

Fuel oil/gas-fired boilers

CABK - CABK PLUS

CABK 8-80



Installation and Service Manual

CABK PLUS 100-250



M003078-A

Declaration of conformity CE

The appliance complies with the standard model described in declaration of compliance **CE**. It is manufactured and distributed pursuant to the requirements of european directives.

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

DECLARATION DE CONFORMITE CE EG - VERKLARING VAN OVEREENSTEMMING EC - DECLARATION OF CONFORMITY EG - KONFORMITÄTSERKLÄRUNG	
<hr/>	
Fabricant/Manufacturer/Hersteller/Fabrikant :	DE DIETRICH THERMIQUE
Adresse/Address/Adress :	57 rue de la Gare
Ville, pays Stad, Land/City, Country/Land, Ort :	F-67580 MERTZWILLER
déclare ici que le produit suivant : this is to declare that the following product : erklärt hiermit daß das Produkt :	CABK -8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 35, 40, 50, 55, 60, 70, 80 CABK Plus - 100, -130, -160, -200, -250
Produit par : Manufactured by : Hergestellt von :	BAYMAK Mak. San. ve Tic. A.S Tepeöeren, Akdeniz Caddesi, Orhanli -Tuzia ISTANBUL -TÜRKIYE
<p>répond aux directives CEE suivantes: voldoet aan de bepalingen van de onderstaande EEG-richtlijnen: is in conformity with the following EEC-directives: den Bestimmungen der nachfolgenden EG-Richtlinien entspricht:</p>	
 1312	Directives 2009/142 CE « Appareils à gaz », « <i>Gas appliances</i> » Directives 92/42/CEE « Rendements des chaudières », « <i>Boiler efficiency</i> »
	Boiler are tested according following standards : EN303/1 - EN 303/2 - EN 303/3 - EN 304 - EN 304/A1
	Directives 73/23/CEE EMC 89/336
	Directives 2004/108/CEE EN55014/1 - EN55014/2
	<p>Mertzwiler, le 18 Février 2013</p>  Thierry Nille Directeur Marketing

M003T04-A

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1 Introduction



1.1 Symbols and abbreviations

In these instructions, various markings and pictograms are used to draw your attention to particular information. In so doing, **De Dietrich Thermique S.A.S** wishes to safeguard the user's safety, obviate hazards and guarantee correct operation of the boiler.

 **Danger**
Risk of a dangerous situation causing serious physical injury.

 **Warning**
Risk of a dangerous situation causing slight physical injury.

 **Caution**
Risk of material damage.

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

DHW: Domestic hot water

PPS: Polypropylene hardly inflammable


3CE: Collective conduit for sealed boiler

Hi: Lower heating value LHV (Nett)

Hs: Higher heating value HHV (Gross)

1.2 General

1.2.1 Manufacturer's liability

Our products are manufactured in compliance with the requirements of the various applicable European Directives. They are therefore delivered with  marking and all relevant documentation.

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

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

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

1.2.2 Installer's liability

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

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

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

1.3 Homologations

1.3.1 Certifications

CE identification no: 1312 BR 48 73

1.3.2 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, 2006/95/EC and 2004/108/EC.

2 Safety instructions and recommendations

2.1 Safety instructions



Danger

If you smell gas:

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



Danger

If you smell flue gases:

1. Switch the appliance off.
2. Open the windows.
3. Trace possible leaks and seal them immediately.

2.2 Recommendations



Warning

Only qualified professionals are authorised to work on the appliance and the installation.



Warning

Before any work, switch off the mains supply to the appliance.

Before any work, close the main gas valve.

3 Technical description

3.1 General description

The boilers of the CABK - CABK PLUS range are pressurised hot water boilers designed for connecting to a flue pipe which require a separate automatic fuel-oil or gas burner.

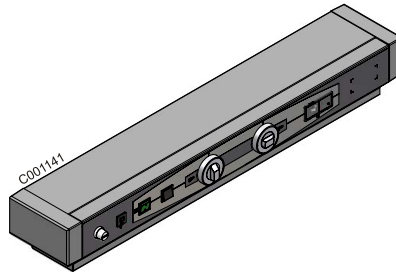
CABK - CABK PLUS boilers have the following characteristics:

- Steel heating body.
- **S3, B3, K3** or **DIEMATIC-m3** control panel.
- Production of domestic hot water can be ensured by a separate hot water calorifier.

3.2 Composition of the range

The naming of the models depends on the control panel associated with them.

3.2.1 CABK - CABK PLUS S3: Boiler with basic control panel



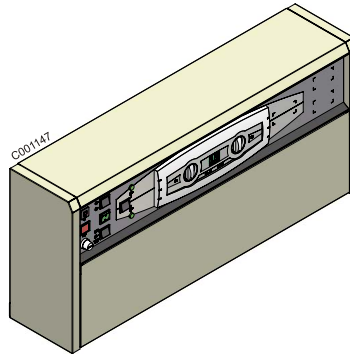
Standard panel to be fitted

Panel comprising the settings, control and safety devices allowing the boiler to operate autonomously, without regulation.

The standard panel is used to connect the boiler to the boiler room control cabinet.

This cabinet can be fitted with control units.

3.2.2 CABK - CABK PLUS B3 : Boiler with electronic control panel.

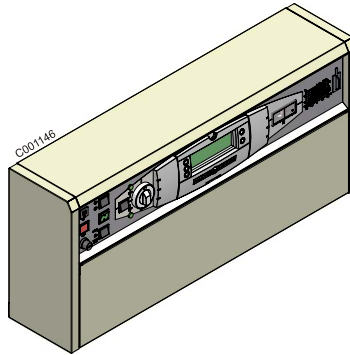


Side panel

Top of the range electronic control panel with digital display, comprising the settings, control and safety devices allowing the boiler to operate autonomously.

The control panel is used to control boilers with 1 or 2-stage burners. This control panel is used to manage DHW priority.

3.2.3 CABK - CABK PLUS DIEMATIC-m3: Boiler with DIEMATIC-m3 electronic control panel



Side panel

Top of the range electronic control panel with digital display, comprising the settings, control and safety devices allowing the boiler to operate autonomously.

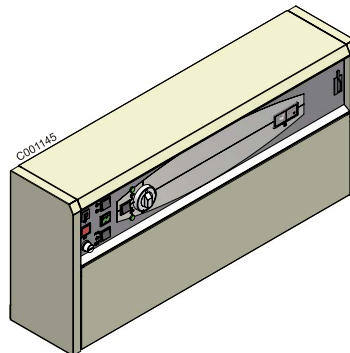
The DIEMATIC-m3 control panel includes as standard a control system with heating curve according to the outside temperature.

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

The DIEMATIC-m3 panel also allows the boiler to be used as a master boiler for installations with 2 to 10 boilers in cascade.

The other boilers (1 to 9) must be fitted with the "K3" control panel.

3.2.4 CABK - CABK PLUS K3: Boiler with K3 control panel



Side panel

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 (2 to 10 boilers can be connected in a cascade).

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

3.3 Technical specifications

Conditions of use:

Maximum operating temperature: 100 °C

Min. return temperature: 55 °C

Maximum operating pressure:

- 4 bar (CABK 8-25)

- 5 bar (CABK 30-80)

Thermostat adjustable from 50 to 90°C

Safety thermostat: 110 °C

Test conditions:

CO₂ Fuel oil = 13%


CO₂ Natural gas = 10%

Ambient temperature: 20 °C

3.3.1 CABK


Boiler		8	10	12	15	18	20	25	
Nominal output	kW	98.7	116	145	175	209	232	290	
Useful output range	kW	79 - 96.7	93 - 116	116 - 145	140 - 175	167 - 209	186 - 232	232 - 290	
LHV efficiency (80-60°C)	%	90.2	90.25	90.3	90.35	90.4	90.45	90.55	
Water content	l	105	120	120	186	186	250	250	
Stand-by losses - ΔT = 30 K	%	0.69	0.69	0.69	0.69	0.69	0.69	0.69	
Nominal water flow - ΔT = 20 K	m ³ /h	3.7	4.9	5.8	7.5	8.9	10.1	12.4	
Flue gas volume flow rate	m ³ /h	196.2	232	289.8	349.2	415.8	460.8	576	
External diameter flue gas nozzle	mm	217	247	247	247	247	247	247	
Flue gas temperature (80-60°C)	°C	190 210	190 210	190 210	190 210	190 210	190 210	190 210	
Pressure in the furnace for nozzle pressure = 0	mbar	0.9	1.1	1.3	1.5	1.7	1.7	2.1	
Mass flue gas flow rate	Fuel oil	kg per sec	0.077	0.086	0.099	0.127	0.154	0.201	0.248
	Natural gas	kg per sec	0.077	0.088	0.1	0.128	0.156	0.203	0.244
Pressure drop - ΔT = 20 K	mmWG	5.14	6.48	7.82	9.16	10.5	11.84	14.52	
Max. operating pressure	bar (MPa)	4	4	4	4	4	4	4	
Flue gas circuit volume	l	185.2	227.3	227.3	282.6	282.6	381.5	381.5	
Weight (empty)	kg	296	380	380	433	433	520	520	
Combustion chamber									
Length	mm	800	945	945	990	990	1197	1197	
Volume	m ³	0.086	0.102	0.102	0.135	0.135	0.201	0.201	
diameter	mm	390	390	390	440	440	488	488	
Pressure drop	mbar	0.90	1.10	1.30	1.50	1.70	1.70	2.10	

Boiler		30	35	40	50	60	70	80	
Nominal output	kW	348	406	465	581	697	813	930	
Useful output range	kW	278 - 348	325 - 406	372 - 465	465 - 581	558 - 697	650 - 813	774 - 930	
LHV efficiency (80-60°C)	%	90.7	91	91.4	91.8	92.2	92.4	92.4	
Water content	l	320	320	565	635	635	690	890	
Stand-by losses - $\Delta T = 30$ K	%	0.69	0.69	0.69	0.69	0.69	0.69	0.69	
Nominal water flow - $\Delta T = 20$ K	m ³ /h	15.1	17.4	19.9	24.8	29.9	35	39.6	
Flue gas volume flow rate	m ³ /h	691	803	916	1139	1361	1584	1811	
External diameter flue gas nozzle	mm	296	296	296	346	346	346	346	
Flue gas temperature (80-60°C)	°C	190 210	190 210	170 190	170 190	170 190	170 190	170 190	
Pressure in the furnace for nozzle pressure = 0	mbar	2.7	3	3.2	3.7	3.9	4	4.5	
Mass flue gas flow rate	Fuel oil	Kg/h	0.298	0.349	0.395	0.492	0.592	0.689	0.786
	Natural gas	Kg/h	0.294	0.344	0.39	0.486	0.586	0.682	0.778
Pressure drop - $\Delta T = 20$ K	mmWG	15.9	24.4	32.9	41.4	58.4	67	80	
Max. operating pressure	bar (MPa)	5	5	5	5	5	5	5	
Flue gas circuit volume	l	494.2	494.2	695.5	788	788	872.4	872.4	
Weight (empty)	kg	665	685	945	1087	1087	1339	1339	
Combustion chamber									
Length	mm	1344	1344	1405	1429	1429	1642	1642	
Volume	m ³	0.270	0.270	0.391	0.424	0.424	0.478	0.478	
diameter	mm	533	533	628	648	648	642	642	
Pressure drop	mbar	2.70	3.00	3.20	3.70	3.90	4.00	4.50	

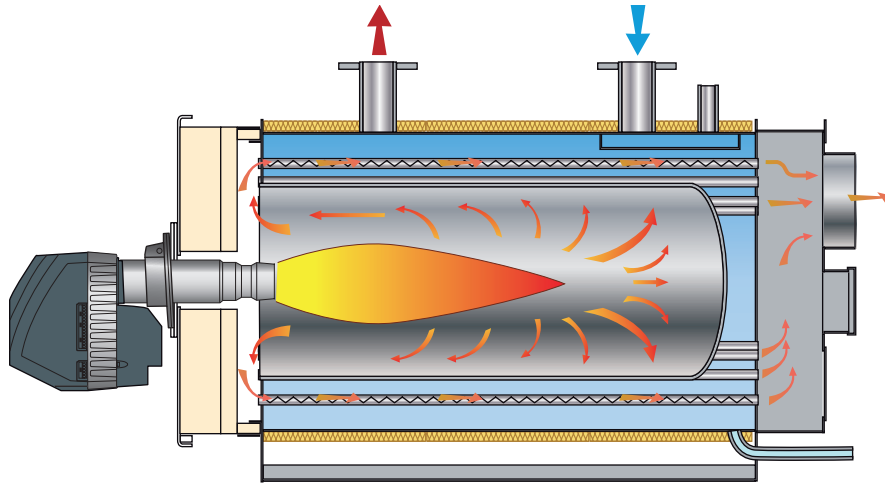
 In order for the boiler to operate correctly, it is imperative to respect the draught at the nozzle: 0 at the nozzle.

3.3.2 CABK PLUS

Boiler		100	130	160	200	250	
Nominal output	kW	1210	1540	1815	2310	2900	
Minimum useful output	kW	968	1232	1452	1846	2320	
LHV efficiency (80-60°C)	%	90.6	90.6	90.6	90.6	90.6	
Water content	l	1327	2281	2377	3047	4700	
Stand-by losses - $\Delta T = 30$ K	W	9215	11728	13823	17593	22086	
Flue gas volume flow rate	m ³ /h	1515	1929	2271	2907	3444	
External diameter flue gas nozzle	mm	500	550	550	600	650	
Flue gas temperature (80-60°C)	°C	190-220	190-220	190-220	190-220	190-220	
Pressure in the furnace for nozzle pressure = 0	mbar	5	5.5	6.1	6.1	6.7	
Mass flue gas flow rate	Fuel oil	kg per sec	1.022	1.3	1.532	1.949	2.446
	Natural gas	kg per sec	1.012	1.288	1.518	1.932	2.425
Pressure drop - $\Delta T = 20$ K	mbar	85	92	95	102	110	
Max. operating pressure	bar (MPa)	5	5	5	5	5	
Flue gas circuit volume	l	846	1439	1439	1970	2400	
Weight (empty)	kg	2500	2900	3250	4000	5500	
Combustion chamber							
Length	mm	1690	2030	2030	2242	2590	
Volume	m ³	0.726	1.240	1.240	1.680	3.612	
diameter	mm	780	930	930	1030	1405	
Pressure drop	mbar	5.00	5.50	6.10	6.10	6.10	

 In order for the boiler to operate correctly, it is imperative to respect the draught at the nozzle: 0 at the nozzle.

3.4 Main parts



M003085-A

CABK and CABK PLUS blind combustion chamber boilers are made up of the following elements:

- A cylindrical envelope containing the heating body.
- A front panel fitted with the burner door.
- A rear panel through which the flue gas nozzle passes.
- A casing composed of several metal panels (sides and top of the boiler).

The cylindrical envelope contains the heating body, composed of the following elements:

- The combustion chamber surrounded by water (first flue gas path).
- A harness of peripheral pipes (second flue gas path).

The peripheral flue gas pipes are fitted with baffles. The combustion gas path in the flue gas circuit enables the heat exchange surfaces to be exploited to the maximum. The flow and return connections in the system, positioned in the top section of the boiler, are fitted with sheet gasket flanges.

The boiler's heating body is insulated with a glass wool coating 70 mm thick covered with a protective aluminium film.

A distribution plate, on the return flange inside the boiler, helps to optimise the circulation of water in the boiler. It ensures an even distribution of water temperatures and thus lessens the stratification phenomenon inside the boiler body. The fact that there is no cold zone in the water circuit in the heating body prevents the formation of condensates in the flue gas pipes and the occurrence of corrosion.

The front panel of the boilers is fitted with a reversible burner door mounted on hinges allowing a choice of left or right opening. The burner delivered separately is mounted on the flange provided for that purpose on the burner door.

The back panel of the boilers incorporates the flue gas nozzle, a cleaning hatch and an anti-explosion valve.

The boilers are equipped with 4 sensor tubes comprising housings for installing temperature sensors and control system thermostat bulbs.

The side casing is composed of white metal panels, affixed to metal cross braces welded between the front and back panels.


The top casing is composed of anthracite grey metal panels positioned on the pins in the side panels and resting on several metal support plates welded to the flow/return pipes and the front and back panels.

Handling hooks welded to the upper section of the boiler's cylindrical envelope enable the unit to be moved with mechanical lifting devices.

4 Installation

4.1 Regulations governing installation

4.1.1 In general

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

4.1.2 In particular for France:

Heating installations must be designed and constructed in such a way as to prevent the return of water from the heating circuit and products put into it into the drinking water network located upstream. The installation must not be in direct relation with the drinking water network (Article 16-7 of the departmental health Directive).

When these installations are fitted with a filling system connected to the drinking water network, they comprise a CB disconnecter (disconnecter for zones with non-controllable pressure differences) which satisfy the functional requirements of the NF P 43-011 standard.

■ Residential buildings

Statutory terms and conditions of installation and maintenance:

The installation and maintenance of the appliance must be carried out by a qualified professional in compliance with the statutory texts of the codes of conduct in force, particularly:

- Order of 27 April 2009 amending the Order of 2 August 1977 Technical and safety rules applicable to combustible gas and liquefied hydrocarbon installations situated inside residential buildings and their annexes.
- NF P 45-204 standards Gas installation, (formerly DTU 61-1, gas installations: April 1982, addendum no 1: July 1984).

- Local Sanitary Regulations

For appliances connected to the electricity network:

- NF C 15-100 standards Low voltage electrical installation - Rules..

■ Establishments open to the public

Statutory terms and conditions of installation:

The installation and maintenance of the appliance must be carried out in compliance with the statutory texts and rules of the codes of conduct in force, particularly:

- Safety regulations against fire and panic in establishments open to the public:

a. General regulations

For all appliances:

- Articles GZ - Installations operating on combustible gases and liquefied hydrocarbons.

Then, depending on use:

- Articles CH-Heating, ventilation, refrigeration, air conditioning and production of steam and domestic hot water.

- b. Instructions specific to each type of establishment open to the public (hospitals, stores, etc.).

■ Certificate of compliance (only concerns CABK - CABK PLUS boilers fitted with a gas burner)

In application of Article 25 of the Order of 27 April 2009 amending the Order of 2 August 1977 amended and Article 1 of the amended Order of 05/02/1999, the installer is required to draw up certificates of conformity approved by the Ministers responsible for construction and gas safety:

- Different forms (forms 1, 2 or 3) for a new gas installation.
- Model 4 after replacing an existing boiler with a new one.

4.2 Package list

4.2.1 Crating

i The boilers come complete with the burner door and flue box already mounted and the glass wool insulation fitted. The sheet metal casing is delivered packed in separate boxes and must be fitted once the heating body is in position in the boiler room.

⚠ After unpacking, ensure that no parts are missing or damaged. If in doubt, do not use the appliance and contact the supplier.

⚠ The packaging materials (cardboard boxes, nails, staples, plastic bag, polystyrene, etc.) must not be left within the reach of children.

The boiler casing is contained in a single cardboard box. The combustion chamber package also contains:

- A box containing the hydraulic connection flanges with gaskets and bolts and a cylindrical brush for sweeping the flue gas pipes.
- Extension handles for the sweeping brush.
- A ceramic fibre cord for the seal around the burner nozzle.

4.2.2 Standard delivery

Each boiler comes in two packages (boiler body and casing), the references for which are shown in the following table:

CABK	
Boiler body	
CABK 8	MB20
CABK 10	MB21
CABK 12	MB22
CABK 15	MB23
CABK 18	MB24
CABK 20	MB25
CABK 25	MB26
CABK 30	MB27
CABK 35	MB28
CABK 40	MB29
CABK 50	MB30
CABK 60	MB31
CABK 70	MB32
CABK 80	MB33
Casing	
CABK 8	MB34
CABK 10-12	MB35
CABK 15-18	MB36
CABK 20-25	MB37
CABK 30-35	MB38
CABK 40	MB39
CABK 50-60	MB40
CABK 70-80	MB41

CABK PLUS	
Boiler body	
CABK PLUS 100	MC9
CABK PLUS 130	MC10
CABK PLUS 160	MC11
CABK PLUS 200	MC12
CABK PLUS 250	MC13
Casing	
CABK PLUS 100	MC14
CABK PLUS 130-160	MC15
CABK PLUS 200	MC16
CABK PLUS 250	MC17

4.3 Choice of the location

4.3.1 Position of the boiler

Installation of the boiler must be done by a qualified professional pursuant to prevailing local and national regulations. Incorrect installation may damage property and injure people for which the manufacturer declines all liability.

It is recommended that the boiler be installed as close as possible to the chimney connection.

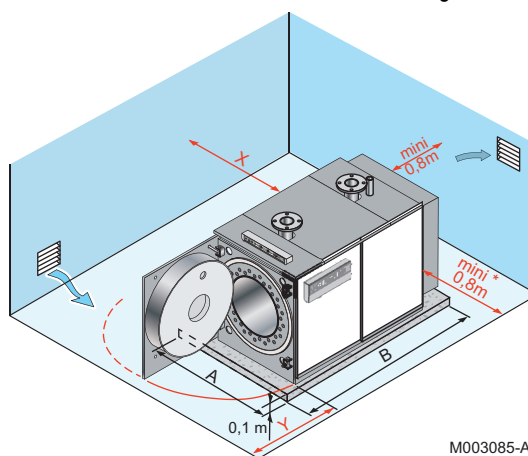
To facilitate cleaning of the flue box, you must allow clearance of at least 800 mm behind the boiler. Check that, when the burner door is open to 90°, the distance to the adjacent wall is at least equal to the length of the burner.

The boiler can be positioned straight on the floor as it is fitted with runners.

The boiler must be placed on a flat, horizontal concrete base frame, capable of bearing its weight when full of water.

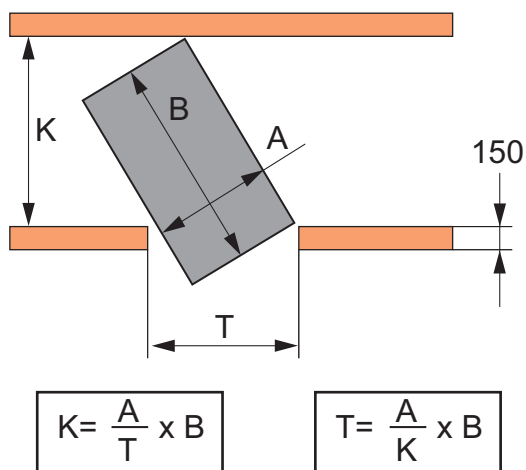
The base frame must overlap the length and width of the boiler by at least 100 mm on each side.

After positioning, the boiler must be perfectly stable and horizontal to eliminate the causes of vibrations and irritating noises.



	CABK-														CABK PLUS-				
	8	10	12	15	18	20	25	30	35	40	50	60	70	80	100	130	160	200	250
A (m)	0.9	0.92	0.92	0.94	1.0	1.0	1.0	1.05	1.05	1.22	1.325	1.325	1.325	1.325	1.75	2.05	2.05	2.20	2.70
B (m)	1.045	1.19	1.19	1.23	1.23	1.41	1.41	1.66	1.66	1.687	1.687	1.687	1.925	1.925	2.10	2.63	2.63	2.70	3.04
X (m)	0.6	0.6	0.6	0.6	0.6	0.75	0.75	0.75	0.75	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2	1.4	1.5
Y (m)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.3	2.5	3.0

■ Minimum width of the door and corridor necessary for the boiler to pass through



K: Corridor width

T: Door width

$$K = \frac{A}{T} \times B$$

$$T = \frac{A}{K} \times B$$


M003086-A

4.3.2 Ventilation

To allow the input of combusting air, sufficient ventilation must be provided in the boiler room, for which the cross section and emplacement must satisfy regulations in force in the country in which the boiler is installed.

Position the air inlets in relation to the high ventilation vents in order that the air is refreshed throughout the boiler room.

 **Do not obstruct the air inlets in the room (even partially).**

 **In order to avoid damage to the boiler, it is necessary to prevent the contamination of combustion air by chlorine and/or fluoride compounds, which are particularly corrosive.**

These compounds are present, for example, in aerosol sprays, paints, solvents, cleaning products, washing products, detergents, glues, snow clearing salts, etc.

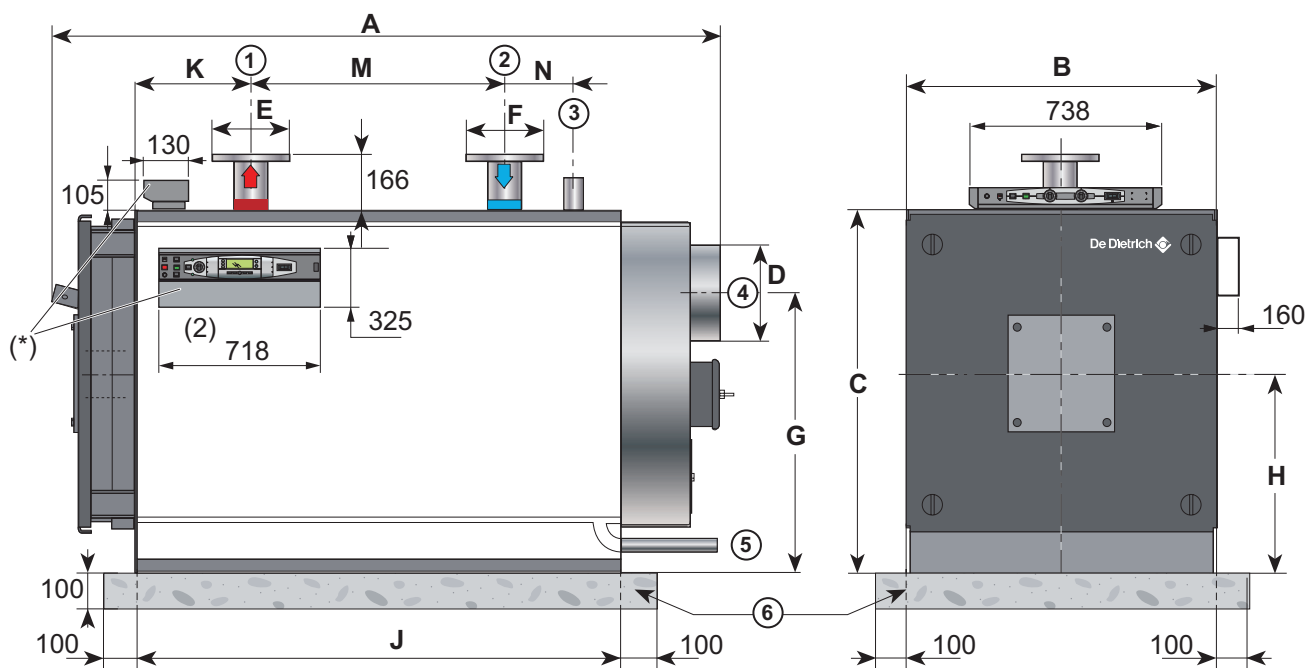
Therefore:

- Do not pull in air evacuated from premises using such products: hairdressing salons, dry cleaners, industrial premises (solvents), premises containing refrigeration systems (risk of refrigerant leakage), etc.
- Do not stock such products close to the boilers.

If the boiler and/or peripheral equipment are corroded by such chloride or fluoride compounds, the contractual guarantee cannot be applied.

4.3.3 Main dimensions

■ CABK



M003083-A

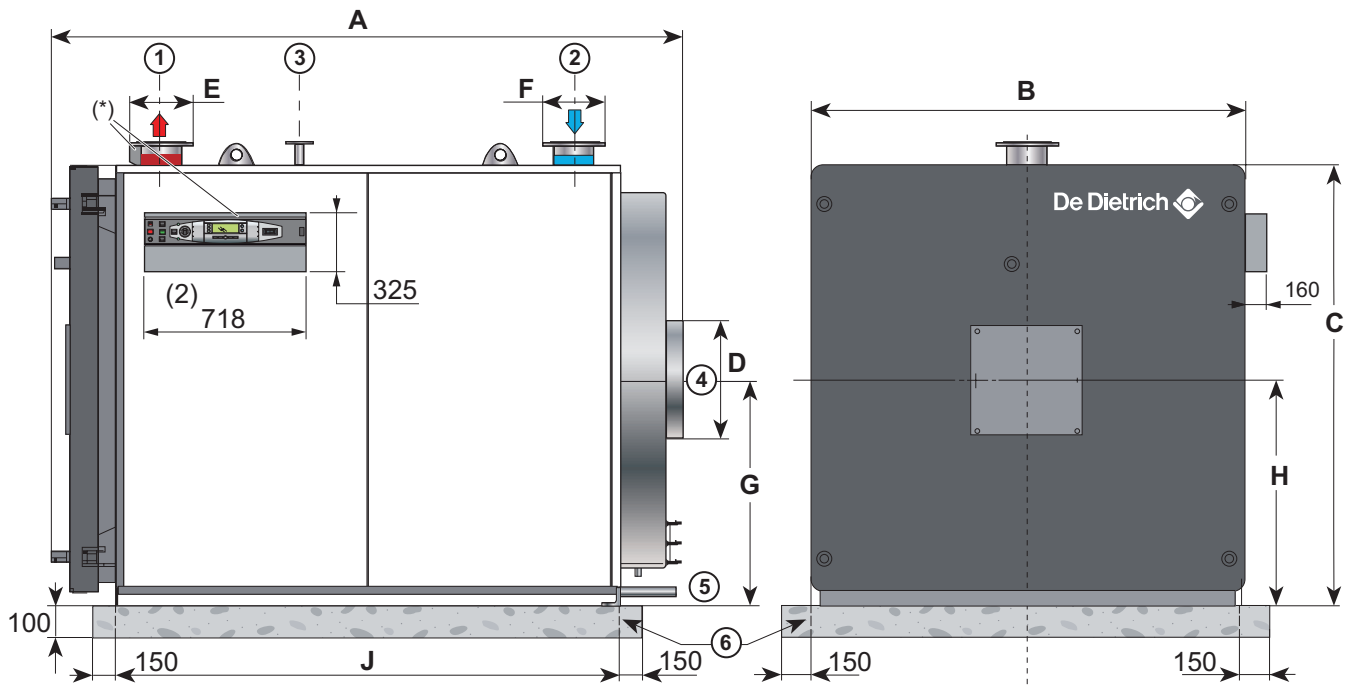
- ① Heating flow
- ② Heating return
- ③ Connection for safety devices - R 1 1/2
- ④ Flue gas discharge pipe
- ⑤ R 1 draining outlet
- ⑥ Concrete base frame

(2) The lateral control panel can be mounted to the right or left of the boiler. Exact height positioning defined by the fitter during assembly.

* Example with Diematic-m3 side-mounted control panel in addition to the standard control panel.

CABK-	8	10	12	15	18	20	25	30	35	40	50	60	70	80
A	1370	1520	1520	1550	1550	1760	1760	1995	1955	2070	2070	2070	2350	2350
B	700	720	720	740	740	800	800	850	850	1020	1125	1125	1125	1125
C	815	815	815	890	890	930	930	950	950	1105	1200	1200	1200	1200
D (exterior)	217	247	247	247	247	247	247	296	296	296	346	346	346	346
E	R1 1/2	DN65	DN65	DN65	DN65	DN80	DN80	DN80	DN80	DN80	DN100	DN100	DN100	DN100
F	R1 1/2	DN65	DN65	DN65	DN65	DN80	DN80	DN80	DN80	DN80	DN100	DN100	DN100	DN100
G	605	605	605	670	670	725	725	745	745	850	890	890	890	890
H	440	440	440	500	500	512	512	510	510	595	640	640	640	640
J	845	990	990	1030	1030	1210	1210	1460	1460	1487	1487	1487	1725	1725
K	235	260	260	260	260	300	300	312	312	312	312	312	312	312
M	400	510	510	530	530	665	665	850	850	850	850	850	1050	1050
N	120	145	145	180	180	180	180	180	180	180	180	180	215	215

■ CABK PLUS



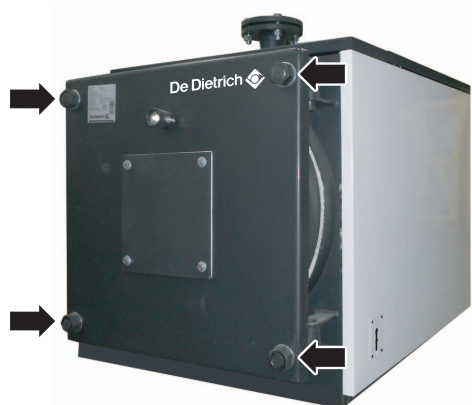
M003084-A

- ① Heating flow
 - ② Heating return
 - ③ Connection for safety devices - DN 40
 - ④ Flue gas discharge pipe
 - ⑤ R 1 draining outlet
 - ⑥ Concrete base frame
- (2) The lateral control panel can be mounted to the right or left of the boiler. Exact height positioning defined by the fitter during assembly.
- * Example with Diematic-m3 side-mounted control panel in addition to the standard control panel.

CABK PLUS-	100	130	160	200	250
A	2380	2760	2760	2980	3425
B	1450	1750	1750	1900	2400
C	1466	1800	1800	1970	2350
D (exterior)	500	550	550	600	650
E	DN125	DN125	DN125	DN150	DN200
F	DN125	DN125	DN125	DN150	DN200
G	766	925	925	1020	1225
H	766	925	920	1020	1225
J	1804	2330	2330	2400	2739

4.4 Positioning the boiler

4.4.1 Burner door



M003093-B

On all boiler models, the burner door can open to the left or right as it is mounted on 4 identical pivot fittings. To open the door to the right (rotation axis to the left), proceed as follows:

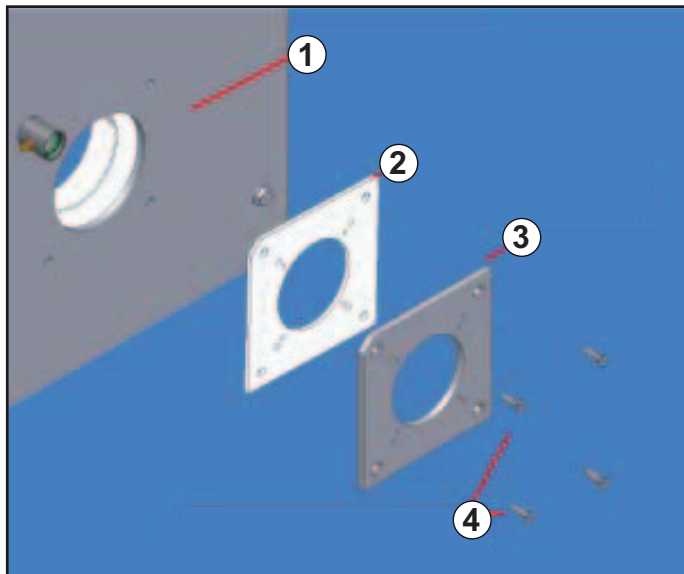
- On the right hand side, fully screw down the locknuts towards the pivot axis in order to leave them flush and, when closed, enable flush fitting of the burner door against the combustion chamber using the nuts.
- On the left hand side, check the tightness of the nut / locknut.

■ Adjusting the door

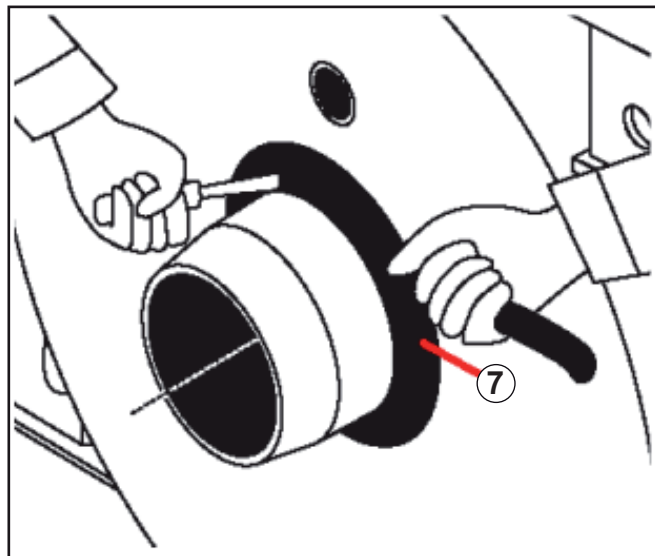
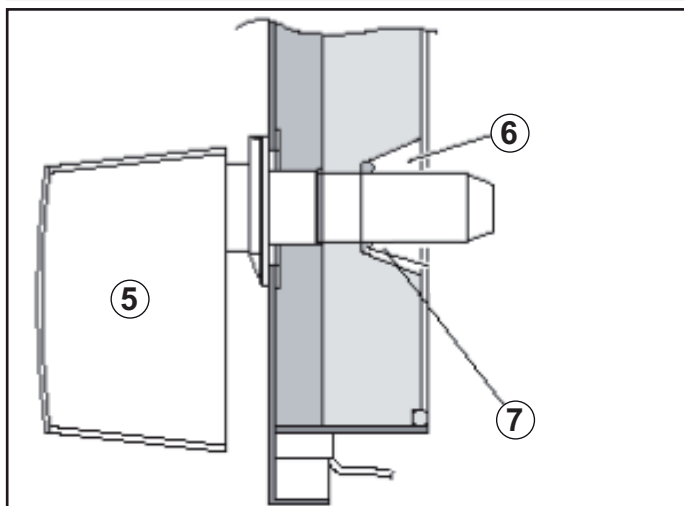
The options for adjusting the burner door are as follows:

- Axial direction: Tighten the nuts to a greater or lesser extent and adjust the position of the locknuts on the hinge side.
- Vertical direction: Insert the washers under the seal (upward adjustment).
- Transverse direction: The adjustment is made in the factory and requires a template; it cannot be redone in the boiler room.

4.4.2 Burner



B	Ø A	L
99	145	280
115	155	280
145	175	280
175	175	280
232	175	280
290	175	280
349	175	280
465	175	300
580	245	300
700	245	300
815	245	300
930	245	300



M003094-A

①	Burner door
②	Insulating gasket
③	Flange
④	Fixing screw
⑤	Burner
⑥	Base
⑦	Ceramic insulation
B	Boiler power

As CABK - CABK PLUS boilers are pressurised in type, the choice of burner must respect precise sizing rules.

The burners must also be CE certified.

The use of burners with a long combustion head is recommended. The above table gives guidelines for perfect adaptation of the burner to the heating body: For each boiler output (column B), column ØA defines the maximum diameter of the burner's flame tube and column L its minimum length.

The burner's output must be adapted the heating body's. We strongly advise against under-sizing the burner and forcing it to run constantly at its maximum output.

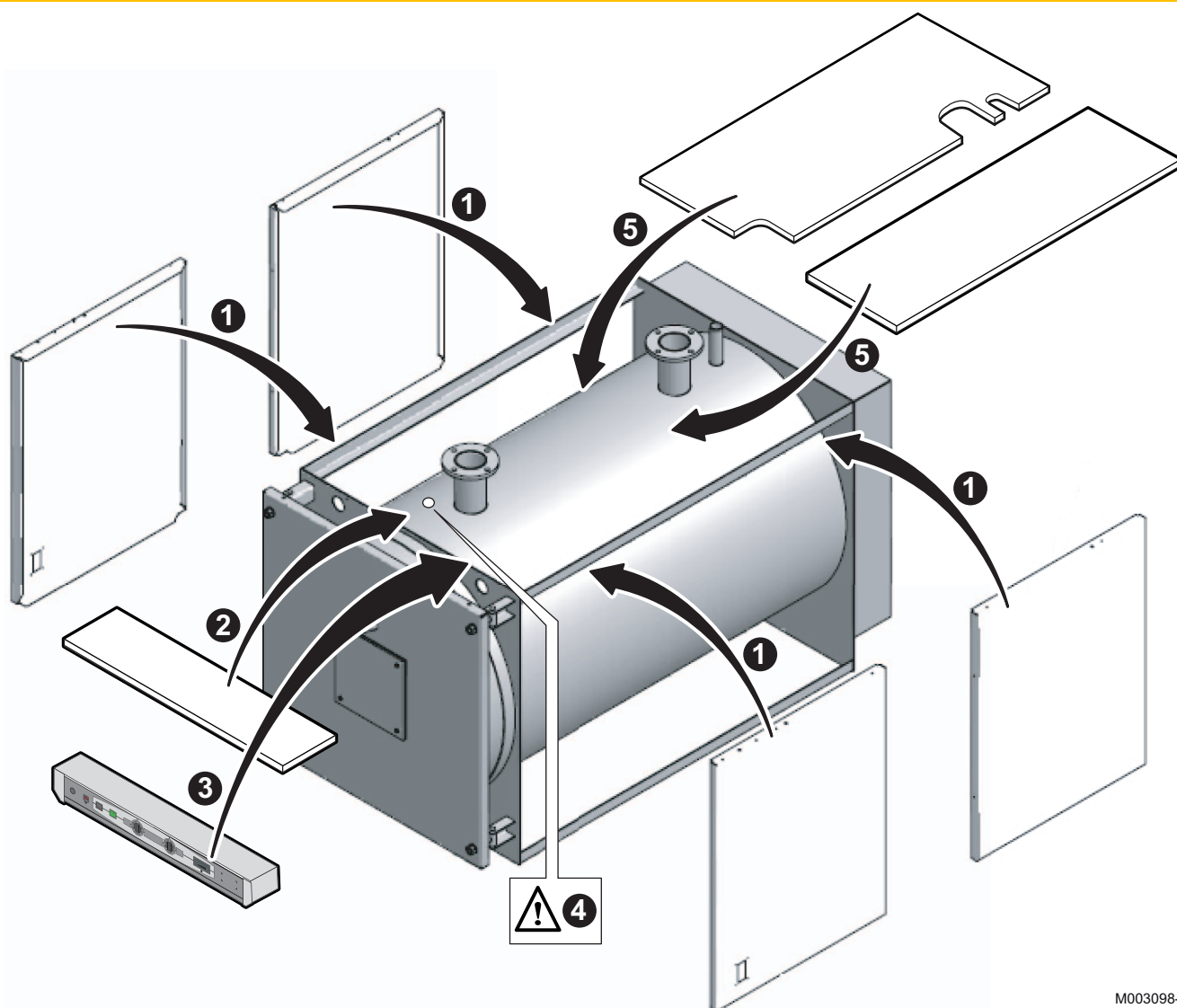
The mounting of the burner to the burner door must guarantee perfect tightness to the combustion products: After mounting the burner on the burner door flange, wind the ceramic fibre cord delivered in the documentation bag around the burner's flame tube in order to fully occupy the free space between the flame tube and the opening in the flange.

If the burner is fitted with a combustion head the diameter of which is greater than that of the burner door nozzle, remove the ceramic cord before mounting the burner on the flange and refit it afterwards.

The fuel supply hoses and the electric cables must be long enough to allow the burner door to open to 90° with the burner in place.

For gas burners, as the use of flexible gas pipes is prohibited, it is necessary to allow for quick dismantling of the end of the gas pipe.

4.4.3 Casing assembly



M003098-B

⚠ The casing must be fitted to the boiler after the hydraulic connection has been made.


 Hydraulic connections (voir page 23).

To mount the casing panels, proceed as follows:

1. Put the lower side panels in position by hooking them on to the supports, ensuring that the cable retaining plates are oriented towards the front of the boiler.
2. Mount the upper front panel.
3. Mount and connect the control panel and thread through the cables accordingly.

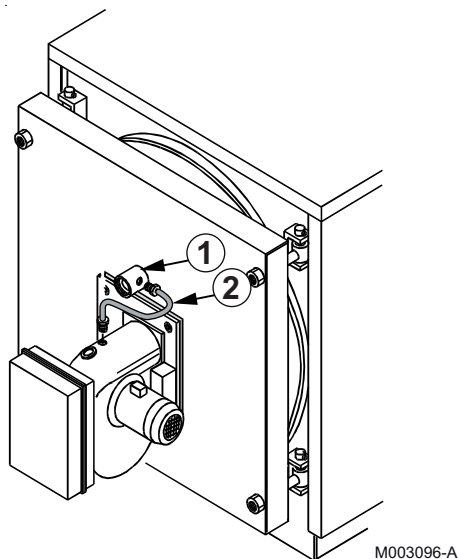
 Electrical connections (voir page 25).

4. Put the sensors in place.

 Fitting the sensors (voir page 21).

5. Fit the upper panels.

4.4.4 Connection between the flame inspection window and the burner



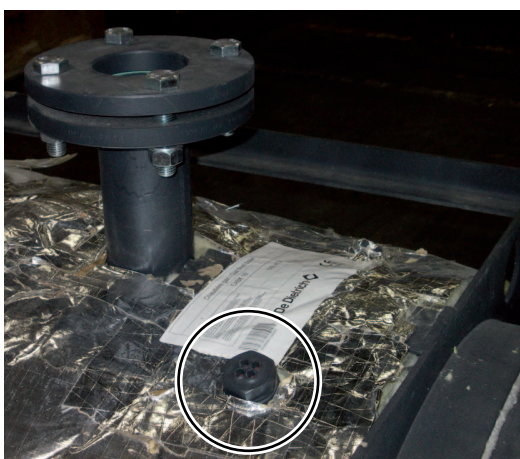
①	Threaded fitting 1/8"
②	Copper pipe

The flame inspection window in the door is fitted with a 1/8" threaded fitting to which a 9 mm pressure outlet is mounted, which is used to measure the counter pressure in the combustion chamber. Remove the pressure outlet (do not discard it) and replace it with a pressure fitting to connect the flame inspection window via a copper pipe directly to the pressure chamber downstream of the burner fan. The air blown by the fan helps to cool down the glass in the flame inspection window and reduces fouling.

If you do not connect the cooling pipe, it may cause the glass to break.

! Danger !
Risk of being burnt.

4.4.5 Fitting the sensors

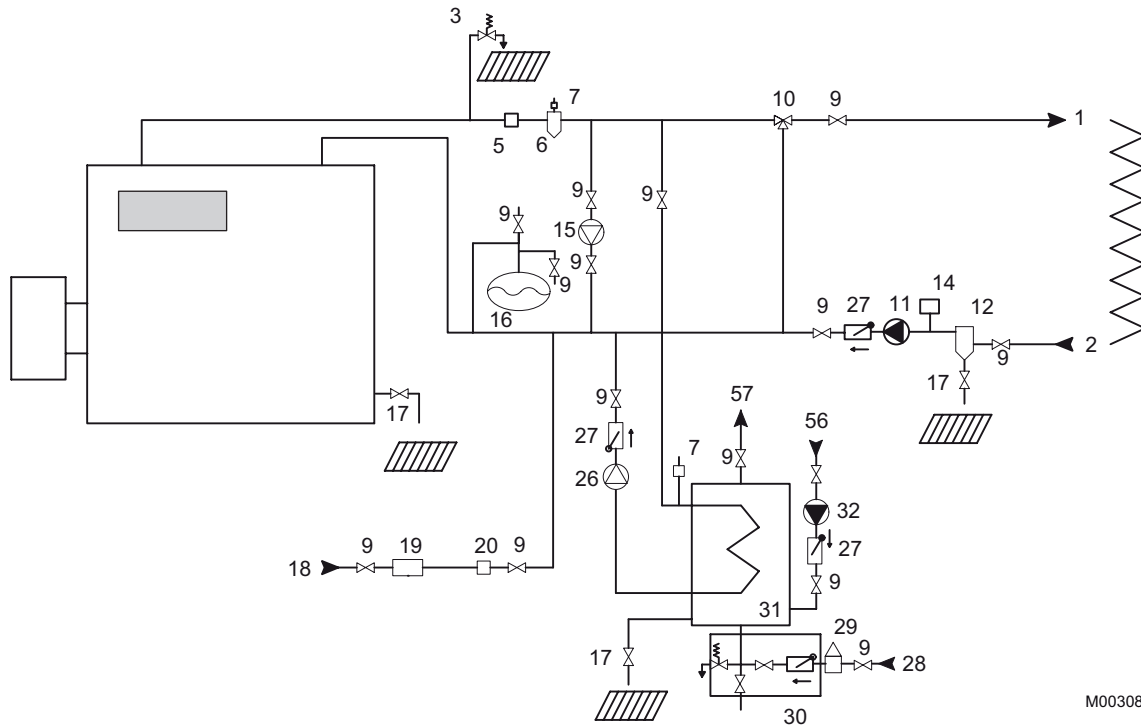


Insert the various sensors and thermostat bulbs in the sensor tubes mounted in the upper section of the boiler body. It is recommended that the sensors be inserted right into the bottom of the sensor tubes in order to improve the contact. Put the spring and the clips in place to retain the sensors and bulbs.


4.5 Example of an installation

The example of an installation shown below does not cover every possible configuration. Its sole aim is to draw your attention to the basic rules to be respected.

CABK - CABK PLUS boiler with domestic hot water production using an independent tank



M003084-A

- | | | | |
|--|--|----|---|
| 1 | Heating flow | 17 | Drain cock |
| 2 | Heating return | 18 | Heating circuit filling (with disconnecter depending on prevailing regulations) |
| 3 | 3-bar safety valve + Pressure gauge | 19 | Water treatment |
| 5 | Flow switch | 20 | Water meter |
| 6 | Air separator | 26 | DHW load pump |
| 7 | Automatic air vent | 27 | Non-return valve |
| 9 | Isolating valve | 28 | Domestic cold water inlet |
| 10 | 3-way mixing valve | 29 | Pressure reducer (if mains pressure > 5.5 bar) |
| 11 | Boiler pump | 30 | Safety unit calibrated to 7 bar with indicator type discharge |
| 12 | Sludge decanting pot (particularly recommended on older installations) | 31 | Independent domestic hot water tank |
| 14 | Water low safety pressure-sensitive switch | 32 | Domestic hot water loop pump (optional) |
| 15 | Shunt pump | 56 | Domestic hot water circulation loop return |
|  See chapter: 5.3 Checks after start-up | | 57 | Domestic hot water outlet |
| 16 | Expansion vessel | | |

4.6 Hydraulic connections

4.6.1 Flushing the system

■ Installing the boiler in new installations (installations less than 6 months old)

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

■ Installing the boiler in existing installations

- ▶ Remove any sludge from the installation before making the boiler's hydraulic connections (see below).
- ▶ Flush the installation.
- ▶ Clean the installation with a universal cleaner to eliminate debris from the appliance (copper, hemp, flux).
- ▶ Thoroughly flush the installation until the water runs clear and shows no impurities.

4.6.2 Sludge removal

If sludge is present in an installation with a CABK - CABK PLUS boiler currently running, a Rp 2" 1/2 threaded opening, closed with a plug, is fitted to the lower part of the front panel of the boiler. Fit a 1/4 turn valve (not supplied) on the opening to remove the sludge.

Sludge removal also causes the drainage of large quantities of water.

After this operation, go ahead and fill the installation.



Filling the system (voir page 25).



A replacement boiler must not be fitted to an old network without first carefully rinsing the installation. Install a sludge decanting pot on the return pipe, very close to the boiler.

4.6.3 Hydraulic connection of the heating circuit

■ Water flow in the boiler

The water flow in the boiler when the burner is operating must correspond with the following formulae:

- Nominal water flow $Q_n = 0.86 P_n / 20$
- Minimum flow $Q_{min} = 0.86 P_n / 45$ (this flow also corresponds with the minimum recycle flow in the boiler)
- Maximum water flow $Q_{max} = 0.86 P_n / 5$

Q_n, Q_{min}, Q_{max} = flow rates in m^3/h

P_n = Nominal output (full boiler output) in kW.

■ Operation in cascade

After stopping the burner:

- Timeout required before the order to close a 2 way valve: 3 min.
- Switch a possible shunt pump (located between the boiler and a butterfly valve) off via the end of run contact of the butterfly valve.

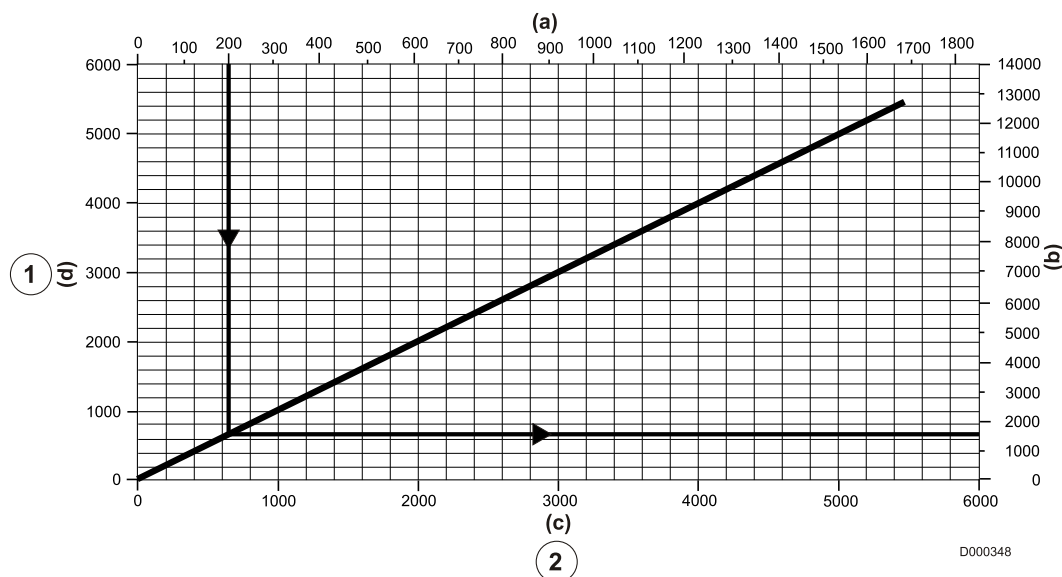
■ Operation with 2-stage burner

The water temperature in the boiler must be higher than a minimum of 54°C (oil system) and 59°C (gas system). In high temperature operation, the first stage must therefore be set to 30% or more of the nominal stage.

4.6.4 Safety valve

The safety valve must be connected to the boiler outlet and no other valve or flap must be interposed between it and the boiler.

■ Minimum safety valve flowrate as a function of maximum boiler nominal output




- ① Minimum relieving capacity
 ② Maximum gross boiler output
- Unit (a) = kW
 (b) = lb/h
 (c) = MBtu/h
 (d) = Kg/h

Example


Maximum boiler nominal output is 200 kW.

Minimum safety valve flowrate must be 700 Kg/h.

4.6.5 Connection of the water circuit for domestic use

 See: Domestic hot water calorifier instructions.

4.7 Fuel-oil or gas connections

 Refer to the instructions supplied with the burner.

4.8 Chimney connection

The high performances of modern boilers and their use in particular conditions related to technological developments bring about very low flue gas temperatures:


- Use flue gas pipes designed to enable the flow of condensates which may result from such operating modes in order to prevent damage to the chimney.
- Install a draining tee at the bottom of the chimney.

The use of a draught moderator is recommended as well.

4.8.1 Flue size

France: Refer to applicable regulations while determining the size of the flue.

Please note that CABK - CABK PLUS boilers have pressurised and tight furnaces and that the pressure at the connection to the chimney must not exceed 0 mbar, unless special sealing precautions have been taken, for instance in order to connect a static condenser/regenerator.

 **In order for the boiler to operate correctly, it is imperative to respect the draught at the nozzle (= 0).**

4.8.2 Connection to the flue gas pipe

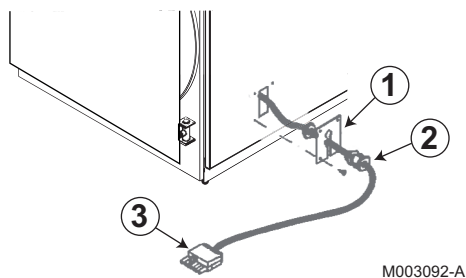
The connection shall be removable, and offer minimum load losses, i.e. it must be as short as possible with no sudden change in section.

Its diameter must always be at least equal to the boiler nozzle's.

Fit a measuring point (\varnothing 10 mm hole) on the flue, in order to adjust the burner (combustion check).

4.9 Electrical connections


4.9.1 Positioning of the burner cable



- ①: Grommet
- ②: Cable clamp
- ③: Burner plug

The control panel is fitted with a burner cable and a cable clamp. When installing the control panel, insert the cable into the cable clamp and connect the cable wires to the terminal block in the control panel. The plug and the cable must exit the side panel through the opening provided for that purpose to which the grommet must be fitted.


4.9.2 Control panel


 Refer to the connection instructions supplied with the control panel..

4.10 Filling the system

Filling shall be performed with a low flow rate from a low point in the boiler room in order to ensure that all the air in the boiler is bled from the high point of the system.

All the pumps must be stopped before filling (included shunt pump(s)).

 **Do not top up with cold water via the return when the boiler is hot.**

 **VERY IMPORTANT: Instructions for starting up the boiler for the first time after the system is fully or partly drained:**
If all the air is not bled naturally to an expansion vessel which opens out onto the air, the system must include manual bleeder valves, in addition to automatic bleeder valves with the capability to bleed the system by themselves when it is operating, the manual bleeder valves are used to bleed all the high points of the system and to make sure that the filled system is free of air before the burner is turned on.

5 Commissioning

5.1 Checks and settings before commissioning

Check the following points before starting the heater:

- The expansion vessel and the safety valve are correctly installed.
- The temperature sensors and the thermostat bulbs are in place and secured into the sensor tubes.
- The baffles are correctly installed in the flue gas pipes.
- The heating system is correctly cleaned and rinsed.
- The installation has been filled with water at a pressure of 1.5 bar (do not use an automatic filling unit) and correctly vented.
- The circulating pumps are unclogged and fully operational.
- All connections comply with prevailing standards and codes of practice.
- The burner output range is compatible with the boiler's.
- The burner is mounted according to the instructions in the relevant manual and set for the type of fuel used.
- The safety devices (anti-explosion valve, valves, thermostat) are fully operational.

5.2 Commissioning the boiler

 See:

- Control panel instructions
- Burner instructions
- Domestic hot water calorifier instructions

When commissioning the boiler for the first time, have the following checks made by qualified professionals:

- Tightness inspection of the burner internally and externally and of the fuel inlet.
- Adjustment of the fuel flow rate according to the boiler's nominal combustion output by switching between the first stage flame and the second stage flame; the first stage flame can drop to 40 to 50% of the nominal combustion output (this may vary between the minimum and the maximum in accordance with the output required by the heating system).

Proceed as follows:

1. Open the fuel supply line.
2. Check that all switches on the control panel are in the "OFF" position and set the adjustment thermostat to the minimum temperature.
3. Power up the control panel by throwing the main switch.
4. Turn the switch on the system pump to "ON".
5. Set the burner switch to "ON".
6. Create a heating demand with the setting thermostat by adjusting it to the maximum temperature.

During this phase, check the following items:

- The door, the burner carrier plate and the connection with the chimney are flue gas tight.
- The chimney flue has a draw value of between 2 and 4 mmCE with a boiler outlet depression equal to 0.
- There are no water leaks.
- The various thermostats and other safety systems in the installation are running correctly.
- The recycling pump is running correctly.
- Burner ignition is correct and in compliance with the requirements in the manual.
- The burner specifications (base settings and injection nozzle type) match the technical data for the boiler and the burner.

i With a correctly set burner, the values shown below, measured on the chimney flue, should be easily obtainable.

A. With oil of a maximum viscosity of 1.5°E at 20°C:

- CO₂ = 12 to 13 %
- Sooting index < 1
- Flue gas temperature = 190 to 210 °C

B. With natural gas

- CO₂ = 9 to 10 %
- Flue gas temperature = 180 to 200 °C (values corresponding to a clean boiler with water at 70°C)

It is advisable to set the fuel flow rate to a value corresponding to the actual needs of the installation under consideration (avoid over-sizing), taking care not to exceed the flue gas temperatures shown above either upwards or downwards (value never less than 120°C for gas - 140°C for oil).


5.3 Checks after start-up

High efficiency boilers are designed to run with a return water temperature never lower than 54°C for operation on oil and 59°C for operation on gas to prevent (or at the very least limit) the phenomenon of acidic condensation of the flue gases, which may lead to premature damage to the boiler's steel heating body.

The general thermostat on the control panel must therefore be adjusted to a setpoint of approximately 80 to 85°C.


The room temperature must be adjusted by means of a mixing valve and where appropriate a climate control system.

To homogenise the water temperature or as far as possible prevent returns to the boiler lower than a value of 54°C for operation on oil and 59°C for operation on gas, a recycling pump with a suitable flow rate must be installed between the boiler's flow and return pipes.

 **The corrosion of the metal sheets by acidic flue gas condensation is not covered by the warranty as it is dependent exclusively on the conduct of the heating system.**


6 Switching off the boiler

- ▶ Set the On/Off switch to **O**.

 See: Control panel instructions.

- ▶ Cut the gas supply to the boiler (if present).

■ DIEMATIC-m3 control panel

 **The panel must always be supplied with 230V voltage:**

- to ensure the anti-grip of the heating pump,
- to ensure Titan Active System® operation when a titanium anode is protecting the DHW tank.

Use the mode:

- summer to shut down the heating.
- antifreeze to shut down the boiler if you are to be absent.

6.1 Precautions required in the case of long boiler stops


- ▶ The boiler and the chimney must be swept carefully.
- ▶ Close all the doors of the boiler to prevent air from circulating inside the boiler.
- ▶ We also recommend removing the flue gas pipe connecting the boiler to the chimney and closing the nozzle with a stopper.

6.2 Precautions required if the heating is stopped when there is a risk of freezing

We recommend the use of a correctly dosed antifreeze agent to prevent to the heating circuit from freezing.

If this cannot be done, drain the system completely.

7.4 Maintenance

 **The boiler will only operate efficiently if the exchange surfaces are kept clean.**


The operating conditions of the boiler vary considerably depending on each individual case and are dependent on the fuel used, the adjustment of the burner, the number of ignitions, the system specifications, etc. It is therefore impossible to establish the frequency of services ahead of time.

It is therefore necessary for the technician carrying out the first service to establish the frequency based on the level of fouling encountered.


The following frequency is advisable, depending on the fuel used:

- Gas boilers: once a year.
- Oil boilers: twice a year or more if there is any reason to doubt that they are correctly adjusted.

 **In all cases, abide by prevailing local standards.**

 **The operations described below shall only be performed with the boiler and power supply off.**

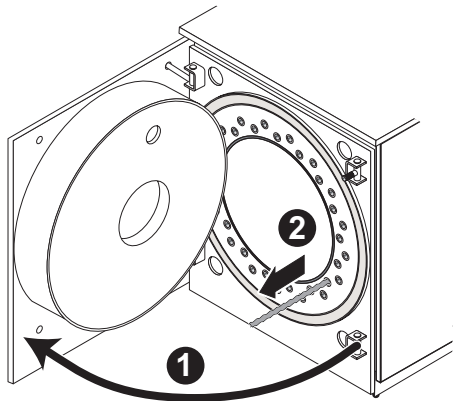
7.4.1 Opening and closing the burner door

 **Danger !**
Risk of being burnt.

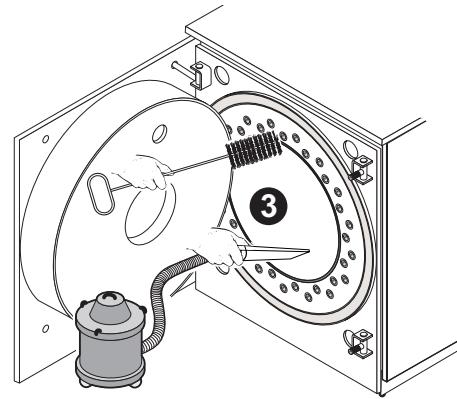
Before opening the burner door, carry out the following operations:

- Close the fuel inlet valve (oil or gas).
- Allow the water to circulate in the system until the boiler has cooled down.
- Cut the power supply to the boiler.
- Put a warning notice in place on the boiler.
- In the case of a gas burner, remove the end of the gas pipe.

7.4.2 Cleaning the flue gas circuit



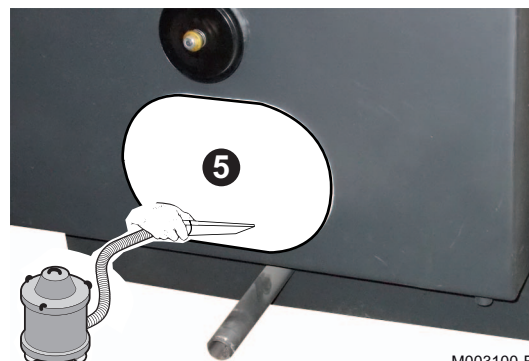
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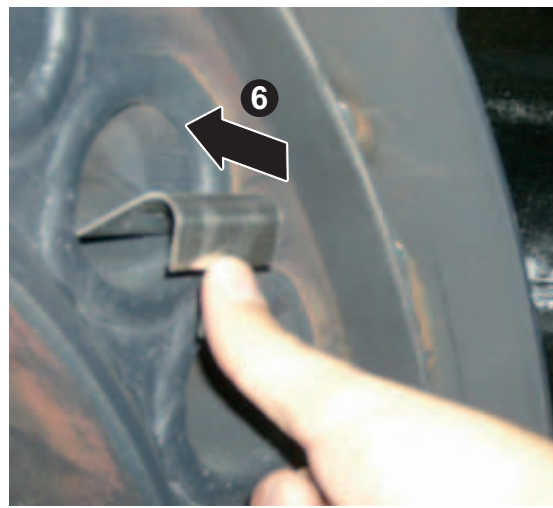
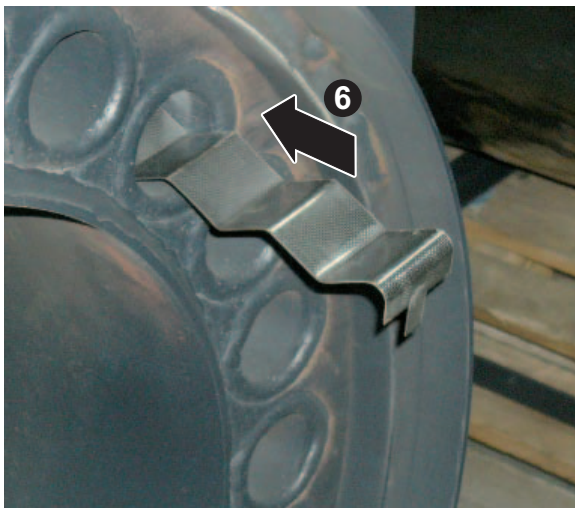
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M003099-B




M003100-B




M003106-B

1. Open the door of the combustion chamber.
2. Remove the flue gas baffles from the heat exchanger pipes.
3. Clean all the pipes in the exchanger with the barrel brush delivered with the boiler.
4. Open the sweeping hatches located on the flue box.
5. Use a vacuum cleaner to remove any cleaning residues.
6. Put the sweeping hatches and the flue gas baffles back in place and close the burner door, checking that it has a perfect seal.

7. Adjust the burner accordingly.

 See burner instructions.

 **Take care to reposition the baffles correctly: Push the baffles down as far as they will go.**

7.4.3 Chemical sweeping

■ General principle

Boilers are traditionally swept mechanically. There are now chemical sweeping methods which facilitate this maintenance work.

A chemical reagent is applied to the boiler's heating surfaces.

After application, the reaction is completed by igniting the burner. The initial deposits are neutralised and pyrolysed. The remaining pulverent residues are easy to remove by sweeping or vacuum cleaning.

■ The products

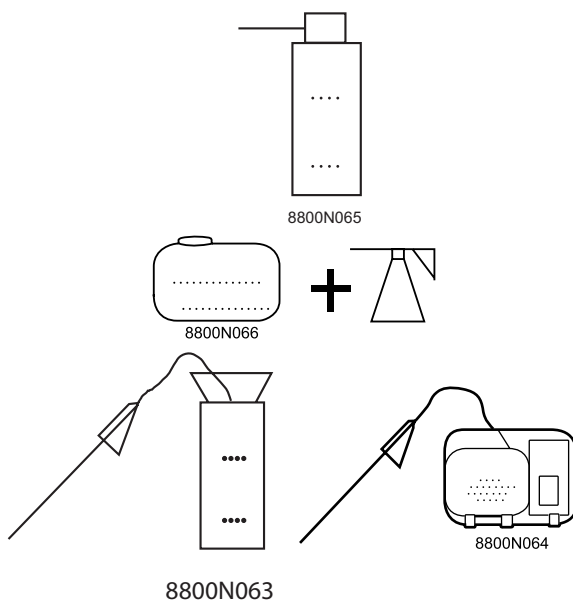
The product must be suitable for boilers with steel bodies. Various manufacturers offer products in the form of a concentrated liquid or aerosol.

The aerosols are packaged in 0.5 to 1 l spray cans for treating domestic boilers. Refer to the instructions supplied with the product.

The liquid products are available in 1 to 50 l containers. These concentrated liquids must be diluted before application with a spray.

Sprays exist in various forms suitable for their intended use:

- Low capacity (2 or 3 l) spray with built-in reservoir for small boilers and moderate frequency. Manual pressurisation of the reservoir.
- 5 l spray with separate reservoir, nozzle and connecting tube. The nozzles enable easy application at the back of the combustion chamber. Manual pressurisation of the reservoir.
- Motor-assisted pressurisation spray with reservoir, nozzle and connecting tube. These sprays are intended for intensive use.



■ Operational mode

The operating mode mentioned corresponds to standard user situations. Refer to the manufacturer's instructions for specific advice on the product used.

■ Application

- Depending on the product, the boiler must be cold or heated. Refer to the instructions supplied with the product.
- Direct application to the heating surfaces with aerosol sprays.
- The concentrates are diluted in the proportions 1/5 to 1/20 (depending on the product and the condition of the boiler).
- Application with the spray is done in the upper part of the boiler and on the walls of the combustion chamber. Surfaces are dampened but not washed. It is not necessary to use the spray to get between the heating surfaces.
- A volume of one litre of solution is generally used for 1 m² of heating surface (domestic boiler), i.e. 0.05 to 0.2 l of concentrate.

■ Ignition

The burner is ignited after allowing the product time to penetrate for 2 to 5 min. Refer to the instructions supplied with the product.


■ Cleaning

- Remove the baffle plates.
- Light sweeping will remove the pulverent residues remaining after combustion. The remaining pulverent residues are easy to remove by sweeping or vacuum cleaning. For certain products, brief application after cleaning has a preventive effect, limiting deposits on the heating surfaces.
- Replace the baffle plates.
- Close the door of the combustion chamber.
- Service the burner.
- Replace the front panel.

7.5 Cleaning the casing material

Use a soapy solution and a sponge only. Rinse with clean water and dry with chamois leather or a soft cloth.

7.6 Maintenance of the burner

 Refer to the instructions supplied with the burner.

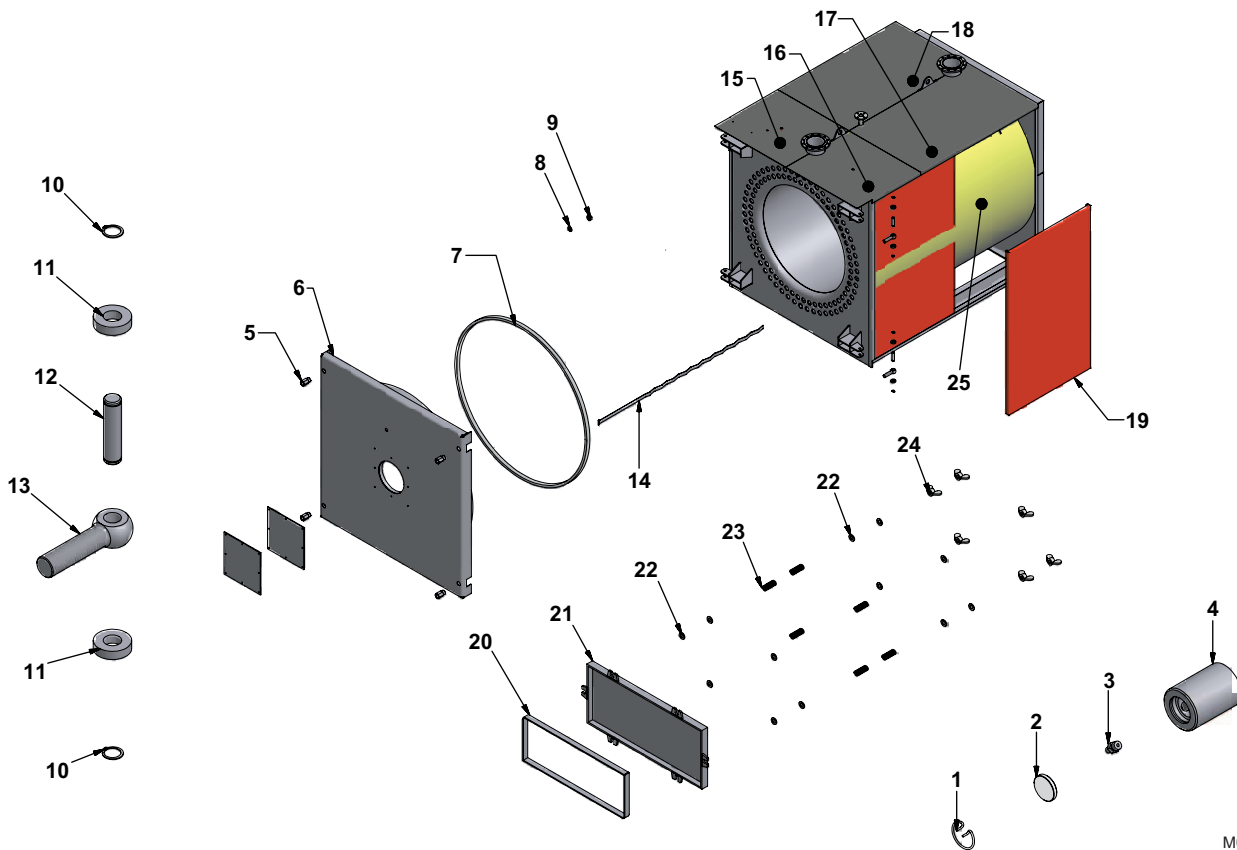
8 Spare parts - CABK - CABK PLUS

25/06/2013 - 7605654-002-01



The code number on the list next to the required piece must be stated when ordering replacement parts.

CABK PLUS 100-250



M003214-A

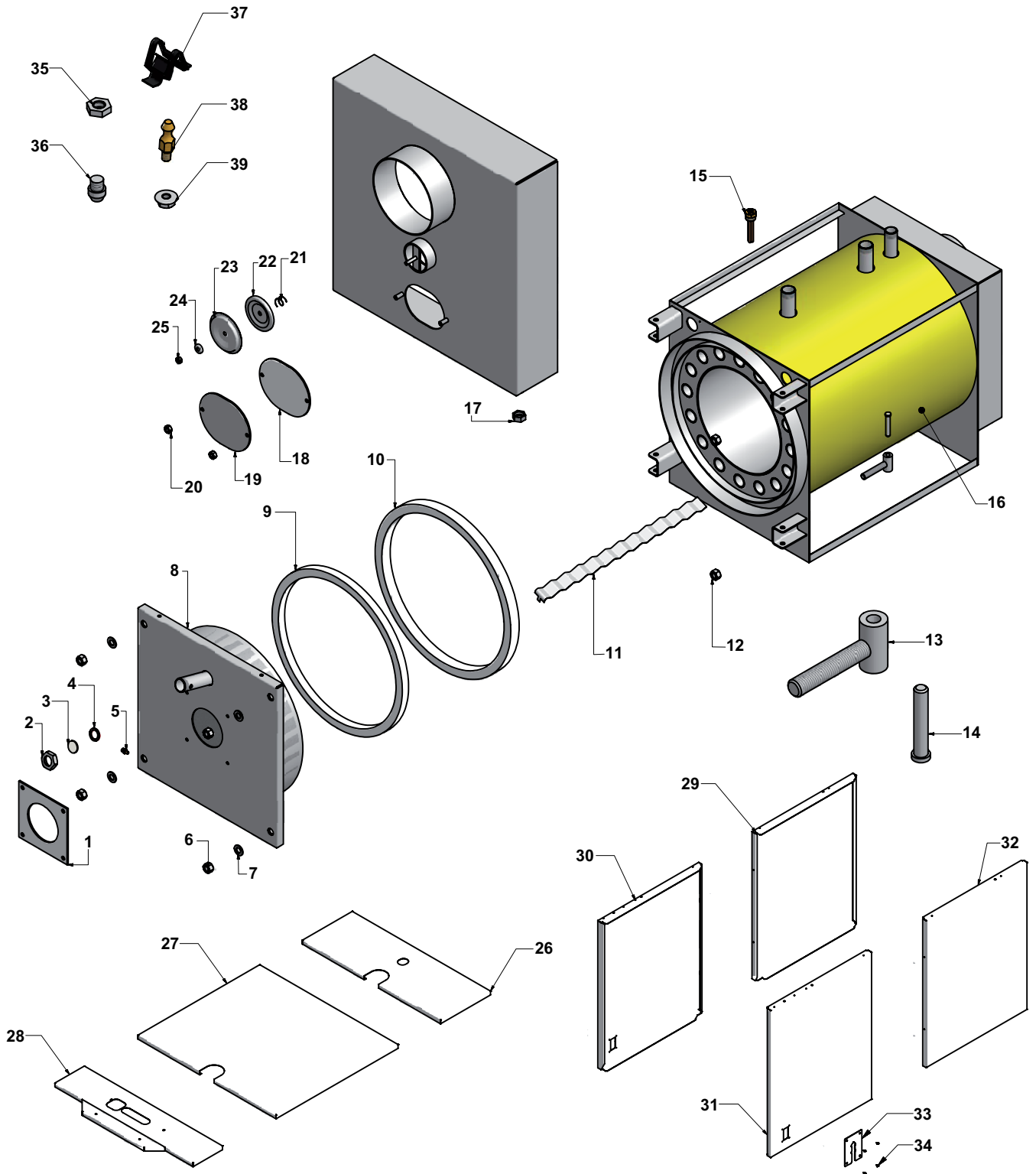
DE DIETRICH THERMIQUE S.A.S. - Spare parts centre

4 rue d'Oberbronn - F-67110 REICHSHOFFEN - ☎ +33 (0)3 88 80 26 50 - 📠 +33 (0)3 88 80 26 98

cpr@dedietrichthermique.com

Markers	Code no.	Description
1	7602913	Indicator circlip
2	7602914	Sight glass
3	7602945	Nipple
4	7602946	Indicator pipe
5	7602968	Burner door nut - CABK PLUS 100-200
5	7602971	Burner door nut - CABK PLUS 250
6	7602982	Burner door - CABK PLUS 100
6	7602986	Burner door - CABK PLUS 130-160
6	7602988	Burner door - CABK PLUS 200
6	7602989	Burner door - CABK PLUS 250
7	7603008	Burner door thermocord - diameter 35 mm
8	7603009	M30 washer
8	7603022	M30 washer
9	7603030	M30 nut holder
9	7603040	M36 nut holder
10	7603041	Tab washer
11	7603064	Spacer - CABK PLUS 100-200
11	7603073	Spacer - CABK PLUS 250
12	7603094	Pin - CABK PLUS 100-200
12	7603100	Pin - CABK PLUS 250
13	7603142	Connecting rod - CABK PLUS 100-200
13	7603144	Connecting rod - CABK PLUS 250
14	7603348	Turbulence generator - CABK PLUS 100
14	7603371	Turbulence generator - CABK PLUS 130
14	7603402	Turbulence generator - CABK PLUS 160
14	7603418	Turbulence generator - CABK PLUS 200
14	7603430	Turbulence generator - CABK PLUS 250
15+18	7603441	Left top panel - CABK PLUS 100
15+18	7603442	Left top panel - CABK PLUS 130-160
15+18	7603444	Left top panel - CABK PLUS 200
15	7603447	Front left top panel - CABK PLUS 250
16+17	7603453	Right top panel - CABK PLUS 100
16+17	7603462	Right top panel - CABK PLUS 130-160
16+17	7603466	Right top panel - CABK PLUS 200
16	7603468	Front right top panel - CABK PLUS 250
17	7603471	Back right top panel - CABK PLUS 250
18	7603472	Back left top panel - CABK PLUS 250
19	7603552	Side panel - CABK PLUS 100
19	7603572	Side panel - CABK PLUS 130-160
19	7603578	Side panel - CABK PLUS 200
19	7603579	Side panel - CABK PLUS 250
20	7603586	Inspection trap gasket
21	7603830	Inspection hatch
22	7603874	M10 washer
23	7603876	Spring
24	7603877	M10 wing nut
25	7603880	Insulating material for body - CABK PLUS 100
25	7603885	Insulating material for body - CABK PLUS 130-160
25	7603887	Insulating material for body - CABK PLUS 200
25	7603888	Insulating material for body - CABK PLUS 250

CABK 8-80



M003221-C

Markers	Code no.	Description
1	7606071	Furnace door insulation - CABK 8-35
1	7606072	Furnace door insulation - CABK 40-80
2	7606073	Indicator light nut
3	7606074	Sight glass
4	7606075	Gasket 1-1/4
5	7606076	Nipple
6	7606077	M20 nut
6	7606078	M30 nut
7	7606081	M20 washer
7	7606109	M30 washer
8	7606132	Burner door - CABK 8
8	7606135	Burner door - CABK 10-12
8	7606137	Burner door - CABK 15-18
8	7606154	Burner door - CABK 20-25
8	7606155	Burner door - CABK 30-35
8	7606156	Burner door - CABK 40
8	7606157	Burner door - CABK 50-60
8	7606158	Burner door - CABK 70-80
9	7606159	30x30 door cord
10	7606160	30x50 door cord
11	7606161	Turbulence generator CABK 8
11	7606233	Turbulence generator CABK 10-12
11	7606256	Turbulence generator CABK 15-18
11	7606290	Turbulence generator CABK 20-25
11	7606291	Turbulence generator CABK 30-35-40-50-60
11	7606296	Turbulence generator CABK 70-80
12	7606300	M30 tapered nut
13	7606301	Hinge CABK 8
13	7606324	Hinge CABK 10-12-15-18-20-25-30-35-40-50-60-70-80
14	7606379	CABK 8 hinge axis
14	7606394	CABK 10-12-15-18-20-25-30-35-40-50-60-70-80 hinge axis
15	7606407	Sensor tube
16	7606456	Insulating material for body
17	7606485	1/2" female valve
18	7606496	Insulating material for sweeping covers CABK 8-10-12-15-18-20-25-30-35-40
18	7606503	Insulating material for sweeping covers CABK 50-60-70-80
19	7606512	Sweeping trap CABK 8-10-12-15-18-20-25-30-35-40
19	7606513	Sweeping trap CABK 50-60-70-80
20	7606552	M8 nut
21	7606514	Spring for indicator light CABK 8-10-12-15-18
21	7606515	Spring for indicator light CABK 20-25-30-35-40-50-60-70-80
22	7606516	Insulation for indicator light CABK 8-10-12-15-18
22	7606517	Insulation for indicator light CABK 20-25-30-35-40-50-60-70-80
23	7606518	Indicator CABK 8-10-12-15-18
23	7606519	Indicator CABK 20-25-30-35-40-50-60-70-80
24	7606520	Tab washer CABK 8-10-12-15-18
24	7606551	Tab washer CABK 20-25-30-35-40-50-60-70-80
25	7606552	M8 nut CABK 8-10-12-15-18
25	7606553	M10 nut CABK 8-10-12-15-18

Markers	Code no.	Description
26	7608471	Rear cover CABK 8
26	7608472	Rear cover CABK 10-12
26	7608473	Rear cover CABK 15-18
26	7608474	Rear cover CABK 20-25
26	7608475	Rear cover CABK 30-35
26	7608476	Rear cover CABK 40
26	7608477	Rear cover CABK 50-60
26	7608478	Rear cover CABK 70-80
27	7608480	Central top panel CABK 8
27	7608481	Central top panel CABK 10-12
27	7608482	Central top panel CABK 15-18
27	7608483	Central top panel CABK 20-25
27	7608484	Central top panel CABK 30-35
27	7608485	Central top panel CABK 40
27	7608486	Central top panel CABK 50-60
27	7608487	Central top panel CABK 70-80
28	7608387	Front cover CABK 8
28	7608464	Front cover CABK 10-12
28	7608465	Front cover CABK 15-18
28	7608466	Front cover CABK 20-25
28	7608467	Front cover CABK 30-35
28	7608468	Front cover CABK 40
28	7608469	Front cover CABK 50-60
28	7608470	Front cover CABK 70-80
29	7608520	Back left side panel CABK 30-35
29	7608521	Back left side panel CABK 40
29	7608730	Back left side panel CABK 50-60
29	7608523	Back left side panel CABK 60-70
30	7608712	Side panel, left CABK 8
30	7608713	Side panel, left CABK 10-12
30	7608510	Side panel, left CABK 15-18
30	7608511	Side panel, left CABK 20-25
30	7608512	Front left side panel CABK 30-35
30	7608513	Front left side panel CABK 40
30	7608514	Front left side panel CABK 50-60
30	7608515	Front left side panel CABK 70-80
31	7608488	Side panel, right CABK 8
31	7608489	Side panel, right CABK 10-12
31	7608490	Side panel, right CABK 15-18
31	7608492	Side panel, right CABK 20-25
31	7608501	Front right side panel CABK 30-35
31	7608505	Front right side panel CABK 40
31	7608506	Front right side panel CABK 50-60
31	7608710	Front right side panel CABK 70-80
32	7608516	Back right side panel CABK 30-35
32	7608517	Back right side panel CABK 40
32	7608518	Back right side panel CABK 50-60
32	7608519	Back right side panel CABK 70-80
33	7609368	Grommet plate
34	7609374	Grommet plate fastening screw
35	7609369	Nut
36	7609370	Casing screw CABK
37	7609373	Casing spring CABK
38	7609372	Casing clip CABK
39	7609371	Casing washer CABK

Warranty

You have just purchased one of our appliances and we thank you for the trust you have placed in our products. Please note that your appliance will provide good service for a longer period of time if it is regularly checked and maintained. Your fitter and our customer support network are at your disposal at all times.

■ Warranty terms

Starting from the purchase date shown on the original fitter's invoice, your appliance has a contractual guarantee against any manufacturing defect.

The length of the guarantee is mentioned in the price catalogue.

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). In particular, the manufacturer shall not be held responsible for any damage, loss or injury caused by installations which do not comply with the following:

- applicable local laws and regulations
- specific requirements relating to the installation, such as national and/or local regulations
- the manufacturer's instructions, in particular those relating to the regular maintenance of the unit
- the rules of the profession

The warranty is limited to the exchange or repair of such parts as have been recognised to be faulty by our technical department and does not cover labour, travel and carriage costs. The warranty shall not apply to the replacement or repair of parts damaged by normal wear and tear, negligence, repairs by unqualified parties, faulty or insufficient monitoring and maintenance, faulty power supply or the use of unsuitable fuel. Sub-assemblies such as motors, pumps, electric valves etc. are guaranteed only if they have never been dismantled.

■ France

The preceding dispositions are not exclusive of benefits for the purchaser of the legal guarantee as stated in Civil Code articles 1641 to 1648.

■ Poland

Warranty conditions are included in the warranty card.

■ Switzerland

The application of the warranty is subject to the terms and conditions of sale, delivery and warranty of the company marketing our products.

■ Belgium

The preceding dispositions about the contractual guarantee are not exclusive of profit if the need arises for the purchaser in Belgium of the applicable legal dispositions on hidden defects.

■ Italy

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

Our liability as manufacturer may not be invoked in respect of incorrect use of the appliance, incorrect or insufficient maintenance thereof, or incorrect installation of the appliance (you must therefore ensure that installation and maintenance operations are carried out respectively by a qualified professional and by an after sales service company).

The legislation laid down by European Directive 99/44/EEC, transposed by Legislative Decree No. 24 of 2 February 2002 published in O.J. No. 57 of 8 March 2002, continues to apply.

■ Russia

The foregoing provisions in no way affect the rights of the consumer, which are guaranteed by the legislation of the Russian Federation as regards hidden defects.

The terms and conditions of warranty and the terms and conditions of application of the warranty are indicated on the warranty form.

The warranty shall not apply as regards the replacement or repair of wearing parts under normal use. Such parts include thermocouples, injection nozzles, flame control and ignition systems, fuses and gaskets.

■ Turkey

Due to the laws and regulations the product life for this product is 10 years. During that time the producer and/or the distributor has to provide after sales services and spare parts.

■ Other countries

The above provisions do not restrict the benefit of the legal laws regarding hidden defects applicable in the buyer's country.

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Subject to alterations.

23/07/2013



7605654-001-02

De Dietrich

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