be between 3,5 and 4 mm.
12. To re-assemble, perform the above actions in reverse order.

> ⚠️ **CAUTION**
>
> ‣ Remember to reconnect the connector to the fan.
> ‣ Check that the gasket is correctly positioned between the mixing elbow and the heat exchanger.
>   (Completely flat in the appropriate groove means it is leak proof).

13. Open the gas inlet valve and restore the mains supply to the boiler.

T001220-B

8   Troubleshooting

8.1   Anti-hunting

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

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

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

8.2   Messages (Code type Bxx or Mxx)

In the case of failure, the control panel displays a message and a corresponding code.

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

Code	Messages	Description	Checking / solution
B00	BL.PSU ERROR	The PSU PCB is incorrectly configured	Parameter error on the PSU PCB ‣ Set the type of generator again in the menu **#CONFIGURATION** (Refer to the original rating plate)
B01	BL.MAX BOILER	Maximum flow temperature exceeded	The water flow in the installation is insufficient ‣ Check the circulation (direction, pump, valves)
B02	BL.HEATING SPEED	The increase in flow temperature has exceeded its maximum limit	The water flow in the installation is insufficient ‣ Check the circulation (direction, pump, valves) ‣ Check the water pressure ‣ Check the cleanliness of the heat exchanger
			Sensor error ‣ Check that the sensors are operating correctly ‣ Check whether the boiler sensor has been correctly fitted

Code	Messages	Description	Checking / solution
B07	BL.DT OUTL RET.	Maximum difference between the flow and return temperature exceeded	The water flow in the installation is insufficient ‣ Check the circulation (direction, pump, valves) ‣ Check the water pressure ‣ Check the cleanliness of the heat exchanger Sensor error ‣ Check that the sensors are operating correctly ‣ Check whether the boiler sensor has been correctly fitted
B08	BL.RL OPEN	The **RL** inlet on the PCU PCB terminal block is open	Parameter error ‣ Set the type of generator again in the menu **#CONFIGURATION** (Refer to the original rating plate) Bad connection ‣ Check the wiring
B09	BL.INV. L/N	Set the type of generator again in the menu **#CONFIGURATION** (Refer to the original rating plate)	
B10 B11	BL.BL INPUT OPEN	The **BL** inlet on the PCU PCB terminal block is open	The contact connected to the **BL** inlet is open ‣ Check the contact on the **BL** inlet Parameter error ‣ Check the parameter **IN.BL** Bad connection ‣ Check the wiring
B13	BL. PCU COM	Communication error with the SCU PCB	Bad connection ‣ Check the wiring SCU PCB not installed in the boiler ‣ Install an SCU PCB
B14	BL.WATER MIS.	The water pressure is lower than 0,8 bar	Not enough water in the circuit ‣ Top up the installation with water
B15	BL.GAS PRESS	Gas pressure too low	Incorrect setting of the gas pressure switch on the SCU PCB ‣ Check that the gas valve is fully opened ‣ Checking the gas supply pressure ‣ Check whether the gas pressure control system has been correctly fitted ‣ Replace the gas pressure control system if need be
B16	BL.BAD SU	The SU PCB is not recognised	Wrong SU PCB for this boiler ‣ Replace the SU PCB
B17	BL.PCU ERROR	The parameters saved on the PCU PCB are impaired	Parameter error on the PCU PCB ‣ Replace the PCU PCB
B18	BL.BAD PSU	The PSU PCB is not recognised	Wrong PSU PCB for this boiler ‣ Replace the PSU PCB
B19	BL.NO CONFIG	The boiler has not been configured	The PSU PCB has been changed ‣ Set the type of generator again in the menu **#CONFIGURATION** (Refer to the original rating plate)
B21	BL. COM SU	Communication error between the PCU and SU PCBs	Bad connection ‣ Check that the SU PCB has been correctly put in place on the PCU PCB ‣ Replace the SU PCB

Code	Messages	Description	Checking / solution
B22	BL.FLAME LOS	No flame during operation	No ionization current
			▸ Purge the gas supply to remove air
			▸ Check that the gas valve is fully opened
			▸ Check the 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
B25	BL.SU ERROR	Internal error on the SU PCB	▸ Replace the SU PCB
B26	BL.DHW. S.	The DHW tank sensor is disconnected or short circuited	▸ If no HL tanks are connected, set the correct boiler type in the #CONFIGURATION menu (See nameplate)
			▸ Check that the sensor is actually connected to the S.ECS inlet on the SCU
			▸ Check the wiring
			▸ Check the Ohmic value of the sensor. Replace it if necessary
B27	BL.DHW INST	The sensor on the plate exchanger outlet is disconnected or short circuited	▸ If no HL tanks are connected, set the correct boiler type in the #CONFIGURATION menu (See nameplate)
			▸ Check that the sensor is actually connected to the X20 inlet on the PCU
			▸ Check the wiring
			▸ Check the Ohmic value of the sensor. Replace it if necessary
B28	BL.BAD.CONFIG	An HL tank is detected whilst the boiler cannot control it. This message disappears after 10 seconds if the boiler can control the HL tank	▸ Wait for 10 seconds to see whether the error persists
			▸ Check that there are no HL tanks connected
			▸ Check that there are no sensors connected to the X20 inlet on the PCU
B29 to B34	BL.UNKNOWN Bxx	Incorrect configuration of the PCU	▸ In the #CONFIGURATION menu, set the AUTODETECTION parameter to YES (it will revert automatically to NO)
M04	REVISION	A service is required	The date programmed for the service has been reached
			▸ Carry out maintenance on the boiler
			▸ To clear the inspection, programme another date in the menu #REVISION or set the parameter REVISION TYPE to OFF
M05	REVISION A	An A, B or C service is required	The date programmed for the service has been reached
M06	REVISION B		▸ Carry out maintenance on the boiler
M07	REVISION C		▸ To clear the inspection, press key ☞
M20	DISGAS	A boiler vent cycle is underway	Switching the boiler on
			▸ Wait 3 minutes
	FL.DRY.B XX DAYS	Floor drying is active	Floor drying is underway. Heating on the circuits not concerned is shut down.
	FL.DRY.C XX DAYS	XX DAYS = Number of days' floor drying remaining.	
	FL.DRY.B+C XX DAYS		▸ Wait for the number of days shown to change to 0
			▸ Set the parameter SCREED DRYING to OFF
M23	CHANGE OUTSI.S	The outside temperature sensor is defective.	Change the outside radio temperature sensor.

8.3 Message history

The menu (#MESSAGE HISTORIC) is used to consult the last 10 messages displayed by the control panel.

1. Access the "After Sales" level: Hold down the 🔧 key until **#PARAMETERS** is displayed.
2. Select the menu (#MESSAGE HISTORIC).

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

☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66
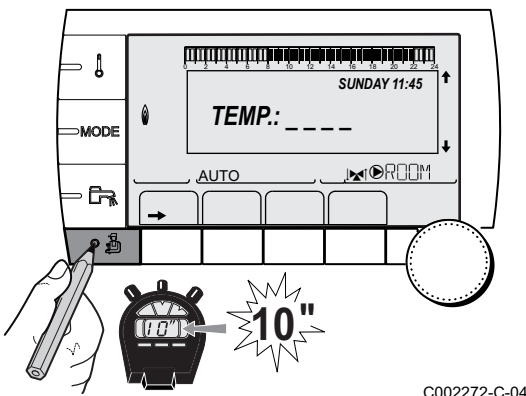
3. The list of the last 10 messages is displayed.
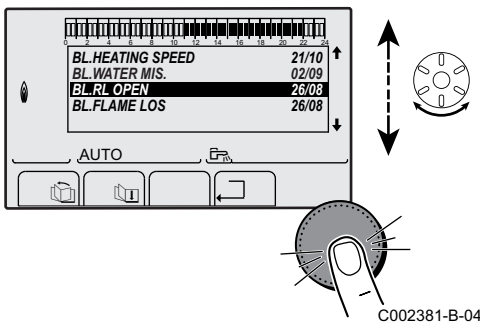
4. Select a message to consult the information pertaining to it.
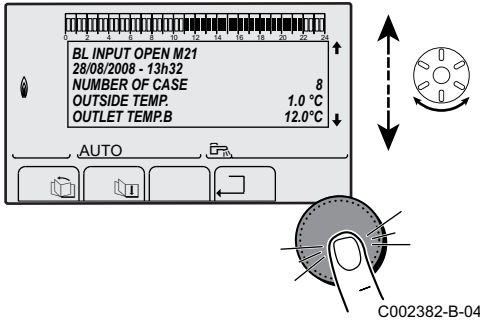
8.4 Faults (Code type Lxx or Dxx)

In the event of operational failure, the control panel flashes and displays an error message and a corresponding code.

1. Make a note of the code displayed.
   The code is important for the correct and rapid diagnosis of the type of failure and for any technical assistance that may be needed.
2. Press the 🔇 key. If the code is displayed again, switch off the boiler and then switch it back on.
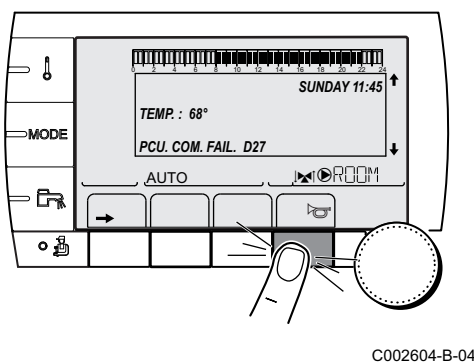
C002302-D-04

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

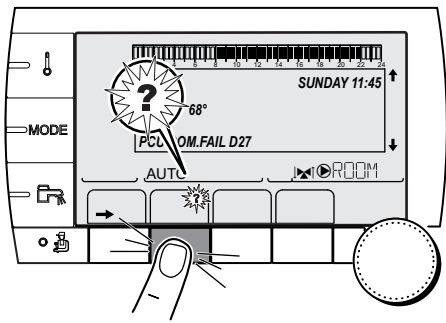| Code	Faults	Cause of the fault	Description	Checking / solution
L00	**PSU FAIL**	PCU	PSU PCB not connected	Bad connection ▸ Check the wiring between the PCU and PSU PCBs PSU PCB faulty ▸ Replace the PSU PCB
L01	**PSU PARAM FAIL**	PCU	The safety parameters are incorrect	Bad connection ▸ Check the wiring between the PCU and PSU PCBs PSU PCB faulty ▸ Replace the PSU PCB
L02	**DEF.OUTLET S.**	PCU	The boiler flow sensor has short-circuited	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
L03	**DEF.OUTLET S.**	PCU	The boiler flow sensor is on an open circuit	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary

Code	Faults	Cause of the fault	Description	Checking / solution
L04	DEF.OUTLET S.	PCU	Boiler temp too low	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary No water circulation ▸ Vent the air in the heating system ▸ Check the circulation (direction, pump, valves) ▸ Check the water pressure ▸ Check the cleanliness of the heat exchanger
L05	STB OUTLET	PCU	Boiler temperature too high	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary No water circulation ▸ Vent the air in the heating system ▸ Check the circulation (direction, pump, valves) ▸ Check the water pressure ▸ Check the cleanliness of the heat exchanger
L06	BACK S.FAILURE	PCU	The return temperature sensor has short-circuited	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
L07	BACK S.FAILURE	PCU	The return temperature sensor is on an open circuit	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary

Code	Faults	Cause of the fault	Description	Checking / solution
L08	**BACK S.FAILURE**	PCU	Return temperature too low	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary No water circulation ▸ Vent the air in the heating system ▸ Check the circulation (direction, pump, valves) ▸ Check the water pressure ▸ Check the cleanliness of the heat exchanger
L09	**STB BACK**	PCU	Return temperature too high	Bad connection ▸ Check the wiring between the PCU PCB and the sensor ▸ Check that the SU PCB is correctly in place ▸ Check that the sensor has been correctly fitted Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary No water circulation ▸ Vent the air in the heating system ▸ Check the circulation (direction, pump, valves) ▸ Check the water pressure ▸ Check the cleanliness of the heat exchanger
L10	**DEP-RET<MIN**	PCU	Difference between the flow and return temperatures insufficient	Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary Bad connection ▸ Check that the sensor has been correctly fitted No water circulation ▸ Vent the air in the heating system ▸ Check the circulation (direction, pump, valves) ▸ Check the water pressure ▸ Check the cleanliness of the heat exchanger ▸ Check that the heating pump is operating correctly

Code	Faults	Cause of the fault	Description	Checking / solution
L11	DEP-RET>MAX	PCU	Difference between the flow and return temperatures too great	**Sensor fault** ▶ Check the Ohmic value of the sensor ▶ Replace the sensor if necessary **Bad connection** ▶ Check that the sensor has been correctly fitted **No water circulation** ▶ Vent the air in the heating system ▶ Check the circulation (direction, pump, valves) ▶ Check the water pressure ▶ Check the cleanliness of the heat exchanger ▶ Check that the heating pump is operating correctly
L12	STB OPEN	PCU	Maximum boiler temperature exceeded (STB thermostat maximum)	**Bad connection** ▶ Check the wiring between the PCU PCB and the STB ▶ Check that the SU PCB is correctly in place ▶ Check the electrical continuity of the STB ▶ Check whether the STB has been correctly fitted **Sensor fault** ▶ Replace the STB if necessary **No water circulation** ▶ Vent the air in the heating system ▶ Check the circulation (direction, pump, valves) ▶ Check the water pressure ▶ Check the cleanliness of the heat exchanger
L14	BURNER FAILURE	PCU	5 burner start-up failures	**No ignition** ▶ Check the wiring between the PCU PCB and the ignition transformer ▶ Check that the SU PCB is correctly in place ▶ Check the ionization/ignition electrode ▶ Check the earthing ▶ SU PCB faulty: Change the PCB **Presence of the ignition arc but no flame formation** ▶ Vent the gas flues ▶ Check that the gas valve is fully opened ▶ 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 the wiring on the gas valve unit ▶ SU PCB faulty: Change the PCB **Presence of the flame but insufficient ionization (<3 µA)** ▶ Check that the gas valve is fully opened ▶ Checking the gas supply pressure ▶ Check the ionization/ignition electrode ▶ Check the earthing ▶ Check the wiring on the ionization/ignition electrode

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Code	Faults	Cause of the fault	Description	Checking / solution
L16	PARASIT FLAME	PCU	Detection of a parasite flame	Ionization current present when there should not be a flame Ignition transformer defective ▸ Check the ionization/ignition electrode
				Gas valve defective ▸ Check the gas valve and replace if necessary
				The burner remains very hot: CO_2 too high ▸ Set the CO_2
L17	VALVE FAIL	PCU	Problem on the gas valve	SU PCB faulty ▸ Inspect the SU PCB and replace it if need be
L34	FAN FAILURE	PCU	The fan is not running at the right speed	Bad connection ▸ Check the wiring between the PCU PCB and the fan
				Fan defective ▸ Check for adequate draw on the chimney connection ▸ Replace the fan if need be
L35	BACK>BOIL FAIL	PCU	Flow and return reversed	Bad connection ▸ Check that the sensor has been correctly fitted
				Sensor fault ▸ Check the Ohmic value of the sensors ▸ Replace the sensor if necessary
				Water circulation direction reversed ▸ Check the circulation (direction, pump, valves)
L36	I-CURRENT FAIL	PCU	The flame went out more than 5 times in 24 hours while the burner was operating	No ionization current ▸ Purge the gas supply to remove air ▸ Check that the gas valve is fully opened ▸ 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
L37	SU COM.FAIL	PCU	Communication failure with the SU PCB	Bad connection ▸ Check whether the SU PCB has been correctly fitted into the connector on the PCU PCB ▸ Change the SU PCB
L38	PCU COM.FAIL	PCU	Communication failure between the PCU and SCU PCBs	Bad connection ▸ Check the wiring between the PCU and SCU PCBs ▸ Run an **AUTODETECTION** in the menu **#CONFIGURATION**
				SCU PCB not connected or faulty ▸ Replace the SCU PCB

Code	Faults	Cause of the fault	Description	Checking / solution
L39	BL OPEN FAIL	PCU	The **BL** inlet opened for a short time	Bad connection ▸ Check the wiring
				External cause ▸ Check the device connected to the **BL** contact
				Parameter incorrectly set ▸ Check the parameter **IN.BL**
L40	TEST.HRU.FAIL	PCU	HRU/URC unit test error	Bad connection ▸ Check the wiring
				Parameter incorrectly set ▸ Set the type of generator again in the menu **#CONFIGURATION** (Refer to the original rating plate)
L250	DEF.WATER MIS.	PCU	The water pressure is too low	Hydraulic circuit incorrectly vented Water leak Measurement error ▸ Top up with more water if necessary ▸ Reset the boiler
L251	MANOMETRE FAIL	PCU	Pressure gauge fault	Wiring problem The manometer is defective Sensor pcb defective ▸ Check the wiring between the PCU PCB and the pressure gauge ▸ Check whether the pressure gauge has been correctly fitted ▸ Replace the pressure gauge if need be
D03 D04	OUTL S.B FAIL. OUTL S.C FAIL.	SCU	Circuit B flow sensor fault Circuit C flow sensor fault Remarks: The circuit pump is running. The 3-way valve motor on the circuit is no longer powered and can be adjusted manually.	Bad connection ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted
				Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D05	OUTSI.S.FAIL.	SCU	Outside temperature sensor fault Remarks: The boiler operates on **BOILER MAX** temperature. The valve setting is no longer ensured but monitoring the maximum temperature of the circuit after the valve is ensured. Valves may be manually operated. Reheating the domestic hot water remains ensured.	Bad connection ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted
				Sensor fault ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary

Code	Faults	Cause of the fault	Description	Checking / solution
D07	AUX.SENS.FAIL.	SCU	Auxiliary sensor fault	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D09	DHW S.FAILURE	SCU	Domestic hot water sensor fault Remarks: Heating of domestic hot water is no longer ensured. The load pump operates. The load temperature of the dhw tank is the same as the boiler.	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D11 D12 D13	ROOM S.A FAIL. ROOM S.B FAIL. ROOM S.C FAIL.	SCU	A room temperature sensor fault B room temperature sensor fault C room temperature sensor fault Note: The circuit concerned operates without any influence from the room sensor.	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D14	MC COM.FAIL	SCU	Communication failure between the SCU PCB and the boiler radio module	**Bad connection** ▸ Check the link and the connectors **Boiler module failure** ▸ Change the boiler module
D15	ST.TANK S.FAIL	SCU	Storage tank sensor fault Note: The hot water storage tank reheating operation is no longer assured.	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary

Code	Faults	Cause of the fault	Description	Checking / solution
D16 D16	SWIM.P.B. S.FAIL SWIM.P.C. S.FAIL	SCU	Swimming pool sensor fault circuit B Swimming pool sensor fault circuit C Note: Swimming pool reheating is always done during the circuit's comfort period.	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D17	DHW 2 S.FAIL	SCU	Sensor fault tank 2	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D18	ST.TANK S.FAIL	SCU	Solar tank sensor fault	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D19	SOL.COL.S.FAIL	SCU	Header sensor fault	**Bad connection** ▸ Check whether the sensor is connected: ☞ See chapter: "Deletion of sensors from the memory in the PCB", page 115 ▸ Check the link and the connectors ▸ Check that the sensor has been correctly fitted **Sensor fault** ▸ Check the Ohmic value of the sensor ▸ Replace the sensor if necessary
D20	SOL COM.FAIL	SCU	▸ Switch the boiler off and switch back on ▸ Check whether the solar module is switched on. If necessary, replace the fuse ☞ Refer to the installation, commissioning and service manual for the DHW tank ▸ Check the connection between the SCU-C and the solar module	
D27	PCU COM. FAIL	SCU	Communication failure between the SCU and PCU PCBs ▸ Check the wiring between the SCU and PCU PCBs ▸ Check that the PCU PCB is powered up (green LED on or flashing) ▸ Change the PCU PCB	
D32	5 RESET:ON/OFF	SCU	5 resets done in less than an hour ▸ Switch the boiler off and switch back on	

Code	Faults	Cause of the fault	Description	Checking / solution
D37	TA-S SHORT-CIR	SCU	The Titan Active System® is short-circuited ▸ Check that the connection cable between the SCU PCB and the anode is not short-circuited ▸ Check that the anode is not short-circuited **Remarks:** Domestic hot water production has stopped but can nonetheless be restarted using key ☞. The tank is no longer protected. If a tank without Titan Active System® is connected to the boiler,check that the TAS simulation connector (delivered with package AD212) is fitted to the sensor card.	
D38	TA-S DISCONNEC	SCU	The Titan Active System® is on an open circuit ▸ Check that the connection cable between the SCU PCB and the anode is not severed ▸ Check that the anode is not broken **Remarks:** Domestic hot water production has stopped but can nonetheless be restarted using key ☞. The tank is no longer protected. If a tank without Titan Active System® is connected to the boiler,check that the TAS simulation connector (delivered with package AD212) is fitted to the sensor card.	
D99	DEF.BAD PCU		The SCU software version does not recognise the PCU connected ▸ Update the SCU with the appropriate software version	

8.4.1. Deletion of sensors from the memory in the PCB

The configuration of the sensors is memorised by the SCU PCB. If a sensor fault appears whilst the corresponding sensor is not connected or has been voluntarily removed, please delete the sensor from the SCU PCB memory.

▸ Press key **?** repeatedly until **Do you want to delete this sensor?** is displayed.

▸ Select **YES** by turning the rotary button and press to confirm.

ℹ The outside temperature sensor cannot be deleted.

8.5   Failure history

C002272-C-04

The menu **#DEFAULT HISTORIC** is used to consult the last 10 faults displayed by the control panel.

1. Access the "After Sales" level: Hold down the 🔧 key until **#PARAMETERS** is displayed.
2. Select the menu **#DEFAULT HISTORIC**.

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

☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66
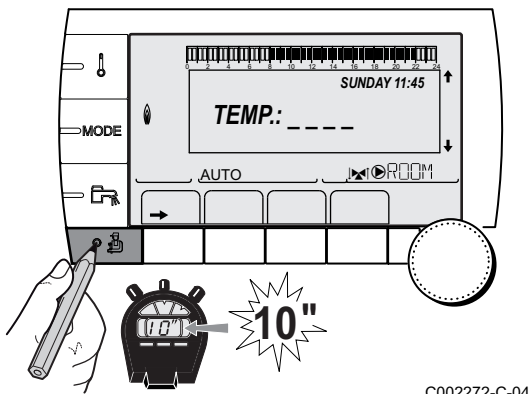
C002274-E-04

3. The list of the last 10 faults is displayed.

C002275-C-04

4. Select a fault to consult the information pertaining to it.
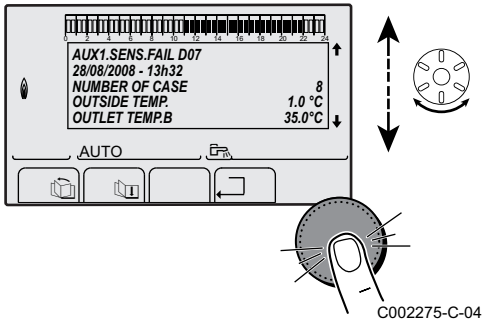
8.6   Parameter and input/output check (mode tests)

C002272-C-04

Use the following menus to target the cause of a malfunction.

1. Access the "After Sales" level: Hold down the 🔧 key until **#PARAMETERS** is displayed.
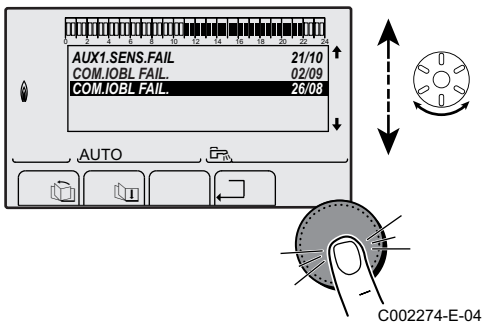2. Check the following parameters:

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

☞ For a detailed explanation of menu browsing, refer to the chapter: "Browsing in the menus", page 66

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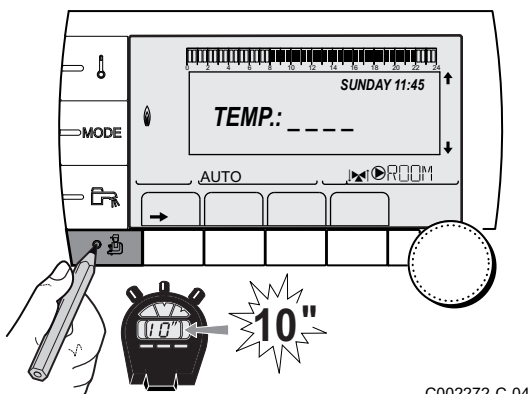
After Sales level - Menu #PARAMETERS	
Parameter	**Description**
PERMUT	Master boiler active
STAGE	Number of boilers requesting heating
NB.CASC.:	Number of boilers recognised in the cascade
NB. VM:	Number of DIEMATIC VM control systems recognised in the cascade
POWER %	Current output of the boiler
OUTPUT SOL P.	Solar pump command
PERCENT PUMP	Modulating pump command
SPEED FAN [1]	Fan rotation speed
SETPOINT FAN	Fan rotation speed desired
MEAN OUTSIDE T	Average outside temperature
CALC.T. BOILER	Temperature calculated by the boiler
BURNER SETPOINT	Set point parameter of the burner
BOILER. T. [1]	Measurement of the boiler flow sensor
BACK TEMP [1]	Temperature of the boiler return water
SYSTEM TEMP. [1]	Temperature of the system flow water if multi-generator
SYST. CALC. T. [2]	System flow temperature calculated by the control system
CALCULATED T. A	Calculated temperature for circuit A
CALCULATED T. B [3]	Calculated temperature for circuit B
CALCULATED T. C [3]	Calculated temperature for circuit C
DHW SETP.CORRECT	DHW set point used by the boiler bearing solar back-up in mind
OUTLET TEMP. B [1] [3]	Temperature of the flow water in circuit B
SWIMMING P.T.B	Temperature of the swimming pool water sensor on circuit B
OUTLET TEMP. C [1] [3]	Temperature of the flow water in circuit C
SWIMMING P.T.C	Temperature of the swimming pool water sensor on circuit C
OUTSIDE TEMP. [1]	Outside temperature
ROOMTEMP. A [1]	Room temperature of circuit A
ROOMTEMP. B [1] [3]	Room temperature of circuit B
ROOMTEMP. C [1] [3]	Room temperature of circuit C
WATER TEMP. [1][3]	Water temperature in the DHW tank
IN 0-10V [1][3]	Voltage at input 0-10 V
CURRENT [1]	Ionization current
PRESSURE [1]	Water pressure in the installation
STOR.TANK.TEMP [1] [3]	Water temperature in the storage tank
T.DHW BOTTOM [1][3]	Water temperature in the bottom of the DHW tank
DHW A TEMP. [1][3]	Water temperature in the second DHW tank connected to circuit A
TEMP.TANK AUX [1][3]	Water temperature in the second DHW tank connected to the AUX circuit
KNOB A	Position of temperature setting button on room sensor A
KNOB B[3]	Position of temperature setting button on room sensor B
KNOB C[3]	Position of temperature setting button on room sensor C
OFFSET ADAP A	Parallel trigger calculated for circuit A
OFFSET ADAP B [3]	Parallel trigger calculated for circuit B
OFFSET ADAP C [3]	Parallel trigger calculated for circuit C
(1) The parameter can be displayed by pressing key ⌂. (2) The parameter is only displayed if **CASCADE:** is set to **ON** (3) The parameter is only displayed for the options, circuits or sensors actually connected	

After Sales level - Menu #TEST OUTPUTS

Parameter	Adjustment range	Description
P. CIRC. A	ON / NO	Stop/start pump circuit A
P. CIRC. B [1]	ON / NO	Stop/start pump circuit B
P. CIRC. C [1]	ON / NO	Stop/start pump circuit C
HW. PUMP [1]	ON / NO	Stop/start domestic hot water pump
AUX.CIRC.[1]	ON / NO	On/Off auxiliary outlet
SOLAR P. [1]	ON / NO	Solar pump On/Off
3WV B [1]	REST	No command
	OPEN	Opening 3-way valve circuit B
	CLOSE	Closure 3-way valve circuit B
3WV C [1]	REST	No command
	OPEN	Opening 3-way valve circuit C
	CLOSE	Closure 3-way valve circuit C
TEL.OUTPUT	ON / NO	On/Off telephone relay outlet
(1) The parameter is only displayed for the options, circuits or sensors actually connected		

After Sales level - Menu #TEST INPUTS

Parameter	Status	Description
PHONE REM.		Bridge on telephone input (1 = presence, 0 = absence)
FLAME		Flame presence test (1 = presence, 0 = absence)
GAS VALVE	OPEN/CLOSE	Opening the valve Closing the valve
FAILURE	ON	Fault display
	OFF	No fault
SEQUENCE		Control system sequence. ☞ See chapter: "Control system sequence", page 119
TYPE		Generator type
R.CTRL A [1]	ON	Presence of a remote control A
	OFF	No remote control A
R.CTRL B [1]	ON	Presence of a remote control B
	OFF	No remote control B
R.CIRL C [1]	ON	Presence of a remote control C
	OFF	No remote control C

After Sales level - Menu #CONFIGURATION

Parameter	Adjustment range	Description
MODE:	MONO/ ALL.CIRC.	To chose if the exemption made for one remote control applies to a single circuit (**MONO**) or if it must be transmitted to a group of circuits (**ALL.CIRC.**)
TYPE		Boiler type (Refer to the original rating plate)
AUTODETECTION	OFF/ON	System reset if error **L38** is displayed
TAS	OFF/ON	Activation of the Titan Active System® function

After Sales level - Menu INFORMATION	
Parameter	**Description**
S/N SCU	Serial number of the SCU board
CTRL	Software version of the SCU board
S/N PCU	Serial number of the PCU board
VER.ROM	Version of the PCU PCB programme
VERS.PARAM PCU	Version of the PCU PCB parameters
MC.VERSION [1]	Version of the boiler radio module programme
SOLAR VERS. [1]	Solar control system software version
CALIBRA.CLOCK[2]	Clock calibration
(1) The parameter is only displayed for the options, circuits or sensors actually connected (2) The parameter is only displayed if **INSTALLATION** is set to **EXTENDED**	

8.6.1.   Control system sequence

Control system sequence		
Status	**Sub-status**	**Operation**
0	0	Boiler stopped
1	1	Anti-short cycle activated
	2	Reversal valve opening
	3	Start-up of the boiler pump
	4	Awaiting burner start-up
2	10	Open gas valve (External)
	11	Fan start-up
	13	The fan switches to the burner start-up speed
	14	Check RL signal (Function not active)
	15	Burner on switch request
	17	Pre-ignition
	18	Ignition
	19	Check flame presence
	20	Awaiting further action to unsuccessful ignition
3 / 4	30	Burner lit and free modulation on the boiler instruction
	31	Burner lit and free modulation on a limited instruction, equal to a return temperature of +25°C
	32	Burner ignited and free modulation on the boiler set point but output restricted
	33	Burner lit and descending modulation following too large a rise in temperature on the exchanger (4 K in 10 seconds)
	34	Burner lit and minimum modulation following too large a rise in temperature on the exhanger (7 K in 10 seconds)
	35	Burner off following too large a rise in temperature on the exchanger (9 K in 10 seconds)
	36	Burner lit and ascending modulation to guarantee a correct ionization current
	37	Heating: Burner lit and minimum modulation after a burner start-up lasting 30 seconds DHW production: Burner lit and minimum modulation after a burner start-up lasting 100 seconds
	38	Burner lit and modulation fixed higher than the minimum after burner start-up lasting 30 seconds, if the burner was off for more than 2 hours or after powering up
5	40	The burner will stop
	41	The fan switches to post-sweeping speed on the burner
	42	The external gas valve closes
	43	Post-sweeping
	44	Stop fan

Control system sequence		
Status	Sub-status	Operation
6	60	Post-operation of the boiler pump
	61	Stop boiler pump
	62	Reversal valve closure
	63	Start anti short cycle
8	0	Stand-by
	1	Anti-short cycle activated
9	--	Blockage: The sub-status shows the error value
10	--	Lock-out
16	--	Antifreeze protection
17	--	Bleed

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9   Spare parts

9.1   General

When it is observed subsequent to inspection or maintenance work that a component in the appliance needs to be replaced, use only original spare parts or recommended spare parts and equipment.
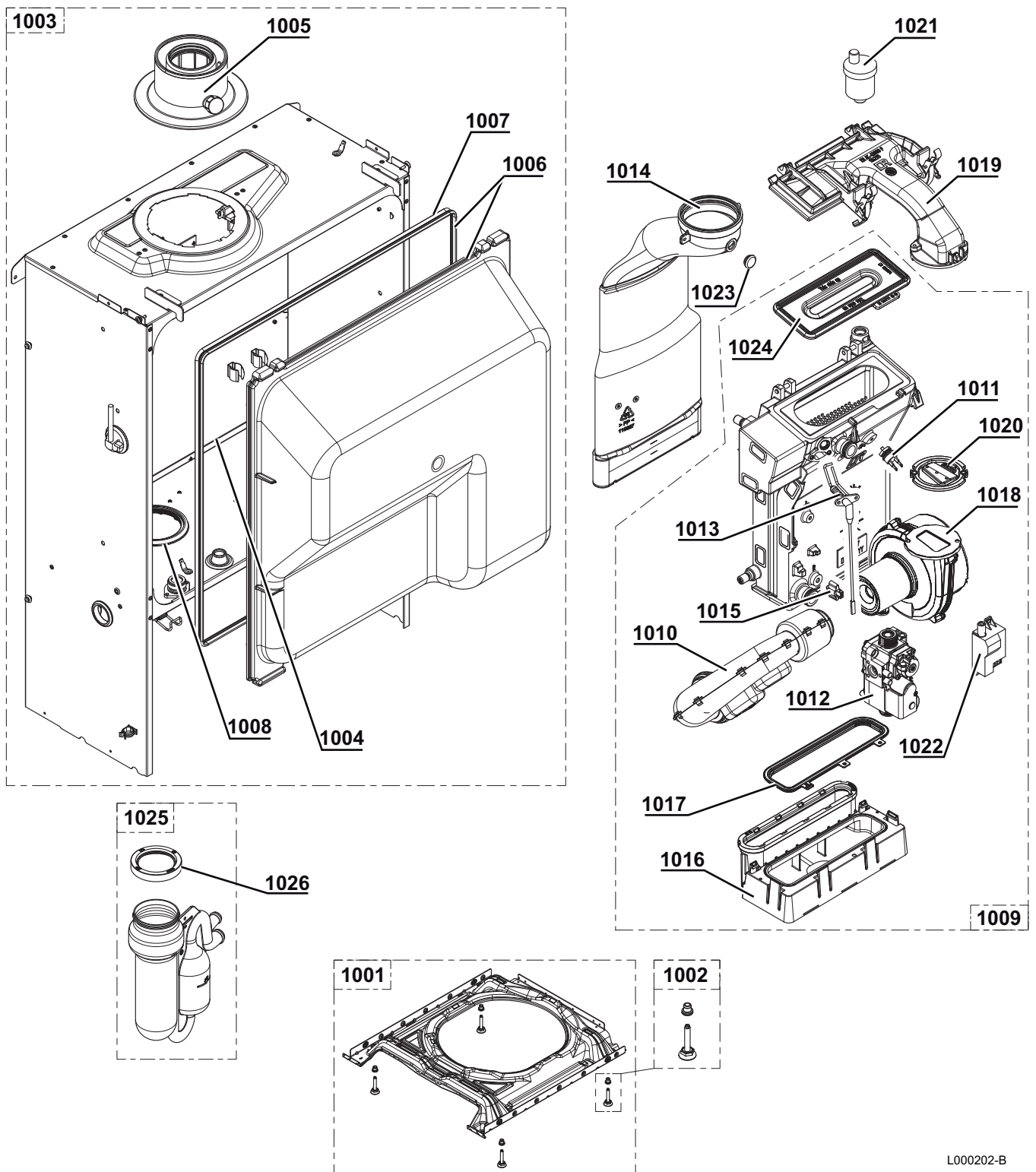
ℹ   To order a spare part, give the reference number shown on the list.
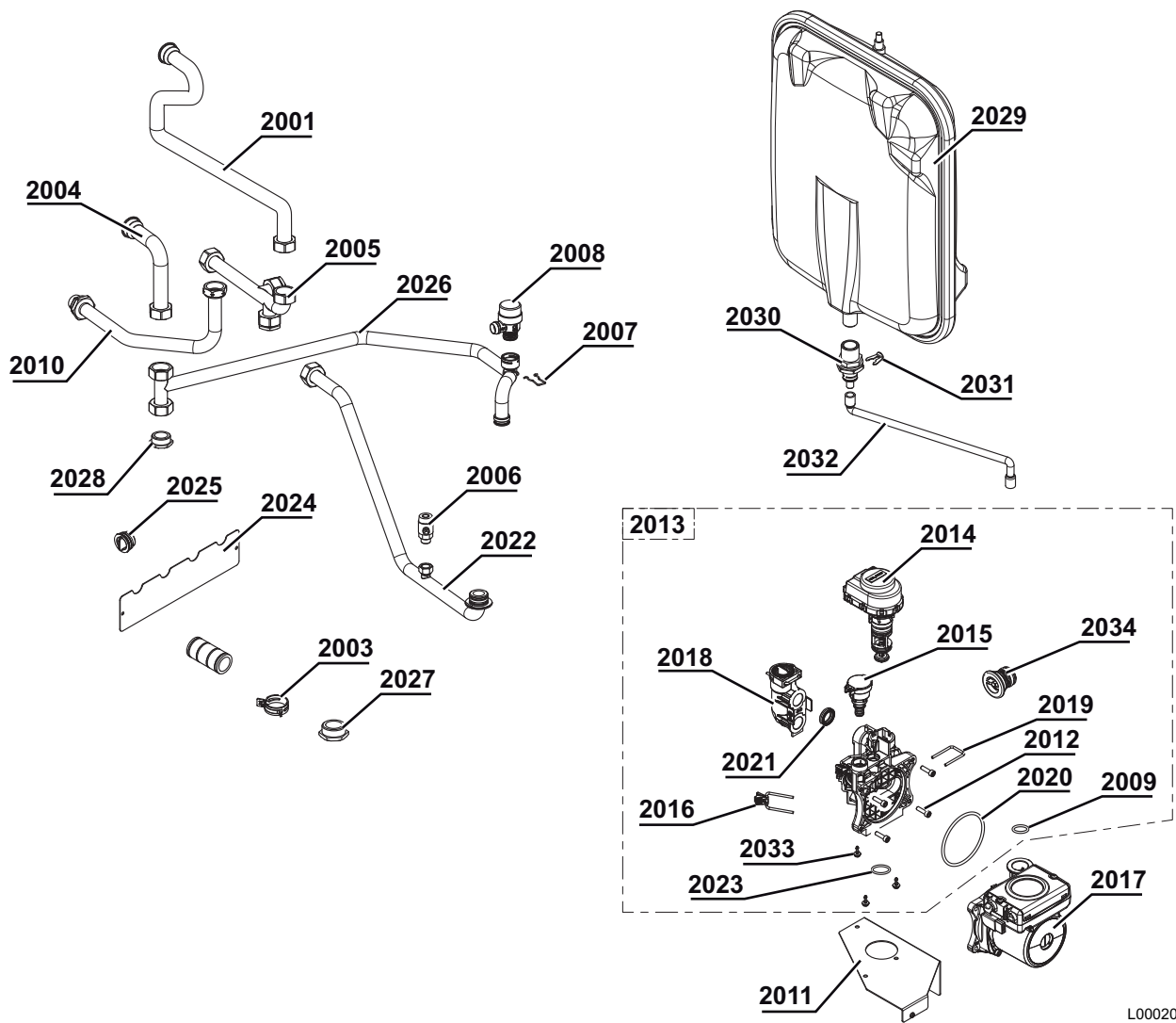
9.2   Spare parts

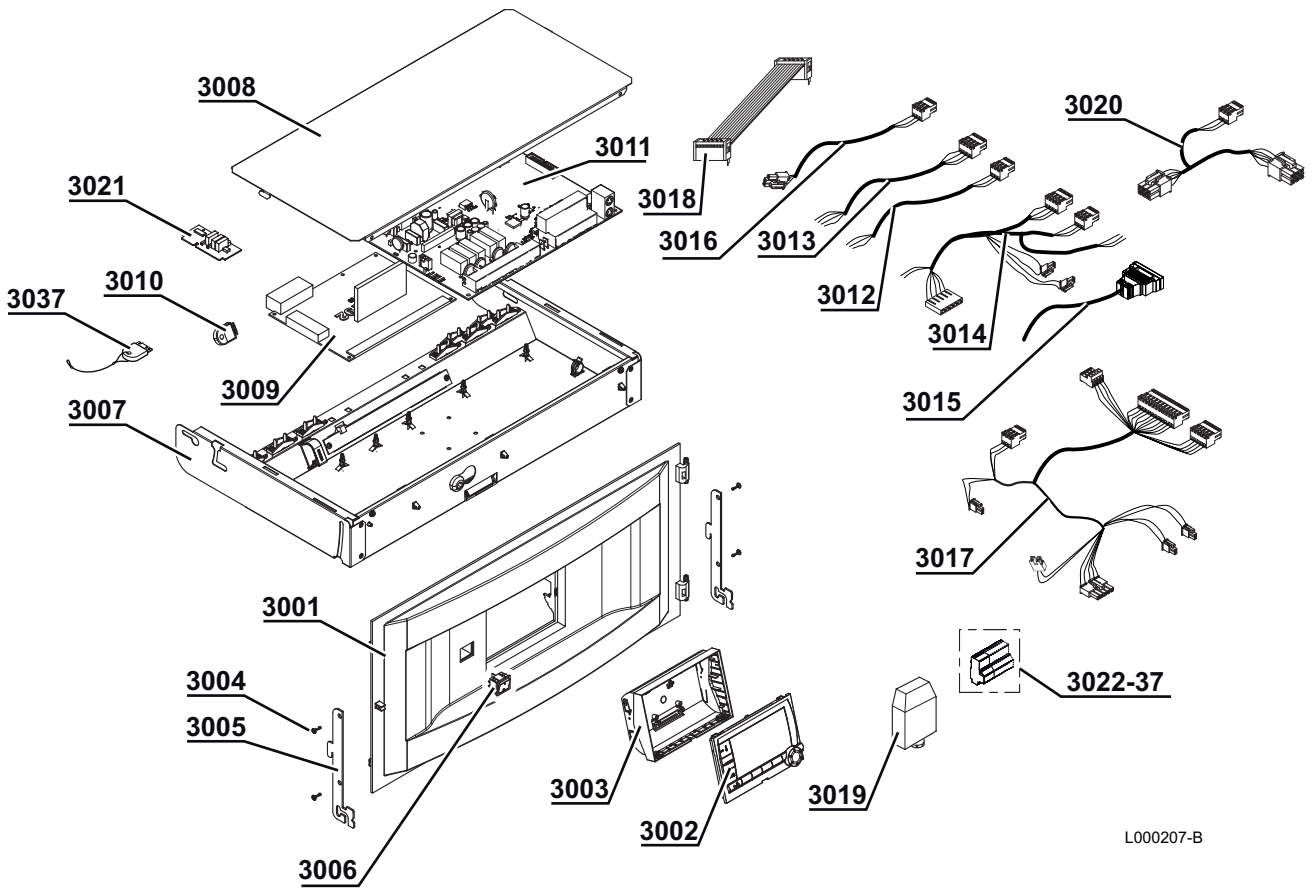Spare parts list reference: 300026081-002-B
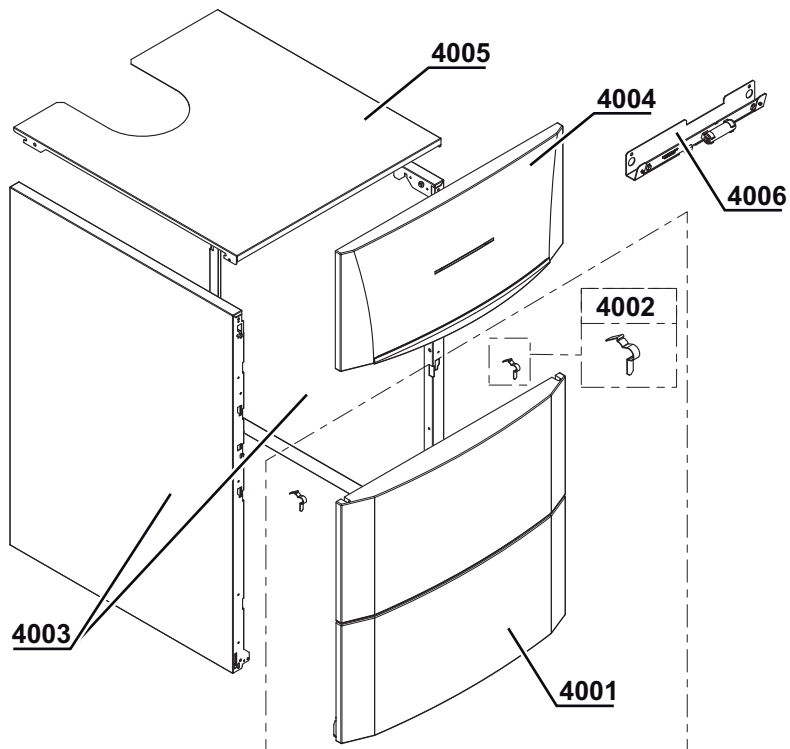
9.2.1. Casing

L000202-B

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9.2.2.   Water unit

L000208-B

9.2.3. Control panel

L000207-B

9.2.4. Casing

L000206-B

9.2.5. Spare parts list

Markers	Code no.	Description
Exchanger - Casing		
1001	200018958	Complete base frame
1002	300024451	Adjustable foot M8-45
Casing		
1003	200018959	Leak proof box 10/15 - 15 - 25 kW - Nozzle 60/100
1003	200019500	Sealed chamber withour vessel 35 kW
1004	95013180	Leakproof seal 9x2 mm
1005	S62768	Flue gas nozzle 60/100
1006	200018975	Complete cover
1007	300024870	Hood seal
1008	300024391	Chamber - siphon gasket
1009	200019456	Heating body 10/15 - 15 kW
1009	200018960	Heating body 25 kW
1009	200018961	Heating body 35 kW
1010	S100911	Silencer 10/15 - 15 - 25 kW
1010	S101255	Silencer 35 - 40 kW
1011	S101005	HL temperature sensor
1012	S101507	Gas valve VK4115V E1054 4
1013	S100890	Ignition/ionization electrode
1014	S100854	Flue gas evacuation pipe Ø 80 mm 10/15 - 15 - 25 kW
1014	200021989	Flue gas evacuation pipe Ø 80 mm 35 kW
1015	S101003	NTC temperature sensor
1016	S100894	Condensates collector 253 mm 10/15 - 15 - 25 kW
1016	S101181	Condensates collector 338 mm 35 - 40 kW
1017	S100888	Gasket between heat exchanger and condensate collector 305 mm 10/15 - 15 - 25 kW
1017	S101179	Gasket between heat exchanger and condensate collector 305 mm 35 kW
1018	S100886	Fan RG 118- R14.2x1 10/15 - 15 kW
1018	S100878	Fan RG 118- R19.5x1 25 kW
1018	S101184	Fan RG 118- R21.5x1 35 kW
1019	S100882	Gas / air mixing part 10/15 - 15 - 25 kW
1019	S101185	Gas / air mixing part 35 kW
1020	S101198	83 mm gasket with flap
1021	85000023	Automatic air vent 10 bar
1022	S100572	Ignition transformer
1023	S100850	Flue gas measuring point (x5)
1024	S100879	Burner 10/15 - 15 - 25 kW - 198 mm
1024	S101524	Burner 35 - 40 kW - 284 mm
1025	300024610	Complete siphon
1026	S100906	Siphon gasket
Water unit - Shunt pump		
2001	300024412	Exchanger flow pipe
2003	S100954	Clamp (10x)
2004	300024411	Exchanger return pipe
2005	300024415	Flow distributor pipe
2006	94902000	Drain cock
2007	S100835	Pin spring 16 mm (10x)
2008	S100829	3.5-bar safety valve

Markers	Code no.	Description
2009	S59597	18x2.8 O-ring (10x)
2010	300024413	Gas inlet pipe G1/2"
2011	300024447	Pump bracket
2012	S59141	Screw M5x18 (15x)
2013	S100822	Water unit, right + 3-way valve + Pressure sensor
2014	S100823	Motor + 3-way valve insert
2015	S100821	Pressure sensor
2016	S100832	26 clip with lever (10x)
2017	S100703	Circulator UPM 15-70 RES 10/15 - 15 - 25 kW
2017	S101187	Circulator UPER0 15-70 35 kW
2018	S100827	cleat fitting
2019	S100813	Clip 26 (20x)
2020	S100815	76x4 O-ring (5x)
2021	S100810	25.2x17 O-ring (20x)
2022	300025159	Return pipe under complete pump
2023	S100816	22x22.5 O-ring (10x)
2024	300025174	Pipe holding plate
2025	300025173	Plug
2026	300025162	Return pump pipe - complete exchanger
2027	94950154	Male plug G1"
2028	300000021	Male plug G3/4"
2029	97581254	Expansion vessel 18 litres
2030	300024509	1/2" junction
2031	S100814	Clip 10.3 (5x)
2032	300024428	Expansion vessel hose
2033	S100825	Screw K50x12 (20x)
2034	S100837	Water unit plug (10x)
2035	200021826	20,3x2,62 (10x) O-ring
2036	114341	Exchanger connection clip
Control panel		
3001	300024400	Command strip
3002	S101249	Display plate
3003	300024405	Tilting control system bracket
3004	200019769	EJOT KB35X10 screw kit (10x)
3005	300024464	Hook
3006	300024488	White bipolar switch
3007	200019187	Complete board support
3008	300025092	Card cover
3009	200018906	Card SCU (the battery should not be replaced)
3011	200018121	PCU-192 control board
3012	300024876	Power supply cable
3013	300024878	PCU cable - General switch 230 V
3014	300024879	cable form 230 V
3015	300024881	3-way valve cable
3016	300024882	Pump cable
3017	300024883	cable form 24 V
3018	300024886	26-pin ribbon cable
3019	95362450	Exterior sensor AF60
3020	300024884	BUS cable
3021	S103300	Plate SU-01
3022	300009075	3 pt power supply connector

Markers	Code no.	Description
3022	300009074	3-pin A.VS connector
3022	300009081	5-pin TS connector + Pump
3022	300009071	2-pin connector 0-10 V
3022	300009102	4-pin connector telephone relay
3022	300008954	2-pin connector room temperature sensor
3022	300009070	2 pt connector outside temperature sensor
3022	300009084	2-pin connector flow B sensor
3022	300009076	3 pt connector auxiliary pump
3022	300009079	4-pin connector 3-way valve
3022	300009077	3 pt connector auxiliary pump
3022	300008959	2-pin connector flow sensor
3022	300008954	2-pin connector room temperature sensor
3022	300008957	2 PIN DHW probe connector
3022	88014963	2-pin connector ACI simulation
3022	300020441	2-pin connector system sensor
3037	S100856	Card PSU01
Casing		
4001	200019180	Complete front panel
4002	200019786	Spring kit for front panel (10x)
4003	200019179	Complete side panel
4004	300026529	Control panel door
4005	300024448	Top panel
4006	200020598	Chamber lighting system

20/01/2012

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