GT 330 - GT 430 - GT 530 - GTU C 330

EN

Control panel K3

Control panel (MD2) to be placed on the boiler
(MD139) lateral control panel

A000400

Installation and Service Manual

300009091-001-C

De Dietrich

Contents

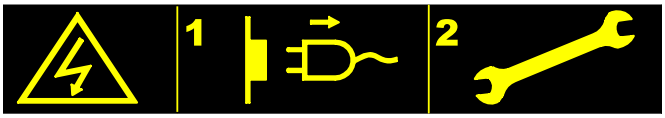
1 Symbols used

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.

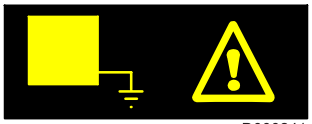
Reference
Refer to another manual or other pages in this instruction manual.

DHW: Domestic hot water



D00024C

Switch off the power supply before doing the work.


D000241

This appliance must be connected to the earth.

2 Important recommendations

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

Any intervention on the appliance and heating equipment must be carried out by a qualified technician.

The manufacturer is not liable for any improper use of the appliance or failure to maintain or install the unit correctly (the user shall take care to ensure that the system is installed by a qualified fitter).

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

3 Description

3.1 General

The control panel enables the operation of a boiler fitted with a 1 stage, 2 stage or modulating burner.

The standard delivery of panel K3 includes :

- 1 Control panel K3
- 1 Boiler sensor measuring the temperature in the boiler

The K3 control panel is fitted only in association with a boiler fitted with a DIEMATIC-m3 control panel as part of a cascade installation.

DHW regulation and programming is handled by the DIEMATIC-m3 control panel on the master boiler.

The following options can be ordered:

- Relay PCB + sensors for 1st valve circuit (Package AD220)
- PCB + sensor for a mixing valve (Package FM48)
- CDI 2 interactive remote control (Package FM51)
- Radio remote control (Package FM161)
- Additional Radio remote control CDR 2 module (Package FM162)
- A simplified remote control with room sensor (Package FM52)
- Flue gas temperature sensor (Package FM47)

3.2 Presentation

Control panel K3 includes:

- 1 Boiler thermostat
- 1 Thermometer
- 1 Safety thermostat

The boiler thermostat regulates the boiler operating temperature.

The safety thermostat with manual reset ensures that the boiler operates safely.

In the event that there is an abnormal rise in the temperature in the boiler 110° C. Advise your installation engineer.

3.3 Operating principle

For boilers controlled by a DIEMATIC-m3 control panel, the boiler temperature is modulated by the action of the control unit on the burner according to the outside temperature. The boiler thermostat will then be set to max. Operating security is provided by the safety thermostat with manual reset.

If using a cascade installation with a master boiler fitted with a DIEMATIC-m3 control panel

See Control panel instructions.

3.4 Technical characteristics

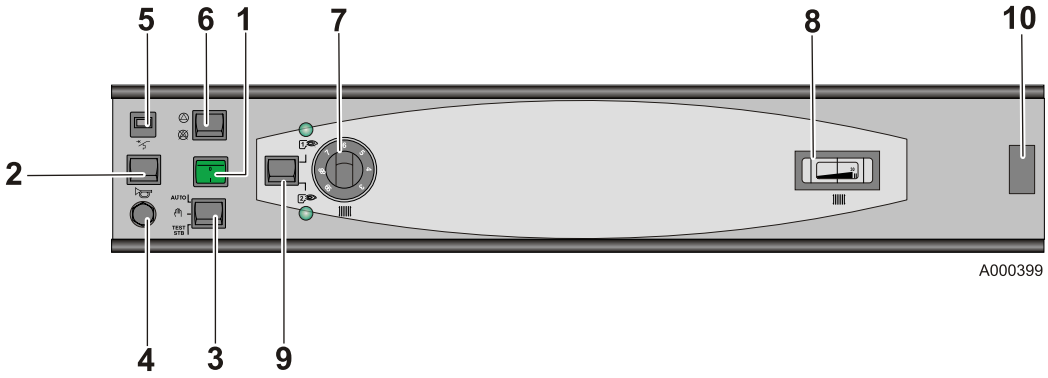
Electricity supply : 230V (-10%, +10%) - 50 HZ

Conformity / Stamp CE

This product complies to the requirements to the European Directives and following standards:

- 2006/95/EC Low Voltage Directive
  Reference Standard : EN 60.335.1
- 2004/108/EC Electromagnetic Compatibility Directive
  Generic standards : EN1000-6-3 ; EN 61000-6-1

4 Presentation



1. **General ON (1) / OFF (0) switch**
2. **Burner alarm indicator**

   This indicator lights up when the burner is on safety (faulty).
3. **Switch AUTO/TEST-STB**

   Position **AUTO**: This position enables automatic operation of the installation in accordance with DIEMATIC-m 3 regulation controls.

   Position : The boiler no longer takes orders from the DIEMATIC-m 3 regulation into account. The boiler is regulated by the boiler thermostat(s).

   Position **TEST-STB**: Temporary action to test the safety thermostat
4. **Safety thermostat with manual reset**
   Set at 110° C
5. **Timed circuit breaker (10 A)** with delayed action and manual reset
6. **Pump shutdown switch**
7. **Boiler thermostat (30 to 90 °C)**

   A factory-set stop limits the maximum temperature to 75 °C. The stop may be moved if necessary.

See "Moving the thermostat stop".

8. **Boiler thermometer**
9. **Switch for selecting the number of burner stages**
10. **Connector for the programming tool**

5 Commissionning

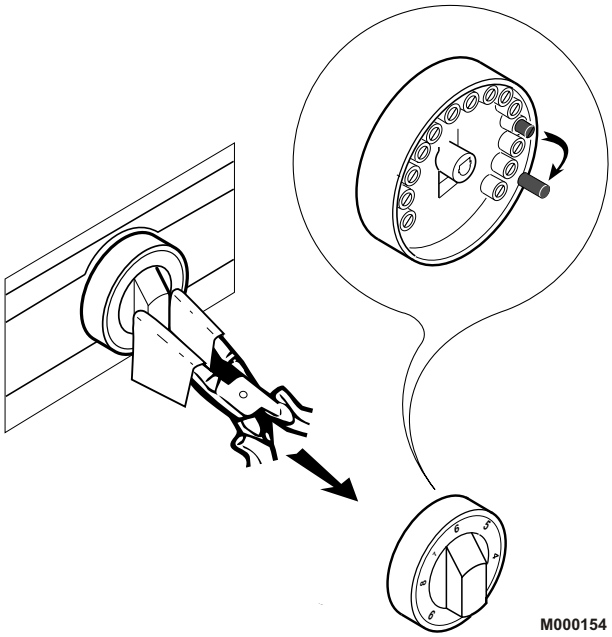
The first start-up is to be performed by your installation engineer.

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

Start the boiler in the following order :

Place the boiler thermostat 7 in the required position. If necessary, change the position of the maximim temperature.

- **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).

6 Assembly, electrical connections and installer's settings

6.1 Control panel assembly

Refer to the technical and assembly instructions delivered with the boiler.

6.2 Electrical connections

Only qualified professionnals may carry out electrical connections, always with the power off.

As the electrical wiring has been carefuly 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.

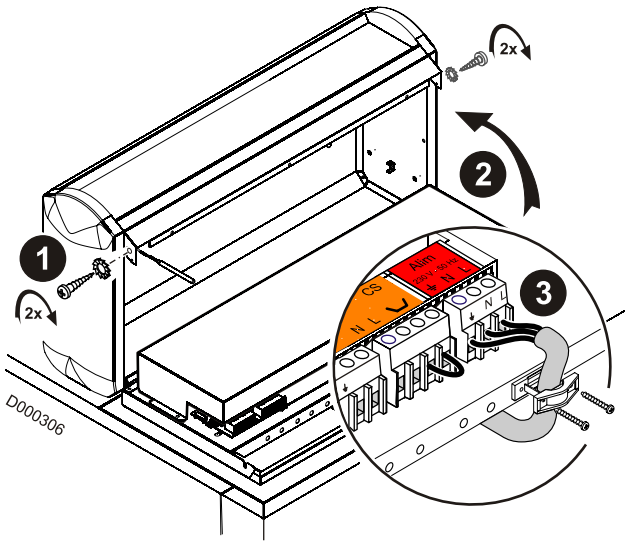
The equipment must have a power supply equipped with a omnipolar switch with an opening distance above 3 mm.

The earth must comply with the NFC 15.100 (France) or the RGPT (Belgium) standards.

6.3 Access to the connection terminal

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

■ Control panel



Proceed as follows to open the control panel:

❶ Loosen the 2 screws located on either side of the front of the panel by two turns.

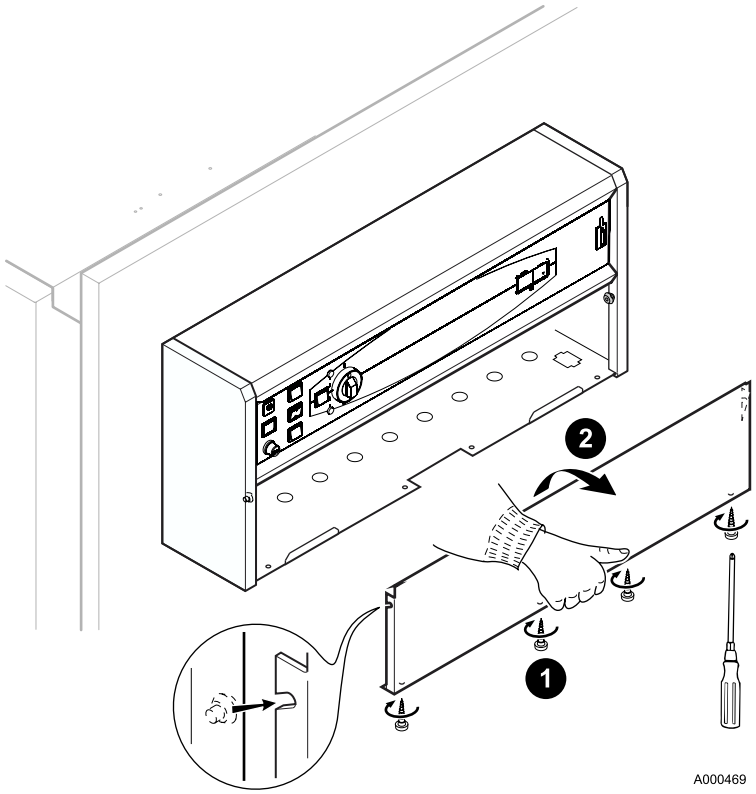
❷ Tilt back the control panel.

❸ Bring the connecting cables to the control panel through the openings located on the rear panel of the boiler and 1 or 2 cable channels, depending upon the type of boiler.
These cables will be fixed on to the control panel with cable clips (supplied in a separate bag).

The available output per outlet is 450 W (with cos φ = 0,7) and the inrush current must be lower than 16 A.
If the charge exceeds one of these values, relay the command using a contactor (fitted outside the control panel).

■ Lateral control panel

1



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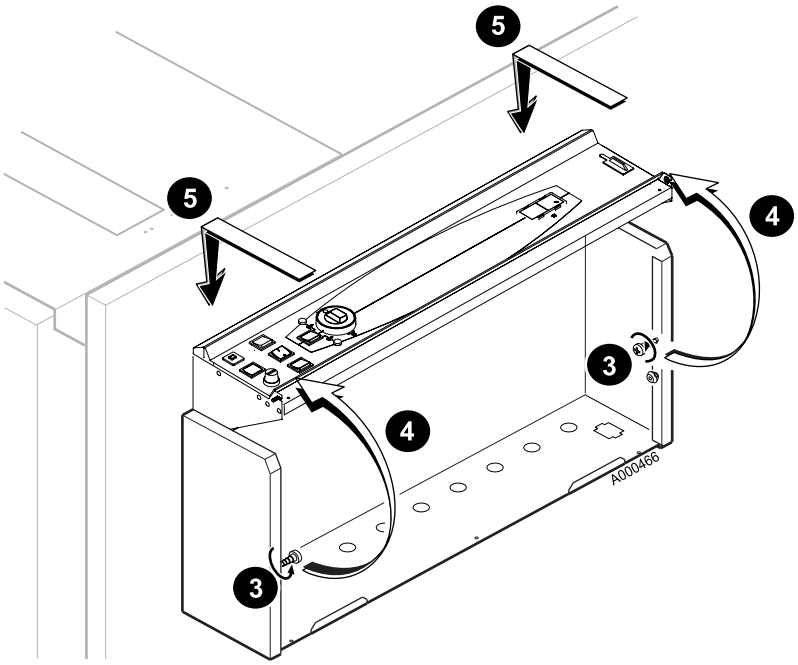

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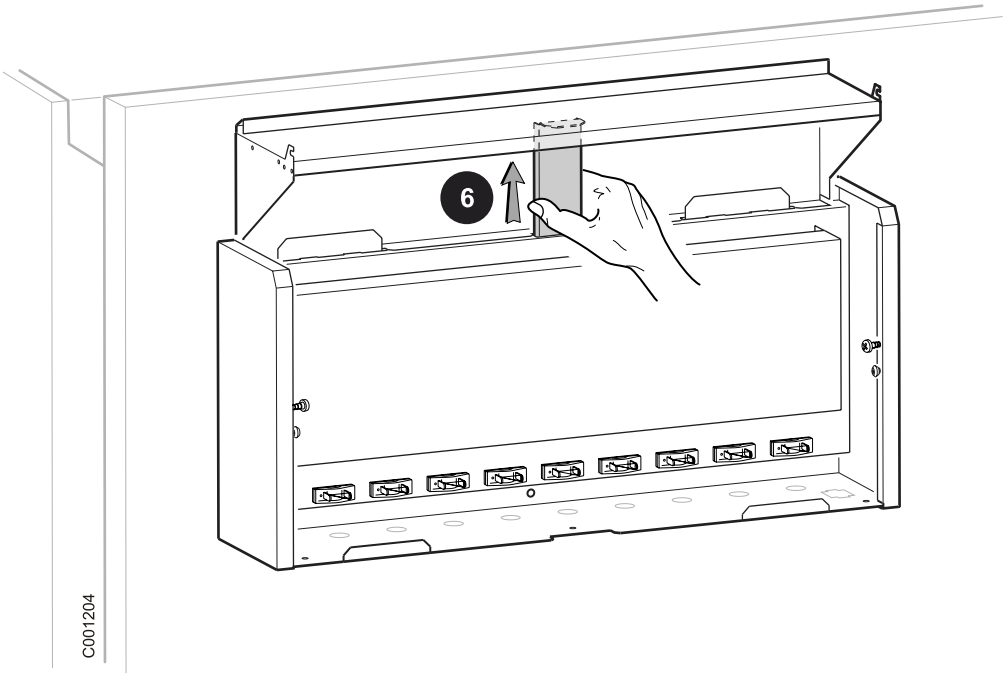

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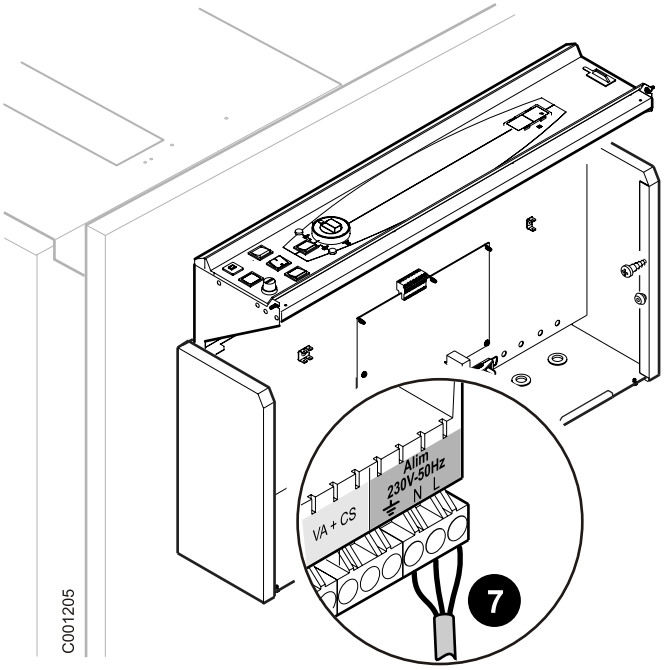

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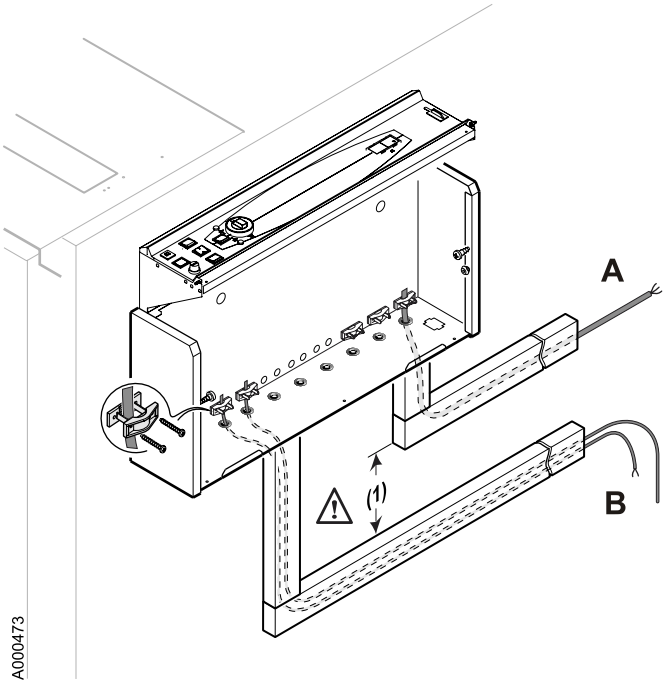
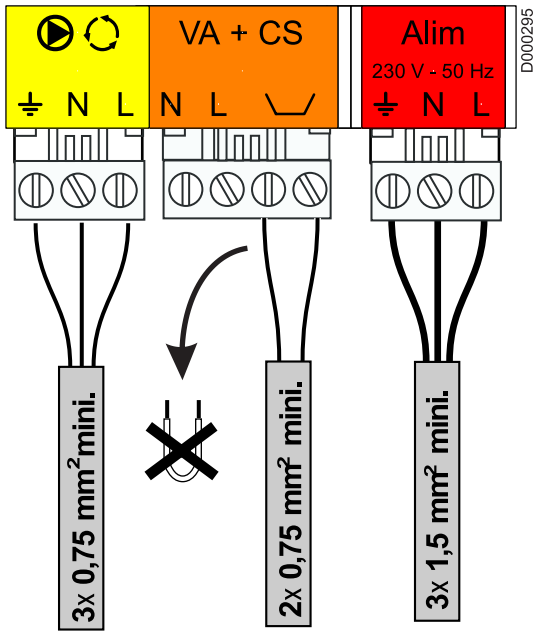


A. 230 V

B. Very low voltage sensors

(1) 100 mm

6.4 Electricity supply - Flow controller



Make the electrical connection to the terminals ⏚, N, L.

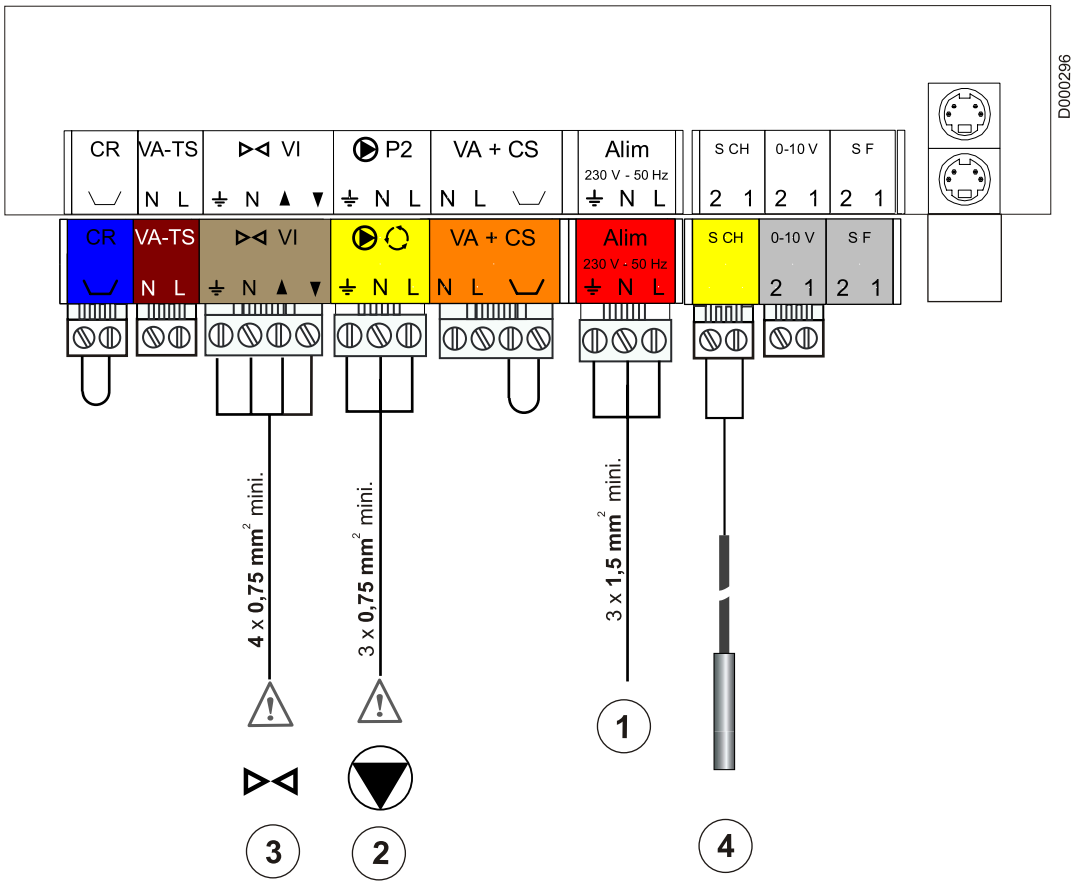
Connection to the mains is done using a 3-wire cable with a cross section of 1.5 mm² on the 3-pin terminal block (terminals ⏚, N, L).

For other electrical connections, use the 3 wire cable with a diameter of 0.75 mm².

The flow controller contact is connected to the terminals (CS) on the VA+CS connector.

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

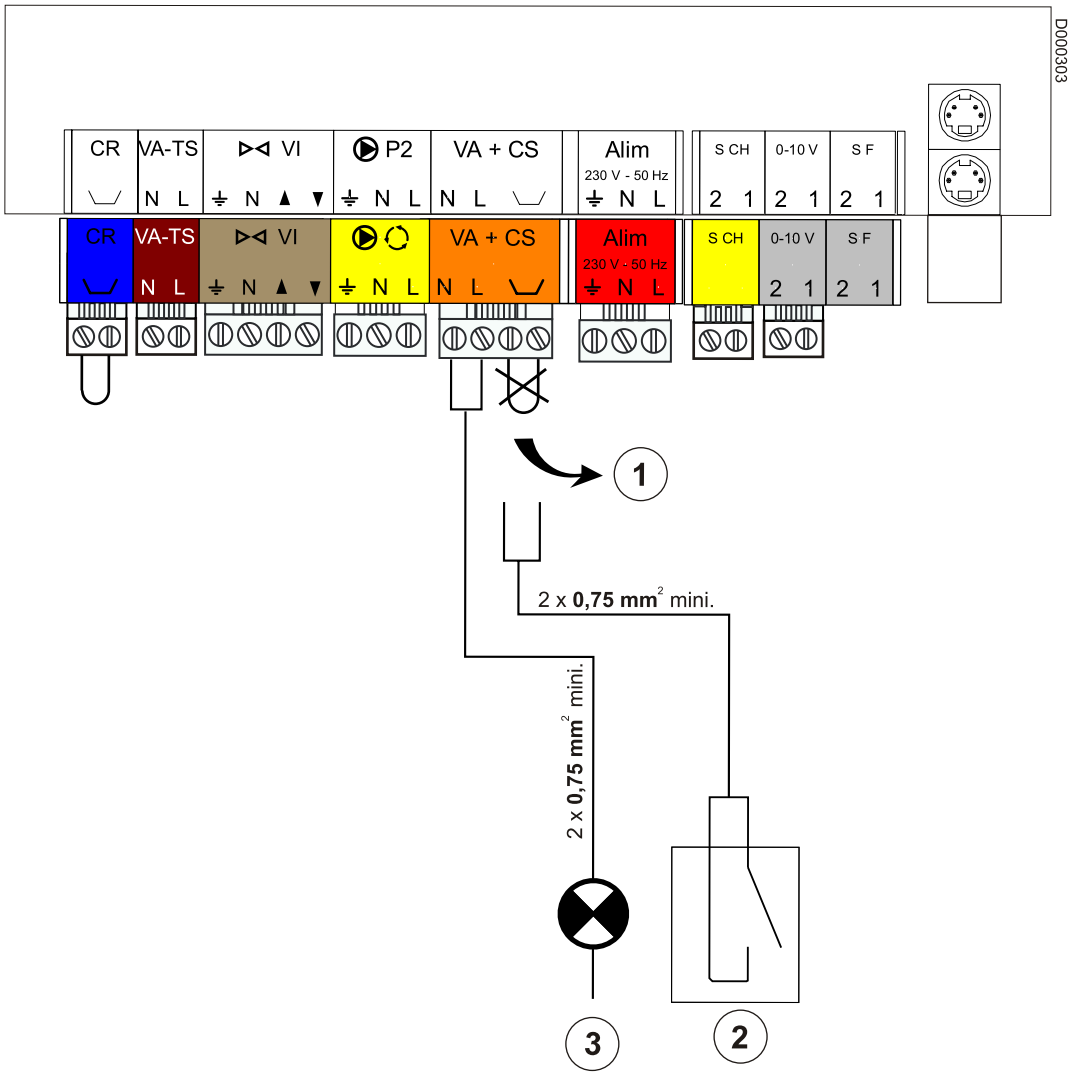
6.5 Basic connections



1 Power supply 230 V
2 Heating pump
3 Gate valve
4 Boiler sensor

The sensor cables have to be separated from the 230V circuit cables.
In the boiler : use the 2 wire guides on either side of the boiler.
Outside the boiler : Use 2 pipes or cable guides at least 10 cm apart.

6.6 Connecting the options



1 Remove bridge
2 Safety contact
3 Alarm indicator

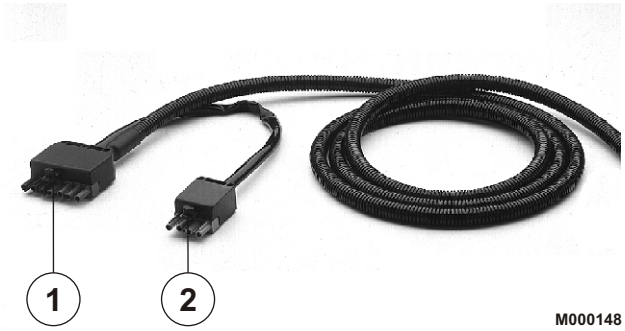
If only one circuit is used, connect the ambient thermostat to circuit A and do not bridge this connector.

- **Safety contact connection (CS)**
  Terminals (CS) after having removed the bridge : allows the connection of a safety device (e.g. low water pressostat, fire safety, ...)

The sensor cables have to be separated from the 230V circuit cables.
In the boiler : use the 2 wire guides on either side of the boiler.
Outside the boiler : Use 2 pipes or cable guides at least 10 cm apart.

6.7 Connecting the burner

- **Burner cable**



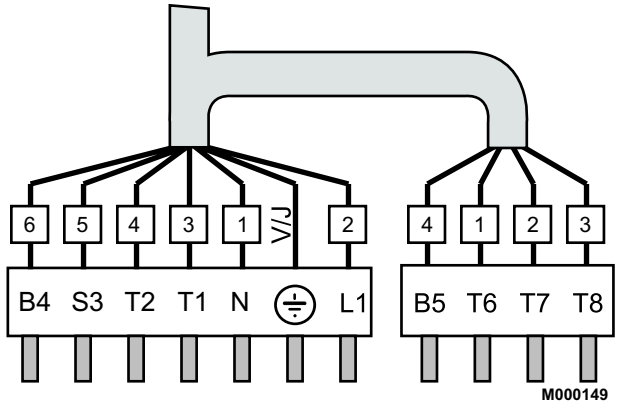
① 7-pin plug for 1-stage burners or stage 1 of 2-stage burners

② 4-pin plug for stage 2 of the burner

The control panel is supplied with the burner power cable.

One end of this cable is fitted with two European 7 and 4 pin sockets and the other with a terminal with male connecting pins.

- **Burner side**



Burner without plug-in connectors

In this case, the connectors supplied with the burner cable must be rewired.

The diagram shows the wire numbers and the terminals of the burner connectors.

The table below specifies the way in which the cables are to be connected on the burner control box.

Connector terminal -No	Wire No	From	Connection to the burner control box
L1	**2**	Continuous phase from the safety thermostat	Burner main supply
⏚	**V/J**	Earth connection	Earth connection
N	**1**	Neutral taken after On/Off	Neutral terminal
T1/T2	**3/4**	Dry contact of the stage 1 boiler thermostat	Insert in the control circuit of boiler stage 1
S3	**5**	Burner alarm indicator	Alarm output (phase)
T6	**1**	Stage 2 boiler thermostat input	Insert in the control circuit of burner stage 2
T7	**2**	Stage 2 “boiler off” thermostat output	Connect only if the burner is of the modulating type
T8	**3**	Stage 2 “boiler on” thermostat output	Insert in the control circuit of burner stage 2
B4	**6**	Stage 1 On indicator (or hour run meter)	Stage 1 operation monotoring output (phase)
B5	**4**	Stage 2 On indicator (or hour run meter)	Stage 2 operation monotoring output (phase)

If the electrical characteristics of the burner exceed the following values:

- inrush current > 16 A or
- P > 450 W or
- I > 2 A cos φ = 0.7

The burner controls must be relayed, e.g. with the relaying kit (package BP51, optional).

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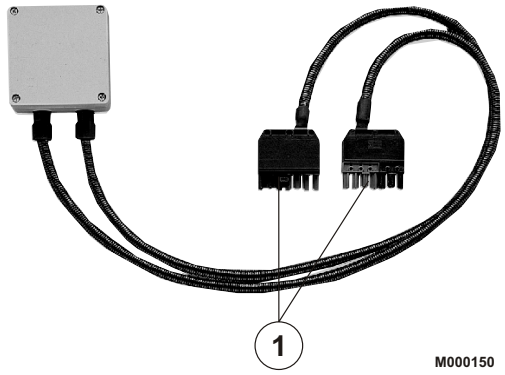
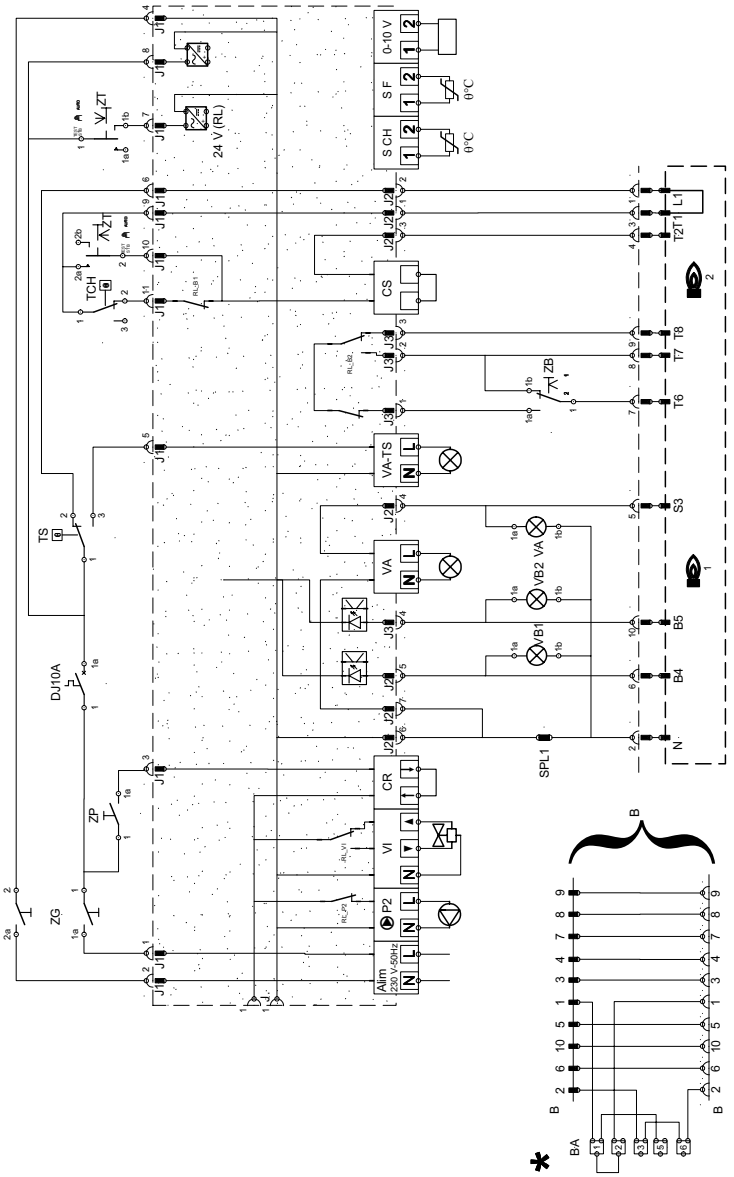


① 7-pin plugs for connecting to the control panel and burner connectors.

7 Skeleton Diagrams

Schéma de principe - Stromlaufplan - Principle diagram - Principeschema K3



0-10 V	ENTREE	0-10 V	INLET
P2	POMPE DE RECYCLAGE CHAUDIERE	P2	SHUNT PUMP
ALI	ALIMENTATION	ALI	MAIN SUPPLY
B	BRULEUR	B	BURNER
BA	BARRETTE	BA	CONNECTING BOARD
CR	CONTACT DE RELAYAGE	CR	RELIEVE CONTACT
CS	CONTACT DE SECURITE	CS	SAFETY CONTACT
DJ10A	DISJONCTEUR	DJ10A	CIRCUIT BREAKER
J-	CONNECTEUR CIRCUIT IMPRIME	J-	PRINTED CIRCUIT BOARD PLUG
L	PHASE	L	PHASE
N	NEUTRE	N	NEUTRAL
RL BR1	RELAIS DE COMMANDE BRULEUR 1ere ALLURE	RL BR1	BURNER 1st STAGE CONTROL RELAY
RL BR2	RELAIS DE COMMANDE BRULEUR 2e ALLURE	RL BR2	BURNER 2nd STAGE CONTROL RELAY
RL P2	RELAIS DE COMMANDE POMPE	RL P2	PUMP CONTROL RELAY
RL VI	RELAIS DE COMMANDE VANNE D' ISOLEMENT	RL VI	GATE VALVE RELAY
S CH	SONDE CHAUDIERE	S CH	BOILER SENSOR
S F	SONDE DE FUMEE	S F	SMOKE SENSOR
TCH	THERMOSTAT DE CHAUDIERE	TCH	BOILER THERMOSTAT
TS	THERMOSTAT DE SECURITE	TS	SAFETY THERMOSTAT
VA	VOYANT ALARME	VA	ALARM INDICATOR
VA-TS	VOYANT ALARME THERMOSTAT DE SECURITE	VA-TS	SAFETY THERMOSTAT ALARM INDICATOR
VB1	VOYANT MARCHE 1ere ALLURE	VB1	ON/OFF INDICATOR 1st STAGE
VB2	VOYANT MARCHE 2eme ALLURE	VB2	ON/OFF INDICATOR 2nd STAGE
VI	VANNE D'ISOLEMENT	VI	GATE VALVE
ZB	INTERRUPTEUR BRULEUR	ZB	BURNER SWITCH
ZG	INTERRUPTEUR GENERAL	ZG	MAIN SWITCH
ZP	INTERRUPTEUR POMPES	ZP	PUMP SWITCH
ZT	INTERRUPTEUR TEST	ZT	TEST SWITCH
*	UNIQUEMENT VERSION C	*	ONLY C VERSION

EINTRITT	INGANGSAN
KESSELKREISPUMPE	RECYCLAGE POMP
NETZANSCHLUSS	VOEDING
BRENNER	BRANDER
ANSCHLUSSLEISTE	AANSLUITINGSKLEMMEN
ABLÖSUNGSKONTACT	AFLOSCONTACT
SICHERHEITSKONTAKT	VEILIGHEIDSCONTACT
LEISTUNGSSCHALTER	THERMISCHE BEVEILIGING
LEITERPLATTE STECKER	AANSLUITKLEM
PHASE	FASE
NULLEITER	NULLEIDER
BRENNER STEUERRELAIS 1.STUFE	BRANDER RELAIS 1st TRAP
BRENNER STEUERRELAIS 2.STUFE	BRANDER RELAIS 2nd TRAP
PUMPENSTEUERRELAIS	POMP RELAIS
ABSPERRVENTIL STEUERRELAIS	AFSLUITKRAAN RELAIS
KESSELFÜHLER	KETEL VOELERS
SPEICHERFÜHLER	ROOKGASSEN VOELER
KESSEL TEMPERATURREGLER	KETELTHERMOSTAAT
SICHERHEITSTEMPERATURBEGRENZER	VEILIG HEIDS THERMOSTAAT
ALARMLEUCHTE	ALARM LAMPJE
SICHERHEITSTEMPERATURBEGRENZER ALARMLEUCHTE	VEILIG HEIDS THERMOSTAAT ALARM LAMPJE
BETRIEBSLEUCHTE 1.STUFE	LAMPJE WERKING 1st TRAP
BETRIEBSLEUCHTE 2.STUFE	LAMPJE WERKING 2de TRAP
ABSPERRVENTIL	AFZONDERINGSKLEP
BRENNER SCHALTER	BRANDER SCHAKELAAR
HAUPTSCHALTER	ALGEMENE SCHAKELAAR
PUMPENSCHALTER	POMP SCHAKELAAR
TESTSCHALTER	TEST SCHAKELAAR
NUR FÜR C AUSFÜRUNG	ALLEEN C VERSIE

PLAN N° 300007463-001-B

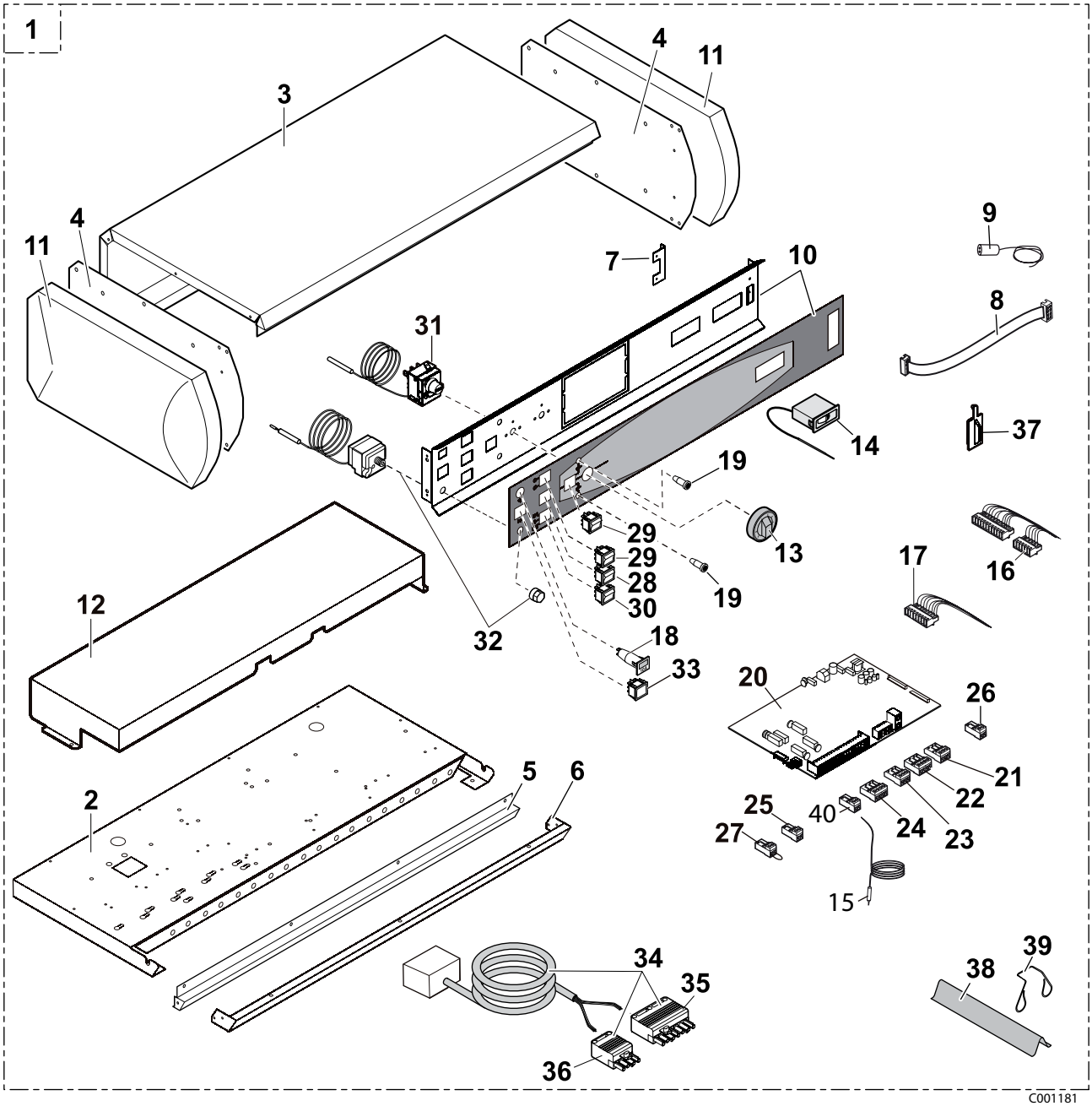
8 Spare parts

19/02/08 - 300009091-002-C

Control panel - Lateral control panel

To order a spare part, quote the reference number next to the part required.

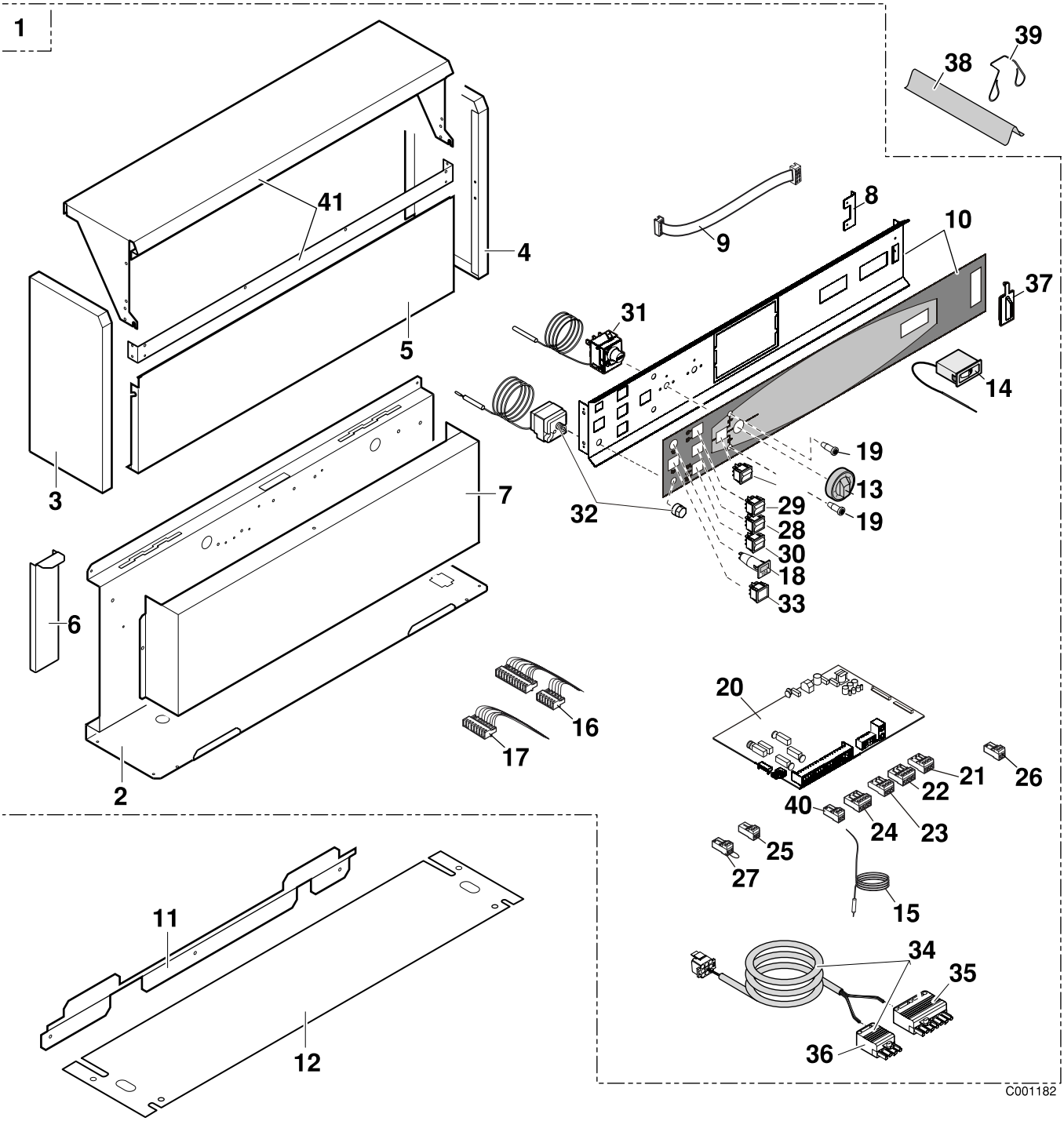
Control panel K3 to be placed on the boiler - GT 330 / GT 430 / GT 530 / GTU C 330



DE DIETRICH THERMIQUE S.A.S. - Spare parts centre
4 rue d'Oberbronn - F-67110 REICHSHOFFEN - +33 (0)3 88 80 26 50 - +33 (0)3 88 80 26 98
cpr@dedietrichthermique.com

Rep	Code no.	Description
1	100004296	Complete control panel
2	200004469	Painted control panel base
3	8555-0536	Painted control panel cover
4	8555-0537	Painted control panel side plate
5	8555-0538	Painted control panel trim
6	8553-0526	Painted spoiler SP panel
7	200004325	Holding bracket
8	200005129	Flat jumper
9	8801-4956	RX 12 cable
10	200005224	Plastic coated panel
11	9750-9034	Side plate
12	8555-8004	Board guard
13	8555-5501	Setting button + Pin
14	9536-5157	Flat thermometer
15	9536-2447	KVT sensor 60 l. 2 m
16	200005025	cable form
17	200005026	Burner harness
18	9534-0286	Timed circuit breaker (10 A)
19	9521-6281	Round green indicator
20	200005008	Tested central card unit
21	300009075	3 pt power supply connector
22	200006051	4 pt connector AV+SC
23	300009074	Connector 3 pt assembled pump A/VS
24	300009079	4 pt connector V3V
25	300008955	VA-TS connector, assembled
26	300009071	2 pin connector 0-10 V
27	200006052	Fitted relay contact connector
28	9532-5027	Green S/S bipolar switch
29	8500-0035	Bipolar switch
30	8500-0034	Test Switch
31	9536-5574	30 to 90 °C setting thermostat
32	8500-0032	110 °C safety thermostat
33	9521-6220	Red indicator
34	8555-4906	Burner cable
35	9531-7395	7-pin plug
36	9531-7384	4-pin plug
37	300007161	Connector KAP PC KORT
38	9536-5613	Contact spring for pocket
39	9758-1286	Spring for pocket
40	300008953	2 pin connector - Boiler sensor

K3 lateral control panel - GT 330 / GT 430 / GT 530 / GTU C 330



Rep	Code no.	Description
1	100007508	Complete control panel
2	200009630	Back, lateral control panel
3	200009380	Lateral panel complete left
4	200009381	Side panel, right, complete
5	200009470	Front panel
6	8553-8058	Opening hood
7	8553-8061	Board guard
8	200004325	Holding bracket
9	200005129	Flat jumper
10	200005224	Plastic coated panel
11	8553-8059	Holding plate
12	8553-0540	Top panel opening cap
13	8555-5501	Setting button + Pin
14	9536-5157	Flat grand model thermometer
15	9536-2447	KVT sensor 60 l. 2 m
16	200005025	cable form
17	200009523	Burner harness
18	9534-0286	Timed circuit breaker (10 A)
19	9521-6281	Round green indicator
20	200005008	Central unit PCB
21	300009075	3 pt power supply connector
22	200006051	4 pt connector AV+SC
23	300009074	Connector 3 pt assembled pump A/VS
24	300009079	4 pt connector V3V
25	300008955	VA+TS connector fitted
26	300009071	2 pts 0-10V connector
27	200006052	Fitted relay contact connector
28	9532-5027	Green S/S bipolar switch
29	8500-0035	Bipolar switch
30	8500-0034	Test Switch STB
31	9536-5574	30 to 90 °C setting thermostat
32	8500-0032	110 °C safety thermostat
33	9521-6220	Red indicator
34	8555-4906	Burner cable
35	9531-7395	7-pin plug
36	9531-7384	4-pin plug
37	300007161	Connection KAP PC KORT
38	9536-5613	Contact spring for pocket
39	9758-1286	Spring for pocket
40	300008953	2 pin connector - Boiler sensor
41	200009631	Front panel support + Cross bar

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