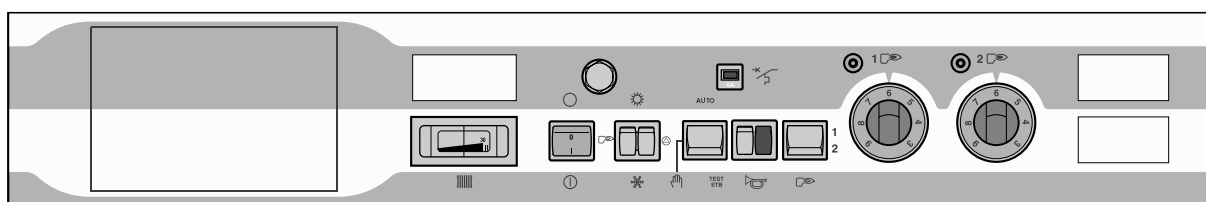


Control panel Gas460

Package RE 22

English
18/01/06



8502N040



Technical
instructions

CE



300005257-001-A

remeha

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Introduction

The control panel is fitted to Remeha boilers in the GAS 460 ranges.

This product will be marketed in the following European Union member states :

Version L: BE, ES

Version S: GB, HU, ES

Warning

The boiler shall be assembled and installed by a qualified professional only.

For a proper operating of the boiler, follow carefully the instructions.

Directive 97/23/EC

Gas and oil boilers with a maximum operating temperature of 110°C and hot water tanks with a maximum operating pressure of 10 bar pertain to article 3.3 of the directive, and therefore, cannot be CE-marked to certify compliance with the directive 97/23 EC. The boilers and hot water tanks are designed and manufactured in accordance with the sound engineering practice, as requested in article 3.3 of the directive 97/23/EC; it is certified by compliance with the directives 90/396/EC, 92/42/EC, 73/23 EC and 89/336/EC.




1 Presentation

The control panel is used to control boilers with 1 or 2-stage burners.

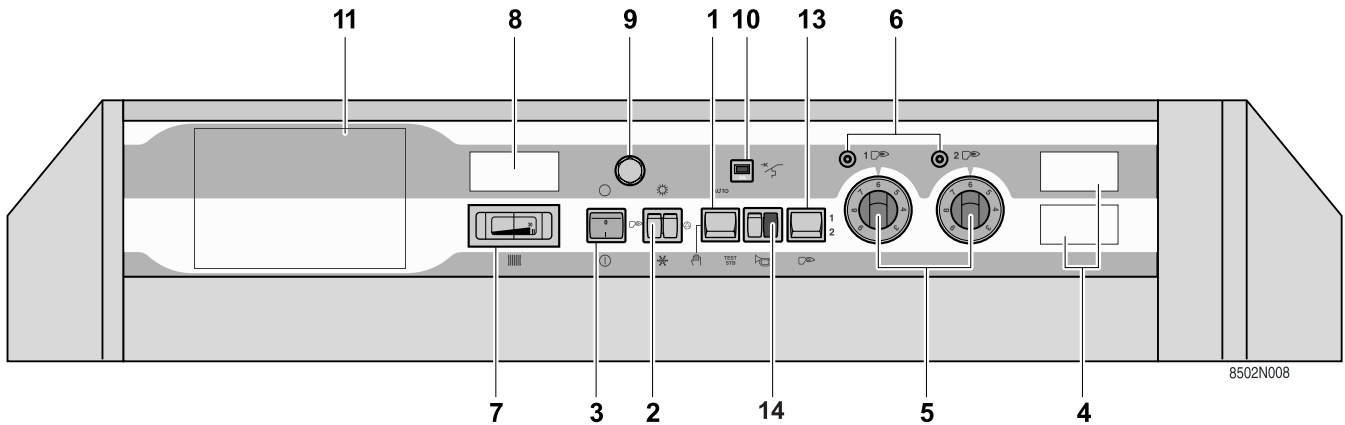
It may be fitted along with several optional features:

- Rematic control unit for 2-stage burners regulating the burner and 2 mixing valve, for heating only or for heating and domestic hot water.
- Hour run meter/s (Package BG 40)
- Flue gas thermometer (Package BP 28)

Symbols used

	Caution danger	Risk of injury and damage to equipment. Attention must be paid to the warnings on safety of persons and equipment
	Specific information	Information must be kept in mind to maintain comfort
	Reference	Refer to another manual or other pages in this instruction manual

Description



- 1 **3-position switch Auto / Manual** / TEST STB
 - The switch may be left on either position manual or automatic **AUTO**.
 - **STB TEST**: Temporary action to test the safety thermostat.
 - Press the TEST STB switch and set pump shut-off switch (2) to the "Summer" position .
- 2 **Switch Burner / Heating pump:**
This button is used to control the burner and the heating pump.
Both buttons are in "Winter" position: Heating and hot water production systems operate (if a hot water tank is included).
Both buttons are in "Summer" position: The burner and the heating pump don't operate.
If the boiler is fitted with a control unit, both buttons must be left on the Winter position.
- 3 **Main ON/OFF switch**
- 4 **Location for hour run meter for the first and second stage (optional)**
- 5 **Boiler thermostat (30 to 90 °C):**
A factory-set stop limits the maximum temperature to 75 °C. The stop may be moved if necessary.
- 6 **Stage one or stage two indicators:**
These only go on if the relevant thermostat or control unit require heating and if the safety contact is closed.
- 7 **Boiler thermometer**
- 8 **Location for flue gas thermometer (optional)**
- 9 **Safety thermostat with manual reset (set to 110 °C).**
- 10 **10 A Circuit-breaker:** with delayed action and manual reset.
- 11 Location for optional features or a **RC4/RC5** control unit
- 13 **Switch for selecting the number of burner stages**
- 14 **Burner alarm indicator + Reset button**

Operating principle


• Boiler regulation

The boiler may be regulated:

- either by the boiler thermostats,
- or by the Rematic control unit, if any (optional terminal strip present in control panel)
- or by the Rematic control unit of the cascaded installation.
- or by a third party control unit with volt-free contacts for high-low and on-off operation, if any (connection kit necessary).

If the boiler is fitted with a **Rematic** control unit, the boiler temperature is modulated by the regulator, which controls the burner and the motorised mixing valves depending upon the outside temperature. With a third party control connected, the boiler thermostats are set to the maximum position. Operating security is provided by the safety thermostat with manual reset.

Electrical connections

 **As the electrical wiring has been carefully checked in the factory, the internal connections on the control panel must not be changed in any way.**

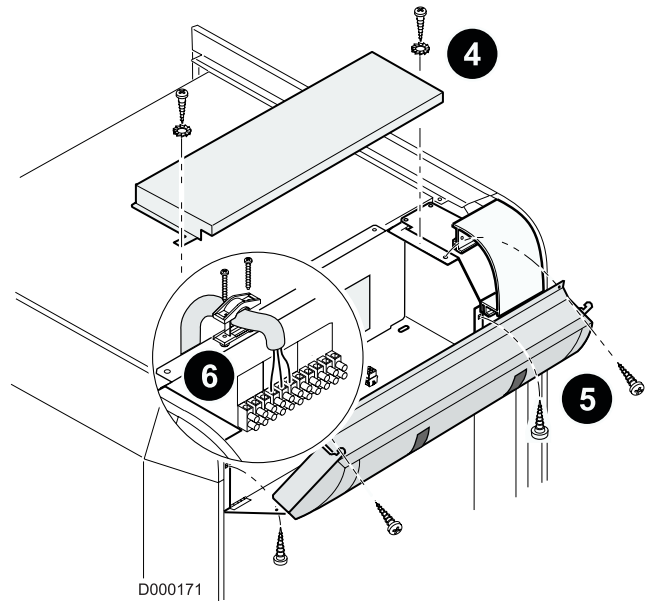
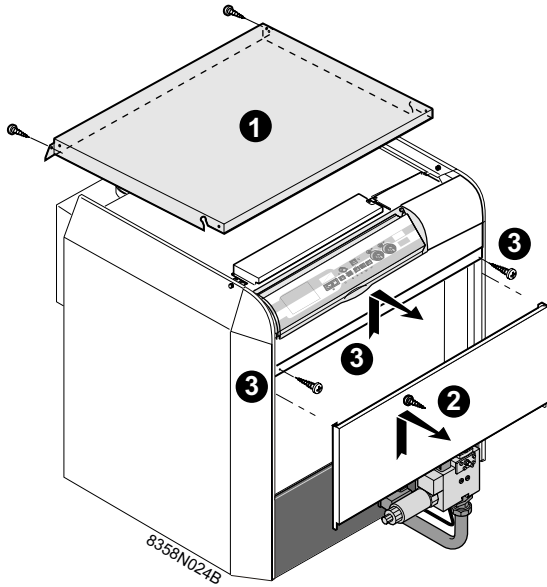
Electrical connections must match the electrical diagrams delivered with the equipment and comply with the instructions in the manual.

The electrical connections shall comply with standards in force. The equipment must have a power supply equipped with a omnipolar switch with an opening distance above 3 mm.

The earth connections shall comply with local standards.

1 Terminal block

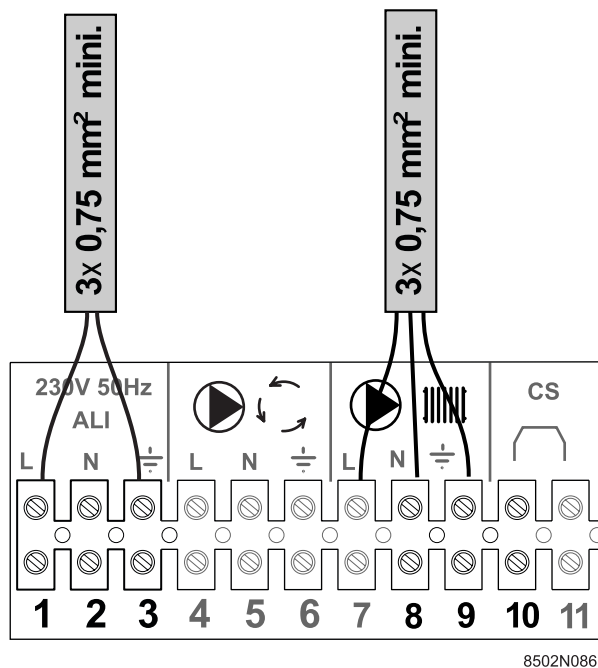
All connections are made with the terminal boxes designed for that purpose on the back of the boiler's command board.



Proceed as follows to open the control panel:

- ❶ Remove the upper casing of the boiler.
- ❷ Remove the front casing.
- ❸ Remove the top front panel.

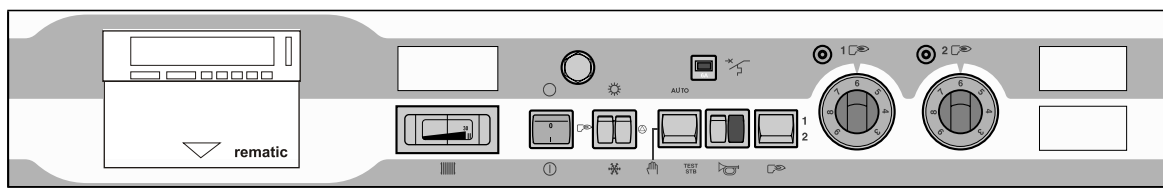
- ❹ Pull out the connection board cover.
- ❺ Open the side of the panel. Remove the 4 screws. Turn the panel.
- ❻ These cables will be fixed on to the control panel with cable clips (supplied in a separate bag).



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i Make the connections, respecting the live (L), neutral (N) and earth terminals.

2 Installation with optional Rematic control unit

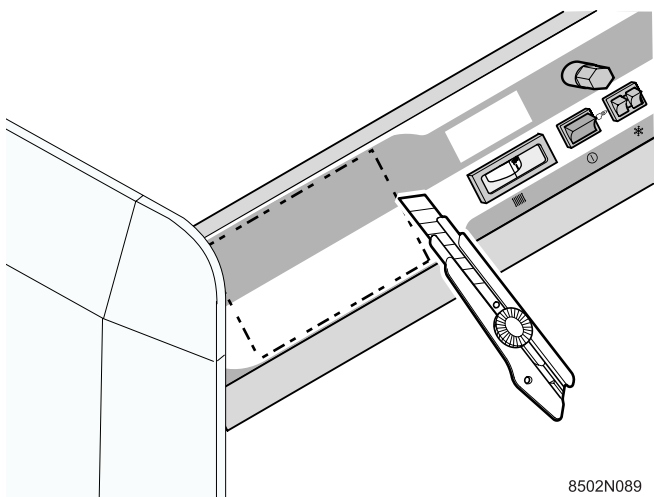


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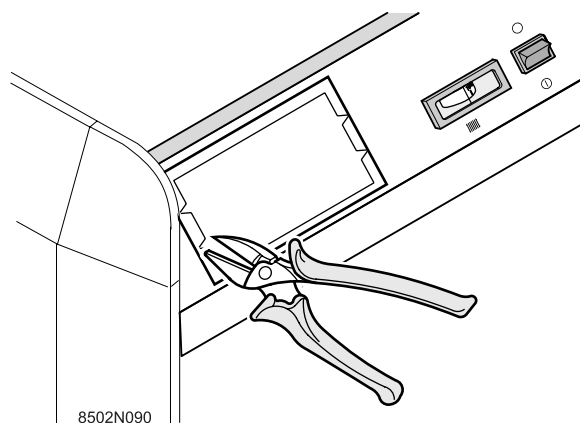
2.1 Fitting the Rematic control unit

The Rematic control unit is fitted on the left-hand side of the front of the panel.

1.

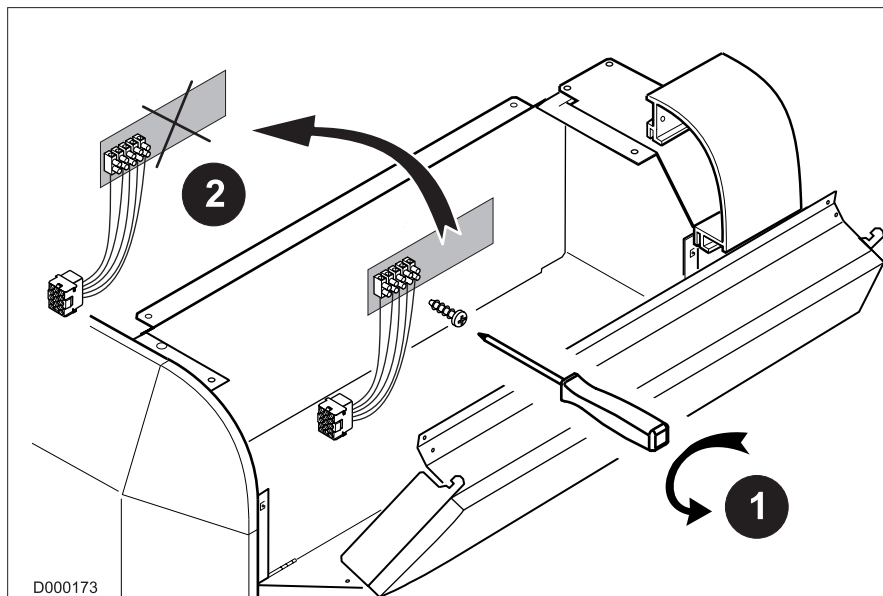


2.

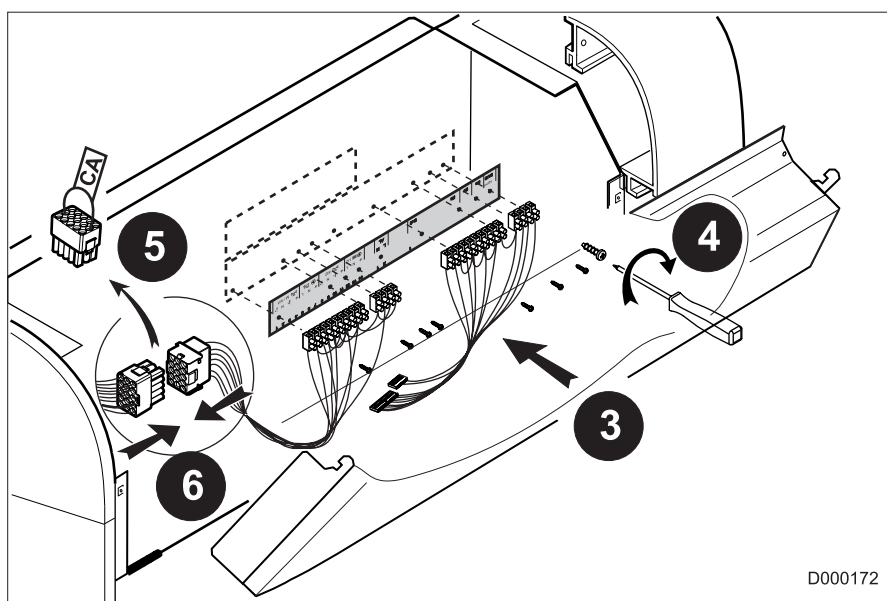


3. Installing the supplementary wiring

- Remove the "External Regulation" harness




- Fit the harnesses delivered with the REMATIC RC4/5 option



2.2 Connections optional REMATIC

Connection block for Rematic sensors and controls.

See the instructions supplied with the control unit and any remote control unit used.


 **Separate the extra low voltage sensor wires from 230 V power wires in order to prevent electromagnetic interference.**

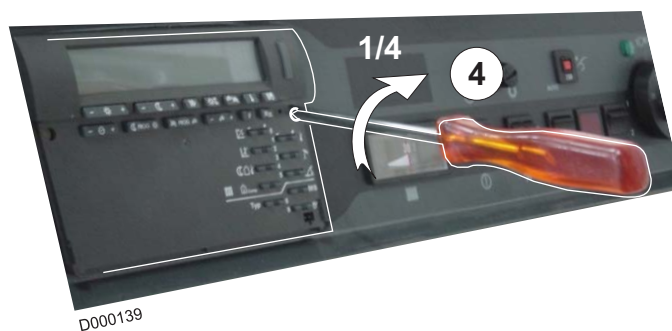
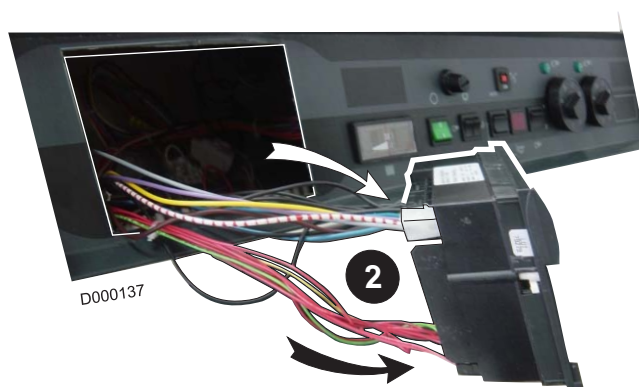
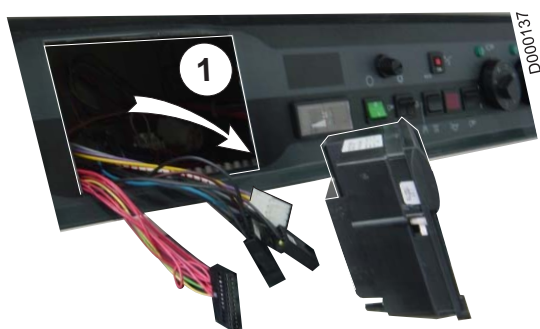
Inside the boiler:

- Boilers with one cable channel: Place the 230 V main supply cables on one side of the cable channel and the sensor cables on the other. The cables shall be held in place on either side using plastic ties.
- Boilers with two cable channels: Place the 230 V main supply cables in one cable channel and the sensor cables in the other. The cables shall be held in place on either side using plastic ties.

Outside the boiler:

use 2 pipes or cable guides at least 10 cm apart.

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



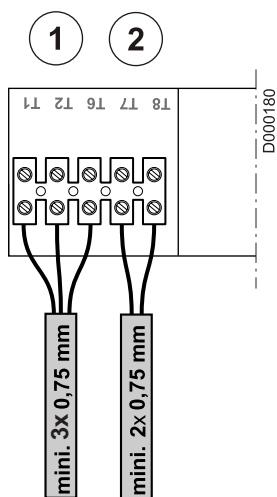
1 Bring the blue connectors out through the opening in the control panel.

2 Plug the connectors onto the back of the control unit.

3 Push the control unit into the front of the control panel and fix it with the 2 plastic screws supplied (push and 1/4 turn, clockwise) on the front of the control unit.

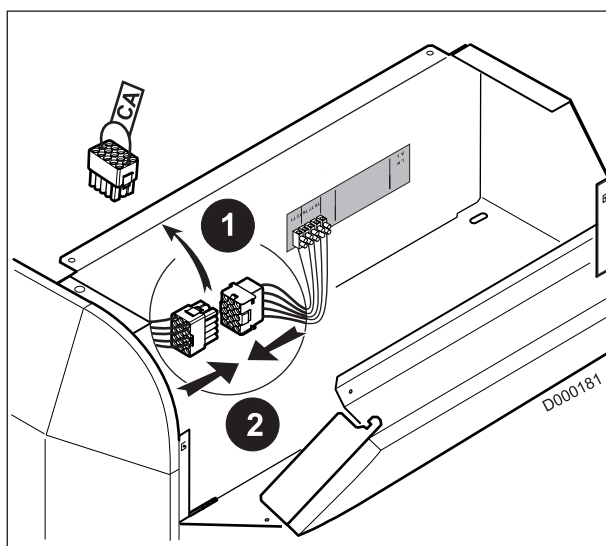
4 Close the control panel.

3 Connecting a third party control unit



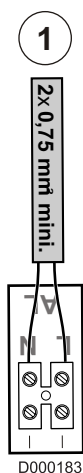
- ① Control of the first stage of the burner by volt-free contacts
- ② Control of the second stage of the burner by volt-free contacts

4 Connecting the harness



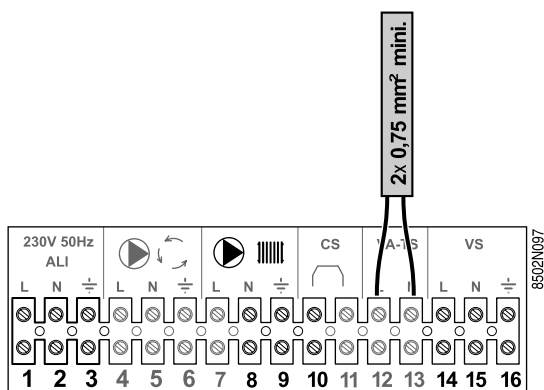
- ① Remove the bridge connector from the control panel wiring "CA"
- ② Connect the "External Regulation" harness to the control panel harness.

5 Connecting the low-water pressure switch alarm indicator (Only NL)



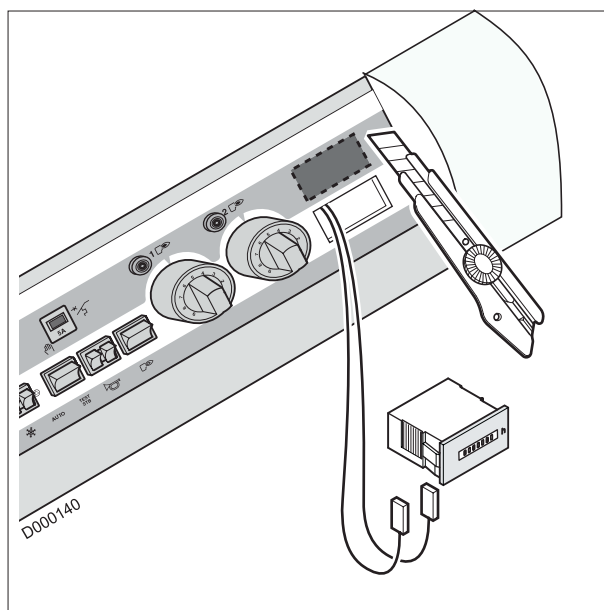
- ① Low-water pressure switch alarm indicator

6 Connecting the safety thermostat alarm indicator



- ① Safety thermostat alarm indicator

7 Connecting one or two hour run meters (Package BG 40)



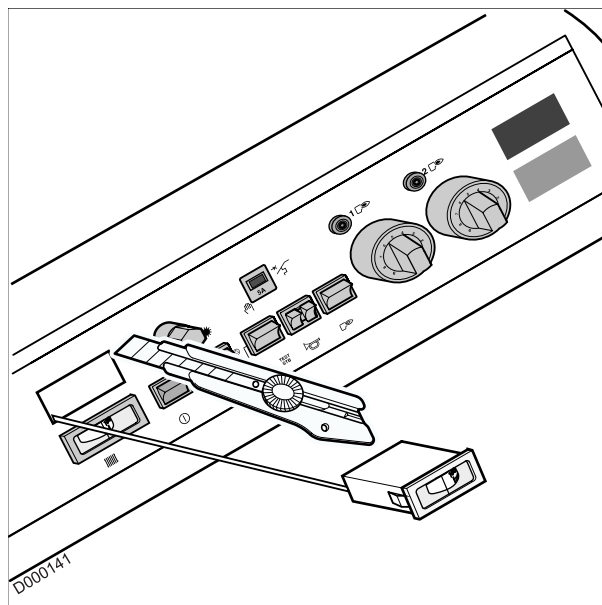
One or two optional hour run meters (stage 1 and 2) may be fitted on the front of the control panel.
To do so:

- Cut the cover off with a cutter along the edges of the coloured rectangle.
- Pull out the *1 wires standing by in the control panel
- Connect the wires to the hour run meter (the wires are interchangeable):
 - Brown and blue wires for stage 1
 - Violet and blue wires for stage 2
- Clip the hour run meter into the control panel.

If the burner is a 1-stage burner, the counter displays the burner operating time.

If the burner has 2 stages, the first stage hour run meters displays the total burner operating time and the second hour run meter displays the operating time of stage 2.

8 Connecting the flue gas thermometer (Package BP 28)

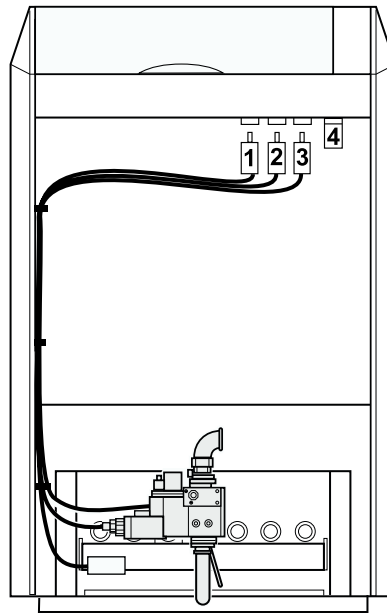


An optional flue gas thermometer may be fitted on the front of the control panel.

To do so:

- Cut the cover off with a cutter along the edges of the coloured rectangle.
- Clip the thermometer into the opening.
- Bring the sensor to the back of the boiler via the cable channel and insert it in the flue gas pipe.

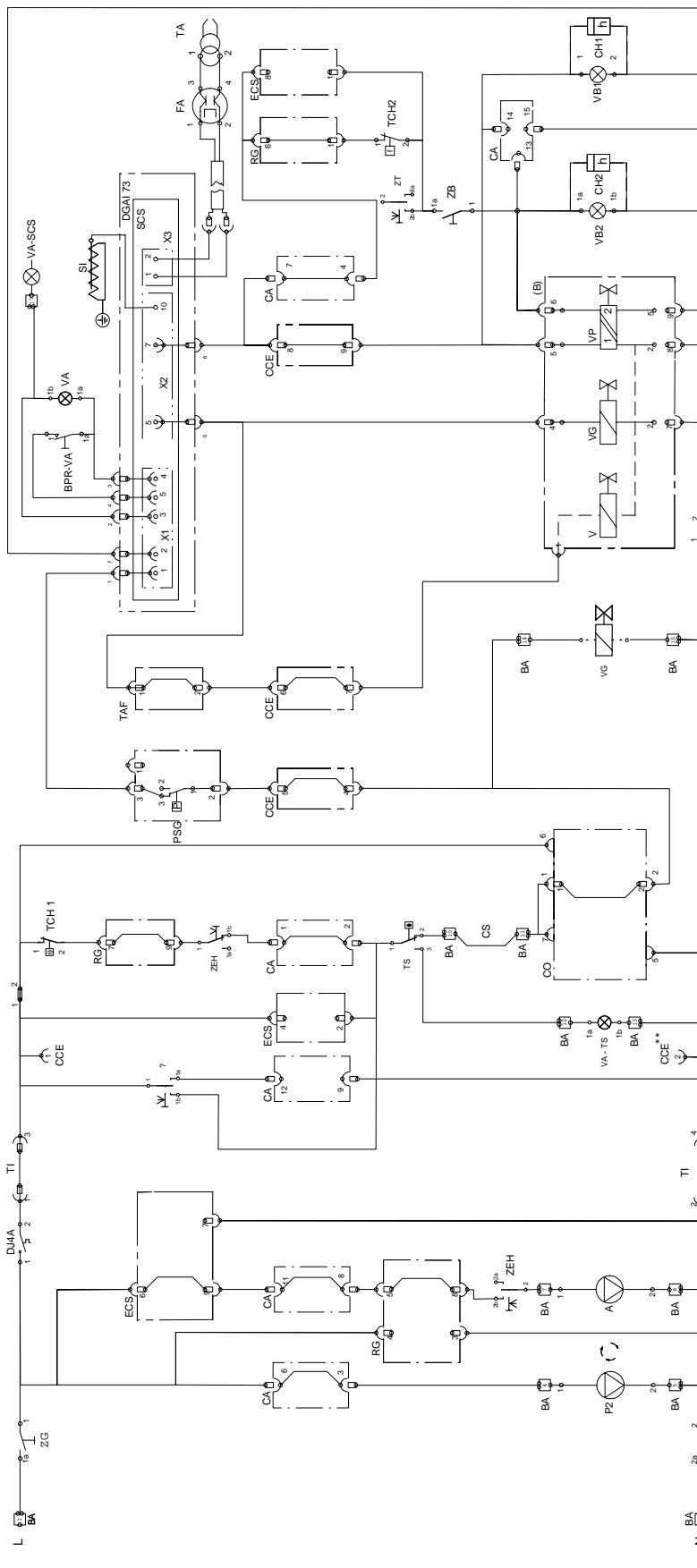
9 Connecting the burner



8358N063A

- 1 Ignition circuit
- 2 Gas pressostat
- 3 Gas valve circuit
- 4 Leak proofing system (Options RE 30)

SCHEMA DE PRINCIPE - STROMLAUFPLAN - PRINCIPLE DIAGRAM - GAS 460

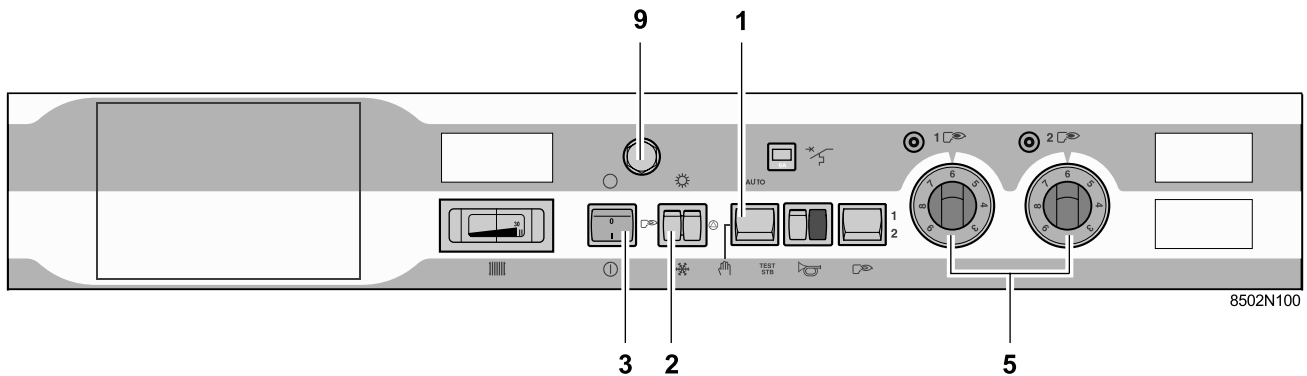


A	ACCUSEUR	IMMAGLIANTE	SCS	VELOSCOPERTIE
AE	ALLUMER SUICTOIE	ELECTRICI ONTOR	SI	IONISATIE SONDE
B	BRIJLER	BURNER	TAF	ANTITURBING THERMOSTAT
BA	BAVETTE	CONNECTING BOARD	TCH1	KETELTHERMOSTAT 2de STAGE
BPR	BOUTON POUSOIR REARMER ET BRUIER	RESET PUSH BUTTON	TCH2	KETELTHERMOSTAT 1de STAGE
CA	CAOUCHE	CASCADE CONNECTION	TI	SCHERMSCHAKTOE
CCE	CONTACTE CYCLIQUE D'ETANCHEITE	LEAK STOPPING SYSTEM	V	LAMP'E
CO	CLAPET D'ENTREE	FLUE DAMPER	VA-TS	VELOGHEDS THERMOSTAT ALARM LAMP'E
CS	CONTACTE DE SECURITE	SAFETY CONTACT	VB1	LAMP'E WERKING 1de STAGE
D1A	DIALECTEUR	CIRCUIT BREAKER	VB2	LAMP'E WERKING 2de STAGE
ECS	EAU CHAUDE SANITAIRE	DOMESTIC HOT WATER	VG	GASKEP ONTSTERING
FA	FANNE D'AZ	EM SUPPRESSOR	VP	HOOFDGAASKEP
L	LAMP'E	PHASE	ZB	BRANDER SCHAKELAR
N	NEUTRE	INTERUPTEUR BRUIER	ZEH	ZOMMER/WINTER SCHAKELAR
P2	POUPE DE RECICLAGE CHAUDIERE	HAUPTWASSER	ZG	ALGEMEINE SCHAKELAR
PSG	PRESSION D'AZ	TESTICHALTER	ZT	TEST SCHAKELAR
R	RELAS	RELAY		
RG	REGULATION	REGULATOR		

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Starting up and operation

1 Control panel without Rematic control unit



⚠ The first start-up is to be performed by your installation engineer.

Before starting the boiler, check if the installation is filled with water.




Start the boiler in the following order:

- **Boiler temperature regulation by means of the thermostats**

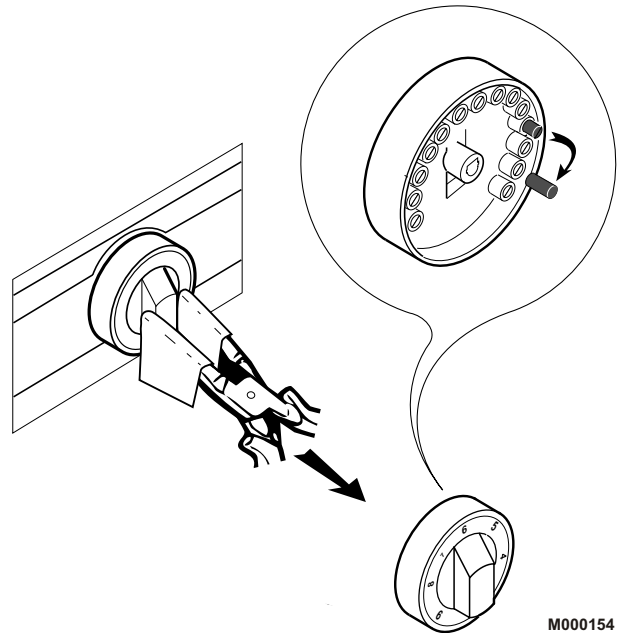
Place the boiler thermostat 5 in the required position. If the burner has 2 stages, the stage 2 thermostat must always be set to value which is approximately 5°C less than that of the stage 1 thermostat.

If required, move the maximum temperature stop as instructed below.

⚠ If there is no control unit, we advise you never to set the boiler thermostat below mark 4 (approx. 40°C) in order to avoid the risk of combustion products condensing on the walls of the boiler.

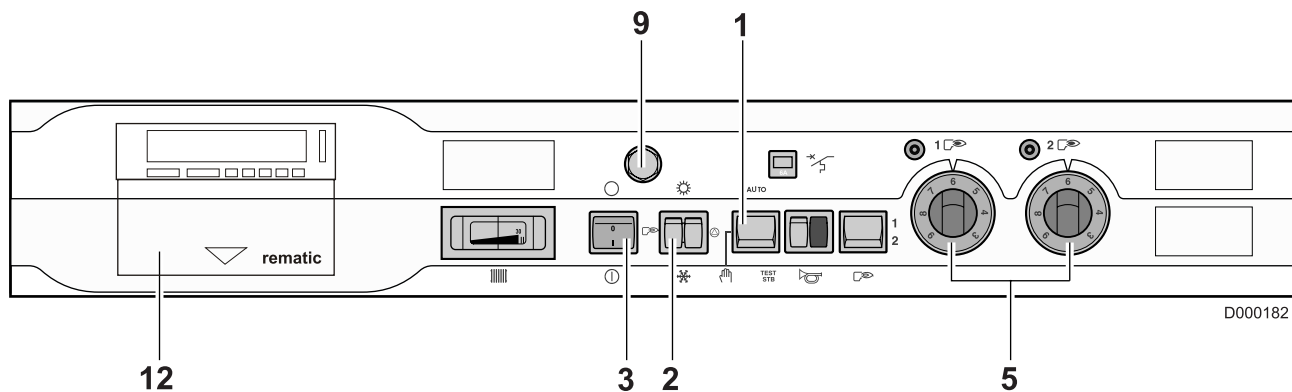
- Set switch 1 to the **manual**  position.
- **Control unit in boiler room electrical cabinet**
See the instructions supplied with the control unit and any remote control unit used.
- Check that safety thermostat 9 is properly set. To do so, unscrew the hexagonal cap and press the reset button with a screwdriver.
- Set the burner and heating pump buttons 2 to the Winter  position.
- Set main On/Off switch 3 to .

Moving the thermostat stop:



A factory-set stop limits the maximum temperature to 75 °C. To move the stop, proceed as follows:

- Pull the thermostat button out carefully (use pliers and a cloth).
- Remove the stop with the pliers.
- Put the stop in the hole of the desired higher temperature (maximum 90°C).



⚠ The first start-up is to be performed by your installation engineer.

Before starting the boiler, check if the installation is filled with water.

Start the boiler in the following order:

- Set the boiler thermostats **5** on maximum position.
If required, move the maximum temperature stop as instructed on the preceding page.
- ⚠ **Set the Rematic control unit **12**. To do so, operate according to the control instructions supplied with the unit.**
- Set switch **1** to the **AUTO** position.
- Check that safety thermostat **9** is properly set. To do so, unscrew the hexagonal cap and press the reset button with a screwdriver.
- Set the burner and heating pump buttons **2** to the Winter ❄ position.
- Set main On/Off switch **3** to Ⓛ.



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