en

PROJECT

Installation, User and Service Manual

Floor-standing condensing gas boiler

IX 245–130
IX 245–150
IX 245–200
IX 245–250

De Dietrich
SUSTAINABLE COMFORT®

Contents

1 Safety

1.1 General safety instructions

For the installer and end user:

Danger
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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

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

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

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

For the installer:

Danger
If you smell gas:

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

Danger
If you smell flue gases:

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

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

For the end user:

Danger
If you smell gas:

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

Danger
If you smell flue gases:

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

1.2 Recommendations

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

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

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

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

Caution
A disconnection device must be fitted to the permanent pipes in accordance with the installation rules.

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

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

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

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

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

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

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

- Avoidance of pumps blocking
- Frost Protection

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

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

Important

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

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

1.3 Liabilities

1.3.1 Manufacturer's liability

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

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

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

1.3.2 Installer's liability

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

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

1.3.3 User's liability

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

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

2 Symbols used

2.1 Symbols used in the manual

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

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

Danger of electric shock
Risk of electric shock.

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

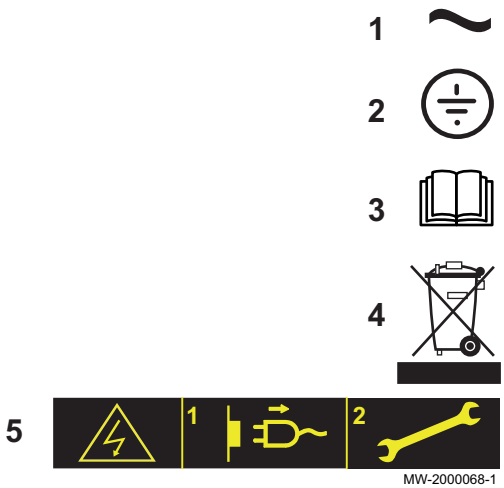
Caution
Risk of material damage.

Important
Please note: important information.

See
Reference to other manuals or pages in this manual.

2.2 Symbols used on the appliance

Fig.1



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

3 Technical specifications

3.1 Homologations

3.1.1 Directives

This product has been manufactured and put into circulation in accordance with the requirements and standards of the following European Directives:

- Gas Appliances Regulation (EU) (2016/426)
- Pressure Equipment Directive 2014/68/EU
- Electromagnetic Compatibility Directive (2014/30/EU).
- Low Voltage Directive (2014/35/EU).
- Efficiency Directive (92/42/EEC)
- European Ecodesign Directive (2009/125/EC)
  EU Regulation (813/2013)
- Energy Labelling Framework Regulation (EU) (2017/1369)
  EU Regulation (811/2013)

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.

3.1.2 EC Declaration of Conformity

The unit complies with the standard type described in the EC declaration of conformity. It has been manufactured and commissioned in accordance with European directives.

The original declaration of conformity is available from the manufacturer.

3.1.3 Gas category

Tab.1 Gas and supply pressure categories

Country	Gas category	Gas type	Supply pressure (mbar)
France	II_{2Esi3P}	G20 (natural gas H) G25 (natural gas L) G31 (propane)	20 25 37
Ireland	II_{2H3P}	G20 (natural gas H) G31 (propane)	20 37
Poland	II_{2ELw3P}	G20 (natural gas H) G27 (natural gas H) G31 (propane)	20 20 37
Czech Republic	II_{2H3P}	G20 (natural gas H) G31 (propane)	20 37-50
Slovakia	II_{2H3P}	G20 (natural gas H) G31 (propane)	20 37-50

The boiler is pre-set in the factory to run on natural gas H (G20).

For operation with another type of gas, see the chapter "Conversion to another gas".

3.1.4 Certifications

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

CE number	0085CP0089
NOx class	Class 6
Gas and pressures	• Natural gas (G20) - 20 mbar • Natural gas (G25) - 25 mbar • Natural gas (G27) - 20 mbar • Propane (G31) - 37/50 mbar

Tab.2 Type of flue gas connection

Boiler model	Type of flue gas connection
IX 245–130 IX 245–150	• B_{23} – $B_{23(P)}$ • $C_{13(X)}$ • $C_{33(X)}$ • $C_{43(X)}$ • $C_{53(X)}$ • $C_{63(X)}$ • $C_{83(X)}$
IX 245–200 IX 245–250	• B_{23} – $B_{23(P)}$ • C_{13} • C_{33} • C_{43} • C_{53} • C_{63} • C_{83}

3.2 Technical data

Tab.3 General

	Boiler speed	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
Useful heat output at 80/60°C Heating mode	Minimum	kW	24.3	28.1	31.0	38.8
Useful heat output at 80/60°C Heating mode	Maximum	kW	121.5	140.3	185.9	232.8
Useful heat output at 50/30 °C Heating mode	Minimum	kW	26.2	30.2	33.1	41.7
Useful heat output at 50/30 °C Heating mode	Maximum	kW	130.6	150.9	200	250
Heat output Heating mode	Minimum	kW (LHV)	24.8	28.6	31.8	40
Heat output Heating mode	Maximum	kW (LHV)	123.8	143	191	240
Heat output Heating mode	Minimum	kW (HHV)	27.5	31.7	35.3	44.4
Heat output Heating mode	Maximum	kW (HHV)	137.4	158.7	212	266.6
Efficiency at 80/60 °C Heating mode under full load	Maximum	%	98.1	98.1	97.32	97.02
Efficiency at 50/30 °C	Heating mode under full load	%	105.5	105.5	104.2	104.2
Efficiency Return temperature 30 °C	Heating mode under part load	%	108.5	108.5	109.1	109.1

Tab.4 Characteristics of the heating circuit

	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
Water content (excluding expansion vessel)	litre	10	11	13	15
Minimum operating pressure	MPa (bar)	0.05 (0.5)	0.05 (0.5)	0.05 (0.5)	0.05 (0.5)

	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
Maximum operating pressure (PMS)	MPa (bar)	0.6 (6)	0.6 (6)	0.6 (6)	0.6 (6)
Maximum water temperature	°C	85	85	85	85
Maximum operating temperature	°C	80	80	90	90

Tab.5 Data on the gases and combustion gases

For gas flow rates at 15°C and 1013.25 hPA	Boiler speed	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
Minimum gas pressure (G20)		mbar	17	17	17	17
Nominal pressure (G20)		mbar	20	20	20	20
Maximum pressure (G20)		mbar	25	25	25	25
Minimum gas pressure (G25)		mbar	20	20	20	20
Nominal pressure (G25)		mbar	25	25	25	25
Maximum pressure (G25)		mbar	30	30	30	30
Minimum gas pressure (G27)		mbar	16	16	16	16
Nominal pressure (G27)		mbar	20	20	20	20
Maximum pressure (G27)		mbar	23	23	23	23
Minimum gas pressure (G31)		mbar	25	25	25	25
Nominal pressure (G31)		mbar	37	37	37	37
Maximum pressure (G31)		mbar	57.5	57.5	57.5	57.5
Consumption of natural gas (G20) (Hi)	Minimum	m³/h	2.6	3.0	3.4	4.2
Consumption of natural gas (G20) (Hi)	Maximum	m³/h	13.1	15.1	20.2	25.4
Consumption of natural gas (G25)	Minimum	m³/h	3.1	3.5	3.9	4.9
Consumption of natural gas (G25)	Maximum	m³/h	15.2	17.6	23.5	29.5
Consumption of natural gas (G27)	Minimum	m³/h	3.2	3.7	4.1	5.2
Consumption of natural gas (G27)	Maximum	m³/h	16.0	18.5	24.7	31.0
Consumption of Propane (G31) (Hi)	Minimum	kg/h	1.0	1.2	2.5	3.1
Consumption of Propane (G31) (Hi)	Maximum	kg/h	5.1	5.9	14.8	18.6
NOx according to EN 15502–1	Class 6	mg/kWh (HHV)	17	23	33.5	35.1
Flue gas mass flow rate (G20)	Minimum	kg/h	43.2	50.4	54	69
Flue gas mass flow rate (G20)	Maximum	kg/h	201.6	230.4	322	411
Maximum flue gas temperature	Minimum	°C	70	70	80	80

Tab.6 Electrical specifications

	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
Power supply voltage	VAC	230	230	230	230
Maximum absorbed power - Full load	W	187	283	242	369
Maximum absorbed power - Part load	W	51	52	47	48
Maximum absorbed power - Stand-by	W	3	3	3	3

Tab.7 Other specifications

	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
Ingress protection rating		IPX1B	IPX1B	IPX1B	IPX1B
Weight empty	kg	126	132	212	232

3.2.1 Other technical parameters

Tab.8 Technical parameters for boiler space heaters

Product name			IX 245–130	IX 245–150	IX 245–200	IX 245–250
Condensing boiler			Yes	Yes	Yes	Yes
Low-temperature boiler(1)			No	No	No	No
B1 boiler			No	No	No	No
Cogeneration space heater			No	No	No	No
Combination heater			No	No	No	No
Rated heat output	*Prated*	kW	122	140	186	233
Useful heat output at rated heat output and high temperature regime(2)	P_4	kW	121.5	140.0	186.0	233.0
Useful heat output at 30% of rated heat output and low temperature regime(1)	P_1	kW	40.4	46.5	36.0	46.0
Seasonal space heating energy efficiency	η_s	%	-	-	-	-
Useful efficiency at rated heat output and high temperature regime(2)	η_4	%	88.4	88.4	87.7	87.4
Useful efficiency at 30% of rated heat output and low temperature regime(1)	η_1	%	97.8	97.8	98.3	98.3
Auxiliary electricity consumption						
Full load	*elmax*	kW	0.187	0.283	0.242	0.369
Part load	*elmin*	kW	0.051	0.052	0.047	0.048
Stand-by	P_{SB}	kW	0.004	0.004	0.004	0.004
Other specifications						
Standby heat loss	P_{stby}	kW	0.078	0.083	0.095	0.117
Ignition burner power consumption	P_{ign}	kW	-	-	-	-
Annual energy consumption	Q_{HE}	GJ	-	-	-	-
Sound power level, indoors	L_{WA}	dB	60	63	65	68
Emissions of nitrogen oxides	NO_x	mg/kWh	17	23	34	35

(1) Low temperature means for condensing boilers 30°C, for low temperature boilers 37°C and for other heaters 50°C return temperature (at heater inlet).
(2) High temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

See
The back cover for contact details.

3.2.2 Sensor specifications

Tab.9 Heating flow sensor and return sensor

Temperature (in °C)	30	65	85
Resistance (in ohms)	8059	2084	1070

Tab.10 Flue gas sensor

Temperature (in °C)	-50	-10	0	40	100	200	250	300
Resistance (in ohms)	1 755765	117521	67650	10569	1377	145	65	34

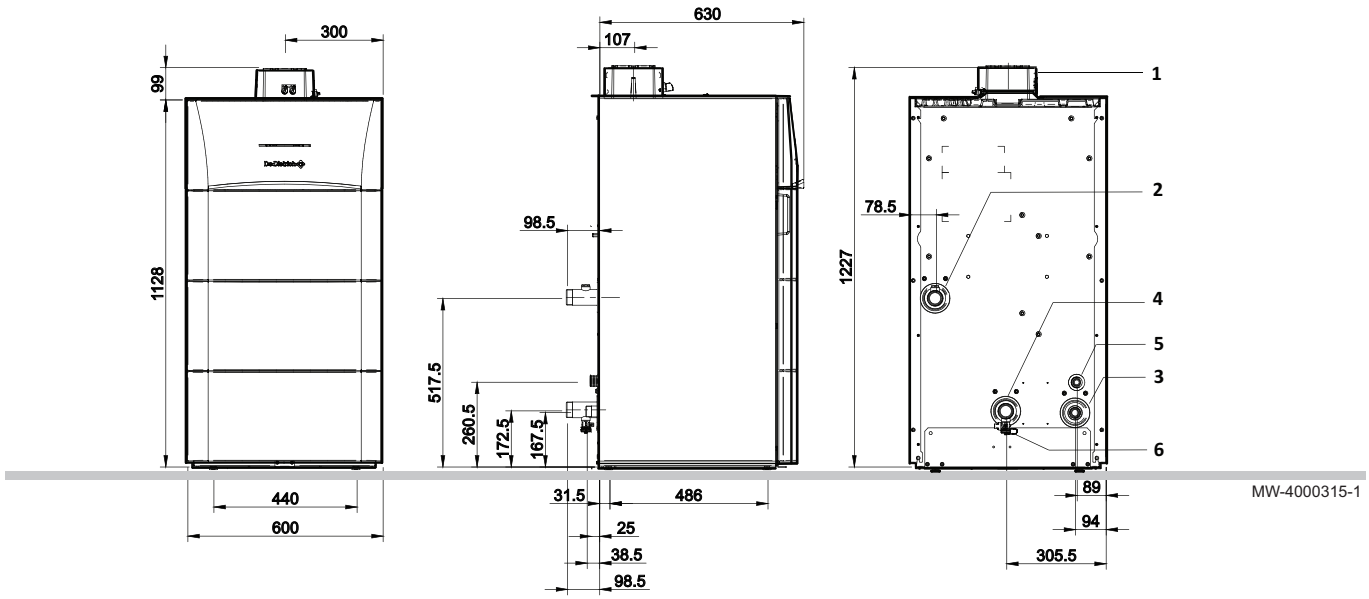
Tab.11 Outside sensor

Temperature (in °C)	-30	-15	-5	0	10	20	30	50
Resistance (in ohms)	13034	5861	3600	2857	1840	1218	827	407

3.3 Dimensions and connections

3.3.1 IX 245–130 and IX 245–150

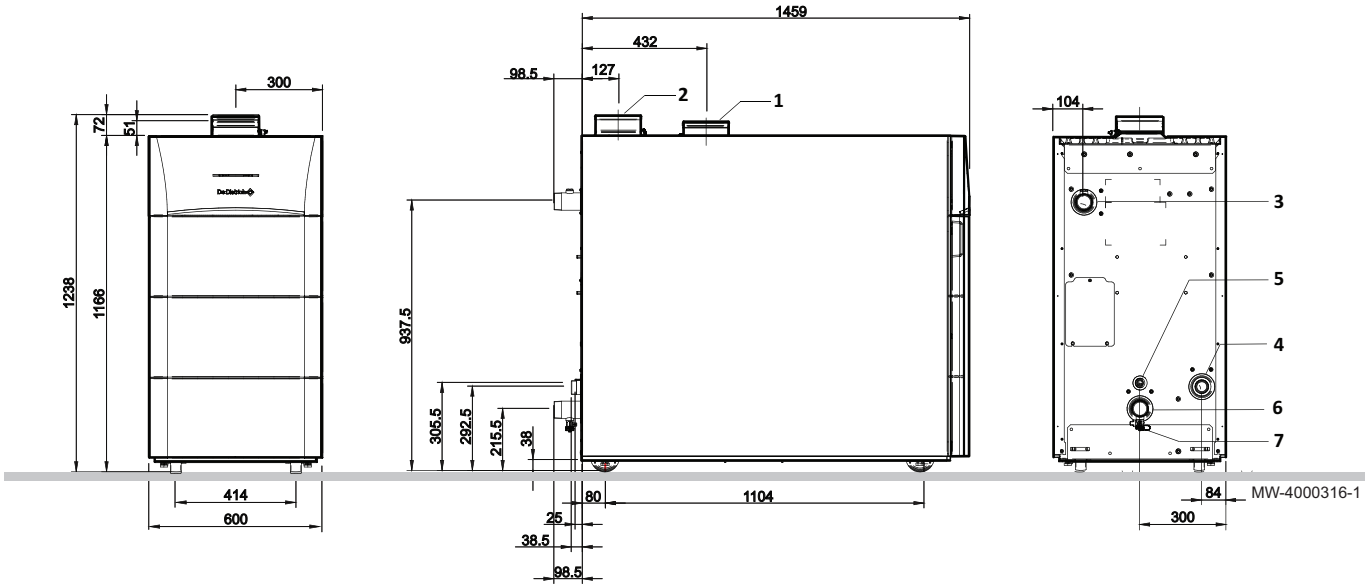
Fig.2



1 Flue gas outlet (110/160 mm)
2 Heating circuit flow (G1"1/2)
3 Gas inlet (G1")
4 Heating circuit return (G1"1/2)
5 Condensate discharge (diameter 32 mm)
6 Drain (1/2”)

3.3.2 IX 245–200 and IX 245–250

Fig.3

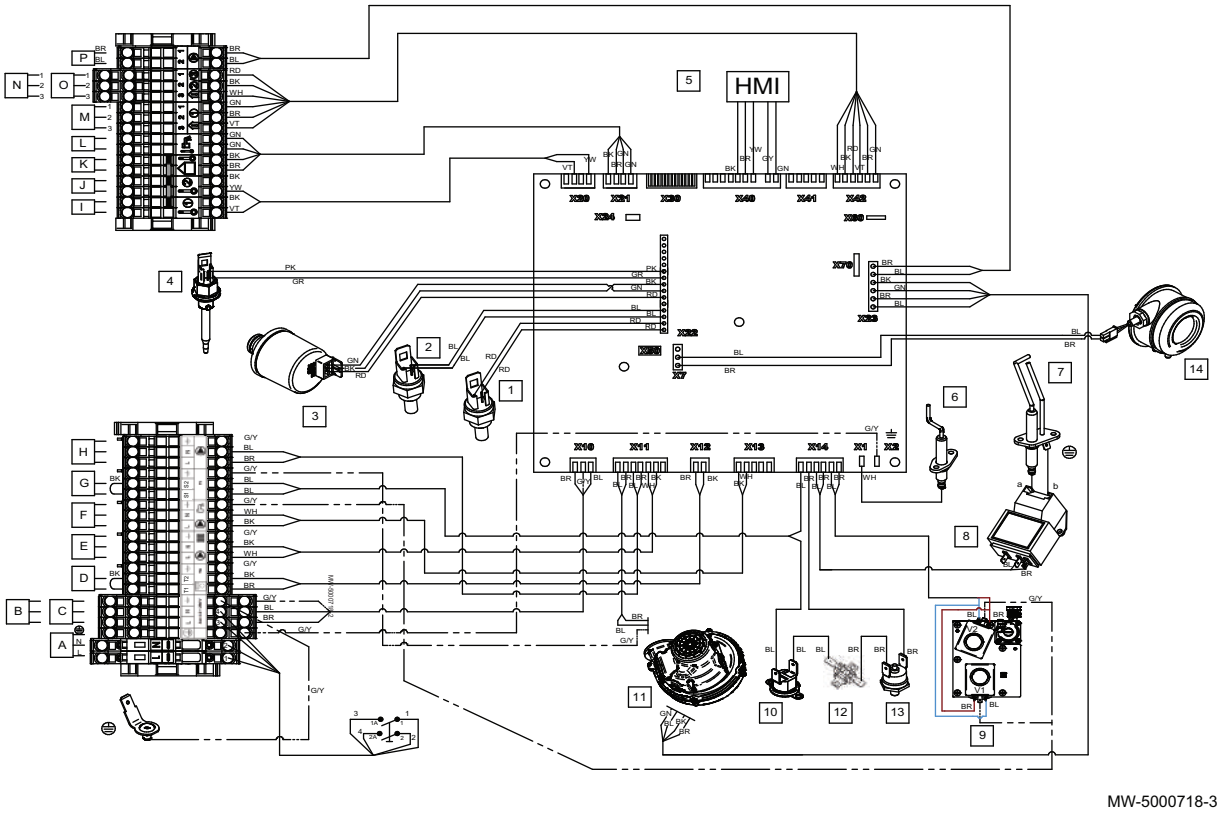


1 Combustion air inlet (150 mm)
2 Flue gas outlet (150 mm)
3 Heating circuit flow (R2” or DN50 PN6 flange)
4 Gas inlet (G1"1/2)
5 Condensate discharge (diameter 32 mm)
6 Heating circuit return (R2” or DN50 PN6 flange)
7 Drain (1/2”)

3.4 Electrical diagram

3.4.1 IX 245–130 and IX 245–150

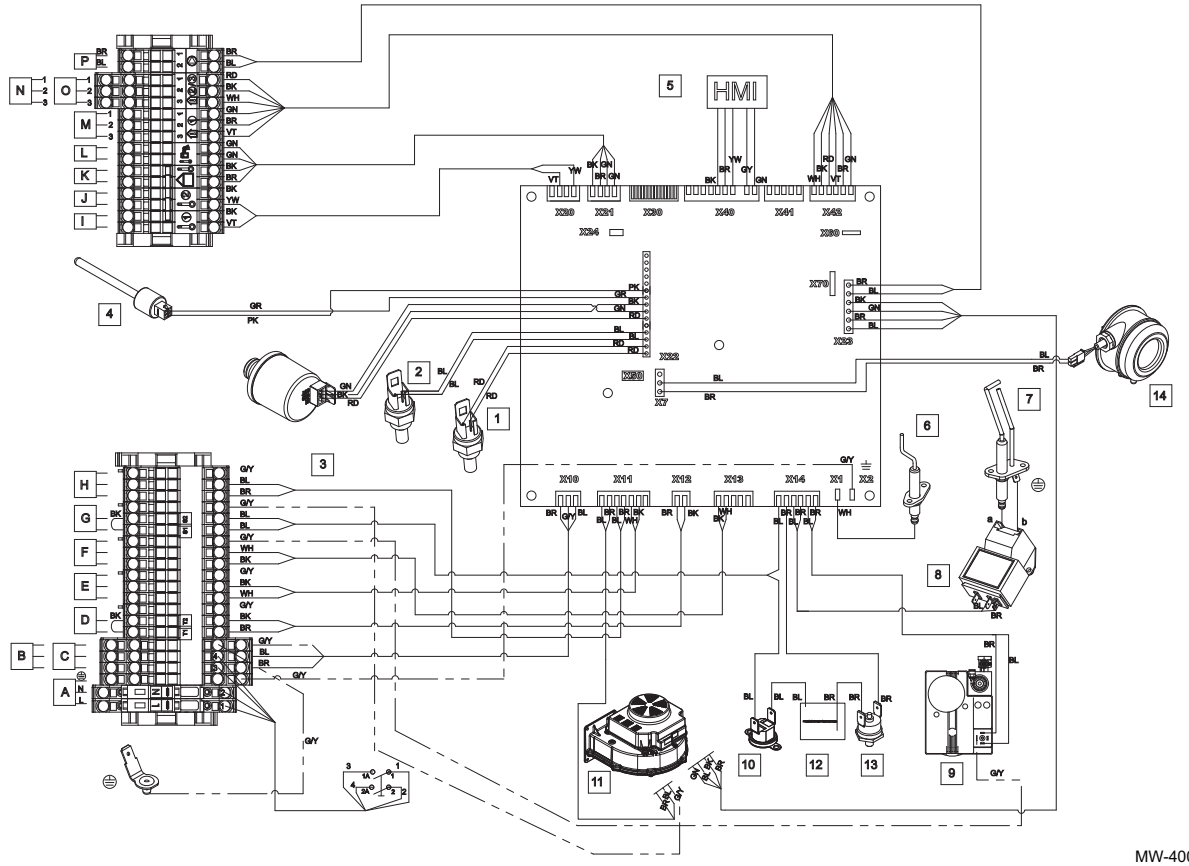
Fig.4



- ⏚ Earth POP rivet
- **A** Power supply 230 V 50 Hz
- **B** Power supply auxiliary circuit 1
- **C** Power supply auxiliary circuit 2
- **D** Room thermostat
- **E** Heating circuit pump
- **F** Domestic hot water pump
- **G** Safety contact
- **H** Boiler pump
- **I** Auxiliary sensor 1
- **J** Auxiliary sensor 2
- **K** Outside sensor
- **L** Domestic hot water sensor
- **M** Room temperature sensor 1
- **N** Room temperature sensor 2
- **O** Room temperature sensor 3
- **P** Boiler pump modulation (PWM)
- **1** Flow temperature sensor
- **2** Return temperature sensor
- **3** Hydraulic pressure sensor
- **4** Flue gas sensor
- **5** Control panel display
- **6** Ionisation probe
- **7** Spark plug
- **8** Igniter
- **9** Gas valve
- **10** Safety thermostat
- **11** Fan
- **12** Thermal fuse
- **13** Safety thermostat on the combustion chamber door
- **14** Flue gas pressure switch

3.4.2 IX 245–200 and IX 245–250

Fig.5



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- **6** Ionisation probe
- **7** Spark plug
- **8** Igniter
- **9** Gas valve
- **10** Safety thermostat
- **11** Fan
- **12** Safety thermostat on the combustion chamber door
- **13** Safety thermostat on the combustion chamber door
- **14** Flue gas pressure switch

4 Description of the product

4.1 General description

IX floor-standing condensing gas boilers have the following characteristics:

- Low pollutant emissions
- High efficiency heating
- Electronic control panel
- Flue gas discharge by a forced flue or chimney type connection.
- Flue gas discharge by a forced flue, chimney or bi-flow type connection.
- Perfectly suitable for cascade systems with several boilers.

4.2 Operating principle

4.2.1 Circulating pump

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

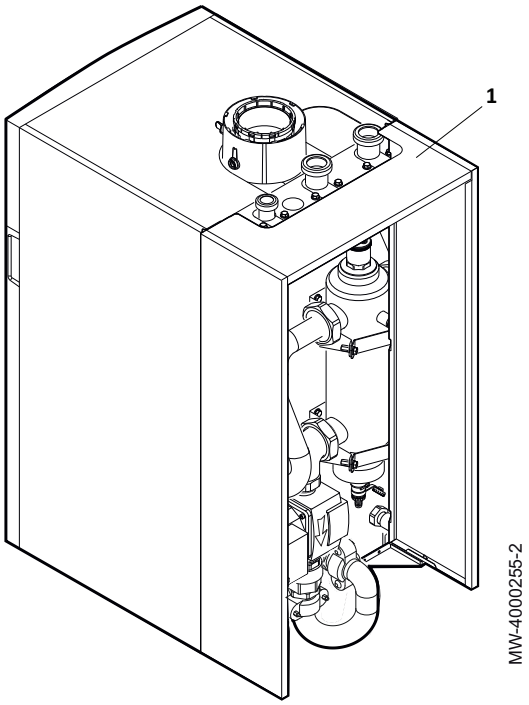
4.2.2 Gas/air setting

Tab.12 Operating principle for gas/air setting

Boiler model	Operating principle
• IX 245–130 • IX 245–150	The casing fitted to the boiler is also used as an air box. Air is drawn in by the fan and gas injected into the Venturi by the fan intake. The fan speed is modulated according to the settings, the heat demand and the actual temperatures measured by the temperature sensors. The gas and air are mixed in the Venturi. The gas/air ratio command function accurately adjusts the quantities of gas and air required. This provides optimum combustion over the entire output range. The gas/air mixture is sent to the burner, located upstream of the heat exchanger.
• IX 245–200 • IX 245–250	An air intake hose conveys the air directly to the air intake nozzle on the venturi inlet. The fan speed is modulated according to the settings, the heat demand and the actual temperatures measured by the temperature sensors. The gas and air are mixed in the Venturi. The gas/air ratio command function accurately adjusts the quantities of gas and air required. This provides optimum combustion over the entire output range. The gas/air mixture is sent to the burner, located upstream of the heat exchanger.

4.2.3 Low-loss header (accessory)

Fig.6



1 Low-loss header kit

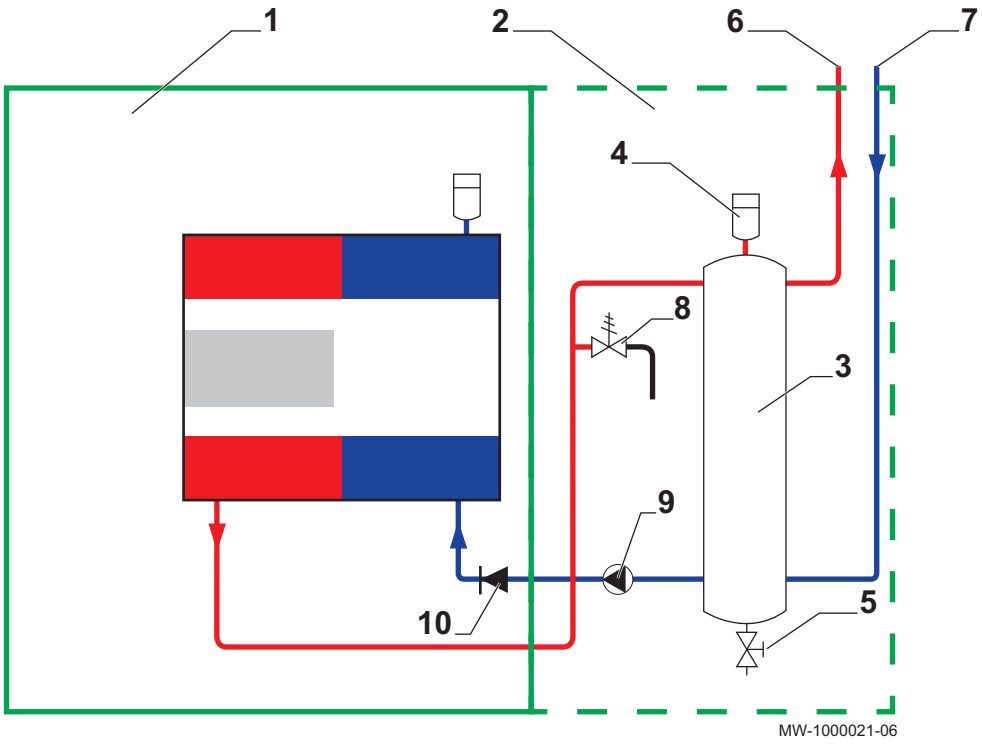
Low-loss headers are available for all boiler outputs.

The low-loss header is a component which enables the primary circuit and secondary circuit to have a hydraulic system independent from the boiler installation.

It offers the following advantages:

- It creates a hydraulically neutral point.
- It ensures the primary flow rate is controlled.
- It allows good control of the secondary flow rate and pressures, particularly when several circuits are operating independently from one another.
- It provides the option of having secondary circuits at different temperatures.
- It allows air to be evacuated thanks to its degassing function
- It enables decanting and removal of sludge via the sludge removal function.

Fig.7 Functional diagram of a boiler with a low-loss header



1 Boiler
2 Low-loss header kit
3 Low-loss header
4 Air vent
5 Drain valve
6 Heating circuit flow
7 Heating circuit return
8 Safety valve
9 Modulating circulating pump
10 Non-return valve

4.2.4 Plate heat exchanger (accessories)

The main advantage of the plate heat exchanger is that it hydraulically isolates the primary and secondary circuits. It also enables the boiler body to be protected from any contamination found in the secondary heating circuit water.

Fig.8

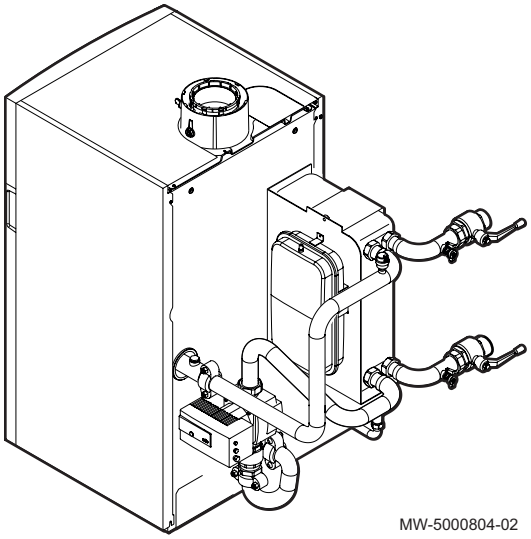
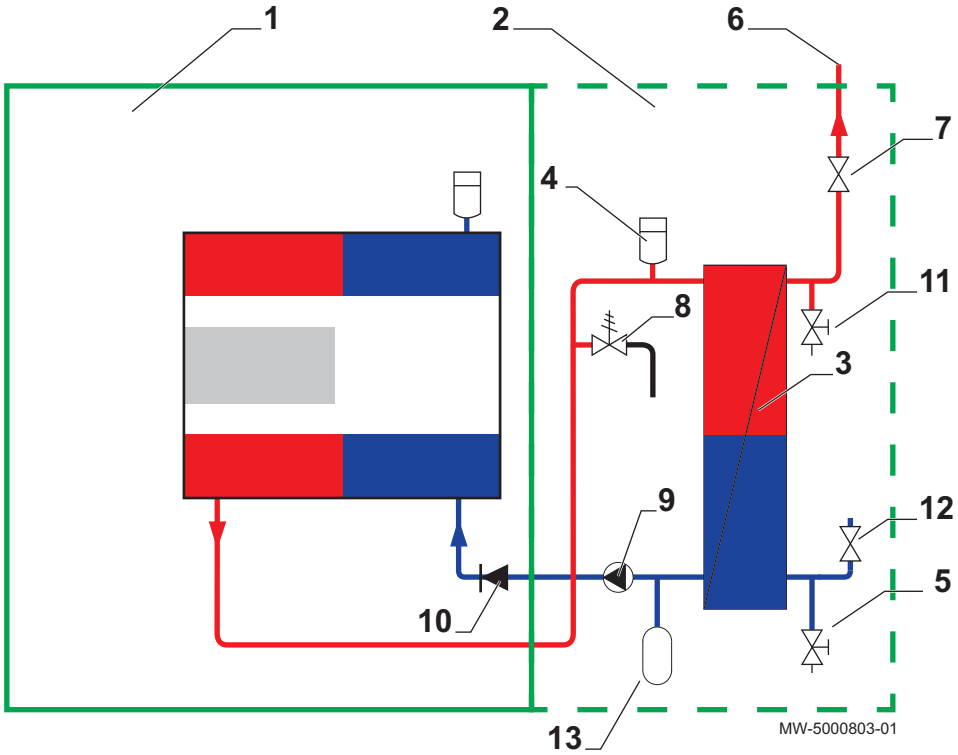


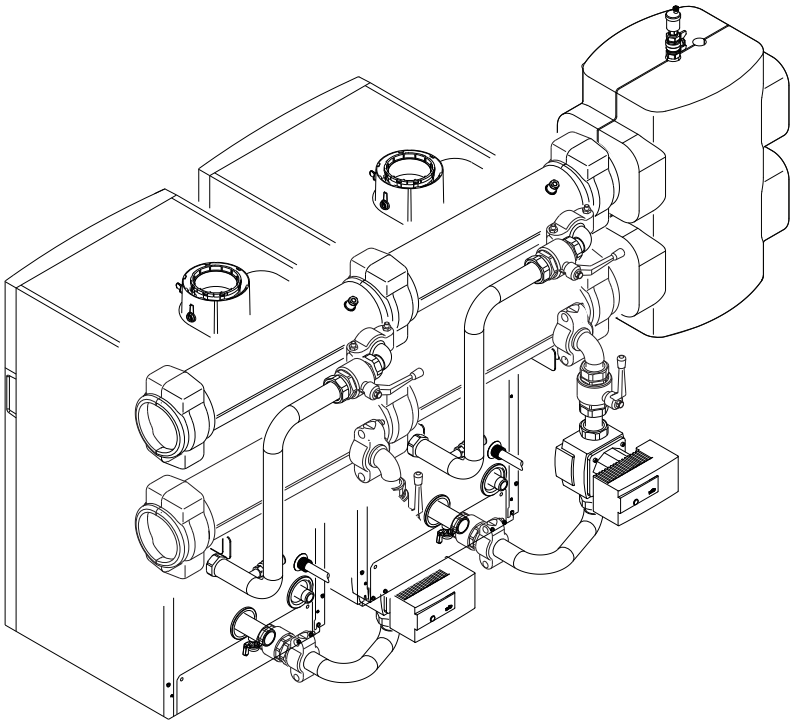
Fig.9 Functional diagram of a boiler with plate heat exchanger



1 Boiler
2 Plate heat exchanger kit
3 Plate heat exchanger
4 Air vent
5 Drain valve
6 Heating circuit flow
7 Valve
8 Safety valve
9 Modulating circulating pump
10 Non-return valve
11 Drain valve
12 Valve
13 Expansion vessel

4.2.5 System in cascade

Fig.10



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The boiler is ideally suited for a cascade system configuration.

Use a boiler/cascade connection kit to connect boilers in cascade.

4.2.6 Settings and safety devices

Important
The settings and safety devices are only operational if the boiler is powered up.

Tab.13 Description of the safety devices

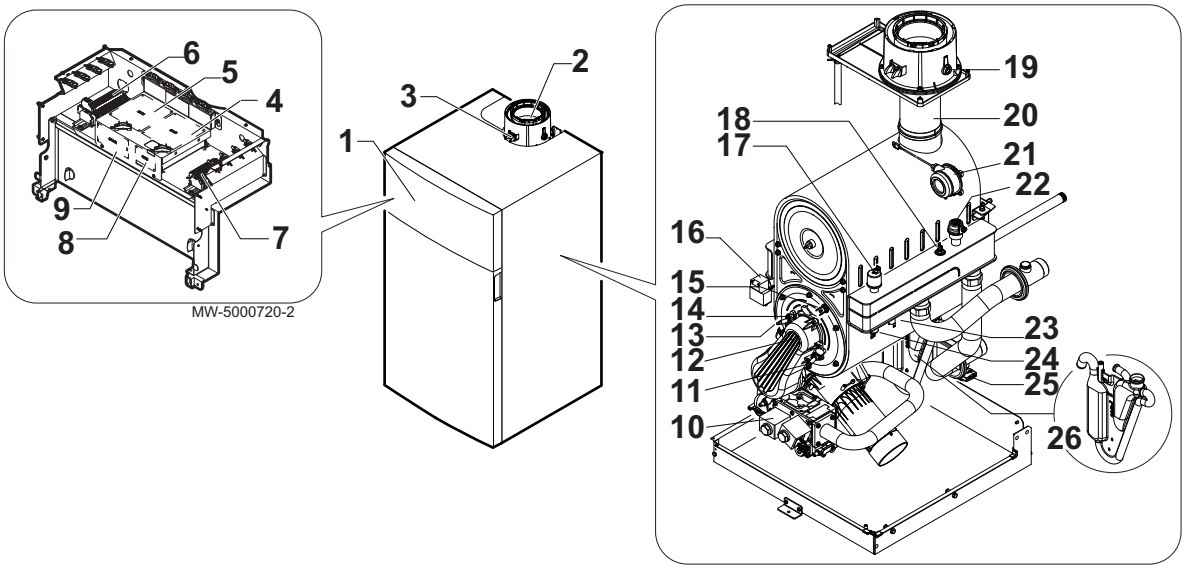
Device	Description
Safety thermostats	The safety thermostats suspend the supply of gas to the burner if the water in the primary circuit overheats. To resume normal operation of the boiler, eliminate the cause of this interruption. **Caution** The safety thermostats must in no circumstances be switched off or disconnected.
NTC flue gas sensor	The control panel blocks the gas supply to the burner in the event of overheating. To resume normal operation of the boiler, switch off the boiler and switch it back on again with the ON/OFF switch.
Flame detector by ionisation	The boiler is put into safety lock-down in the event of gas shortage or incomplete cross-lighting on the burner.
Hydraulic pressure switch	Thanks to this device, the burner can only operate if the installation pressure is higher than 0.1 bar (0.10 MPa). When the pressure switch detects a pressure lower than 0.8 bar (0.08 MPa), a warning message is displayed, without stopping the circulating pump.
Post-circulating pump	After the burner stops, depending on the room thermostat setting and if in heating mode, the circulating pump runs for a further 3 minutes.

Device	Description
Frost protection device	When the flow temperature is lower than 5 °C, the burner starts up and runs until the flow temperature reaches 15 °C. This device runs under the following conditions: • The boiler is switched on • The gas supply is working • The pressure in the system is higher than 0.5 bar (0.05 MPa)
Anti-blocking of the pump	If there are no heating or domestic hot water requirements for 24 consecutive hours, the pumps start up automatically and run for 10 seconds. The pumps connected directly to the appliance's terminal blocks are started up every Friday at 10:00 a.m. and run for 30 seconds.
Anticipatory start-up of the circulating pumps	In heating mode only, the appliance can start up the circulating pumps before burner ignition. The duration and activation of anticipatory start-up depends on the installation requirements and the operating temperatures. The duration of anticipatory start-up of the circulating pumps therefore varies from a few seconds to several minutes.
Flue gas pressure switch	The flue gas pressure switch interrupts the intake of gas to the burner in the event of a blockage in the discharge pipe for the combustion products or the combustion air inlet pipe.

4.3 Main components

4.3.1 IX 245–130 and IX 245–150

Fig.11



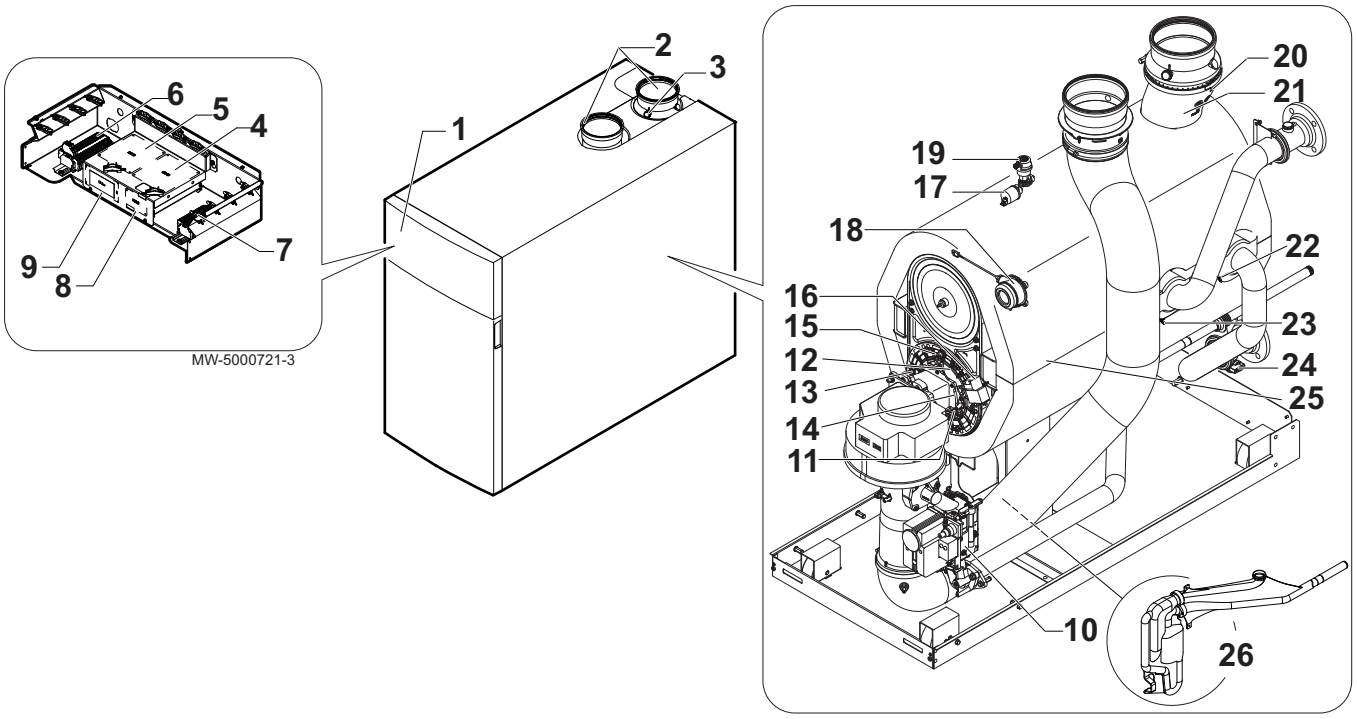
1 Control panel
2 Flue gas connection
3 Flue gas measuring point
4 Controller PCB
5 Mounting point for a maximum of two AVS 75 modules. A third AVS 75 module can be used by the boiler but must be fixed to the wall and powered externally.
6 Power supply terminal block
7 Terminal block for the sensors and the remote control
8 Mounting point for communication module OCI 345

Caution
Danger of short circuit on the OCI 345 communication module if it is fixed in another emplacement.

9 Mounting point for conversion module AGU 2.551
10 Gas valve
11 Ionisation probe
12 Burner
13 Ignition electrode
14 Flame inspection window
15 Safety thermostat on the combustion chamber door
16 Ignition transformer
17 Hydraulic pressure sensor
18 Return temperature sensor
19 Flue gas sensor
20 Flue gas fitting
21 Flue gas pressure switch
22 Automatic air vent
23 Safety thermostat
24 Flow temperature sensor
25 Drain valve
26 Condensate siphon

4.3.2 IX 245–200 and IX 245–250

Fig.12



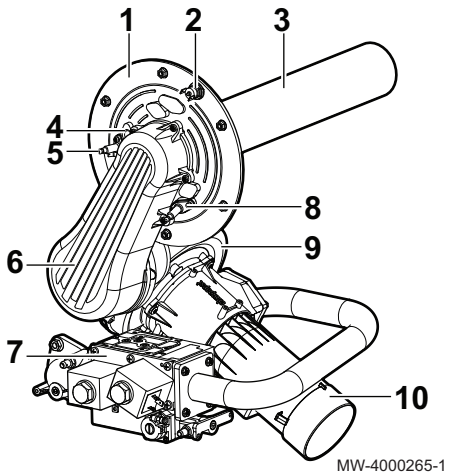
1 Control panel
2 Flue gas connection
3 Flue gas measuring point
4 Controller PCB
5 Mounting point for a maximum of two AVS 75 modules. A third AVS 75 module can be used by the boiler but must be fixed to the wall and powered externally.
6 Power supply terminal block
7 Terminal block for the sensors and the remote control
8 Mounting point for communication module OCI 345

Caution
Danger of short circuit on the OCI 345 communication module if it is fixed in another emplacement.

9 Mounting point for conversion module AGU 2.551
10 Gas valve
11 Ionisation probe
12 Burner
13 Ignition electrode
14 Flame inspection window
15 Safety thermostat on the combustion chamber door
16 Ignition transformer
17 Hydraulic pressure sensor
18 Flue gas pressure switch
19 Automatic air vent
20 Flue gas sensor
21 Flue gas fitting
22 Return temperature sensor
23 Flow temperature sensor
24 Drain valve
25 Safety thermostat
26 Condensate siphon

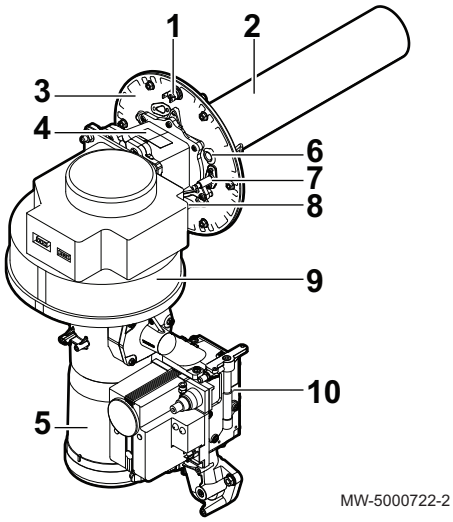
4.3.3 Main burner components

Fig.13 Burner for IX 245–130 and IX 245–150



1 Burner door
2 Safety thermostat on the combustion chamber door
3 Burner
4 Flame inspection window
5 Ignition electrode
6 Air/gas inlet pipe
7 Gas valve
8 Ionisation probe
9 Fan
10 Venturi

Fig.14 Burner for IX 245–200 and IX 245–250

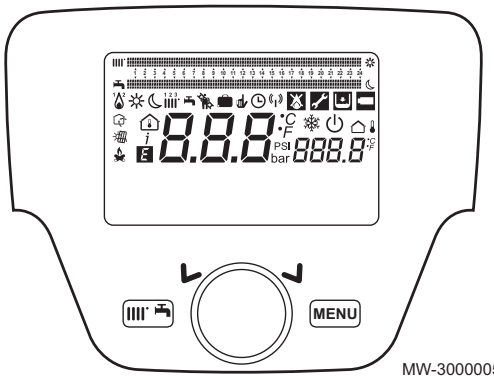


1 Safety thermostat on the combustion chamber door
2 Burner
3 Burner door
4 Flue gas non-return valve
5 Venturi
6 Flame inspection window
7 Ignition electrode
8 Ionisation probe
9 Fan
10 Gas valve

4.4 Control panel description

4.4.1 Description of the keys

Fig.15



Shortcuts menu key

Quick access to the operating modes

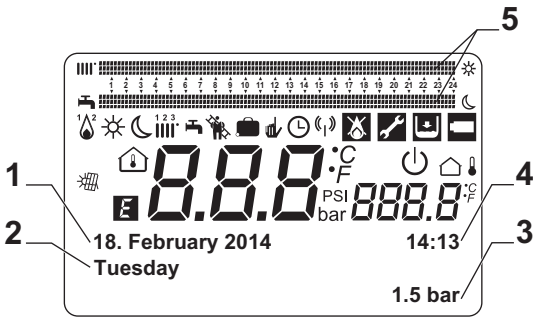
Menu key

Selection and confirmation button

- Rotary button for navigating between menu or parameter screens
- Push button to select a menu/parameter or to confirm a value/action

4.4.2 Description of the symbols

Fig.16



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

Tab.14 Description of the symbols

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

4.5 Standard delivery

The IX boiler comes in a package that includes:

- A floor-standing gas boiler
- An installation, user and maintenance manual
- A data plate.

4.6 Accessories & options

A detailed list of accessories and options can be found in our catalogue.

5 Before installation

5.1 Installation regulations

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

5.2 Installation requirements

5.2.1 Water treatment

In many cases, the boiler and the heating system can be filled with mains water, without treating the water.

Caution
Do not add any chemical products to the central heating water without first consulting a water treatment specialist. 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.

Important
- Flush the installation with at least 3 times the volume of water contained in the central heating system.
- Flush the DHW circuit with at least 20 times its volume of water.

The water in the installation must comply with following characteristics:

Tab.15 Heating water specifications

Specification	Unit	Total output of the installation (kW)			
		≤ 70	70 - 200	200 - 550	> 550
Degree of acidity (untreated water)	pH	7.5 - 9.5	7.5 - 9.5	7.5 - 9.5	7.5 - 9.5
Degree of acidity (treated water)	pH	7.5 - 9.5	7.5 - 9.5	7.5 - 9.5	7.5 - 9.5
Conductivity at 25°C	µS/cm	≤ 800	≤ 800	≤ 800	≤ 800
Chlorides	mg/litre	≤ 50	≤ 50	≤ 50	≤ 50
Other components	mg/litre	< 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/litre	0.1 - 3.5	0.1 - 2.0	0.1 - 1.5	0.1 - 0.5

(1) For installations with constant heating and a maximum total system output of 200 kW, the appropriate maximum total water hardness is 8.4°dH (1.5 mmol/l, 15°f). For installations of more than 200 kW, the appropriate maximum total hardness is 2.8°dH (0.5 mmol/l, 5°f).

Important
If water treatment is necessary, De Dietrich recommends the following manufacturers:
- Sotin
- Fernox
- Sentinel

5.2.2 Gas supply

- Before mounting, check that the gas meter has sufficient capacity (in m^3/h). To do this, you should bear in mind the consumption of all appliances. If the capacity of the gas meter is too low, inform the gas supply company.

- The boilers are preset to run on G20 gas (gas H) and can be adapted to run with the following gases:
  - G25 (gas L),
  - G27 (gas Lw),
  - G31 (gas P),

Important
To use a different type of gas, contact an approved assistance service.

5.2.3 Electrical power supply

Power supply voltage	230 V AC/50 Hz

Caution
Please ensure the polarities shown on the terminals are followed, i.e live (L), neutral (N) and earth (⏚)

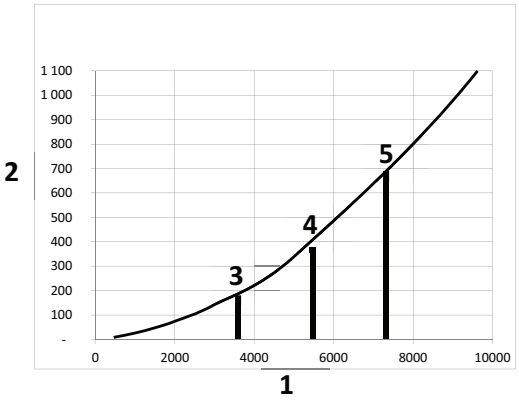
5.2.4 Circulating pump

The boiler's water flow rates must be higher than or equal to the specifications in the table below:

Tab.16 Water flow rates in the boiler

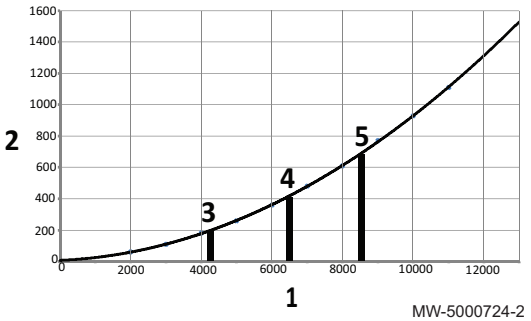
Boiler model	Working flow rate with the low-loss header kit: minimum flow rate (litres/hour)
IX 245–130	2250
IX 245–150	3000
IX 245–200	3500
IX 245–250	4500

Fig.17 Pressure drops for IX 245–130



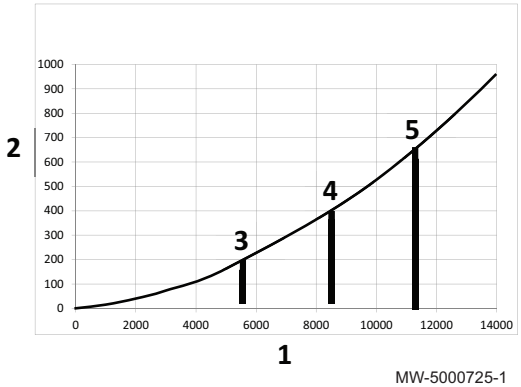
1 Q flow rate (litres/hour)
2 H pressure in millibar (mbar)
3 Operating water flow rate at nominal heat output = 3730 litres/hour where ΔT = 30°C
4 Operating water flow rate at nominal heat output = 5600 litres/hour where ΔT = 20°C
5 Operating water flow rate at nominal heat output = 7500 litres/hour where ΔT = 15°C
ΔT Temperature difference between the flow water and the return water in the boiler

Fig.18 Pressure drops for IX 245–150



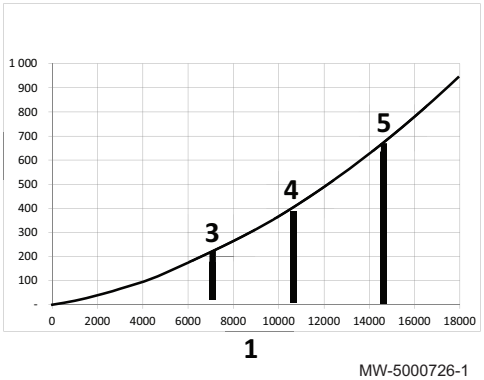
1 Q flow rate (litres/hour)
2 H pressure in millibar (mbar)
3 Operating water flow rate at nominal heat output = 4310 litres/hour where ΔT = 30 °C
4 Operating water flow rate at nominal heat output = 6460 litres/hour where ΔT = 20 °C
5 Operating water flow rate at nominal heat output = 8610 litres/hour where ΔT = 15°C
ΔT Temperature difference between the flow water and the return water in the boiler

Fig.19 Pressure drops for IX 245–200



1 Q flow rate (litres/hour)
2 H pressure in millibar (mbar)
3 Operating water flow rate at nominal heat output = 5740 litres/hour where ΔT = 30°C
4 Operating water flow rate at nominal heat output = 8610 litres/hour where ΔT = 20°C
5 Operating water flow rate at nominal heat output = 11480 litres/hour where ΔT = 15°C
ΔT Temperature difference between the flow water and the return water in the boiler

Fig.20 Pressure drops for IX 245–250



1 Q flow rate (litres/hour)
2 H pressure in millibar (mbar)
3 Operating water flow rate at nominal heat output = 7180 litres/hour where ΔT = 30°C
4 Operating water flow rate at nominal heat output = 10770 litres/hour where ΔT = 20°C
5 Operating water flow rate at nominal heat output = 14350 litres/hour where ΔT = 15°C
ΔT Temperature difference between the flow water and the return water in the boiler

5.3 Choice of the location

Before mounting the boiler, decide on the ideal position for mounting, bearing in mind any Directives and the dimensions of the appliance.

Caution
Install the thermodynamic water heater in a frost-free environment.

Caution
Install the boiler on a solid, stable structure able to bear its weight.

Caution
Do not stock chloride or fluoride compounds close to the boiler. They are particularly corrosive and may contaminate the combustion air. Chloride and fluoride compounds are present in aerosol sprays, paints, solvents, cleaning products, washing products, detergents, glues, snow clearing salts.

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

Caution
Use plugs for the intake of air and discharge of combustion gases observing the prevailing regulations and directives.

Caution
Connect the condensate discharge to the waste water near the boiler.

Caution
France: Abide by the regulatory provisions of the Order of 23 June 1978 and the **ATG C 321.4**

5.3.1 Ventilation

To allow the intake of combustion air, sufficient ventilation must be provided in the boiler room, for which the cross section and position must satisfy the regulations in force in the country in which the boiler is installed:

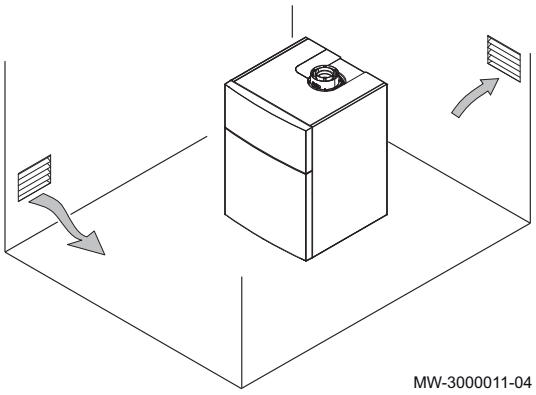
Germany	Boilers with a nominal output of less than 70 kW: • DTU P 45-204: Gas installations (formerly DTU No. 61-1 - Gas installations - April 1982 + addendum no 1 July 1984). For boilers with a nominal output of between 25 and 70 kW: in the case of a direct air supply, the cross section of mandatory ventilation must have a minimum surface area of 70 cm^2.
Germany	Boilers with a nominal output of more than 70 kW: • DTU 65.4 (NF P 52-221): gas installations. For boilers with a nominal output of more than 70 kW: top and bottom ventilation mandatory Top ventilation: the cross section of the ventilation must be equal to half the total cross section of the flue gas pipes with a minimum of 2.5 dm^2. Bottom ventilation: the cross section (in dm^2) of the direct air supply must be more than or equal to (0.86 x P) / 20. P is the nominal output of the boiler (in kW). Example for a 70 kW boiler: (0.86 x 70) / 20 = 3.01 dm^2

If the boiler is installed in closed premises, respect the minimum dimensions given in the diagram below. Also allow for openings to obviate the following hazards:

- Accumulation of gas
- Overheating of the premises
- **All countries except Great Britain**: Minimum cross section of the openings: **S1** + **S2** = 150 cm^2

■ **Ventilation to be provided for the boilers**

Fig.21



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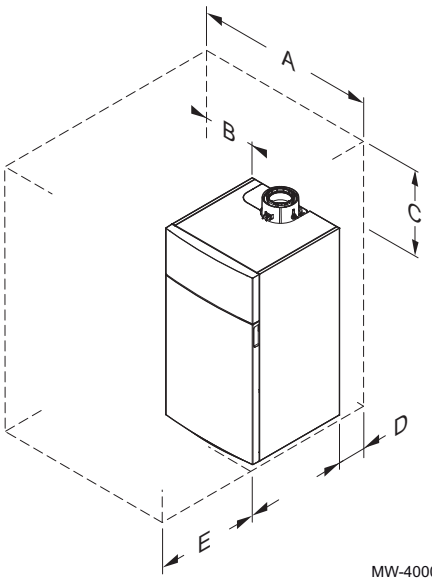
5.3.2 Overall space needed for the boiler

To ensure adequate access to the appliance and facilitate maintenance, allow sufficient space around the boiler, according to the information provided.

Important
Keep the boiler accessible at all times.

Clearance to be provided for the boilers

Fig.22



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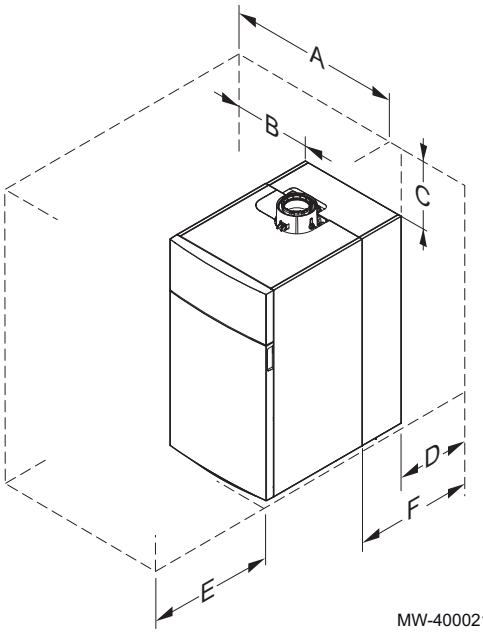
Tab.17

	IX 245–130	IX 245–150	IX 245–200	IX 245–250
A	1100	1100	1100	1100
B	500	500	500	500
C	400	400	750	750
D	800	800	800	800
E	1000	1000	1000	1000

Space to be allowed for boilers equipped with a low-loss header kit, plate heat exchanger kit or cascade kit

Fig.23

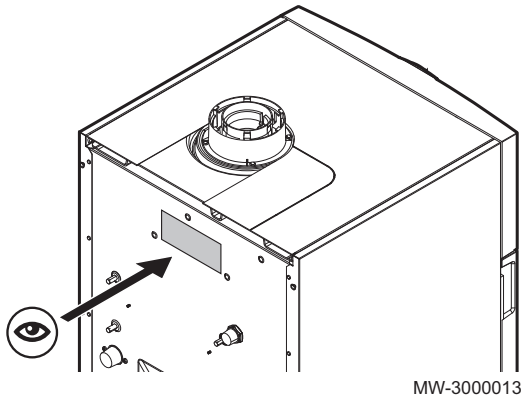


Tab.18

	IX 245–130	IX 245–150	IX 245–200	IX 245–250
A	1100	1100	1100	1100
B	500	500	500	500
C	400	400	750	750
D	500	500	500	500
E	1000	1000	1000	1000
F with low-loss header kit	775	775	910	910
F with plate heat exchanger kit	1140	1140	1140	1140
F with cascade kit	1020	1020	1070	1070

5.3.3 Data plate

Fig.24



The data plate is located on the back of the boiler. The data plate provides important information regarding the appliance:

- Serial number
- Model
- Gas category
- etc.

5.3.4 Selecting the position for the outside temperature sensor (optional)

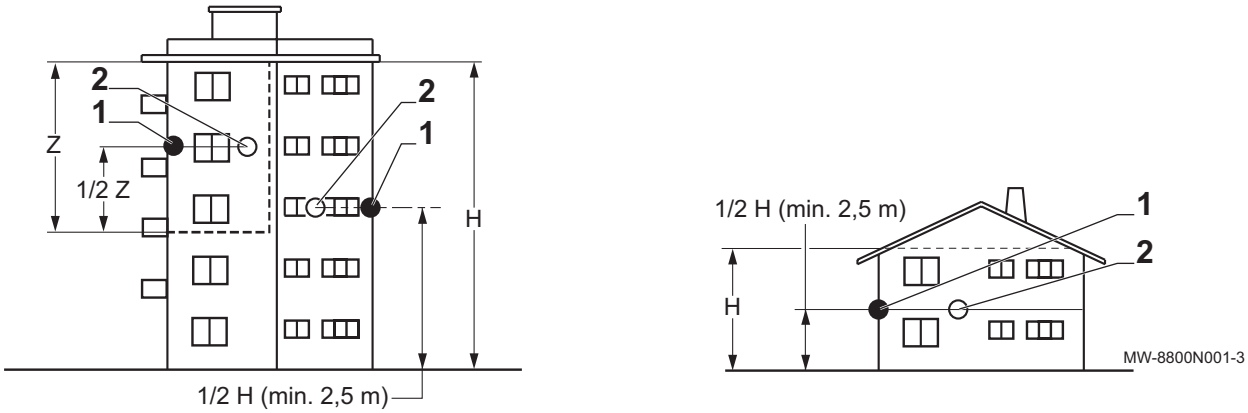
It is important to select a position that allows the sensor to measure the outside conditions correctly and effectively.

■ Recommended positions

Place the outside sensor in a position that covers the following characteristics:

- On a façade of the area to be heated, on the north if possible.
- Half way up the wall of the area to be heated.
- Under the influence of changes in the weather.
- Protected from direct sunlight.
- Easy to access.

Fig.25



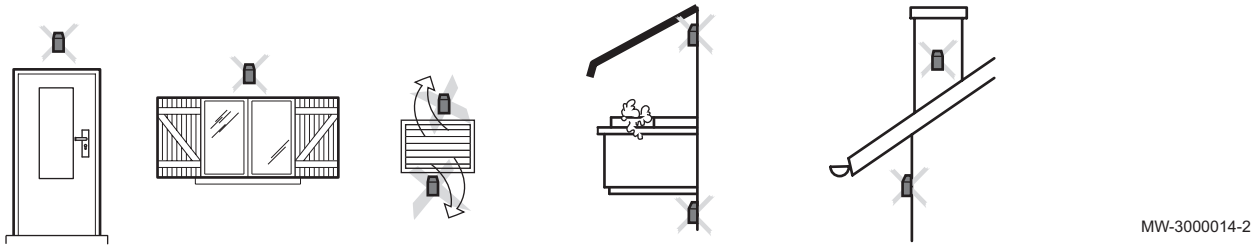
1 Optimum location
2 Possible position
H Inhabited height controlled by the sensor
Z Inhabited area controlled by the sensor

■ Positions to be avoided

Avoid placing the outside sensor in a position with the following characteristics:

- Masked by part of the building (balcony, roof, etc.).
- Close to a disruptive heat source (sun, chimney, ventilation grid, etc.).

Fig.26

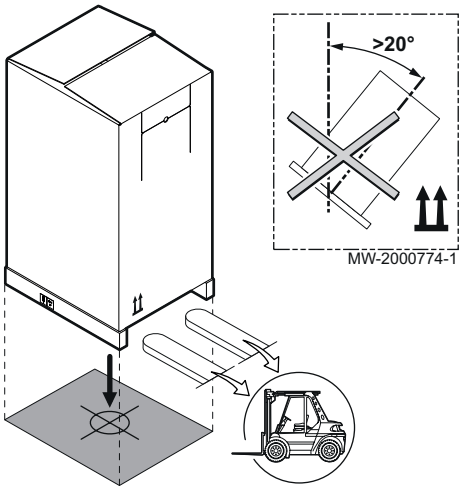


5.4 Transport and unpacking

5.4.1 IX 245–130 and IX 245–150

■ Transport

Fig.27



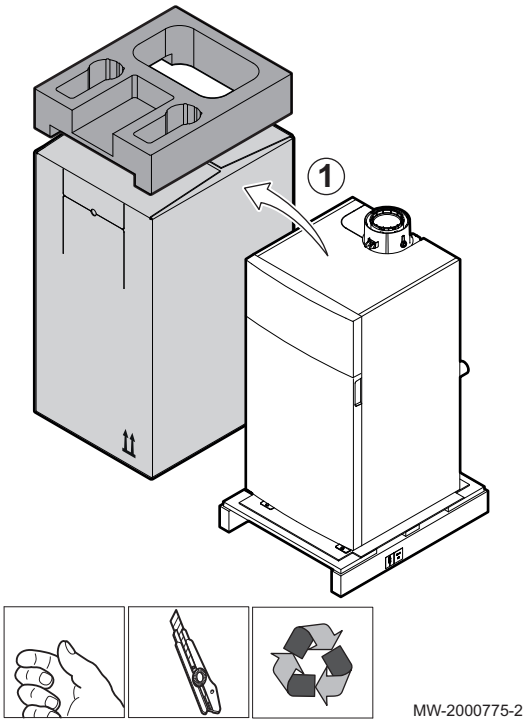
Caution

- Have at least two people standing by.
- Handle the appliance with gloves.

- Transport the pallet carrying the appliance using a pallet truck, a forklift truck or a 4-wheel removals cart.
- Do not use the top cover of the appliance for transport lifting.
- Transport the appliance vertically.

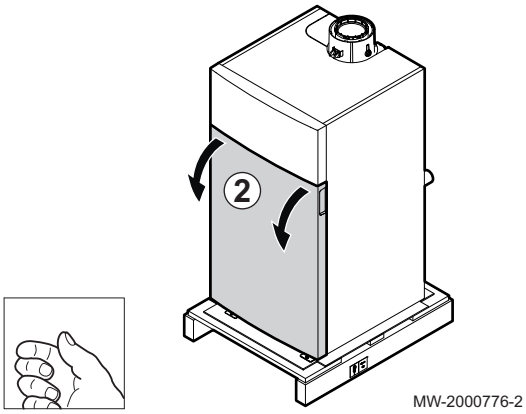
■ Unpacking & initial preparation

Fig.28



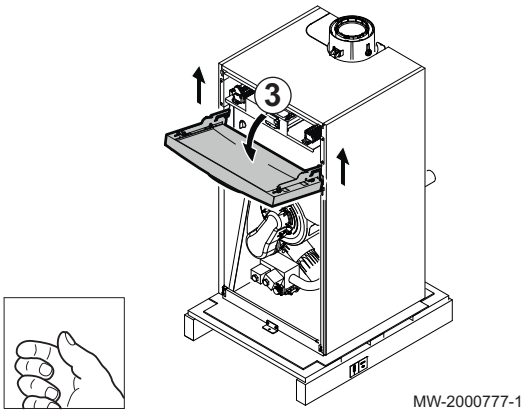
1. Remove the cardboard packaging and polystyrene packing.

Fig.29



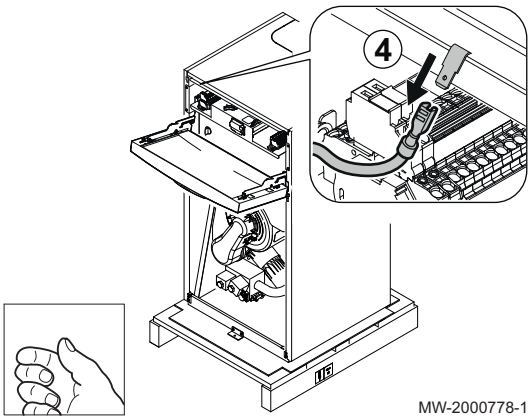
2. Remove the front panel by pulling firmly on the slots provided.

Fig.30



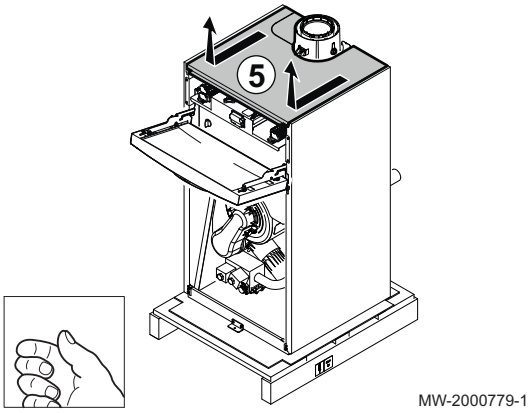
3. Lift and tilt the control panel.

Fig.31



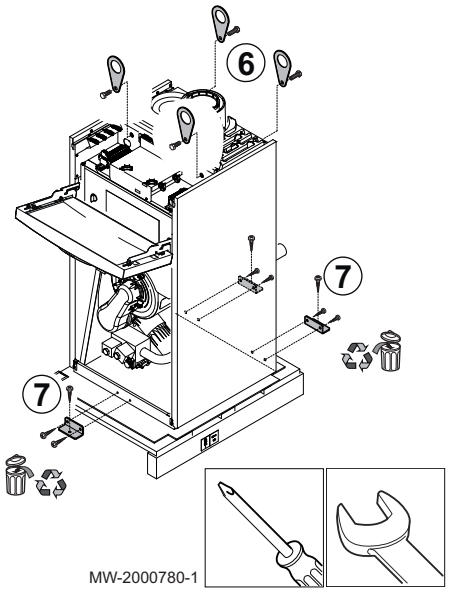
4. Disconnect the earth wire.

Fig.32



5. Pull and lift the top panel.

Fig.33

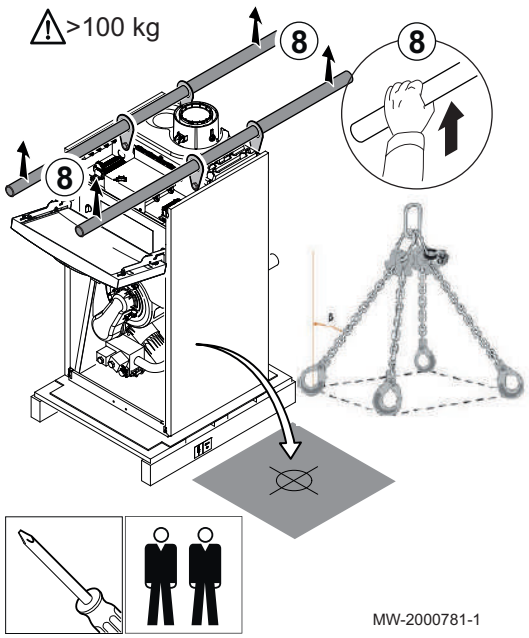


6. Screw the lifting rings into the locations provided. Tightening torque: 23 N.m.

Important
The rings are supplied with the boiler.

7. Remove the screws attaching the boiler to the pallet.

Fig.34

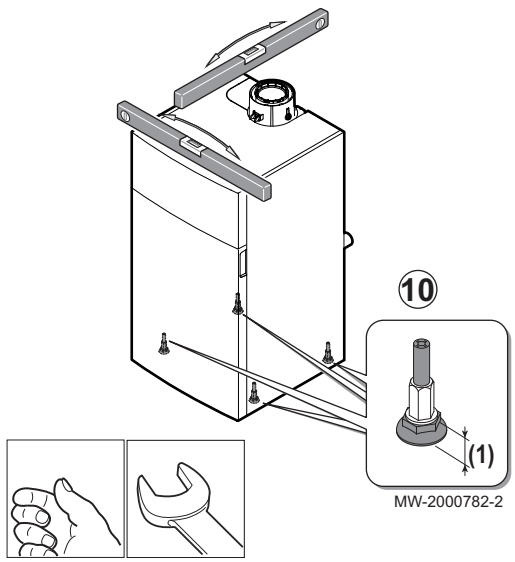


8. Use carrying bars or slings (not provided) to move the boiler.

Sling attachment angle	β < 60°
IX 245–130	126 kg
IX 245–150	132 kg

Caution
Moving the boiler is a job for two people.

Fig.35

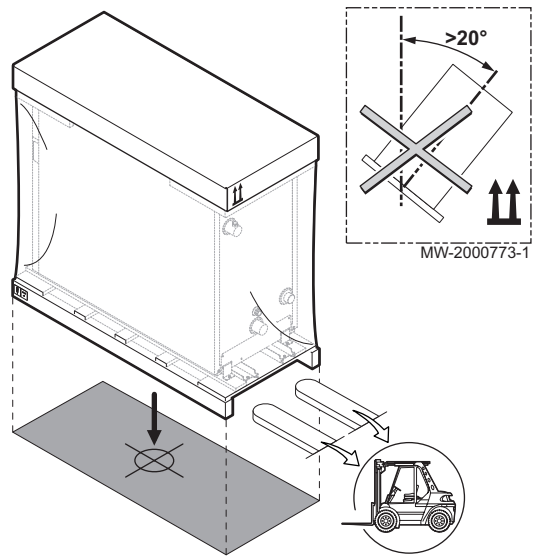


9. Close the boiler.
   (1) Adjustment range for the feet: 30 mm
10. Level the boiler using the adjustable feet.

5.4.2 IX 245–200 and IX 245–250

Transport

Fig.36



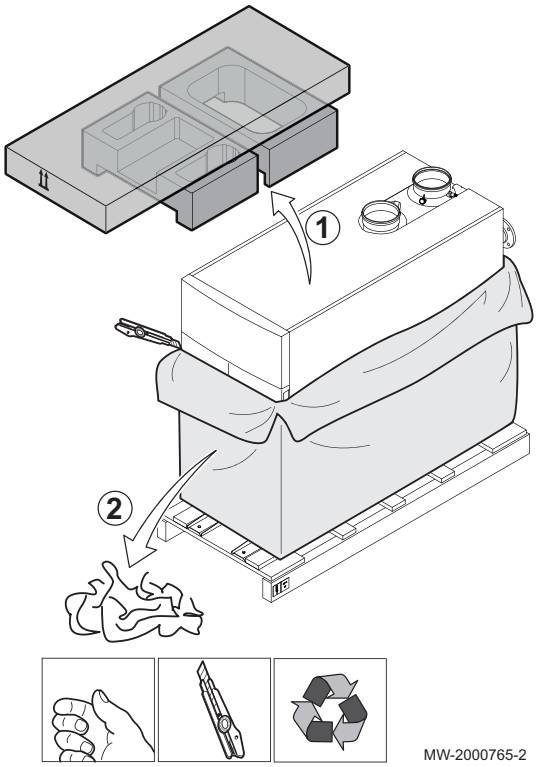
Caution

- Have at least two people standing by.
- Handle the appliance with gloves.

- Transport the pallet carrying the appliance using a pallet truck, a forklift truck or a 4-wheel removals cart.
- Do not use the top cover of the appliance for transport lifting.
- Transport the appliance vertically.

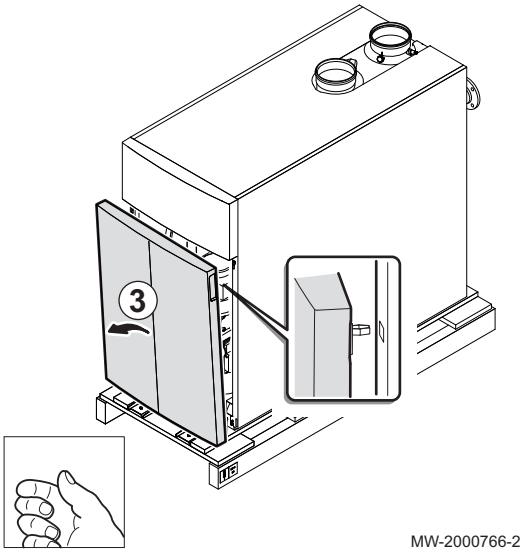
Unpacking & initial preparation with rails

Fig.37



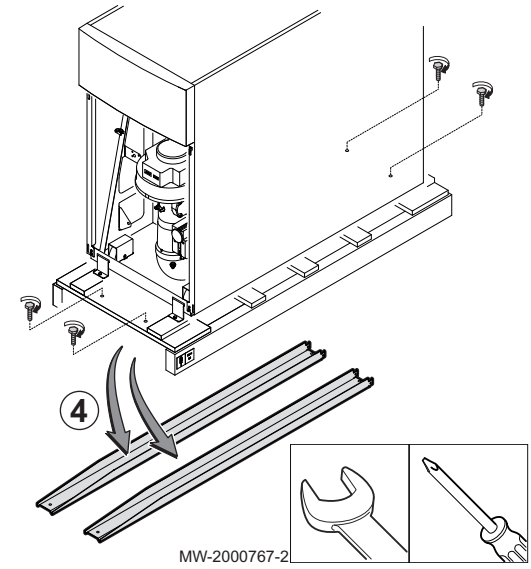
1. Remove the cardboard and the polystyrene packing.
2. Remove the protective plastic.

Fig.38



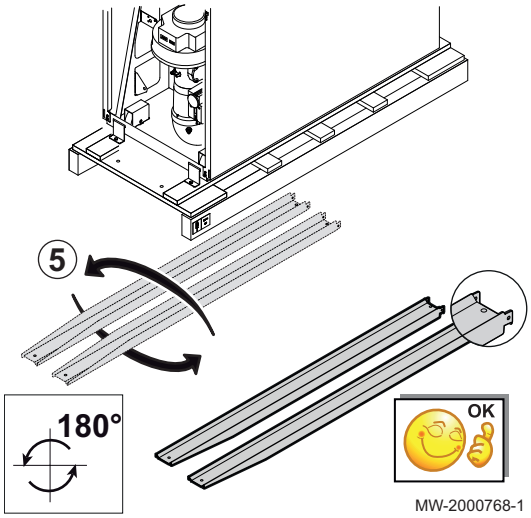
3. Remove the front panel by pulling firmly on the slots provided.

Fig.39



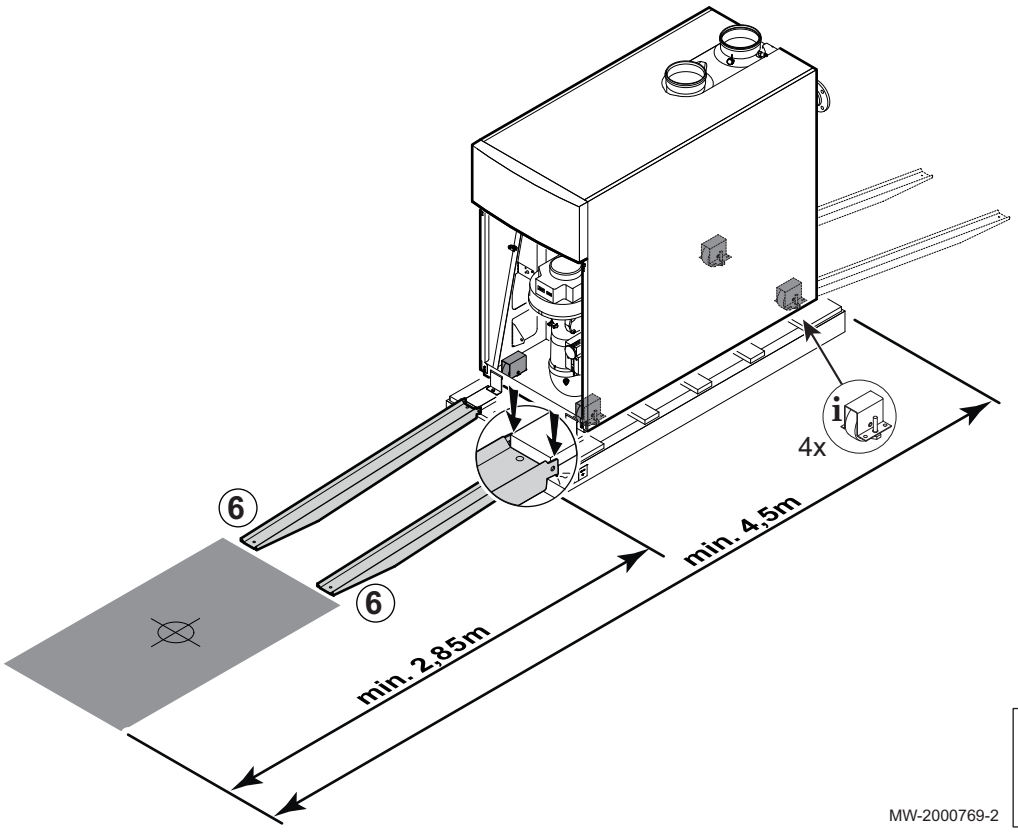
4. Remove the 2 unloading rails by unscrewing the 4 screws.

Fig.40



5. Rotate the 2 rails by 180°.

Fig.41



6. Fit the 2 rails on the edge of the pallet.

Caution
Ensure there is sufficient space to move the boiler.

Fig.42

7. Remove the four screws attaching the boiler to the pallet.

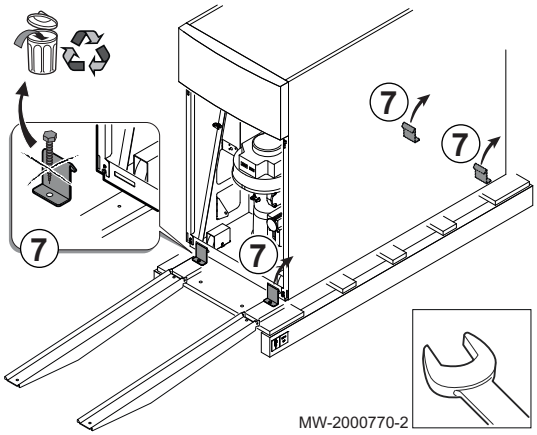
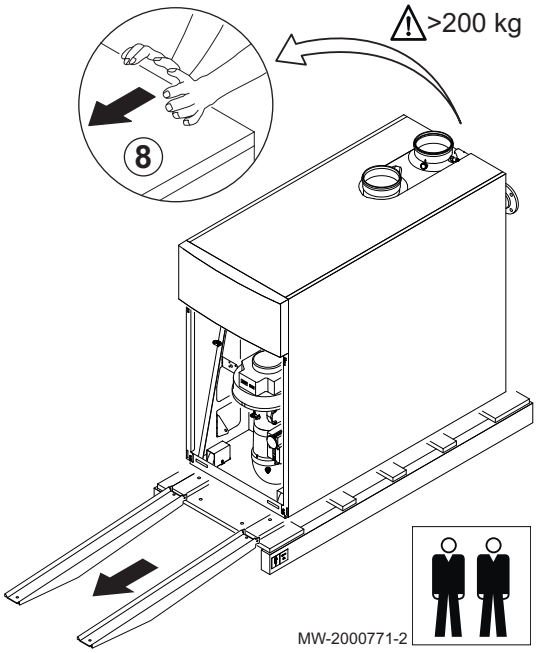


Fig.43

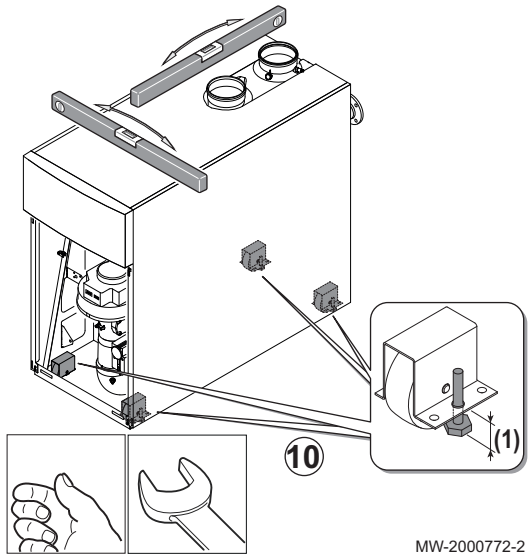


8. Slide the boiler onto the unloading rails.

IX 245–200	212 kg
IX 245–250	232 kg

Caution
Moving the boiler is a job for two people.

Fig.44



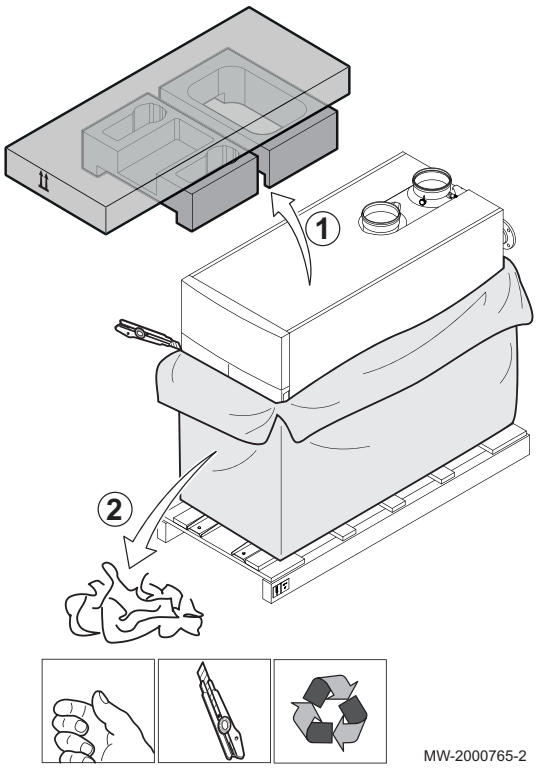
9. Close the boiler.

(1) Adjustment range for the feet: 20 mm

10. Level the boiler using the adjustable feet.

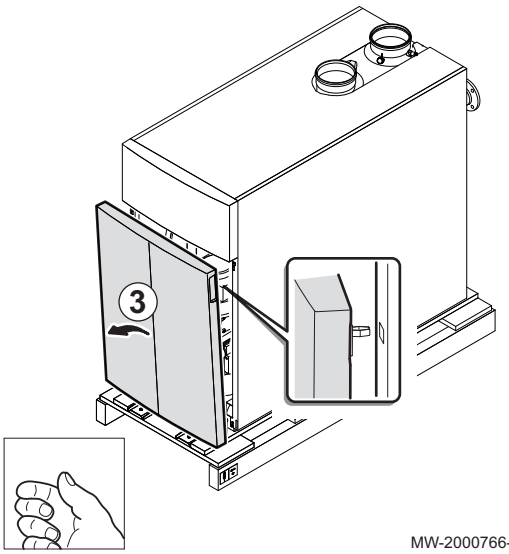
■ Unpacking & initial preparation with slings

Fig.45



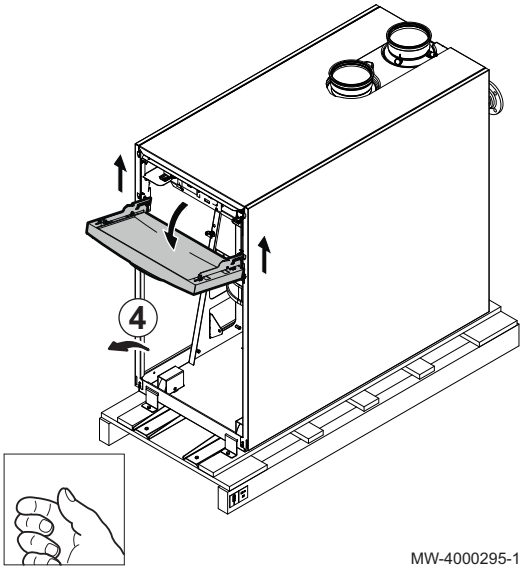
1. Remove the cardboard and the polystyrene packing.
2. Remove the protective plastic.

Fig.46



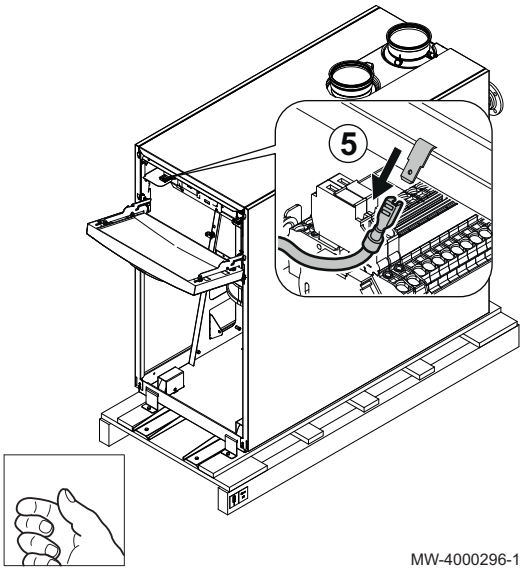
3. Remove the front panel by pulling firmly on the slots provided.

Fig.47



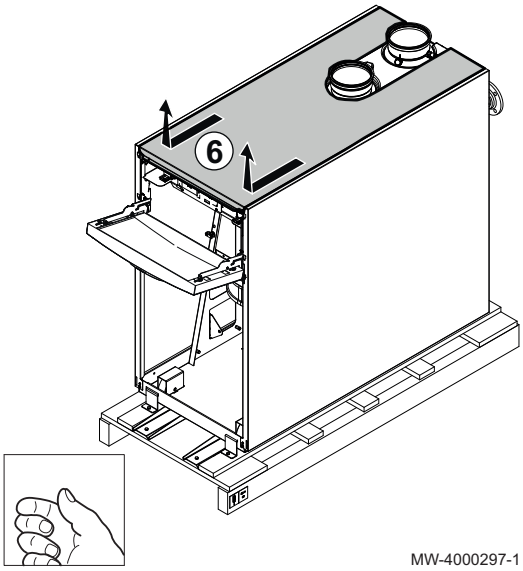
4. Lift and tilt the control panel.

Fig.48



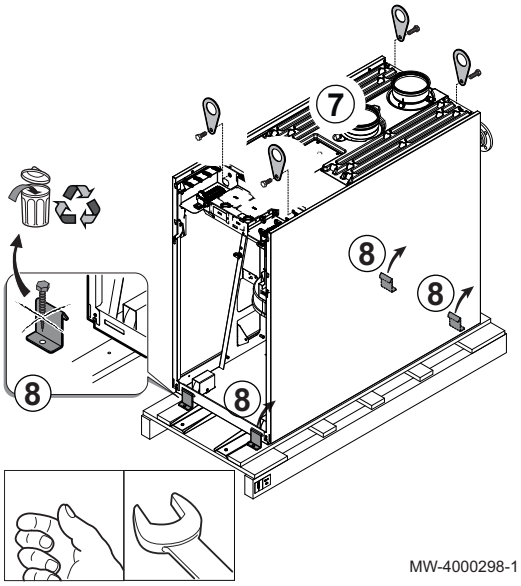
5. Disconnect the earth wire.

Fig.49



6. Pull and lift the top panel.

Fig.50

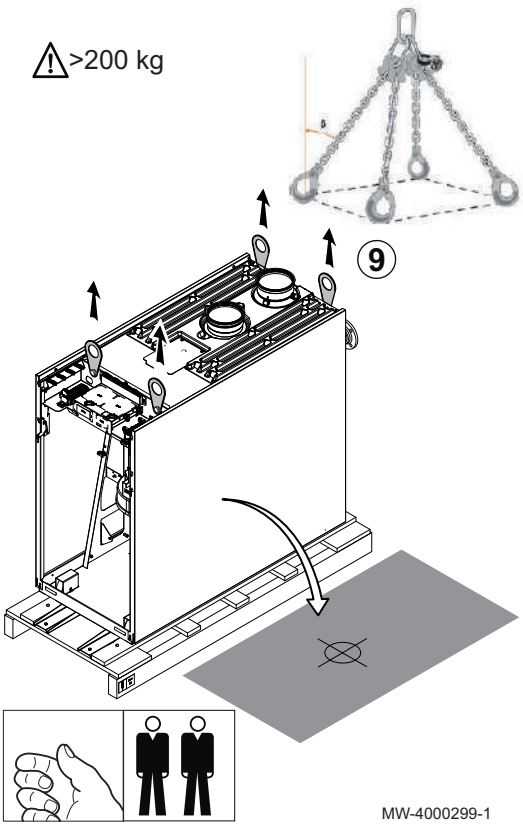


7. Screw the lifting rings into the locations provided. Tightening torque: 23 N.m.

Important
The rings are supplied with the boiler.

8. Remove the screws attaching the boiler to the pallet.

Fig.51



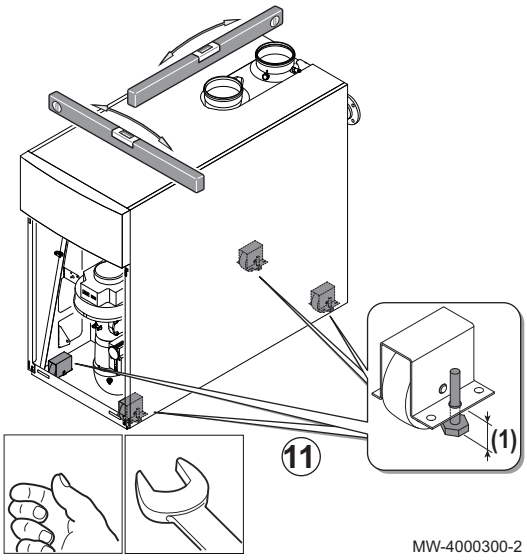
9. Use slings (not provided) to move the boiler.

Sling attachment angle	β < 60°
IX 245–200	212 kg
IX 245–250	232 kg

Caution
Moving the boiler is a job for two people.

10. Close the boiler.

Fig.52



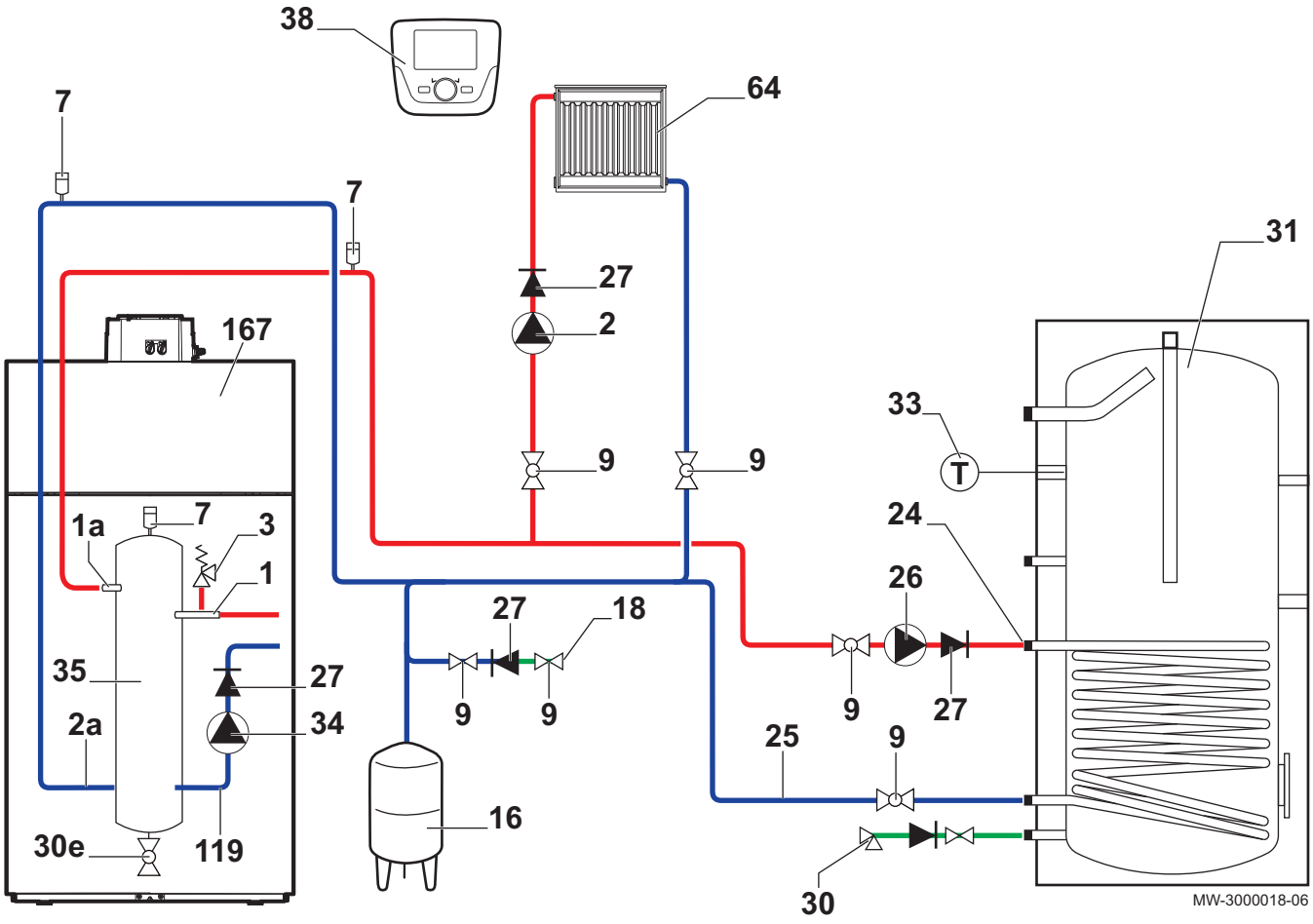
11. Level the boiler using the adjustable feet.
    (1) Adjustment range for the feet: 20 mm

6 Connecting diagrams

6.1 One boiler + one direct circuit + one domestic hot water tank

6.1.1 Hydraulic connection

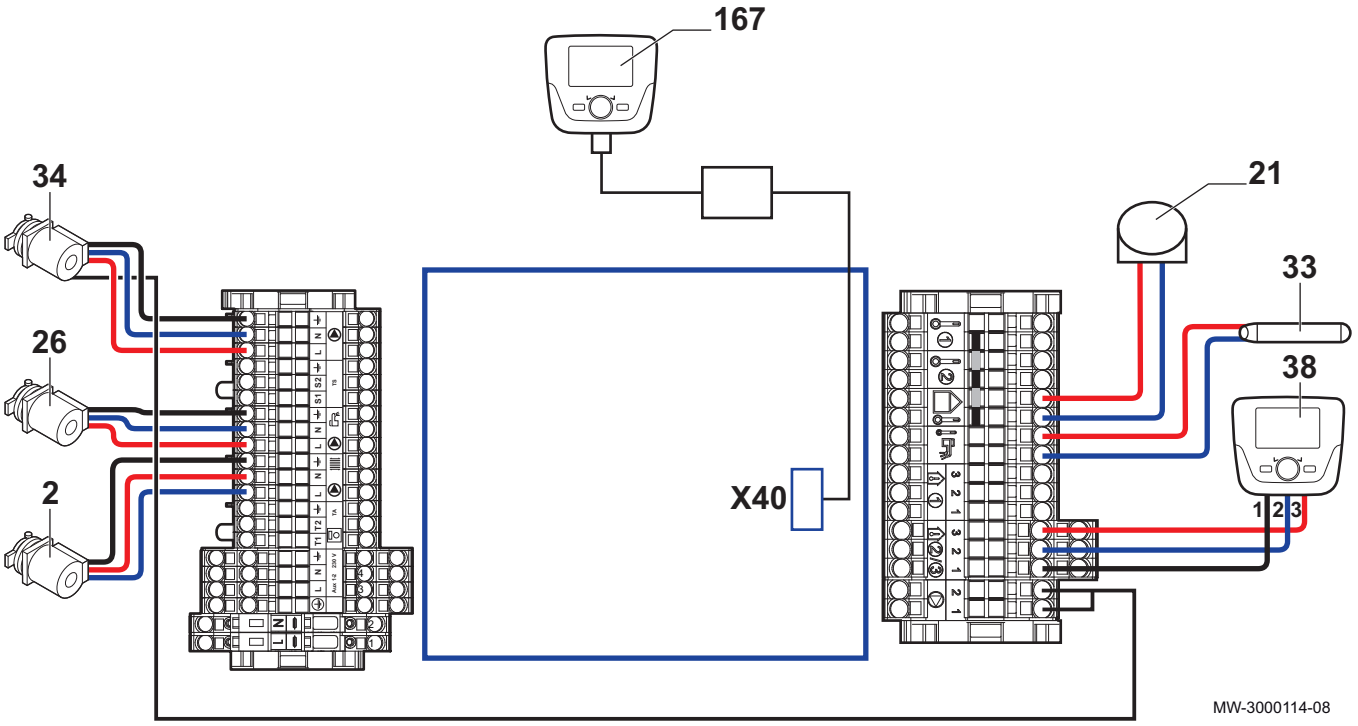
Fig.53 Boiler + 1 direct circuit + 1 domestic hot water tank



1 Boiler flow
1a Heating flow direct circuit
2 Heating pump direct circuit
2a Heating return direct circuit
3 6 bar (0.6 MPa) safety valve
7 Automatic air vent
9 Isolation valve
16 Closed expansion vessel
18 Heating circuit fill point
(France: with disconnector according to prevailing regulations)
24 Domestic hot water tank exchanger primary inlet
25 Domestic hot water tank exchanger primary outlet
26 DHW booster pump
27 Non-return valve
30 Calibrated and sealed safety unit
France: (7 bar (0.7 MPa) - with opening on the discharge pipe)
30e Drain valve
31 Independent domestic hot water tank
33 Domestic hot water temperature sensor
34 Modulating boiler pump (primary pump)
35 Low-loss header (accessory)
38 Remote control
64 Direct heating circuit
119 Boiler return
167 Boiler control panel

6.1.2 Electrical connection

Fig.54 Boiler + 1 direct circuit + 1 domestic hot water tank



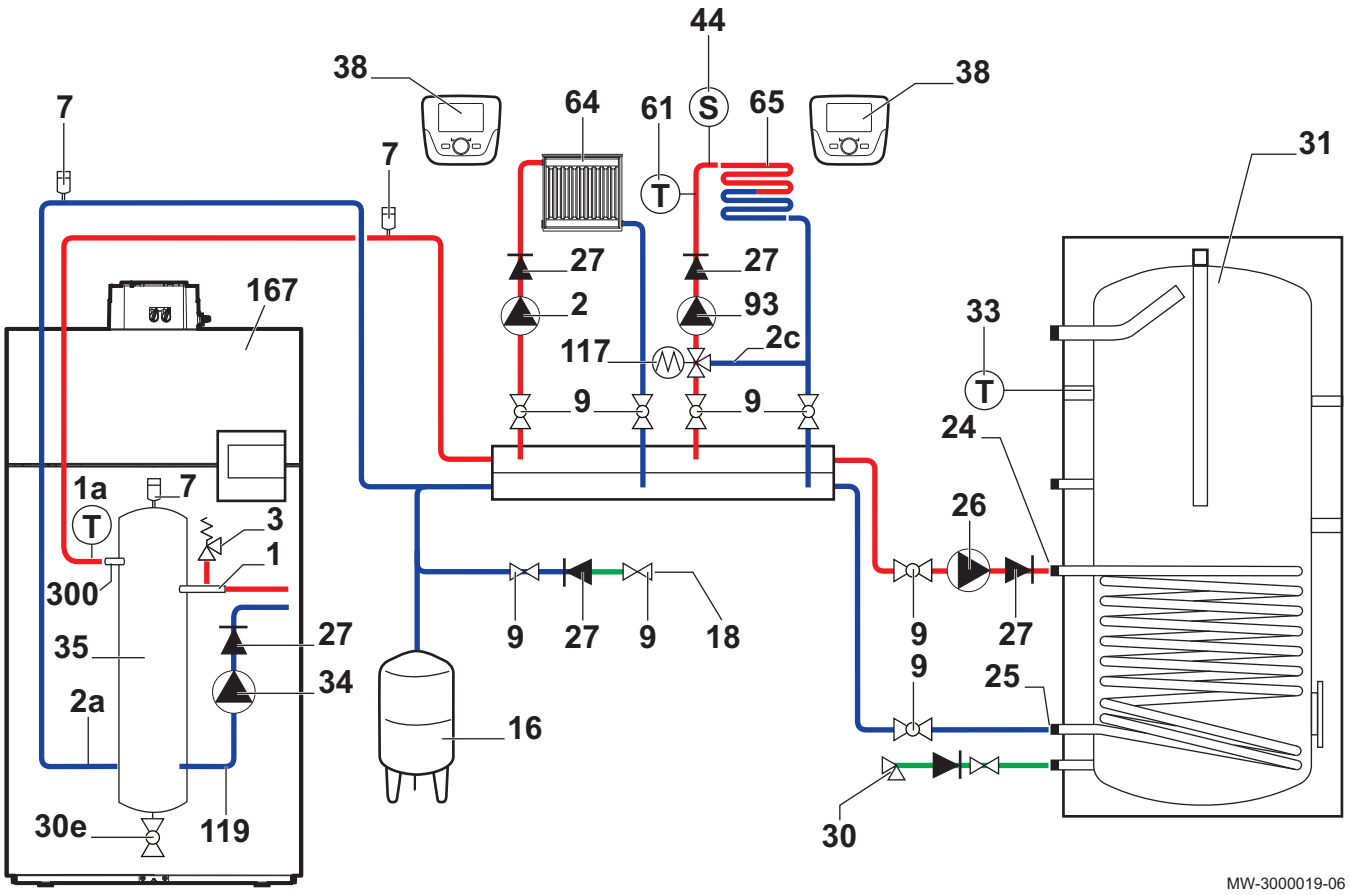
2 Direct heating circuit pump
21 Outside temperature sensor
26 DHW booster pump
33 Domestic hot water temperature sensor
34 Modulating boiler pump (primary pump)
38 Remote control
167 Boiler control panel

Important
Relay the pumps if the current exceeds 1 A max per output.

6.2 One boiler + one underfloor heating circuit + one direct circuit + one domestic hot water tank

6.2.1 Hydraulic connection

Fig.55 Boiler + 1 underfloor heating circuit + 1 direct circuit + 1 domestic hot water tank



1 Boiler flow
1a Heating flow sensor
2 Direct heating circuit pump
2a Heating return
2c Three-way valve bypass
3 6 bar (0.6 MPa) safety valve
7 Automatic air vent
9 Isolation valve
16 Closed expansion vessel
18 Heating circuit fill point

(France: with disconnector according to prevailing regulations)

24 Domestic hot water tank exchanger primary inlet
25 Domestic hot water tank exchanger primary outlet
26 DHW booster pump
27 Non-return valve
30 Calibrated and sealed safety unit

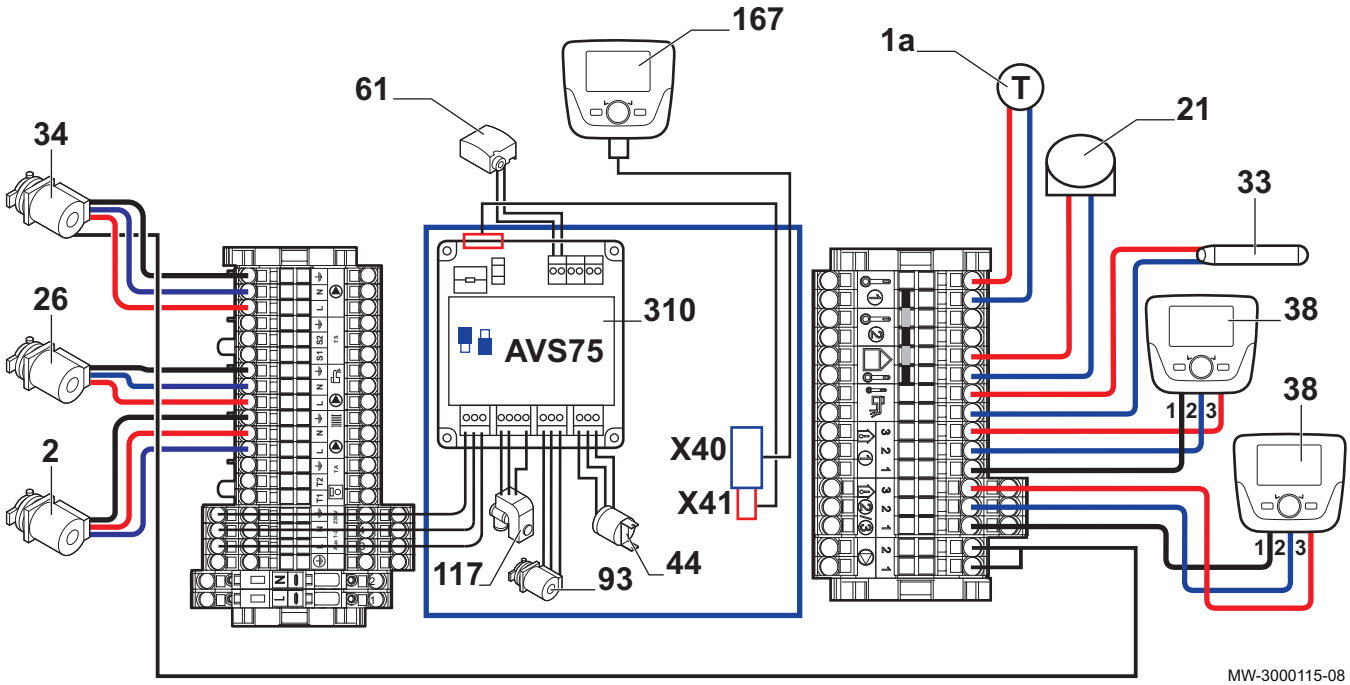
France: (7 bar (0.7 MPa) - with opening on the discharge pipe)

30e Drain valve
31 Independent domestic hot water tank
33 Domestic hot water temperature sensor
34 Modulating boiler pump (primary pump)
35 Low-loss header (optional)
38 Remote control with or without room temperature sensor
44
- France: 65 °C safety thermostat with manual reset for underfloor heating (DTU 65.8, NF P52-303-1)
- Austria: safety device to safeguard against overheating: according to the type of underfloor heating
- Other countries: safety device to safeguard against overheating of the underfloor heating, in accordance with prevailing regulations

61 Mixed circuit flow sensor
64 Direct heating circuit (example: radiators)
65 Heating circuit with mixing valve, may be low temperature heating circuit (underfloor heating or radiators)
93 Heating pump for underfloor heating circuit
117 Three-way mixing valve
119 Boiler return
167 Boiler control panel
300 Heating flow

6.2.2 Electrical connection

Fig.56 Boiler + 1 underfloor heating circuit + 1 direct circuit + 1 domestic hot water tank



1a Heating flow sensor
2 Heating pump direct circuit
21 Outside temperature sensor
26 DHW booster pump
33 Domestic hot water temperature sensor
34 Modulating boiler pump (primary pump)
38 Room temperature sensor
44 65 °C safety thermostat with manual reset for underfloor heating (France: DTU 65.8, NF P52-303-1)
61 Mixed circuit flow temperature sensor
93 Mixed circuit heating pump
117 Three-way mixing valve
167 Boiler control panel
310 AVS75: Option

Important
Relay the pumps if the current exceeds 1 A max. per output.

6.2.3 Configuration

1. Go to the installer parameters.
2. Set/check the following parameters on the boiler:

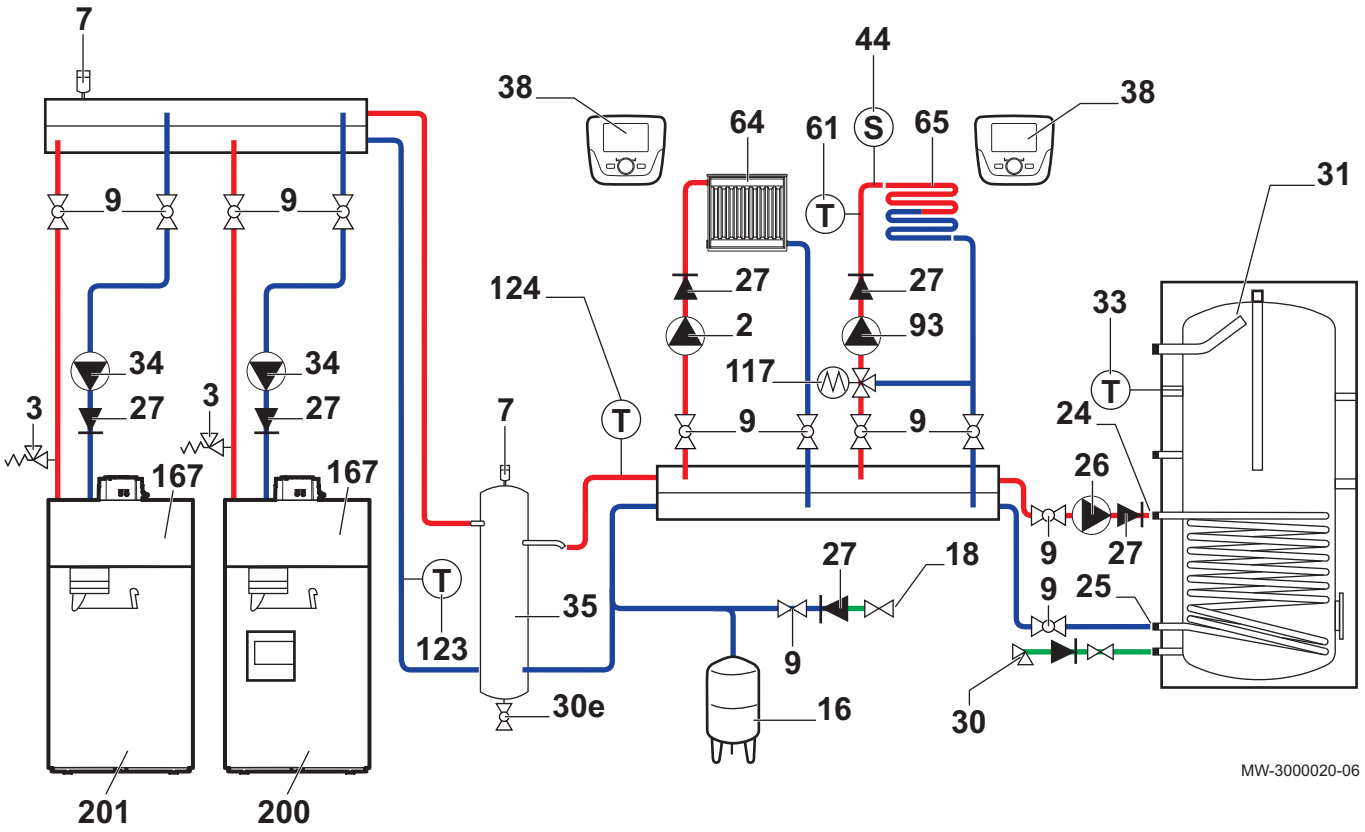
Tab.19 Boiler settings + 1 underfloor heating circuit + 1 direct circuit + 1 domestic hot water tank

Parameter number	Parameter	Adjustment/check required
5710	**Temps / mode CH1**	**On**
5715	**Temps / mode CH2**	**On**
5721	**Temps / mode CH3**	**Off**
5730	**Hot water sensor**	**Hot water sensor B3**
5731	**HW controlling element**	**Charging pump**
5890	**Relay output QX1**	**heating pump CH1 Q2**
5891	**Relay output QX2**	**Boiler pump Q1**
5892	Relay output QX3	**Hot water ctrl elem Q3**
5932	**Sensor input BX3**	**Common flow sensor B10** Low-loss header sensor pocket
6020	**Function extension module 1**	**Temps / mode CH2**
6024	Funct input EX21 module 1	Limit thermostat CH

6.3 Boilers in cascade + one underfloor heating circuit + one direct circuit + one domestic hot water tank

6.3.1 Hydraulic connection

Fig.57 Boilers in cascade + 1 underfloor heating circuit + 1 direct circuit + 1 domestic hot water tank



2 Heating pump direct circuit
3 6 bar (0.6 MPa) safety valve
7 Automatic air vent
9 Isolation valve
16 Closed expansion vessel
18 Heating circuit fill point

(France: with disconnector according to prevailing regulations)

24 Domestic hot water tank exchanger primary inlet
25 Domestic hot water tank exchanger primary outlet
26 DHW booster pump
27 Non-return valve
30 Calibrated and sealed safety unit

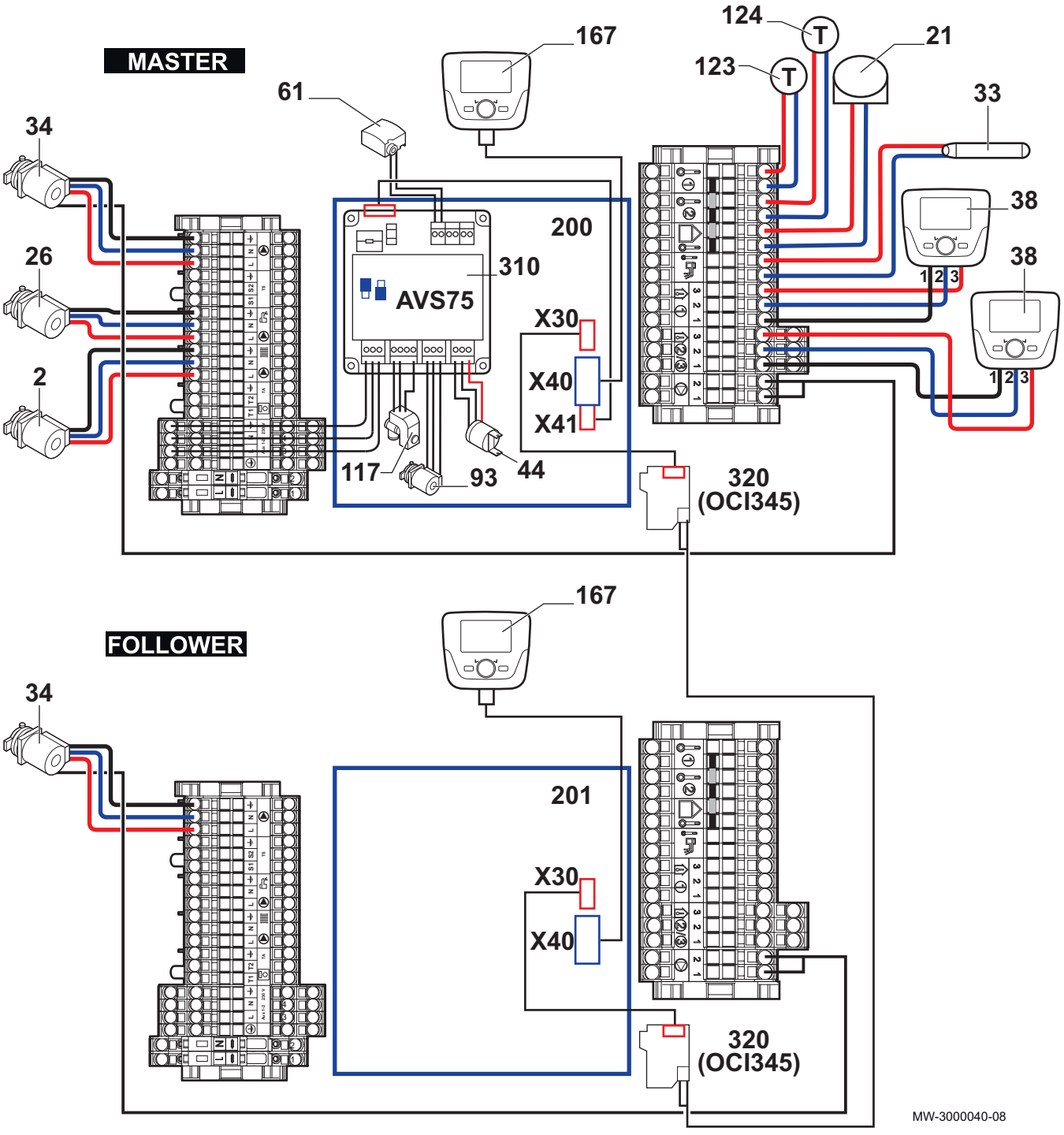
France: (7 bar (0.7 MPa) - with opening on the discharge pipe)

30e Drain valve
31 Independent domestic hot water tank
33 Domestic hot water temperature sensor
34 Modulating boiler pump (primary pump)
35 Low-loss header
38 Remote control with or without room temperature sensor
44 - France: 65 °C safety thermostat with manual reset for underfloor heating (DTU 65.8, NF P52-303-1)
- Austria: safety device to safeguard against overheating: according to the type of underfloor heating
- Other countries: safety device to safeguard against overheating of the underfloor heating, in accordance with prevailing regulations

61 Mixed circuit flow sensor
64 Direct heating circuit (example: radiators)
65 Heating circuit with mixing valve, may be low temperature heating circuit (underfloor heating or radiators)
93 Heating pump for underfloor heating circuit
117 Three-way mixing valve
123 Cascade return sensor
124 Cascade flow sensor
167 Boiler control panel
200 Lead boiler
201 Slave boiler

6.3.2 Electrical connection

Fig.58 Boilers in cascade + 1 underfloor heating circuit + 1 direct circuit + 1 domestic hot water tank



2 Heating pump direct circuit
21 Outside temperature sensor
26 DHW booster pump
33 Domestic hot water temperature sensor
34 Modulating boiler pump (primary pump)
38 Room temperature sensor
44 France: 65 °C safety thermostat with manual reset for underfloor heating (DTU 65.8, NF P52-303-1)

Austria: safety device to safeguard against overheating: according to the type of underfloor heating

Other countries: safety device to safeguard against overheating of the underfloor heating, in accordance with prevailing regulations
61 Mixed circuit flow sensor
93 Mixed circuit heating pump
117 Three-way mixing valve
123 Cascade return sensor
124 Cascade flow sensor
167 Boiler control panel
200 Lead boiler
201 Slave boiler
310 AVS75: option
320 OCI345: communication module for cascade (option)

Important
Relay the pumps if the current exceeds 1 A max. per output.

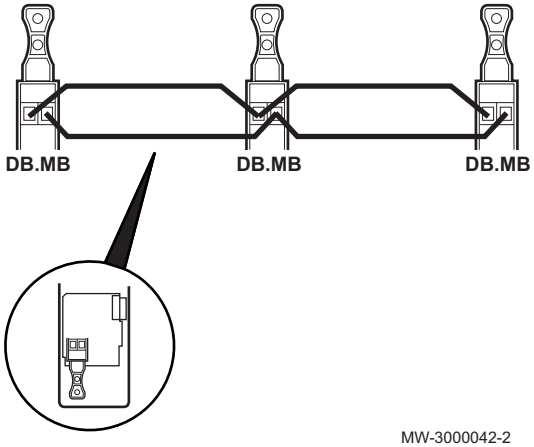
6.3.3 Connecting boilers in cascade with a OCI 345 module

Connect the boilers included in the boiler cascade with OCI 345 modules (electronic devices that handle communication through a BUS link). The OCI 345 modules must be connected to each boiler with three connectors.

Tab.20 Connecting the boiler components in cascade

Component 1	Component 2
OCI 345 module on the boiler	X30 connector on the boiler PCB. (Flat cable supplied with the OCI 345 module)
MB connector of a OCI 345 module	MB connector of a boiler OCI 345 module
DB connector of a OCI 345 module	DB connector of a boiler OCI 345 module

Fig.59 Connecting OCI 345 modules for boilers in cascade



MW-3000042-2

To make the connections between the various MB and DB connectors, use a shielded cable with the following specifications:

Type	Cross section	Maximum length
HAR H05 VV-F	2 x 1.5 mm^2	200 m

6.3.4 Configuration for 1 master boiler and 1 slave boiler

1. Go to the installer parameters on boiler 1 (master boiler).
2. Set the following parameters on boiler 1:

Tab.21 Settings on boiler 1 (master boiler)

Parameter number	Parameter	Adjustment required
5710	**Temps / mode CH1**	**On**
5715	**Temps / mode CH2**	**On**
5721	Temps / mode CH3	**Off**
5730	**Hot water sensor**	**Hot water sensor B3**
5731	Sensor input BX2	Common flow sensor B10
5890	Relay output QX1	heating pump CH1 Q2
5892	Relay output QX3	**Hot water ctrl elem Q3**
5932	**Sensor input BX3**	**Cascade return sensor B70**
6020	**Function extension module 1**	**Temps / mode CH2**
6600	**Device address**	**1**
6640	**Clock mode**	**Master**

3. Go to the installer parameters on boiler 2 (slave boiler).

4. Set the following parameters on boiler 2:

Tab.22 Settings on boiler 2 (slave boiler)

Parameter number	Parameter	Adjustment required
5710	**Temps / mode CH1**	**Off**
6600	**Device address**	**2**
6640	**Clock mode**	**Slave without remote setting**

6.3.5 Configuration for a master boiler and slave boilers

1. Access the installer parameters of the master boiler.
2. Set the following parameters on the master boiler:

Tab.23 Configuration of the master boiler in a cascade

Parameter number	Parameter	Adjustment required	Description
6200	**Save sensors**	**Yes**	Saving any modifications made. The setting will revert automatically to **No** immediately after the adjustment.
6630	**Cascade master**	**Always**	Identification master boiler
6640	**Clock mode**	**Autonomously**	Cascade master boiler clock setting

3. Access the installer parameters for the slave boiler(s):
4. Set the following parameters on the slave boiler(s).

Tab.24 Cascade configuration of the slave boilers

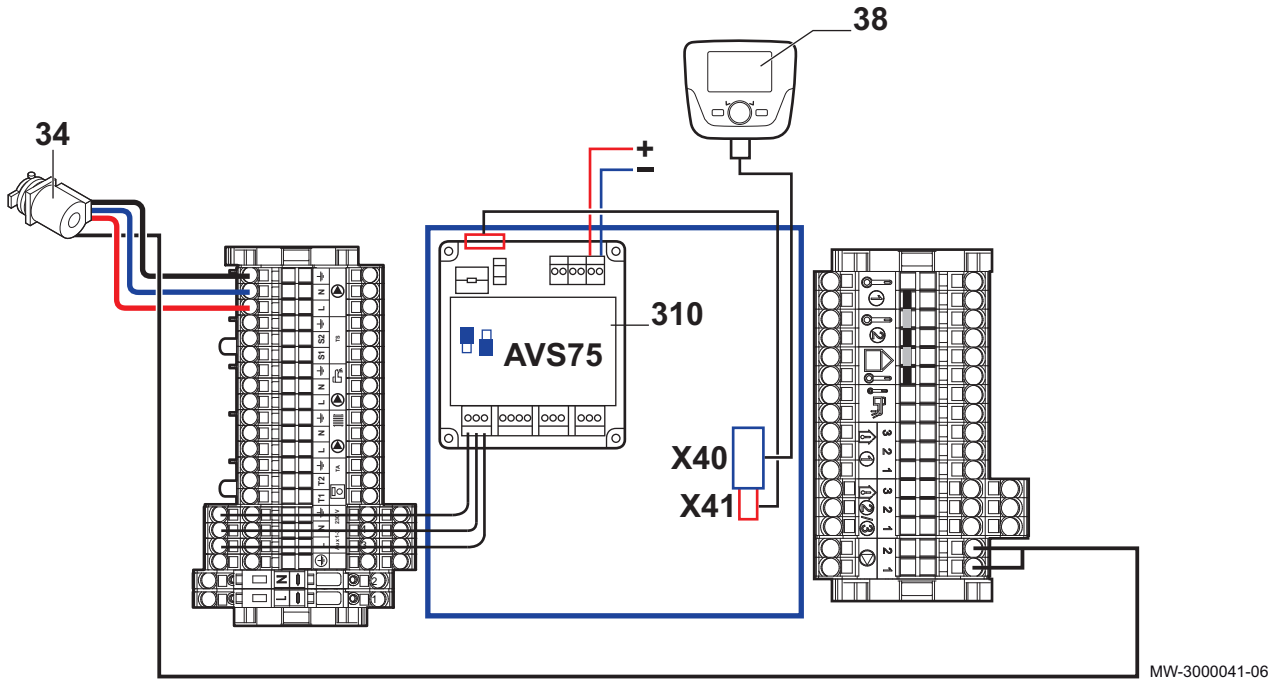
Parameter number	Parameter	Adjustment required	Description
5710	**Temps / mode CH1**	**Off**	
6600	**Device address**	**2...3...4...**	Cascade activation
6640	**Clock mode**	**Slave with remote setting**	Setting the slave boiler clock with a master boiler

Important
- Remember to deactivate Heating circuit 1 so that the thermostatic input on terminal block M1 (1-2) is not taken into account.

6.4 Controlling a boiler in 0-10 V mode

6.4.1 Electrical connection

Fig.60 Boiler in 0–10 V mode



34 Primary pump
38 Remote control with or without room temperature sensor
310 AVS75: Option

Important
Relay the pumps if the current exceeds 1 A max. per output.

6.4.2 Configuring the boiler control in 0–10 V

1. Go to the installer parameters.
2. Set the following parameters on the boiler:

Tab.25 Boiler settings in 0–10 V mode

Parameter number	Parameter	Adjustment required
5710	Temps / mode CH1	Off
6020	Function extension module 1	Multifunctional
6046	Function input H2 module 1	Consumer request VK1 10V
6049	Voltage value 1 H2 module 1	0(1)
6050	Funct value 1 H2 module 1	0(1)
6051	Voltage value 2 H2 module 1	10(1)
6052	Funct value 2 H2 module 1	800 (1)(2)

(1) Default setting
(2) This parameter setting is an example. The value 800 means that, at 10 V, the set point will be 80°C.

Important
For further information, see the following sections in the installation and service manual for the IX boiler:

- Modifying the installer parameters
- List of installer parameters

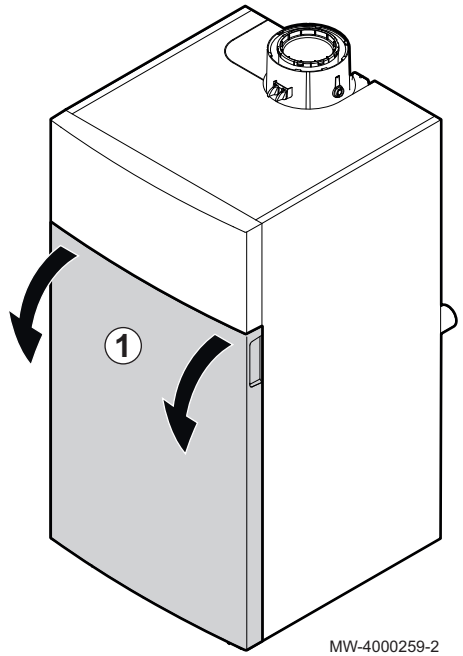
7 Installation

7.1 General

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

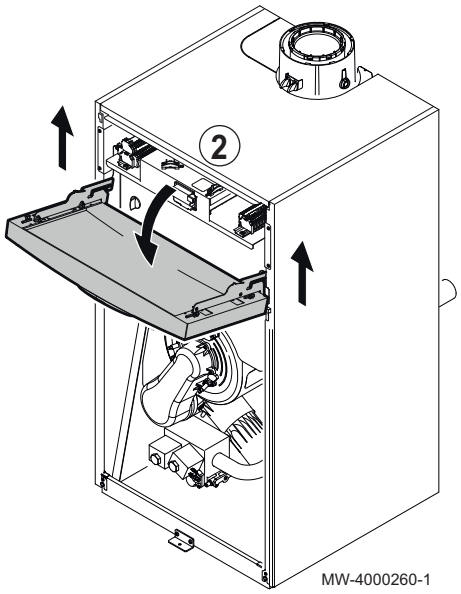
7.2 Accessing the internal boiler components

Fig.61



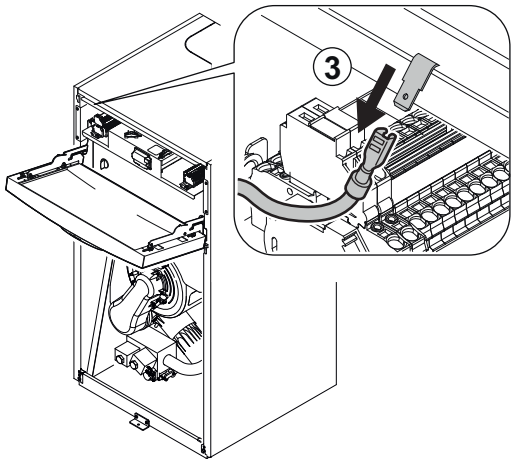
1. Remove the front panel by pulling firmly on the notches provided.

Fig.62



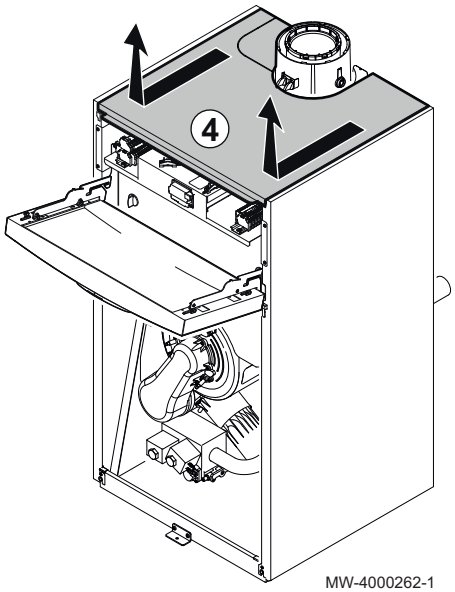
2. Lift and tilt the panel holding the control panel

Fig.63



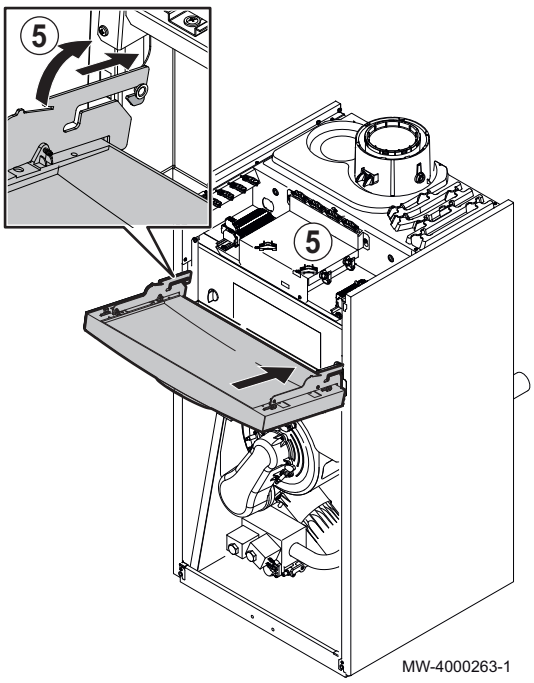
3. Disconnect the earth wire.

Fig.64



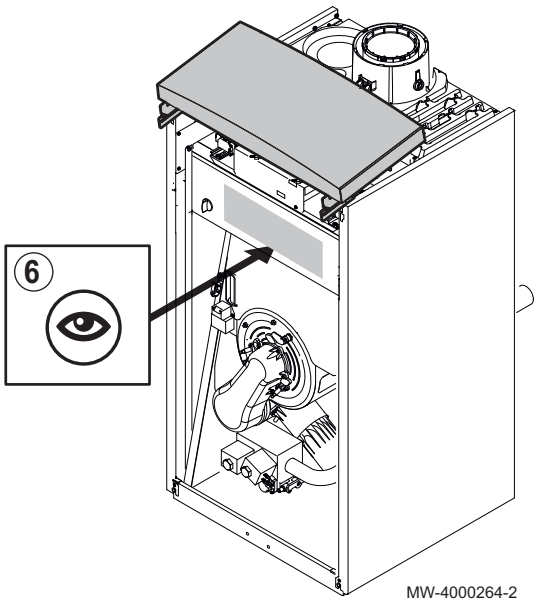
4. Pull and lift the top panel.

Fig.65



5. Unhook the panel holding the control panel then place it on the boiler.

Fig.66



6. **For IX 245–130 and IX 245–150** only: remove the detachable panel if necessary.

See
The disassembly instructions can be found on the detachable panel.

7.3 Hydraulic connections

7.3.1 Connecting the heating circuit

Respect the installations shown in the hydraulic diagrams.

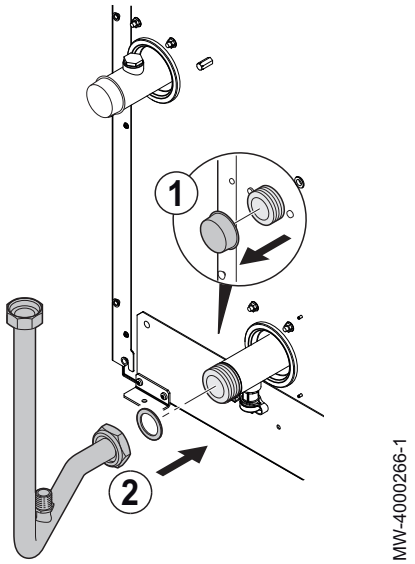
Caution
- The heating pipe must be mounted in accordance with the provisions applicable.
- If installing stop valves, position the fill/drain valve and the expansion vessel between the stop valves and the boiler.
- Always install a safety valve calibrated to 6 bar on the heating circuit. The safety valve can be connected to a venting pot. The safety valve must not be used to drain the heating circuit.

See
- In the case of an assembly with a low-loss header, use the assembly instructions for the low-loss header.
- If using a cascade kit, use the assembly instructions for the cascade kit.
- If using an exchanger kit, use the assembly instructions for the plate heat exchanger kit.

Important
The pipes are not provided.

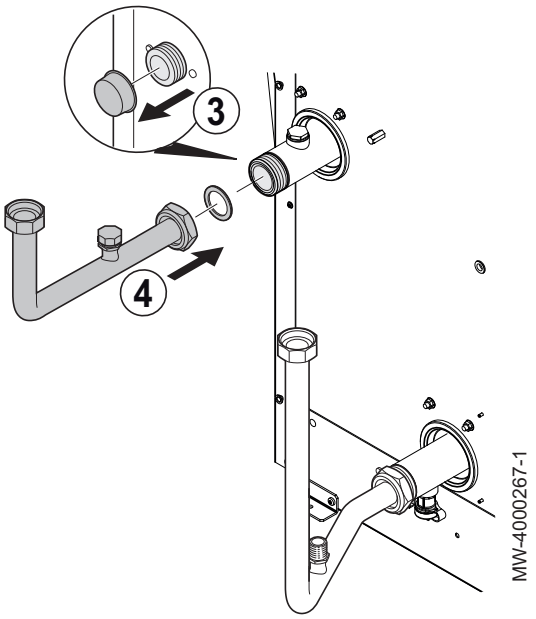
IX 245–130 and IX 245–150

Fig.67



1. Remove the anti-dust plug located on heating return.
2. Connect the pipe to the heating return.

Fig.68

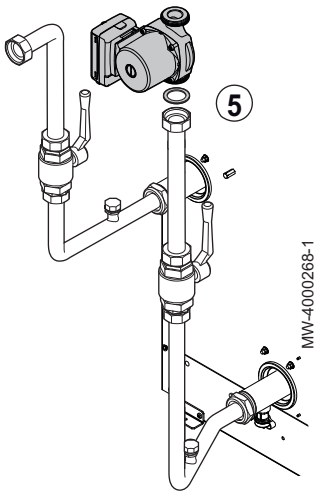


3. Remove the anti-dust plug on the heating flow.
4. Mount the filling and drain valves to the boiler's inlet and outlet (valves not provided).

Important
To facilitate maintenance work, we recommend mounting a stop valve on the heating flow and return pipes.

Caution
Position the safety valve between the boiler and the stop valve.

Fig.69

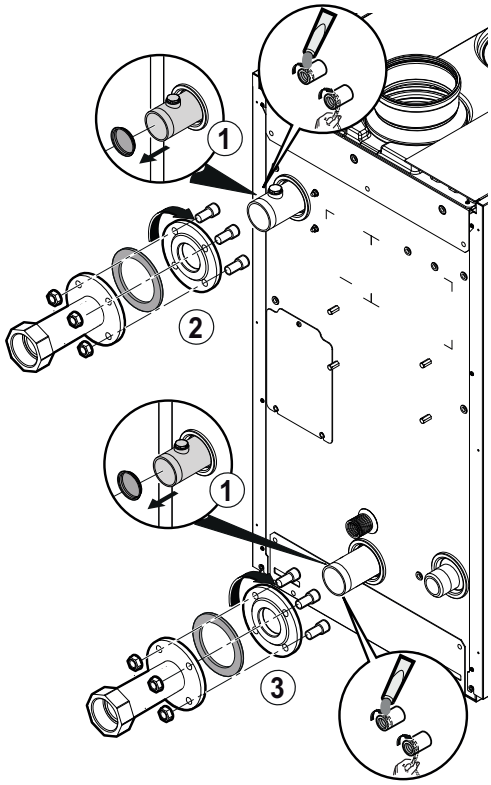


5. Fit the circulating pump on the heating return pipe (circulating pump not provided).

IX 245–200 and IX 245–250

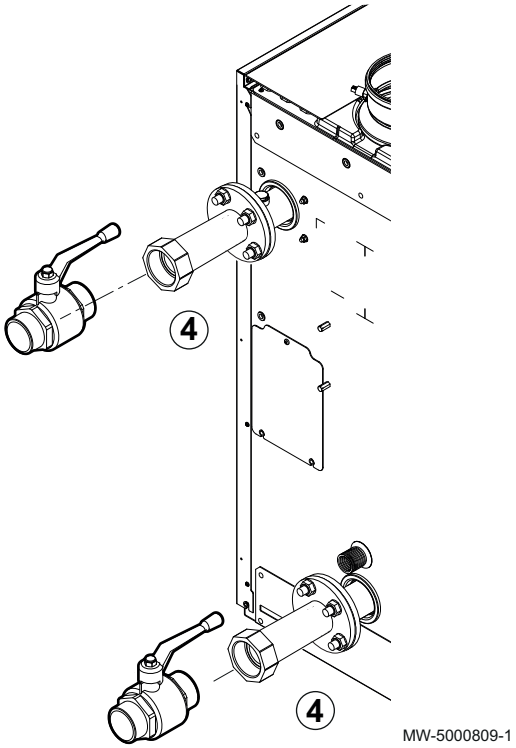
Important
The brackets are supplied with the boiler.

Fig.70



1. Remove the dust cap located on the boiler's heating inlet and outlet.
2. Apply a sealing product (paste, oakum or Teflon) to the thread then screw the heating circuit flow bracket onto the boiler's heating flow output.
3. Screw the heating circuit return bracket onto the boiler's heating return output.

Fig.71

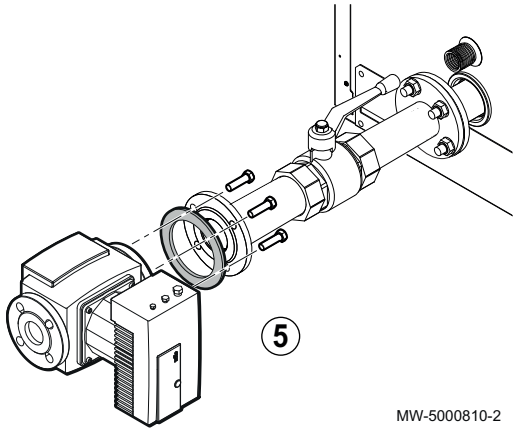


4. Mount the filling and drain valves to the boiler's inlet and outlet (valves not provided).

Important
To facilitate maintenance work, we recommend mounting a stop valve on the heating flow and return pipes.

Caution
Position the safety valve between the boiler and the stop valve.

Fig.72



5. Fit the circulating pump on the heating return pipe (circulating pump not provided).

7.3.2 Connecting the expansion vessel

1. Determine the volume of the expansion vessel depending on the volume of the installation.
2. Connect the expansion vessel to the heating circuit return pipe.

■ **Volume of the expansion vessel for the installation**

Tab.26 Volume of the expansion vessel depending on the volume of the installation

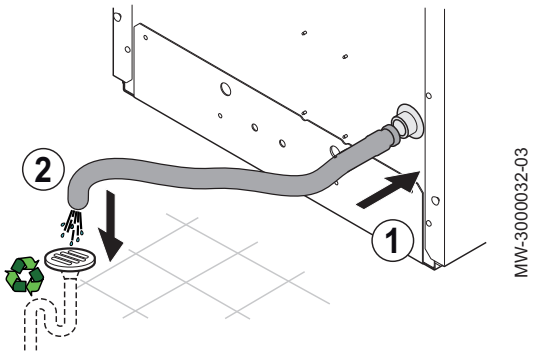
Initial pressure of the expansion vessel	Volume of the installation (in litres)							
	100	125	150	175	200	250	300	> 300
50 kPa (0.5 bar)	4.8	6.0	7.2	8.4	9.6	12.0	14.4	Volume of the installation x 0.048
100 kPa (1 bar)	8.0	10.0	12.0	14.0	16.0	20.0	24.0	Volume of the installation x 0.080
150 kPa (1.5 bar)	13.3	16.6	20.0	23.3	26.6	33.3	39.9	Volume of the installation x 0.133

Terms and conditions of validity:

- Safety valve calibrated to 0.6 MPa (6 bar).
- Average water temperature: 70°C.
- Heating circuit flow temperature: 80°C.
- Heating circuit return temperature: 60°C.
- Filling pressure in the system lower than or equal to the initial pressure in the expansion vessel.

7.3.3 Connecting the condensate discharge pipe

Fig.73



The condensate discharge pipe is located inside the boiler.

- Do not block 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.
- Connect the condensate discharge pipe in accordance with prevailing standards.
- It is preferable to use the condensate neutralisers recommended by the manufacturer of the boiler.

1. Connect a plastic hose to the condensate discharge outlet (DN18) or a rigid pipe (DN32).
2. Insert the other end of the hose into a waste water discharge outlet.

Important
Treat the condensate in accordance with prevailing local regulations.

7.4 Gas connection

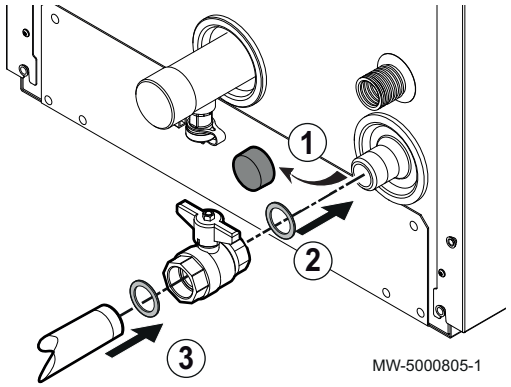
7.4.1 IX 245–130 and IX 245–150

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

The gas pipes are not provided.

Danger
The diameters of the pipes must be defined in accordance with the standards in force in your country.

Fig.74



1. Remove the anti-dust plug located on the boiler's gas inlet.
2. Fit a gas stop valve (not provided) on the boiler's gas inlet (G1”).
3. Connect the gas inlet pipe to the gas stop valve.

Caution
- Ensure that there is no dust in the gas pipe.
- Connect the gas pipe in accordance with prevailing standards and regulations.
- Check the leak-tightness using a leak detector spray.

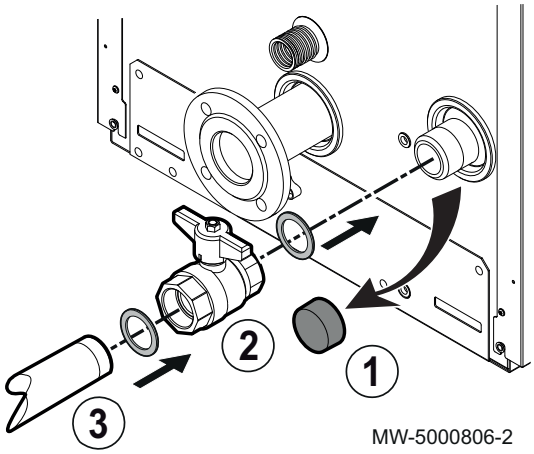
7.4.2 IX 245–200 and IX 245–250

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

The gas pipes are not provided.

Danger
The diameters of the pipes must be defined in accordance with the standards in force in your country.

Fig.75



1. Remove the anti-dust plug located on the boiler's gas inlet.
2. Fit a gas stop valve (not provided) on the boiler's gas inlet (G1”1/2).
3. Connect the gas inlet pipe to the gas stop valve:

Caution
- Ensure that there is no dust in the gas pipe.
- Connect the gas pipe in accordance with prevailing standards and regulations.
- Check the leak-tightness using a leak detector spray.

7.5 Air supply/flue gas outlet connections

7.5.1 Classification

The discharge and intake pipes must be certified for the appropriate configuration and must meet the requirements of the prevailing installation standards in the country.

The pipes must deliver a maximum pressure drop in compliance with the values given in the table below.

Tab.27 Configurations and recommendations for the flue system

<table>
<tr><th>Configuration</th><th>Description</th></tr>
<tr><td>B_{23} – B_{23P}</td><td>• Connection to a chimney using a connection kit (single pipe in a flue, combustion air taken from the boiler room).
• The maximum pressure drop in the pipes ΔP must not exceed the values given in the table below. The pipes must be certified for this type of use and for a temperature in excess of 100°C.

Tab.28
<table><tr><th>Model</th><th>Maximum pressure drop ΔP (Pa)</th></tr><tr><td>IX 245–130</td><td>200</td></tr><tr><td>IX 245–150</td><td>200</td></tr><tr><td>IX 245–200</td><td>200</td></tr><tr><td>IX 245–250</td><td>200</td></tr></table></td></tr>
<tr><td>C_{13}</td><td>• Air/flue gas connection using concentric pipes to a horizontal terminal (so-called forced flue).
• The terminal parts of the singled-up discharge pipe must be scheduled inside a 50 cm square.</td></tr>
<tr><td>C_{33}</td><td>• Air/flue gas connection using concentric pipes to a vertical terminal (roof outlet).
• The terminal parts of the singled-up discharge pipe must be scheduled inside a 50 cm square.</td></tr>
<tr><td>C_{43}</td><td>• Air/flue gas connection to a collective flue for sealed boilers.
• The chimney or flue gas pipe must be suitable for such use.</td></tr>
<tr><td>C_{53}</td><td>• Separate air/flue gas connection using a bi-flow adapter.
• The terminal parts of combustion air intake and combustion product discharge pipes must not be planned on opposite walls of the building.</td></tr>
<tr><td>C_{63}</td><td>• The maximum pressure drop in the pipes ΔP must not exceed the values given in the table below. The pipes must be certified for this type of use and for a temperature of more than 100 °C. The terminal part of the flue gas pipe must be certified as complying with the EN 1856-1 Standard.
• If installing discharge and intake pipes not supplied by De Dietrich, these must be certified for the type of use scheduled and present a maximum pressure drop in line with the values given in the table below.

Tab.29
<table><tr><th>Model</th><th>Maximum pressure drop ΔP (Pa)</th></tr><tr><td>IX 245–130</td><td>170</td></tr><tr><td>IX 245–150</td><td>280</td></tr><tr><td>IX 245–200</td><td>230</td></tr><tr><td>IX 245–250</td><td>230</td></tr></table></td></tr>
<tr><td>C_{83}</td><td>• Flue gas connection to a collective flue for sealed boilers. The air supply is individual via a terminal coming from outside the building.
• The chimney or flue gas pipe must be suitable for such use.</td></tr>
</table>

Important

- Only original components are authorised for connection to the boiler and for the terminal.
- The clear section must comply with the standard.
- The chimney must be swept before installing the discharge flue.

Caution
Ensure that the flue gas discharge pipes are securely attached to the wall with suitable retaining flanges to prevent any damage and guarantee the tightness of every gasket in the circuit.

Caution
The minimum gradient of the condensates discharge pipe from the boiler to the waste water discharge must be 1 cm per linear metre.

7.5.2 Coaxial pipes

Fig.76 IX 245–130 and IX 245–150

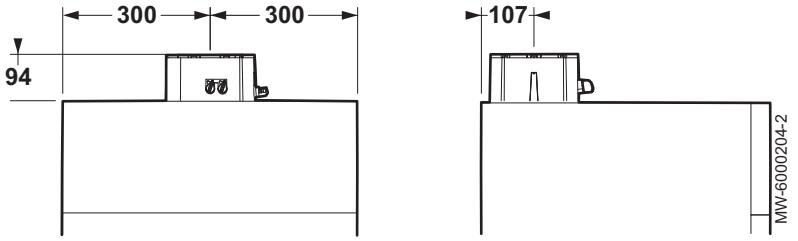
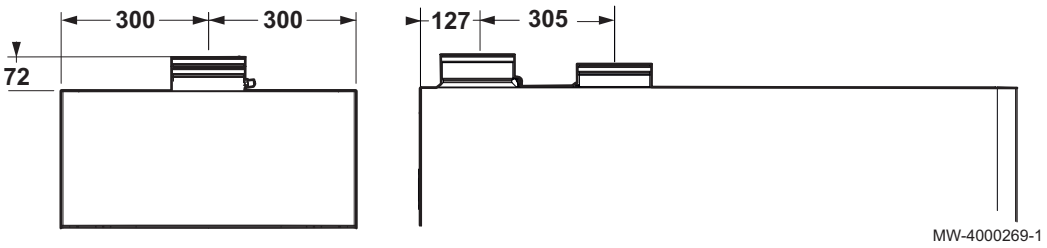


Fig.77 IX 245–200 and IX 245–250



This type of pipe is used to discharge exhaust gases and draw in combustion air, whether outside the building or in the flue gas pipes. The 90° coaxial elbow is used to connect the boiler to the discharge/intake pipes in every direction due to the 360° rotation option. It can also be used as an extra elbow in combination with the coaxial pipe or the 45° elbow.

If discharging to the outside, the discharge/intake pipe must stick out of the wall by at least 18 mm to allow fitting of the aluminium rosette and its sealing unit and thus prevent any infiltration of water.

- Insertion of a 90° elbow reduces the total length of the pipe by 1 metres.
- Insertion of a 45° elbow reduces the total length of the pipe by 0.5 metres.
- The first 90° elbow is not taken into account in calculating the maximum length available.

7.5.3 Flue gas system accessories

A detailed list of flue system accessories can be found in the appendix.

7.5.4 Pipes in cascade (not provided)

These types of pipes are used to discharge the combustion products from several boilers interlinked in cascade via a shared flue gas collector. The collector must be used solely to connect the boilers to the flue gas pipe. .

Caution
The calculation of the length of the flue gas pipe must be made by a qualified technician during the installation design phase, in accordance with the requirements of the prevailing standards.

7.5.5 Lengths of the air/flue gas pipes

Warning
The discharge and intake pipes must be certified for the adapted configuration and their pressure drops must comply with the values given in the following corresponding table(s).

Caution
Be careful that the discharge pipe outlet for combustible products is not directed towards a habitation zone.

- **B23p configuration**

All countries except Italy	Ventilation of the premises: in accordance with the NFP 45 – 204 or DTU 61.1 standard.
Italy	Ventilation of the premises: in accordance with the UNI CIG 7129-2001 standard.
All countries	Lengths L1, L2 and L3 are obtained with Centrotec pipes covered by CE marking and the TAD Technical Application Directive.

Fig.78 Flexible flue system B_{23p}

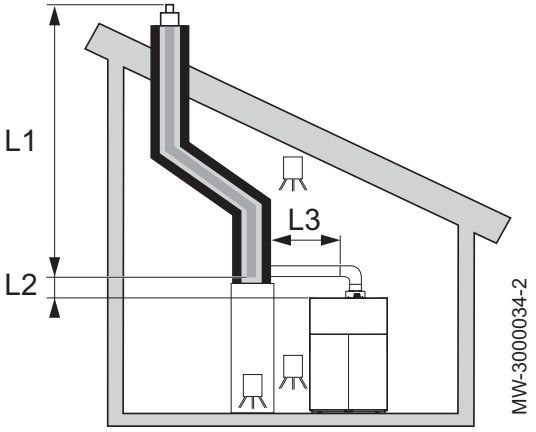


Fig.79 Rigid flue system B_{23p}

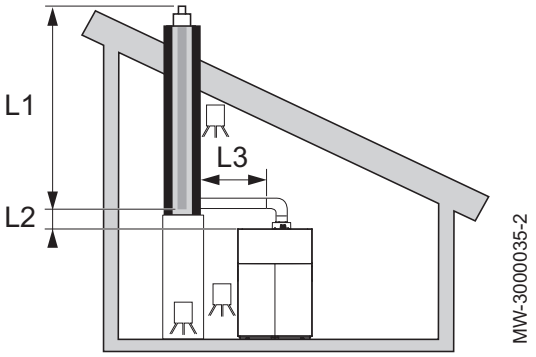
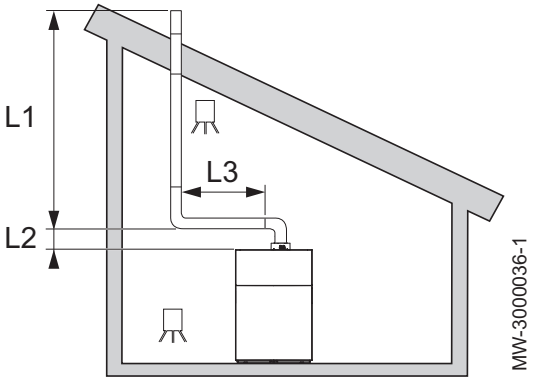


Fig.80 Through-roof flue system B_{23p}



Important
For B_{23p} configurations, the lengths given in the tables are valid for horizontal pipes with a maximum length of 1 metre. For each additional metre of horizontal pipe, subtract 1.2 m from the vertical length L_{max}.

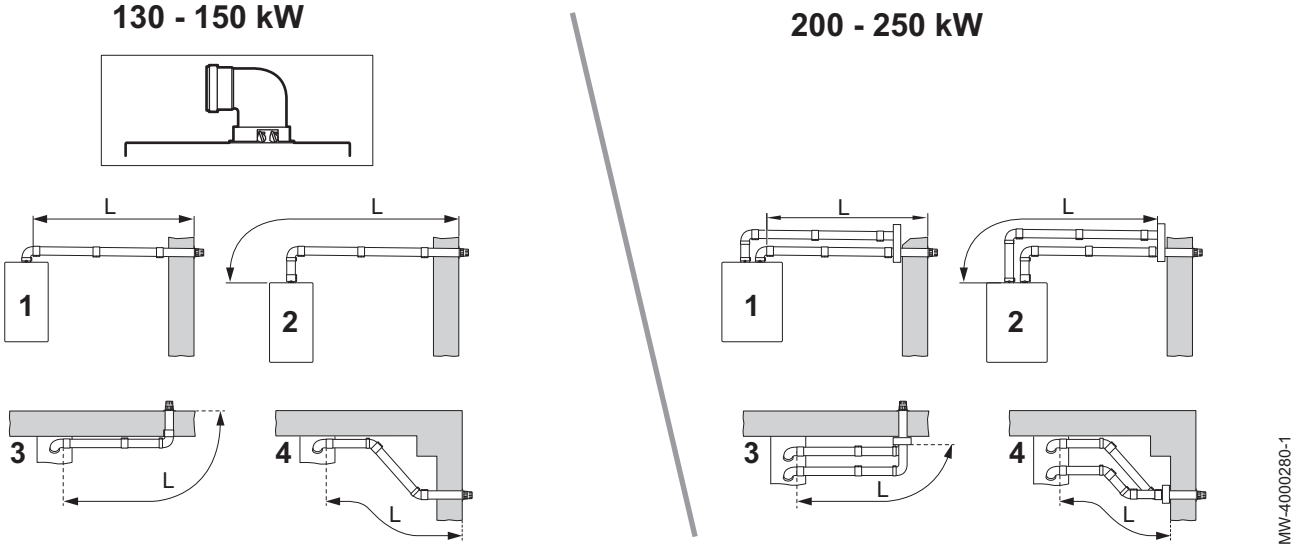
Tab.30 Flue gas system connection type B_{23p}

Arrangement	Configuration	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
		mm	Ø 110	Ø 110	Ø 160	Ø 160
L3<2m + 2 elbows	(L1 + L2) rigid	m	20	27	39	23
L3<2m + 2 elbows	(L1 + L2) flexible	m	7	9	19	13
L3<5m + 2 elbows	(L1 + L2) rigid	m	17	23	36	19
L3<5m + 2 elbows	(L1 + L2) flexible	m	-	6	15	10

■ Configuration C_{13}

Important
Pipes subject to technical evaluation 14 08–1289.

Fig.81



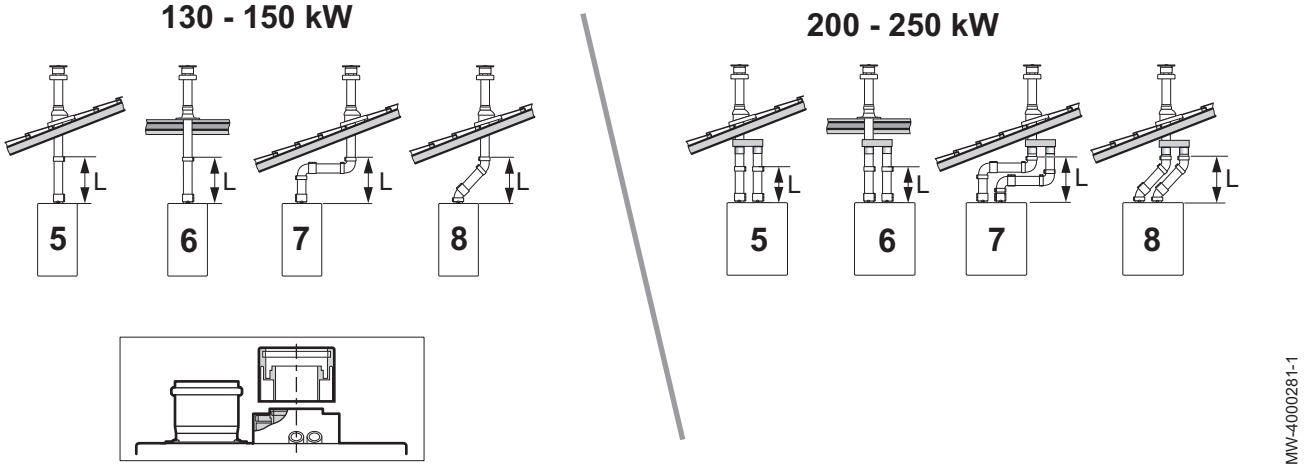
Tab.31 Maximum length for configuration C_{13}

Configuration	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
	mm	Ø 110	Ø 110	Ø 160	Ø 160
1	m	L < 8	L < 8	L < 45	L < 22
2	m	L < 8	L < 8	L < 45	L < 22
3	m	L < 7	L < 7	L < 42	L < 19
4	m	L < 7	L < 7	L < 41	L < 18

■ Configuration C_{33}

Important
Pipes subject to technical evaluation 14 08–1289.

Fig.82 Maximum length of the connections



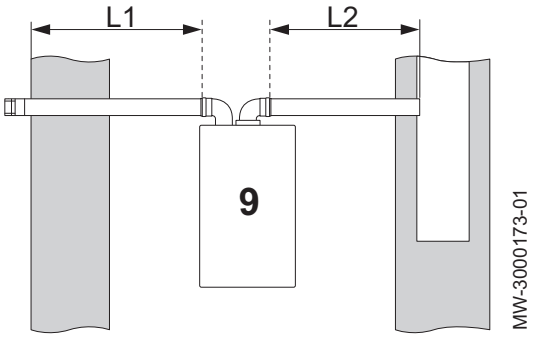
Tab.32 Maximum length for configuration C_{33}

Configuration	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
	mm	Ø 110	Ø 110	Ø 160	Ø 160
5	m	L < 8	L < 8	L < 20	L < 11
6	m	L < 8	L < 8	L < 22	L < 12
7	m	L < 6	L < 6	L < 16	L < 6
8	m	L < 7	L < 7	L < 20	L < 9

■ Configuration C_{53}

Important
Pipes subject to technical evaluation **14 08–1289**.

Fig.83 Maximum length of the connections



Tab.33 Maximum length for configuration C_{53}

Configuration	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
	mm	Ø 110	Ø 110	Ø 160	Ø 160
9	m	(L1 + L2) max = 20 (L1 max) = 10	(L1 + L2) max = 20 (L1 max) = 10	(L1 + L2) max = 42	(L1 + L2) max = 21

7.6 Electrical connections

7.6.1 Recommendations

- Only qualified professionals may carry out electrical connections, always with the power off.
- Earth the appliance before making any electrical connections.
- France: Earthing must comply with the NFC 15-100 standard.
- Power the appliance via a circuit that includes an omni-polar switch with contact opening distance of 3 mm or more.
- When making electrical connections to the mains, respect the polarities.

Danger
Position the various electrical cables in such a way that they never touch the heating pipes.
Keep the various electrical cables far enough from the heating pipes so that they cannot be damaged by the effect of the heat.

7.6.2 Recommended cable cross section

Decide on the cable according to the following information:

- Distance of the appliance from the power source.
- Upstream protection.
- Neutral operating conditions.

Tab.34 Specifications of the power cable and the power source

Cable cross section	3 x 1.5 mm²
Curve C (circuit breaker)	10 A
Differential	30 mA

Caution
Provide a separate power supply for the pump and a power switch, if necessary.
The output available per outlet is 450 W (2 A, with cos ϕ = 0.7) and the inrush current must be less that 16 A. If the load exceeds either of these values, the control must be relayed using a contactor that must in no circumstances be installed in the control panel. The sum of the currents from all outlets must not exceed 5 A.

7.6.3 Wiring the terminal blocks

Use a flat-bladed screwdriver less than 3.5 mm in width.

1. Press down the spring on the terminal block with a suitable screwdriver.

Fig.84

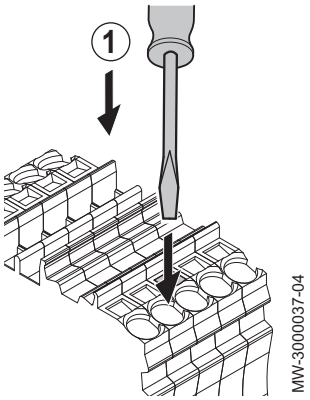
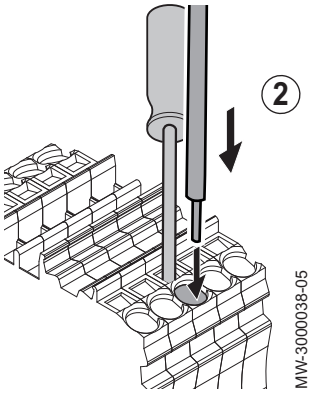


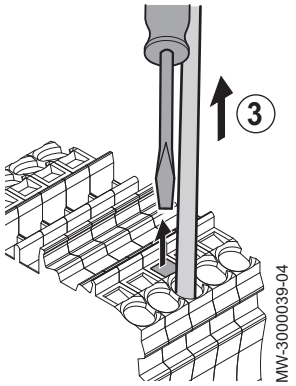
Fig.85



2. Insert the stripped part of the wire into the corresponding connector.

Caution
The length to be stripped must be between 10 and 12 mm.

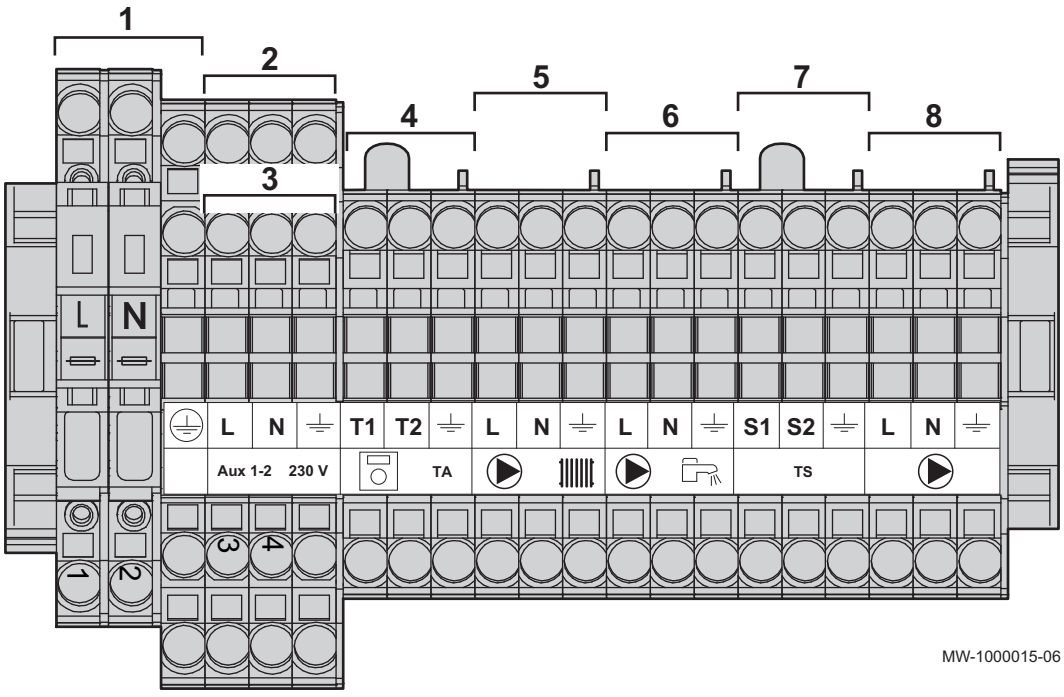
Fig.86



3. Release the pressure on the spring.
   ⇨ The wire is attached.
4. Check that the wire is attached by pulling it gently upwards. If it comes out of the housing, repeat step 3.

7.6.4 Description of the power supply terminal block

Fig.87



1 Power supply 230 V 50 Hz

2 Power supply auxiliary circuit 1

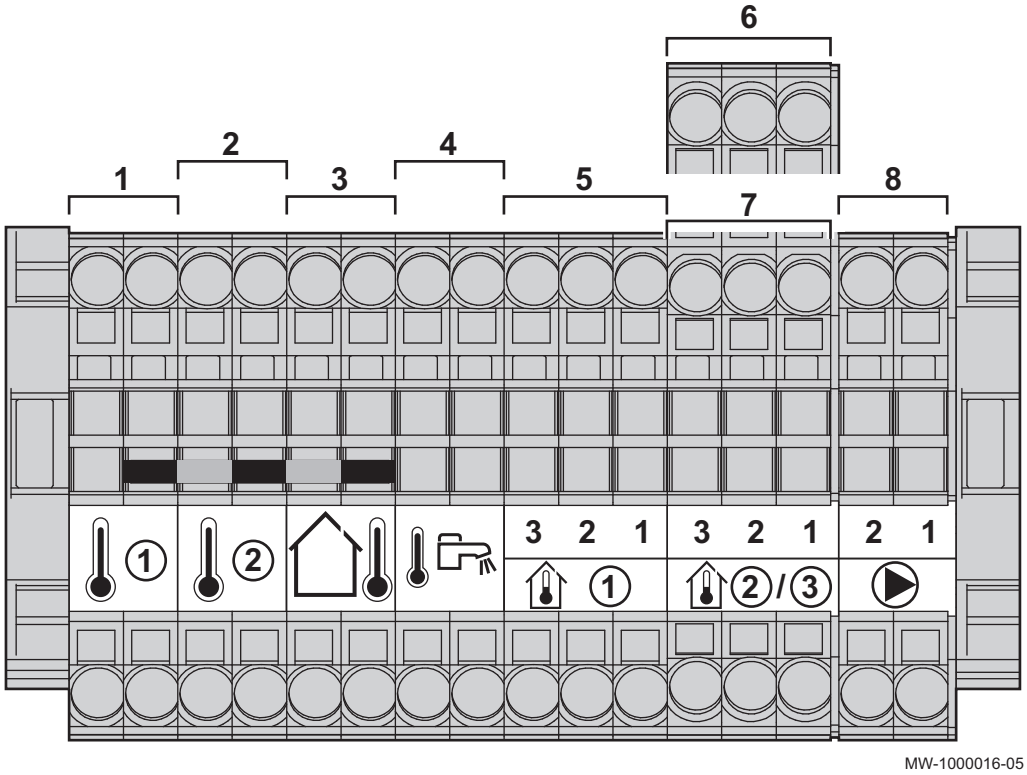
3 Power supply auxiliary circuit 2
4 Room thermostat H5 (230 V)
5 Heating circuit pump – QX1
6 Domestic hot water pump – QX3
7 Safety contact
8 Boiler pump – QX2

Important
Terminals 5, 6 and 8 are associated with the QX1, QX3 and QX2 parameters of the **Configuration** menu

Caution
All connections are made to the terminal blocks provided for that purpose in the boiler connection box. The output available per outlet is 180 W (1 A, with cos ϕ = 0.8) and the inrush current must be less that 5 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.
The sum of the currents from all outlets must not exceed 6.3 A.

7.6.5 Description of the sensor terminal block

Fig.88



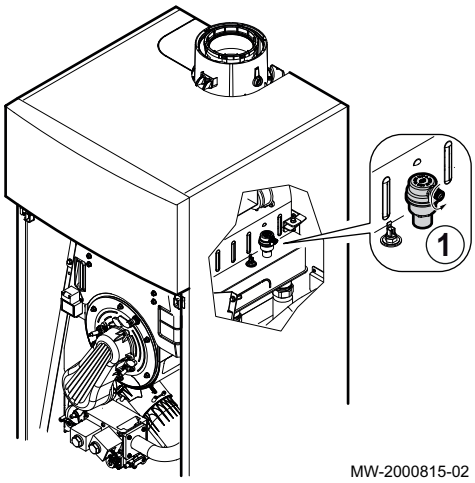
1 Auxiliary sensor 1 - BX3: flow sensor + cascade return connection
2 Auxiliary sensor 2 - BX2: heating circuits collector flow sensor connection
3 Outside sensor
4 Domestic hot water sensor
5 Room temperature sensor 1
6 Room temperature sensor 2
7 Room temperature sensor 3
8 Boiler pump modulation (PWM)

7.7 Filling the installation

7.7.1 IX 245–130 and IX 245–150

Before filling the heating installation, rinse it thoroughly.

Fig.89



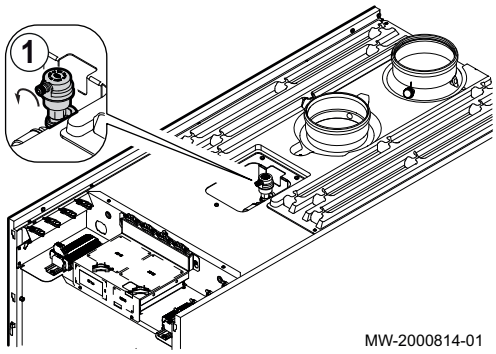
1. Open the plug on the automatic air vent.
2. Fill the heating system until you reach a pressure of between 0.15 and 0.2 MPa (1.5 and 2 bar).
3. Check the tightness of the hydraulic connections.
4. Completely vent the heating circuit for optimum running.

For more information, see
Flushing new installations and installations less than 6 months old, page 70
Flushing an existing installation, page 70

7.7.2 IX 245–200 and IX 245–250

Before filling the heating installation, rinse it thoroughly.

Fig.90



1. Open the plug on the automatic air vent.
2. Fill the heating system until you reach a pressure of between 0.15 and 0.2 MPa (1.5 and 2 bar).
3. Check the tightness of the hydraulic connections.
4. Completely vent the heating circuit for optimum running.

For more information, see
Flushing new installations and installations less than 6 months old, page 70
Flushing an existing installation, page 70

7.7.3 Flushing new installations and installations less than 6 months old

Before filling the heating installation, it is essential to remove any debris (copper, caulking, soldering flux) from the installation.

1. Clean the installation with a powerful universal cleaner.
2. Flush the installation with at least 3 times the volume of water contained in the central heating system (until the water runs clear and shows no impurities).

7.7.4 Flushing an existing installation

Before filling the heating installation, it is essential to remove any sludge deposits which have accumulated in the heating circuit over the years.

1. Remove any sludge from the installation.
2. Flush the installation with at least 3 times the volume of water contained in the central heating system (until the water runs clear and shows no impurities).

7.7.5 Filling the siphon

1. Completely fill the siphon until it overflows.

Danger
Fill the siphon to the top. If the siphon is empty, there is a danger of poisoning by combustion products.

7.8 Completing installation

1. Reconnect the earth wire and put the front panel back in place.
2. Discard the various packaging items.

8 Commissioning

8.1 General

Commissioning the boiler is done for first time use, after a prolonged shut-down (more than 28 days) or after any event that would require complete re-installation of the boiler. Commissioning of the boiler allows the user to review the various settings and checks to be made to start up the boiler in complete safety.

8.2 Check-list before commissioning

1. Check that the gas type supplied matches the data shown on the boiler's data plate.

Warning
Do not commission the boiler if the gas supplied does not match the gas types approved for the boiler.

2. Check connection of the earth wires.
3. Check the tightness of the gas circuit from the non-return valve to the burner.
4. Check the hydraulic circuit from the boiler's isolation valves to the connection to the heating body.
5. Check the hydraulic pressure in the heating system.
6. Check the electricity supply connections to the various boiler components.
7. Check the electrical connections on the thermostat and the other external components.
8. Check the ventilation in the room in which the system is installed.
9. Check the flue gas connections.
10. Test the boiler at full load.
11. Test the boiler at part load.

8.3 Commissioning procedure

8.3.1 Checking the gas inlet

Danger
Ensure that the boiler is switched off.

1. Open the main gas valve.
2. Open the gas valve on the boiler.
3. Open the front panel.
4. Check the gas supply pressure at the pressure outlet on the gas valve unit.
5. Check the tightness of the gas connections made after the gas valve unit in the boiler.
6. Check the tightness of the gas pipe, including any valves, from the non-return valve to the burner. The test pressure must not exceed 0.06 bar (0.006 MPa).
7. Vent the gas supply pipe by unscrewing the pressure outlet on the gas valve unit. Close the outlet again when the pipe has been sufficiently vented.
8. Check the tightness of the gas connections in the boiler.

8.3.2 Checking the electrical connections

1. Check for the presence of the recommended circuit breaker.
2. Check the electrical connection to the mains.
3. Check the connection of the sensors.
4. Check the position of the sensors. Respect the distance of the sensors according to the power.
5. Check the connection of the circulating pump(s).

6. Check the connection of the optional equipment.
7. Check the length of the cables and that they are firmly secured in the cable clamps.

8.3.3 Checking the hydraulic circuit

1. Check the siphon, which must be completely filled with water.
2. Check that there are no leaks on the boiler's hydraulic connections.
3. Check the pressure in the expansion vessel before filling the system.

8.3.4 Initial commissioning

During initial commissioning of the boiler:

- the **311:Commissioning function** function starts up automatically: see 312:Deaeration apprx 10min function below,
- the control panel needs to be synchronised with the boiler: the default language for the control panel is English.

1. Wait for the end of the **311:Commissioning function** function.
2. Press the ◎ button for 5 seconds.
   ⇨ Synchronisation between the boiler and the control panel is running and shows its progress from 1% to 100%. Synchronisation may take several minutes.
3. Select the language.
4. Set the date and time.
5. Configure the parameters for the installation.

■ 312:Deaeration apprx 10min function

This function enables the air inside the heating circuit to be removed once installation is complete, after maintenance operations, or after the primary circuit has been drained of water.

The error message: **311:Commissioning function** is displayed during initial commissioning of the boiler.

To clear the error message: **311:Commissioning function**, proceed as follows:

1. From the main menu, simultaneously press the keys for approximately 6 seconds.
   ⇨ The name of the functions 301–303–304–312 flashes.
2. Turn the ◎ button to select the required function.

Fig.91

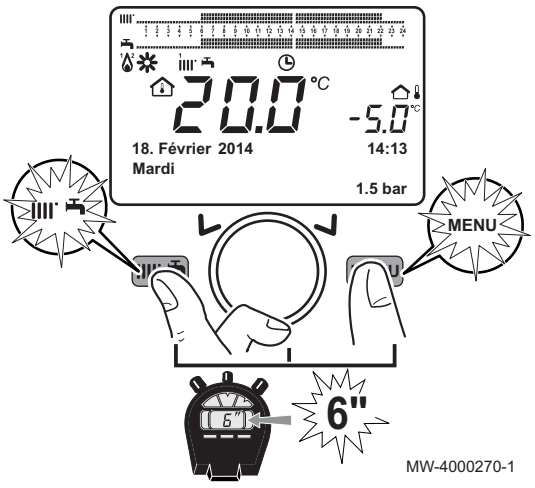
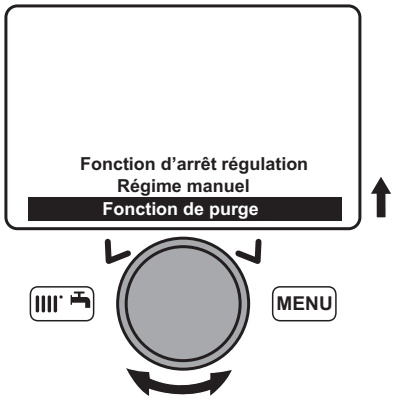


Fig.92



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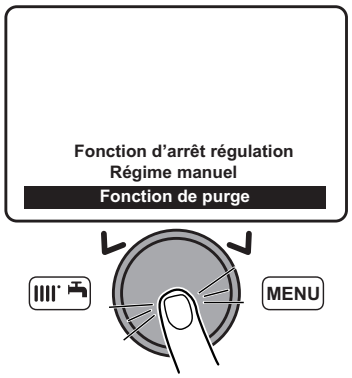
3. Access the **312:Deaeration apprx 10min** function.
   ⇨ The **312:Deaeration apprx 10min** parameter appears.
4. Turn the ◎ button to select **312:Deaeration apprx 10min**.

Fig.93



MW-5000818-1

5. Confirm the selection by pressing the ◎ button.
   ⇨ The function 312 appears.
6. Wait for the end of the venting cycle.
   The PCB will activate an on/off cycle of the pump which will last 10 minutes.
   The function will stop automatically at the end of the cycle.

Important
Do not interrupt this venting function.

8.4 Gas settings

8.4.1 Configuring the fan speed

The boiler's fan speed has to be configured according to gas type before the gas valve is set.

1. Go to the installer parameters.
2. Select the **Boiler Settings** menu by turning the ◎ button.
3. Confirm the menu selection by pressing the ◎ button.
4. Modify parameter 2441 **Fan speed heating max** according to the gas type. Use the ◎ button to select and modify the parameter.
5. Confirm the setting by pressing the ◎ button.
6. Select the **Burner control** menu by turning the ◎ button.
7. Modify parameters 9512 **Required speed ignition**, 9524 **Required speed LF** and 9529 **Required speed HF** according to the gas type. Use the ◎ button to select and modify the parameters.

■ **Fan speed according to gas type**

Tab.35 Fan speed for gas type G20

Parameter	Output	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
9524 **Required speed LF**	minimum	rpm	1550	1800	1480	1560
9524 **Required speed LF**	minimum for boilers in cascade	rpm	1550	1800	1480	1560
9529 **Required speed HF** 2441 **Fan speed heating max**	maximum	rpm	5800	6900	5550	6150
9512 **Required speed ignition**	ignition	rpm	2500	2500	2200	2200

Tab.36 Fan speed for gas type G25

Parameter	Output	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
9524 **Required speed LF**	minimum	rpm	1550	1800	1450	1570
9524 **Required speed LF**	minimum for boilers in cascade	rpm	1550	1800	1450	1570
9529 **Required speed HF** 2441 **Fan speed heating max**	maximum	rpm	5800	6900	5050	6100
9512 **Required speed ignition**	ignition	rpm	2500	2500	2200	2200

Tab.37 Fan speed for gas type G27

Parameter	Output	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
9524 **Required speed LF**	minimum	rpm	1550	1800	1450	1570
9524 **Required speed LF**	minimum for boilers in cascade	rpm	1550	1800	1450	1570
9529 **Required speed HF** 2441 **Fan speed heating max**	maximum	rpm	5800	6900	5300	6300
9512 **Required speed ignition**	ignition	rpm	2500	2500	2500	2500

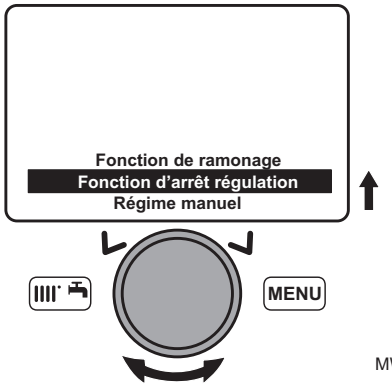
Tab.38 Fan speed for gas type G31

Parameter	Output	Unit	IX 245–130	IX 245–150	IX 245–200	IX 245–250
9524 **Required speed LF**	minimum	rpm	1950	2000	1370	1510
9524 **Required speed LF**	minimum for boilers in cascade	rpm	1950	2000	1370	1510
9529 **Required speed HF** 2441 **Fan speed heating max**	maximum	rpm	5800	6900	5200	5830
9512 **Required speed ignition**	ignition	rpm	2500	2500	2200	2200

8.4.2 Setting the air/gas ratio (maximum heat input)

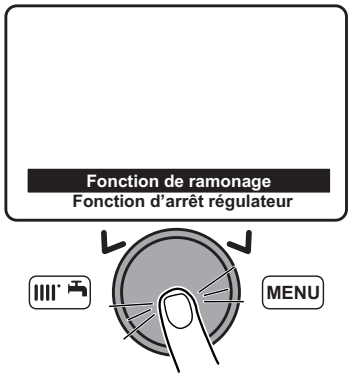
1. Access the function **303** Chimney sweep function.
   ⇨ The **Chimney sweep function** parameter appears.
2. Turn the button to select **Chimney sweep function**.

Fig.94



MW-4000282-FR-01

Fig.95



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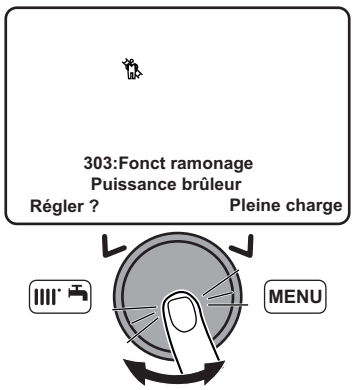
3. Confirm the selection by pressing the ◎ button.
   ⇨ The function 303 appears.

Fig.96



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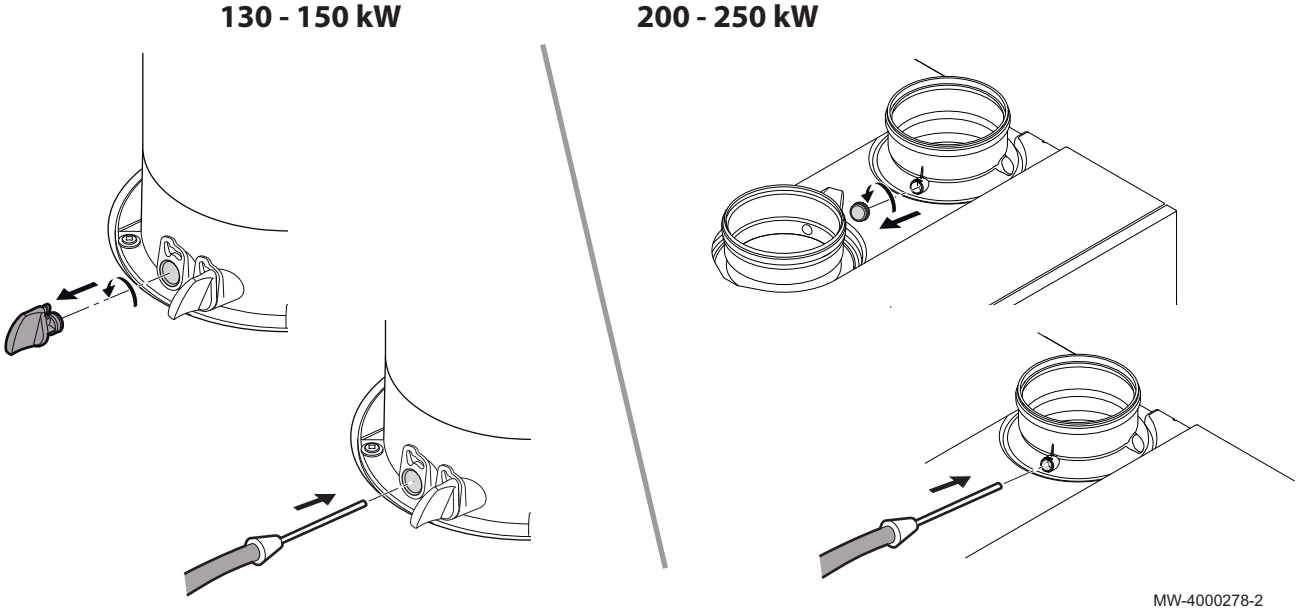
4. Turn the ◎ button to select **Full load**.
5. Press the ◎ button to adjust the setting.
6. Confirm the selection by pressing the ◎ button.

Fig.97



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7. Unscrew:

• IX 245–130 • IX 245–150	the left-hand plug (flue gas measurement point connection).
• IX 245–200 • IX 245–250	the plug for the rear nozzle.

8. Connect the flue gas analyser to the measurement point.

Important
- Ensure that the opening around the sensor is completely sealed when taking measurements.
- IX 245–130 and IX 245–150: insert the sensor at least 8 cm into the flue gas measurement point.

9. Set the boiler's heat input to 100% at full load.
10. Measure the percentage of CO_2 in the flue gases.
11. Compare the values measured with the set point values in the Control and setting values table.
12. If necessary, adjust the air/gas ratio using the gas flow rate adjustment screw.

Important
- Turn the gas adjustment screw clockwise to reduce the CO_2 content.
- Turn the gas adjustment screw counter-clockwise to increase the CO_2 content.

Tab.39 Checking and setting values for gas type G20 / G25 / G27 / G31

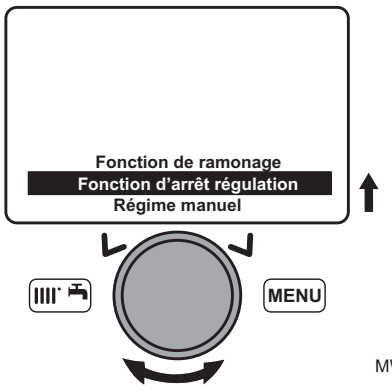
Boiler model	Maximum CO (ppm)
IX 245–130	< 250
IX 245–150	< 250
IX 245–200	< 250
IX 245–250	< 250

Tab.40 Authorised CO_2 ranges at maximum output

Boiler model	Type G20	Type G25	Type G27	Type G31
IX 245–130	9.2 +0.2/- 0	9.2 +0.2/- 0	9.2 +0.2/-0	10 +0.2/- 0
IX 245–150	9.2 +0.2/- 0	9.2 +0.2/- 0	9.2 +0.2/-0	10 +0.2/- 0
IX 245–200	9.2 +0.2/- 0	9.2 +0.2/- 0	8.85 +0.2/-0	10.2 +0.2/- 0
IX 245–250	8.85 +0.2/- 0	9.2 +0.2/- 0	8.85 +0.2/-0	10.2 +0.2/- 0

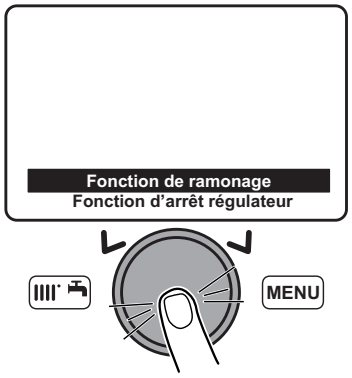
8.4.3 Setting the air/gas ratio (reduced heat input)

Fig.98



1. Accessing the Chimney sweep function **303** function.
   ⇨ The Chimney sweep function parameter appears.
2. Turn the button to select **Chimney sweep function**.

Fig.99



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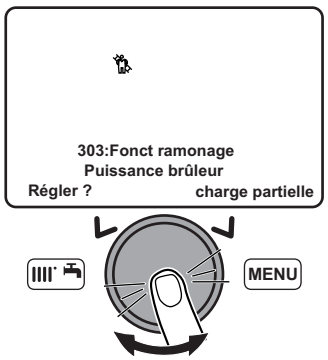
3. Confirm the selection by pressing the ◎ button.
   ⇨ The 303 function appears.

Fig.100



MW-4000285-FR-01

4. Turn the ◎ button to select **Partial load**.
5. Confirm the selection by pressing the ◎ button.
6. Unscrew the left-hand plug, which corresponds to the flue gas measurement point connection.
7. Connect the flue gas analyser to the connection on the left.

Important
- Ensure that the opening around the sensor is completely sealed when taking measurements.
- IX 245–130 and IX 245–150: Insert the sensor into the flue gas measurement point to at least 8 cm.

8. Set the boiler's heat input to 0%.
9. Measure the percentage of CO_2 in the flue gases.
10. Compare the values measured with the authorised CO_2 range in the Control and setting values table.
11. If necessary, adjust the air/gas ratio using the OFFSET adjustment screw.

Important
- Turn the gas adjustment screw clockwise to increase the CO_2 content.
- Turn the gas adjustment screw counter-clockwise to reduce the CO_2 content.

Tab.41 Checking and setting values for gas type G20 / G25 / G27 / G31

Boiler model	Maximum CO (ppm)
IX 245–130	< 250
IX 245–150	< 250
IX 245–200	< 250
IX 245–250	< 250

Tab.42 Authorised CO_2 ranges at minimum output

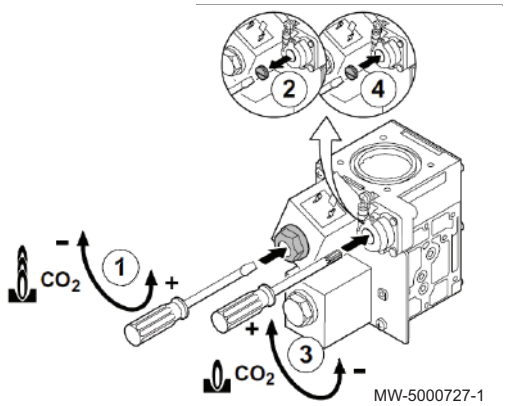
Boiler model	Type G20	Type G25	Type G27	Type G31
IX 245–130	8.5 +0/-0.2	8.5 +0/-0.2	8.5 +0/-0.2	9.7 +0/-0.2
IX 245–150	8.5 +0/-0.2	8.5 +0/-0.2	8.5 +0/-0.2	9.7 +0/-0.2
IX 245–200	9.0 +0/- 0.2	8.9 +0/-0.2	8.4 +0/-0.2	10.0 +0/-0.2
IX 245–250	8.45 +0/- 0.2	8.9 +0/-0.2	8.4 +0/-0.2	10.0 +0/-0.2

8.4.4 Gas valve basic settings

Tab.43 Settings values for a new gas valve

Boiler model	Nominal heat input: Number of turns for the gas flow rate settings screw	Minimum heat input: Number of turns for the OFFSET settings screw
IX 245–130	4 + 1/4	2
IX 245–150	4	2 + 1/2
IX 245–200	1 + 1/4	7 + 3/4
IX 245–250	1 + 3/8	8 + 5/8

Fig.101 Gas valve for IX 245–130 and IX 245–150



1 Gas flow rate setting screw:

The settings screw is screwed down as far as it will go and is then unscrewed according to the number of turns given in the above table.

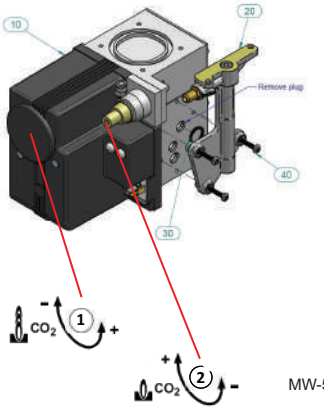
2 **OFFSET** setting screw:

Remove the cap then use a Torx (T40) or flat-head (10 mm) screwdriver.

3 The settings screw is screwed down as far as it will go and is then unscrewed according to the number of turns given in the above table.

4 Refit the cap using a Torx screwdriver (T40) or flat-head screwdriver (10 mm).

Fig.102 Gas valve for IX 245–200 and IX 245–250



1 Gas flow rate setting screw:

The settings screw is screwed down as far as it will go and is then unscrewed according to the number of turns given in the above table.

2 **OFFSET** setting screw:

Remove the cap then use an Allen key.

3 The settings screw is screwed down as far as it will go and is then unscrewed according to the number of turns given in the above table.

4 Put the cap back in place.

8.4.5 Conversion to propane (G31)

■ IX 245–130 and IX 245–150

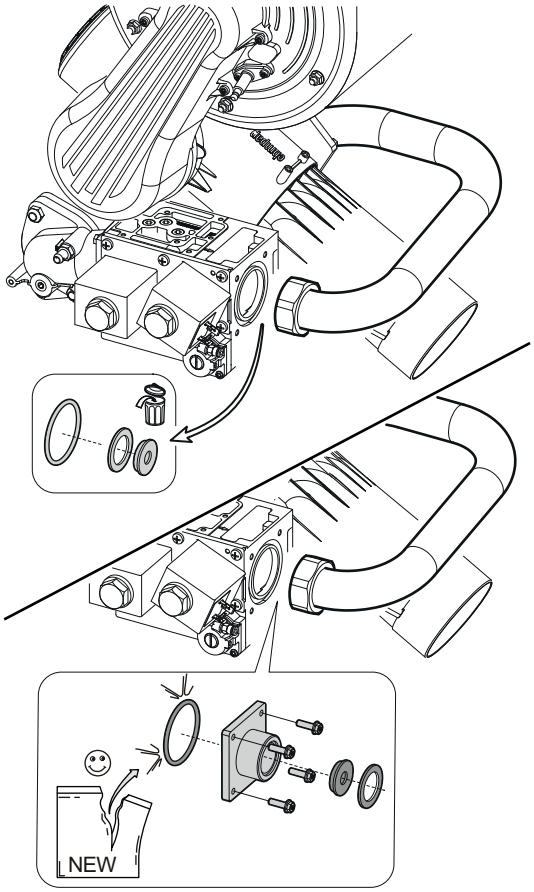
Caution
Only a fully trained, qualified professional may carry out the following operations.

The boiler is pre-set in the factory to run on natural gas H (G20).

Adaptation kits are available for propane (G31).

1. Switch off the boiler.

Fig.103



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2. Close the mains gas valve.
3. Disconnect the gas valve electrical connection.
4. Unscrew the nut connecting the gas supply tube to the flange on the gas valve.
5. Remove the 4 screws from the flange connecting the gas valve to the gas supply tube.
6. Remove the bracket.
7. Replace the O-ring.
8. Replace the diaphragm (Ø 12 mm) and gasket with the diaphragm (Ø 11 mm) and gasket provided in the documentation bag.
9. Proceed in the reverse order to refit the flange.
10. Check the tightness using a leak detector spray.
11. Replace the gas setting label with the one delivered with the boiler and tick the corresponding gas setting.

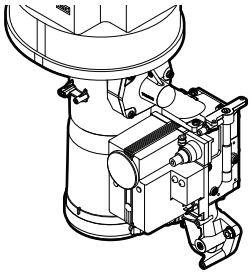
■ IX 245–200 and IX 245–250

Caution
Only a fully trained, qualified professional may carry out the following operations.

The boiler is pre-set in the factory to run on natural gas H (G20).

Adaptation kits are available for propane (G31).

Fig.104



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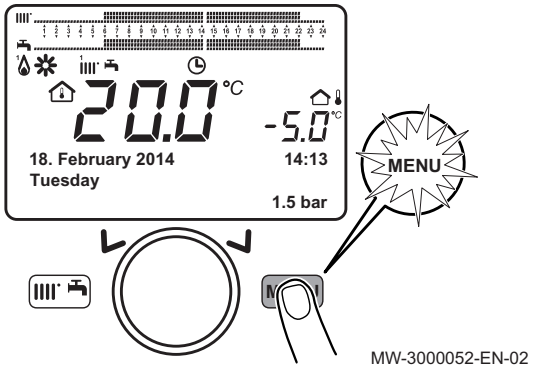
1. Switch off the boiler.
2. Close the mains gas valve.
3. Disconnect the gas valve electrical connection.
4. Remove the 8 screws from the elbow connecting the gas valve to the venturi (4 screws per flange).
5. Remove the elbow.
6. Fit the diaphragm provided for the required gas on the gas valve outlet. The diaphragm is supplied in the documentation bag.
7. Replace the O-rings. The new O-rings are provided in the documentation bag.
8. Proceed to refit the elbow by reversing the steps above.
9. Check the tightness using a leak detector spray.
10. Replace the gas setting label with the one delivered with the boiler and tick the corresponding gas setting.

9 Operation

9.1 Use of the control panel

9.1.1 Modifying the user parameters

Fig.105



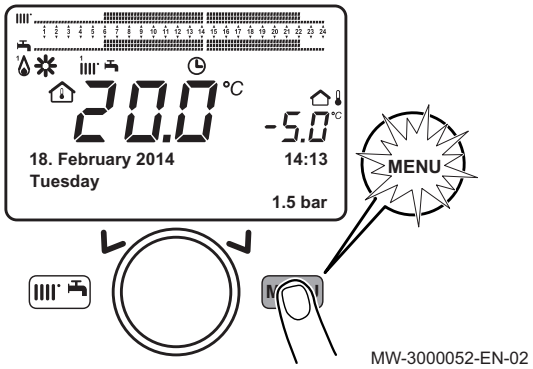
1. Press the (MENU) key to access the parameters.

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

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

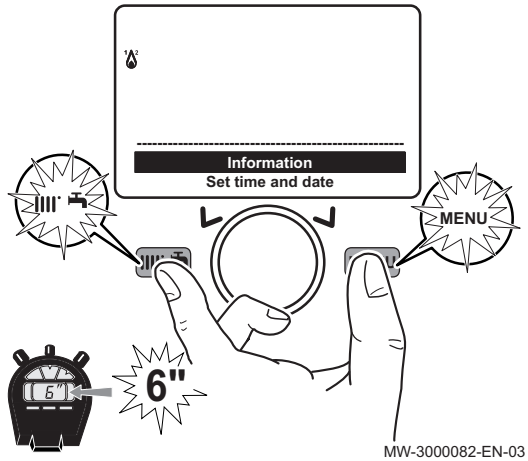
9.1.2 Modifying the installer parameters

Fig.106



1. Press the (MENU) key to access the parameters.

Fig.107



2. Press the (🔥) and (MENU) keys simultaneously for at least 6 seconds.
3. Select the **Commissioning** menu by turning the ◯ button.
4. Confirm the menu selection by pressing the ◯ button.

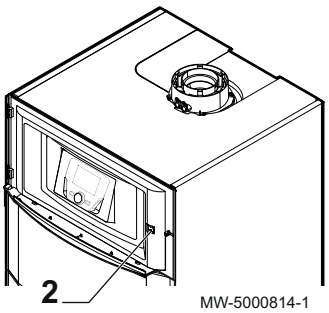
Important
Press the (MENU) key to return to the main display.

⇨ The parameters for the **Commissioning** mode can now be accessed. Use the ◯ button to select and modify them.

9.2 Starting up the boiler

1. Open the gas cock.

Fig.108



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

9.3 Stopping the boiler

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

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

9.3.1 Putting the boiler in Standby mode

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

9.4 Frost Protection

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

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

9.4.1 Activating the Off

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

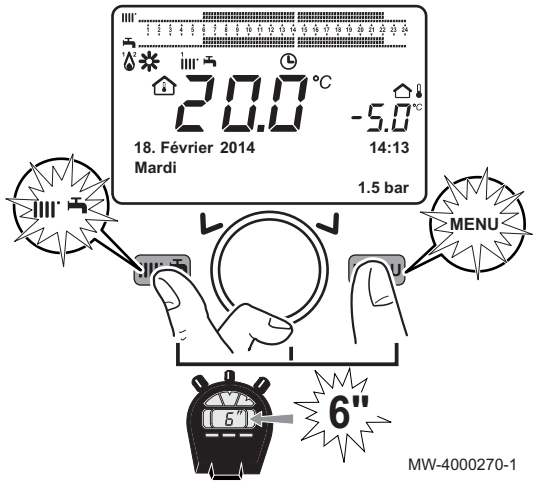
Important
When the operating mode **Off** is activated:
- The electrical circuits continue to be powered up.
- The frost protection function is activated.

9.5 Special functions

Tab.44

Number and Name of the function	Description
301:Manual control	The boiler operates in heating mode according to the programmed temperature set point value. Adjustment range: 25 to 90 °C
303:Chimney sweep function	• Full load: boiler at its maximum heat output, • Part load: reduced heat output, • Heating full load: heating function at its maximum heat output.
304:Controller stop	Activate this function to facilitate the gas valve calibration operations. Adjustment range: 100 % (maximum heat output) to 0 % (reduced heat output).
312:Deaeration apprx 10min	• On: activates the function, • Off: exits the function.

Fig.109



To activate a special function:

1. From the main menu, simultaneously press the MENU keys for approximately 6 seconds.
   ⇨ The name of the functions 301–303–304–312 flashes.
2. Turn the button to select the required function.
3. Press the button to activate the selected function.
4. Confirm the selection by pressing the button.
   ⇨ The menu for the selected function flashes.
5. Modify by turning the button

Important
To manually interrupt the function, repeat the procedure described above. When the function is deactivated, the display indicates "Off".

For more information, see
312:Deaeration apprx 10min function, page 73

10 Settings

10.1 List of parameters

10.1.1 Shortcuts menu

Tab.45 Functions accessible with the shortcut key

Parameter	Description	Adjustment range
Standby/operation	Boiler standby/Start-up.	• **Standby** : Boiler put on standby. - The symbol is displayed. - The boiler's operating modes are deactivated. - The frost protection function is activated. • On : Putting the boiler into operation
316:Hot water boost	Forcing domestic hot water production.	• **On** : - Activates the domestic hot water override. - The symbol is displayed. - If a domestic hot water tank is connected to the boiler circuit, the boiler will give priority to forcing heating of the DHW tank, independently of the other parameters. • **Off** : Deactivates forcing of domestic hot water.
Central heating mode CH1	Boiler operating mode.	• **On** : - The heating is activated in Comfort mode. - The symbols , and are displayed. • **Reduced**: - The heating is activated in Eco mode. - The symbols , and are displayed. • **Timed** : - The heating operates according to the defined timer programs. - The symbols and are displayed. • **Off** : - The boiler is shut down and frost protection is active. - The symbol is displayed.
Room temperature CH1	Room temperature setpoint in comfort mode.	• Can be adjusted between 16 and 35 °C.
Hot water heating	Setting domestic hot water production.	• **On** : Enables domestic hot water production. • **Off** : - Disables domestic hot water production. - The symbol disappears from the display. • **Eco** : Not used.
Hot water temp setpoint	Domestic hot water temperature set point.	• Can be adjusted between 35 and 60 °C.

10.1.2 Information menu

Tab.46 Information menu

Information	Description	Unit
Room temperature	Is displayed if the control system unit is configured as a room temperature appliance	
Room temperature min		
Room temperature max		
Boiler temperature	Boiler flow temperature	°C
Outside temp	Outdoor temperature	°C

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

10.1.3 List of user parameters

Tab.47 Structure of the user menu

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

Tab.48 **Set time and date** menu

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

Tab.49 **Operator section** menu

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

Tab.50 **Time program** menu

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

Tab.51 **Time hot water** menu

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

Tab.52 **Holiday Settings** menu

Parameter number			Parameter	Description	Factory setting
Heating circuit 1	Heating circuit 2	Heating circuit 3			
641	651	661	Select	Selecting the holiday period	Period 1
642	652	662	Start	Selecting the day and month of the start of the current holiday period.	
643	653	663	End	Selecting the day and month of the end of the current holiday period.	
648	658	668	Operating level	Boiler operating mode during the holiday period. • Off • Reduced	Off

Tab.53 **Temps / mode CH1 – Temps / mode CH2 – Temps / mode CH3** menu

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

10.1.4 List of installer parameters

Tab.54 Structure of the installer menu

Menu	Sub-menu
Installer	**Operator section**
	Temps / mode CH1 **Temps / mode CH2** **Temps / mode CH3**
	Temps / mode hot water
	Boiler Settings
	Solar
	Configuration
	Error
	Service/special operation
	State
	Diagnostics heat generation
	Burner control

Tab.55 **Operator section** menu

Parameter number	Parameter	Description	Factory setting
24	**Lighting**	• **Off** • **Temporarily** • **Permanently**	**Temporarily**
29	**Units**	• **°C, bar** • **°F, PSI**	**°C, bar**

Parameter number	Parameter	Description	Factory setting
40	**Used as**	• **Operator unit 1** : The control system unit is installed on the boiler. • **Room unit 1** : The control system unit is configured as a room temperature unit for heating circuit 1. • **Room unit 2** : The control system unit is configured as a room temperature unit for heating circuit 2. • **Room unit 3** : The control system unit is configured as a room temperature unit for heating circuit 3.	**Operator unit 1**
42	**Assignment device 1**	As Room Temperature Unit 1, the action of the control system unit can be assigned to CC1 or to two heating circuits: • **Temps / mode CH1** • **Central heating 1 and 2** • **Central Heating 1 and 3** • **All central heatings**	**All central heatings**
43	**Action operation**	• **Locally** : The room temperature unit controls only the respective heating circuit. • **Centrally** : Only room temperature unit 1 can be centralised. It also controls the domestic hot water and standby mode.	**Centrally**
54	**Readjustment room sensor**	-3°C to +3°C	0 °C
70	**Software version**		

Tab.56 **Temps / mode CH1** – **Temps / mode CH2** – **Temps / mode CH3** menus

Parameter number			Parameter	Description	Unit	Factory setting
Heating circuit 1	Heating circuit 2	Heating circuit 3				
714	1014	1314	**Frost protection setpoint**		°C	6
720	1020	1320	**Heating curve slope**	Heating curve gradient: The regulator calculates the flow temperature set point which is used for the control system, according to outside weather conditions.	–	• Heating circuit 1: 1.5 • Heating circuit 2: 1.5 • Heating circuit 3: 1.5
730	1030	1330	**Summer/winter heating limit**	Limit temperature for switching between Heating/Protection mode. Triggers or shuts down the heating in the course of the year according to variations in outside temperature. This switch is made automatically in Automatic Mode.		20
732	1032	1332	**24-hour heating limit**	The heating is shut down when the outside temperature is equal to the room temperature + parameter 732 (deactivated in Comfort mode).	°C	0
740	1040	1340	**Flow temp setpoint min**	The flow set point calculated is limited by the set value.	°C	25
741	1041	1341	**Flow temp setpoint max**	The flow set point calculated is limited by the set value.	°C	80
742	1042	1342	**Flow temp setpoint room stat**	The set flow value is applied in room temperature thermostat mode. ‘ ---‘ the boiler is running in modulation mode.	°C	80

Parameter number			Parameter	Description	Unit	Factory setting
Heating circuit 1	Heating circuit 2	Heating circuit 3				
750	1050	1350	**Room influence**	• Influence of the room temperature and the outside temperature on calculating the flow temperature: ---%: Simple regulation in accordance with outside weather conditions: • 1…99%: Regulation in accordance with outside weather conditions with room temperature influence. • 100%: Regulation in accordance with the room temperature only.	%	50
760	1060	1360	**Room temp limitation**	Cuts the circulating pump if the room temperature exceeds the current set point + parameter 760, 1060, 1360.	°C	**0.5**
809	1109	1409	**Continuous pump operation**	• **No** : The heating circuit / boiler pump may be shut down during an accelerated decline in temperature or when the room temperature set point is reached. • **Yes** : The heating circuit / boiler pump also continues to run during the accelerated decline in temperature and when the room temperature set point is reached.	–	No
834	1134	1434	**Actuator running time**	Setting the stroke of the servomotor on the mixing valve used	seconds	30
850	1150	1450	**Floor curing function**	Controlled screed-drying function: • **Off** : The function is inoperative. • **Curing/functional heating** : Active for 7 days, 3 days at 25 °C and 4 days at 55 °C. • **Curing heating** : Active for 18 days, 6 days from 25 °C to 55 °C increasing by 5 °C a day, 6 days at 55 °C, 6 days from 55 °C to 25 °C diminishing by 5 °C a day. • **Functional/curing heating** : "Functional Heating" cycle first, and then "Ready for Occupation". • **Manually** : Regulation is based on the "Manual Control Drying" set point.	S	**Off**
851	1151	1451	**Floor curing setp manually**	The flow temperature set point of the "Manual" controlled drying function can be set separately for each heating circuit.	°C	25
855	1155	1455	**Floor curing setp current**	Displays the current day of the controlled screed-drying function. With '---' the function is deactivated.	-	'---'
856	1156	1456	**Days complete.current**	Displays the current flow temperature set point of the controlled screed-drying function. With '---' the function is deactivated.	-	'---'

Tab.57 **Temps / mode hot water** menu

Parameter number	Parameter	Description	Factory setting
1600	**Operating mode**	• **Off**: Permanent running at the frost protection set point. • **On** : Domestic hot water loading is done automatically at the comfort set point. • **Eco** : The temperature maintenance function is deactivated.	**On**
1610	**Hot water temp setpoint**	DHW set point during release times	60°C
1612	**Reduced temp setpoint**	Reduced temperature set point outside release times	35°C

Parameter number	Parameter	Description	Factory setting
1620	**Release**	Start-up enabled: • **Time hot water** : This setting provides domestic hot water preparation with a dedicated timer program. • **Time setting central heating** : Domestic hot water is released with the same timer program as the heating circuits. • **24h/day** : Default setting for instantaneous boilers.	**Time hot water**
1640	**Legionella function**	• **Off** • **Periodically** • **Fixed weekday**	**Off**
1641	**Legionella funct periodically**	Determines after how many days the anti-legionella function must be reactivated.	**7**
1642	**Legionella funct weekday**	Determines on which day the anti-legionella function must be activated.	**Monday**
1644	**Legionella funct time**	Determines the start-up time of the anti-legionella function (Hours / Minutes).	**– –/– –**
1660	**Circulating pump release**	The circulating pump is tripped during the release time: • **Time central heating CH3** • **Hot water release** • **Time hot water** • **Time auxiliary**	**Hot water release**
1663	**Circulation setpoint**	The regulator monitors the temperature measured while the anti-legionella function is running.	45 °C
1680	**Optg mode changeover**	In cases of external switching via the Hx inputs, the regime to which the switch must be made must first be defined. • None • Off	**None**

Tab.58 **Boiler Settings** menu

Parameter number	Parameter	Description	Unit	Factory setting
2214	Setpoint manual control	In manual mode, the flow temperature set point can be set to a fixed value.	°C	80 °C
2441	Fan output heating max	Maximum fan speed in heating mode.	rpm	depending on the model

Tab.59 **Solar** menu (with additional extension module)

Parameter number	Parameter	Description	Unit	Factory setting
3810	**Temp diff on**	Min. ΔT between the solar collector sensor and the solar domestic hot water tank for running the solar pump.	°C	**8**
3811	**Temp diff off**	Max. ΔT between the solar collector sensor and the solar domestic hot water tank for shutting down the solar pump.	°C	**4**
3830	**Collector start function**	To measure the temperature on the solar collector correctly (pipes empty) (--- = deactivated)	min	**30**
3831	**Min run time collector pump**	Minimum running of the collector pump.	Seconds	**30**
3850	**Collector overtemp prot**	If there is a danger of overheating in the collector, tank loading continues to eliminate any excess heat.	°C	**120**

Tab.60 **Configuration** menu

Parameter number	Parameter	Description	Factory setting
5710	**Temps / mode CH1**	Activation of heating circuit 1: • **Off** • **On**	**On**
5715	**Temps / mode CH2**	Activation of heating circuit 2: • **Off** • **On**	**Off**
5721	**Temps / mode CH3**	Activation of heating circuit 3: • **Off** • **On**	**Off**
5730	**Hot water sensor**	Selection of the domestic hot water sensor: • **Hot water sensor B3** : Domestic hot water sensor for tank • **Thermostat** : The sensor used for domestic hot water is a thermostat	**Hot water sensor B3**
5731	**HW controlling element**	Type of actuator for controlling the domestic hot water requirement: • **No charging request** : No function • **Charging pump** : Domestic hot water loading is done with a pump. • **Diverting valve** : Domestic hot water loading is done with a bypass valve.	**Diverting valve**

Parameter number	Parameter	Description	Factory setting
5890	**Relay output QX1**	• **None** • **Circulating pump Q4** : Domestic hot water circulating pump. • **El imm heater HW K6** • **Collector pump Q5** : Circulating pump for the solar collector circuit. • **Cons circuit pump VK1 Q15** : The VK1 consumer circuit pump can be used for an additional boiler consumer. • **Boiler pump Q1** : The pump connected is used for circulating the boiler water. • **Bypass pump Q12** • **Alarm output K10** : Presence of an error signalled by relay. Closure of the contact is on a time delay of 2 min. • **2nd pump speed CH1 Q21** • **2nd pump speed CH2 Q22** • **2nd pump speed CH3 Q23** • **heating pump CH3 Q20** : The heating circuit with CH3 pump is activated (3WV Zone). • **Cons circuit pump VK2 Q18** • **System pump Q14** : The pump connected is used as the mains pump. • **Heat gen shutoff valve Y4** • **Solid fuel boiler pump Q10** : Integration of a solid fuel boiler: Circulating pump in the boiler circuit. • **Time setting 5 K13** : The relay is controlled according to the settings on timer program 5. • **Buffer return valve Y15** • **Solar pump ext exch K9** • **Solar ctrl elem buffer K8** • **Solar ctrl elem swi pool K18** : Contact for heating the swimming pool with solar energy (if using several heat exchangers). • **Cons circuit pump VK2 Q18** • **Cascade pump Q25** : Boiler pump common to all boilers in a cascade. • **St tank transfer pump Q11** • **Hot water mixing pump Q35** • **HW interm circ pump Q33** • **Heat request K27** • **Refrigeration request K28** : Cooling requirement for cooling circuit 1. • **heating pump CH1 Q2** : The heating circuit with CH1 pump is activated. • **heating pump CH2 Q6** : The heating circuit with CH2 pump is activated. • **Hot water ctrl elem Q3** : Pump / distribution valve for hot water tank. • **Instant WH ctrl elem Q34** : Pump / distribution valve for boiler producing instantaneous hot water. • **Water refill K34**: Solenoid filling valve command. • **2nd boiler pump speed Q27** : Boiler pump second speed. • **Status output K35** • **Status information K36** • **Flue gas damper K37** • **Fan shutdown K38** : Fan shut-down function for cutting the power to the fan if it is not used.	**heating pump CH1 Q2**

Parameter number	Parameter	Description	Factory setting
5931	**Sensor input BX2**	• **None** : No function on the sensor input. • **Hot water sensor B31** : Sensor in the bottom section of the domestic hot water tank. • **Collector sensor B6** : Solar collector sensor. • **HW circulation sensor B39** : Circulation / DHW preparation sensor. • **Buffer sensor B4** : Sensor in the top section of the storage tank. • **Buffer sensor B41** : Sensor in the bottom section of the storage tank. • **Flue gas temp sensor B8** : Flue gas sensor • **Common flow sensor B10** : Common flow sensor (cascade). • **Solid fuel boiler sensor B22** : Sensor for solid fuel boiler. • **HW charging sensor B36** • **Buffer sensor B42** : Third sensor (in the middle) of the storage tank. • **Common return sensor B73** • **Cascade return sensor B70** : Cascade return sensor. • **Swimming pool sensor B13** : Swimming pool sensor. • **Solar flow sensor B63** : Solar flow sensor for measuring efficiency. • **Solar return sensor B64** : Solar return sensor for measuring efficiency. • **Primary exch sensor B26**	**None**
5932	**Sensor input BX3**	 **See** **Sensor input BX2**	**None**
5970	**Function input H4**	• **None** : Default setting for boilers with domestic hot water tank. • **Flow measurement Hz** : Default setting for instantaneous boilers. • **Error/alarm message**	**None**
5971	**Contact type H4**	• **NC** • **NO**	**Error/alarm message**
5973	**Frequency value 1 H4**	Definition of the parameters for collector specifications	15
5974	**Function value 1 H4**	Definition of the parameters for collector specifications	20
5975	**Frequency value 2 H4**	Definition of the parameters for collector specifications	162
5976	**Function value 2 H4**	Definition of the parameters for collector specifications	120

Parameter number	Parameter	Description	Factory setting
5977	**Function input H5**	• **None** • **Optg mode change CHs+HW** : Heating and domestic hot water circuit changeover mode. • **Optg mode changeover HW** : Domestic hot water circuit changeover mode. • **Optg mode changeover CHs** : The regimes of the heating circuits are switched to parameter mode on line 900-1200-1500. • **Optg mode changeover CH1** : The regimes of the heating circuits are switched to parameter mode on line 900-1200-1500. • **Optg mode changeover CH2** : The regimes of the heating circuits are switched to parameter mode on line 900-1200-1500. • **Optg mode changeover CH3** : The regimes of the heating circuits are switched to parameter mode on line 900-1200-1500. • **Heat generation lock** : The generator is locked. All heating circuit and domestic hot water temperature requirements are ignored. (boiler frost protection active) • **Error/alarm message** : The input causes an error message on the regulator. • **Consumer request VK1** : The input causes an error message on the regulator. • **Consumer request VK2** : The input causes an error message on the regulator. • **Release swimpool source htg** : Swimming pool demand • **Excess heat discharge** : Enables an external generator to force the switches (heating circuit, DHW, Hx pump) to dissipate any heat surplus. • **Release swi pool solar** : This function enables the release of solar swimming pool heating by an external resource. • **Operating level HW** : The temperature level can be adjusted by a contact (external timer program) rather than by the internal timer program. • **Operating level CH1** : The temperature level can be adjusted by a contact (external timer program) rather than by the internal timer program. • **Operating level CH2** : The temperature level can be adjusted by a contact (external timer program) rather than by the internal timer program. • **Operating level CH3** : The temperature level can be adjusted by a contact (external timer program) rather than by the internal timer program. • **Room thermostat CH1** : This input is used to generate a room thermostat demand for heating circuit 1. • **Room thermostat CH2** : This input is used to generate a room thermostat demand for heating circuit 2. • **Room thermostat CH3** : This input is used to generate a room thermostat demand for heating circuit 3. • **Hot water flow switch** : Connection of the flow rate controller on the instantaneous water heater. • **Hot water thermostat** : Connection of the domestic hot water tank thermostat. • **Pulse count** : Impulse counter. • **Checkb sign flue gas damper** : Feedback on flue gas valve position. • **Boiler flow switch** : Start-up authorisation by flow rate controller. • **Boiler pressure switch** : Start-up authorisation by pressure switch.	**Room thermostat CH1**
5978	**Contact type H5**	• **NC** • **NO**	**NO**
6020 to 6068		See following table	
6097	**Sensor type collector**	Type of collector sensor: • **NTC** • **Pt 1000**	**NTC**
6100	**Readjustm outside sensor**	The value of the outdoor temperature measurement can be offset by +/- 3 °C.	0 °C

Parameter number	Parameter	Description	Factory setting
6200	**Save sensors**	Records the sensors used in the appliance.	No
6212	**Check no. heat source 1**	Information on the manufacturer	
6213	**Check no. heat source 2**		
6215	**Check no. storage tank**		
6217	**Check no. heating circuits**		
6230	**Info 1 OEM**		
6231	**Info 2 OEM**		

Tab.61 **Configuration** menu: parameters for extension modules 1, 2 and 3

Parameter			Description	Factory setting
Extension module 1	**Extension module 2**	**Extension module 3**		
6020 : Function extension module 1	6021 : **Function extension module 2**	6022 : **Function extension module 3**	• **None** • **Multifunctional** : The functions that can be assigned to the inputs/outputs. • **Temps / mode CH1** : Settings corresponding to the operator chapter on "Heating Circuit 1". • **Temps / mode CH2** : Settings corresponding to the operator chapter on "Heating Circuit 2". • **Temps / mode CH3** : Settings corresponding to the operator chapter on "Heating Circuit 3". • **Return temp controller** : Not used • **Solar HW** : Settings corresponding to the operator chapter on "Thermal Solar". • **Primary contr/system pump** : Not used	Without
6024 : **Funct input EX21 module 1**	6026 : **Funct input EX21 module 2**	6028 : **Funct input EX21 module 3**	• **None** • **Limit thermostat CH**	**None**
6030 : **Relay output QX21 module 1**	6033 : **Relay output QX21 module 2**	6036 : **Relay output QX21 module 3**	**See** QX1 relay outlet	without
6031 : **Relay output QX22 module 1**	6034 : **Relay output QX22 module 2**	6037 : **Relay output QX22 module 3**	**See** QX1 relay outlet	without
6032 : **Relay output QX23 module 1**	6035 : **Relay output QX23 module 2**	6038 : **Relay output QX23 module 3**	**See** QX1 relay outlet	without
6040 : **Sensor input BX21 module 1**	6042 : **Sensor input BX21 module 2**	6044 : **Sensor input BX21 module 3**	**See** BX2 sensor inlet	without
6041 : **Sensor input BX22 module 1**	6043 : **Sensor input BX22 module 2**	6045 : **Sensor input BX22 module 3**	**See** BX2 sensor inlet	without
6046 : **Function input H2 module 1**	6054 : **Function input H2 module 2**	6062 : **Function input H2 module 3**	**See** H5 inlet function	without
6047 : **Contact type H2 module 1**	6055 : **Contact type H2 module 2**	6063 : **Contact type H2 module 3**	• **NC** • **NO**	**NO**
6049 : **Voltage value 1 H2 module 1**	6057 : **Voltage value 1 H2 module 2**	6065 : **Voltage value 1 H2 module 3**	Definition of parameters for collector specifications	0

Parameter			Description	Factory setting
Extension module 1	Extension module 2	Extension module 3		
6050 : **Funct value 1 H2 module 1**	6058 : **Funct value 1 H2 module 2**	6066 : **Funct value 1 H2 module 3**	Definition of parameters for collector specifications	0
6051 : **Voltage value 2 H2 module 1**	6059 : **Voltage value 2 H2 module 2**	6067 : **Voltage value 2 H2 module 3**	Definition of parameters for collector specifications	0
6052 : **Funct value 2 H2 module 1**	6060 : **Funct value 2 H2 module 2**	6068 : **Funct value 2 H2 module 3**	Definition of parameters for collector specifications	0

Tab.62 **Error** menu

Parameter number	Parameter	Description	Factory setting
6704	**Display SW diagnostic code**	Display of the software troubleshooting code: • **No** • **Yes**	**Yes**
6705	**SW diagnostic code**	Software troubleshooting code currently pending.	
6706	**Burn ctrl phase lockout pos**	Locking phase indicating the place where the error occurred.	
6710	**Reset alarm relay**	Alarm relay reset.	
6800	**History 1**	Last error that occurred.	
6805	**SW diagnostic code 1**	Last troubleshooting code that occurred.	
6806	**Burner control phase 1**	Last locking phase indicating the place where the error occurred.	
6810 – 6996	**History 2** to **History 20**	Fault history.	

Tab.63 **Service/special operation** menu

Parameter number	Parameter	Description	Factory setting
7045	**Time since maintenance**	Resetting the boiler operating time after boiler servicing.	0 months
7130	**Chimney sweep function**	Chimney sweep function: • **Off** • **On**	**Off**
7131	**Burner output**	Burner output during the chimney sweep function: • **Partial load** • **Full load** • **Max heating load**	**Full load**
7140	**Manual control**	Manual control function: • **Off** • **On**	**Off**
7143	**Controller stop function**	Regulator shut-down function: • **Off** • **On**	**Off**
7145	**Controller stop setpoint**	Set point output during the regulator shut-down function: 0 % to 100 %.	100%
7146	**Deaeration function**	Venting function: • **Off** • **On**	**Off**

Parameter number	Parameter	Description	Factory setting
7147	**Type of venting**	Venting cycle operating mode: • **None** • **Heating circuit continuous** • **Heating circuit cycled** • **Hot water continuous** • **Hot water cycled**	**None**
7170	**Telephone customer service**		
7231	**Refill time current week**	Value displayed	0 s
7232	**Refill time to date**	Value displayed	0 s
7233	**Number of refills to date**	Value displayed	0

Tab.64 **State** menu

Parameter number	Parameter	Description
8000	**State central heating CH1**	
8001	**State central heating CH2**	
8002	**State central heating CH3**	
8003	**State hot water**	
8005	**State boiler**	
8007	**State solar**	
8008	**State solid fuel boiler**	
8009	**State burner**	
8010	**State buffer**	
8011	**State swimming pool**	

Tab.65 **Diagnostics heat generation** menus

Parameter number	Parameter	Description
8310	• **Boiler temperature** • **Control temp**	Value displayed
8311	• **Boiler setpoint** • **Control setpoint**	
8313	**Control sensor**	
8314	**Boiler return temp**	
8315	**Boiler return temp setpoint**	
8316	**Flue gas temp**	
8321	**Primary exchanger temp**	
8323	**Fan speed**	
8326	**Burner modulation**	
8330	**Hours run 1st stage**	Value reset
8526	**Solar Gain 24 Hour**	
8527	**Total Solar Gain**	
8530	**Hours run solar**	
8531	**Hours run collect overtemp**	
8532	**Hours run collector pump**	

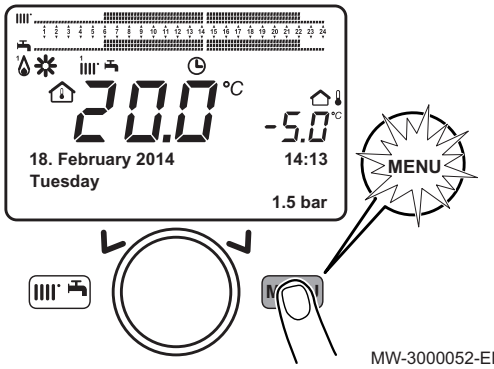
Tab.66 **Burner control** menus

Parameter number	Parameter	Description
9512	**Required speed ignition**	Ignition speed set point adjustable on the operating interface.
9524	**Required speed LF**	Rotation speed set point at partial load adjustable on the operating interface.
9529	**Required speed HF**	Rotation speed set point at nominal load adjustable on the operating interface.
6624	**Manual source lock**	

10.2 Setting the parameters

10.2.1 Setting the date and time

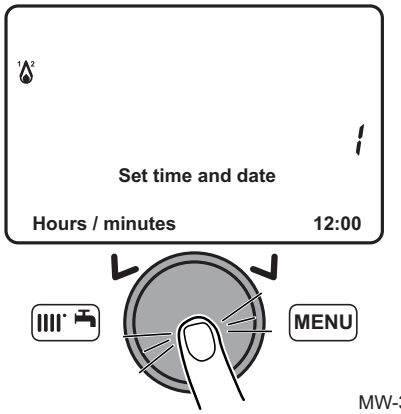
Fig.110



MW-3000052-EN-02

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

Fig.111



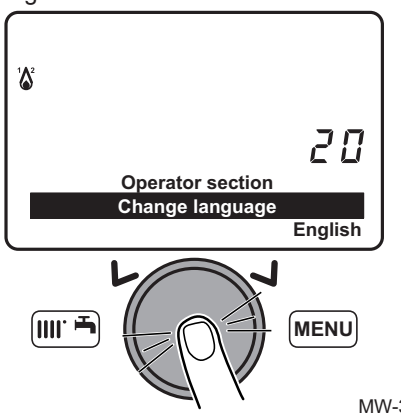
MW-3000055-EN-02

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

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

10.2.2 Selecting the language

Fig.112



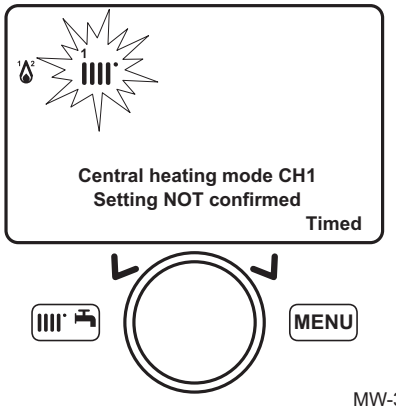
MW-3000058-EN-02

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

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

10.2.3 Changing the operating mode

Fig.113



MW-3000060-EN-02

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

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

For more information, see
Description of the symbols, page 26

10.2.4 Forcing domestic hot water production

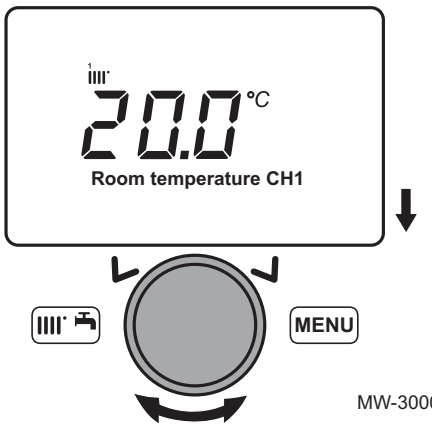
1. Press the key to access the shortcuts menu.
2. Select the parameter **316:Hot water boost** by turning the button.
3. Press the button to start forcing domestic hot water.

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

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

10.2.5 Setting the room temperature set point (On mode)

Fig.114



MW-3000063-EN-02

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

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

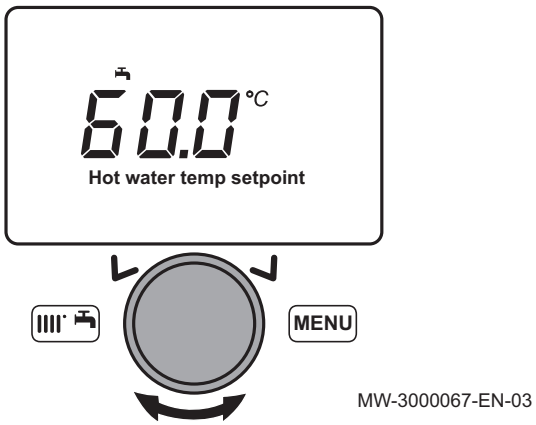
10.2.6 Modifying the domestic hot water production mode

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

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

10.2.7 Setting the domestic hot water temperature set point

Fig.115



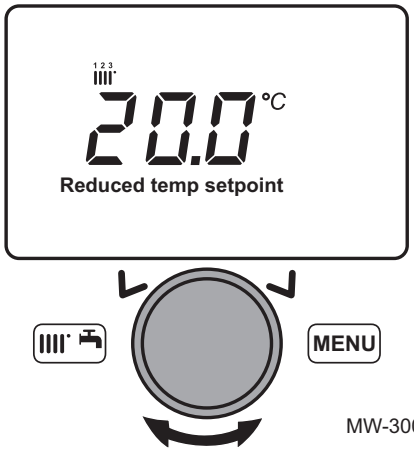
MW-3000067-EN-03

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

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

10.2.8 Setting the room temperature set point (Reduced mode)

Fig.116



MW-3000070-EN-03

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

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

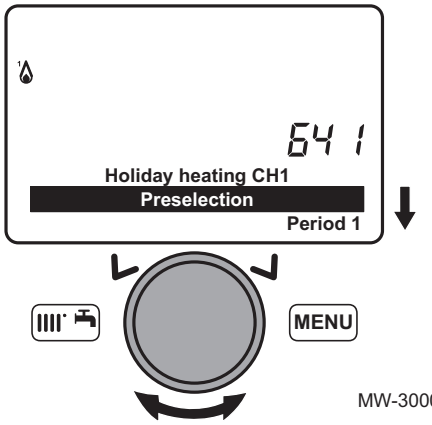
10.2.9 Programming a Holiday period

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

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

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

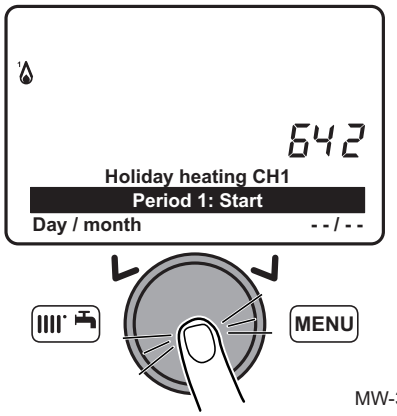
Fig.117



MW-3000073-EN-02

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

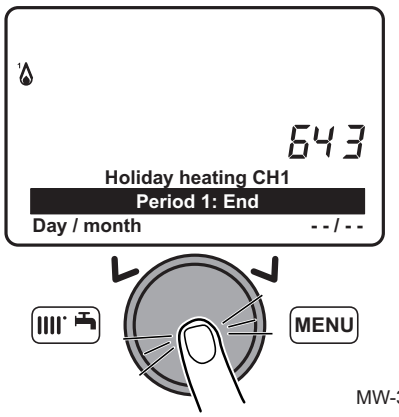
Fig.118



MW-3000075-EN-02

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

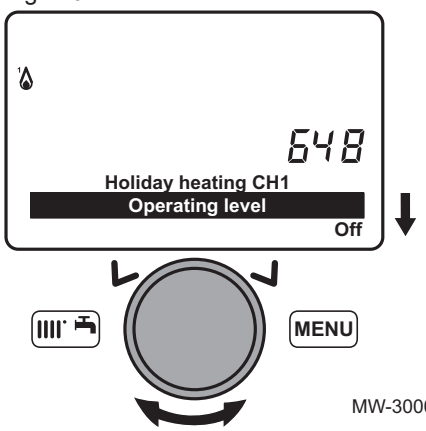
Fig.119



MW-3000078-EN-02

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

Fig.120



MW-3000080-EN-02

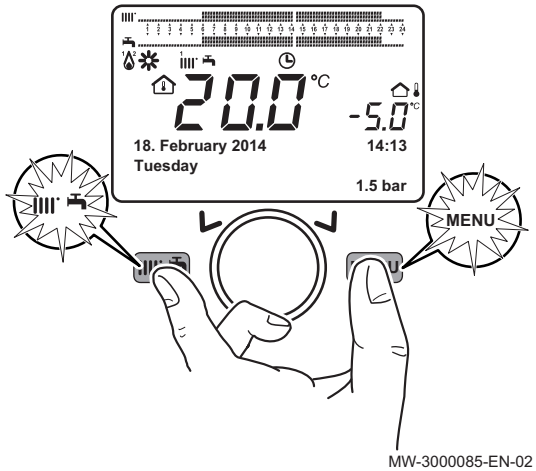
14. Select the **Operating level** parameter by turning the ◎ button.
15. Confirm the menu selection by pressing the button ◎.
16. Select the boiler's operating mode during the holiday period by turning the ◎ button.
17. Confirm the menu selection by pressing the button ◎.

10.2.10 Using the fixed-speed boiler

Using the boiler according to heat input makes it possible to calibrate the gas valve.

The heat input corresponds to the speed of the boiler in percentage of the nominal output.

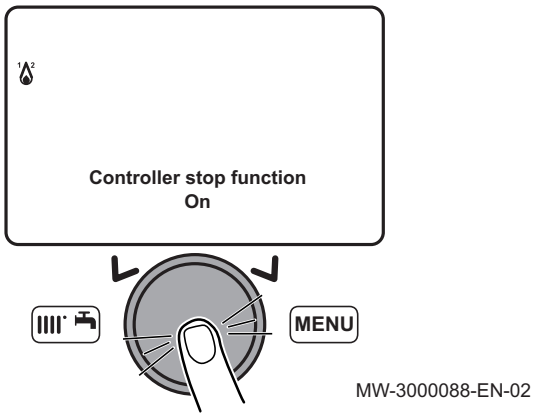
Fig.121



MW-3000085-EN-02

1. From the home screen, press the and keys simultaneously.
2. Select the parameter **Controller stop function** by turning the button.
3. Press the button to confirm.
   ⇨ The parameter **Controller stop function On** appears.

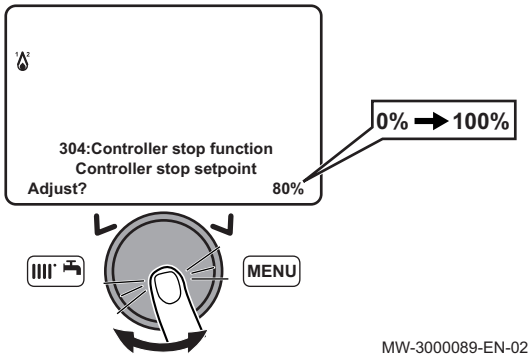
Fig.122



MW-3000088-EN-02

4. Press the button to confirm.
   ⇨ **304:Controller stop** appears.

Fig.123



MW-3000089-EN-02

5. Press the button to modify the heat input value from 0 to 100 % by turning the button.
6. Press the button to confirm the heat input.

Important

Press the key to return to the main display and reactivate the control system.

10.2.11 Selecting a heating circuit

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

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

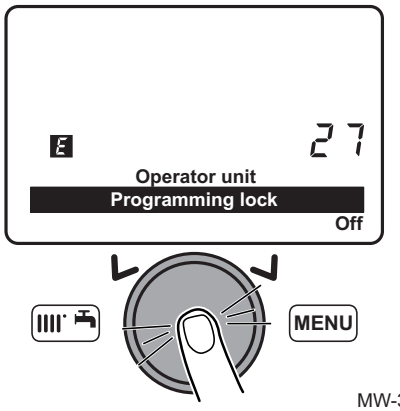
10.2.12 Locking/Unlocking parameter modification

It is possible to lock all functions associated with the MENU key to prevent unauthorised persons from modifying the parameters.

Locking parameter modification

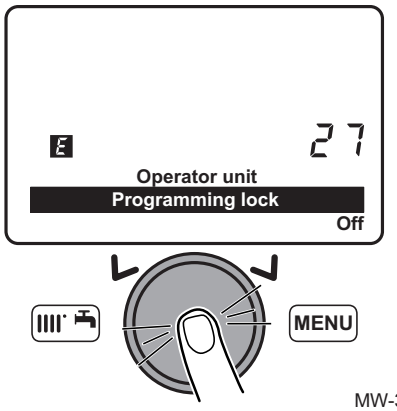
1. Press the MENU key to access the user parameters menu.
2. Select the **Operator unit** menu by turning the button.
3. Confirm the menu selection by pressing the button.
4. Select menu 27 **Programming lock** by turning the button.
5. Confirm the menu selection by pressing the button.

Fig.124



MW-3000091-EN-02

Fig.125



MW-3000092-EN-02

6. Select the setting **On** by turning the button.
7. Confirm the menu selection by pressing the button.
   ⇨ The parameters can be displayed but cannot be modified.

Unlocking parameter modification

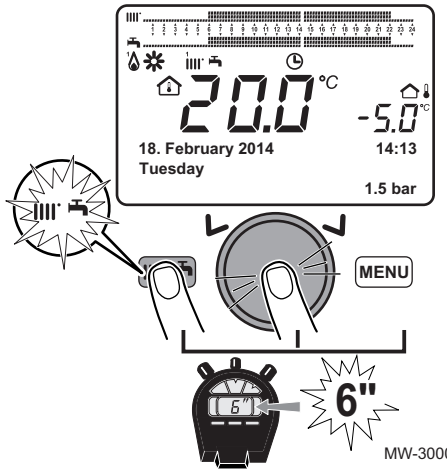
It is necessary to enter a temporary unlocking phase to modify the parameter **Programming lock**. This parameter enables parameter modification to be locked/unlocked.

1. Press the MENU key to access the user parameters menu.
2. Press the key and the button simultaneously for around 6 seconds.

Important
Unlocking is temporary and lasts 1 minute.

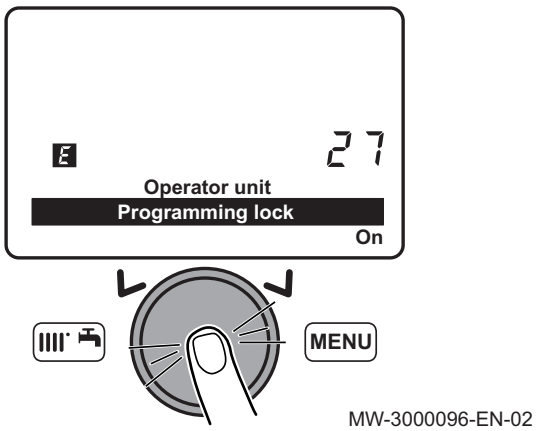
   ⇨ **temporarily unlocked** is displayed.
3. Press the MENU key to access the user parameters menu.
4. Select the **Operator unit** menu by turning the button.
5. Confirm the menu selection by pressing the button.
6. Select menu 27 **Programming lock** by turning the button.

Fig.126



MW-3000093-EN-02

Fig.127



MW-3000096-EN-02

7. Confirm the menu selection by pressing the ◎ button.
8. Select the setting On by turning the ◎ button.
9. Confirm the menu selection by pressing the ◎ button.
   ⇨ The parameters can be modified.

10.2.13 Timer programme

Important
Activate the **Timed** operating mode

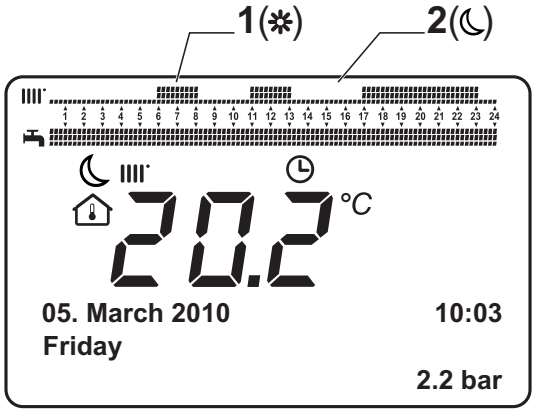
The various timer programming functions are used to program start-up and automatic shut-down of the boiler during predefined time ranges. Timer programming is done for days of the week, from Monday to Sunday. Groups of days are predefined.

Tab.67 Weekly intervals

Values of the parameters **Select days** (500, 520, 540) for heating circuits 1, 2 and 3 and the parameters **Select days** (560) for domestic hot water.

Pre-setting selected	Days programmed
Mon-Sun	Monday - Tuesday - Wednesday - Thursday - Friday - Saturday - Sunday
Mon-Fri	Monday - Tuesday - Wednesday - Thursday - Friday
Sat-Sun	Saturday - Sunday
Mon	Monday
Tue	Tuesday
Wed	Wednesday
Thu	Thursday
Fri	Friday
Sat	Saturday
Sun	Sunday

Fig.128 Example of a time range



BM-0000025-GB-03

1 Period of operation at the comfort temperature
2 Period of operation in reduced mode

Tab.68 Daily time ranges

Values of the parameters **Select default timings?** (514, 534, 554) for heating circuits 1, 2 and 3 and the parameter **Select default timings?** (574) for domestic hot water.

Pre-setting selected	Hours programmed
Time setting 1	6:00 to 23:00
Time setting 2	06:00...08:00 – 17:00...23:00
Time setting 3	06:00...08:00 – 11:00...13:00 – 17:00...23:00

■ Default time ranges

Tab.69 Time ranges according to the groups of days selected

Program line 514 (heating), 574 (domestic hot water)

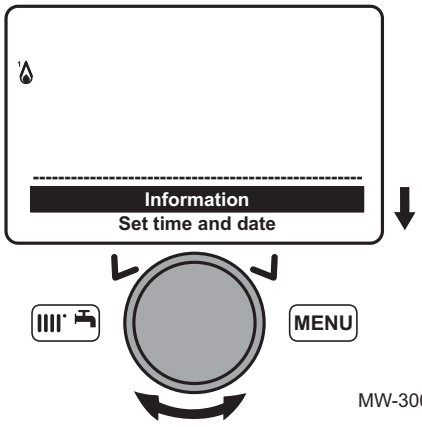
Groups of days	Pre-set programs		
	On 1 - Off 1	**On 2 - Off 2**	**On 3 - Off 3**
Mon-Sun	06:00 - 08:00	11:00 - 13:00	17:00 - 23:00
Mon-Fri	06:00 - 08:00	17:00 - 23:00	
Sat-Sun	06:00 - 23:00		

Tab.70 Time ranges according to the days selected

Program line 501, 502, 503, 504, 505, 506 (heating) - 561, 562, 563, 564, 565, 566 (domestic hot water)

Single days	Pre-set programs		
	On 1 - Off 1	**On 2 - Off 2**	**On 3 - Off 3**
Monday-Tuesday-Wednesday-Thursday-Friday-Saturday-Sunday	06:00 - 08:00	11:00 - 13:00	17:00 - 23:00

Fig.129



MW-3000071-EN-03

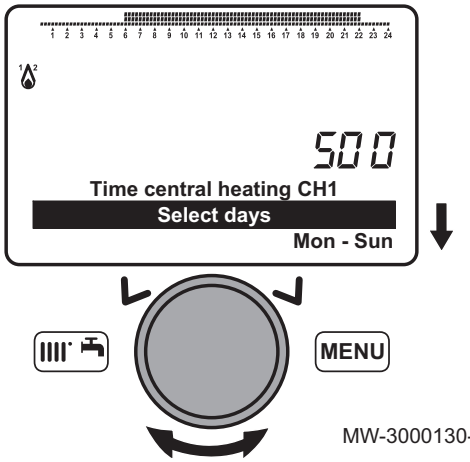
■ Selecting a Timer Program

1. Select a heating circuit.
2. Press the MENU key to access the parameters.
3. Select the **Time central heating CH1** menu by turning the button.

Important
- For heating circuits 2 and 3, select the parameters **Time central heating CH2** or **Time setting 3/CHP**.
- For the domestic hot water circuit, select the parameter **Time hot water**.

4. Confirm the menu selection by pressing the button.
   ⇨ The parameter **Select days** (500, 520, 540 or 560) appears.

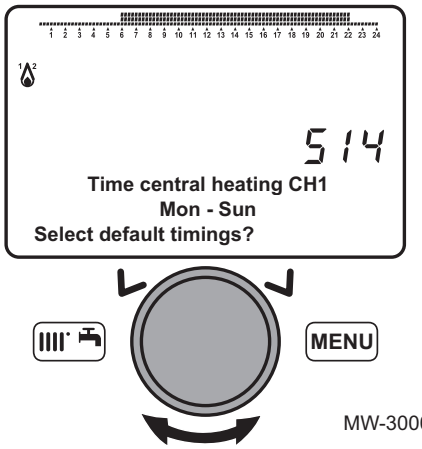
Fig.130



MW-3000130-EN-02

5. Confirm the parameter selection by pressing the ◎ button.
   ⇨ The current selection flashes.
6. Select a weekly interval by turning ◎ button.
7. Confirm the weekly interval selection by pressing the ◎ button.

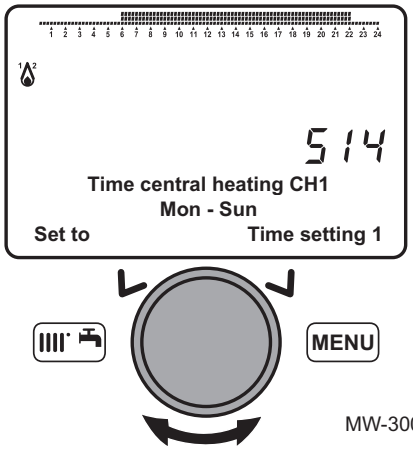
Fig.131



MW-3000131-EN-02

8. Select the parameter **Select default timings?** (514, 534, 554 or 574) by turning the ◎ button.

Fig.132



MW-3000132-EN-02

9. Confirm the parameter selection by pressing the ◎ button.
   ⇨ The current selection flashes.
10. Select the desired time range by turning the ◎ button.
11. Confirm the time range selection by pressing the ◎ button.

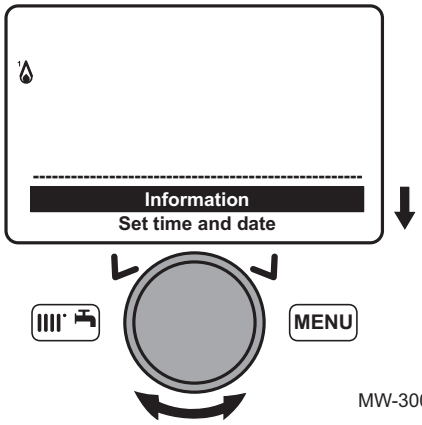
Important
Press the MENU key to return to the main screen.

For more information, see
Copying a time range, page 108

■ Customising the time ranges

1. Select a heating circuit.
2. Press the MENU key to access the parameters.

Fig.133



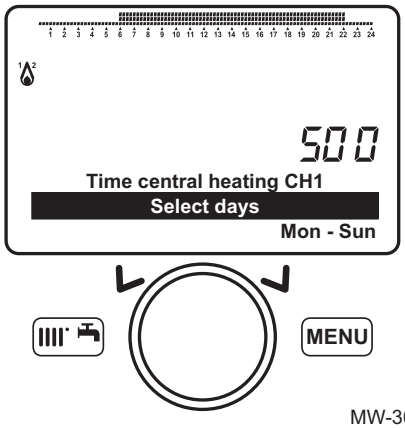
MW-3000071-EN-03

3. Select the **Time central heating CH1** menu by turning the ◎ button.

Important
- For heating circuits 2 and 3, select the parameters **Time central heating CH2** or **Time setting 3/CHP**.
- For the domestic hot water circuit, select the parameter **Time hot water**.

4. Confirm the menu selection by pressing the ◎ button.
   ⇨ The parameter **Select days** (500, 520, 540 or 560) appears.

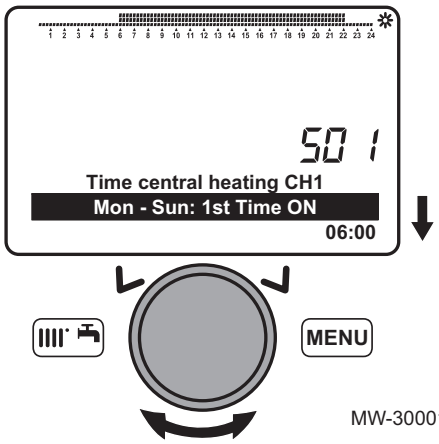
Fig.134



MW-3000133-EN-02

5. Confirm the menu selection by pressing the ◎ button.
   ⇨ The current selection flashes.
6. Select a weekly interval.
7. Confirm the menu selection by pressing the ◎ button.

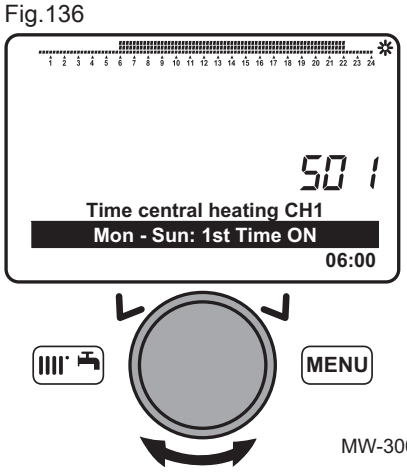
Fig.135



MW-3000134-EN-02

8. Select the parameter **1st Time ON** (501, 521, 541 or 561) by turning the ◎ button.

Fig.136



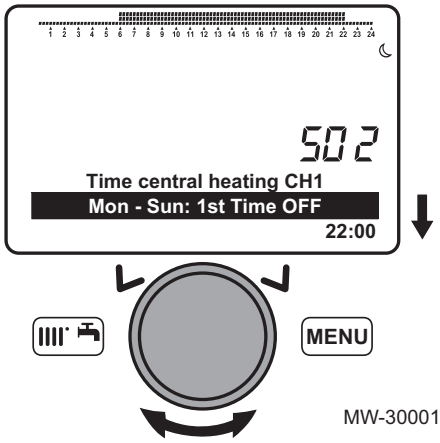
MW-3000135-EN-02

9. Confirm the menu selection by pressing the ◎ button.
   ⇨ The beginning of the first time range flashes.
10. Select the end of the first time range by turning the ◎ button.

Important
Select the value **--:--** in order not to program a first time range.

11. Confirm the value programmed by pressing the ◎ button.

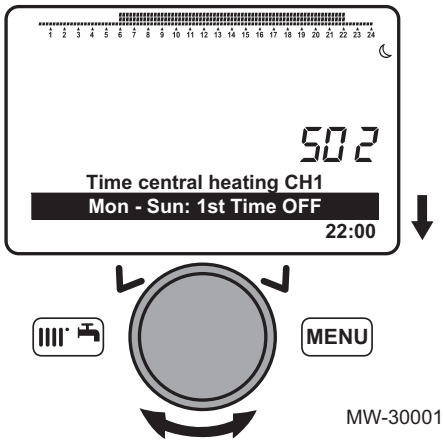
Fig.137



MW-3000136-EN-02

12. Select the parameter **1st Time OFF** (502, 522, 542 or 562) by turning the ◎ button.

Fig.138



MW-3000137-EN-02

13. Confirm the menu selection by pressing the ◎ button.
    ⇨ The current selection flashes.
14. Select the beginning of the first time range by turning the ◎ button.
15. Confirm the value programmed by pressing the ◎ button.
16. Repeat the programming for the second and third time ranges.

Tab.71 Parameters of the time ranges

	First time range	Second time range	Third time range
Beginning of the time range	**1st Time ON** (501, 521, 541 or 561)	**2nd Time ON** (503, 523, 543 or 563)	**3rd Time ON** (505, 525, 545 or 565)
End of the time range	**1st Time OFF** (502, 522, 542 or 562)	**2nd Time OFF** (504, 524, 544 or 564)	**3rd Time OFF** (506, 526, 546 or 566)

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

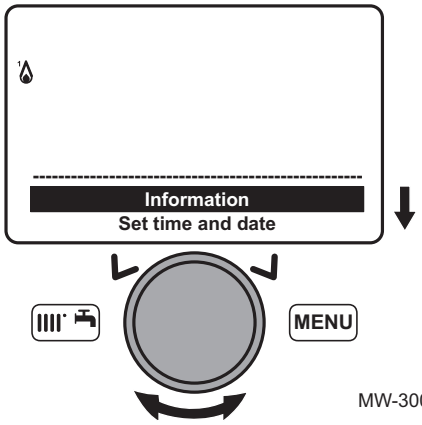
For more information, see
Copying a time range, page 108

■ Copying a time range

Important
It is possible to copy a time range from one day to another. It is not possible to copy a time range from a period of several days.

1. Select a heating circuit.
2. Press the MENU key to access the parameters.

Fig.139



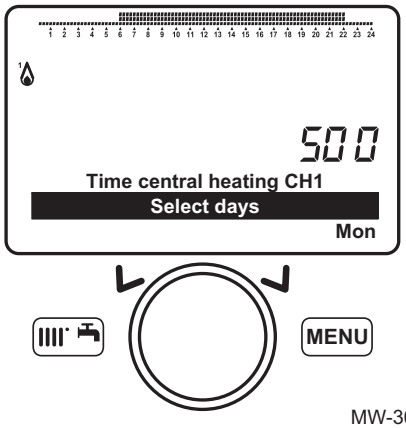
MW-3000071-EN-03

3. Select the **Time central heating CH1** menu by turning the ◎ button.

Important
- For heating circuits 2 and 3, select the parameters **Time central heating CH2** or **Time setting 3/CHP**.
- For the domestic hot water circuit, select the parameter **Time hot water**.

4. Confirm the menu selection by pressing the ◎ button.
   ⇨ The parameter **Select days** (500, 520, 540 or 560) appears.

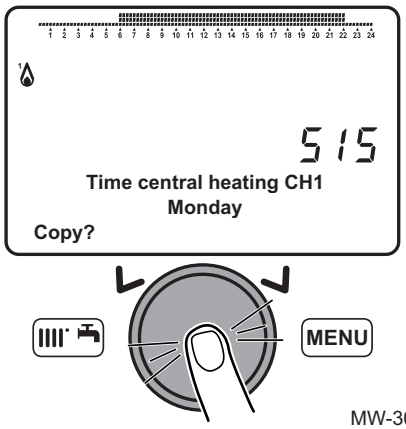
Fig.140



MW-3000138-EN-02

5. Confirm the menu selection by pressing the ◎ button.
   ⇨ The current selection flashes.
6. Select a day.
7. Confirm the menu selection by pressing the ◎ button.
8. Select a predefined or customised time range.

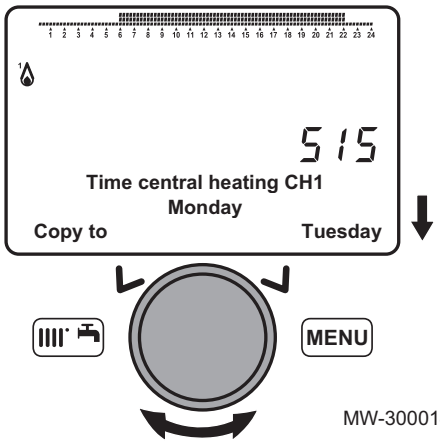
Fig.141



MW-3000139-EN-02

9. Select the parameter **Copy?** (515, 535, 555 or 575) by turning the ◎ button.
10. Confirm the menu selection by pressing the ◎ button.
    ⇨ The parameter **Copy to** appears.

Fig.142



MW-3000140-EN-02

11. Select a target day by turning the ◎ button.
12. Confirm the menu selection by pressing the ◎ button.

Important
- Repeat the copy to other days if necessary.
- Press the MENU key to return to the main screen.

For more information, see
Selecting a heating circuit, page 102
Selecting a Timer Program, page 105
Customising the time ranges, page 106

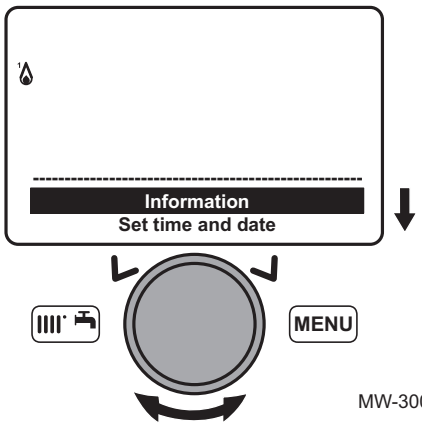
■ Resetting the timer programs to zero

1. Press the MENU key to access the parameters.
2. Select the **Time central heating CH1** menu by turning the button.

Important
- For heating circuits 2 and 3, select the parameters **Time central heating CH2** or **Time setting 3/CHP**.
- For the domestic hot water circuit, select the parameter **Time hot water**.

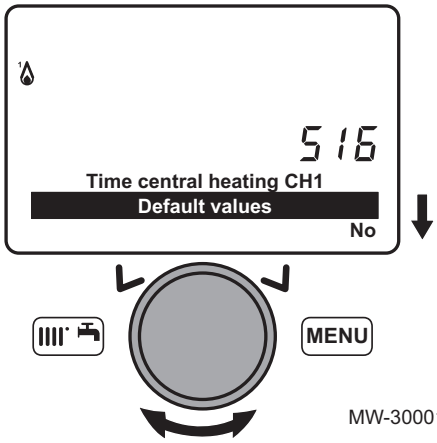
3. Confirm the menu selection by pressing the button.
   ⇨ The parameter **Select days** (500, 520, 540 or 560) appears.

Fig.143



MW-3000071-EN-03

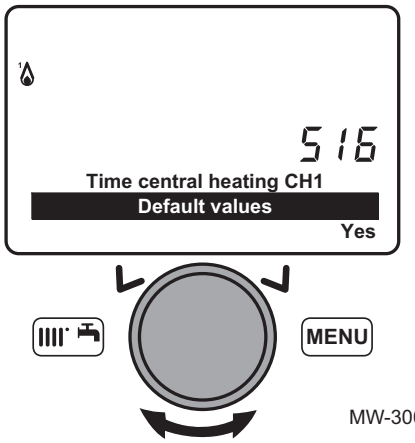
Fig.144



MW-3000141-EN-02

4. Select the parameter **Default values** (516, 536, 556 or 576) by turning the button.
5. Confirm the parameter selection by pressing the button.
   ⇨ The parameter **No** flashes.

Fig.145



MW-3000142-EN-02

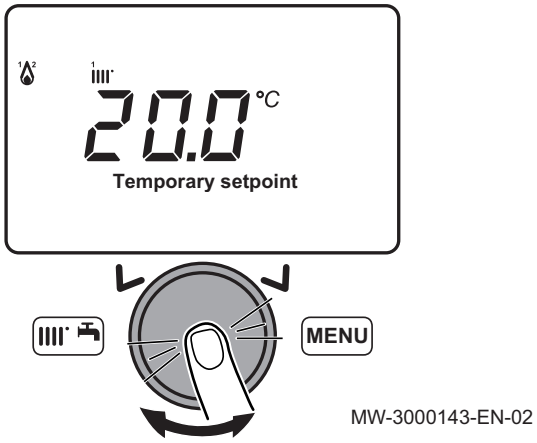
6. Select the parameter **Yes** by turning the button.
7. Confirm the parameter selection by pressing the button.

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

⇨ The reset to zero of the timer program is effective.

10.2.14 Setting a temporary heating flow temperature

Fig.146



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

10.2.15 Managing boilers in cascade

Boilers in cascade are controlled and managed by the master boiler.

1. Set the following parameters on the master boiler:

Tab.72 Configuration of the master boiler in a cascade

Parameter number	Parameter	Description	Setting
3540	Auto source seq ch'over	Operating time before the automatic change of the master boiler sequence.	Number of hours
3541	**Auto source seq exclusion**	Exclusion of the boiler or boilers from the periodic sequence rotation.	• First • First and last • Last • None

10.3 Accessing the information menu

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

11 Maintenance

11.1 General

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

Caution
Do not neglect to service the boiler. Contact a qualified professional or take out a maintenance contract for the obligatory annual servicing of the boiler.
Failure to service the appliance voids the warranty.
The annual service is obligatory pursuant to Decree No. 2009-649 of 9 June 2009.

Danger of electric shock
Before service work is started, the boiler has to be de-energised and secured from accidentally being switched back on.

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

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

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

Caution
Only genuine spare parts may be used.

11.2 Standard inspection and maintenance operations

11.2.1 Performing the annual service

1. Check the outward appearance and tightness of the gaskets on the gas circuit and the combustion circuit.
2. Check for any impurities inside the combustion chamber. Use a vacuum cleaner for any cleaning work.
3. Check the condition of the insulation in the door and at the bottom of the combustion chamber and the condition of the gaskets on the combustion chamber door.
4. Check the condition and position of the ignition and flame detection electrodes, as well as the condition of the burner and its retaining device.
5. Check for any impurities inside the siphon.
6. Dry up as much as possible any water that may have stagnated in the bottom of the boiler as the result of a maintenance operation.
7. Check that there are no obstructions in the discharge and air intake pipes.
8. Check that the fan is working correctly.
9. Check the combustion and the correct calibration of the gas valve.
10. Check the pressure in the heating system.
11. Check the pressure in the expansion vessel.

11.2.2 Removing the burner

- **IX 245–130 and IX 245–150**

1. Switch off the mains supply to the boiler.

2. Close the gas inlet valve.
3. Close the valves on the heating circuits.
4. Access the internal boiler components.
5. Disconnect the power and command cables on the fan.

Fig.147

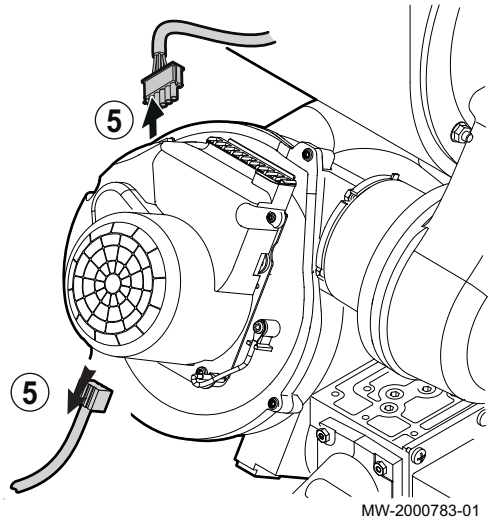


Fig.148

6. Disconnect the ignition electrode and the flame detection sensor.

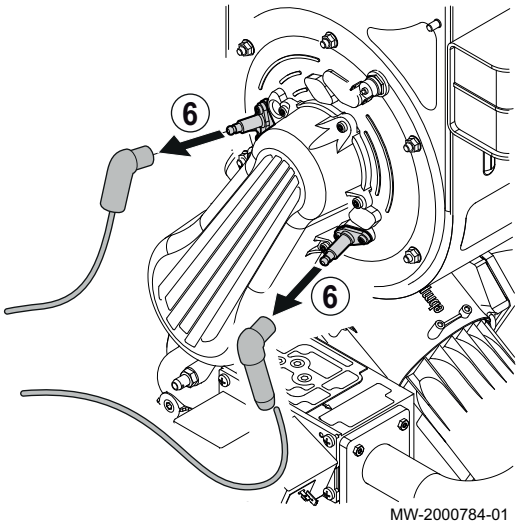


Fig.149

7. Disconnect the 2 wires from the safety thermostat on the combustion chamber door and the pin under the ignition electrode.

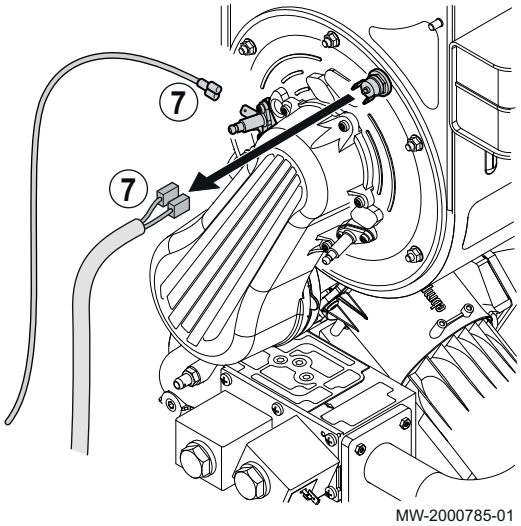
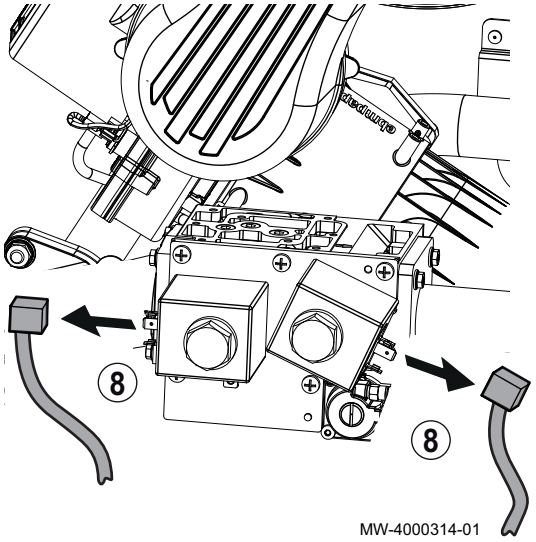
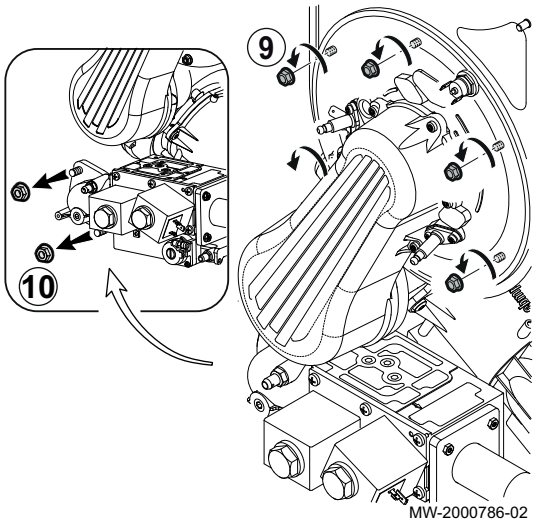


Fig.150



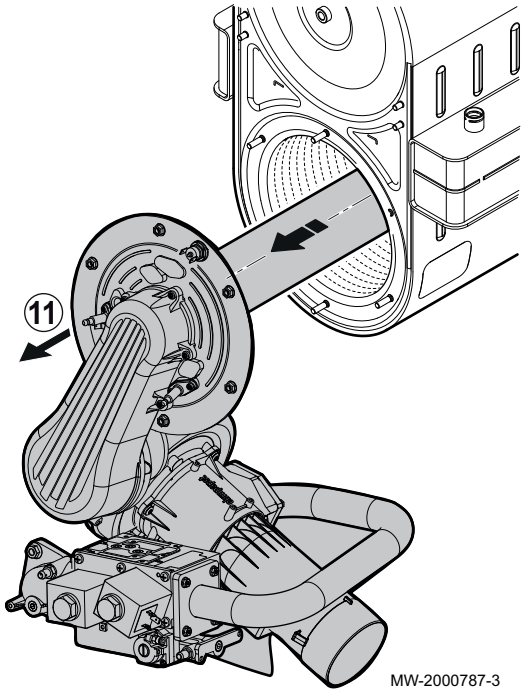
8. Remove the 2 connectors from the gas valve.

Fig.151



9. Remove the nuts holding the burner in place on the heat exchanger.
10. Remove the screws securing the gas inlet tube elbow.

Fig.152



11. Remove the assembly comprising the fan, Venturi, burner and gas valve to access the inside of the heat exchanger.

IX 245–200 and IX 245–250

1. Switch off the mains supply to the boiler.
2. Close the gas inlet valve.
3. Close the valves on the heating circuits.
4. Access the internal boiler components.
5. Disconnect the power and command cables on the fan.

Fig.153

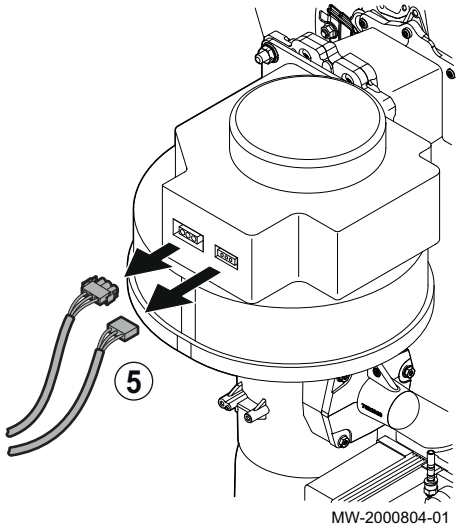


Fig.154

6. Disconnect the ignition electrode and the flame detection sensor.

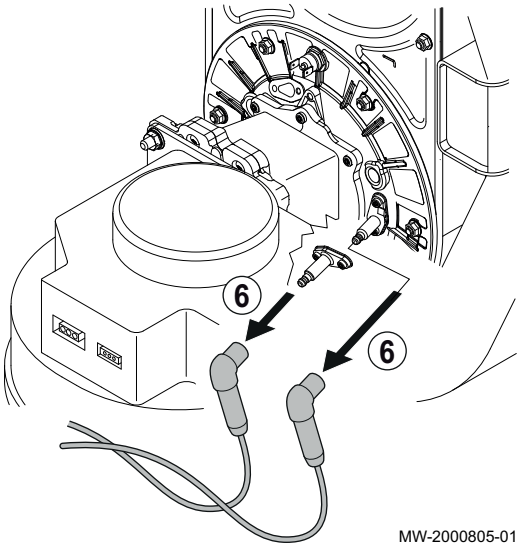


Fig.155

7. Disconnect the 2 wires from the safety thermostat on the combustion chamber door and the pin under the ignition electrode.

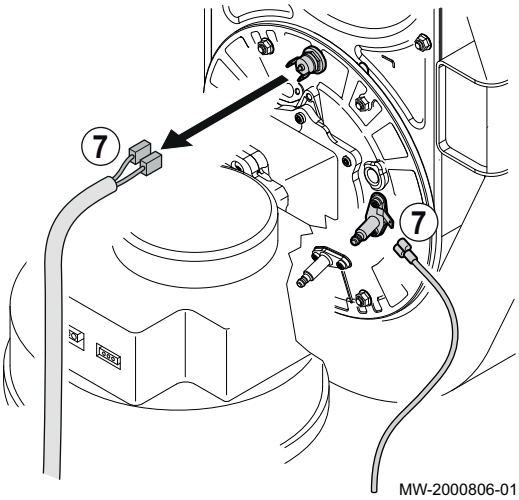
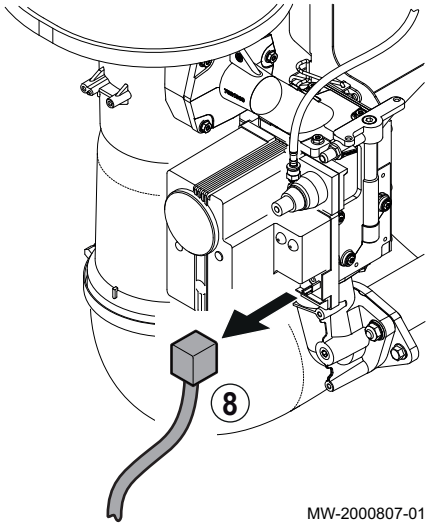
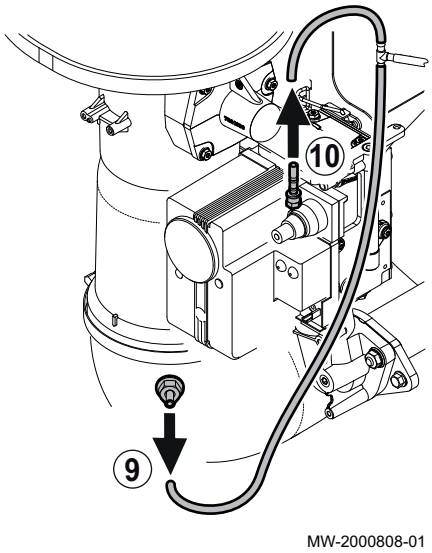


Fig.156



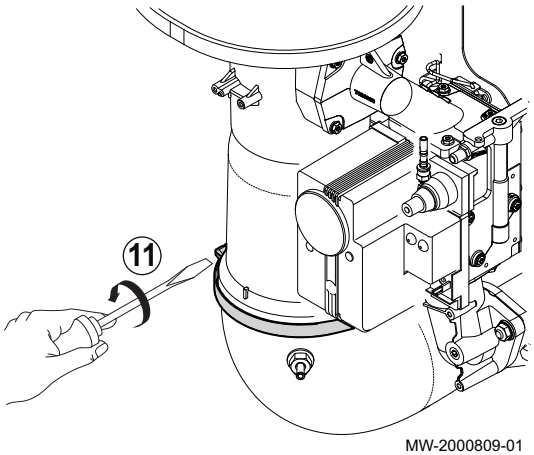
8. Remove the gas valve connector.

Fig.157



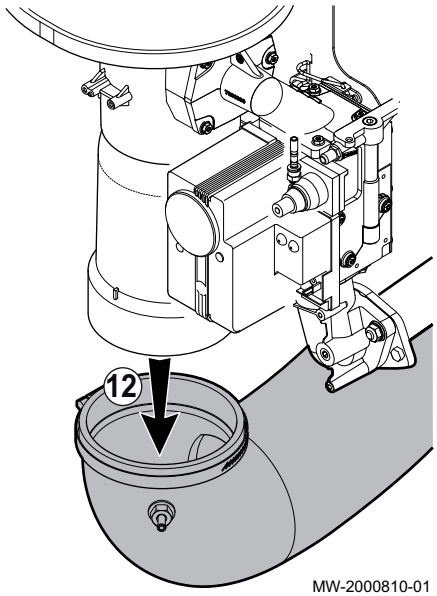
9. Remove the hose pipe.
10. Remove the gas valve pipe.

Fig.158



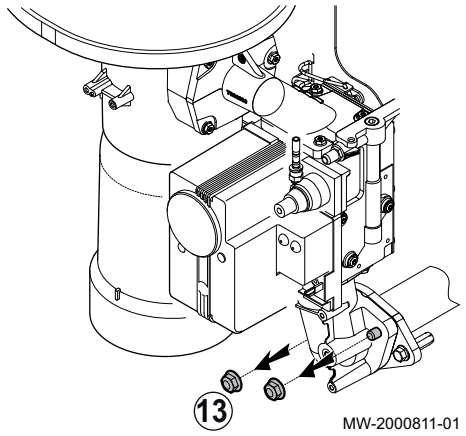
11. Remove the hose collar.

Fig.159



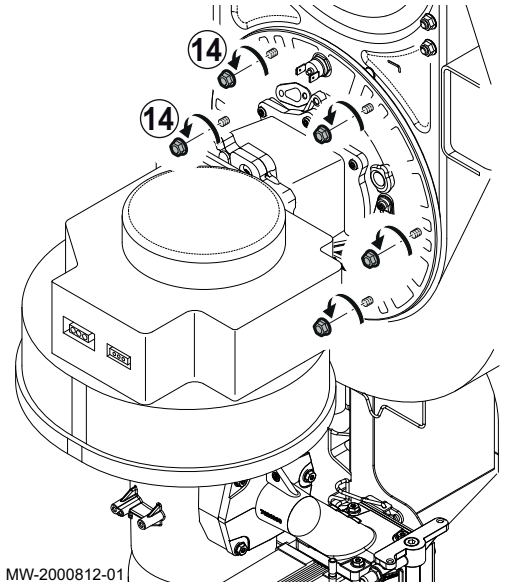
12. Remove the air supply.

Fig.160



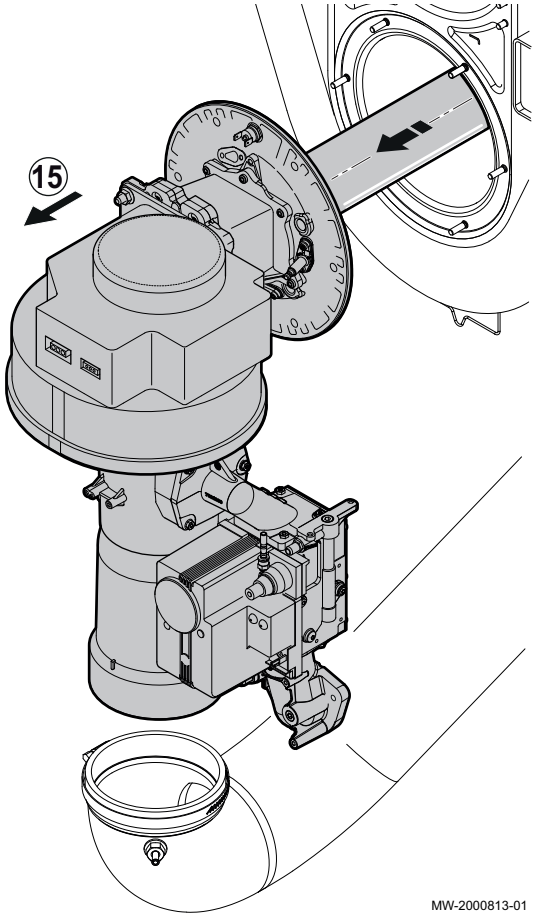
13. Remove the 2 nuts.

Fig.161



14. Remove the nuts holding the burner in place on the heat exchanger.

Fig.162



15. Remove the assembly comprising the fan, Venturi, burner and gas valve to access the inside of the heat exchanger.

11.2.3 Cleaning the heat exchanger

1. Remove the door.
2. Vacuum up any combustion residue.

Fig.163

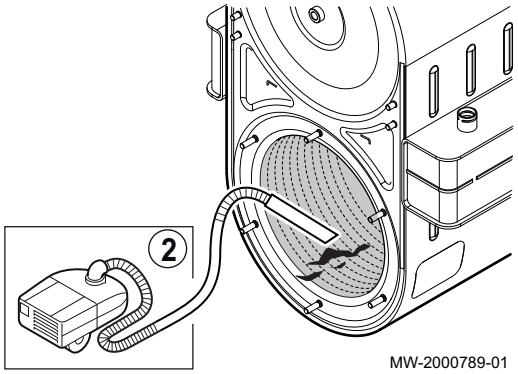
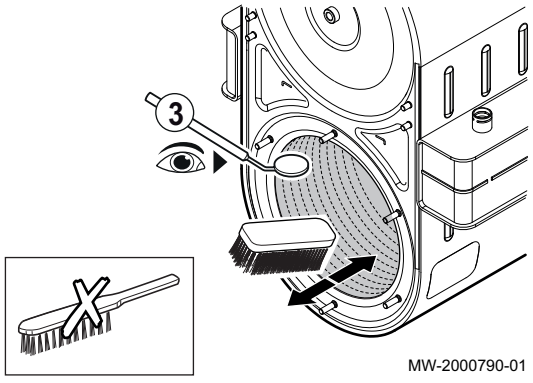


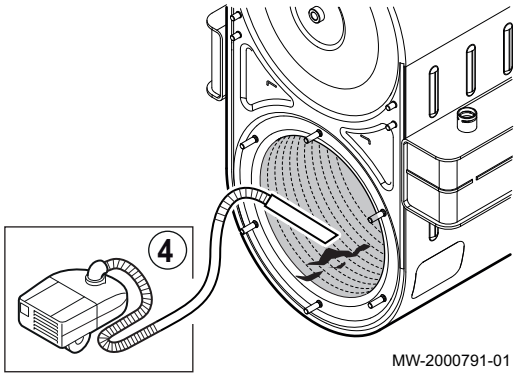
Fig.164



3. Clean using a nylon brush.

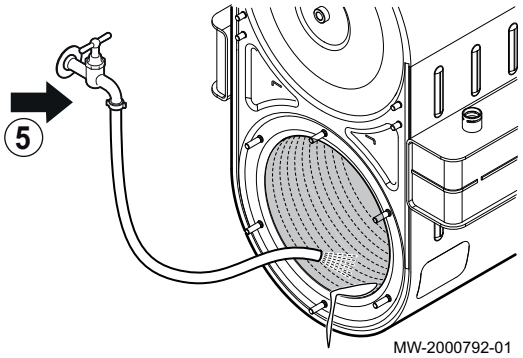
Warning
Only use a nylon brush. Do not use a metal brush. Using a metal brush will irreparably damage the heat exchanger.

Fig.165



4. Vacuum up the remaining residue.

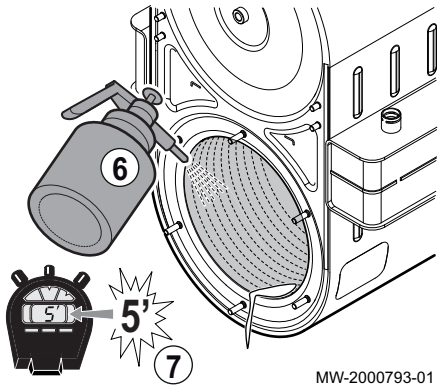
Fig.166



5. Rinse with clean water.

Warning
Do not rinse the deflector insulation.

Fig.167

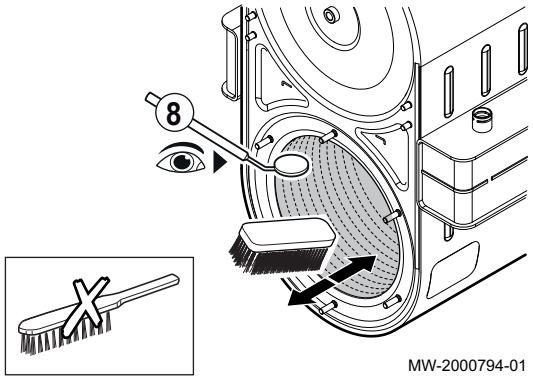


6. Spray with white vinegar or a cleaning product suitable for stainless steel.

Warning
This step must be carried out if there is a high level of fouling, and may be repeated several times.

7. Leave to work for 3 to 5 minutes.

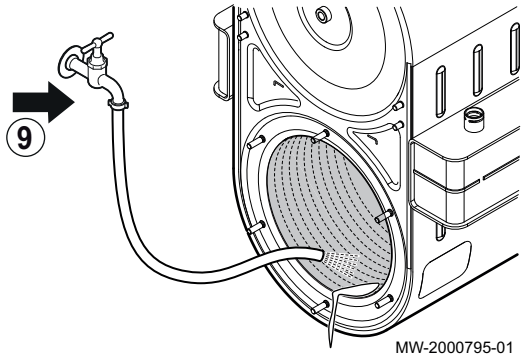
Fig.168



8. Clean using a nylon brush.

Warning
Only use a nylon brush. Do not use a metal brush. Using a metal brush will irreparably damage the heat exchanger.

Fig.169



9. Rinse with clean water.

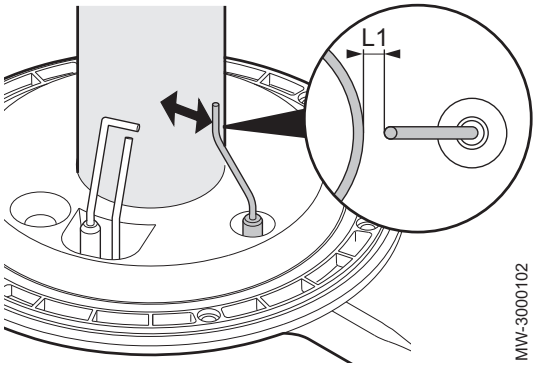
Warning
Do not rinse the deflector insulation.

11.2.4 Checking the burner

1. Remove the burner.
2. Check whether the surface of the burner is damaged in any way. Replace the burner and its gasket if they are damaged.
3. Check the safety thermostats.
   ⇨ Replace the safety thermostats if they are damaged.
4. Clean the burner with a vacuum cleaner.

Important
Do not use a brush as it may damage the burner.

Fig.170



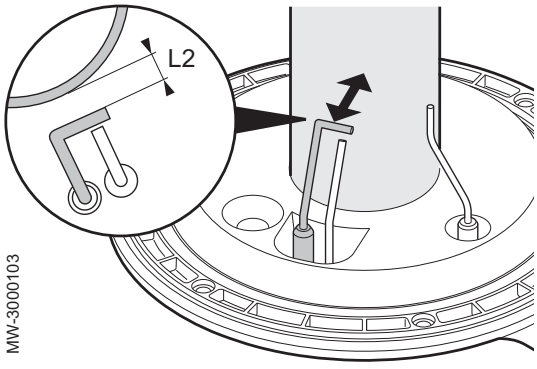
5. Check the distance between the flame detection electrode and the burner.

Tab.73 L1

Boiler model	Distances and tolerances to be observed for the flame detection electrode and the burner (mm)
IX 245–130	8 +/-1
IX 245–150	8 +/-1
IX 245–200	10.5 +/- 2
IX 245–250	10.5 +/- 2

Important
Replace the flame detection electrode if it is damaged.

Fig.171



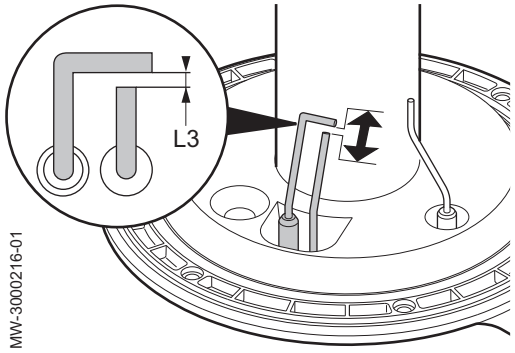
6. Check the distance between the ignition electrode and the burner.

Tab.74 L2

Boiler model	Distances and tolerances to be observed for the ignition electrode and the burner (mm)
IX 245–130	8 +/-1
IX 245–150	8 +/-1
IX 245–200	10.5 +/- 1
IX 245–250	10.5 +/- 1

Important
Replace the ignition electrode if it is damaged.

Fig.172



7. Check the distance between the ignition electrode and the ground electrode.

Tab.75 L3

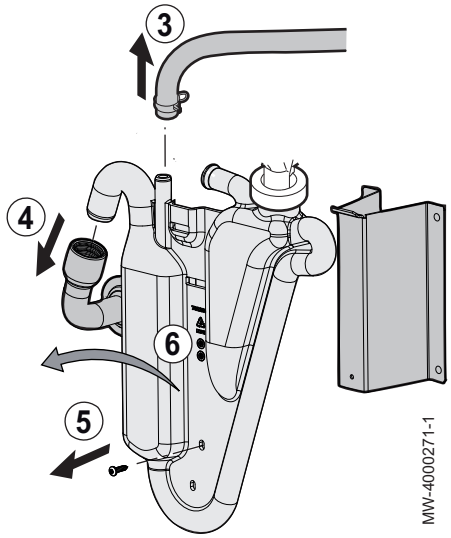
Boiler model	Distances and tolerances to be observed for the ignition electrode and the ground electrode (mm)
IX 245–130	4.5 +/-0.5
IX 245–150	4.5 +/-0.5
IX 245–200	4.5 +/-0.5
IX 245–250	4.5 +/-0.5

8. Check there is no damage to the insulation on the inside surface of the burner. The surface must be clean and free of any damage.
   ⇨ Replace the insulation if it is damaged.
9. Remount the burner.

11.2.5 Cleaning the siphon

■ **IX 245–130 and IX 245–150**

Fig.173

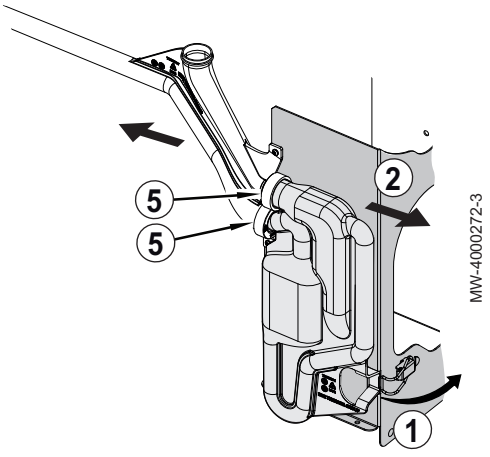


1. Remove the burner.
2. Access the siphon.
3. Disconnect the pipe leading from the rainwater holding tank.
4. Disconnect the condensate discharge pipe.
5. Remove the screw retaining the siphon.
6. Remove the siphon by pulling it towards you.
7. Clean the bottom of the siphon with water.
8. Completely fill the siphon.
9. Refit the siphon and fit the screw to hold the siphon in place.
10. Remount the burner.

Danger
Fill the siphon to the top. If the siphon is empty, there is a danger of intoxication by exhaust gases.

■ **IX 245–200 and IX 245–250**

Fig.174



1. Open the spring clip retaining the siphon.
2. Remove the siphon by pulling it towards you.
3. Clean the bottom of the siphon with water.
4. Completely fill the siphon.
5. Lubricate the gaskets using special grease for flue systems or silicone.
6. Refit the siphon and reattach the spring clip to hold the siphon in place.

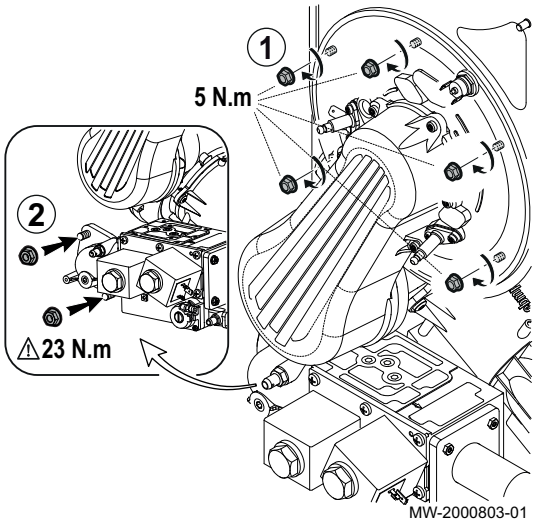
Danger
Fill the siphon to the top. If the siphon is empty, there is a danger of intoxication by exhaust gases.

11.2.6 Refitting the burner

■ IX 245–130 and IX 245–150

Important
Replace the sealing gaskets to ensure perfect leak-tightness is maintained.

Fig.175



1. Refit the assembly comprising the fan, Venturi, burner and gas valve.
2. Refit the nuts holding the burner in place on the exchanger.

Important
Observe the tightening torque.

3. Refit the screws securing the gas inlet tube elbow.

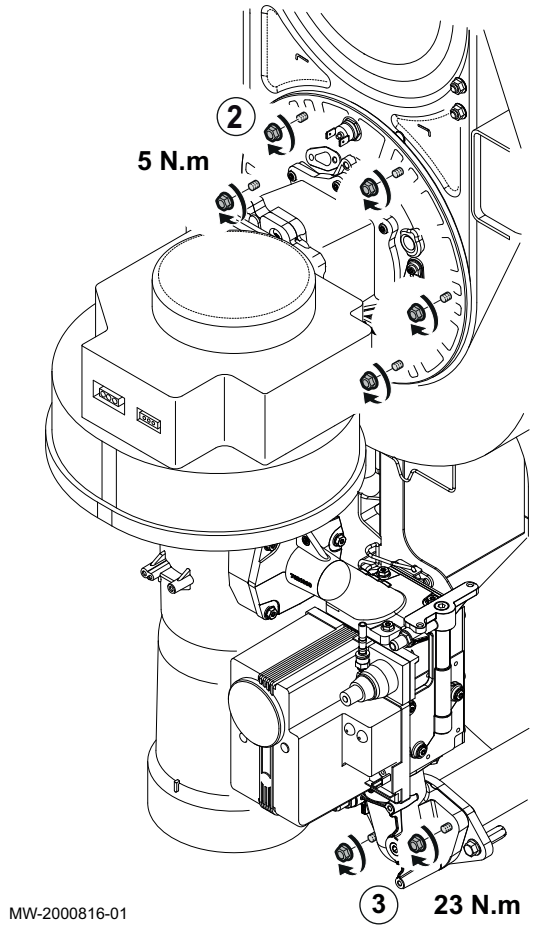
Important
Observe the tightening torque.

4. Reconnect the 2 connectors to the gas valve.
5. Reconnect the 2 wires between the safety thermostat on the combustion chamber door and the pin under the ignition electrode.
6. Reconnect the ignition electrode and the flame detection sensor.
7. Reconnect the power supply and command cables on the fan.

■ IX 245–200 and IX 245–250

Important
Replace the sealing gaskets to ensure perfect leak-tightness is maintained.

Fig.176



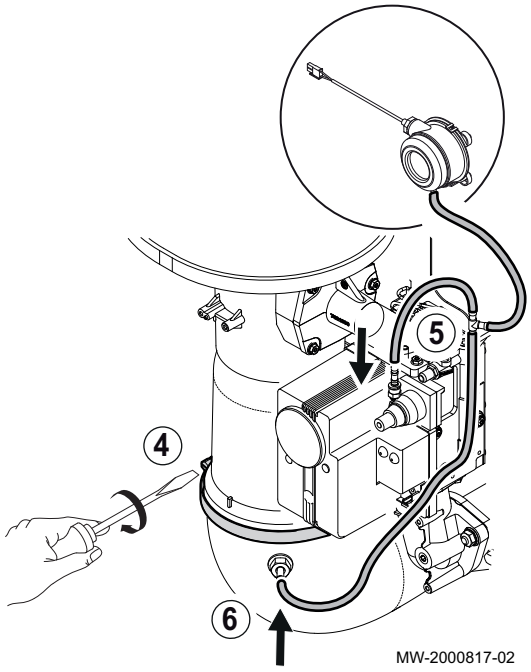
1. Refit the assembly comprising the fan, Venturi, burner and gas valve.
2. Refit the nuts holding the burner in place on the exchanger.

Important
Observe the tightening torque.

3. Refit the screws securing the gas inlet tube elbow.

Important
Observe the tightening torque.

Fig.177



4. Reattach the elbow for the air supply tube using the collar.
5. Reconnect the gas valve pipe.
6. Reconnect the hose pipe.
7. Reconnect the connector to the gas valve.
8. Reconnect the 2 wires between the safety thermostat on the combustion chamber door and the pin under the ignition electrode.
9. Reconnect the ignition electrode and the flame detection sensor.
10. Reconnect the power supply and command cables on the fan.

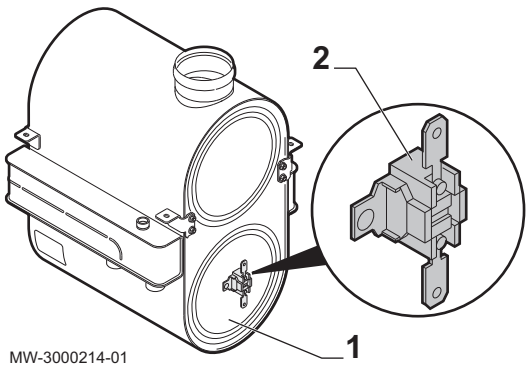
11.2.7 Thermal fuse in the heat exchanger

The thermal fuse is located in the rear part of the heat exchanger and is connected in series to the safety thermostat.

The function of the thermal fuse is to ensure the protection of the heat exchanger against the danger of overheating if the insulation malfunctions.

Intervention by the device is signalled by the on-screen display of the anomaly **110:Lockout SLT**.

Fig.178



1 Rear of the heat exchanger
2 Thermal fuse

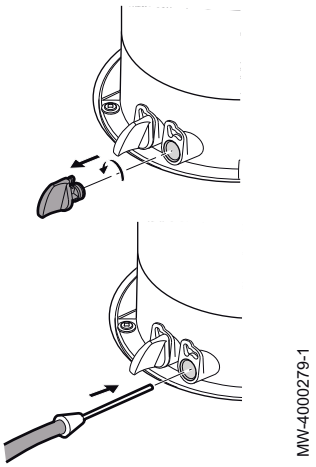
Important
When replacing the thermal fuse, also replace the insulating surface inside the heat exchanger. This insulating surface has been damaged by overheating.

11.2.8 Check the combustion

Checking combustion (maximum heat input)

1. Check the combustion with the maximum heat input.

Fig.179



2. IX 245–130 and IX 245–150 (coaxial pipes): if necessary, check the return into circulation of any combustion products. The sensor will then be connected to the outlet connected to the combustion air intake circuit.

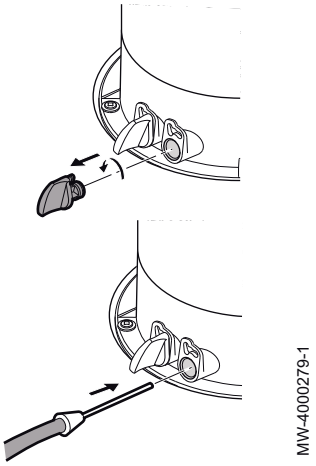
For more information, see
Setting the air/gas ratio (maximum heat input), page 75

■ Checking combustion (reduced heat input)

1. Check the combustion with reduced heat input.
2. IX 245–130 and IX 245–150 (coaxial pipes): if necessary, check the return into circulation of any combustion products. The sensor will then be connected to the outlet connected to the combustion air intake circuit.

For more information, see
Setting the air/gas ratio (reduced heat input), page 77

Fig.180



11.2.9 Cleaning the plate heat exchanger (optional kit)

Fig.181

1. Close the two valves on the secondary side.

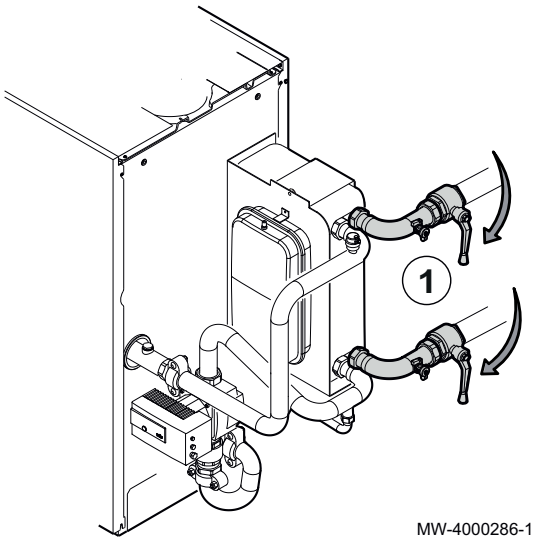
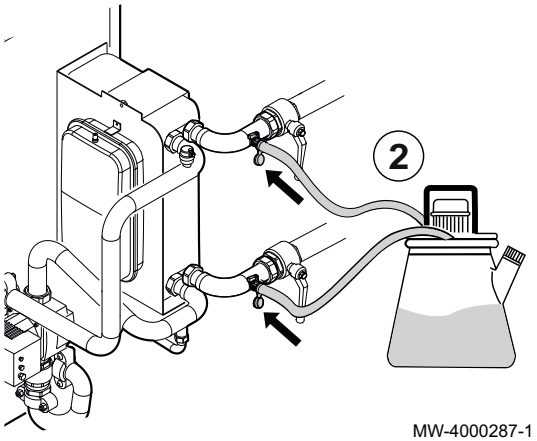
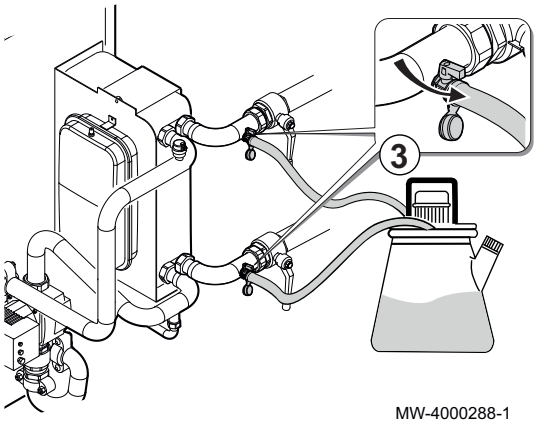


Fig.182



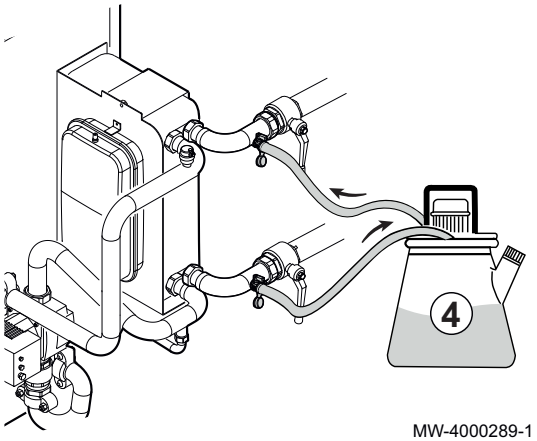
2. Connect the cleaning pump to the valves.

Fig.183



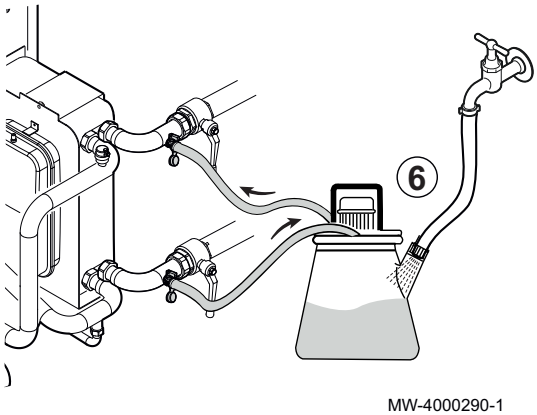
3. Open the valves.

Fig.184



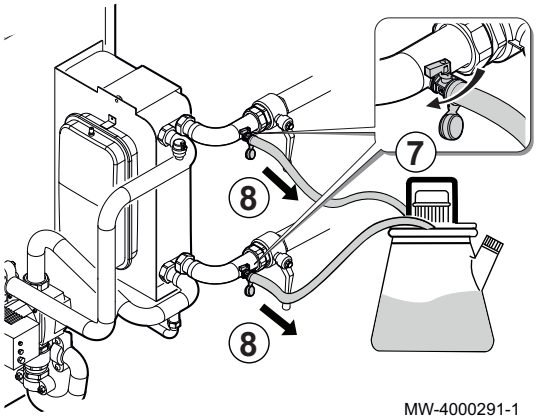
4. Descale using a suitable product.
5. Flush through a neutralisation and passivation product.

Fig.185



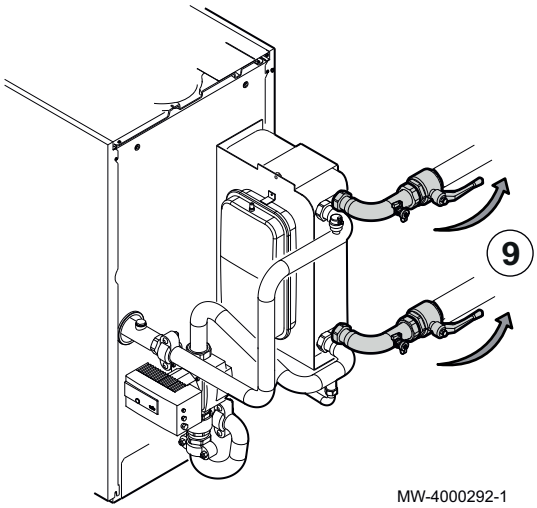
6. Rinse the plate heat exchanger with water until a pH of between 6 and 9 is reached.

Fig.186



7. Close the valves.
8. Disconnect the cleaning pump.

Fig.187

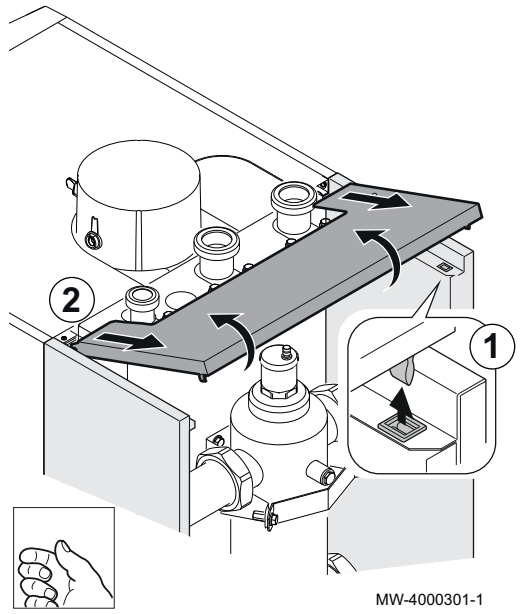


9. Open the two valves on the secondary side.

11.2.10 Cleaning the low-loss header (optional kit)

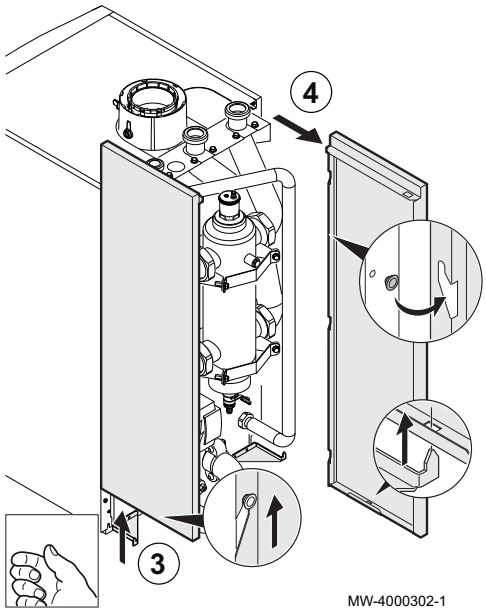
- **IX 245–130 and IX 245–150**

Fig.188



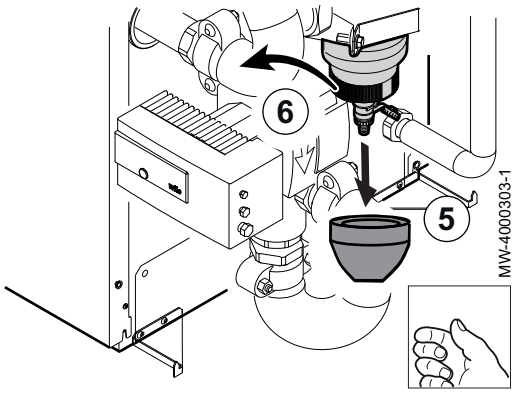
1. Lift the upper panel on the low-loss header kit.
2. Pull the upper panel on the low-loss header kit to remove it.

Fig.189



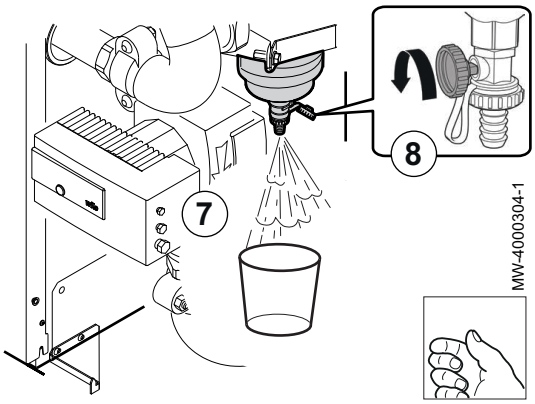
3. Lift the two side panels on the low-loss header kit.
4. Pull the two side panels on the low-loss header kit to remove them.

Fig.190



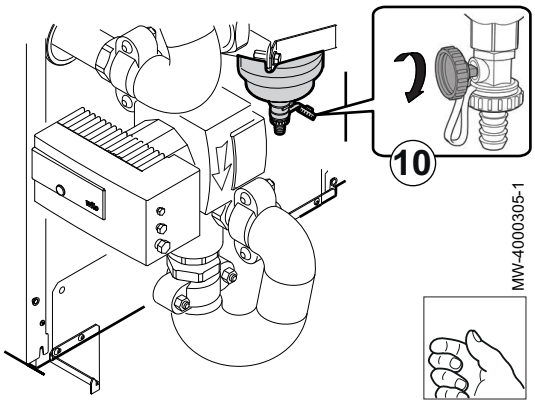
5. Remove the lower insulating shell.
6. Remove the magnetic ring.

Fig.191



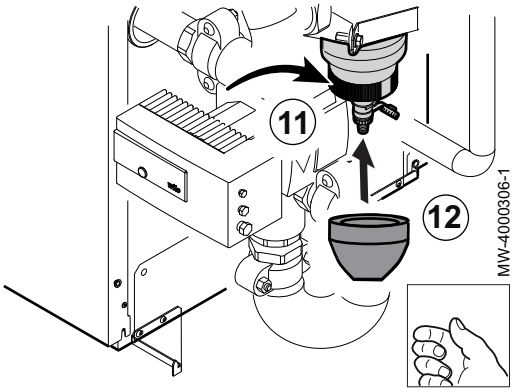
7. Place a container with sufficient capacity underneath the low-loss header vent valve.
8. Open the vent valve, using the plug.
9. Allow the flow to continue until no more dirt is present.

Fig.192



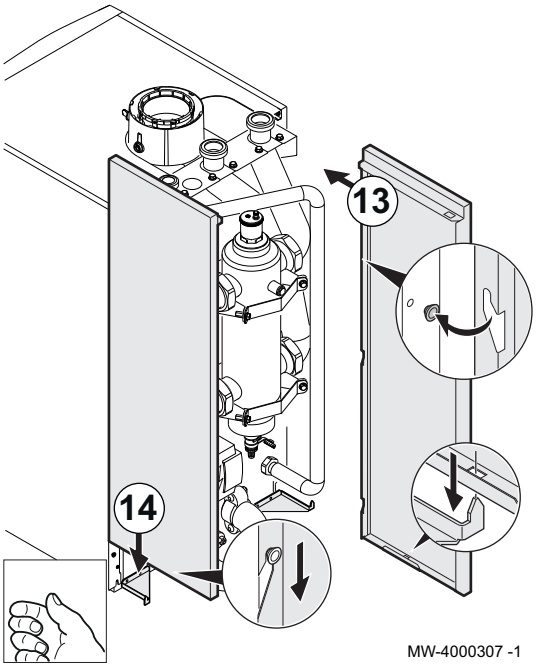
10. Close the vent valve, using the plug.

Fig.193



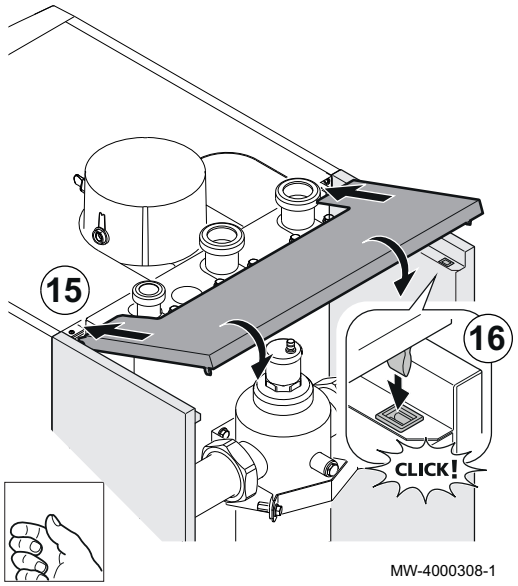
11. Refit the magnetic ring.
12. Refit the insulation on the low-loss header.

Fig.194



13. Refit the two side panels on the low-loss header kit.
14. Ensure the two side panels are securely seated by pressing firmly on them.

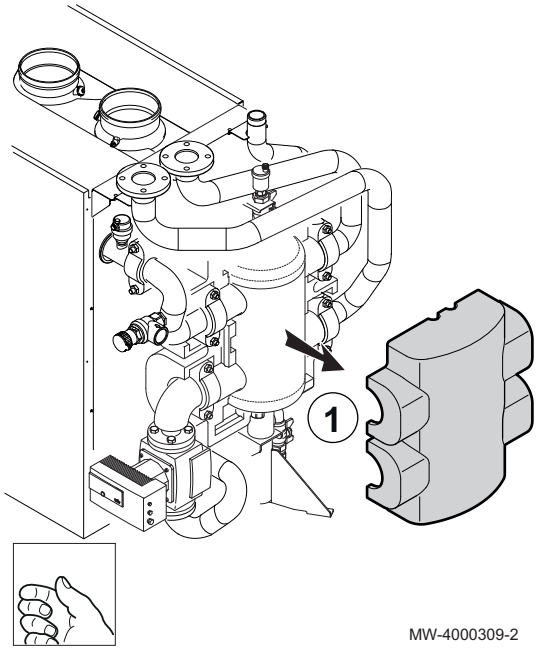
Fig.195



15. Insert the upper panel on the low-loss header kit.
16. Ensure the upper panel is securely seated by pressing firmly on it.

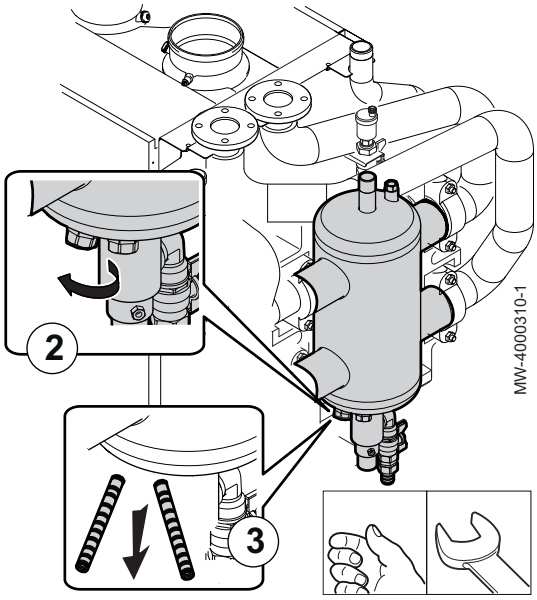
■ IX 245–200 and IX 245–250

Fig.196



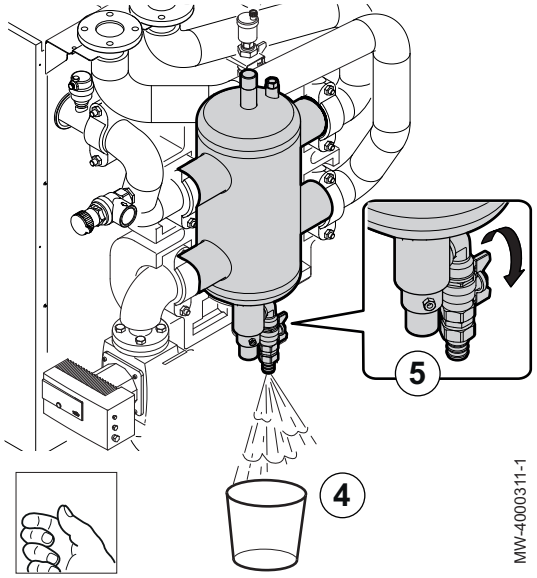
1. Remove the insulating shell.

Fig.197



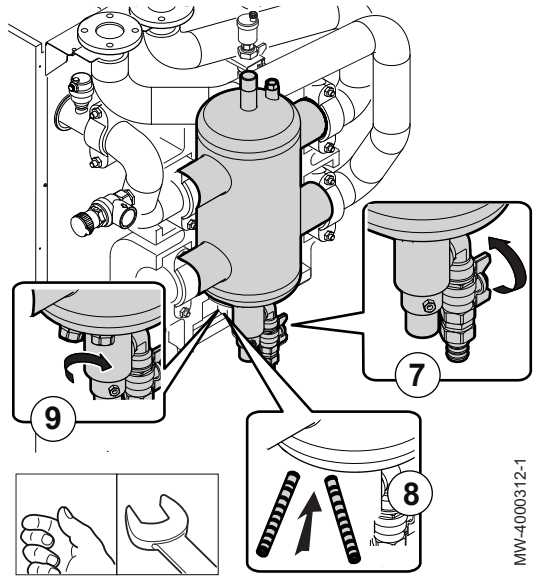
2. Remove the 2 screw plugs.
3. Remove the 2 magnetic bars from their housings.

Fig.198



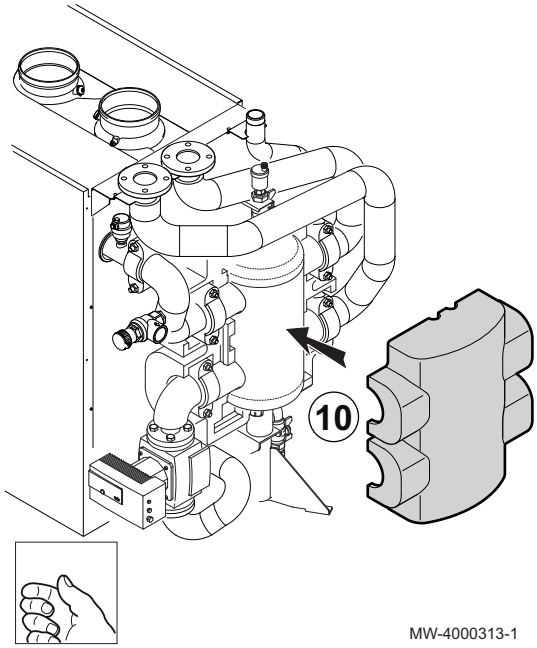
4. Place a container with sufficient capacity underneath the low-loss header vent valve.
5. Open the vent valve.
6. Allow the flow to continue until no more dirt is present.

Fig.199



7. Close the vent valve.
8. Refit the 2 magnetic bars in their housings.
9. Refit the screw plugs.

Fig.200

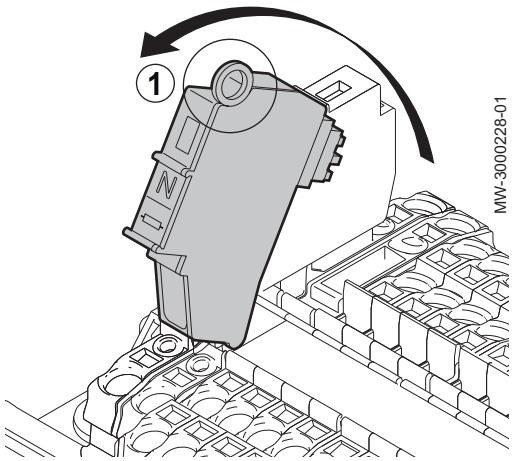


10. Refit the insulating shell on the low-loss header.

11.3 Replacing the 6.3 A fuses on the electrical terminal blocks

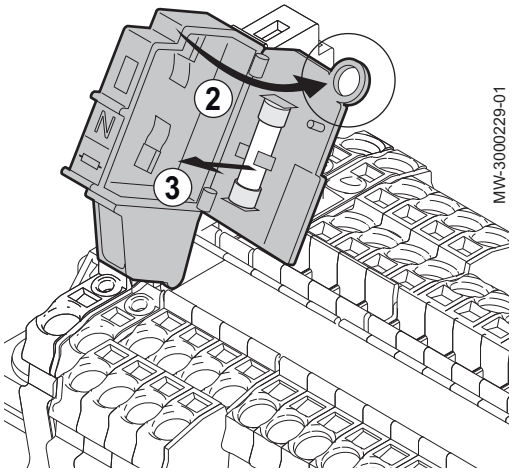
Danger of electric shock
Before any work, switch off the mains supply to the boiler.

Fig.201



1. Pivot the fuse-holder socket **N** towards you.

Fig.202

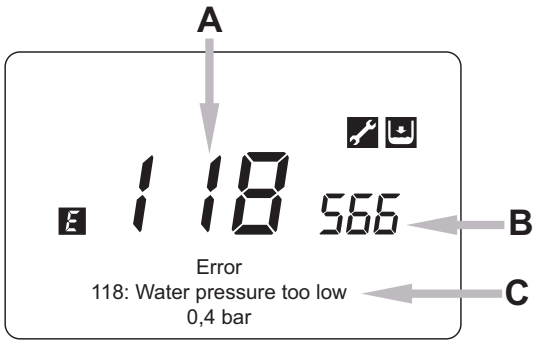


2. Open the fuse-holder socket with the eyelet.
3. Take out the damaged fuse and replace it with an identical one (6.3 A).
4. Check the fuse **L**, proceeding in the same way.

12 Troubleshooting

12.1 Error codes

Fig.203



BM-0000026-GB-03

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

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

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

Important
If the display of the error code persists, contact the accredited assistance service.

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

12.1.1 List of error codes

Tab.76 List of error codes

E	Display	Description of the error	Probable causes	Check/Solution
10	10:Outside sensor	Outdoor temperature sensor.	The outdoor temperature sensor is not correctly connected to the boiler	Check that the outdoor temperature sensor has been correctly connected to the boiler sensor terminal block
			The outdoor temperature sensor is not compatible with the LMS 14 control system	Contact your manufacturer to check the compatibility of the outdoor temperature sensor with the boiler
			The outdoor temperature sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table (1 K sensor)
20	20:Boiler sensor 1	NTC flow back sensor.	The flow sensor is not correctly connected	Check that the flow sensor has been correctly connected to the boiler PCB
			The flow sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the water temperature using the "Resistance/Temperature" correspondence table (10 K sensor)
28	28:Flue gas temp sensor	NTC flue gas sensor.	The flue gas sensor is not correctly connected	Check that the flue gas sensor has been correctly connected to the boiler PCB
			The flue gas sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table (20 K sensor)

E	Display	Description of the error	Probable causes	Check/Solution
40	40:Return sensor 1	NTC return sensor	The return sensor is not correctly connected	Check that the return sensor has been correctly connected to the boiler PCB
			The return sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the water temperature using the "Resistance/Temperature" correspondence table (10 K sensor)
46	46:Return sensor cascade	Cascade return temperature sensor error	The return sensor is not correctly connected	Check that the return sensor has been correctly connected to the boiler PCB
			The return sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the water temperature using the "Resistance/Temperature" correspondence table (10 K sensor)
50	50:HW sensor 1	DHW sensor	The sensor is not correctly connected to the boiler sensor terminal block	Check that the sensor has been correctly connected to the boiler sensor terminal block
			The DHW temperature sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table (10 K sensor)
52	52:HW sensor 2	Solar DHW sensor (if incorporating a solar installation)	The sensor is not correctly connected to the boiler sensor terminal block	Check that the sensor has been correctly connected to the boiler sensor terminal block.
			The return temperature sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table (PT 1000 sensor)
60	60:Room sensor 1	Room temperature sensor 1 error	The sensor is not correctly connected to the boiler sensor terminal block	Check that the room sensor has been correctly connected to the boiler sensor terminal block
65	65:Room sensor 2	Room temperature sensor 2 error	The sensor is not correctly connected to the boiler sensor terminal block	Check that the room sensor has been correctly connected to the boiler sensor terminal block
68	68:Room sensor 3	Room temperature sensor 3 error	The sensor is not correctly connected to the boiler sensor terminal block	Check that the room sensor has been correctly connected to the boiler sensor terminal block
78	78:Water pressure sensor	Hydraulic pressure sensor error	The hydraulic pressure sensor is not connected to the PCB	Check that the connectors between the sensor and the PCB are correctly connected
			The hydraulic pressure sensor does not work	Replace the hydraulic pressure sensor. Please note that this action requires the boiler to be drained
73	73:Collector sensor 1	Solar collector sensor (if incorporating a solar installation)	The sensor is not correctly connected to the boiler sensor terminal block	Check that the sensor has been correctly connected to the boiler sensor terminal block
			The solar collector sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table (PT 1000 sensor)

E	Display	Description of the error	Probable causes	Check/Solution
83	83:BSB short-circuit	Communication problem between the boiler PCB and the control unit	The wire connecting the control unit to the boiler is not connected properly	Check that the wire connecting the control unit to the boiler has been correctly connected to the boiler sensor terminal block
84	84:BSB address collision	Address conflict between several control units	The remote controls have not been configured correctly	Check that the control unit is not configured on the same circuit as another unit
91	91:Data loss in EEPROM	Loss of data in EEPROM	Faulty PCB	Change the PCB
98	98:Extension module 1	Extension module 1 error	Extension module 1 is not correctly connected to the PCB	Check that the extension module 1 is correctly connected to the PCB
			Extension module 1 is not receiving a 230 V power supply	Check that the extension module 1 is correctly receiving a 230 V power supply via the power supply terminal block of auxiliary circuit 1
			Module 1 is not configured correctly	Check that the extension module 1 has been correctly configured in the "configuration" menu
99	99:Extension module 2	Extension module 2 error	Extension module 2 is not correctly connected to the PCB	Check that the extension module 2 is correctly connected to the PCB
			Extension module 2 is not receiving a 230 V power supply	Check that the extension module 2 is correctly receiving a 230 V power supply via the power supply terminal block of auxiliary circuit 1
			Module 2 is not configured correctly	Check that the extension module 2 has been correctly configured in the "configuration" menu
100	100:2 clock time masters	2 master clocks	Configuration error	Check that a single master is declared in the cascade. (Parameter 6630 cascade configuration section)
102	102:Clock without backup	Master clock with no power reserve	Configuration error	Check the configuration of parameter 6640 Clock operation in the cascade menu
103	103:Communication failure	Communication error.	Communication error on the cascade	Check the connections
				Check the cascade configuration
109	109:Boiler temp supervision	Boiler temperature monitoring.	The boiler has overheated, probably due to air in the hydraulic circuit	Manually vent the hydraulic circuit
			The boiler's flow/return sensors have been reversed	Check that the flow and return sensor connections inside the boiler have not been reversed
110 & 111	110:Lockout SLT	Safety thermostat cut-off for overheating	The water flow is insufficient	Check that the hydraulic circuit circulating pump is correctly operating.
			There is air in the hydraulic circuit	Manually vent the hydraulic circuit
			The safety thermostat is not connected correctly	Check that the safety thermostat is correctly connected to the boiler PCB
117	117:Water pressure too high	Pressure in hydraulic circuit too high.	The hydraulic pressure in the heating circuit is too high	Check the setting of the hydraulic circulating pump. If this is in manual mode, reduce the setpoint. Otherwise, depressurise using an air vent
118	118:Water pressure too low	Pressure in hydraulic circuit too low.	The hydraulic pressure in the heating circuit is too low	Open the water inlet valve to increase the pressure in the hydraulic circuit. Check that the circulating pump is operating
125	125:Boiler temp too high	Maximum boiler temperature exceeded	The water flow is insufficient	Check the operating status of the circulating pump

E	Display	Description of the error	Probable causes	Check/Solution
128	128:Loss of flame in op	Flame extinguished.	The flame has gone out	Check that the gas inlet valve is open and that the gas pressure is not too low. Also check that the combustion product discharge and air supply pipes are not blocked
130	130:Flue gas temp too high	Cut-off by NTC flue gas sensor for overheating.	The flue gases are too hot. This may be caused by the heating body being overly clogged	Clean the heating body
133	133:Safety time exceeded	Ignition error (4 attempts).	The boiler has not been supplied with gas	Check that the gas pipe valves are open
			The gas circuit has not been vented	Vent the gas pipe using the control valve located on the boiler
			The power supply has been reversed	Reverse the live-neutral polarity on the boiler power supply terminal block
151	151:BMU internal	Internal error on heating PCB.	The PCB is faulty	Change the PCB
152	152:Parameterization	General parameter setting error.	The PCB is faulty	Change the PCB
153	153:Unit locked	Appliance locked manually.	The main PCB is faulty	Check that the rotary button on the display is not locked in the pressed down position
				Change the main PCB
160	160:Fan speed threshold	Fan operation error.	The fan is not correctly connected to the boiler	Check that fan's control and supply outlets are correctly connected to the fan
			The fan is not responding correctly (wear due to prolonged use)	Switch off the boiler and let it rest for several minutes to allow the fan to cool down
			The fan does not work	Replace the fan
162	162:Air pressure switch	Air pressure switch	The flue gas differential pressure switch is triggered	Use a pressure gauge to check that the pressure difference between the air supply and the combustion products does not exceed 600 Pa at the connections on the concentric nozzle. If this is the case, the pipes for the air supply and combustion products may be blocked or may be longer than recommended in this manual.
			The flue gas pressure switch is not correctly connected to the PCB	Check that the connectors on the PCB (X7) and on the flue gas pressure switch are correctly connected.
178	178:Limit thermostat CH1	Safety thermostat CC1, fault on heating circuit 1.	The water flow is insufficient	Check that the hydraulic circuit circulating pump is correctly operating.
			There is air in the hydraulic circuit	Manually vent the hydraulic circuit
			The safety thermostat is not connected correctly	Check that the safety thermostat is correctly connected to the boiler PCB
179	179:Limit thermostat CH2	Safety thermostat CC2, fault on heating circuit 2.	The water flow is insufficient	Check that the hydraulic circuit circulating pump is correctly operating.
			There is air in the hydraulic circuit	Manually vent the hydraulic circuit
			The safety thermostat is not connected correctly	Check that the safety thermostat is correctly connected to the boiler PCB

E	Display	Description of the error	Probable causes	Check/Solution
321	321:HW outlet sensor	Domestic hot water sensor damaged.	The sensor is not correctly connected to the boiler sensor terminal block	Check that the sensor has been correctly connected to the boiler sensor terminal block
			The DHW temperature sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table
343	343:Solar integration missing	General parameter setting error on the solar system (if incorporating a solar system).	The solar installation has not been correctly configured on the boiler	Check the configuration of the solar system on the boiler
353	353:Casc sens B10 missing	B10 cascade sensor missing.	The sensor is not correctly connected to the boiler sensor terminal block	Check that the sensor has been correctly connected to the boiler sensor terminal block
			The DHW temperature sensor does not work	Use a suitable multimeter to check the resistance (Ω) of the sensor according to the room temperature using the "Resistance/Temperature" correspondence table
372	372:Limit thermostat CH3	Safety thermostat CC3, fault on heating circuit 2	The water flow is insufficient	Check that the hydraulic circuit circulating pump is correctly operating.
			There is air in the hydraulic circuit	Manually vent the hydraulic circuit
			The safety thermostat is not connected correctly	Check that the safety thermostat is correctly connected to the boiler PCB
373	373:Extension module 3	Extension module 3.	Extension module 3 is not correctly connected to the PCB	Check that the extension module 1 is correctly connected to the PCB
			Extension module 3 is not receiving a 230 V power supply	Check that the extension module 3 is correctly receiving a 230 V power supply via the power supply terminal block of auxiliary circuit 1
			Module 3 is not configured correctly	Check that the extension module 3 has been correctly configured in the "configuration" menu
385	385:Mains undervoltage	Power supply voltage too low.	The power supply voltage is too low	Use a voltmeter to check the power supply voltage.
				Check the earthing of the installation
386	386:Fan speed tolerance	Fan threshold speed not reached.	The fan is not responding correctly (wear due to prolonged use)	Switch off the boiler and let it rest for several minutes to allow the fan to cool down.
430	430:Dyn water pres too low	Safety cut-off for absence of circulation (check made by a pressure sensor).	The hydraulic circuit pressure is too low	Open the water inlet valve to increase the pressure in the hydraulic circuit.
				Check that the circulating pump is operating
432	432:Function ground missing	Earthing function not connected.	The boiler is not earthed properly	Check that the earth connection is correct on the power supply terminal block
E110	110:Lockout SLT	Code **E110** displayed	Overheating due to a breach in the insulation	Remove the heat exchanger.
				Replace the insulation behind the burner bracket.
				Replace the safety thermofuse behind the heat exchanger.

Important
This list is not exhaustive. Other error codes may be displayed. Contact the accredited technical support service.

Error 110:Lockout SLT

The code **110:Lockout SLT** is displayed to signify that one of the following 3 components has been triggered:

Tab.77

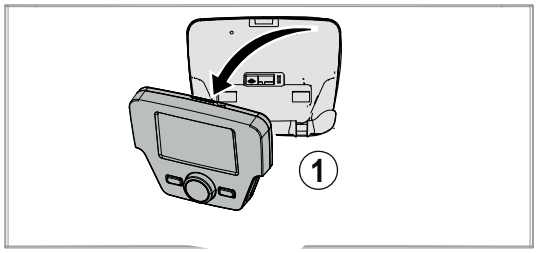
Component responsible	Steps to be performed
Safety thermostat on the combustion chamber door	• Switch off and power off the boiler. • Use an ohmmeter to check whether the component is triggered. In normal operation, the ohmmeter displays 0 Ω (circuit normally closed) • If the safety thermostat on the combustion chamber door has been triggered: - Remove the burner, - Replace the insulation on the combustion chamber door, - Use the tip of a pen to perform a manual reset.
Water safety thermostat	• Wait for the water temperature to drop. • Clear the error using the main button.
Exchanger thermofuse	• Switch off and power off the boiler. • Use an ohmmeter to check whether the component is triggered. In normal operation, the ohmmeter displays 0 Ω (circuit normally closed) • If the exchanger thermofuse has been triggered: - Remove the heat exchanger, - Replace the insulation behind the burner bracket, - Replace the safety thermostat thermofuse behind the heat exchanger.

Error 162:Air pressure switch

The error 162:Air pressure switch signifies that the flue gas differential pressure switch has been triggered several times over the last 24 hours.

Check that the air inlet and combustion products discharge pipes are not blocked. Unblock these if necessary.
After this procedure, proceed as follows to restart the boiler:

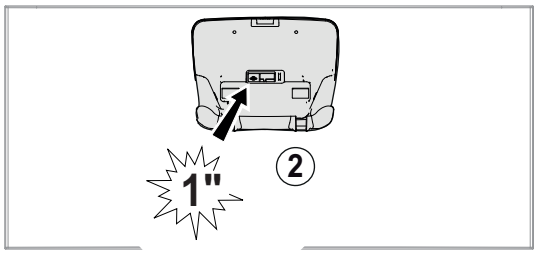
Fig.204



MW-4000273-2

1. Unclip the HMI by hand then remove it from its support: pull firmly on the slots at the bottom of the HMI.

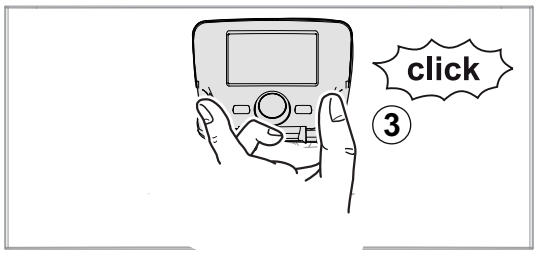
Fig.205



MW-4000274-2

2. Press the red button RESET on the boiler for 1 second using a pointed object.

Fig.206

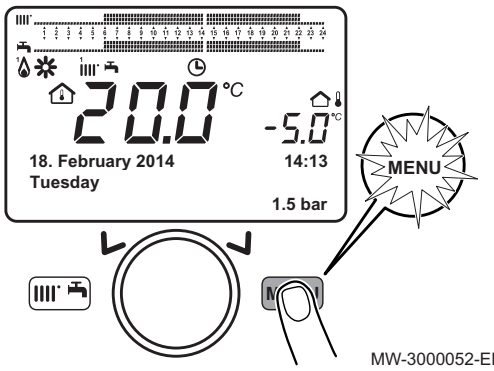


MW-4000275-2

3. Clip the HMI back onto its support.

12.2 Accessing the error memory

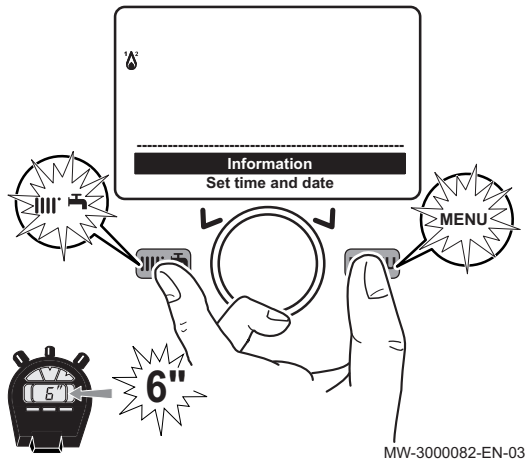
Fig.207



MW-3000052-EN-02

1. Press the (MENU) key to access the parameters.

Fig.208



MW-3000082-EN-03

2. Press the and (MENU) keys simultaneously for at least 6 seconds.
3. Select the **Commissioning** menu by turning the button.
4. Confirm the menu selection by pressing the button.

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

⇨ The list of parameters for the **Error** mode can now be accessed. Use the button to consult them.

5. Select the **Error** menu by turning the button.
6. Confirm the menu selection by pressing the button.

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

For more information, see
List of installer parameters, page 87

12.3 Automatic error code clearing

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

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

12.4 Clearing error codes

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

1. Press the button.
   ⇨ The command **Reset? Yes** is displayed on the control panel.

2. Confirm by pressing the ◎ button.
   ⇨ The error code disappears after a few seconds.

13 Decommissioning

13.1 Decommissioning procedure

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

To switch off the boiler temporarily or permanently, proceed as follows:

1. Switch the boiler off.
2. Cut the electrical power to the boiler.
3. Close the gas valve on the boiler.
4. Drain the central heating system or ensure frost protection.
5. Close the door of the boiler to prevent air circulating inside it.
6. Remove the pipe connecting the boiler to the chimney and close the nozzle with a plug.

13.2 Recommissioning procedure

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

Should it prove necessary to carry out the recommissioning of the boiler, proceed as follows:

1. Re-establish electrical power to the boiler.
2. Remove the siphon.
3. Fill the siphon with water.
   ⇨ The siphon must be completely full.
4. Put the siphon back in place.
5. Fill the central heating system.
6. Open the boiler gas valve.
7. Start up the boiler.

14 Spare parts

14.1 General

If inspection or maintenance work bring to light the need to replace a component in the boiler:

Provide the reference number given in the spare parts list when ordering a spare part.

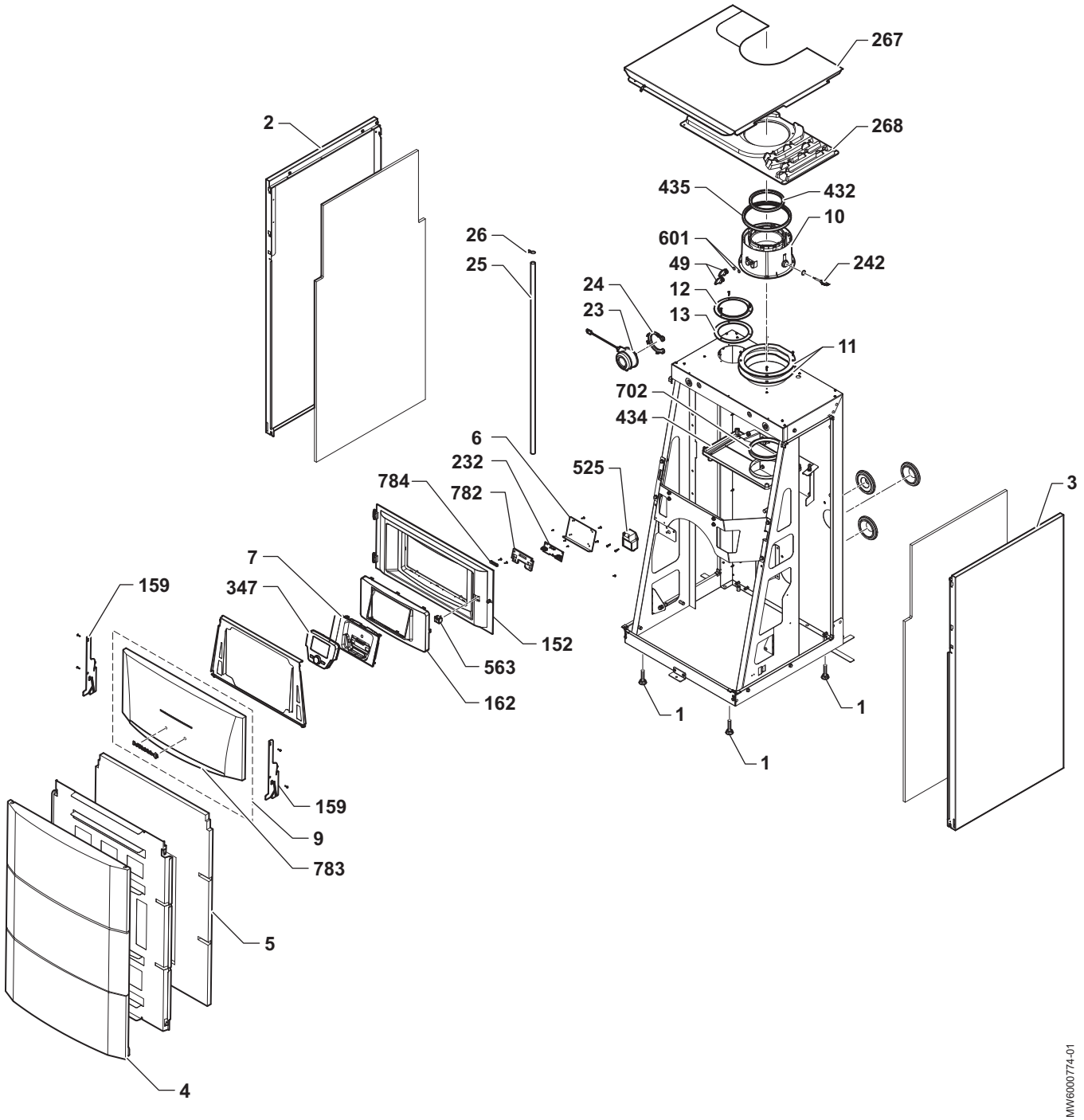
Caution
Only genuine spare parts may be used.

14.2 Spare parts lists

14.2.1 Spare parts lists for IX 245–130 and IX 245–150

- **Casing/Base frame for IX 245–130 and IX 245–150**

Fig.209

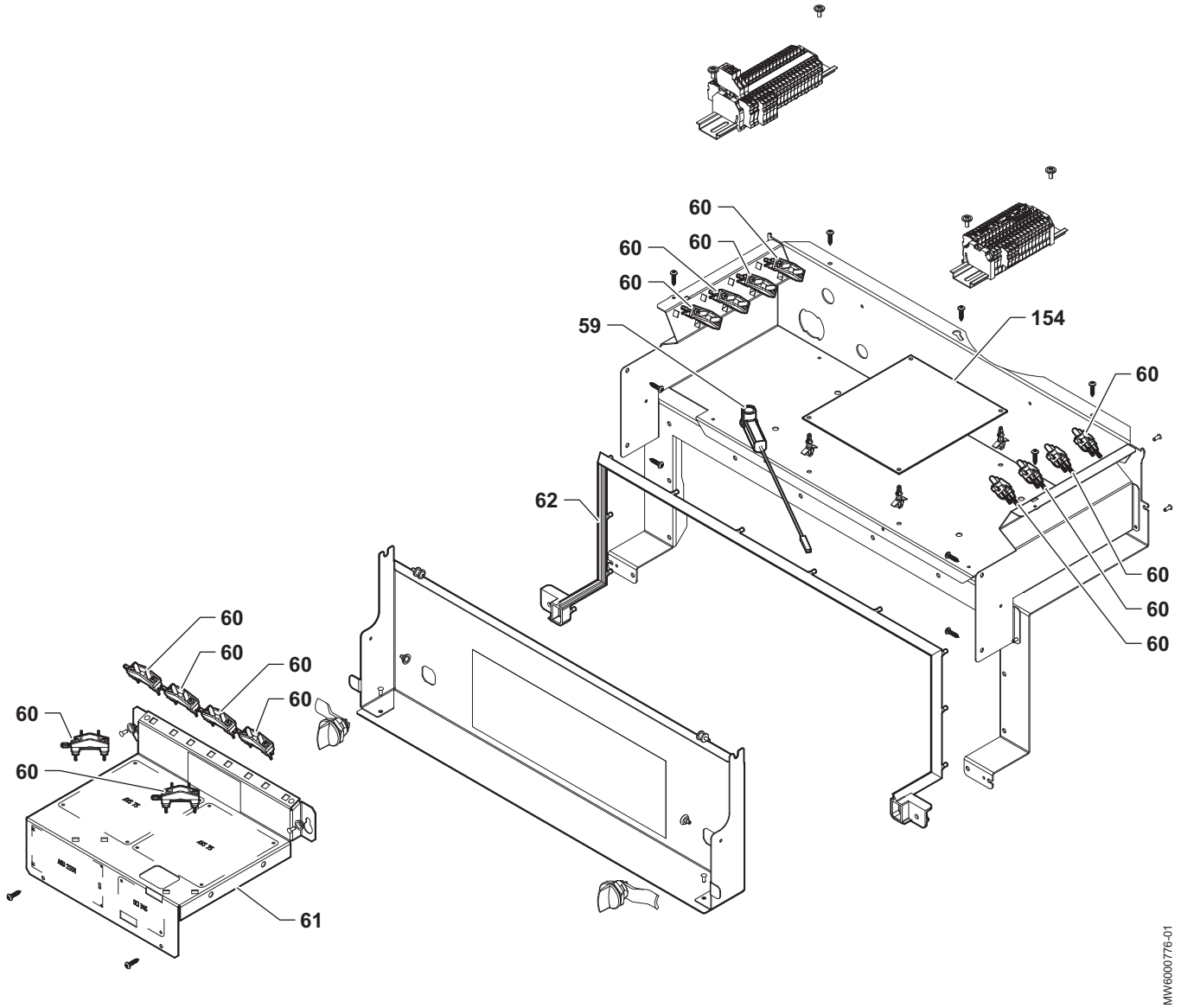


Tab.78 Casing/Base frame for IX 245–130 and IX 245–150

Marker	Reference	Description
1	300024451	Adjustable foot M8-45
2	7685265	Complete left panel
3	7685252	Complete right panel
4	200019243	Complete front panel
5	7688749	Foam front panel
6	144703	Panel cover
7	7684946	HMI support
9	300026529	Complete door with RAL9006 handle
10	7606342	Complete nozzle, Ø 110/160 mm
11	7613480	Nozzle gasket, Ø 110/160 mm
12	511611	Blanking plate, Ø 90/110 mm
13	541242	Blanking plate gasket, Ø 110 mm
23	7705875	Complete flue gas pressure switch
24	53931	Retaining clip for air pressure switch
25	94994712	PVC pipe, Ø 16x12 mm
26	7614685	Spring tightening clamp Ø 18.2 mm
49	7101077	Flue gas measurement point plug
152	7615287	Control panel
159	7606186	Control panel hook
162	7616612	Control panel base
232	7100281	PCB
242	7106824	CTN sensor, length 40 mm
267	7618314	Complete top panel, height 1150 mm
268	7669380	Cable way
347	7719110	QAA75 text HMI control
432	7103813	Pipe gasket, Ø 110 mm
434	7103734	Condensate collector, height 85-100 mm
435	7103810	Pipe gasket, Ø 160 mm
525	843522	2 V igniter
563	300024488	White bipolar switch
601	7101078	EPDM O-ring, Ø 8.73 x 1.78 mm
702	7103731	Condensate tray gasket
782	7101836	AVS 92 PCB gasket
783	300026530	Door handle, RAL9006
784	0293359	Cable clamp – top section (x2)

■ Control unit for IX 245–130 and IX 245–150

Fig.210

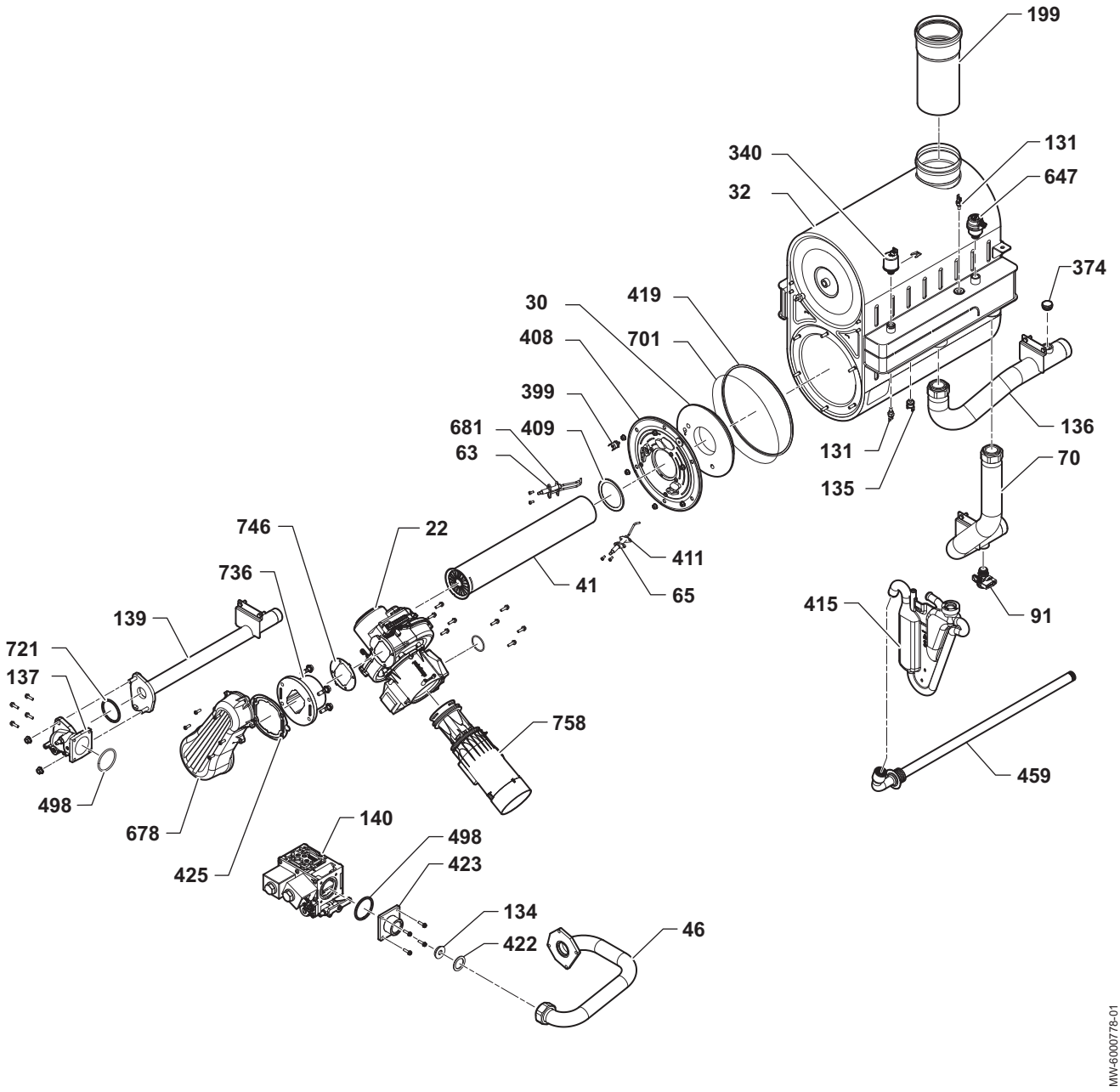


Tab.79 Control unit for IX 245–130 and IX 245–150

Marker	Reference	Description
59	851097	Ignition cable
60	95320187	Cable clamp 222.01.0087
61	7689206	AVS riveted module support
62	7691322	Control panel gasket
154	7717049	LMS14 C PCB for 130 kW boiler
154	7717050	LMS14 C PCB for 150 kW boiler

■ Heat exchanger for IX 245–130 and IX 245–150

Fig.211



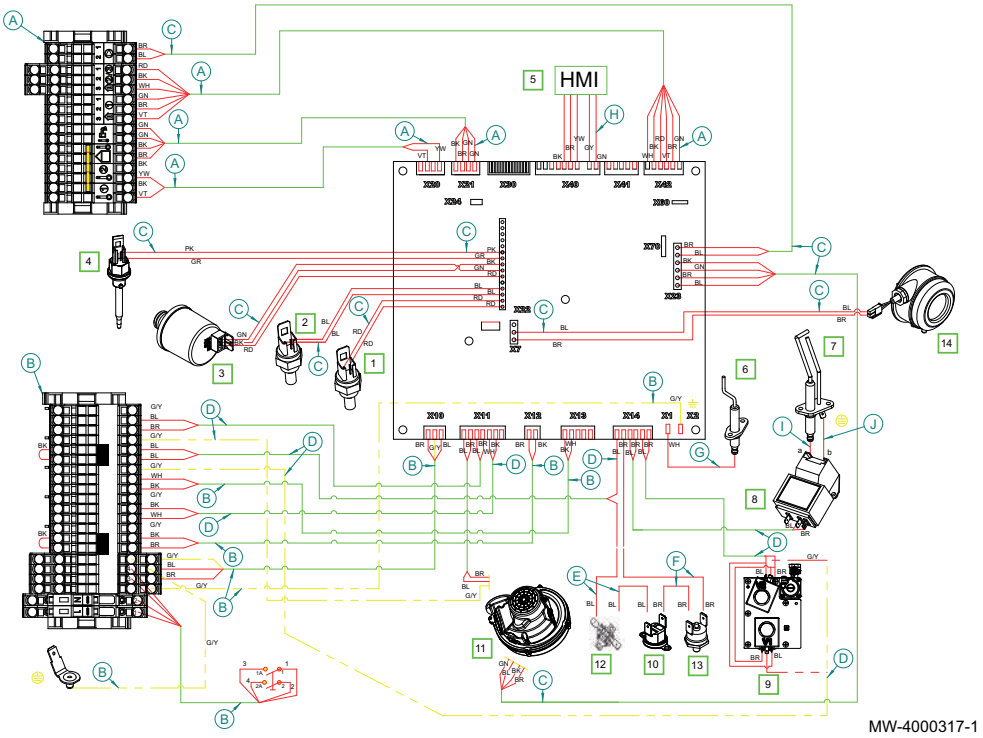
Tab.80 Heat exchanger for IX 245–130 and IX 245–150

Marker	Reference	Description
22	7705874	NRG 137 fan
30	7104878	Ceramic panel
32	7705876	130 kW duo exchanger
32	7705877	150 kW duo exchanger
41	7705878	BLUEJET 70 mm 150 kW burner
46	7709502	Gas pipe
63	7705879	Ignition electrode
65	7705900	Ionisation sensor
70	7709527	Return pipe
91	7709519	G 1/2" drain valve

Marker	Reference	Description
131	7101891	CTN S011021 SMD sensor
134	7705933	Ø 12 mm injector – G20 gas
135	300029470	Bimetal thermostat, 105 °C
136	7709521	Flow pipe
137	7718928	PN gas pipe
139	7709523	130 kW gas pipe
140	7705906	150 kW PN gas valve
199	7606350	D100 flue gas extension
340	7709514	HUBA 503 pressure gauge
374	94950113	1/2" solid plug
399	7114277	260G safety thermostat
408	7705910	BJ70 burner door
409	7705911	BJ70 burner gasket
411	7705920	Ionisation sensor gasket
415	7623677	Siphon + complete gasket
419	7114050	BJ70 burner door gasket
422	95013063	38x27x2 mm green gasket
423	7677591	Gas valve flange
425	7705915	Sleeve gasket
459	7692329	Complete condensate pipe
498	7705913	36x2.5 mm O-ring
647	7705918	G3/8 air vent with RIGAM O-ring.
678	7705919	RG175 fan collector
681	7705912	Ionisation sensor gasket
701	5212780	Thermocord gasket, Ø 6 mm
721	95013063	38x27x2 mm green gasket
736	7705921	Fan/collector adaptor
746	7705922	Fan gasket
758	7705923	Lower venturi

■ Wiring for IX 245–130 and IX 245–150

Fig.212



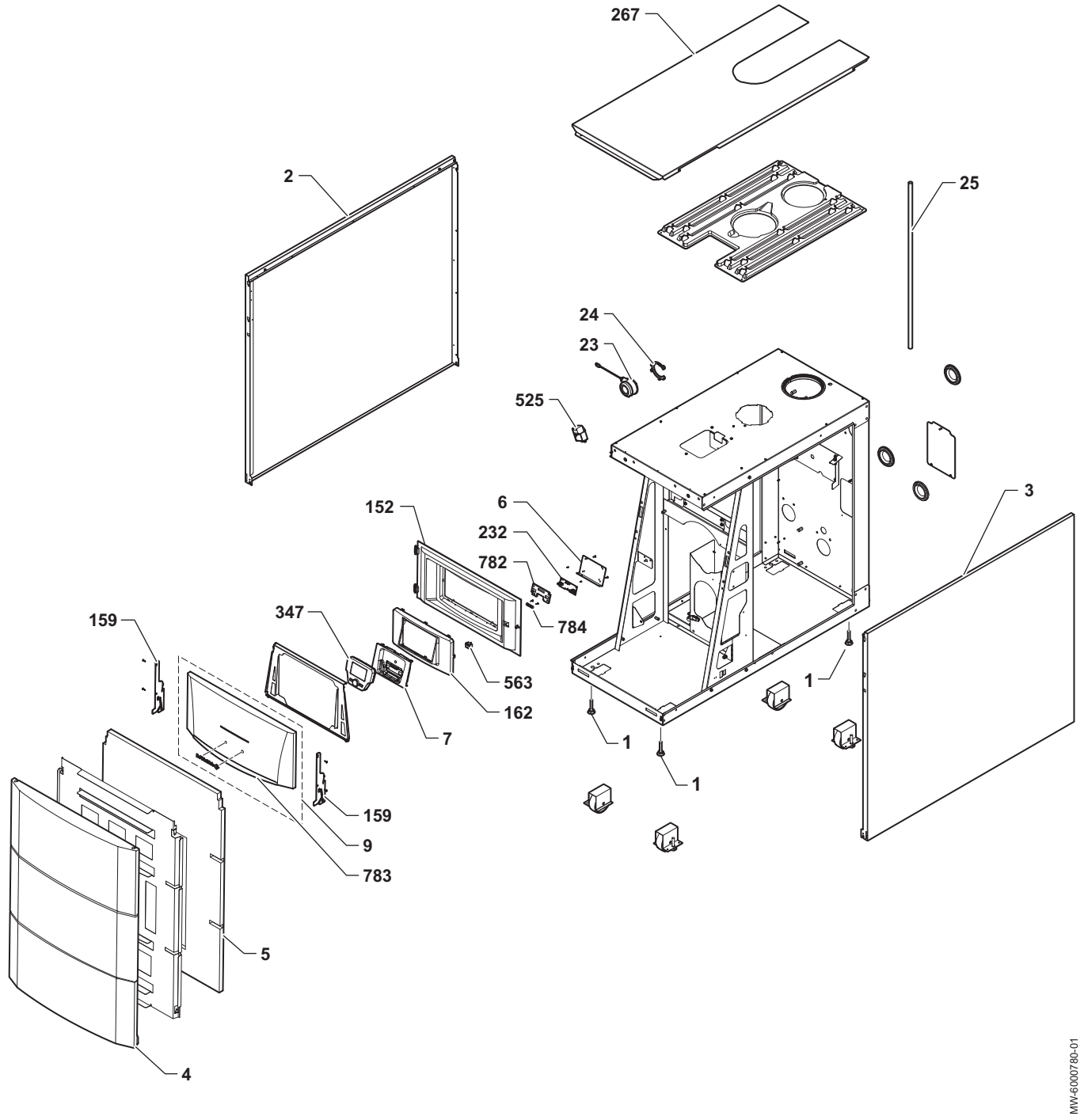
Tab.81 Wiring for IX 245–130 and IX 245–150

Marker	Reference	Description
A	7608991	24 V wiring – X20 X21 X42
B	7608992	230 V wiring – X10 X12 X13
C	7669775	24 V wiring – X22 X23
D	7709573	230 V wiring – X11 X14
E	7609415	Thermal fuse wiring
F	7672091	Safety thermostat wiring
G	7608718	X1 flame sensor wiring
H	7608684	LMS14 X40 wiring
I	851097	Ionisation cable
J	7107773	Earth cable, length 270 mm

14.2.2 Spare parts lists for IX 245–200 and IX 245–250

■ **Casing/Base frame for IX 245–200 and IX 245–250**

Fig.213



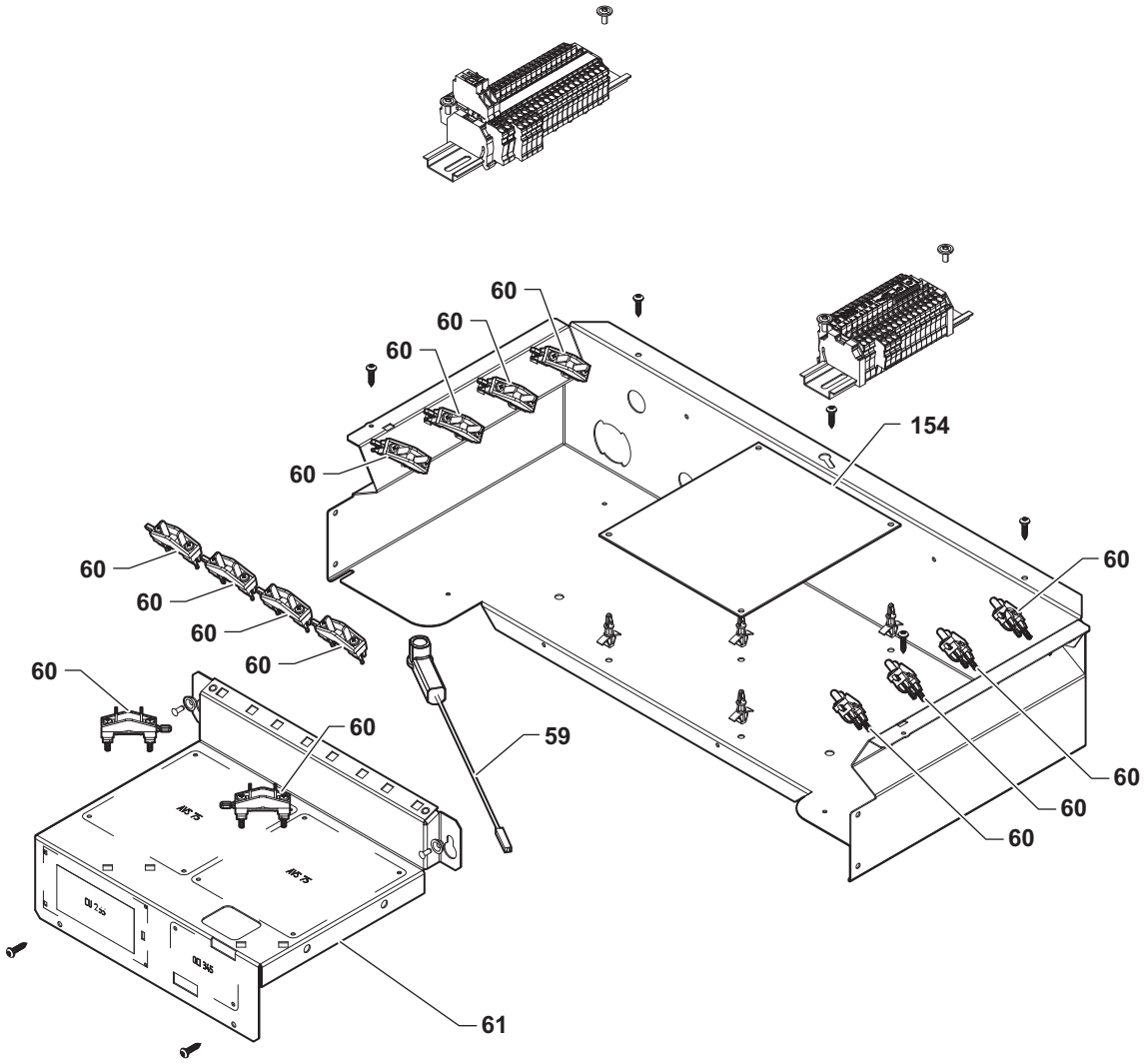
Tab.82 Casing/Base frame for IX 245–200 and IX 245–250

Marker	Reference	Description
1	300024451	Adjustable foot M8-45
2	7709568	Complete left panel
3	7709566	Complete right panel
4	200019243	Complete front panel

Marker	Reference	Description
5	7688749	Foam front panel
6	144703	Panel cover
7	7684946	HMI support
9	300026529	Complete Advance door with RAL9006 handle
23	7705875	Complete flue gas pressure switch
24	53931	Retaining clip for air pressure switch
25	94994712	PVC pipe, Ø 16x12 mm
152	7615287	Control panel
159	7606186	Control panel hook
162	7616612	Control panel base
232	7100281	PCB
267	7709562	Complete top panel, height 1150 mm
347	7719110	QAA75 text HMI control
525	843522	2 V igniter
563	300024488	White bipolar switch
782	7101836	AVS 92 PCB gasket
783	300026530	Door handle, RAL9006
784	0293359	Cable clamp – top section (x2)

■ Control unit for IX 245–200 and IX 245–250

Fig.214

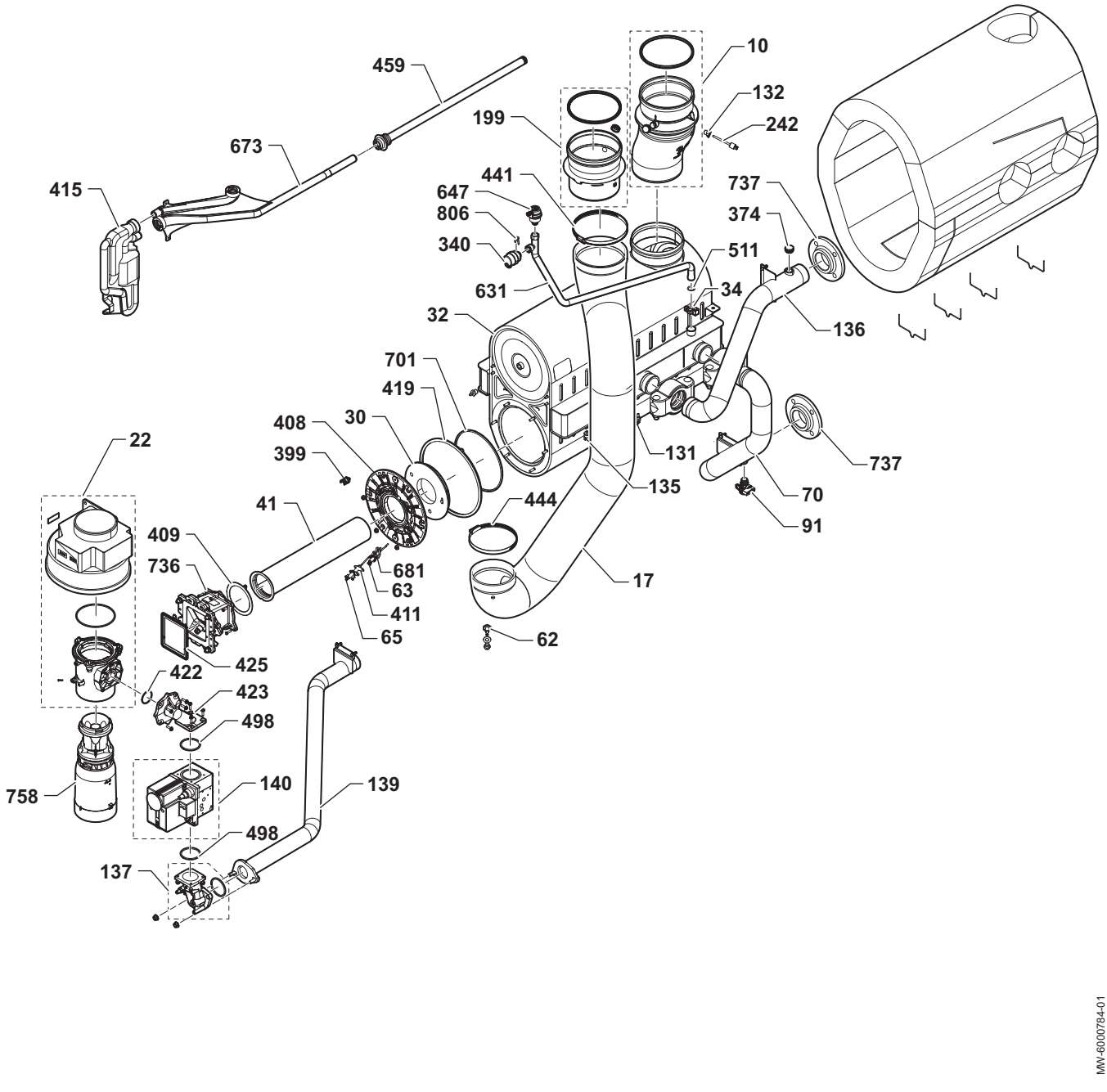


Tab.83 Control unit for IX 245–200 and IX 245–250

Marker	Reference	Description
59	851097	Ignition cable
60	95320187	Cable clamp 222.01.0087
61	7689206	AVS riveted module support
154	7717051	LMS14 C PCB for 200 kW boiler
154	7717052	LMS14 C PCB for 250 kW boiler

■ Heat exchanger for IX 245–200 and IX 245–250

Fig.215



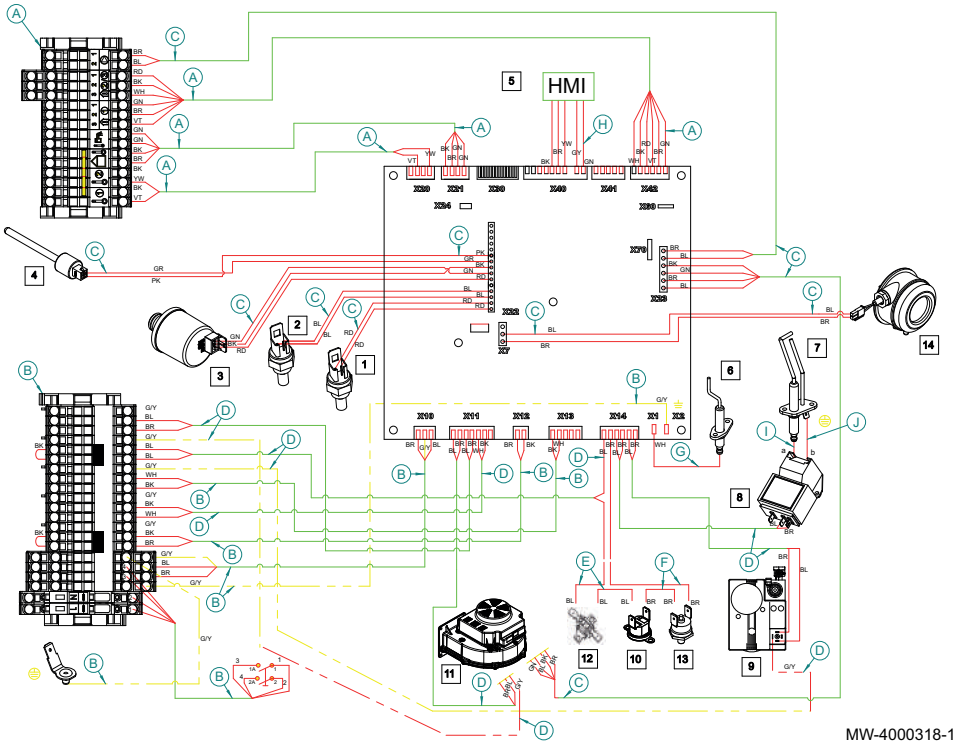
Tab.84 Heat exchanger for IX 245–200 and IX 245–250

Marker	Reference	Description
10	7709536	Flue gas outlet, Ø 150 mm
17	7709495	Air duct, 200 kW
17	7709496	Air duct, 250 kW
22	7709499	NRG 137 fan
30	7709510	Burner door insulation
32	7709507	130 kW duo exchanger

Marker	Reference	Description
32	7709508	150 kW duo exchanger
34	96350203	Clips for quick connection Ø 25 mm
41	7709491	Burner (200 kW)
41	7709492	Burner (250 kW)
62	7709497	Pressure tube connector
63	7709509	Ignition electrode
65	7709511	Ionisation sensor
70	7709528	Return pipe
91	7709519	G 1/2" drain valve
131	7101891	CTN S011021 SMD sensor
132	7709548	Flue gas sensor gasket
135	300029470	Bimetal thermostat, 105 °C
136	7709522	Flow pipe, 200/250 kW
137	7718928	Gas pipe
139	7709524	200 kW gas pipe
139	7709525	250 kW gas pipe
140	7709504	200/250 kW gas valve
199	7709535	D100 flue gas extension
242	7709553	NTC flue gas sensor
340	7709514	HUBA 503 pressure gauge
374	94950113	1/2" solid plug
399	7114277	260G safety thermostat
408	7705910	BJ70 burner door
409	7709505	BJ70 burner gasket
411	7705920	Ionisation sensor gasket
415	7709552	Siphon + complete gasket
419	7709506	BJ70 burner door gasket
422	7705913	38x27x2 mm green gasket
423	7709501	Gas valve flange
425	7709512	Sleeve gasket
441	7709494	Toggle clamp collar, 150 mm
444	7709493	Toggle clamp collar, 125 mm
459	7692329	Complete condensate pipe
498	7705916	36x2.5 mm O-ring
511	7101096	17.86x2.62 mm O-ring
631	7709526	Air vent pipe
647	7705918	G3/8 air vent with RIGAM O-ring.
673	7709541	Condensate collector, 200/250 kW
681	7705912	Ionisation sensor gasket
701	5212780	Thermocord gasket, Ø 6 mm
736	7709515	G1G70 valve adaptor part
737	7709490	DN50 PN6 Type 13 flange
758	7709530	Venturi, 200/250 kW
806	JJD005117880	Spring, Ø 10 mm

■ Wiring for IX 245–200 and IX 245–250

Fig.216



Tab.85 Wiring for IX 245–200 and IX 245–250

Marker	Reference	Description
A	7608991	24 V wiring – X20 X21 X42
B	7608992	230 V wiring – X2 X10 X12 X13
C	7709576	24 V wiring – X7 X22 X23
D	7709574	230 V wiring – X11 X14
E	7713857	Thermal fuse wiring
F	7672091	Safety thermostat wiring
G	7608718	X1 flame sensor wiring
H	7608684	LMS14 X40 wiring
I	851097	Ionisation cable
J	7107773	Earth cable, length 270 mm

15 Environmental

15.1 Energy savings

Tips on saving energy:

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

15.2 Room thermostat and settings

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

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

16 Disposal and recycling

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

Fig.217


MW-3000179-03

If you need to remove the boiler, proceed as follows:

1. Switch off the boiler.
2. Cut the power supply to the boiler.
3. Close the main gas valve.
4. Close the water mains.
5. Close the gas valve on the boiler.
6. Drain the installation.
7. Remove the air/flue gas pipes.
8. Disconnect all pipes.
9. Dismantle the boiler.

17 Warranty

17.1 General

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

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

Your installer and our service department can assist with this.

17.2 Terms of warranty

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

The following provisions do not affect the application, in favour of the buyer, of the legal warranty in accordance with articles 1641 to 1648 of the civil code.

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

The duration of our warranty is shown on the certificate delivered with the appliance.

The warranty period is stated in our price list.

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

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

- Legal or regulatory requirements or provisions laid down by the local authorities.
- National or local regulations and special provisions relating to the installation.
- Our manuals and installation instructions, in particular in terms of regular maintenance of the appliances.
- The rules of good workmanship.

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

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

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

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

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