

ELIDENS

EN


Gas fired condensing boiler

DTG(E)130 - 35/45/65/90/115 Eco.NOxPlus



**Technical
instructions**

Declaration of conformity

The appliance complies with the standard model described in declaration of compliance . It is manufactured and distributed pursuant to the requirements of European directives. The original of the declaration of compliance is available from the manufacturer.

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

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

- déclare ici que les produit(s) suivant(s) : DTG (E) 130-35/45/65/90/115 Eco.NOx Plus
- verklaart hiermede dat de toestel(len)
- this is to declare that the following product(s)
- erklärt hiermit dass die Produk(te)

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

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

CEE-Directive:	90/396/CEE	normes appliquées, toegepaste normen:
EEG-Richtlijn:	90/396/EEG	tested and examined to the following norms:
EEC-Directive:	90/396/EEC	verwendete Normen:
EG-Richtlinie:	90/396/EWG	EN 483, EN 437, EN 677, EN 625

92/42/CEE
92/42/EEG
92/42/EEC
92/42/EWG

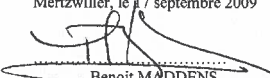
2006/95/CEE EN 60335-2-102
2006/95/EEG
2006/95/EEC
2006/95/EWG

2004/108/CEE EN61000-6-3
2004/108/EEG EN 61000-6-1
2004/108/EEC
2004/108/EWG

97/23/CEE (art.3 section 3)
97/23/EEG (art. 3, lid 3)
97/23/EEC (article 3, sub 3)
97/23/EWG (Art. 3, Absatz 3)



Mertzwiller, le 17 septembre 2009


Benoit MADDENS
Directeur d'activité Chaudières au sol

C002709-A

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For Belgium: German instructions reference 300014251 available on request.

For Switzerland: Italian instructions reference 300016782 available on request.

1 Introduction

1.1 Used symbols



Caution danger

Risk of injury and damage to equipment. Attention must be paid to the warnings on safety of persons and equipment



Important information

Information must be kept in mind to maintain comfort



Reference

Refer to another manual or other pages in this instruction manual

1.2 Abbreviations

- ▶ **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)

1.3 General

1.3.1 Manufacturer's liability

De Dietrich Thermique S.A.S manufactures products in compliance with the standard **CE**. Products are delivered with **CE** marking and all documents required.

In the interest of customers, **De Dietrich Thermique S.A.S** are continuously endeavouring to make improvements in product quality. All the specifications stated in this document are therefore subject to change without notice.

The liability of **De Dietrich Thermique S.A.S** as the manufacturer may not be invoked in the following cases:


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


1.3.2 Installer's liability


The installer is responsible for the installation and 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.


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 engineer.


 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 engineer).

 Work on electrical equipment must be carried out by a qualified professional in compliance with the prevailing regulations.

 Check that the appliance is properly set for the type of gas used.

 Keep to the polarity shown on the terminals: phase (L), neutral (N) and earth $\frac{1}{\text{---}}$.

 Check the seal on the gas and water pipe connections.

 We shall not accept any responsibility for any damage and disturbance arising from not following these instructions.

3 Description

3.1 General

DTG(E)130 - 35/45/65/90/115 Eco.NOxPlus boiler are floor-standing gas-fired condensing boilers fitted with a DIEMATIC3 conversational control unit. They handle central heating and the production of domestic hot water (when DHW tank is connected).

They are designed for closed circuit hot water boiler rooms with a maximum operating temperature of 90°C. Their installation is recommended on low temperature heating installations (Underfloor heating, gentle heat radiators, ...).

3.2 Composition of the range

Boiler	DTGE130-35 / DTG130-35 / DTG130-45 / DTG130-65 / DTG130-90 / DTG130-115
No. CE	CE-0063BS3826
Type	B ₂₃ - C _{13(x)} - C _{33(x)} - C _{43(x)} - C ₅₃ - C _{63(x)} * - C _{83(x)} - C _{93(x)}
Flue gas discharge	Chimney / Flue gas outlet
Ignition	Automatic
Gas	Natural gas / Propane

* Except Belgium

(x) For Germany only

3.3 Homologations

3.3.1 General instructions

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

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

Only original spare parts must be used.


Any work on the gas valve unit is authorised only if carried out by a qualified professional. Please confirm to the user of the installation that you have carried out a leak tightness check on the gas circuit.

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. Boilers must be used only with the types of gas indicated on the rating plate.

Before commissioning, the factory settings of the appliance must be compared with the local energy supply conditions. If the settings have to be modified, this must be carried out by a qualified professional.

Condensing boilers require a flue gas discharge system or a fresh air inlet specially adapted to the method of operation. Its execution depends on the place of installation and the building.

Compliance with a minimum distance between the flue gas discharge system in forced flue mode or the boiler with combustible substances is not necessary. At nominal output, the temperature of the components does not exceed 85 °C.

 **Work on electrical equipment must be carried out by a qualified professional in compliance with the prevailing regulations.**

■ Switzerland

SVGW No.: 08-008-4

The installation of the boiler must be done in compliance with the following directives:

- SSIGE regulations - G1: Gas installation,
- VKF requirements (Cantonal Grouping of Insurance Brokers),
- Local and cantonal regulations.

Installation and maintenance of the boiler must be carried out by a qualified professional in compliance with prevailing local and national regulations.

The safety distance between combustible substances and the boiler and gaseous effluents must comply with the requirements of the AEAI standard.


■ Other countries

Installation and maintenance of the boiler must be carried out by a qualified professional in compliance with prevailing local and national regulations.

■ Belgium

The appliances comply with the requirements and standards laid down in the Royal Decree of 8 January 2004 and in the 17 July 2009.

Installation and maintenance of the boiler must be carried out by a qualified professional in compliance with prevailing local and national regulations.

 **The boiler is preset in the factory to operate on natural gas G20. It is formally prohibited to interfere with the gas block.**

**Déclaration de conformité à l'Arrêté royal du 17/07/2009
Konformitätserklärung - Königlicher Erlass vom 17. Juli 2009
Conformiteitsverklaring - Koninklijk Besluit van 17 juli 2009**

Fabricant : De Dietrich Thermique S.A.S.
Hersteller: 57 rue de la gare
Fabrikant: F-67580 MERTZWILLER
Tél : +33 3 88 80 27 00
Fax : +33 3 88 80 27 99

certifie par la présente que le(s) produit(s) suivant(s) : DTG E 130-35 Eco.NOx Plus ; DTG 130-35 Eco.NOx Plus
erklärt hiermit, dass das(die) folgende(n) Produkt(e): DTG 130-45 Eco.NOx Plus; DTG 130-65 Eco.NOx Plus
verklaart hierbij dat het(de) volgende product(en): DTG 130-90 Eco.NOx Plus; DTG 130-115 Eco.NOx Plus

est (sont) conforme(s) aux exigences de l'Arrêté royal du 08/01/2004 et aux exigences des normes
suivantes :
die Anforderungen des Königlichen Erlasses vom 08. Januar 2004 sowie die Anforderungen der
folgenden Normen erfüllt:
beantwoord(en) aan de eisen van het Koninklijk Besluit van 08/01/2004 en aan de eisen van de
volgende normen:

EN 297 ; EN 483 ; EN677 ; EN15420 ; EN15417

Les valeurs NOx et CO ci-après, mesurées sur chaque chaudière mentionnée :
Die nachstehenden NOx- und CO-Werte, gemessen an jedem der genannten Heizkessel:
De volgende NOx- en CO-waarden, gemeten op iedere vermelde verwarmingsketel:

- DTG E 130-35 Eco.NOx Plus	NOx: <37 mg/kWh; CO: 21 mg/kWh (DIN 4702 Teil 8)
- DTG 130-35 Eco.NOx Plus	NOx: <37 mg/kWh; CO: 21 mg/kWh (DIN 4702 Teil 8)
- DTG 130-45 Eco.NOx Plus	NOx: 37 mg/kWh; CO: 21 mg/kWh (DIN 4702 Teil 8)
- DTG 130-65 Eco.NOx Plus	NOx: 32 mg/kWh; CO: 21 mg/kWh (DIN 4702 Teil 8)
- DTG 130-90 Eco.NOx Plus	NOx: 45 mg/kWh; CO: 20 mg/kWh (DIN 4702 Teil 8)
- DTG 130-115 Eco.NOx Plus	NOx: 46 mg/kWh; CO: 31 mg/kWh (EN 297)

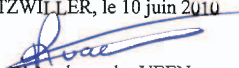
ont été certifiées par l'organisme certificateur suivant :
wurden von der folgenden Zertifizierungseinrichtung zertifiziert:
zijn door de volgende certificeringsinstantie gecertificeerd:

GASTEC Certification BV NL-7300AC APELDOORN

Les appareils mentionnés ci-dessus sont de classe NOx :
Die oben genannten Geräte gehören der folgenden NOx-Klasse an: 5
De hierboven vermelde apparaten zijn van de klasse NOx:

La documentation technique relative à la gamme précitée est conservée par le responsable des
essais.
Die technische Dokumentation zur vorgenannten Produktreihe wird vom Zuständigen für die
Prüfungen aufbewahrt.
De technische documentatie met betrekking tot het vernoemde assortiment wordt bewaard door de
voor de tests verantwoordelijke persoon.

MERTZWILLER, le 10 juin 2010


Richard van der VEEN
Directeur Recherche et Développement

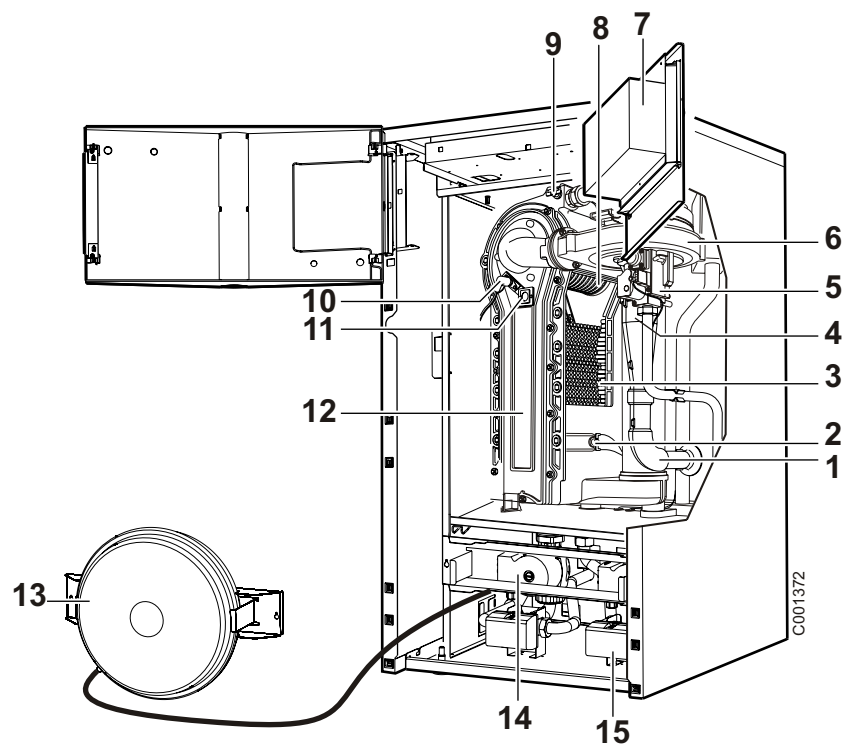
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3.3.2 Gas categories

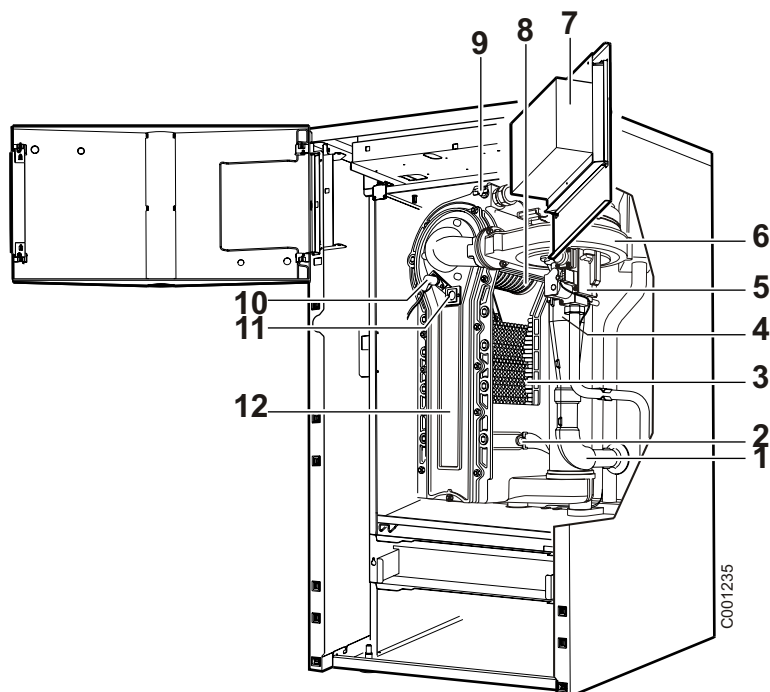
User country	Gas category	Gas type	Supply pressure	
			Minimum	Maximum
FR	I ₂ ESi3P	Natural gas H (G20)	17 mbar	25 mbar
		Natural gas L (G25)	20 mbar	30 mbar
		Propane (G31)	25 mbar	57.5 mbar
ES, IT	I ₂ H3P	Natural gas H (G20)	17 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
DE	I ₂ ELL3P	Natural gas E (G20)	17 mbar	25 mbar
		Natural gas LL (G25)	18 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
PL	I ₂ E3P	Natural gas H (G20)	17 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
LU	I ₂ E3P	Natural gas E (G20)	17 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
RO	I ₂ H3P	Natural gas H (G20)	17 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
RU	I ₂ H3P	Natural gas H (G20)	17 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
CZ	I ₂ H3P	Natural gas H (G20)	17 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
AT, CH	I ₂ H3P	Natural gas H (G20)	17 mbar	25 mbar
		Propane (G31)	25 mbar	57.5 mbar
BE	I ₂ E(S)B	Natural gas H/L	17 mbar	25 mbar
	I ₂ E(R)B (DTG130-90, DTG130-115)		17 mbar	30 mbar
	I ₃ +	Propane (G31)	25 mbar	57.5 mbar

3.4 Main parts

- DTGE130-35

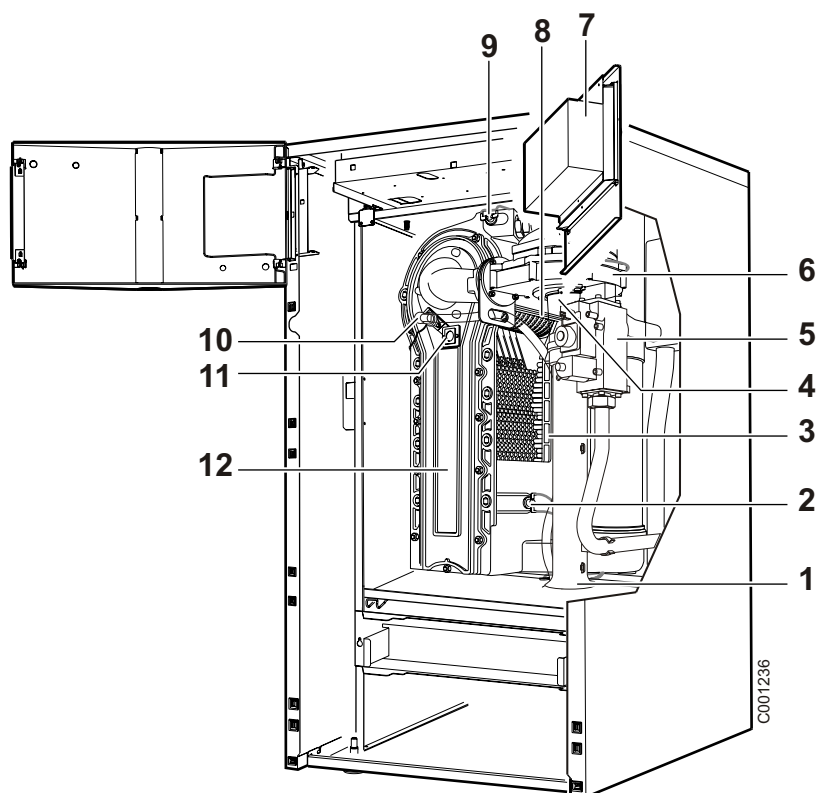


- DTG130-35 / DTG130-45 / DTG130-65



- | | |
|---------------------------------------|----------------------------------------------|
| 1 Fan air inlet | 8 Burner |
| 2 Return sensor | 9 Output sensor |
| 3 Heating body | 10 Ignition electrode + Ionization electrode |
| 4 Venturi premix | 11 Flame inspection window |
| 5 Combined venturi and gas valve unit | 12 Inspection hatch |
| 6 Fan | 13 Expansion vessel |
| 7 Control panel | 14 Shunt pump (only for DTGE130-35) |
| | 15 Reversal valve kit |

- DTG130-90 / DTG130-115



- 1 Fan air inlet
- 2 Return sensor
- 3 Heating body
- 4 Venturi premix
- 5 Combined venturi and gas valve unit
- 6 Fan
- 7 Control panel
- 8 Burner
- 9 Output sensor
- 10 Ignition electrode + Ionization electrode
- 11 Flame inspection window
- 12 Inspection hatch

3.5 Technical characteristics

3.5.1 Boiler

- For operation on Natural Gas or Propane (See "Switching from Natural Gas to Propane")
- The boiler is preset in the factory to operate on natural gas G20, Wobbe index IWS = 15.0 kWh/m³, 20 mbar
- The boiler is designed to operate dependent on or independently of the ambient air
- DIEMATIC 3 control panel factory fitted with a top of the range control unit which operates on the outside temperature with room temperature correction thanks to the CDI 2 remote control or the optional simplified control
- Control panel used to control and programme a direct circuit and two circuits with mixing valve
- Single-unit heat exchanger in aluminium/silicium alloy
- Cylindrical premix burner covered in metal fibres
- Centrifugal fan with combustive air intake silencer for a low noise level
- Compact gas line with zero pressure regulator, two valves and filter
- Shunt pump (Only DTGE130-35)
- Water condensation siphon with run-off pipe
- Automatic air vent
- Mechanical manometer
- Flue gas temperature sensor with safety function
- Soundproofed boiler body
- A documentation pack.

3.5.2 Control panel

i Please read the following installation and commissioning instructions carefully before operating your equipment. The constructor shall not be liable for damage caused by the failure to comply with these instructions and the warranty shall no longer apply.

! If work is carried out on the heating installation: assembly, commissioning, maintenance and repair work on the appliance and on the heating installation must be carried out only by a qualified heating professional.
Before installation: Turn the main heating switch off.
Before commissioning: Check the seal on the gas and water pipe connections.

! The connection of the control panel must be carried out by a qualified professional. For a proper operating of the boiler, follow carefully the instructions.

- Power supply: 230 V (±10%) - 50 Hz
- Clock: 2 years minimum.

3.6 Technical data

DTG... 130...		DTGE 35	DTG 35	DTG 45	DTG 65	DTG 90	DTG 115
CE identification no	****		CE-0063BS3826				
Boiler specifications							
Power input (Hi) - minimum/maximum G20	kW	8.2 - 33.5	8.2 - 33.5	8.2 - 41.2	12.2 - 62.0	14.6 - 86.0	17.2 - 110.2
Power input (Hs) - minimum/maximum G20	kW	9.1 - 37.2	9.1 - 37.2	9.1 - 45.7	13.5 - 68.8	16.2 - 95.5	19.1 - 122.3
Useful output 50/30 °C - minimum/maximum G20	kW	8.9 - 35.0	8.9 - 35.0	8.9 - 43.0	13.3 - 65.0	15.8 - 89.5	18.4 - 114.0
Useful output 80/60 °C - minimum/maximum G20	kW	8.0 - 32.0	8.0 - 32.0	8.0 - 40.0	12.0 - 61.0	14.1 - 84.2	16.6 - 107.0
Useful output 50/30 °C - maximum G25 (Valid only for Belgium)	kW	30.1	30.1	37	55.9	89.5	114.0
Gas flow rate At nominal output (15 °C-1013.25 mbar)							
Natural gas H/L (All countries except Belgium)	m³/h	3.54 / 4.12	3.54 / 4.12	4.36/ 5.07	6.56 / 7.63	9.1 / 10.58	11.66 / 13.56
Natural gas H/L (Valid only for Belgium)	m³/h	3.54/3.37	3.54/3.37	4.36/4.15	6.25/6.6	9.1/10.58	11.66/13.56
Propane	Kg/h	2.6	2.6	3.2	4.82	6.68	8.56
Efficiency 75/60 °C (DIN 4702 T8) (Hi)	%	106	106	106	106	106	106
Efficiency 75/60 °C (DIN 4702 T8) (Hs)	%	95.5	95.5	95.5	95.5	95.5	95.5
Efficiency 40/30 °C (DIN 4702 T8) (Hi)	%	109	109	109	111	108.9	102.5
Efficiency 40/30 °C (DIN 4702 T8) (Hs)	%	98.2	98.2	98.2	100	98.1	92.4
Load and water temperature efficiency (-100% Pn-Average temperature 70 °C) (Hi)	%	97.5	97.5	97.5	98.3	97.9	97.1
Load and water temperature efficiency (-100% Pn-Average temperature 70 °C) (Hs)	%	87.8	87.8	87.8	88.6	88.2	87.5
Load and water temperature efficiency (-30% Pn-Return temperature 30 °C) (Hi)	%	107.7	107.7	107.7	108.9	108.1	107.1
Load and water temperature efficiency (-30% Pn-Return temperature 30 °C) (Hs)	%	97.0	97.0	97.0	98.1	97.4	96.5
Stand-by losses ΔT = 30K	W	127	127	127	125	131	131
Mass flue gas flow rate - minimum/maximum	Kg/h	13.8/56.4	13.8/56.4	13.8/69.3	20.5/104	23.4/138	28.9/186
For Germany only: Mass flue gas flow rate - minimum/maximum	kg per sec	0.0039/ 0.0156	0.0039/ 0.0156	0.0039/ 0.0192	0.0058/ 0.0288	0.0063/ 0.0383	0.0081/ 0.0494
All countries except Belgium:							
CO ₂ level in flue gases							
Natural gas H/L	%	9.0/9.0	9.0/9.0	9.0/9.0	9.0/9.0	9.5/9.5	9.0/9.5
Propane	%	10.7	10.7	10.7	10.7	10.7	10.0
For Belgium:							
CO ₂ level in flue gases							
Natural gas H/L	%	9.0/*	9.0/*	9.0/*	9.0/*	9.5/9.5	9.0/9.5
Propane	%	10.7	10.7	10.7	10.7	10.7	10.0
Available pressure at boiler outlet	Pa	150	150	150	100	160	250
Average flue gas temperature (75/60 °C)	°C	65	65	65	65	66	67.9
Connection to a chimney (internal diameter)	mm	80/125	80/125	80/125	100/150	100/150	100/150
Emission NOx (Natural gas H) - DIN 4702 Teil 8	mg/kWh	37	37	37	32	45	46 (EN297A3)
Emission CO (Natural gas H) - DIN 4702 Teil 8	mg/kWh	21	21	21	21	20	31 (EN297A3)
NOx classification		5	5	5	5	5	5
Maximum operating temperature	°C	90	90	90	90	90	90
Total admissible overpressure	bar	4	4	4	4	4	4
Water resistance (ΔT = 20K)	mbar	55	55	90	130	140	230
Nominal water flow Pn to ΔT = 20K	m³/h	1.41	1.41	1.72	2.62	3.60	4.6
Water content	l	5.5	5.5	5.5	6.5	7.5	7.5

3. Description

DTG... 130...		DTGE 35	DTG 35	DTG 45	DTG 65	DTG 90	DTG 115
Connecting (diameter - Male)		1"	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4
Condensation water pH		3-5	3-5	3-5	3-5	3-5	3-5
Condensation water run-off (diameter)	mm	25	25	25	25	25	25
Electrical specifications							
Electrical connection	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50
Power consumption	W	164	55	55	88	136	213
Degree of protection - DIN40050		IP 21	IP 21	IP 21	IP 21	IP 21	IP 21
Dimensions							
Height	mm	1100	1100	1100	1100	1322	1322
Width	mm	600	600	600	600	600	600
Depth	mm	663	663	663	663	663	663
Shipping weight	kg	123	110	110	116	132	133

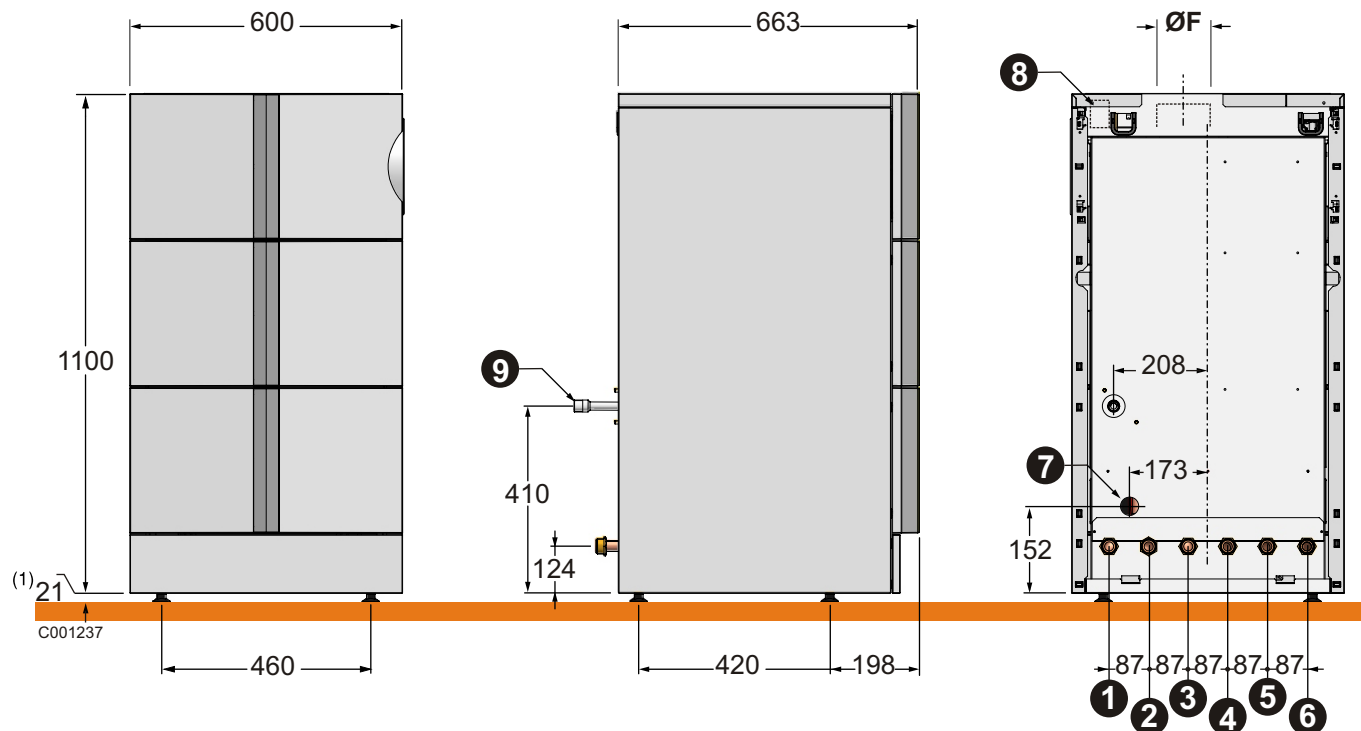
*Approximate CO₂ content: 7.5%

*Approximate O₂ content: 7.3%

3.7 Main dimensions

3.7.1 Boiler self-standing

- DTGE130-35 Eco.NOxPlus



DTGE130-35		
1	Heating flow	G 1
2	Flow to the exchanger on the independent DHW tank (plugged as standard) (Option) - Package HE25 or Package EA124	G 1
3 + 4	Flow and return for: - 1 mixing valve circuit (Option: 3-way internal valve kit Package HE24), - 2 valve circuits by 2 hydraulic modules (2xPackage EA67) (Option: External 3-way valve kit Package HE26) and - Boiler/collector connection kit Package EA59	
5	Exchanger return on the independent DHW tank (Option) - Package HE25 or Package EA124	G 1
6	Heating return	G 1
7	Condensates discharge	Ø 25 mm external
8	Automatic air vent	-
9	Gas inlet	R 3/4
ØF	Forced flue connection	Ø 80/125 mm

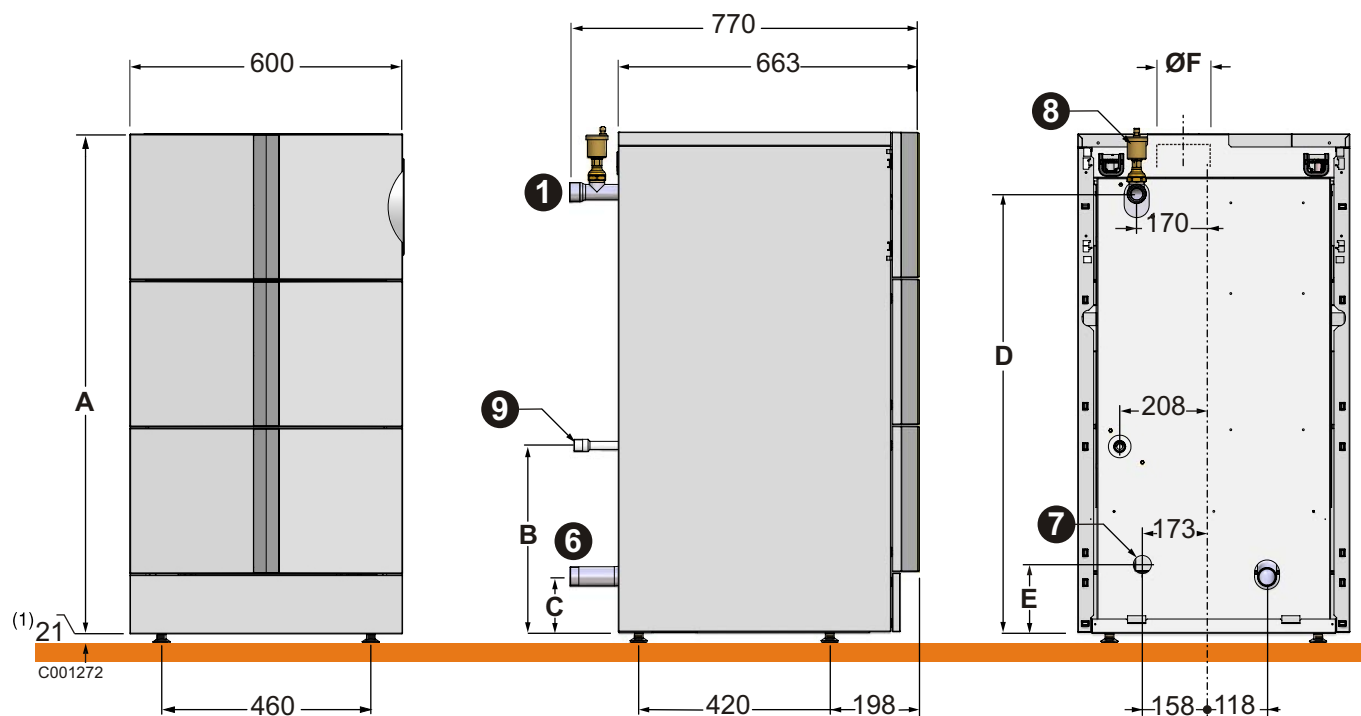
R = Thread

G = Exterior cylindrical threading, sealed by sheet gasket

- (1) Basic dimension 21 mm.
adjustment possible: 21 to 40 mm

3. Description

- DTG130-35 / 45 / 65 / 90 / 115 Eco.NOxPlus



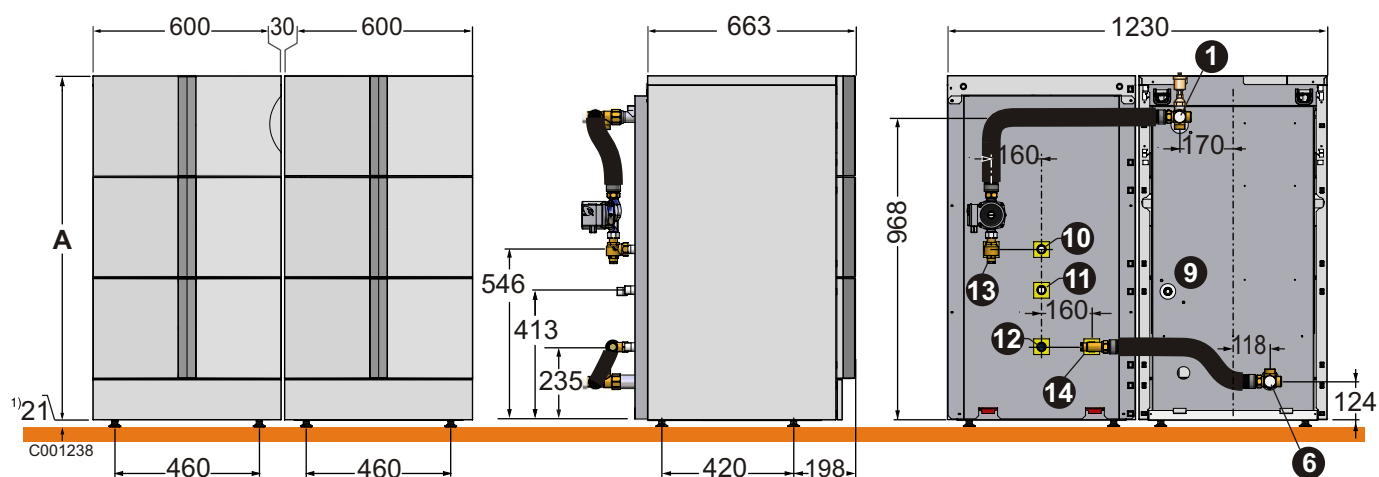
DTG130- 35 / 45 / 65 / 90 / 115		
1	Heating flow	G 1
2	Flow to the exchanger on the independent DHW tank (plugged as standard) (Option) - Package HE25 or Package EA124	G 1
6	Heating return	G 1
7	Condensates discharge	Ø 25 mm external
8	Automatic air vent	-
9	Gas inlet	R 3/4
A	DTG130- 35 / 45 / 65	1100 mm
	DTG130-90, DTG130-115	1322 mm
B	DTG130- 35 / 45 / 65	410 mm
	DTG130-90, DTG130-115	632 mm
C	DTG130- 35 / 45 / 65	124 mm
	DTG130-90, DTG130-115	346 mm
D	DTG130- 35 / 45 / 65	968 mm
	DTG130-90, DTG130-115	1190 mm
E	DTG130- 35 / 45 / 65	152 mm
	DTG130-90, DTG130-115	374 mm
ØF	Forced flue connection: DTG130- 35 / 45 / 65	Ø 80/125 mm
	Forced flue connection: DTG130-90, DTG130-115	Ø 100/150 mm

R = Thread

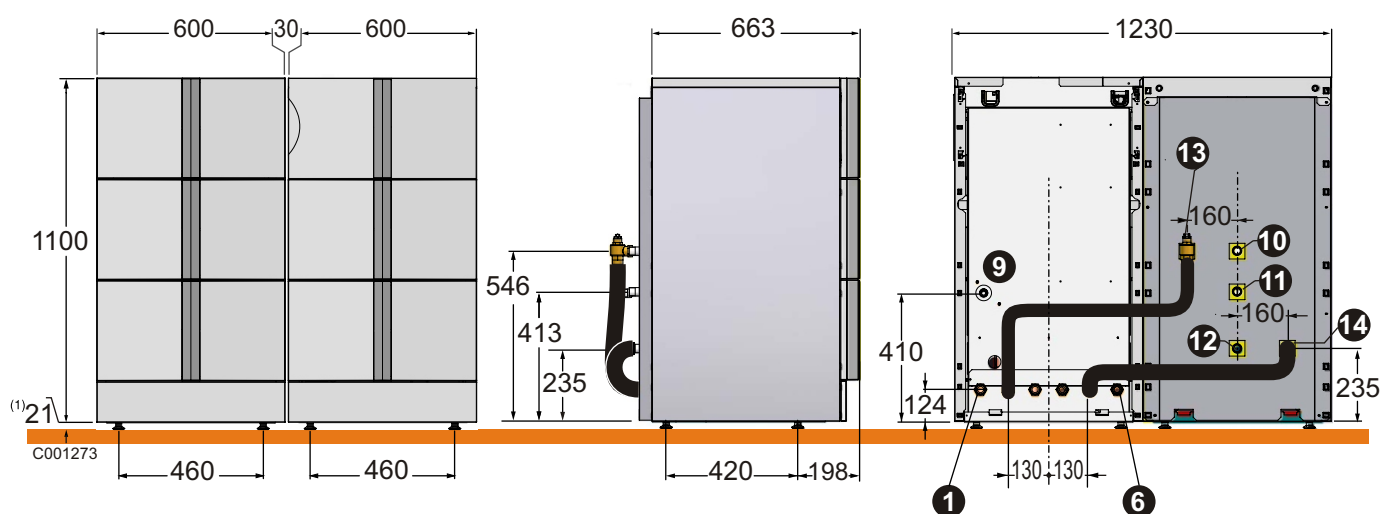
G = Exterior cylindrical threading, sealed by sheet gasket

- (1) Basic dimension 21 mm.
adjustment possible: 21 to 40 mm

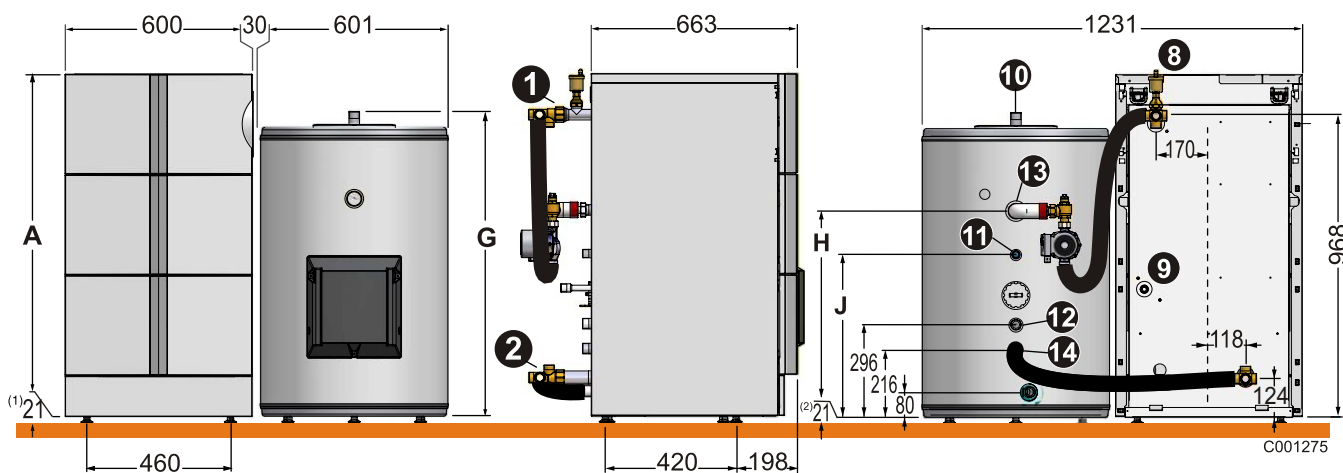
- DTG130-35 Eco.NOxPlus + Tank (BA150 l) - Boiler/tank connection kit (Package EA122)



- DTGE130-35 Eco.NOxPlus + Tank (BA150 l) - Boiler/tank connection kit (Package EA124)



- DTG130-35 Eco.NOxPlus + Tank BC or BP (150,200,300 l) - Boiler/tank connection kit (Package EA116)



Connection options (Not represented):

- DTGE130-35 Eco.NOxPlus + Tank BC or BP (150,200,300 l) - Boiler/tank connection kit (Package EA124),
- DTG130-45/65/90/115 Eco.NOxPlus + Tank BSC or BSP (150,200,300 l) - Boiler/tank connection kit (Package EA121).

		DTGE130- 35	DTG130- 35 / 45 / 65 / 90 / 115
1	Heating flow	G 1	R 1 1/4
2	Flow to the exchanger on the independent DHW tank (plugged as standard) (Option) - Package HE25 or Package EA124	G 1	-
6	Heating return	G 1	R 1 1/4
8	Automatic air vent	-	-
9	Gas inlet	R 3/4	R 3/4
10	Domestic hot water outlet	R 3/4	R 3/4
11	Circulation	R 3/4	R 3/4
12	Domestic cold water inlet	R 3/4	R 3/4
13	Heat exchanger inlet	-	-
14	Heat exchanger outlet	-	-
15	Draining	-	-

	DTGE130-35	DTG130-35 / 45 / 65	DTG130-90 / 115	DTG...130-... + BC/BP150	DTG...130-... + BC/BP200	DTG...130-... + BC/BP300
A	1100 mm	1100 mm	1322 mm	-	-	-
G	-	-	-	978 mm	1217 mm	1757 mm
H	-	-	-	661 mm	796 mm	996 mm
J	-	-	-	521 mm	651 mm	626 mm

R = Thread

Rp = Tapped connection

G = Exterior cylindrical threading, sealed by sheet gasket

(1) Basic dimension 21 mm. adjustment possible: 21 to 40 mm

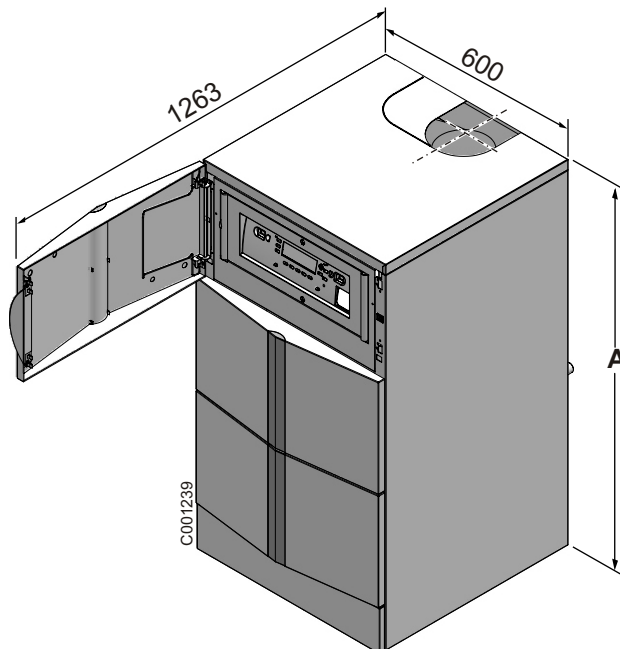
(2) Basic dimension 21 mm. adjustment possible: 21 to 40 mm

3.7.2 Boiler installed

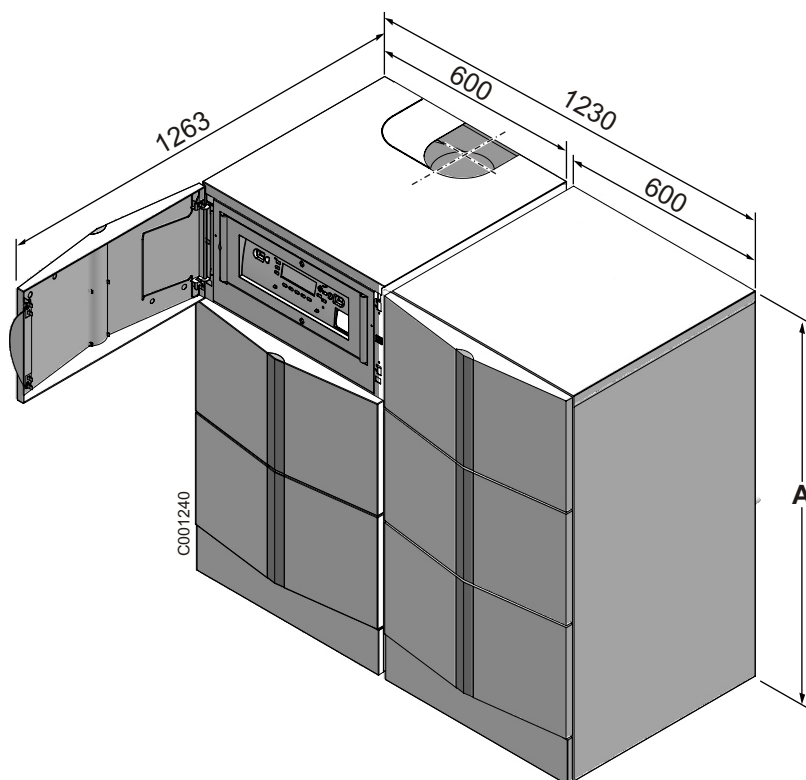
Clear space should be left around the boiler:

- 60 cm in front of the boiler
 - 40 cm above the boiler
- 2.5 cm each side of the boiler
(Facilitates removal of the casing)

- DTG(E)130- 35 / DTG130-45 / DTG130-65 / DTG130-90 / DTG130-115 Eco.NOxPlus



- DTGE130-35 Eco.NOxPlus + Tank (150 litres)



- A. DTG(E)130- 35 / DTG130-45 / DTG130-65 = 1100
DTG130-90 / DTG130-115 = 1322

3.8 Hydraulic specifications

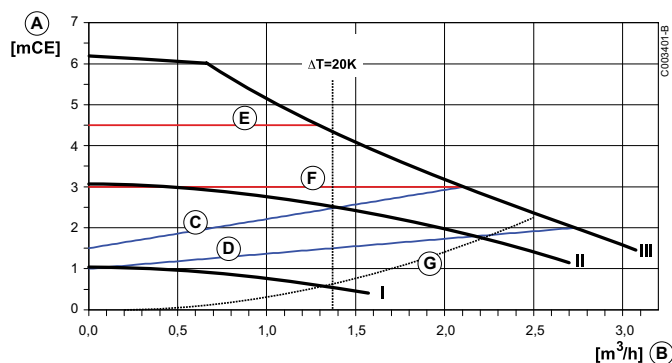
Depending on the flow, the following diagrams represent:

- the manometric heights of the heating circulator pumps (delivered from the factory for DTGE130-35 or, optionally, for DTG130-45, DTG130-65, DTG130-90 and DTG130-115)
- loss of load in the boiler.

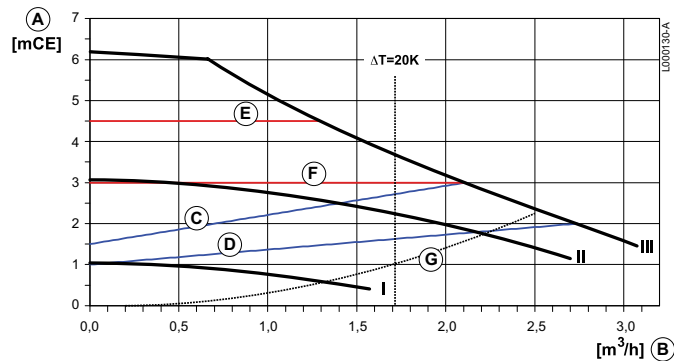
For a fixed flow, the manometric height available at the boiler outlet is obtained by taking the difference between the manometric height of the circulator pump and the loss of load in the boiler.

ALPHA 2 L 25-60 electronic heating pump (Pump class A):

- Delivered as standard for DTGE130-35

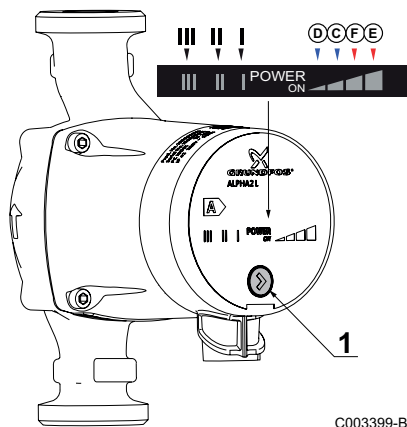


- Optional for DTG130-45 (Package HC142).

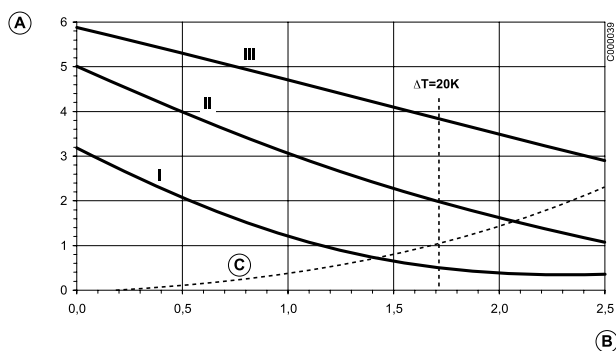


A	Rated net head (mWG)	
B	Flow rate (m³/h)	
C	Maximum proportional pressure	The pump's operating point can be moved on the maximum proportional pressure curve according to the heating requirement. If the heating requirement increases, the pressure increases.
D	Minimum proportional pressure	The pump's operating point can be moved on the minimum proportional pressure curve according to the heating requirement. If the heating requirement increases, the pressure increases.
E	Maximum constant pressure	The pump's operating point can be moved on the maximum constant pressure curve according to the heating requirement. The pressure remains constant, regardless of the heating requirement.
F	Minimum constant pressure	The pump's operating point can be moved on the minimum constant pressure curve according to the heating requirement. The pressure remains constant, regardless of the heating requirement.
G	Boiler pressure drop	
III	Speed III	The pump runs at a constant speed and therefore according to a constant curve. The pump is set to run according to the maximum curve. The pump can be quickly vented by selecting speed III for a short period.
II	Speed II	The pump runs at a constant speed and therefore according to a constant curve. The pump is set to run according to the average curve.
I	Speed I	The pump runs at a constant speed and therefore according to a constant curve. The pump is set to run according to the minimum curve.

Press the 1 button on the pump to modify its performance

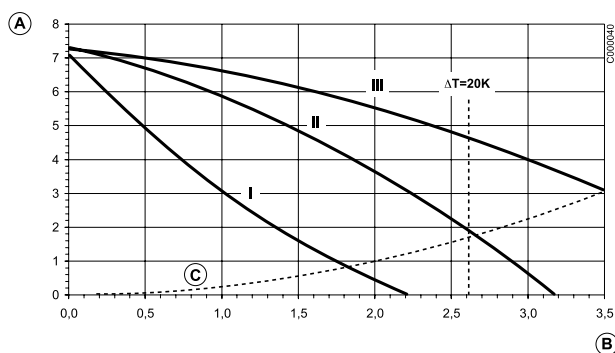


Optional 3-speed circulator pump for DTG130-45 - Package HC141



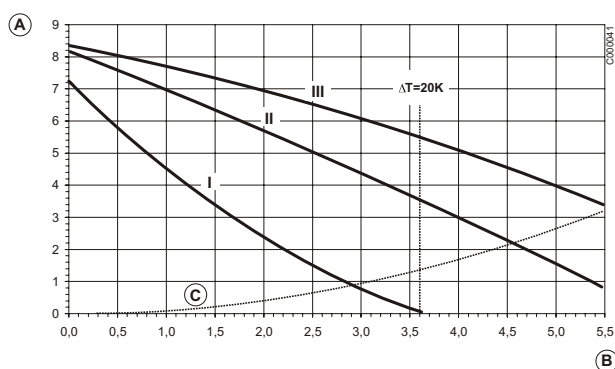
- A. Rated net head (mWG)
- B. Flow rate (m³/h)
- C. Loss of load DTG130-45

Optional 3-speed circulator pump for DTG130-65 - Package HC143



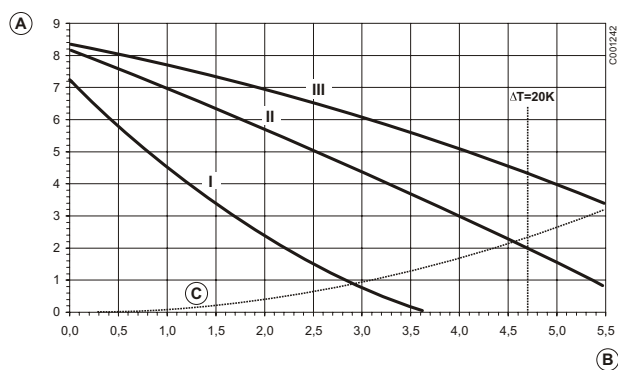
- A. Rated net head (mWG)
- B. Flow rate (m³/h)
- C. Loss of load DTG130-65

Optional 3-speed circulator pump for DTG130-90 - Package HC145



- A. Rated net head (mWG)
- B. Flow rate (m³/h)
- C. Loss of load DTG130-90

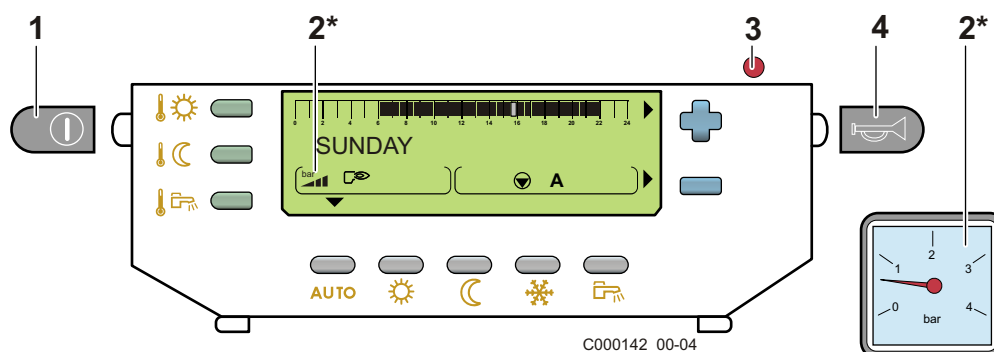
Optional 3-speed circulator pump for DTG130-115 - Package HC145



- A. Rated net head (mWG)
- B. Flow rate (m³/h)
- C. Loss of load DTG130-115

4 Control panel

4.1 Electromechanical components



C000142_00-04

1	Main ON/OFF switch
2	Pressure gauge * Depending on the model of the appliance, the pressure gauge is manual (dial display) or automatic (pictogram display)
3	On light / Alarm Green LED LIT: normal operation Red LED lit: Burner in safety condition Flashing red Led: abnormal operation (See chapter "10 Messages - Alarms")
4	Safety control box reset button

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

- to ensure the anti-grip of the heating pump.

Use the mode:

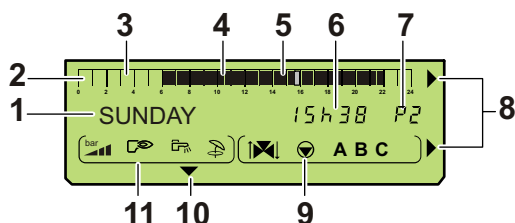
- "summer" to shut down the heating.
- "antifreeze" to shut down the boiler if you are to be absent.

If a remote control is connected, it will not show a display when the main switch is in the OFF position.

See chapter Operating mode

See chapter Summer mode

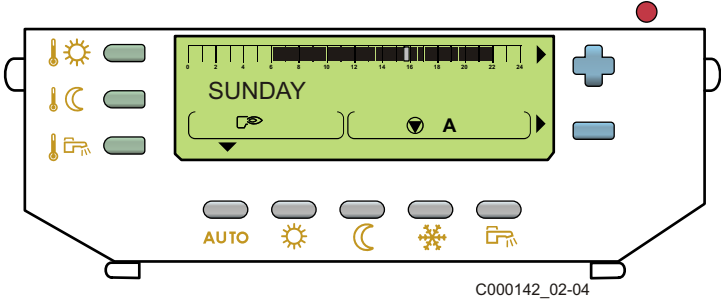
4.2 Display



1	Text and numerical display
2	Graphic display bar for the programme in circuit A, B or C
3	Light area: Reduced temperature heating period or tank load disabled
4	Dark area: Comfort temperature heating period or tank load enabled
5	Flashing cursor showing the current time
6	Number display (current time, adjusted values, parameters, etc.)
7	Active programme display, P1, P2, P3, P4 or Su: automatic "Summer" cut-off
8	The arrows flash when setting values can be modified using the + and - keys
9	Circuit operation symbols
Opening the 3-way valve Closing the 3-way valve Displayed circuit pump on Name of the circuit displayed A, B, C	

10	Symbol displayed above the active operating mode
11	Symbols indicating that the following inputs/outputs are active
Burner on DHW load pump on Summer mode Not available	

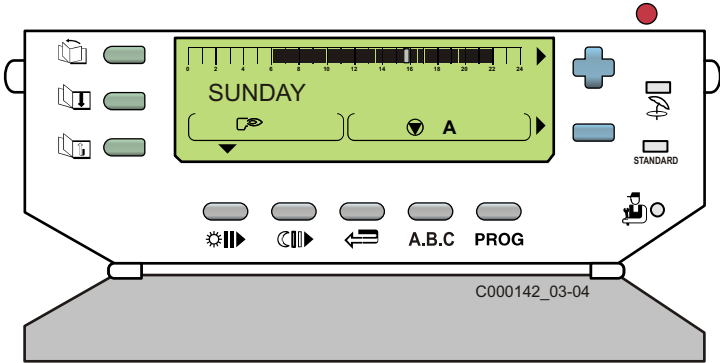
4.3 Keys accessible when the flap is closed



Setting the temperatures	
	Comfort temperature
	Reduced temperature
	Domestic hot water temperature
	Is used to adjust the selected temperature
Operating mode selection keys	
AUTO	Heating according to the time programme
	Forced Comfort mode: - until midnight if ▼ flashes - all the time if ▼ is steady

	Forced Low mode: - until midnight if ▼ flashes - all the time if ▼ is steady
	Antifreeze mode
	Tank load enabled mode: - until midnight if ▼ flashes - all the time if ▼ is steady

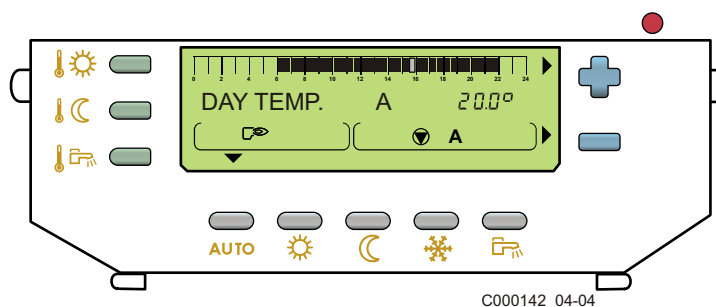
4.4 Keys accessible when the flap is open



	Manual "Summer" shutdown key The heating is switched off and DHW production is ensured. The symbols ☀ and Su are displayed.
STANDARD	"Standard" programme key Reset of all time programmes
	Fitter settings access key
Key for access to setting and measurements	
	Page scrolling
	Line scrolling
	Back to the title or the previous line

Programming keys	
	Enter (per 1/2 hour) the comfort temperature period or tank load enabled (dark area)
	Enter (per 1/2 hour) the reduced temperature period or tank load disabled (light area)
	Return key
A.B.C.	Circuit display selection key
PROG	Active heating programme selection key (P1, P2, P3 or P4)

4.5 Operating mode



Select the operating modes using the **AUTO** - ☀ - ☾ - ❄ - 🛢 keys.

- **AUTO key = Automatic mode**

Heating and domestic hot water production operate according to the time programmes set for each circuit.

📖 See chapter Selecting a programme.

- Key ☀ = **Comfort mode**

Heating operates according to the comfort temperature, independently of the time programmes.

- Key ☾ = **Reduced mode**

Heating operates according to the reduced temperature, independently of the time programmes.

- Key 🛢 = **Tank load enabled mode**

Domestic hot water production is enabled, independently of the time programme.












The loop pump operates if it is connected to the auxiliary outlet (**S.AUX** set to **DHW LOOP**).

- Key ❄ = **Antifreeze mode**

Heating and domestic hot water production are off but the installation is monitored and protected against frost.

Comfort mode ☀ Reduced mode ☾ Allowed dhw tank heating 🛢	Temporary activation (Until midnight)	Permanent activation
For one circuit: With remote control		▶ Brief touch: MODE key on the remote control The message SHOW REM.CTRL indicates the presence of an override on a remote control. ▶ Cancellation Press the MODE key on the remote control. or Press the AUTO key on DIEMATIC for 5 seconds.
For all circuits: With DIEMATIC	▶ Brief touch: Key ☀/☾/🛢 The arrow above the key flashes. ▶ Cancellation ☀/☾: Press key AUTO . 🛢: Press the 🛢 key	▶ Long touch, 5 seconds: Key ☀/☾/🛢 The arrow above the key is steady. ▶ Cancellation ☀/☾: Press key AUTO . 🛢: Press the 🛢 key

i The operating mode selected on the remote control dedicated to a circuit takes precedence over the operating mode selected on the boiler for this circuit.

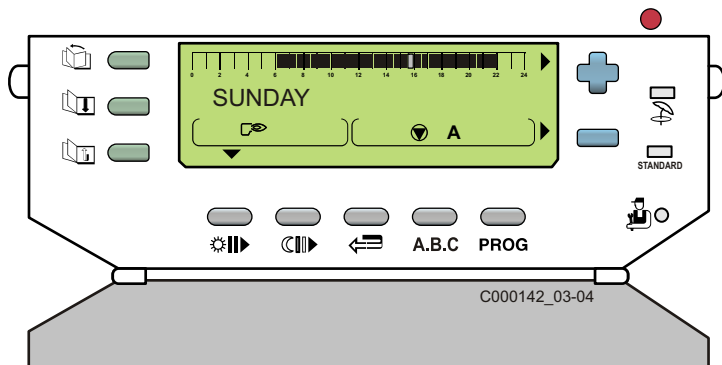
Anti-freeze 	Temporary activation (Number of days)	Permanent activation
For all circuits: With DIEMATIC	<p>► First brief touch: Key </p> <p>Set the number of days' absence (current day = 1) using keys  and  (up to 99 days).</p> <p>The arrow above the key is steady.</p> <p>Deferred temporary activation:</p> <p>► Second brief touch: Key </p> <p>Set the start month using keys  and .</p> <p>► Third brief touch: Key </p> <p>Set the start day using keys  and .</p> <p>The arrow above the key flashes until the start day and then becomes steady.</p> <p>► Confirmation of the antifreeze setting</p> <p>Press the AUTO key or after 2 minutes</p> <p>► Cancellation</p> <p>Press key AUTO</p>	<p>► Long touch, 5 seconds: Key </p> <p>The arrow above the key is steady.</p> <p>► Cancellation</p> <p>Press key AUTO</p>

i The operating mode selected on the remote control dedicated to a circuit takes precedence over the operating mode selected on the boiler for this circuit.

i The antifreeze mode protects:




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

4.6 Summer mode



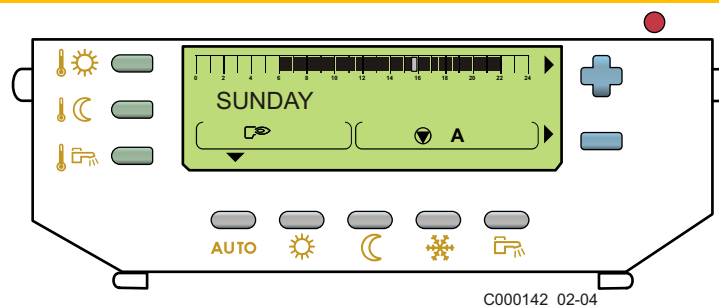
Heating is shut down but continues to be protected against frost. Domestic hot water production continues to be enabled

- **Automatic summer regime:**
 - activated if the average outside temperature is higher than 22°C. The symbol **S** is displayed.
 - deactivated if the average outside temperature is lower than 22°C and if a remote control is connected to each circuit if one of the room temperatures is lower than the set temperature.

- **Forced "summer" condition:**
 - activated by pressing key  for 5 seconds. The symbols **S** and  are displayed.
 - cancelled by pressing key  for 5 seconds (If the symbol **S** continues to be displayed, the automatic summer regime is active).

i The pumps operate for 1 minute once a week to ensure that they are flushed out.

5 Heating and domestic hot water temperature setting



- Comfort temperature
- Reduced temperature
- Domestic hot water temperature

5.1 Heating temperature setting

The comfort and reduced temperatures are set separately for each circuit:

- Select the comfort temperature or the reduced temperature for the desired circuit by successively pressing key or .
- Set the temperature using keys or .
- **End of setting:** Press the **AUTO** key or after 2 minutes.

Temperature	Adjustment range	Factory setting
Comfort	5 to 30 °C In steps of 0.5°C	20 °C
Low	5 to 30 °C In steps of 0.5°C	16 °C

i The graphic bar displays the heating programme for the displayed circuit for the current day.

5.2 DHW set temperature

- Select the domestic hot water temperature using key and set the temperature using keys or .
- **End of setting:** Press the **AUTO** key or after 2 minutes.

Temperature	Adjustment range	Factory setting
Domestic hot water	10 to 80 °C In steps of 1°C	55 °C

i In the summer regime, the graph bar displays the DHW programme for the current day.



i If there is no domestic hot water sensor, pressing this key has no effect.

6 Selecting a programme

6.1 Selecting a programme

- The DIEMATIC 3 control unit includes 4 heating programmes:
 - 1 fixed programme **P1**, activated in the factory.
 - 3 custom programmes **P2**, **P3**, **P4** to adapt to the lifestyle of the occupants.

- **Allocation of a programme to a circuit:**
 - Select the circuit using key **A.B.C**.
 - Select the programme using the **PROG** key.
 - The programme selected is active in automatic mode.


i The programme for the current day can be displayed on the graph bar using key  or .

Programme	Day	Comfort periods
P1	Monday - Sunday	06:00 - 22:00
P2 (Factory setting)	Monday - Sunday	04:00 - 21:00
P3 (Factory setting)	Monday - Friday	05:00 - 08:00, 16:00 - 22:00
	Saturday, Sunday	07:00 - 23:00
P4 (Factory setting)	Monday - Friday	06:00 - 08:00, 11:00 - 13:30, 16:00 - 22:00
	Saturday	06:00 - 23:00
	Sunday	07:00 - 23:00

6.2 Hot water programme

The DIEMATIC 3 control unit includes a custom domestic hot water programme.

Programme	Day	Filling enabled
Tank (Factory setting)	Monday - Sunday	05:00 - 22:00

i The programme for the current day can be displayed on the graph bar using key .

6.3 Auxiliary programme

The DIEMATIC 3 control unit includes a custom programme on the auxiliary outlet.

Programme	Day	Filling enabled
AUX (Factory setting)	Monday - Sunday	06:00 - 22:00

6.4 Customising the programmes

See: "User" settings - Programming

7 Installation

7.1 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:

■ France

- NF P 45-204 standards

Gas installation, (formerly DTU 61-1, gas installations: April 1982, addendum no 1: July 1984).

1. Residential buildings

- 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.
- Local Sanitary Regulations
- For appliances connected to the electricity network: NF C 15-100 standards Low voltage electrical installation - Rules..

2. Establishments open to the public

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:

- 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.)

■ Germany

In addition to the instructions on construction and combustion equipment, also abide by the following standards, rules and directives when installing and commissioning gas condensing boilers:

- DIN 4705: calculation of chimney dimensions
- DIN EN 12828 (June 2003 edition): heating systems in buildings. Planning of hot water heating installations (up to a maximum operating temperature of 105°C and a maximum output of 1 MW)
- DIN 4753: drinking and industrial water heating installations
- DIN 1988: technical rules on drinking water installations (TRW)
- DVGW-TRGI: technical rules on gas installations, including complementary equipment
- Working paper DVGW G 260/I: technical rules on the nature of the gas

■ Belgium

The boiler installation and gas connection must be carried out by a qualified professional in compliance with the NBN D 51-003, NBN D 30-003, NBN B 61-001, NBN B 61-002, NBN D 51-004 and NBN D 51-006 standards. An ARGB approved stop valve must be fitted in the pipe leading to and close to the boiler.

Electrical connections must comply with the instructions in the general regulations on electrical installations (RGIE)

Belgium: the cross-section of the aeration vents, which are compulsory in the room in which the boiler is installed, must comply with the NBN D 51-003 standard.

■ Switzerland

The installation of the boiler must be done in compliance with the following directives:

- Directives of the Association des Etablissements Cantonaux d'Assurance Incendie AEAI;
- Directives of local and cantonal bodies;
- Directives of the Société Suisse de l'Industrie des Gaz et des Eaux SSIGE;
- Directives on liquefied gases, part 2.

7.2 Requirements on heating water

- pH 4.5 to 8.5
- Chloride content <20 mg/l
- Conductivity <500 µS/cm to 25 °C

Anti-freeze inhibitors and additives must be used only after consulting the constructor. The diffusion of oxygen, in the case of underfloor heating systems that are not leakproof to diffusion or of expansion vessels that are too small, for example, must be prevented. If appropriate, fit a heat exchanger to uncouple the boiler from the heating circuit or a second expansion vessel.

7.3 Important comments on the treatment of the heating circuit

! Central heating systems must be cleaned to eliminate debris (copper, strands, brazing flux) linked to the installation of the system and deposits that can cause malfunctions (noise in the system, chemical reaction between metals). On the other hand, it is important to protect central heating systems against corrosion, scaling and microbiological growth by using a corrosion inhibitor adapted to all types of systems (steel, cast iron radiators, heated floor, PER).

For Switzerland: The water quality must comply with the SICC directives No. 97-1F "Treatment of water intended for heating, steam, refrigeration and air conditioning installations".

We recommend the use of products from the SENTINEL range from GE BETZ for the preventive and curative treatment of heating water circuits.

■ 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, flaxen thread, flux)
- Thoroughly flush the installation until the water runs clear and shows no impurities
- Protect the installation against corrosion and frost with an inhibitor and an anti-freeze.

■ Installing the boiler in existing installations

- Remove sludge from the installation
- Clean the installation with a universal cleaner to eliminate debris from the appliance (copper, flaxen thread, flux)
- Thoroughly flush the installation until the water runs clear and shows no impurities
- Protect the installation against corrosion and frost with an inhibitor and an anti-freeze.

The boiler must be used only in closed circuit heating installations. If you have underfloor heating, the installer must install a safety thermostat with manual reset to prevent overheating. For an underfloor heating circuit without system insulation, only oxygen tight heating pipes must be used. If the plastic pipe manufacturer recommends a chemical additive, it is necessary to be particularly careful that there are no adverse effects on the aluminum or aluminum alloy content of components. For floor heating systems with pipes that are not oxygen tight, the system must be insulated (heat exchanger). In this case, the floor circuit must be protected separately (Expansion vessel, Safety valve).

A minimum water level safety device is not necessary. Protection is ensured by the control unit.

■ Minimum water flow

The maximum difference in temperature between the outlet water and the return water, and the speed at which the outlet temperature increases, are restricted by the boiler's regulation. Consequently, the boiler does not need a minimum flow provided that it operates at a maximum temperature of 75°C.

Otherwise, the minimum required flow is:

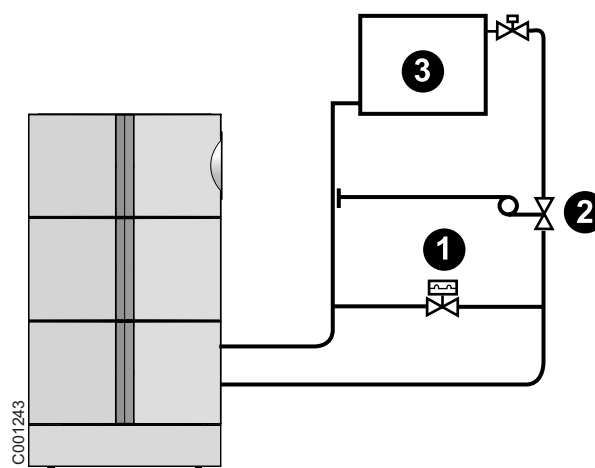
- 160 l/h for DTG(E)130-35, DTG130-35, DTG130-45,
- 240 l/h for DTG130-65,
- 300 l/h for DTG130-90,

- 350 l/h for DTG130-115.

■ In the event of run-off noise

Run-off noise may occur on installations with a direct heating circuit, fitted with thermostatic valves, under certain conditions of use when the hydraulic systems are not perfectly balanced.

If this is the case, we recommend fitting a preset differential valve **1** (200-250 mbar) between the out pipe and the return pipe on the heating installation.



! Poor adjustment of the differential valve may cause a continuous increase in the return of water to the boiler.

If there are particular requirements for silent running, it is a good idea to fit a differential pressure regulator **2** (setting 100 -150 mbar).

3: Radiator

■ Location

DTG(E)130 - 35/45/65/90/115 Eco.NOxPlus boilers must be installed in a frost-free room.



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.

The warranty does not apply to damage to the boiler caused by these instances. If the heating device is installed in residential premises where people are present all the time, it is necessary to use a concentric ambient air inlet / combustion gas evacuation installation. When installing the boiler, it is necessary to comply with degree of protection IP21.

8 Connecting the furnace

 **These actions must be carried out by a qualified technician.**

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

Clean the gas supply pipe. The gas shut off valve should be located on the back of the boiler. Pipe diameters must be defined in accordance with ATG's (Association Technique de Gaz) B171 specifications.

To prevent damage caused by overpressure on the gas regulator, the gas supply valve must be closed before carrying out the pressure test on the gas supply pipe. Decompress before reopening the valve.

Maximum pressure: 150 mbar. In old gas networks, we recommend fitting a gas filter with a large surface area and low water resistance before this point.

8.1 Water discharge connection

Discharge condensation water directly into the main drain. Given the degree of acidity (pH 3-5), use only plastic materials to make the connection. Open the gas valve. Make the connection to the main drain with a visible flow connection.

The discharge duct must have a minimum gradient of 50 mm/m. The discharge of condensation water via the gutter is not authorised, given the risk of frost and the damage to the materials usually used for gutters.

8.2 Combustive air supply


For operation dependent on ambient air, the aeration and air discharge vents in the premises must comply with the regulations. Germany: TRGI' 86, Edition 1996.

If a flue gas discharge pipe is connected in a chimney, position the boiler as close as possible to the chimney. Avoid long horizontal sections of flue gas pipe.

The aeration of the flue gas discharge pipe may also be used as the air discharge.

i Condensing boilers require a flue gas discharge system or a fresh air inlet specially adapted to the method of operation. Installation must be carried out in accordance with current laws.

8.3 Checking the gas inlet

 **These actions must be carried out by a qualified technician.**

- ▶ Check the tightness of the gas line, including the gas valves.
- ▶ Open all the stop valves on the gas inlet.
- ▶ Empty the gas inlet.

i Maximum authorised pressure on the gas valve: 150 mbar. In the event of higher control pressures, disconnect the condensing boiler from the gas inlet at the threaded connection to the gas stop valve. Closing the gas stop valve is not sufficient.

8.4 Flue gas system connections

- The horizontal sections on the flue gas side will be constructed with a gradient to the boiler of 3 %. The cross-section of the aeration vent in the premises for B₂₃ type connections (i.e. intake of combustible air into the premises) must comply with the DTU 61.1 standard.
- Type C appliances can only be installed with the systems mentioned in these technical instructions (particularly concentric pipes, terminal connection parts).
- As connections of type B₂₃ chimney conduits and type C₅₃ conduits are pressurised, they must be either installed outside or in a ventilated brick sheath.

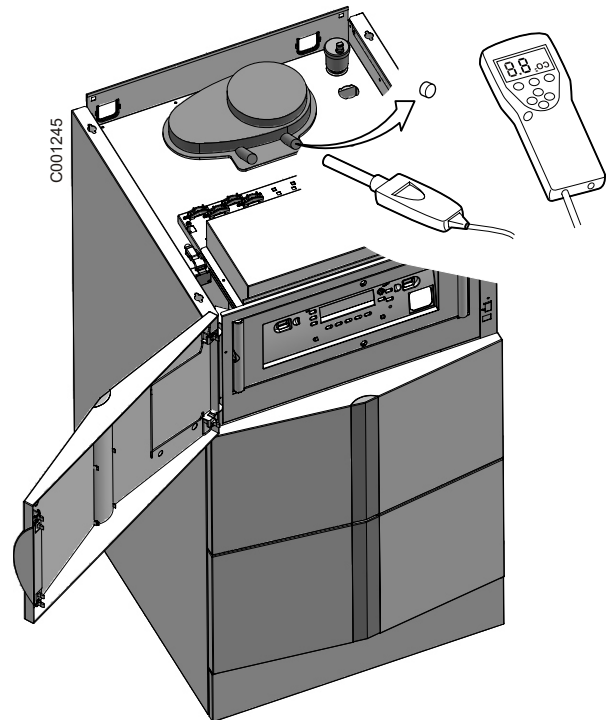
Ventilation must be ensured:

- by an opening located in the lower section, taking the air either from the common ventilated areas or directly from outside, and
- by an opening in the upper section connected directly with the outside.

The minimum cross section of the air vent and the openings to be provided must be 100 cm² (clear cross section).

For Belgium: Comply with the NBN D 51-003 standard.

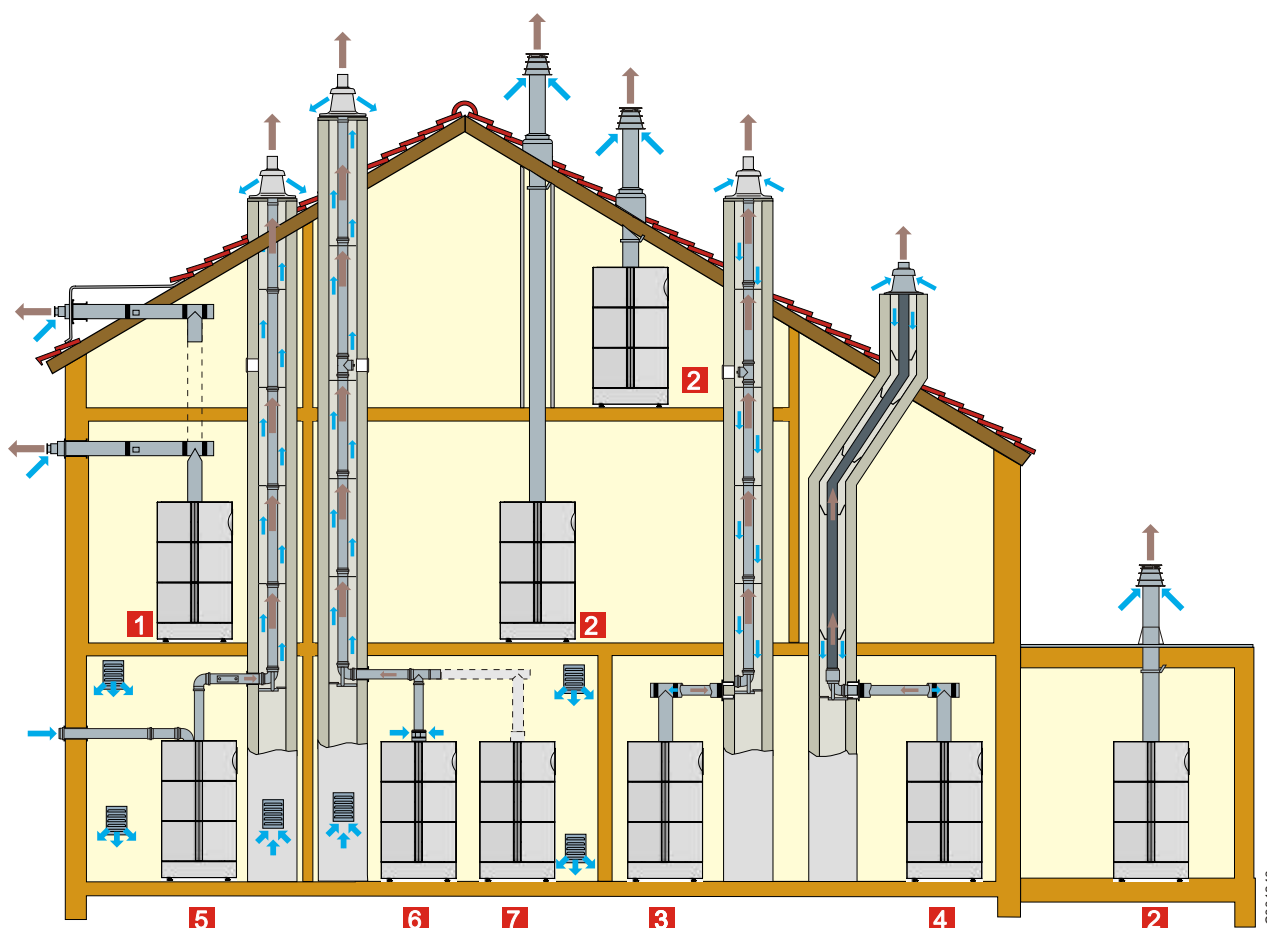
The parts of this sheath which can be dismantled must allow for inspection of the flue gas conduit along its entire length.



Comply with the installation instructions and the information on the authorised lengths of the flue gas pipes.

- ▶ Remove the anti-dust cap.
- ▶ Mount the flue gas pipe or the fresh air/flue gas discharge system in compliance with the assembly instructions.
- ▶ Check the seal.
 - Static test overpressure: 1000 Pa
 - Maximum leak rate: 50 l/hm² depending on the internal surface of the flue gas pipe
 - A diameter 80 = 0.25 m²/m,
 - A diameter 100 = 0.31 m²/m
- ▶ On concentric flue gas discharge systems (forced flue), the CO₂ level in the annular space in the measurement piping can also be checked. The flue gas discharge system is considered leak-proof if the measured CO₂ level is lower than 0.2%.

8.4.1 Classification




- 1 **Homologation C_{13x}**: Air/flue gas connection by means of concentric pipes to a horizontal terminal (so-called forced flue)
- 2 **Homologation C_{33x}**: Air/flue gas connection by means of concentric pipes to a vertical terminal (roof outlet)
- 3 **Homologation C_{93x}**: Air/flue gas connection by concentric pipes in the boiler room and single pipes in the chimney (combustive air in counter current in the chimney)
- 4 **Homologation C_{93x}**: Air/flue gas connection by concentric pipes in the boiler room and single "flex" in the chimney (combustive air in counter current in the chimney)
- ⚠ **- Only factory components are authorised for connecting the boiler and the terminal.**
- The clear section must comply with the standard.
- The chimney must be swept before the installation of the evacuation conduit.
- 5 **Homologation C₅₃**: Air and flue gas connection separated by means of a bi-flow adapter and single pipes (combustive air taken from outside)
- 6 **Homologation B_{23p}**: Chimney connection (combustive air taken from the boiler room)
- 7 **Homologation B_{23p}**: Cascade installation
 Compulsory accessories:
 Flue damper (Package HC154)
 Alarm and control module AM35 (Package GR12)
 For information about the connection to the electrical terminal block, refer to the instructions delivered with package GR12

(x) For Germany only


Belgium: Boilers can only be installed with flue gas connection pipes provided by the constructor. For the list of parts, refer to the current price list.

8.4.2 Lengths of the air/flue gas pipes


 **L_{max} is measured by adding the lengths of the air/flue gas pipes and the equivalent lengths of the other elements.**

Type of air/flue gas connection		Diameter	Maximum length of the connection pipes (metre)					
			DTGE130-35	DTG130-35	DTG130-45	DTG130-65	DTG130-90	DTG130-115
Concentric pipes connected to a horizontal terminal (Alu)	C _{13(x)}	80/125 mm	16	16	16	-	-	-
		100/150 mm	-	-	-	9	8	5.9
Concentric pipes connected to a vertical terminal (Alu)	C _{33(x)}	80/125 mm	14.5	14.5	14.5	-	-	-
		100/150 mm	-	-	-	11.5	10	9.4
Concentric pipes in the boiler room Single pipes in the chimney (combustive air in counter current) (Alu)	C _{93(x)}	80/125 mm 80 mm	15	15	15	-	-	-
		80/125 mm 110 mm	11.5	11.5	25	-	-	-
		110/150 mm 110 mm	-	-	-	16	13.2	10
Concentric pipes in the boiler room "Flex" pipes in the chimney (combustive air in counter current) (PPS)	C _{93(x)}	80/125 mm 80 mm	12	12	12	-	-	-
		110/150 mm 110 mm	-	-	-	16.5	13.5	9.4
Bi-flow adapter + Separate single air/flue gas pipes (combustive air taken from outside) (Alu)	C ₅₃	80/125 mm on 2x80 mm	20.5	20.5	20.5	-	-	-
		100/150 mm on 2x100 mm	-	-	-	23	17.5	Air: 11 flue gases: 5
Chimney (rigid or flexible) (combustive air taken in the premises) (PPS)	B _{23P}	80 mm (rigid)	23.5	23.5	23.5	-	-	-
		110 mm (rigid)	-	-	-	40	40	40
		80 mm (Flexible)	21	21	21	-	-	-
		110 mm (Flexible)	-	-	-	29.5	24	17.5

(x) For Germany only

 Take the pressure drops into account if using accessories (elbows, inspection pipe, etc.).

8.4.3 Connection options

 Refer to the current price list.

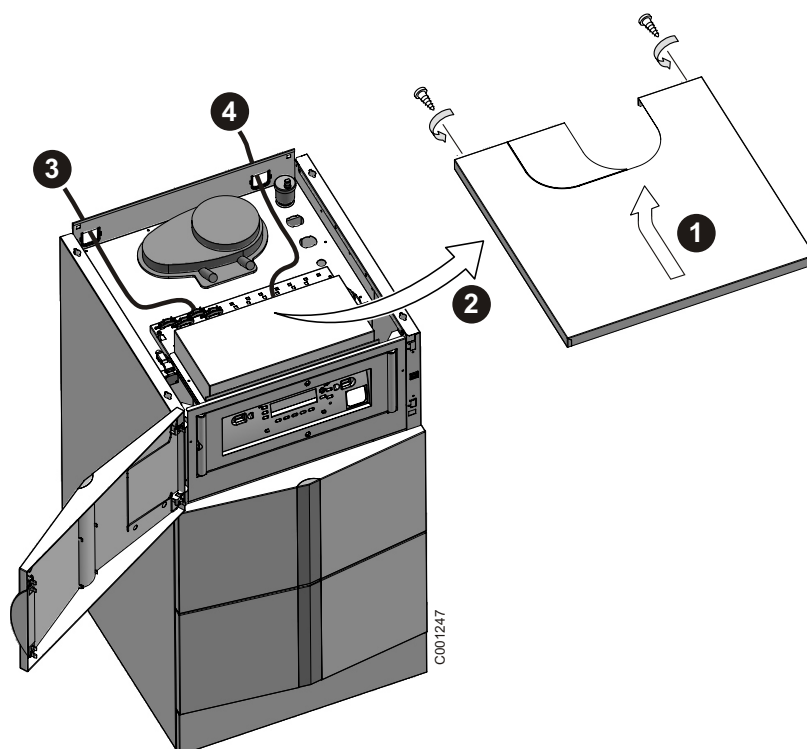
8.5 Electrical connection

The appliance must be powered by a circuit containing an omnipolar switch with an opening distance 3 mm.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L
± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L	± N L

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- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> 1 3-way valve (circuit C) 2 Pump (circuit C) 3 Safety thermostat (circuit C) 4 3-way valve (circuit B) 5 Pump (circuit B) 6 Safety thermostat (circuit B) 7 Auxiliary outlet 8 DHW pump or Reversal valve 9 Pump (circuit A) 10 Limiting thermostat and permanent phase 11 Pre-wired power supply | <ul style="list-style-type: none"> 12 Flow sensor (circuit B) 13 Input 0-10 V 14 Room sensor (circuit B) 15 Room sensor (circuit A) 16 Domestic hot water sensor 17 Outside sensor 18 Safety contact 19 Telephone relay 20 Room sensor (circuit C) 21 Flow sensor (circuit C) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



- ▶ Open the panel flap.
- ▶ **1** Unscrew the 2 mounting screws at the back of the top panel. Lift and tilt the back of the top panel.
- ▶ **2** Unscrew the 2 mounting screws from the screen. Remove the card cover.
- ▶ **3+4** Pass the 230V and sensor cables through the openings in the rear panel in the order 230V, sensor.
- ▶ Attach the cables to the cable clamps provided for this purpose.
- ▶ Position the cable connectors on the card.
- ▶ Follow in reverse order for re-assembly.

! Check on the path of the cables when replacing the drawer supporting the sensor relay card.

9 Commissioning

⚠ Initial commissioning must be done by a qualified professional.

Before start-up, the heating installation must be completely emptied and rinsed.

Operation while the condensation water siphon is empty may damage the boiler.

9.1 Filling the system

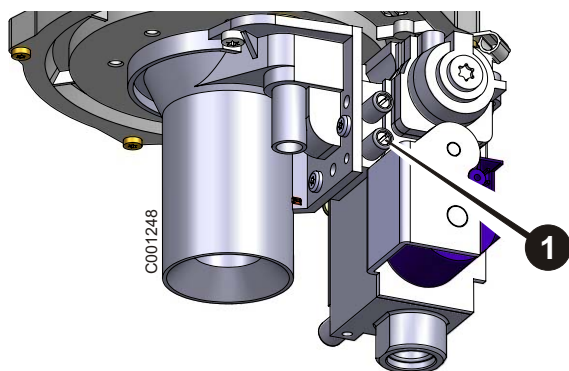
- ▶ Fill the installation with water.
- ▶ Vent the heating installation.
- ▶ Fill the siphon with water.
- ▶ Check the pressure of the installation (Minimum pressure 0.8 bar; Recommended pressure 1.5 bar; Maximum pressure 4 bar).
- ▶ Carry out a water tightness check.
- ▶ Top up with more water if necessary.

9.2 Check points before commissioning

⚠ For Belgium: Any work on the gas valve unit is authorised only if carried out by a qualified professional.

9.2.1 Checking the gas supply pressure

1. Close the gas valve.



2. Loosen the screw on the measurement connection by 2 turn (Marker ❶).
3. Connect the manometer.

4. Open the gas valve.
5. Check the pressure of the gas connection on the measurement connection. The boiler is preset in the factory to operate on natural gas.

⚠ If the pressure exceeds the authorised pressure range, suspend commissioning (Authorised pressure range, see page: 9). Inform the gas supply company.

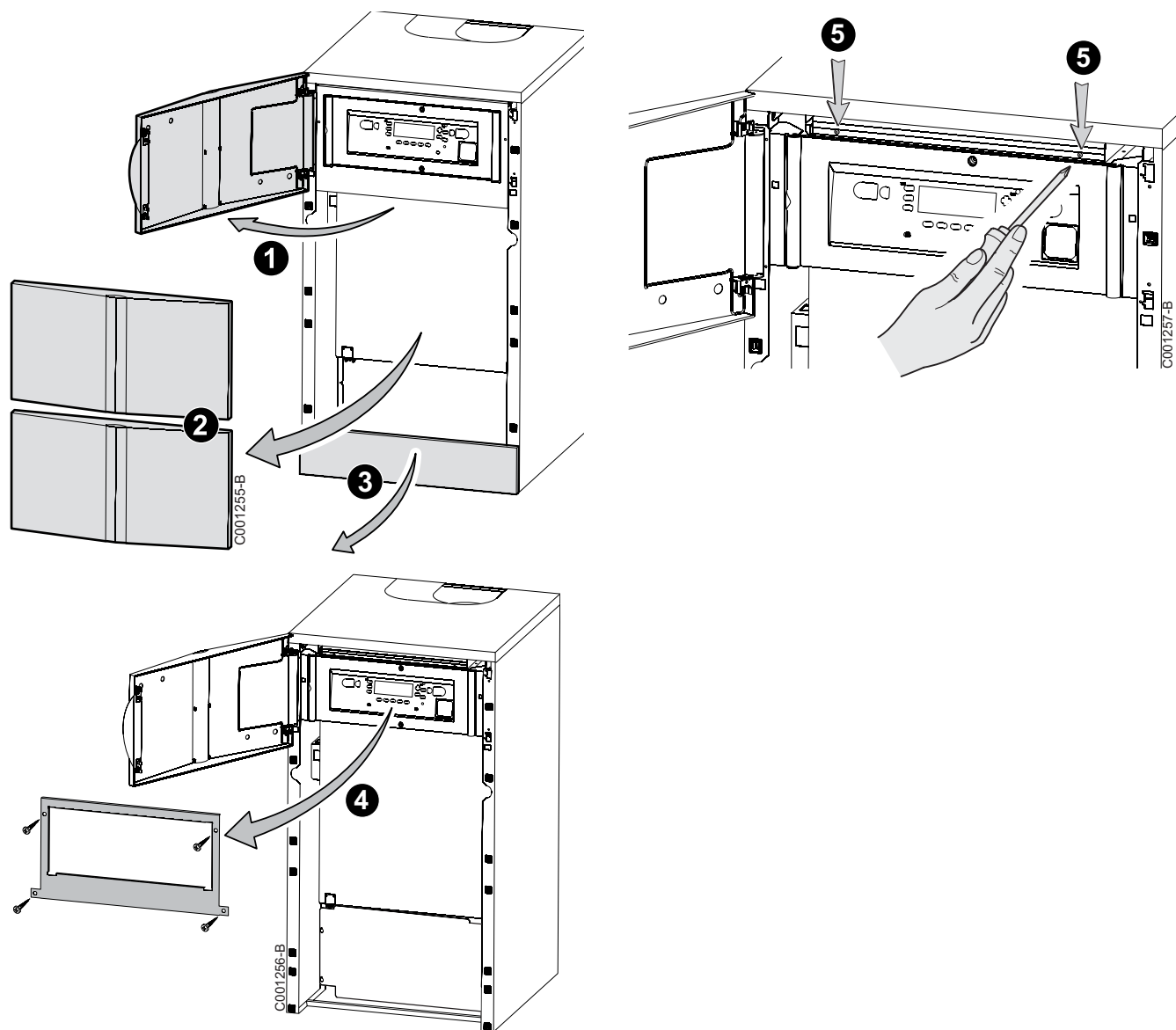
⚠ The pressure measured on ❶ is the supply pressure reduced by the pressure drop of internal gas pipe.

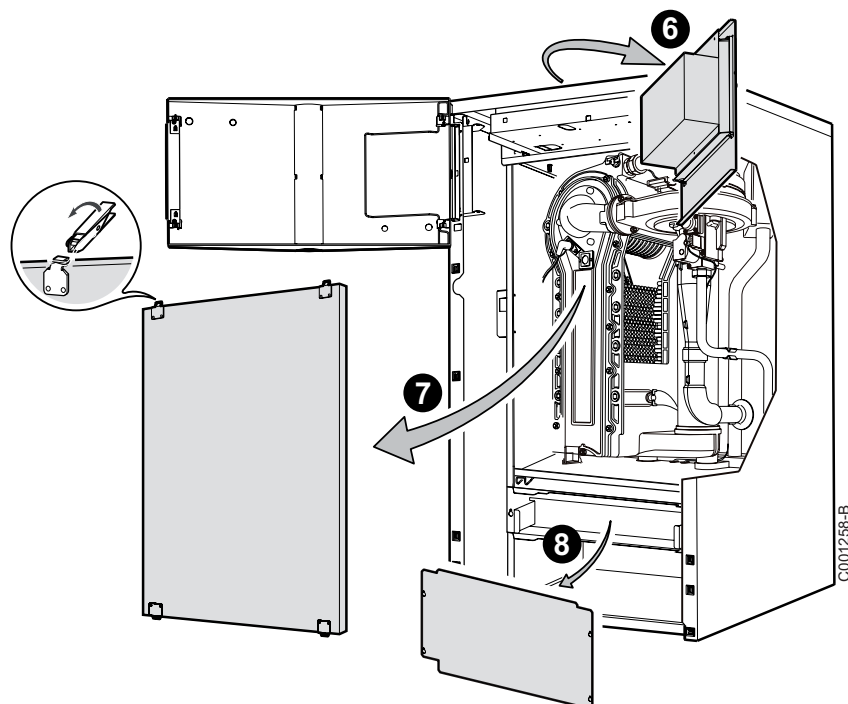
6. Close the gas valve. Disconnect the manometer.
7. Tighten screw ❶.
8. Open the gas valve. Check the seal.

DTG... 130...	DTG (E) 35			DTG 45			DTG 65			DTG 90			DTG 115		
	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)
Natural gas H (20 mbar)															
Supply pressure	17	20	25	17	20	25	17	20	25	17	20	25	17	20	25
Pressure ❶	16.2	19.2	24.2	15.8	18.8	23.8	14.5	17.5	22.5	13.3	16.3	21.3	13.1	16.1	21.1
Natural gas L (25 mbar)															
Supply pressure	20	25	30	20	25	30	20	25	30	20	25	30	20	25	30
Pressure ❶	18.8	23.8	28.8	18.2	23.2	28.2	16.3	21.3	27.3	14.5	19.5	24.5	14.2	19.2	24.2
Propane (37 mbar)															
Supply pressure	25	37	45	25	37	45	25	37	45	25	37	45	25	37	45
Pressure ❶	24.7	36.7	44.7	24.5	36.5	44.5	24	36	44	23.5	35.5	43.5	23.4	35.4	43.4

DTG... 130...	DTG (E) 35			DTG 45			DTG 65			DTG 90			DTG 115		
	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)	P min (1)	P nom (2)	P max (3)
Propane (50 mbar)															
Supply pressure	42.5	50	57.5	42.5	50	57.5	42.5	50	57.5	42.5	50	57.5	42.5	50	57.5
Pressure 1	42.2	48.7	57.2	42	49.5	57	41.5	49	56.5	41	48.5	56	40.9	48.4	55.9
(1) Minimum pressure (2) Nominal pressure (3) Maximum pressure															

9.3 Putting the appliance into operation





9.3.1 DTGE130-35 / DTG130-35 / DTG130-45 / DTG130-65 / DTG130-90

⚠ For Belgium: Any work on the gas block must be carried out by a factory technician (For example: SERV'élite).

The boiler is preset in the factory to operate on natural gas G20, IWs = 15.0 kWh/m³. Connection pressure (mbar) 20.

Maximum power of the burner (Factory setting in kW)

Boilers	DTG E 130-35	DTG130- 35	DTG130- 45	DTG130- 65	DTG130- 90
Heating mode (100 %) (Hi / Hs)	33.5 / 37.2	33.5 / 37.2	41.2 / 45.7	62.0 / 68.8	86.0 / 95.5
Domestic hot water mode (100%) (Hi / Hs)	33.5 / 37.2	33.5 / 37.2	41.2 / 45.7	62.0 / 68.8	86.0 / 95.5

The burner is set exclusively by checking the CO₂ and O₂ level in the flue gases at maximum and minimum output.

Compare the information on the appliance's rating plate with the type of gas available in situ.

If this is natural gas, the boiler can be commissioned without making other settings (Ws = 12.0-15.7 kWh/m³).

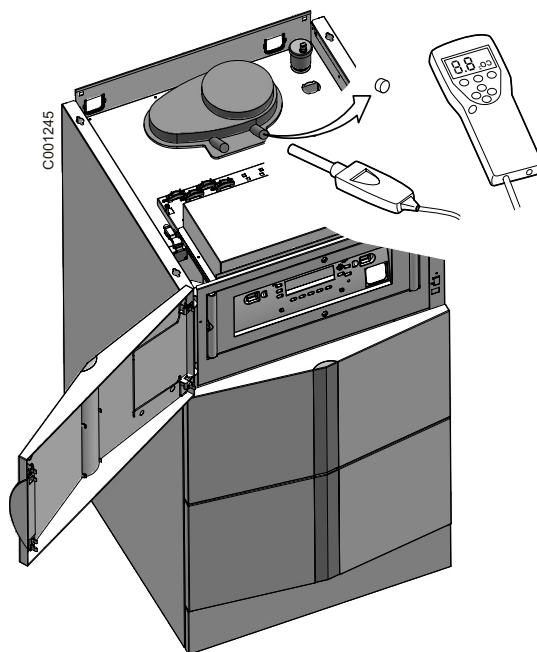
- ▶ Switch on the electrical supply.
- ▶ Starting the burner up.

The appliance must be powered by a circuit containing an omnipolar switch with an opening distance 3 mm.

The earth connection shall comply with standard NF C 15 100.

Take the boiler up to maximum power.

- ▶ Open the panel flap.
- ▶ Press key and simultaneously for 2 seconds.
- ▶ Set the burner output using the + and - keys. P_{max} = Maximum power of the burner.



- ▶ Remove the top panel.
- ▶ Remove the plastic plug from the measurement tube.
- ▶ Check the CO₂ and O₂ level in the flue gases using the measuring device.

All countries except Belgium:

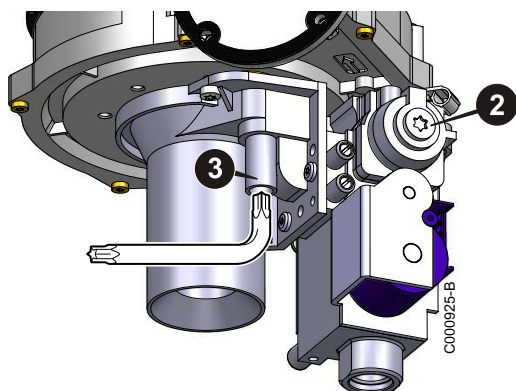
CO ₂ content (%)							O ₂ content (%)				
Boilers	DTGE130-35	DTG130-35	DTG130-45	DTG130-65	DTG130-90	DTGE130-35	DTG130-35	DTG130-45	DTG130-65	DTG130-90	
Natural gas H (G20)	9.0	9.0	9.0	9.0	9.5	4.8	4.8	4.8	4.8	3.9	
Natural gas L (G25)	9.0	9.0	9.0	9.0	9.5	4.8	4.8	4.8	4.8	3.9	
Propane	10.7	10.7	10.7	10.7	10.7	4.8	4.8	4.8	4.8	4.8	

Correct the burner setting to $\pm 0.3\%$ CO₂; $\pm 0.2\%$ O₂.

For Belgium:

CO ₂ content (%)							O ₂ content (%)				
Boilers	DTGE130-35	DTG130-35	DTG130-45	DTG130-65	DTG130-90	DTGE130-35	DTG130-35	DTG130-45	DTG130-65	DTG130-90	
Natural gas H (G20)	9.0	9.0	9.0	9.0	9.5	4.8	4.8	4.8	4.8	3.9	
Natural gas L (G25)	*	*	*	*	9.5	*	*	*	*	3.9	
Propane	10.7	10.7	10.7	10.7	10.7	4.8	4.8	4.8	4.8	4.8	

* Approximate CO₂ content: 7.5%



* Approximate O₂ content: 7.3%

- ▶ Set the "max output" gas flow with the setting screw **3** until the required CO₂ and O₂ content is reached.
- ▶ Check the CO₂ and O₂ level in the flue gases.
- ▶ Check the flame via the flame inspection window. It must not go out. The flame must be stable and blue in colour with orange particles around the edge of the burner.
- ▶ Set the burner output to minimum using the - key. P_- : Minimum output.
- ▶ Measure the CO₂ or O₂ level in the flue gases.
- ▶ Modify the "min output" setting with the setting screw **2**.
- ▶ Check the output delivered again.
- ▶ Adjust if necessary.

For Switzerland: The maximum limit values authorised by the OPAIR federal order on air protection regarding CO and NO_x must be checked using measurements made in the place of installation.

When the setting is correct, close the flap.

- ▶ Switch the On/Off switch on Off.
- ▶ Remove the measuring equipment.
- ▶ Replace the plastic plug onto the measuring tube.

9.3.2 DTG130-115

⚠ For Belgium: Any work on the gas block must be carried out by a factory technician (For example: SERV'élite).

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

The conversion from Natural Gas G20 to Natural Gas G25 requires the installation of the conversion kit delivered with the boiler.

Maximum power of the burner (Factory setting in kW)

Boilers	DTG130-115
Heating mode (100 %) (Hi / Hs)	110.2 / 122.3
Domestic hot water mode (100%) (Hi / Hs)	110.2 / 122.3

The burner is set exclusively by checking the CO₂ or O₂ level in the flue gases at minimum output.

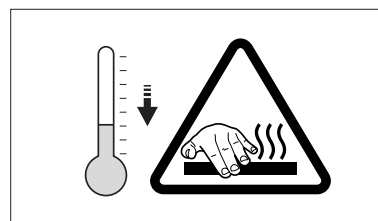
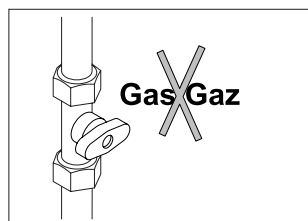
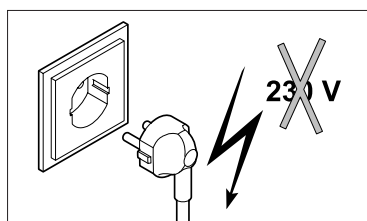
Compare the information on the appliance's rating plate with the type of gas available in situ.

- If natural gas G20 is being used, this boiler can be commissioned without making any other preliminary settings,
- If natural gas G25 is being used, the G25 conversion kit must be fitted (diaphragm diameter 9.8) between the gas valve and the venturi,
- If propane G31 is being used, the propane injector kit must be installed (gas valve + diaphragm diameter 6.7)

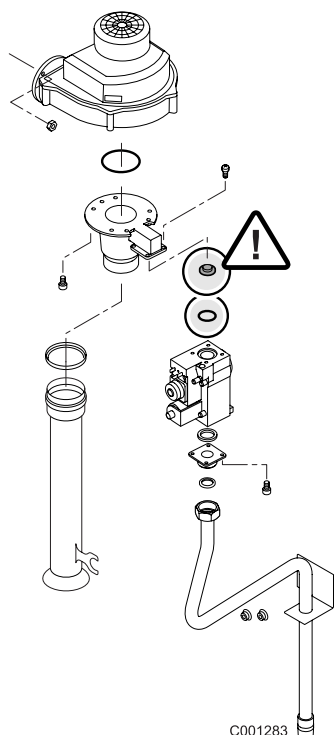


See: Conversion kit instructions.

■ Fitting the G25 natural gas conversion kit



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Replace the diaphragm diameter 8.6 with the diaphragm diameter 9.8 in the sachet.

- ▶ Switch on the electrical supply.
- ▶ Starting the burner up.

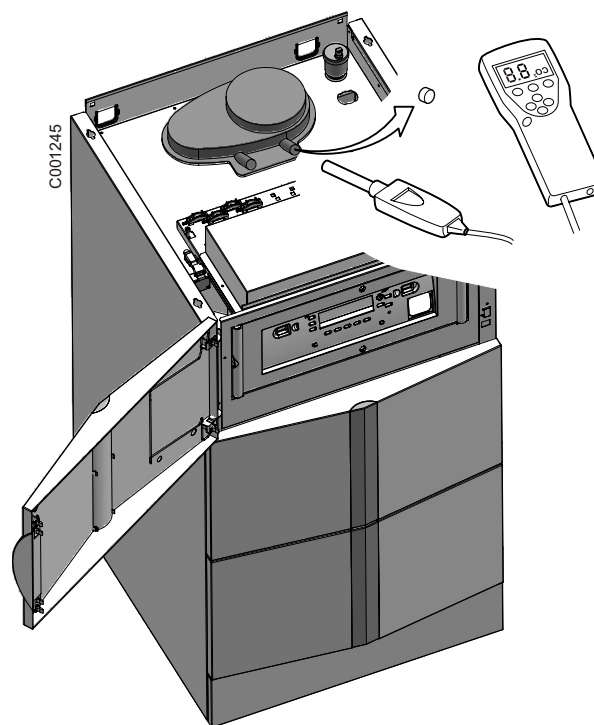
The appliance must be powered by a circuit containing an omnipolar switch with an opening distance 3 mm.

The earth connection shall comply with standard NF C 15 100.

Take the boiler up to maximum power.

- ▶ Open the panel flap.
- ▶ Press key  and  simultaneously for 2 seconds.
- ▶ Set the burner output using the + and - keys.

P_{Ξ} = Maximum power of the burner.



- ▶ Remove the plastic plug from the measurement tube.
- ▶ Check the CO₂ and O₂ level in the flue gases using the measuring device.

P_{Ξ}	CO ₂ content (%)	O ₂ content (%)
Natural gas G20	9	4.8
Natural gas G25	9.5	3.9
Propane	10.0	5.7

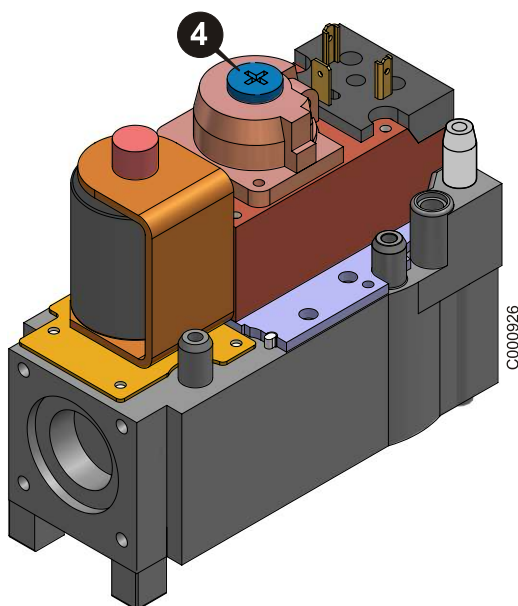
Check the burner setting to $\pm 0.3\%$ CO₂; $\pm 0.5\%$ O₂.



If the values exceed the tolerances:

Check the gas input pressure.

Check that the diaphragm fitted is suitable for the gas being used (G25 = Diameter 9.8, G20 = Diameter 8.6, Propane = Diameter 6.7).



- ▶ Set the burner output to minimum using the - key. P_- : Minimum output.
- ▶ Measure the CO_2 or O_2 level in the flue gases.
- ▶ If necessary:
Modify the "min output" setting with the setting screw 4 (The adjustment screw is protected by a plug, Torx type screw and plug).

Turn the screw clockwise to increase the CO_2 and anti-clockwise to decrease the O_2

P_-	CO_2 content (%)	O_2 content (%)
Natural gas G20	9.5	3.9
Natural gas G25	9.5	3.9
Propane	10.5	4.9

Correct the burner setting to $\pm 0.1\% \text{ CO}_2$; $\pm 0.2\% \text{ O}_2$.

- ▶ Check the CO_2 and O_2 content again at maximum output.

For Switzerland: The maximum limit values authorised by the OPAIR federal order on air protection regarding CO and NOx must be checked using measurements made in the place of installation.

When the setting is correct, close the flap.

- ▶ Switch the On/Off switch on Off.
- ▶ Remove the measuring equipment.
- ▶ Replace the plastic plug onto the measuring tube.


9.4 Adapting the output

Setting the burner output

Output (kW) (Hi / Hs)						Control value (%)
DTGE130-35	DTG130-35	DTG130-45	DTG130-65	DTG130-90	DTG130-115	
33.5 / 37.2	33.5 / 37.2	41.2 / 45.7	62.0 / 68.8	86.0 / 95.5	110.2 / 122.3	100
30.8 / 34.2	30.8 / 34.2	37.9 / 42.1	57 / 63.3	79.1 / 87.8	102.1 / 113.3	90
28.1 / 31.2	28.1 / 31.2	34.6 / 38.4	52 / 57.7	72.2 / 80.1	93.2 / 103.5	80
26.8 / 29.7	26.8 / 29.7	33 / 36.6	49.6 / 55.1	68.8 / 76.4	88.8 / 98.6	75
25.5 / 28.3	25.5 / 28.3	31.3 / 34.7	47.1 / 52.3	65.4 / 72.6	84.4 / 93.7	70
22.8 / 25.3	22.8 / 25.3	28 / 31.1	42.2 / 46.8	58.5 / 64.9	75.5 / 83.8	60
20.1 / 22.3	20.1 / 22.3	24.7 / 27.4	37.2 / 41.3	51.6 / 57.3	66.6 / 73.9	50
17.4 / 19.3	17.4 / 19.3	21.4 / 23.8	32.2 / 35.7	44.7 / 49.6	57.7 / 64.0	40
14.7 / 16.3	14.7 / 16.3	18.1 / 20.1	27.3 / 30.3	37.8 / 42.0	48.8 / 54.2	30

By setting the boiler output percentage, you obtain an adaptation of the maximum load in heating mode.

For the hot water mode, the burner is preset to maximum load in the factory.


 See chapter Table Installer settings, **#LIMITED TEMP., MAX.R.HEAT(%)**

9.5 Programming boiler control

Set the integrated control in compliance with the corresponding operating instructions.


9.6 Domestic hot water preparation

Setting the domestic water temperature:

- ▶ Press the  key.
- ▶ Set the temperature using keys + and - (10-80 °C).
- ▶ Save the temperature by pressing the **AUTO** key.

9.7 Train the user of the installation

9.8 Filling in the commissioning certificate

 See "Filling in the commissioning certificate".

9.9 Turning the installation off

- ▶ Switch the On/Off switch on Off.
- ▶ Close the gas valve.

10 Messages - Alarms

10.1 Faults

In the event of a fault, the display may show the following messages. Contact your fitter.

Message	Probable causes	Action
SHOW REM. CTRL	The message SHOW REM.CTRL indicates the presence of an override on a remote control	To cancel the overrides on all remote controls, press the AUTO key for 5 seconds.
REVISION	Boiler service required	Contact the professional responsible for maintenance of the boiler.
24V SHORT-CIRC.	Short circuit 24 V	Check the wiring.

Faults	Probable causes	Action
BURNER FAILURE	Igniter fault	Check the ignition electrode (spacing of the electrodes), its connector and its connection cable. Replace if necessary.
	Ionization fault	Check the earth. Check the ionization current. If necessary rectify the level of CO ₂ .
	Gas valve defective	Replace the gas valve.
	No gas or presence of air in the pipe	Measure the gas supply pressure. Bleed the gas circuit.
I-CURRENT FAIL	Ionization fault during operation	Check the earth. Check the ionization current. If necessary rectify the level of CO ₂ .
MCBA FAILURE XX	Internal safety control box fault	Reset the boiler. Briefly cut the electrical power supply to the boiler using the On/Off switch. Replace the command and safety box.
MCBA FAILURE 5	External influences	Check the wiring.
MCBA FAILURE 11	Internal fault	Check that multi-wire connections are undamaged. Presence of humidity in the control panel. Eliminate electro-magnetic influences.
DEF.MCBA 24	Boiler reversal sensor and return sensor	Reverse the sensors. Pump incorrectly fitted.
VALVE FAIL	Combined gas valve unit defective	The safety control box does not signal a gas valve. Check: - The wiring of the gas valve; - The gas valve could be defective (coil defective).
REARM CVI	Control error	Reset the boiler.
MCBA.COM.FAULT	Communication error between DIEMATIC and safety control box	Check the link and the connections between DIEMATIC and safety control box. Reset the boiler. Briefly cut the electrical power supply to the boiler using the On/Off switch.
BOILER S.FAIL. BACK S.FAILURE OUTSI. S.FAIL. DHW S. FAILURE OUTL S.B FAIL. OUTL S.C FAIL. ROOM S.A FAIL. ROOM S.B FAIL. ROOM S.C FAIL. SMOKE S. FAIL. SWIM.P. S.FAIL ST.TANK S.FAIL	The corresponding sensor is off or short-circuited	Check the link and the connectors. Replace the sensor if necessary.

Faults	Probable causes	Action
FAN OFF FAIL	The fan is not working	Fan defective. Check the fan wiring (corrosion of the connection). Safety control box defective.
FAN ON FAIL	The fan is working constantly	Electrical connections broken. Fan control is defective (replace the fan).
BOILER S.FAIL.	Boiler sensor defective	Check the link and the connectors. Replace the sensor if necessary. Reset the boiler.
PARASIT FLAME	Detection of a parasite flame	Check the seals on all gas connections. Set the gap between the ignition electrodes. Check that the surface of the burner does not have any fibre residues.
STB BOILER	Outlet temperature > 110°C	Check the STB safety thermostat and the wiring. Bleed the boiler. Check the boiler pump. Check the hydraulic circuit on the installation.
STB SMOKE	Flue gas temperature > 100°C	Check flue gas discharge. Replace it if necessary.
STB BACK	Return temperature too high	Check the wiring. Bleed the boiler. Check the boiler pump. Check the hydraulic circuit on the installation.

- **BOILER S.FAIL., BACK S.FAILURE**

The boiler will no longer satisfy any heating requests.



The 10 latest faults appearing on the display are memorised in the paragraph **#HISTORY D.**



See chapter Parameter and input/output check (mode tests).

- **OUTSI. S.FAIL.**

- The boiler operates on **BOILER MAX** temperature.
- The valve setting is no longer ensured but monitoring the maximum temperature of the circuit after the valve is ensured.
- Valves may be manually operated.
- Reheating the domestic hot water remains ensured.

- **DHW S. FAILURE**

- Heating of domestic hot water is no longer ensured.
- The load pump operates.
- The load temperature of the dhw tank is the same as the boiler.

- **OUTL S.B FAIL., OUTL S.C FAIL.**

- The pump operates.
- The valve is no longer powered and can be adjusted manually.

- **ROOM S.A FAIL., ROOM S.B FAIL., ROOM S.C FAIL.**

The circuit concerned operates without any influence from the room sensor.

- **SMOKE S. FAIL.**

Flue gas sensor defective. The boiler goes into safety shutdown.

- **SWIM.P. S.FAIL**


Pool reheating is independent of its temperature.

- **ST.TANK S.FAIL**

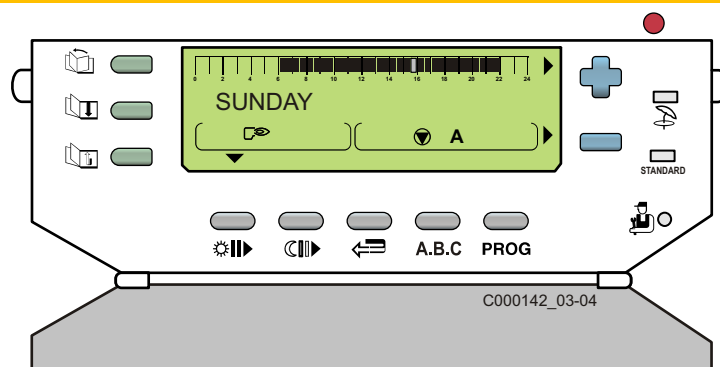
The hot water storage tank reheating operation is no longer assured.

10.2 Blockage (temporary)

Code no.	Description	Checks
BL. AIR	The setting of the parameters is incorrect.	Check the boiler type. Briefly cut the electrical power supply to the boiler using the On/Off switch. Check the wiring.
BL.RET.HIGH.BOI	Return temperature > Flow temperature for 10 minutes minimum, after boiler operating at lower stage.	Connection or outlet and return sensor reversed
BL.SPEED	The maximum temperature increase speed tolerated in the exchanger has been exceeded. The boiler is blocked for 10 minutes. After 5 successive attempts during a single heating request, the repeated cut-offs will be saved (the blockage code and the boiler situation at the time of the blockage). However, the boiler does not break down and continues to operate.	Pump Water flow Hydraulic pressure
BL.DT BOI BACK	The maximum difference tolerated between the outlet and return temperatures has been exceeded. The boiler is blocked for 150 seconds. After 10 successive attempts during a single heating request, the repeated cut-offs will be saved (the blockage code and the boiler situation at the time of the blockage). However, the boiler does not break down and continues to operate.	Pump Water flow Hydraulic pressure
BL.INT.MCBA	The setting of the parameters is incorrect or the memory is defective.	Check the boiler type. Briefly cut the electrical power supply to the boiler using the On/Off switch. Check the wiring.
BL.SMOKE	Flue gas temperature > Max flue gas temperature.	Boiler setting Fouling
BLOCKING b26	Blockage input on the CS bridge terminals, is open, or absence of a bridge.	External safety, bridge
BLOCKING bXX	The control box is off.	Check the wiring. Reset the boiler.
BL.FAN.OFF	Fan defective or incorrectly fitted. After 5 successive blockages, the boiler goes into safety shutdown.	
BL.FAN.ON	Fan continues to turn after post-ventilation, the boiler goes into safety shutdown.	

 The blockage mode is a normal operating mode and therefore does not indicate a breakdown but a normal boiler operating status. A blockage code is likely to signal a technical problem in the installation or an incorrect setting.

11 "User" settings



Key for access to setting and measurements	
	Page scrolling
	Line scrolling
	Back to the title or the previous line
Programming keys	
	Enter (per 1/2 hour) the comfort temperature period or tank load enabled (dark area)
	Enter (per 1/2 hour) the reduced temperature period or tank load disabled (light area)
	Return key

11.1 Measurements

The **#MEASURES** paragraph is used to read the measurements of the connected sensors..

Press	Display	Parameter set
 then 	#MEASURES	Allows the values below to be read
	BOILER TEMP.	Boiler water temperature
	OUTLET TEMP. B*	Water temperature in circuit B
	OUTLET TEMP. C*	Water temperature in circuit C
	CASCADE TEMP.*	Cascade temperature
	WATER TEMP.*	Tank water temperature
	ROOMTEMP. A*	Ambient temperature A
	SWIMMING P. T.*	Pool temperature
	ROOMTEMP. B*	Ambient temperature B
	ROOMTEMP. C*	Ambient temperature C
	OUTSIDE TEMP.	Outside temperature
	SMOKE TEMP.*	Flue gas temperature
	BACK TEMP	Return temperature
	STOR.TANK.TEMP*	Hot water storage tank temperature
	SPEED B.(RPM)	Display of the fan speed
	POWER	Display of the current boiler output (%) (0% = Pmin or Stop, 100% = Pmax)
	CURRENT (uA)	Ionization current
	NB IMPULS.	Number of burner start-ups (not restartable)
	RUNTIME	Number of burner operation hours (not restartable)
	IN 0-10V	Voltage at input 0-10 V
	CTRL	Information reserved for the technician

* The line or paragraph is only displayed by the connected circuits or sensor options.

i At the end of the intervention, the data is memorised after 2 minutes or by pressing the **AUTO** key.

11.2 Programming

■ Factory programmes



See chapter Selecting a programme

■ Resetting the programmes

Press the **STANDARD** key for 5 seconds.

- ▶ All customised programmes are replaced with their factory setting.
- ▶ Programme P1 is assigned to all heating circuits.

■ Customised programming

#PROG. CIRC.A

Day	Comfort periods			
	P1	P2	P3	P4
Monday	06:00 - 22:00			
Tuesday	06:00 - 22:00			
Wednesday	06:00 - 22:00			
Thursday	06:00 - 22:00			
Friday	06:00 - 22:00			
Saturday	06:00 - 22:00			
Sunday	06:00 - 22:00			

#PROG. CIRC.B

Day	Comfort periods			
	P1	P2	P3	P4
Monday	06:00 - 22:00			
Tuesday	06:00 - 22:00			
Wednesday	06:00 - 22:00			
Thursday	06:00 - 22:00			
Friday	06:00 - 22:00			
Saturday	06:00 - 22:00			
Sunday	06:00 - 22:00			

#PROG. CIRC.C



Day	Comfort periods			
	P1	P2	P3	P4
Monday	06:00 - 22:00			
Tuesday	06:00 - 22:00			
Wednesday	06:00 - 22:00			
Thursday	06:00 - 22:00			
Friday	06:00 - 22:00			
Saturday	06:00 - 22:00			
Sunday	06:00 - 22:00			

#PROG. DHW: Domestic hot water

Day	Filling enabled
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

#PROG. AUXIL: Programming the auxiliary outlet

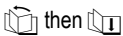

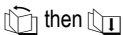

Day	Authorised operation
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Press	Display	Parameter set	Factory setting
 then 	#PROG. CIRC.A *	Heating programme for circuit A if used	Monday to Sunday 4:00 - 21:00
	PROG EVERY DAY P2		
	PROG MONDAY P2		
	PROG TUESDAY P2		
	PROG WEDNESDAY P2		
	PROG THURSDAY P2		
	PROG FRIDAY P2		
	PROG SATURDAY P2		
	PROG SUNDAY P2		
	PROG EVERY DAY P3		
	PROG MONDAY P3		Monday to Friday 5:00 - 8:00 16:00 - 22:00 Saturday and Sunday 7:00 - 23:00
	PROG TUESDAY P3		
	PROG WEDNESDAY P3		
	PROG THURSDAY P3		
	PROG FRIDAY P3		
	PROG SATURDAY P3		
	PROG SUNDAY P3		
	PROG EVERY DAY P4		
	PROG MONDAY P4		
	PROG TUESDAY P4		
	PROG WEDNESDAY P4		Monday to Friday 6:00 - 8:00 11:00 - 13:00 16:00 - 22:00 Saturday and Sunday 6:00 - 23:00 7:00 - 23:00
	PROG THURSDAY P4		
	PROG FRIDAY P4		
	PROG SATURDAY P4		
	PROG SUNDAY P4		
	#PROG. CIRC.B *	Heating programme for circuit B if used	-
		Lines as circuit A	
	#PROG. CIRC.C *	Heating programme for circuit C if used	-
		Lines as circuit A	

* The line or title is only displayed for the options, circuits or sensors actually connected.

i **PROG EVERY DAY** enables simultaneous programming of each day of the week. Each day can subsequently be individually modified.

i At the end of the intervention, the data is memorised after 2 minutes or by pressing the **AUTO** key.







Press	Display	Parameter set	Factory setting
 then 	#PROG. DHW *		5:00 - 22:00
	PROG EVERY DAY		
	PROG MONDAY		
	PROG TUESDAY		
	PROG WEDNESDAY		
	PROG THURSDAY		
	PROG FRIDAY		
	PROG SATURDAY		
	PROG SUNDAY		
 then 	#PROG. AUXIL *		6:00 - 22:00
	PROG EVERY DAY		
	PROG MONDAY		
	PROG TUESDAY		
	PROG WEDNESDAY		
	PROG THURSDAY		
	PROG FRIDAY		
	PROG SATURDAY		
	PROG SUNDAY		

* The line or title is only displayed for the options, circuits or sensors actually connected.

i **PROG EVERY DAY** enables simultaneous programming of each day of the week. Each day can subsequently be individually modified.

i At the end of the intervention, the data is memorised after 2 minutes or by pressing the **AUTO** key.

11.3 Adjustment

Press	Display	Parameter set	Factory setting	Adjustment range	Customer setting
 then 	#SETTING	The parameters are set using keys  or  .			
	CONTRAST DISP.	Allows the display contrast to be set using keys  and  .			
	BACK LIGHT	ON	ON	ON, ECO or OFF	
		ECO			
		OFF			
	PERMUT *	AUTO	AUTO	AUTO, 1, 2, ...10	
		1, 2, ... 10			
	SUM/WIN	Non heating exterior temperature	22 °C	15 to 30 °C, OFF	
	CALIBR. OUT	Outside sensor calibration	0.0	-5.0 to +5.0 °C	
	CALIBR. ROOM A *	Calibration of the room sensor on circuit A	0.0	-5.0 to +5.0 °C	
	OFFSET ROOM A *	Room offset on circuit A (If no room sensor is connected)	0.0	-5.0 to +5.0 °C	
	ANTIFR. ROOM A *	Room temperature antifreeze activation on circuit A	6 °C	0.5 to 20 °C	
	CALIBR. ROOM B *	Lines as circuit A	0.0	-5.0 to +5.0 °C	
	OFFSET ROOM B *	Lines as circuit A	0.0	-5.0 to +5.0 °C	
	ANTIFR. ROOM B *	Lines as circuit A	6 °C	0.5 to 20 °C	
	CALIBR. ROOM C *	Lines as circuit A	0.0	-5.0 to +5.0 °C	
	OFFSET ROOM C *	Lines as circuit A	0.0	-5.0 to +5.0 °C	
	ANTIFR. ROOM C *	Lines as circuit A	6 °C	0.5 to 20 °C	

*The line or title is only displayed for the options, circuits or sensors actually connected.

i At the end of the intervention, the data is memorised after 2 minutes or by pressing the **AUTO** key.

► **SUM/WIN**

Used to set the outside temperature above which heating will be shut down.

- The heating pumps are shut down,
- The burner will only start for domestic hot water needs,
- The symbol **E** appears.

If this parameter is set to NO, heating will never be shut down automatically.

► **CALIBR. OUT: Outside sensor calibration**

Used to correct the outside temperature.

For example: Actual outside temperature = 10°C

Temperature displayed = 11°C: Set **CALIBR. OUT** to -1.

• **CALIBR. ROOM...: Room calibration
(With room sensor)**

Used to correct the room temperature.

For example: Set temperature = 20°C

Temperature displayed = 19°C: Set the **CALIBR. OUT** to +1

i Make this setting 2 hours after switching on, when the room temperature has stabilised.

► **AMB OFFSET...: Room offset
(Without room sensor)**

Is used to set a room offset.

For example: Set temperature = 20°C





Measured temperature = 19°C: Set **OFFSET ROOM** to +1.

i Make this setting 2 hours after switching on, when the room temperature has stabilised.

► **ANTIFR. ROOM...: Room antifreeze
(With room sensor)**

Used to set the room temperature maintained in antifreeze mode for each circuit.


11.4 Clock settings


Press	Display	Parameter set	Factory setting	Adjustment range	Customer setting
 then 	#TIME . DAY	The parameters are set using keys  or  .			
	HOURS				
	MINUTE				
	DAY				
	MONTH				
	DATE				
	YEAR				
	SUM. TIME:	AUTO: automatic switch to summer time on the last Sunday in March and back to winter time on the last Sunday in October. MANU: for countries where the time change is done on other dates or is not in use.	AUTO	AUTO or MANU	

i At the end of the intervention, the data is memorised after 2 minutes or by pressing the **AUTO** key.

■ Clock calibration

You can also adjust the clock on your DIEMATIC 3 if incorrect.

Press	Display	Parameter set	Factory setting	Adjustment range
+ and 	CALIBRA.CLOCK	Clock calibration	+ 1,5	-2.5 to +5.0

► + and 

The value that you set is the value displayed after pressing keys +


and  less the number of minutes that the DIEMATIC 3 gains or

loses every month.

- Close the flap.
- Switch off the control panel and switch it back on again.

For example:

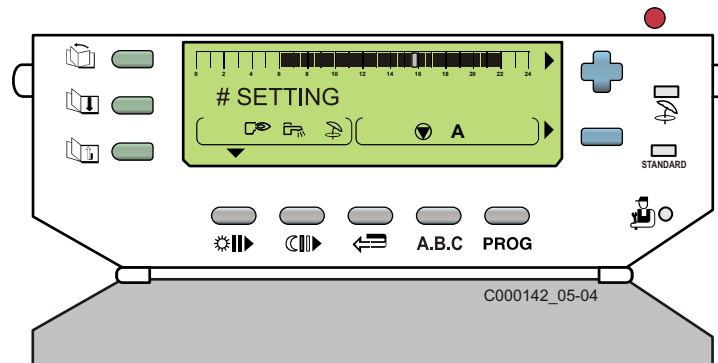
The DIEMATIC 3 gains 2 minutes a month.

- 1.5 is displayed after pressing keys + and .
- **Value to be set:** $1.5 - 2 = - 0.5$


12 Installer settings




! These actions must be carried out by a qualified technician.


i The various settings and programmes are saved even when the power supply is cut off.



Open the flap surrounding the display.









Press on the installer key  for 5 seconds using a screwdriver or a point of a pencil.

-  Page scrolling
-  Line scrolling
-  Back to the title or the previous line


i To return to the factory settings of parameters (user and filter level) without modifying the time programmes, press the  and **STANDARD** keys simultaneously.

RESET PARAM is displayed for 10 seconds. This function does not affect the hourly or impulse meters.

12.1 "Professional" settings

Press	Display		Parameter set	Factory setting	Adjustment range
 5 seconds then 	#LANGUAGE	Language selection using keys  or 			
	FRANCAIS		FRANCAIS	(1)	
 then 	#LIMITED TEMP.	Setting the temperature limits using keys  or 			
	BOILER MAX	Maximum boiler temperature and boiler setting if producing domestic hot water.	80 °C	30 to 90 °C	-
	BOILER MIN	Minimum boiler temperature.	15 °C	10 to 50 °C	-
	HCZP D	Bottom of curve temperature in comfort mode (Circuit A).	OFF	OFF or 20 to 90 °C	-
	HCZP N	Bottom of curve temperature in reduced mode (Circuit A).	OFF	OFF or 20 to 90 °C	-
	HCZP D B*	Boiler instruction setting when the circuit is a pool on request.	OFF	OFF or 20 to 90 °C	-
	MAX. CIRC. A*	Maximum outlet temperature (Circuit A).	75 °C	20 to 90 °C	-
	FL.DRY. A*	Drying the floor (Circuit A).	OFF	OFF or 20 to 90 °C	-
	MAX. CIRC. B *	Maximum outlet temperature (Circuit B).	50 °C	20 to 90 °C	-
	FL.DRY. B *	Drying the floor (Circuit B).	OFF	OFF or 20 to 55 °C	-
	MIN. CIRC. B *	Minimum outlet temperature activated by the installation's antifreeze function (Circuit B).	20 °C	10 to 30 °C	-
	MAX. CIRC. C *	Maximum outlet temperature (Circuit C).	50 °C	20 to 90 °C	-
	FL.DRY. C *	Drying the floor (Circuit C).	OFF	OFF or 20 to 55 °C	-
	MIN. CIRC. C *	Minimum outlet temperature activated by the installation's antifreeze function (Circuit C).	20 °C	10 to 50 °C	-
	OUT.ANTIFREEZE	Outside temperature activating the installation's antifreeze function.	+ 3 °C	- 8 to + 10 °C	-
	MAX.R.HEAT(%)	Maximum boiler output during heating	100 %	20-100 %	
	MAX.DHW(%)	Maximum boiler output in DHW	100 %	20-100 %	

* The line or title is only displayed for the options, circuits or sensors actually connected.

 At the end of the intervention, the data is stored after 2 minutes or by closing the flap.

(1) Français - Deutsch - English - Polski - Italiano - Español - Nederlands - Русский


► **BCT (Bottom of Curve temperature)**

Used to impose a minimum temperature on the boiler circuit.
To direct/control the boiler at a constant temperature by HCZP, set circuit gradient A/B to 0. This setting is required to control an aerothermal or pool type circuit.

For example: A different value may be set for day time **HCZP D** or night time **HCZP N** between the values **NO**, 20 to 90°C.

► **MAX.CIRC...**

For circuits B and C, this setting limits the start temperature in the corresponding circuit.

 **If using underfloor heating, do not modify the factory setting (50 °C).**

Regulations require a safety system independent of the control unit, with manual reset, which cuts the heat supply to the underfloor heating when the temperature of the fluid reaches 65°C (France: DTU 65.14).

Connect a safety thermostat to the TS contact on the pump connector.

It is advisable to set the RELATIVE DHW parameter in the event of domestic hot water production.

► **FL.DRY...**

Used to impose a constant outlet temperature to accelerate drying of an underfloor heating floor.

The setting of this temperature must follow the recommendations from the underfloor heating installer.

The activation of this parameter (setting other than **NO**) forces the permanent display of **FL.DRY C** and deactivates all other functions on the control unit.




When floor drying is active on a circuit, all other circuits (e.g. DHW) are shut down. The use of this function is only possible on one circuit.

► **OUT.ANTIFREEZE**

Below this temperature the pumps are permanently on and the minimum temperatures for each circuit are respected.

When **NIGHT : STOP** is set, the reduced temperature is maintained in each circuit.

12.2 Settings relating to a heating circuit

Press	Display	Parameter set	Factory setting	Adjustment range	Customer setting
	#FITTER PARAM.	Setting parameters specific to the installation using keys  or  .			
	BUILD. INERTIA	Characterisation of building's inertia	3 (22 hours)	0 (10 hours) to 10 (50 hours)	
	CIRC.CURVE A *	Gradient in circuit A	1.5	0 to 4	
	ROOM INFL. A *	Influence of room sensor A	3	0 to 10	
	CIRC. A:	HEAT	HEAT	HEAT H.TEMP DISAB.	
		H.TEMP			
		DISAB.			
	PUMP A	PUMP.A	PUMP.A	PUMP.A BOILER	
		BOILER			
	CIRC.CURVE B *	Gradient in circuit B	0.7	0 to 4	
	ROOM INFL. B *	Influence of room sensor B	3	0 to 10	
	CIRC. B:	HEAT	HEAT	HEAT SWIM.P.	
		SWIM.P.			
	CIRC.CURVE C *	Gradient in circuit C	0.7	0 to 4	
	CIRC. C:	HEAT	HEAT	HEAT BUF.TK.	
		BUF.TK.			
	ROOM INFL. C	Influence of room sensor C	3	0 to 10	
	S.AUX:	PUMP A	PUMP A	PUMP A ORDER BURN THERM DHW LOOP PROGRAM. FA.MCBA	
		ORDER BURN			
		DHW LOOP			
		PROGRAM.			
		THERM			
		FA.MCBA			
	O.DHW:	PUMP	PUMP	PUMP I.V	
		I.V			

* The line or title is only displayed for the options, circuits or sensors actually connected.

i At the end of the intervention, the data is stored after 2 minutes or by closing the flap.

► BUILD. INERTIA

i Modification of the factory setting is only useful in exceptional cases.

0 for a building with low thermal inertia.

3 for a building with normal thermal inertia.

10 for a building with high thermal inertia.

► PUMP A:

- In the **PUMP A** parameter, outlet  controls circuit A and can be used as a load pump for DHW production with a reversal valve on the DHW outlet.

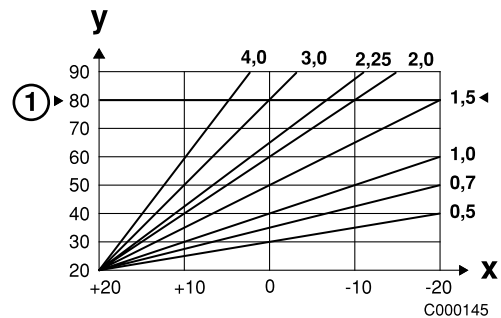
Note: For **DTGE-35** boilers, set the parameter **PUMP A** to **BOILER** (see Installation instructions).

- In the **HOT** parameter, pump A is started up whenever there is a secondary request (circuits A, B, C, DHW or VM).

► CIRC. CURVE ...

Independent setting for each circuit.

- Heating curve circuit A



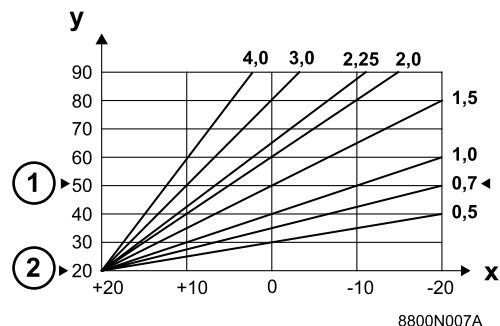
- ① Maximum boiler temperature: 90 °C
(factory setting 80 °C)

x Outside temperature (°C)

y Water flow temperature (°C)

The factory setting of the heating curve is 1.5.

- Heating curve circuit B or C



- ① Maximum boiler temperature (factory setting 50 °C)

- ② Minimum boiler temperature (factory setting 20 °C)

x Outside temperature (°C)

y Water flow temperature (°C)




The factory setting of the heating curve is 0.7.

► ROOM S.INFL

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

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

12.2 Settings relating to a heating circuit (continued)

Press	Display		Parameter set	Factory setting	Adjustment range	Customer setting
	#FITTER PARAM.		Setting parameters specific to the installation using keys  or  .			
	CT.TEL:	OPEN	Telephone input activates if the contact is open	CLOSE	OPEN CLOSE	
		CLOSE	Telephone activates if the contact is closed.			
	I.TEL:	ANTIFR	Start anti-freeze in boiler command	ANTIFR	ANTIFR DHW+HEAT HEAT DHW THERM A SWIM.	
		DHW+HEAT	Hot water storage tank affected to heating and domestic hot water.			
		HEAT	Storage tank for heating.			
		DHW	Storage tank for domestic hot water.			
		THERM A	Connection of a room thermostat to circuit A.			
		SWIM.	Used for the remote control of pool reheating shutdown.			
	NIGHT	DEC.	The lower temperature is maintained	DEC.	DEC. or STOP	
		STOP	The boiler is stopped			
	IN 0-10V		Activating the control at 0-10 V.	OFF	OFF/ON	
	VMIN/OFF 0-10V*		Voltage corresponding to the instruction set minimum.	0.5 V	0 to 10 V	
	VMAX 0-10V*		Voltage corresponding to the instruction set maximum.	9.5 V	0 to 10 V	
	CONS.MIN 0-10V*		Instruction minimum set temperature.	20 °C	10 to 70 °C	
	CONS.MAX 0-10V*		Maximum set temperature.	80 °C	10 to 100 °C	

* The line or title is only displayed for the options, circuits or sensors actually connected.

i At the end of the intervention, the data is stored after 2 minutes or by closing the flap.

KT.TEL: setting			OPEN	CLOSE	OPEN	CLOSE
I.TEL: status			OPEN	CLOSE	CLOSE	OPEN
I.TEL:	ANTIFR		Boiler operating mode selected	Antifreeze mode	Antifreeze mode	Boiler operating mode selected
	DHW+HEAT	Hot water storage tank affected to heating and domestic hot water	Burner, heating load pump (auxiliary pump) and DHW load pump shut down.		Boiler operating mode selected.	
	HEAT	Hot water storage tank affected to heating only	Heating load pump (auxiliary pump) shut down. Burner shut down if domestic hot water requirement.			
	DHW	Hot water tank affected to domestic hot water only	The DHW function is not ensured by the boiler.			
	THERM A	Connection of a room thermostat to circuit A	Circuit A in Antifreeze mode.			
	SWIM.	Used for the remote control of pool reheating shutdown	Pool heating off.			

► CT.TEL:

Defines the nature of the contact (open or closed) which activates the function associated with the telephone input.

► I.TEL:

Used to define the function associated with the telephone input. The telephone input on DIEMATIC is located between terminals 1 and 2 on the telephone terminal block.

► NIGHT

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

For circuits without a room sensor:

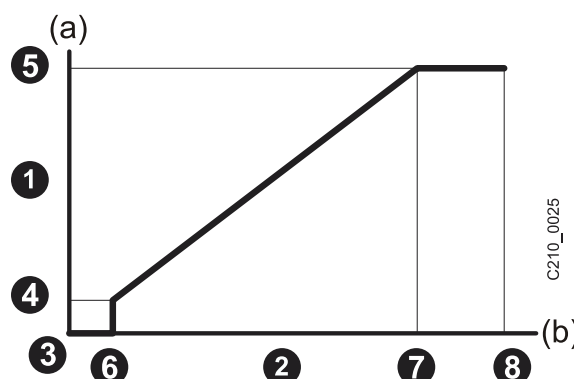
- **NIGHT :DEC.** (Reduced): The reduced temperature is maintained during reduced periods. The circuit pump operates constantly.
- **NIGHT :STOP** (Stop): Heating is shut down during reduced periods. When the installation's antifreeze function is active, the function **NIGHT DEC.** is activated.

For circuits with a room sensor:

- **NIGHT : STOP** is active when the room temperature is higher than its setting.
- **NIGHT DEC.** is active when the room temperature is lower than its setting.

► 0-10 V function

This function controls the boiler using an external system that includes a 0-10 V output connected to the 0-10 V input. This control imposes an instruction set temperature on the boiler. The parameter **BOILER MAX** must be higher than **CONS.MAX 0-10V** and **BOILER MIN** over than **CONS.MIN 0-10V**.



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






(a) Boiler temperature

(b) Voltage at input

If the input voltage is less than **VMIN/OFF 0-10V**, the boiler is off.

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

12.3 Miscellaneous

Press	Display	Parameter set	Factory setting	Adjustment range	Customer setting
 then 	#MISCELLANEOUS		The parameters are set using keys  or 		
	DSP	ALTERNATED	Alternate display of the two preceding displays	ALTERNATED	ALTERNATED TIME - DAY BOILER. T.
		TIME - DAY	Permanent time display		
		BOILER. T.	Permanent temperature display		
	BAND WIDTH		Control unit bandwidth for the 3-way valves	12 K	4 to 16 K
	BOIL/3WV SHIFT*		Minimum temperature difference between the boiler and the valves	4 K	0 to 16 K
	H. PUMP DELAY		Timing of the shutdown of the heating pumps	4 minutes	0 to 15 minutes
	HW. PUMP DELAY*		Timing of the shutdown of the domestic hot water pump	2 minutes	0 to 15 minutes
	ADAPT*	ON	Automatic adaptation of the heating curves for each circuit with a room sensor with an influence of > 0	ON	ON or OFF
		OFF	The heating curves can only be modified manually		
	DHW *	TOTAL	Interruption of pool heating and reheating during domestic hot water production	TOTAL	TOTAL SLIDING NO PRIOR.
		SLIDING	Domestic hot water production and valve circuit heating if available output is sufficient		
		NO PRIOR.	Heating and domestic hot water production.  Risk of overheating in the direct circuit.		
	LEG PROTEC*		Activation of the leg protec function	OFF	OFF or ON
	BURN.MIN.RUN		Setting the burner minimum operation time	1 minute	0 to 4 minutes
	B.P. DELAY*		Timing of the boiler pump shutdown if using a cascade	3 minutes	1 to 30 minutes

* The line or title is only displayed for the options, circuits or sensors actually connected.

i At the end of the intervention, the data is stored after 2 minutes or by closing the flap.

► BAND WIDTH

Option of increasing the bandwidth if the valves are rapid or of reducing it if they are slow.

► H. PUMP DELAY

The timing of heating pump shutdown prevents the boiler overheating.

► HW. PUMP DELAY







The timing of the domestic hot water load pump shutdown prevents the boiler and the heating circuits overheating.

► LEG PROTEC

The domestic hot water tank is overheated to 70° C every Saturday from 4 to 5 o'clock. The anti-legionnaires function prevents the appearance of legionella in the tank.







i Set the maximum temperature of the boiler (**BOILER MAX.**) to 80°C and fit a mixing system which prevents the distribution of domestic hot water at a temperature higher than 60°C.

12.4 Parameter and input/output check (mode tests)

Press	Display	Output or input parameter status
 10 seconds then 	#PARAMETERS	
	PERMUT	Cascade permutation status (1 = permutation 1-2, 2 = permutation 2-1)
	STAGE	Current speed (Number of boilers requesting heating)
	NB.CASC.:	Number of boilers recognised in the cascade
	POWER %	Temporary output % (0 % = Minimum output or burner off)
	SPEED B.(RPM)	Fan speed (Measured values)
	CONS.RPM	Instruction set fan rpm
	MEAN OUTSIDE T	Average outside temperature
	CALC.T. BOILER	Temperature calculated by the boiler
	BOILER. T.	Measured boiler temperature
	CALC.T.CASC**	Calculated temperature cascade outlet
	CASCADE TEMP.**	Measured temperature cascade outlet
	CALCULATED T. A	Calculated temperature for circuit A
	CALCULATED T. B*	Calculated temperature for circuit B
	OUTLET TEMP. B	Measured start temperature B
	CALCULATED T. C*	Calculated temperature for circuit C
	OUTLET TEMP. C	Measured start temperature C
	KNOB A*	Position of temperature setting button on room sensor A
	KNOB B*	Position of temperature setting button on room sensor B
	KNOB C*	Position of temperature setting button on room sensor C
	OFFSET ADAP A*	Parallel trigger calculated for circuit A
	OFFSET ADAP B*	Parallel trigger calculated for circuit B
	OFFSET ADAP C*	Parallel trigger calculated for circuit C
 then 	#DEF. HISTORY	Failure history
	1 FAIL...	Failure memorised + day, month and time of the failure
	...	
	10 FAIL...	Failure memorised + day, month and time of the failure
 then 	#TEST OUTPUTS	
	BURNER : YES/NO	Stop/start burner
	AUX.CIR.P : YES/NO	On/Off auxiliary outlet
	DHW PUMP : YES/NO*	Stop/start domestic hot water pump
	P.CIRC.A : YES/NO	Stop/start pump circuit A
	OP. 3WVB: YES/NO*	Open/Close valve circuit B
	CLOSE V3WB: YES/NO*	Close/Stop valve circuit C
	P.CIRC B : YES/NO*	Stop/start pump circuit B
	OPEN 3WV C: YES/NO*	Open/Close valve circuit C
	CLOSE V3W C: YES/NO*	Close/Stop valve circuit C
	P.CIRC. C: YES/NO*	Stop/start pump circuit C

* The line or title is only displayed for the options, circuits or sensors actually connected.

** The line is only displayed for boiler 1.

Press	Display	Output or input parameter status
 then 	#TEST INPUTS	
	PHONE REM.	Bridge on telephone input (1 = presence, 2 = absence)
	FLAME	Flame (1 = presence, 2 = absence)
	FAILURE	Fault display: yes (1) or no (0)
	SEQ.	Operating mode: STANDBY - FAN - IGNITION - ON - PENDING - OFF
	TYPE	Boiler type + Control value for the technician
	VER. PROTOCOL	Control value for the technician
	R.CTRL A: ON/FF*	Remote control A (yes = presence, no = absence)
	R.CTRL B: ON/OFF*	Remote control B (yes = presence, no = absence)
	R.CTRL C: ON/OFF*	Remote control C (yes = presence, no = absence)
 then 	#CONFIGURATION	
	MODE:: MONO/ALL.CIRC.	To chose if the exemption made for one remote control applies to a single circuit (MONO) or if it must be transmitted to a group of circuits (ALL CIRC)
	CASCADE NO, 1 TO 10	OFF : The boiler is not in a cascade 1 : Boiler self-standing or Master boiler 2 to 10 : Secondary boiler
	FUNCT: CASC:/PARA*	Operation in cascade (See installation instructions "Cascade Management")
	*PARALLEL CASC. 10° (minimum: -10°, maximum: 20°)	Outside temperature at which all boilers are started up (See installation instructions "Cascade Management")
	TYPE**	Type of box: 35 kW, 45 kW, 65 kW, 90 kW, 115 kW
	ST.VENT.**	Fan start up speed (rpm) Factory setting (natural gas): 35 kW: 2500, 45 kW: 2500, 65 kW: 2500, 90 kW: 2500, 115 kW: 2500 Setting range: 2000 to 3000 (rpm)
	MIN.VENT.**	Minimum fan speed (rpm) Factory setting (natural gas): 35 kW: 1100, 45 kW: 1100, 65 kW: 1200, 90 kW: 1200, 115 kW: 1300 Setting range: 1000 to 6000 (rpm)
	MAX.VENT.**	Maximum fan speed (rpm) Factory setting (natural gas): 35 kW: 4600, 45 kW: 5200, 65 kW: 5200, 90 kW: 6200, 115 kW: 7000 Setting range: 1000 to 7000 (rpm)
 then 	#REVISION	Activates the function generating a REVISION display when the date programmed is reached
	REVISION HOUR*	Time at which the REVISION display appears
	REV. YEAR: OFF/AAAA	Year in which the REVISION display appears
	REVIS. MONTH*	Month in which the REVISION display appears
	REVISION DATE*	Day on which the REVISION display appears

* The line or title is only displayed for the options, circuits or sensors actually connected.

** The lines are only displayed one minute after the boiler has been switched on. The lines are never displayed when the safety control box is locked or during an MCBA COM. FAULT failure.

13 Adapting to another gas type

! For Belgium: Only SERV'élite is authorised to carry out the conversion of this appliance.

! The boiler installation and gas connection must be carried out by a qualified professional in compliance with the NBN D 51.003, NBN D 30.003, NBN B 61.001, NBN B 61.002 and NBN D 51.006 standards.

13.1 Switching from Natural Gas to Propane

■ DTGE130-35, DTG130-35, DTG130-45 and DTG130-65

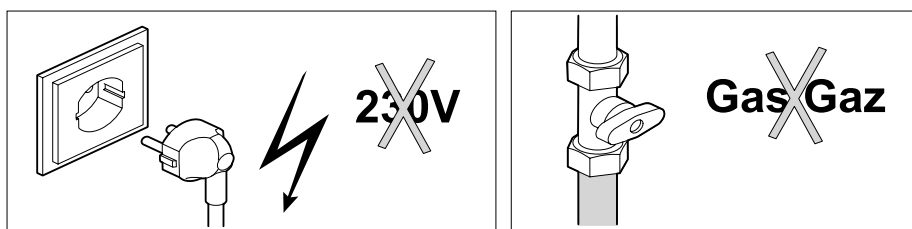
Changing from Natural Gas to Propane requires:

- the setting of the burner,
- the setting of the maximum fan speed.

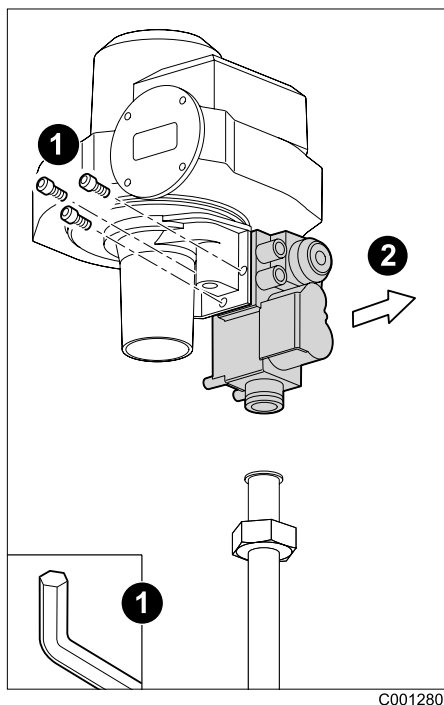
■ DTG130-90

Changing from Natural Gas to Propane requires:

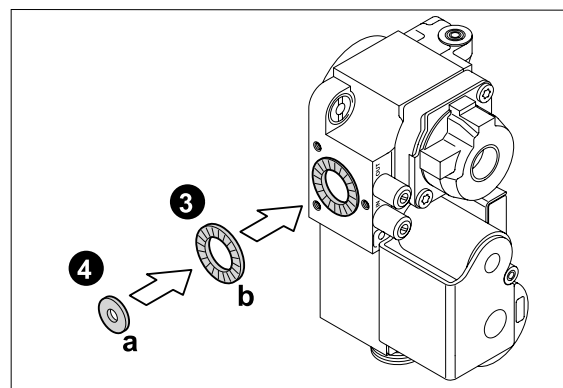
- Installing the conversion kit.



C001279



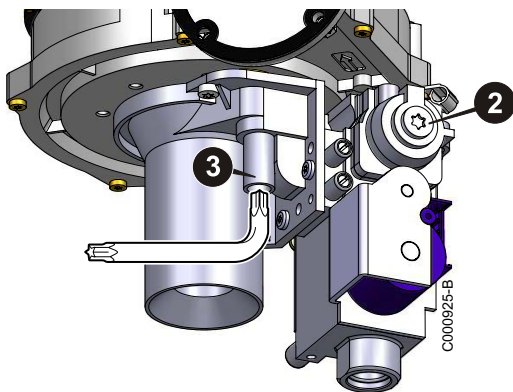
C001280



C001281

- the setting of the burner,
- the setting of the maximum fan speed,
- the setting of the fan start-up speed.

- ▶ Switch the On/Off switch on Off.



- ▶ Preset the burner by turning the "max output" setting screw **1**:
 - by 3 turns to the right: DTGE130-35, DTG130-35, DTG130-45.
 - by 4 turns to the right: DTG130-65.

- ▶ Install the conversion kit on DTG130-90.

- ▶ Place the stop/start switch on On.

- ▶ Set the maximum fan speed to a value of:

- 4200 rpm: DTGE130-35, DTG130-35.
- 4600 rpm: DTG130-45, DTG130-65.
- 6100 rpm: DTG130-90.





See chapter: Parameter and input/output check (mode tests) ; "Table: **MAX. VENT.**" (page 63).

- ▶ Set the fan start-up speed to a value of 2000 rpm: DTG130-90.



See chapter: Parameter and input/output check (mode tests) ; "Table: **ST. VENT.**" (page 63).

- ▶ Take the boiler up to maximum power.

- Tilt the flap on the control panel.
 - Press key  and  simultaneously for 2 seconds.
 - Set the burner output using the + and - keys.
- P_{\max} : Maximum power of the burner

- ▶ Remove the plastic plug from the measurement tube.

- ▶ Measure the CO₂ or O₂ level in the flue gases.

- ▶ Set: CO₂ to 10.7 ±0.3% or O₂ to 4.8 ±0.2%.

- ▶ Check the flame via the flame inspection window. It must not go out. The flame must be stable and blue in colour with orange particles around the edge of the burner.

- ▶ Set the burner output to minimum using the - key. P_{\min} : Minimum output.

- ▶ Measure the CO₂ or O₂ level in the flue gases.

- ▶ Modify the "min output" setting with the setting screw **2**.

- ▶ Check the output delivered again.

- ▶ Adjust if necessary.

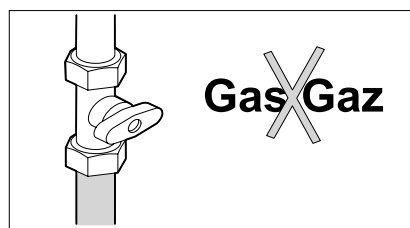
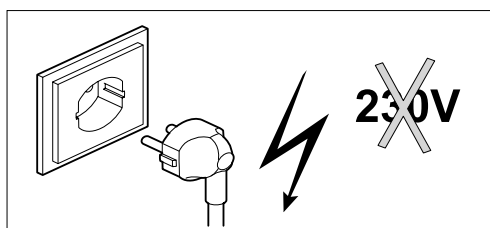
For Switzerland: The maximum limit values authorised by the OPAIR federal order on air protection regarding CO and NO_x must be checked using measurements made in the place of installation.

- ▶ When the setting is correct, close the flap.
- ▶ Switch the On/Off switch on Off.
- ▶ Remove the measuring equipment.
- ▶ Replace the plastic plug onto the measuring tube.

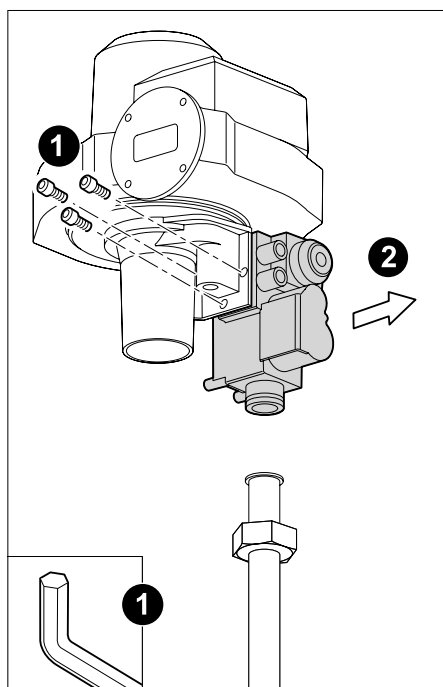
■ DTG130-115

Changing from Natural Gas to Propane requires:

- Installing the conversion kit.

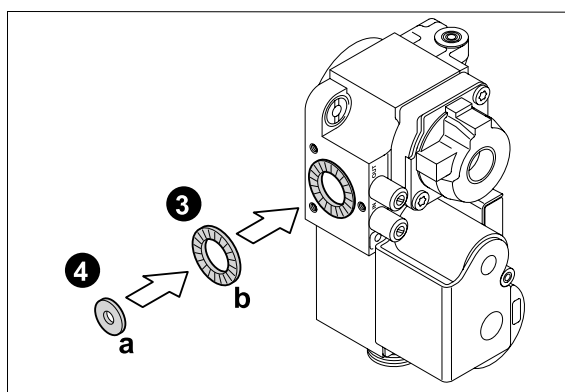


C001279



C001280

- ▶ Place the stop/start switch on On.
- ▶ Set the maximum fan speed to a value of:
 - 6700 rpm: DTG130-115.
- ▶ See chapter Parameter and input/output check (mode tests) "Table: **MAX. VENT.**" (page 63)
- ▶ Take the boiler up to maximum power.
 - Tilt the flap on the control panel.
 - Press key and simultaneously for 2 seconds.
 - Set the burner output using the + and - keys.
 - P_{max} : Maximum power of the burner
- ▶ Remove the plastic plug from the measurement tube.
- ▶ Measure the CO₂ or O₂ level in the flue gases.
 - ▶ See Table page 39.
- ▶ Set: CO₂ to 10.7 ±0.3% or O₂ to 4.8 ±0.2%.
- ▶ Check the flame via the flame inspection window. It must not go out. The flame must be stable and blue in colour with orange particles around the edge of the burner.
- ▶ Set the burner output to minimum using the - key. P_{min} : Minimum output.
- ▶ Measure the CO₂ or O₂ level in the flue gases.



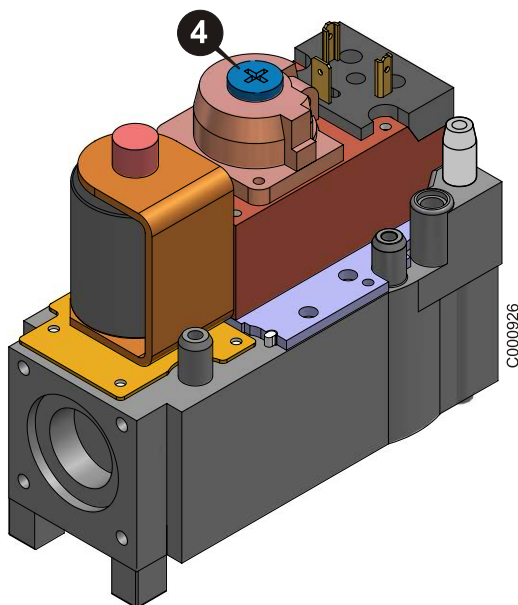
C001281

- the setting of the burner,
- the setting of the maximum fan speed.

- ▶ Open the top flap.
- ▶ Switch the On/Off switch on Off.
- ▶ Access the heating body and the gas valve unit
 - ▶ See chapter Cleaning and maintenance.
- ▶ Put the gas block in place.
 - ▶ See Assembly instructions, Propane conversion kit.

- ▶ Modify the "min output" setting with the setting screw ④.

 See Table page 40.



- ▶ Check the output delivered again.

- ▶ Adjust if necessary.

For Switzerland: The maximum limit values authorised by the OPAIR federal order on air protection regarding CO and NOx must be checked using measurements made in the place of installation.

- ▶ When the setting is correct, close the flap.
- ▶ Switch the On/Off switch on Off.
- ▶ Remove the measuring equipment.
- ▶ Replace the plastic plug onto the measuring tube.

13.2 Gas type


Affix the label which indicates for which type of gas the boiler is fitted and set.

13.3 Eventual assembly of an external solenoid valve

All countries except Belgium:


For an installation located at least 1 metre below ground floor level, it is necessary to fit an external solenoid valve to the gas supply pipe close to the inlet to the building or premises.

For Belgium:

 **The boiler installation and gas connection must be carried out by a qualified professional in compliance with the NBN D 51.003, NBN D 30.003, NBN B 61.001, NBN B 61.002 and NBN D 51.006 standards.**

For an installation located at least 1 metre below ground floor level, it is necessary to fit an external solenoid valve to the gas supply pipe close to the inlet to the building or premises.

Electrical connection is done in the control panel using the alarm and control module.

 Alarm and control module AM35 (GR12).

14 Filling in the commissioning certificate

Please tick off the work carried out and write down the measurement values		
Date		
Company		
Installation		
Carry out a gas tightness check		
Check the fresh air / flue gas pipe		
Check the tightness of the flue gas pipe		
Check the neutralisation equipment if used		
Compare the information on the appliance's rating plate with the type of gas available in situ		
Wobbe Wo index (international Ws) of the type of gas available		
HuB (international HiB) lower calorific operating output of the type of gas available		
Check the pressure of the gas connection on the measurement connection (dynamic pressure)		
Boiler temperature		
Flue gas temperature / Ambient temperature		
Measure the carbon gas level in the flue gases (CO ₂)		
Measure the carbon monoxide level in the flue gases (CO)		
Calculate the loss via the flue gases		
Carry out a functional check		
Set the control		
Inform the user of the installation on the control and give him the operating instructions		
Signature / Company stamp		

15 Maintenance

15.1 General

The boiler requires little maintenance if it is correctly set. The boiler only requires an annual check and cleaning if necessary.

15.2 Inspection

The annual inspection of the boiler can be restricted to the following operations:

- Measure the combustion and check the operation
- Clean the siphon
- Checking condensates discharge
- Checking the ignition electrode and the ionization sensor

- Set the gap between the ignition electrodes: 3 to 4 mm
- Check the concentric flue gas evacuation and combustive air inlet pipes
- Checking the hydraulic pressure (minimum 0.8 bar). Add water to the installation if necessary (Recommended pressure: 1.5 bar)
- Check the ionization current: 4 to 9 μ A.

15.2.1 Checking the combustion in the boiler

This check can be carried out by measuring the CO_2/O_2 content in the combusted gas evacuation pipe at the measurement point.

Bring the boiler to maximum output up to a water temperature of around 70°C.

All countries except Belgium:

Boilers	Fan speed					Natural gas G20/G25		Propane	
	rpm					O ₂	CO ₂	O ₂	CO ₂
	Maximum output		Minimum output	Start-up output		%	%	%	%
	Natural gas	Propane		Natural gas	Propane				
DTGE130-35, DTG130-35	about 4600	about 4200	about 1100	2500	2500	4.8/4.8 \pm 0.2	9.0/9.0 \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-45	about 5200	about 4600	about 1100	2500	2500	4.8/4.8 \pm 0.2	9.0/9.0 \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-65	about 5200	about 4600	about 1200	2500	2500	4.8/4.8 \pm 0.2	9.0/9.0 \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-90	about 6200	about 6100	about 1200	2500	2000	3.9/3.9 \pm 0.2	9.5/9.5 \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-115	about 7000	about 6700	about 1300	2500	2000	4.8/3.9 \pm 0.2	9.0/9.5 \pm 0.3	5.7 \pm 1.0	10.0 \pm 0.7

Correct the burner setting to $\pm 0.3\%$ CO₂; $\pm 0.2\%$ O₂.

For Belgium:

Boilers	Fan speed					Natural gas G20/G25		Propane	
	rpm					O ₂	CO ₂	O ₂	CO ₂
	Maximum output		Minimum output	Start-up output		%	%	%	%
	Natural gas	Propane		Natural gas	Propane				
DTGE130-35, DTG130-35	about 4600	about 4200	about 1100*	2500	2500	4.8/* \pm 0.2	9.0/* \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-45	about 5200	about 4600	about 1100	2500	2500	4.8/* \pm 0.2	9.0/* \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-65	about 5200	about 4600	about 1200	2500	2500	4.8/* \pm 0.2	9.0/* \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-90	about 6200	about 6100	about 1200	2500	2000	3.9/3.9 \pm 0.2	9.5/9.5 \pm 0.3	4.8 \pm 0.2	10.7 \pm 0.3
DTG130-115	about 7000	about 6700	about 1300	2500	2000	4.8/3.9 \pm 0.2	9.0/9.5 \pm 0.3	5.7 \pm 1.0	10.0 \pm 0.7

* Approximate CO₂ content: 7.5%

Approximate O₂ content: 7.3%

The temperature of the combusted gases can also be measured at the measurement point in the evacuation pipe. The temperature of the combusted gas must not exceed the temperature of the return water by more than 30 °C. If it turns out that boiler combustion has not been optimised after this check, clean the installation.



15.2.2 Setting the ignition electrode

- Check the setting of the ignition electrode. Set the gap between the ignition electrodes: 3 to 4 mm.

15.2.3 Checking the hydraulic pressure

The hydraulic pressure must be a minimum of 0.8 bars. We recommend filling the installation to around 1.5 bars higher than the static height.

15.2.4 Checking the ionization current

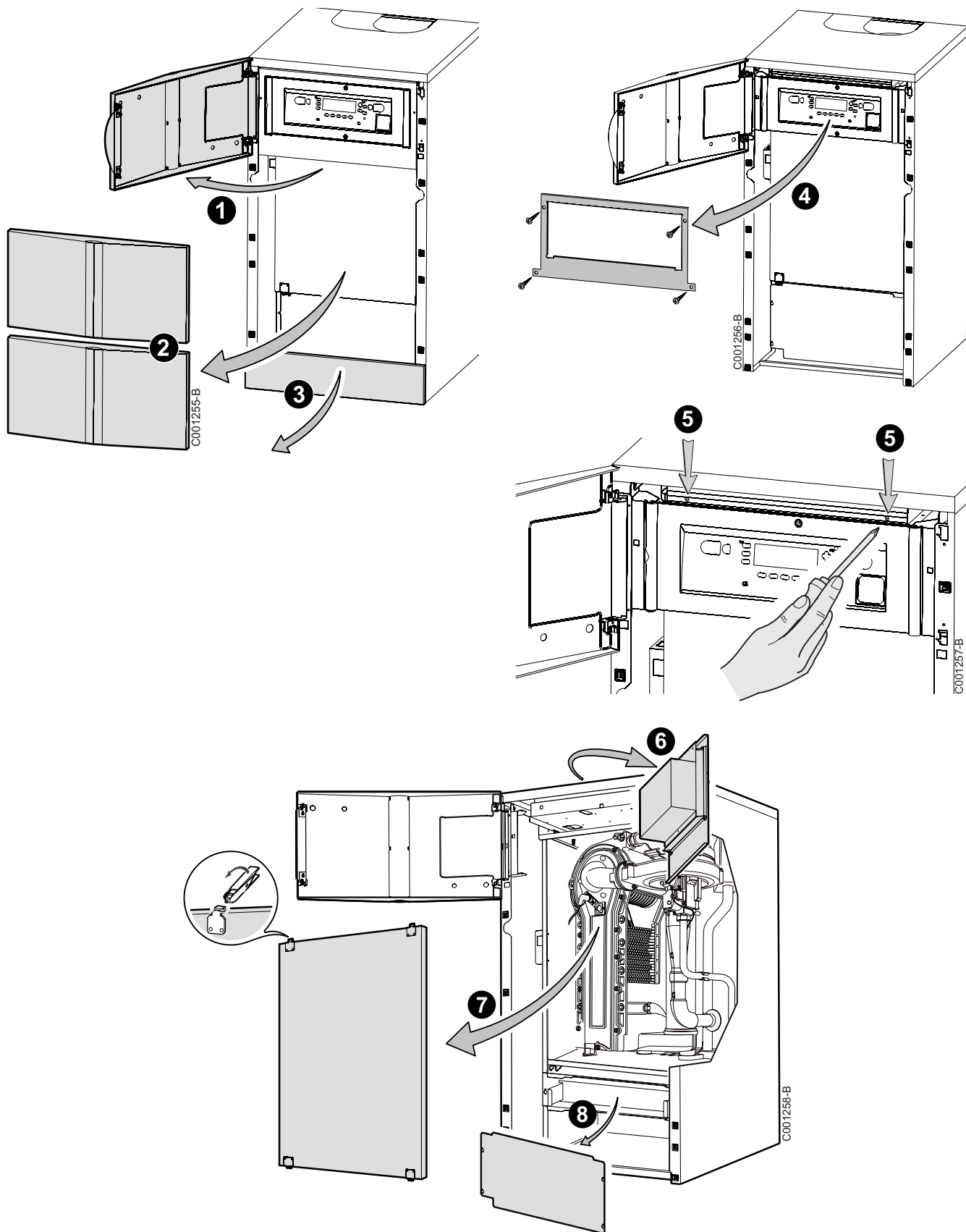
- | | |
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| <ul style="list-style-type: none"> ▶ Tilt the flap on the control panel. ▶ Press key  and  simultaneously for 2 seconds. ▶ Use keys + and - to switch from P_{Ξ} to P_{-} <ul style="list-style-type: none"> - P_{Ξ}: Maximum boiler output - P_{-}: Minimum output | <ul style="list-style-type: none"> ▶ In the display area: <ul style="list-style-type: none"> EMISSION MES. 88.8°: Boiler temperature EMISSION MES. 8888: Fan speed EMISSION MES. 88.8uA: Ionization current |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

15.3 Cleaning and maintenance



Before any operation, ensure that:

- The mains supply is disconnected,
- The gas supply is shut off,
- The boiler is hydraulically isolated and drained (if required).

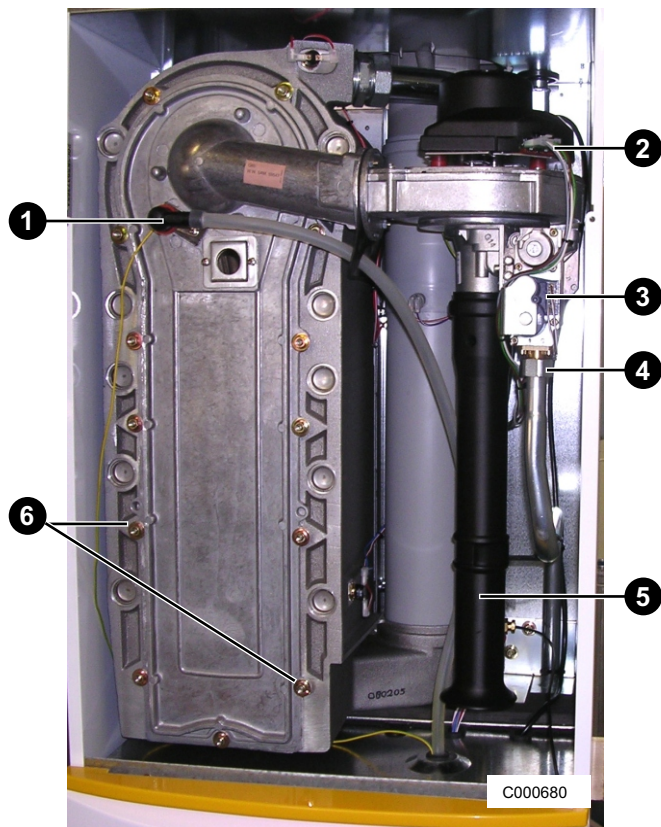


■ Operational mode

When the boiler is fouled, carry out the following maintenance operations:

- Open the heating body,
 - Clean the burner,
 - Clean the heat exchanger using the tool provided,
- Clean the fan,
 - Clean the siphon,
 - Close the heating body,
 - Measure the combustion.

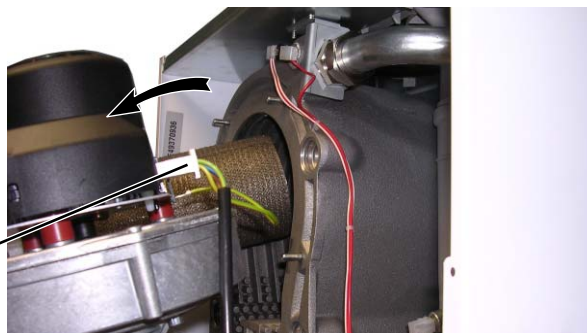
■ Opening and closing the heating body



- ▶ Remove the front panel of the casing.
- ▶ Disconnect the following electrical connections:
 - Ionization probe + Earth cable **1**,
 - Fan **2**,
 - Gas block **3**.
- ▶ Unscrew the gas valve joint **4**.
- ▶ Take out the air inlet silencer **5**.
- ▶ Unscrew the 13 holding nuts on the inspection hatch **6**.

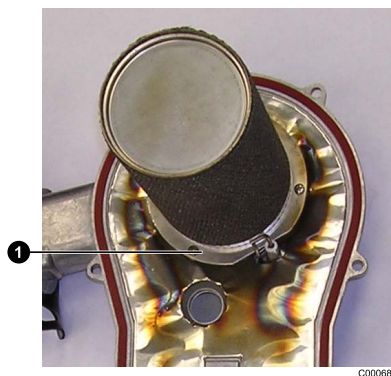
⚠ There is a 230 V electricity supply at the back of the fan which must be disconnected (Marker 7).

⚠ If the inspection hatch seal remains stuck, it is necessary to replace it.



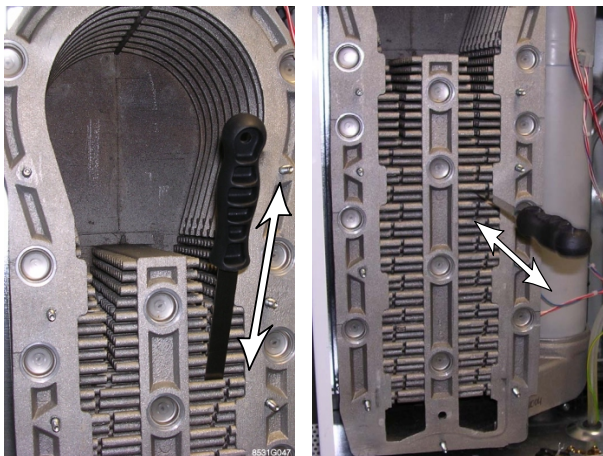
- ▶ Remove the inspection hatch, fan, burner and gas block unit.
 - Tilt the top of the unit until the burner comes out completely,
 - Then remove the inspection hatch, the fan and the gas valve unit.
- ▶ Carry out the cleaning operation.
- ▶ Connect the rear connector before putting the hatch back in place.
- ▶ Close the heating body following the above procedure in reverse order.

■ Cleaning the burner



- ▶ Remove the 3 screws and the 3 holding lugs on the burner **1**.
- ▶ Remove the burner.
- ▶ Carry out a visual check on the general appearance of the burner.
- ▶ Carefully clean the burner with compressed air.
- ▶ Put the burner and its fastenings back in place.

■ Cleaning the heat exchanger



Specific tools:
Cleaning knife

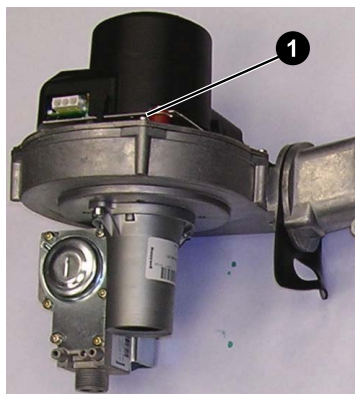


See chapter Spare parts

DTGE130-35, DTG130-35, DTG130-45, DTG130-65: Ref. 83
DTG130-90: Ref. 283
DTG130-115: Ref. 483

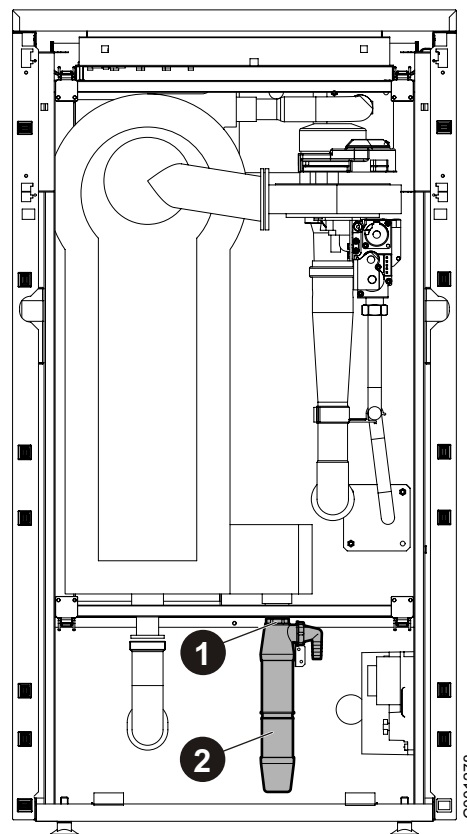
- ▶ Clean inside the exchanger using the specific knife.
- ▶ Remove the residues from the bottom of the exchanger.
- ▶ Rinse with water jet until the water in the siphon runs clean.
- ▶ Check that there are no residues in the bottom of the exchanger.

■ Cleaning the fan



- ▶ Unscrew the 5 screws on the fan ①.
- ▶ Open the fan.
- ▶ Clean the fan with a nylon brush.
- ▶ Check that the openings are clear and that the turbine turns easily.
- ▶ Replace the fan.

■ Cleaning the siphon



DTG(E)130-35/45/65:

- ▶ Unscrew the nut on the siphon from underneath the boiler ①.
- ▶ Turn the siphon 90° to the front to dislodge it from the support lug.

DTG130-90/115:

- ▶ Unscrew the siphon from the siphon body from underneath the boiler ②.
- ▶ Turn the siphon 90° to the front to dislodge it from the support lug.
- ▶ Carefully remove the siphon under the boiler (Danger of splashing).
- ▶ Clean the siphon with water.
- ▶ Fill the siphon with water.
- ▶ Re-assemble the siphon.
- ▶ Put the siphon back in place on the support lug.



**The siphon must always be filled with water
(Risk of damage to the boiler).**

■ Setting the burner



See following chapters: Commissioning, Putting the appliance into operation.

15.4 Maintenance of the air/flue gas drain connection flues

The connection pipes must be serviced at least once a year.

- Check that the pipe and the terminal are empty along their entire length. This can be done by checking that the boiler is operating correctly; a particular check will be made to ensure that the maximum calorific flow can be reached. Turn over the boiler at full output. Check the meter to ensure that the gas flow complies with the maximum flow indicated on the technical specifications table.
- Check the seal.
- Check the condensates evacuation device in the boiler and on the pipe if used.
- Replace the leakproof seals and sections of pipe if these no longer offer a perfect guarantee of leak tightness after being dismantled during a maintenance operation (only for the visible part of the pipe).

15.5 Temperature sensor

The resistance values at the various temperatures are indicated in the tables on the next page.

If a defective sensor is detected, it is possible to check the resistance at the various temperatures using a measuring device with a corresponding measurement range (e.g. a multimeter). In order to obviate incorrect measurements, the sensor must be disconnected from the connector bar in the boiler distribution panel.

■ Outside sensor resistance

Temperature (°C)	Resistance (ohm)	Temperature (°C)	Resistance (ohm)
-20	2392	4	984
-16	2088	8	842
-12	1811	12	720
-8	1562	16	616
-4	1342	20	528
0	1149	24	454

■ Resistance of the NTC 12 sensor kOhm (boiler water, boiler return water, flue gases)

Temperature (°C)	Resistance (ohm)	Temperature (°C)	Resistance (ohm)
10	22800	60	3250
20	14770	70	2340
30	9800	80	1710
40	6650	90	1270
50	4610		

■ Resistance of the NTC 10 sensor kOhm (Domestic hot water, Outlet B, Outlet C)

Temperature (°C)	Resistance (ohm)	Temperature (°C)	Resistance (ohm)
0	32014	50	3661
10	19691	60	2535
20	12474	70	1794
25	10000	80	1290
30	8080	90	941
40	5372		

16 Chimney sweep instructions



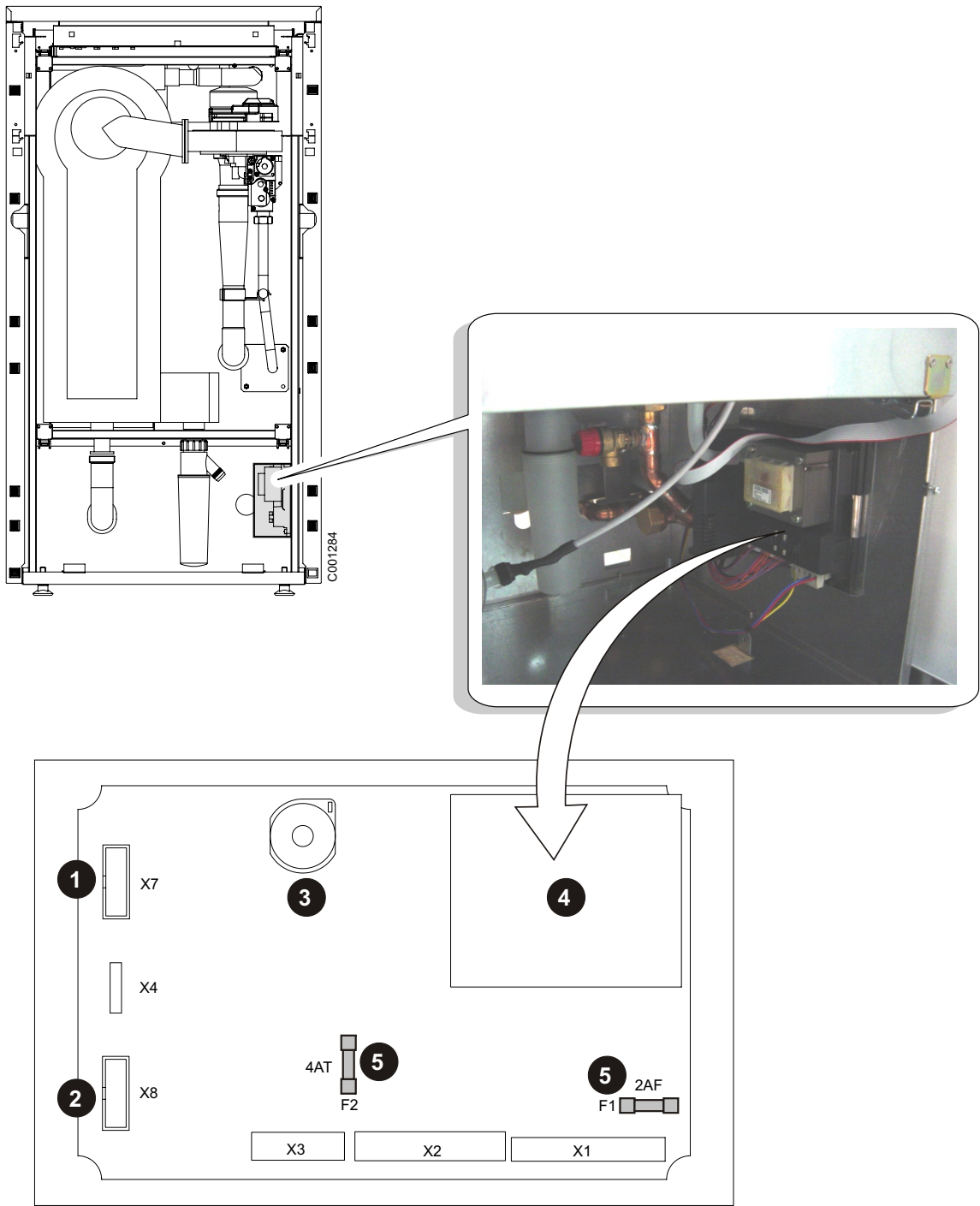
■ Setting the boiler output for measuring emissions

- ▶ Tilt the flap on the control panel. **EMISSION MES. 88.8°**: Boiler temperature
- ▶ Press key and simultaneously for 2 seconds. **EMISSION MES. 8888**: Fan speed
- ▶ Use keys + and - to switch from P_{Ξ} to P_{-} **EMISSION MES. 88.8uA**: Ionization current
 - P_{Ξ} : Maximum boiler output
 - P_{-} : Minimum output
- ▶ In the display area:

		DTGE130-35, DTG130-35	DTG130-45	DTG130-65	DTG130-90	DTG130-115
P_{-}	Fan speed (rpm)	1100	1100	1200	1200	1300
	Ionization current (μA)	4	4	4	4	4
P_{Ξ}	Fan speed (rpm) (Natural gas)	4600	5200	5200	6200	7000
	Fan speed (rpm) (Propane)	4200	4600	4600	6100	6700
	Ionization current (μA)	9	9	9	9	9

17 Schematic diagrams




■ Safety box



- ❶ Operation
- ❷ Display (Not used)
- ❸ Ignitor + Ionization probe
- ❹ Transformer
- ❺ Fuse

Fuse	Protection	Function protected
F1	2 AF (quick)	230 Volt Safety box
F2	4 AT (slow)	24 Volt Safety box
F3	6.3 AT (slow)	Power supply

Legend:

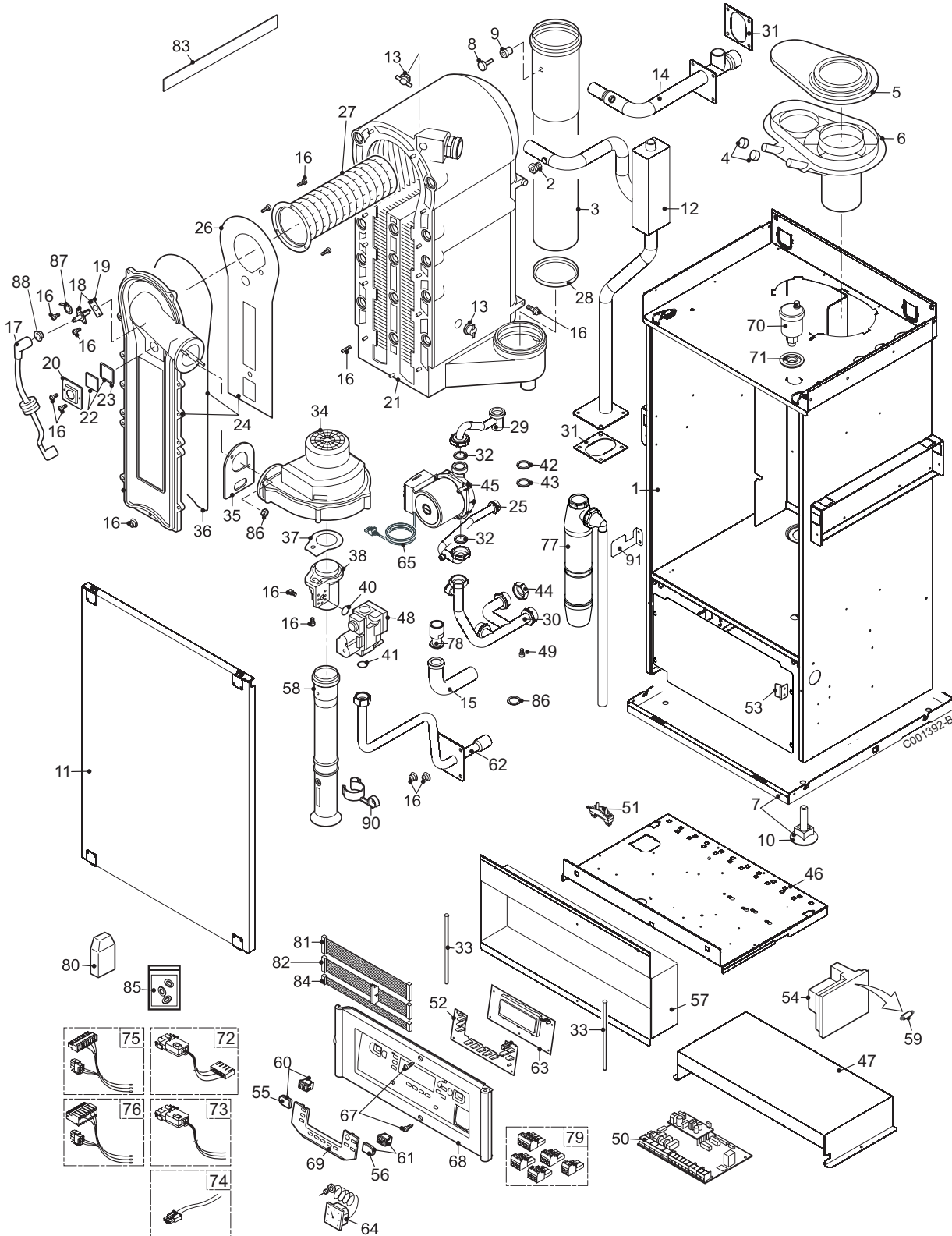
0-10 V	Input
Alim 230 V 50 Hz	Power supply 230 V - 50 Hz
 A	Heating pump circuit A
 AUX	DHW pump
 AUX	Auxiliary pump
BPR - BPR I	Burner reset button
CS	Safety contact
FA	EMI-supressor filter
J-	PCB connector
L	Lane
MCBA	Safety box
N	Neutral
RL PA	Heating pump control relay
RL AUX	External relay for auxilliary pump
RL ECS	Dhw pump control relays
S DEP B, C	Flow sensor B, C
S F	Flue gas sensor
S RET	Return sensor
S ECS	Domestic hot water sensor
S EXT	Outside sensor
S AMB A, B, C	Room sensor
TELE	Telephone relay
TL	Limiting thermostat
VG	Gas valve
VN, VN I	Fan
X1... X4	Bridge connector
ZG -ZG I	General switch

18 Spare parts

15/02/2011- 300014279-002-H

i To order a spare part, give the reference number shown on the list.

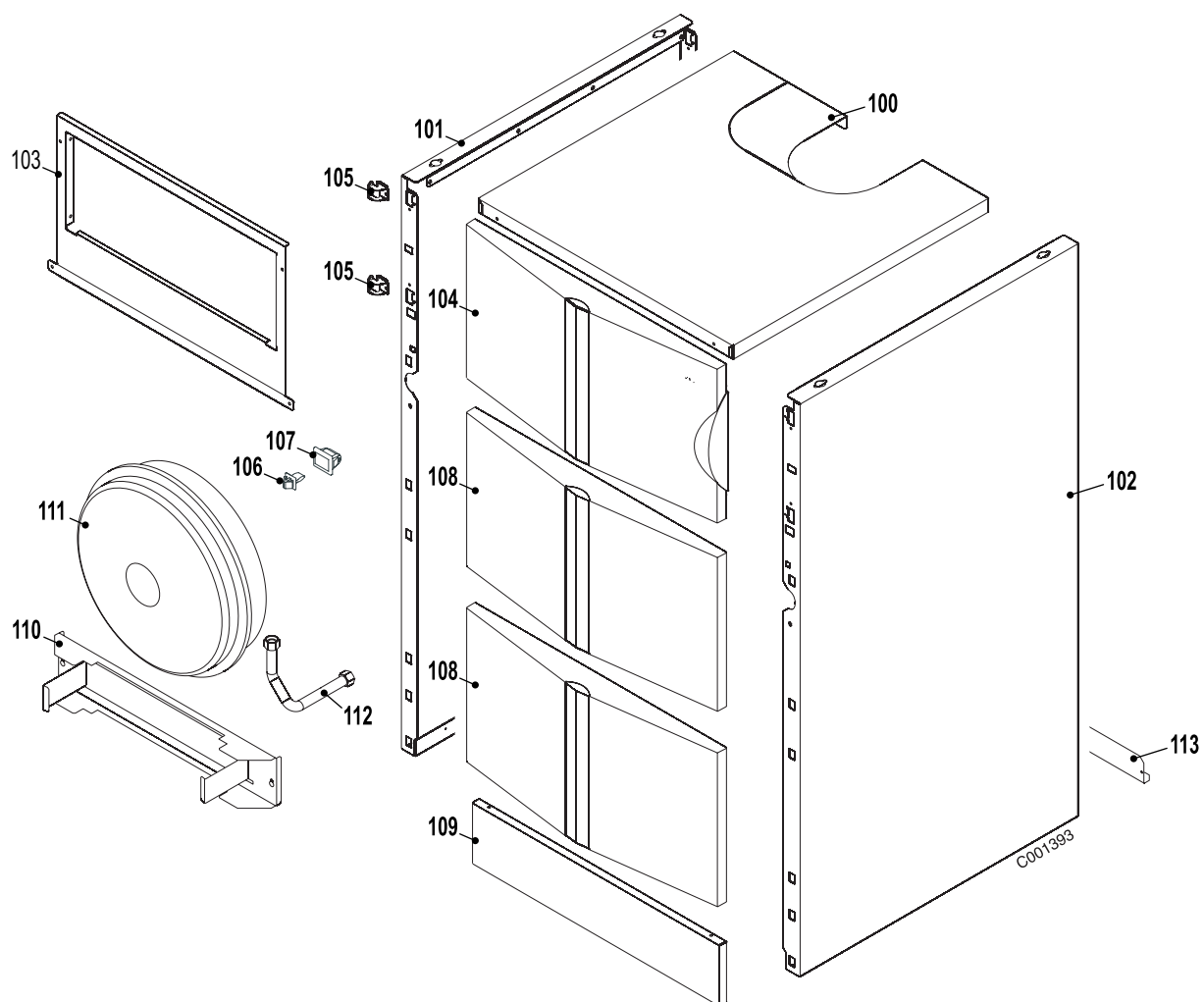
Boiler body DTG(E)130 - 35/45/65 Eco.NOxPlus



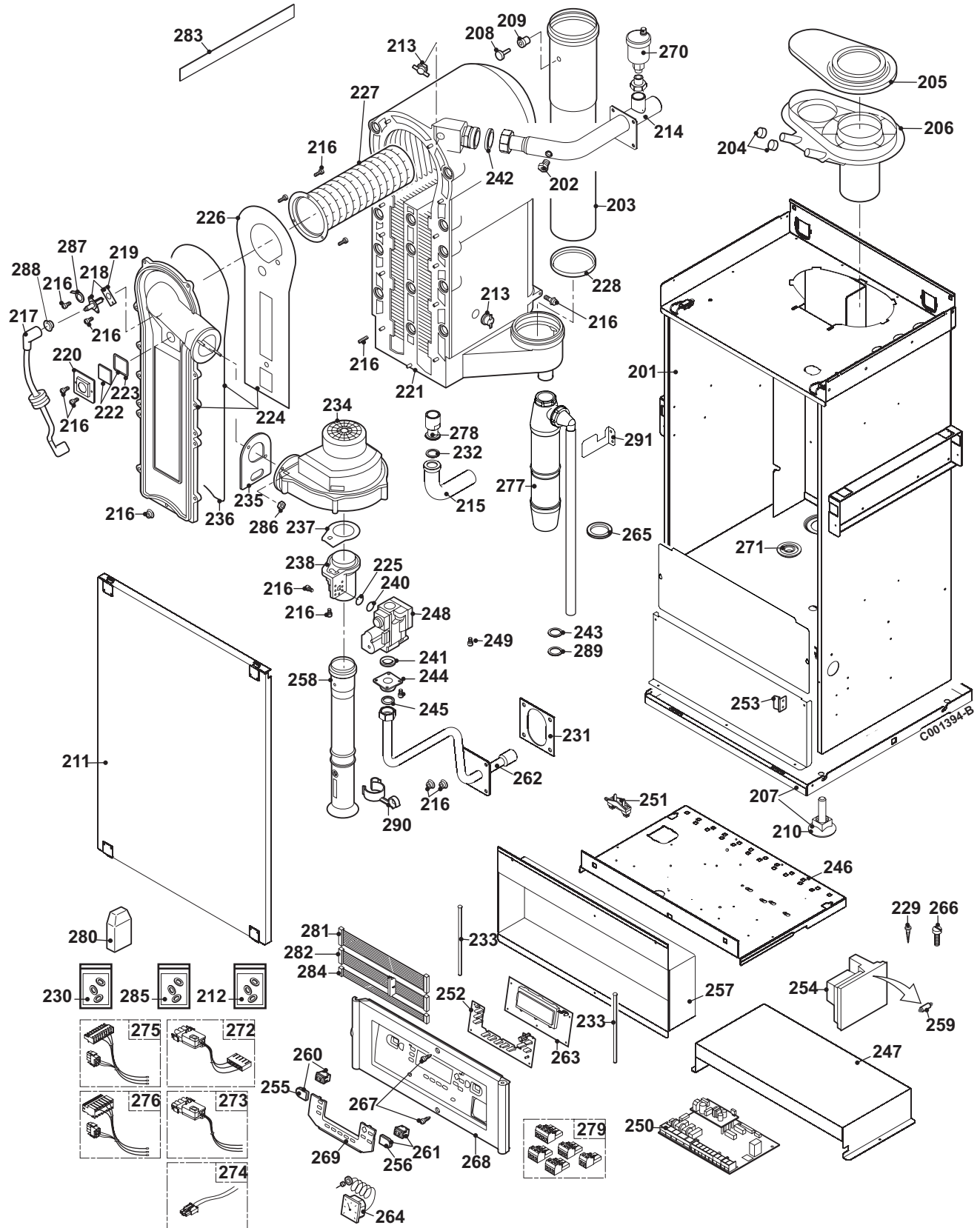
DE DIETRICH THERMIQUE S.A.S. - Spare parts centre

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

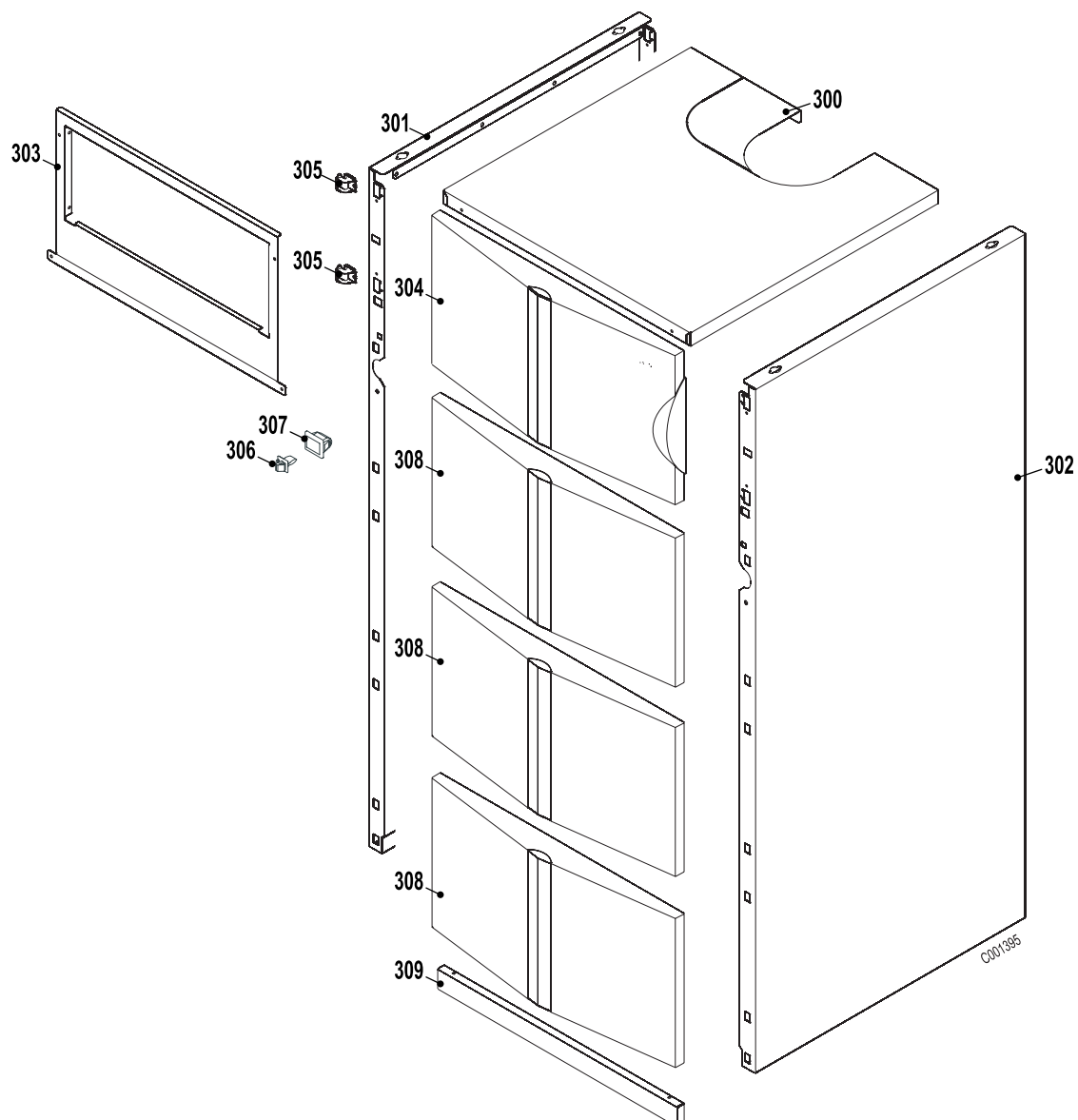
cpr@dedietrichthermique.com

Casing DTG(E)130 - 35/45/65 Eco.NOxPlus

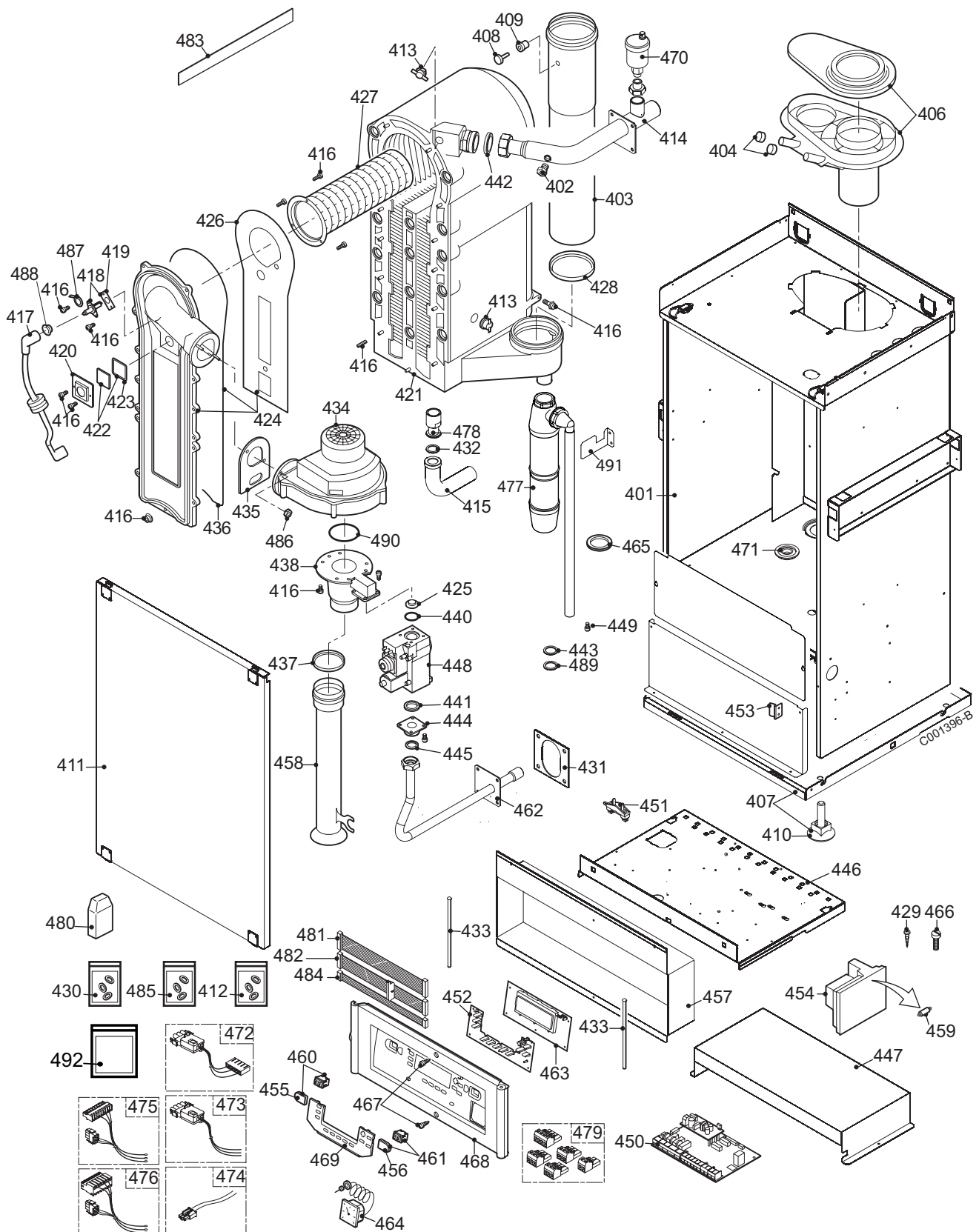
Boiler body DTG130 - 90 Eco.NOxPlus

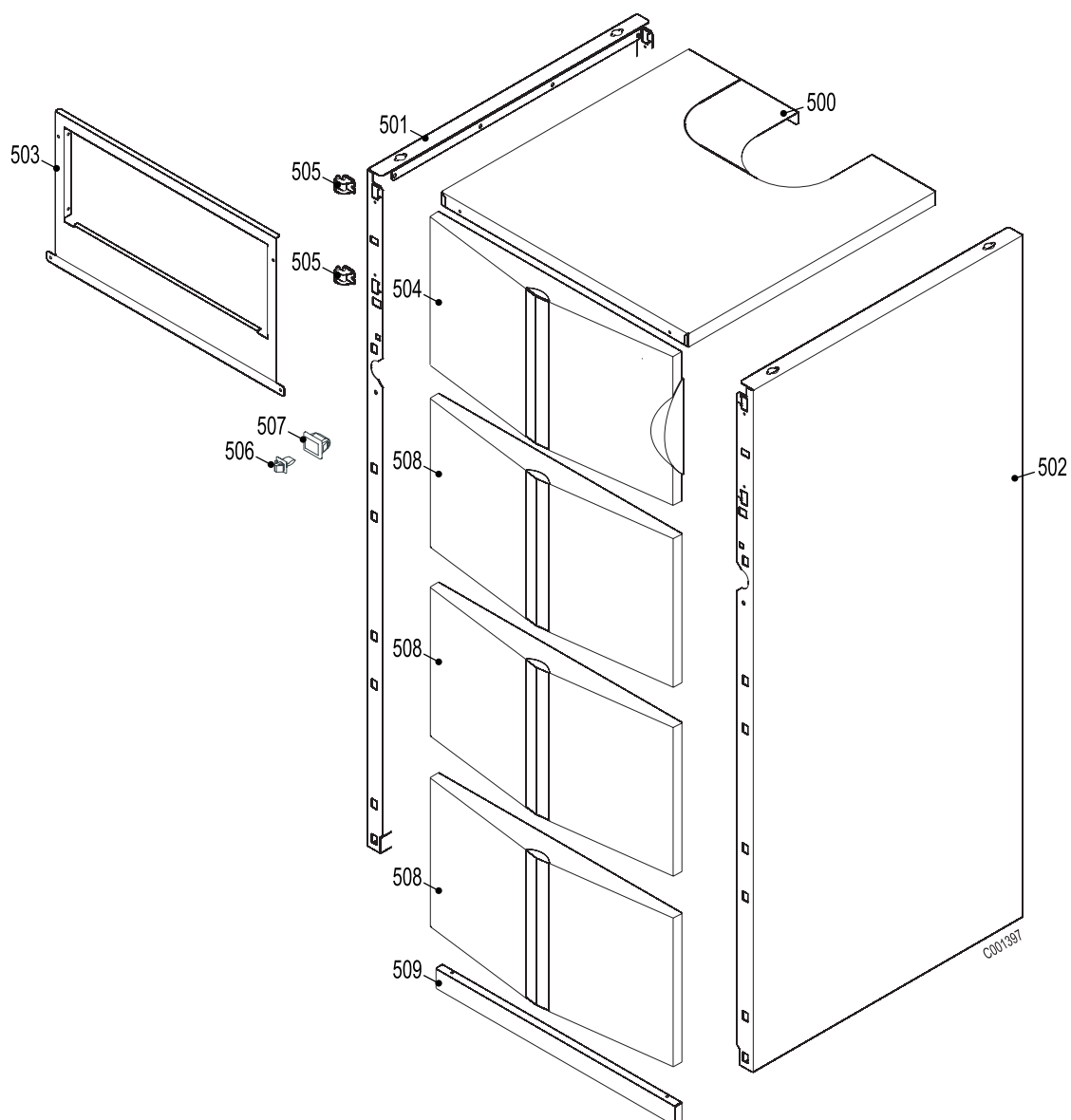


Casing DTG130 - 90 Eco.NOxPlus



Boiler body DTG130 - 115 Eco.NOxPlus



Casing DTG130 - 115 Eco.NOxPlus

Mark.	Reference	Description
		Boiler body DTG(E) 35 / DTG45 / DTG65 Eco.NOxPlus
1	200010110	Complete leak proof box DTGE130-35
1	200009362	Leak proof box DTG130-35/DTG130-45
1	200010067	Complete leak proof box DTG130-65
2	S46850	Non-return valve
3	S55993	Flue gas outlet pipe - Diameter 80 mm DTG(E)130-35 / DTG130-45
3	S55994	Flue gas outlet pipe - Diameter 100 mm DTG130-65
4	S57163	Measurement device cap
5	S54750	Adapter cover DN 80 DTG(E)130-35 / DTG130-45
5	S54763	Adapter cover DN 100 DTG130-65
6	54748	Complete adapter DN 80/125 DTG(E)130-35 / DTG130-45
6	54781	Complete adapter DN 100/150 DTG130-65
7	200009361	Complete base frame
8	S49297	Flue gas sensor NTC
9	S59659	Pipe feed flue gas sensor
10	97860646	Adjustable foot M10x35
11	200009369	Complete box door
12	300013082	Heating exchanger water flow pipe DTGE130-35
13	S44698	Temperature sensor ELMWOOD NTC
14	300012502	Water flow pipe DTG130-35 / DTG130-45
14	300013770	Water flow pipe DTG130-65
15	300012503	Return pipe
16	200002325	Boiler screw bag
17	S55924	Ignition cable
18	S59527	Ignition electrode + Ionization electrode + Gasket
19	S53489	Electrode gasket
20	S54822	Flame inspection window support
21	S53323	Heating body - DTG(E)130-35 / DTG130-45
21	S53324	Heating body - DTG130-65
22	S45004	Flame inspection window diameter 32x32x3 mm + Gasket
23	S35458	Flame inspection window gasket
24	S53477	Exchanger inspection hatch + Gasket + Insulation
25	300013083	Heating return pipe DTGE130-35
26	S54731	Exchanger inspection hatch insulation
27	S54753	Burner - DTG(E)130-35 / DTG130-45
27	S54754	Burner - DTG130-65
28	S55915	Flue gas outlet gasket DN 100 DTG130-65
29	300013084	Return pipe, heating exchanger DTGE130-35

Mark.	Reference	Description
30	300013085	Multiple flow pipe DTGE130-35
31	300013105	Gasket box pipe
32	97550181	Neoprene gasket diameter 44x32x2 mm
33	54798	Hinge pin
34	59162	Fan DTG(E)130-35 / DTG130-45
34	S59167	Fan MVLRG148/1200-3633 + Gaskets DTG130-65
35	S56151	Fan gasket / Exchanger
36	S57241	Exchanger inspection hatch gasket
37	S54777	Gasket Venturi-Fan
38	54765	Venturi DTG(E)130-35 / DTG130-45
38	54766	Venturi DTG130-65
40	54768	Gas block seal / Venturi
41	S54771	O-ring 15.1x2.7
42	95013074	Sheet gasket diameter 30x21x2 mm
43	95013060	Green joint diameter 24x17x2 mm
44	94950148	Brass plug G 1
45	300024414	Circulator 25-60
46	200009275	Card supports
47	200009276	Board guard
48	S54767	Gas valve VK125V1036B + Gaskets
49	S62185	Screw KB30x8
50	200002044	Sensor relay card
51	95320187	Cable clamp
52	97864033	Elastomer keyboard
53	54794	Safety control box attachment
54	S59942	Safety box MCBA
55	0294026	Switch hood
56	0294038	Burner reset button
57	200009281	Control panel guard
58	57238	Air silencer
59	S43563	Fuse 2 AF (quick) 230 V MCBA
59	S14510	Fuse 4 AT (slow) 24 V MCBA
59	S6778	Fuse 6,3 AT (slow) Power supply
60	300012997	Main ON/OFF switch
61	0295159	Reset switch
62	300012504	Gas inlet pipe
63	200008102	UC display card
64	300013121	TG330.70X5.51A manometer
65	200010264	Pump cable
67	S59939	Front panel cover
68	59908	Front panel
69	97864027	Flap
70	85000023	3/8 automatic air bleed valve
71	97939290	Pipe feed Diameter 18 mm
72	200010256	Gas valve cable

Mark.	Reference	Description
73	200010252	Power supply harness
74	200010251	Burner harness
75	200010212	cable form 230 V
76	200010211	cable form 24 V
77	S54761	Siphon
78	300013190	Return connector 1"1/4
79	300009071	2 pin connector fitted 0-10 V
79	300009070	2 pin connector fitted Outside sensor
79	300009075	3 pin connector fitted Power supply
79	300009074	3 pin connector fitted Pump A
79	300009077	3 pin connector fitted Auxiliary pump
79	300009080	4 pin connector fitted PG-TEL
79	200006051	4 pin connector fitted VA+CS
79	300008954	RAST5,2 bridge connector S.ROOM A
80	95362450	Outside sensor AF60
81	300013123	Sheeting 26 pts Length 610 mm
82	300013129	Sheeting 14,MCBA pts length 1650
83	52484	Cleaning knife
84	300013128	Sheeting 8 pts Length 820 mm
85	200002326	Seal bag
86	95800227	M5 nut
87	S21473	Brace for ignition electrode
88	S55409	Grommet
89	S51103	Leakproof seal DTGE130-35
90	57475	Silencer attachment
91	200013781	Holding bracket
		Casing DTG(E) 35 / DTG45 / DTG65 Eco.NOxPlus
100	200009374	Complete top panel
101	200009367	Complete left panel
102	200009366	Complete right panel
103	200009285	Panel cover
104	200009376	Complete flap
105	300012374	Hinge
106	94820110	Catch
107	94820120	Pin
108	200009377	Complete front panel
109	200009378	Complete lower front panel
110	200010054	Holding plate
111	300011372	DGN141SK-29597 expansion vessel
112	300010820	Straight hose DN8 3/8-1/2
113	200010055	Pipe holding plate
		Boiler body DTG130-90Eco.NOxPlus
201	200010101	Complete leak proof box
202	S46850	Non-return valve

Mark.	Reference	Description
203	S55994	Flue gas discharge pipe DN 100
204	S57163	Measurement device cap
205	S54763	Adapter cover DN 100
206	54781	Complete adapter DN 100/150
207	200009361	Complete base frame
208	S49297	Flue gas sensor NTC
209	S59659	Pipe feed flue gas sensor
210	97860646	Adjustable foot M10x35
211	200009369	Complete box door
212	S59076	Conversion set B/P
213	S44698	Elmwood NTC temperature sensor
214	300013081	Heating flow pipe
215	300012503	Heating return pipe
216	200002325	Boiler screw bag
216	S100051	Stud M5x15
216	S14342	Screw M5x12
216	S100052	Screw M4x10
217	S55924	Ignition cable
218	S59527	Ignition electrode + Ionization electrode + Gasket
219	S53489	Electrode gasket
220	S54822	Flame inspection window support
221	S57240	Heating body
222	S45004	Flame inspection window diameter 32x32x3 mm + Gasket
223	S35458	Flame inspection window gasket
224	S53477	Exchanger inspection hatch + Gasket + Insulation
225	S100082	Diaphragm Natural gas H
225	S100038	Diaphragm Natural gas L
226	S54731	Exchanger inspection hatch insulation
227	S57477	Burner
228	S55915	Flue gas outlet gasket DN100
229	S100053	Special screw M4x16
230	S100066	Gasket kit
231	300013105	Gasket box pipe
232	97550181	Neoprene gasket diameter 44x32x2 mm
233	54798	Hinge pin
234	S59168	Fan + Gasket
235	S56151	Fan gasket/Exchanger
236	S57241	Exchanger inspection hatch gasket
237	S54777	Leakproof seal for venturi
238	S57488	Venturi
240	54768	Gas block seal - Venturi
241	S57828	O-ring
242	95013074	Sheet gasket diameter 30x21x2 mm
243	95013060	Green joint diameter 24x17x2 mm

Mark.	Reference	Description
244	57827	Right flange gas block
245	S100363	Gas valve flange gasket 33x2
246	200009275	Card supports
247	200009276	Board guard
248	S57479	Gas valve VK8115VB1008B
249	S62185	Screw KB30x8
250	200002044	Sensor relay card
251	95320187	Cable clamps
252	97864033	Elastomer keyboard
253	54794	Safety control box attachment
254	S59942	MCBA safety box
255	0294026	Switch hood
256	0294038	Burner reset button
257	200009281	Control panel guard
258	57460	Air silencer
259	S6778	Fuse 6.3 AT (slow) Power supply
259	S14510	Fuse 4AT (slow) 24 V MCBA
259	S43563	Fuse 2 AF (quick) 230 V MCBA
260	300012997	Main ON/OFF switch
261	0295159	Reset switch
262	300013118	Gas inlet pipe
263	200008102	UC display card
264	300013121	TG330.70X5.51A manometer
265	S57470	Siphon gasket
266	S14254	Screw PARKER,4.2x9.5
267	S59939	Front panel cover
268	59908	Front panel
269	97864027	Flap
270	8500-0023	Automatic air bleed 3/8"
271	97939290	Pipe feed Diameter 18 mm
272	200010256	Gas valve cable
273	200010252	Power supply harness
274	200010251	Burner harness
275	200010212	cable form 230 V
276	200010211	cable form 24 V
277	S57926	Siphon + Run-off pipe
278	300013190	Return connector 1"1/4
279	300009077	3 pin connector fitted Auxiliary pump
279	300009075	3 pin connector fitted Power supply
279	300009070	2 pin connector fitted Outside sensor
279	200006051	4 pin connector fitted VA+CS
279	300009074	3 pin connector fitted Pump A
279	300009071	2 pin connector fitted 0-10 V
279	300009080	4 pin connector fitted PG-TEL
279	300008954	RAST5,2 bridge connector S.ROOM A

Mark.	Reference	Description
280	95362450	Outside sensor AF 60
281	300013123	Sheeting 26 pts lg. 610
282	300013129	Sheeting 14,MCBA pts length 1650
283	52484	Cleaning knife
284	300013128	Sheeting 8 pts lg. 820
285	200002326	Seal bag
286	95800227	M5 nut
287	S21473	Brace for ignition electrode
288	S55409	Grommet
289	54771	15.1x2.7 O-ring
289	S100058	70X3 O-ring Fan / Venturi
289	97550196	Gasket 27x20x2.5
289	S100059	23.47X2.62 O-ring
290	57475	Silencer attachment
291	200013781	Holding bracket
		Casing DTG130-90 Eco.NOxPlus
300	200009374	Complete top panel
301	200010105	Complete left panel
302	200010104	Complete right panel
303	200009285	Panel cover
304	200009376	Complete flap
305	300012374	Hinge
306	94820110	Catch
307	94820120	Pin
308	200009377	Complete front panel
309	200010107	Complete lower front panel
		Boiler body DTG130-115 Eco.NOxPlus
401	200010101	Complete leak proof box
402	S46850	Non-return valve
403	S55994	Flue gas discharge pipe diameter 100 mm
404	S57163	Measurement device cap
406	S54781	Complete adapter DN 100/150
407	200009361	Complete base frame
408	S49297	Flue gas sensor NTC
409	S59659	Pipe feed flue gas sensor
410	97860646	Adjustable foot M10x35
411	200009369	Complete box door
412	S59076	Conversion set B/P
413	S44698	Temperature sensor ELMWOOD NTC
414	300013081	Heating flow pipe
415	300012503	Heating return pipe
416	200002325	Boiler screw bag
416	S48950	Screw M4x10
416	S54755	M6 nut
416	S56987	Stud M6

Mark.	Reference	Description
416	S100052	Screw M4x10
416	S100051	Stud M5x15
416	S48512	Screw M5x10
416	S100054	Screw M5x16
416	S14342	Screw M5x12
417	S55924	Ignition cable
418	S54339	Ignition electrode + Ionization electrode + Gasket
419	S53489	Electrode gasket
420	S54822	Flame inspection window support
421	S100196	Heating body
422	S45004	Flame inspection window + Gasket
423	S35458	Flame inspection window gasket
424	S53477	Exchanger inspection hatch + Gasket + Insulation
425	S100082	Diaphragm Natural gas H
425	S100038	Diaphragm Natural gas L
426	S54731	Exchanger inspection hatch insulation
427	S57477	Burner
428	S55915	Flue gas outlet gasket DN100
429	S100053	Special screw M4x16
430	S100066	Gasket kit
431	300013105	Gasket box pipe
432	97550181	Neoprene gasket diameter 44x32x2 mm
433	54798	Hinge pin
434	S100036	Fan RG 148 1200-3633-010202
435	S56151	Fan gasket/Exchanger
436	S57241	Exchanger inspection hatch gasket
437	S100046	Gasket diameter 60 mm Venturi - Silencer
438	S100037	Venturi
440	S100059	23.47x2.62 O-ring
441	S100363	Gasket 33x2 Gas flange
442	95013074	Sheet gasket diameter 30x21x2 mm
443	95013060	Green joint diameter 24x17x2 mm
444	S100364	Gas valve flange
445	97550196	Gasket 27x20x2.5
446	200009275	Card supports
447	200009276	Board guard
448	S100065	Gas valve VR 8615 VB 1002
449	S62185	Screw KB30x8
450	200002044	Sensor relay card
451	95320187	Cable clamps
452	97864033	Elastomer keyboard
453	S54794	Safety control box attachment
454	S100372	MCBA safety box
455	0294026	Switch hood
456	0294038	Burner reset button

Mark.	Reference	Description
457	200009281	Control panel guard
458	S100045	Air silencer
459	S6778	Fuse 6.3 AT (slow) Power supply
459	S14510	Fuse 4AT (slow) 24 V MCBA
459	S43563	Fuse 2 AF (quick) 230 V MCBA
460	300012997	Main ON/OFF switch
461	0295159	Reset switch
462	300013080	Gas inlet pipe
463	200008102	UC display card
464	300013121	TG330.70x5.51A manometer
465	S57470	Siphon gasket
466	S14254	Screw Parker 4.2x9.5
466	S100049	Screw Parker 4.2x19
467	S59939	Front panel cover
468	59908	Front panel
469	97864027	Flap
470	85000023	Automatic air bleed 3/8"
471	97939290	Pipe feed diameter 18 mm
472	200010257	Gas valve cable
473	200010252	Power supply harness
474	200010251	Burner harness
475	200010212	cable form 230 V
476	200010211	cable form 24 V
477	S100041	Complete siphon
478	300013190	Return connector 1"1/4
479	300008954	RAST5,2 pin connector fitted S.AMB A
479	300009074	3 pt connector A pump/SV
479	300009077	Connector RAST 5 3-pin Auxiliary pump
479	200006051	4 pin connector fitted VA+CS
479	300009070	Connector RAST 5 3-pin Outside sensor
479	300009071	2 pin connector fitted 0-10 V
479	300009080	Connector RAST 5 4-pin PG-TEL
480	95362450	Exterior sensor AF60
481	300013123	Sheeting 26 pts PICO FLEX Length 610 mm
482	300013129	Sheeting 14,MCBA pts length 1650
483	58286	Cleaning knife
484	300013128	Sheeting 8 pts PICO FLEX Length 820 mm
485	200002326	Seal bag
486	95800227	M5 nut
487	S21473	Brace for ignition electrode
488	S55409	Grommet
489	S51103	Leakproof seal
490	S100058	70x3 O-ring Fan - Venturi
491	200013781	Holding bracket
492	100013072	Propane conversion kit

18. Spare parts

Mark.	Reference	Description
		Casing DTG130-115 Eco.NOxPlus
500	200009374	Complete top panel
501	200010105	Complete left panel
502	200010104	Complete right panel
503	200009285	Panel cover
504	200009376	Complete flap
505	300012374	Hinge
506	94820110	Catch
507	94820120	Pin
508	200009377	Complete front panel
509	200010107	Complete lower front panel

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15/02/2011



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