

### PROJECT



## C 230-.. Eco

from 18 to 217 kW



Very compact  
with simplicity of use



- Floor-standing gas condensing
- Factory setting on natural gas or on propane with conversion kit (option)
- Annual efficiency up to 109%
- **Low pollutant emissions:**  
NOx < 62 mg/kWh, CO < 19 mg/kWh
- Dimensions on the ground reduced (0.54 m<sup>2</sup>)
- **Boiler fitted and tested in the factory**
- Heat exchanger in cast aluminium/silicium sections.
- Burner with premixing modulation from 18 to 100%.
- **Choice of 2 control panels:**
- DIEMATIC-m 3 with programmable electronic control system based on the outside temperature; can also be used in cascade of up to 10 boilers
- K3 only in association with DIEMATIC-m 3 to control the other boilers
- Option for connection with horizontal or vertical air/flue gas vent (homologations C<sub>13x</sub> or C<sub>33</sub>) or to a chimney (B<sub>23</sub> and B<sub>23P</sub>)
- **Packaging:** 2 packages.

N° CE 0085BS0132

**OPTIONS:** see next page

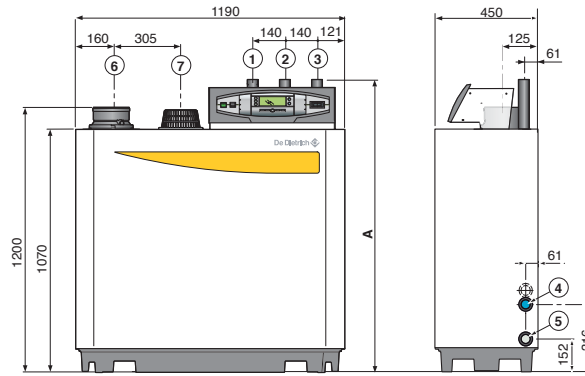
### MAIN DIMENSIONS (mm and inches)

- Heating flow
- Heating return
- Gas inlet R 1" 1/4
- Filling and drain tap / Connection for second return R 1" 1/4
- Condensate drain, siphon provided, for PVC pipe ext. Ø 32mm
- Flue gas nozzle Ø 150mm
- Combustive air inlet

R: Threading

	A	①	②
C 230-85 Eco	1309	R 1" 1/4	R 1" 1/4
C 230-130 Eco	1309	R 1" 1/4	R 1" 1/4
C 230-170 Eco	1309	R 1" 1/4	R 1" 1/4
C 230-210 Eco	1324	R 1" 1/2 (1)	R 1" 1/2 (1)

(1) Reduction 1" 1/2 - 1" 1/4 delivered



### TECHNICAL SPECIFICATIONS

#### Condensing

Max. operating temperature: 90°C  
Safety thermostat: 110°C

Max. operating pressure: 6 bar  
Min. operating pressure: 0.8 bar

Classification:  
B<sub>23</sub>, B<sub>23P</sub>, C<sub>13</sub>, C<sub>33</sub>, C<sub>43</sub>, C<sub>53</sub>, C<sub>63</sub>, C<sub>83</sub>

NOx classification: 6

### MODEL

	C 230-... ECO	85	130	170	210	
Nominal output at 50/30°C Pn (natural gas H)		kW	93	129	179	217
Efficiency at...%	{ - 100 % Pn at average temp. 70°C - 100 % Pn at return temp. 30°C - 30 % Pn at return temp. 30°C	%	97.4	97.5	97.5	97.6
output and...°C		%	104.3	104.7	105.2	105.7
water temp.		%	107.9	108.1	108.3	108.4
Useful efficiency at 100 % of rated heat output (1)		%	87.7	87.8	87.8	87.8
Useful efficiency at 30 % of rated heat output (1)		%	97.7	97.5	97.3	97.6
Water flow at ΔT = 20 K		m <sup>3</sup> /h	3.73	5.16	7.14	8.17
Stand-by losses at ΔT = 30 K		W	230	257	276	288
Auxiliary electrical power at Pn	{ - panel DIEMATIC-m3 - boiler panel K3	W	125	193	206	317
		W	122	190	203	314
Min nominal output at 50/30°C		kW	18	24	33	44
Min.-max. nominal output at 80/60°C		kW	16-87	22-120	29-166	39-200
Water resistance at ΔT = 20 K at 80/60°C		mbar	165	135	170	180
Gas flow	{ - natural gas H - propane	m <sup>3</sup> /h	1.8-9.4	2.4-13.0	3.3-18.0	4.3-21.7
		kg/h	1.94-6.91	1.94-9.56	3.42-13.21	3.19-15.93
Flue gas mass flow rate		kg/h	27.2-149.7	36.7-206.9	49.5-286.0	65.5-344.9
Max. flue gas temperature at 40/30°C		°C	43	43	43	43
Flue gas pressure available		Pa	130	130	130	130
Water content		l	12	16	20	24
Minimum flow rate (operation > 75°C)		m <sup>3</sup> /h	1.12	1.49	2.14	2.59
Floor area		m <sup>2</sup>	0.54	0.54	0.54	0.54
Net weight		kg	115	135	165	188

(1) According to commission regulation n°813/2013 from 2/08/13

### MODEL

	C 230-... ECO	85	130	170	210
C 230 ECO K3 (1)	Ref.	100010393	100010394	100010395	100010396
C 230 ECO DIEMATIC-m3	Ref.	100010397	100010398	100010399	100010420

(1) C 230 ECO K3 is only operating in association with C 230 DIEMATIC-m 3.

# OPTIONS

FOR C 230 ECO

## ALL OPTIONS EXCEPT CONTROL UNIT OPTIONS

### ACCESSORIES

	PACKAGE	REF.
2nd return nozzle	GR5	100002442
Sensor tube for outlet sensor	GR6	100002443
Grass tightness control gas valve unit (C 230-170 and C 230-210)	GV26	100011035
Air intake filter	GR8	100002445
Min gas pressure switch:		
• C 230-85 and C 230-130	GV22	100011031
• C 230-170 and C 230-210	GV25	100011034
Flue gas thermostat	GV21	100011030
Compulsory flue damper	GV24	100011033
• 300 mbar pressure regulator GDJ 15, Ø 1/2" (for power input max. 150 kW)	SA11	7628752
• 300 mbar pressure regulator GDJ 20, Ø 3/4" (for power input max. 340 kW)	SA12	7628753
• 300 mbar pressure regulator GDJ 25, Ø 1" (for power input max. 700 kW)	AD245	100011223
• 300 mbar pressure regulator GDJ 50, Ø 2" (for power input max. 1300 kW)	AD246	88027177
Decoupling cylinder for C 230-85 ECO	GV46	100019347
Decoupling cylinder for C 230-130 to 210 ECO	GV47	100019348
Decoupling cylinder for C 230-130 to 210 ECO	GV47	100019348

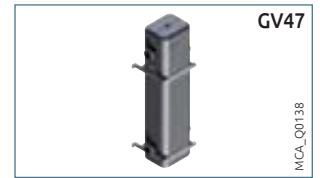
### ACCESSORIES

	PACKAGE	REF.
Condensates neutralization system (without pump):		
• Boilers < 450 kW	SA3	7613609
• Boilers from 450 to 1300 kW	-	7622256
Condensates neutralization system (with lift pump):		
• Boilers < 120 kW	DU13	83877009
• Boilers from 120 to 300 kW	SA4	7613610
• Boilers (cascades) from 300 to 1300 kW	DU15	83877011
Neutralization granules (10 kg)*	-	94225601
Neutralization granules (25 kg)	SA7	7613613
Propane conversion kit for C 230-85 and C 230-130	GV23	100011032
Propane conversion kit for C 230-170 and C 230-210	GV27	100011036

\* To be order at the spare parts department

### CONTROL UNITS

	PACKAGE	REF.
• Independent or mixed calorifier		see chapter 11
• Solar calorifier		see chapter 12
DWH sensor	AD212	100000030



## CHOICE OF OPTIONS ACCORDING TO THE CONTROL PANEL TYPE AND THE CONNECTED CIRCUITS

Circuit type	Boiler self standing or boiler 1 of cascade							Boiler 2 to 10 cascade by additional boiler (2)			
	DHW	direct	valve	direct + valve	2 x valve	1 x direct + 2 x valve	3 x valve	valve	2 x valve	3 x valve	
Control panel	DIEMATIC-m3 (1) C 230 Eco Diematic-m3 K3 (1) C 230 Eco K3	1 x AD212	as standard	1 x AD199	1 x FM48	1 x AD199 + 1 x FM48	2 x FM48	1 x AD199 + 2 x FM48	-	-	-
		-	-	-	-	-	-	1 x AD220	1 x AD220 + 1 x FM48	1 x AD220 + 2 x FM48	

### CONTROL UNITS OPTIONS

	PACKAGE	REF.	PACKAGE	REF.	
• For DIEMATIC-m 3 control panel					
PCB + sensor for 1 circuit with mixing valve	FM48	85757743	AD220	100004970	
Outlet sensor downstream of the valve	AD199	88017017	FM48	85757743	
Interactive remote control CDI D. iSystem	AD285	100018924	AD285	100018924	
Interactive remote radio control CDR D. iSystem (without radio transmitter)	AD284	100018923	AD284	100018923	
Simplified remote control with room sensor	FM52	85757747	AD244	100012044	
BUS cable connection 12 m	AD134	88017851	FM52	85757747	
Connecting cable length 40 m for wall brack.	DB119	81997720	AD252	100013307	
Bus cable extension	AD139	88017858	Interface SCU-X03 for control external modulating primary pump	GV48	7647074
Cascade outlet sensor or DHW sensor	AD212	100000030			
Dip sensor + sensor tube (replacing the attachment sensor)	AD218	100004781			
Radio outside temperature sensor	AD251	100013306			
Boiler radio module (radio transmitter)	AD252	100013307			
Sensor for storage tank	AD160	88017887			
Room sensor	AD244	100012044			
Interface SCU-X03 for control external modulating primary pump	GV48	7647074			

• For K3 control panel

Relay PCB + sensors for 1 circuit with valve

PCB + sensor for 1 circuit with mixing valve

Interactive remote control CDI D. iSystem

Interactive remote radio control CDR D. iSystem (without radio transmitter)

Room sensor

Simplified remote control with room sensor

Boiler radio module

Interface SCU-X03 for control external modulating primary pump

(1) Each of the circuits "heating" can be completed in choice by a remote control AD285, AD284 + AD252 or FM52

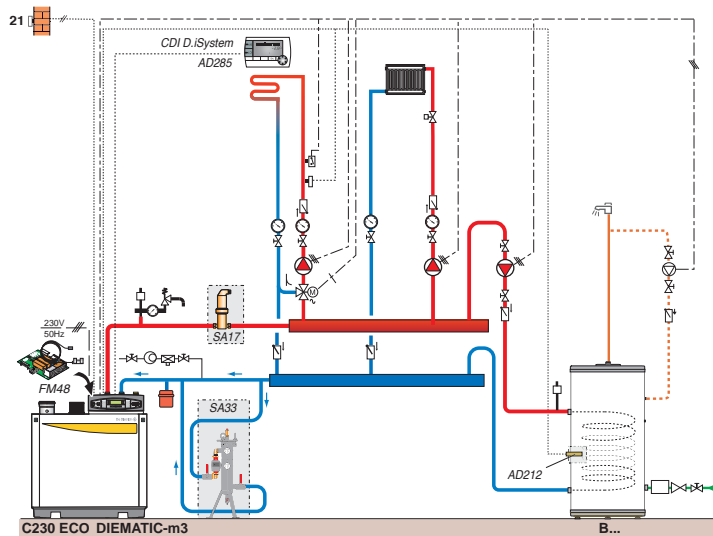
(2) Do not forget to order the "cascade outlet" sensor package AD218

# EXAMPLES OF INSTALLATIONS

FOR C 230 ECO

## C 230-Eco C 230-85 Eco DIEMATIC-m3

- 1 direct circuit (without mixing valve)
- 1 underfloor heating circuit (with mixing valve)
- 1 DHW calorifier B...

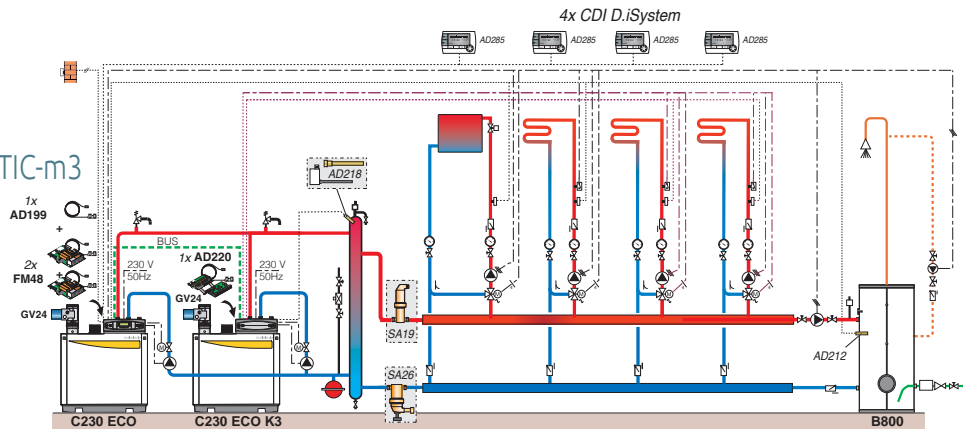


### DESCRIPTION

	PACKAGE	REF.
C 230-85 ECO DIEMATIC-m 3	-	100010397
PCB + sensor for 1 circuit with mixing valve	FM48	85757743
2nd return nozzle	GR5	100002442
DHW calorifier BPB 500	EC613	100018097
DHW sensor	AD212	100000030
Brass microbubble degasser Rp 1 "1/4	SA17	7650330
Clarifier unit DN 32 (4m³/h)	SA33	7651695
Treatment product "SoluTECH FULL PROTECTION" (1/4 of can) for a treatment of a volume of installation of 1 m³	1/4 of SA40	7651705
Option		
- Interactive remote control CDI D. iSystem	AD285	100018924

## C 230-Eco C 230-85 Eco DIEMATIC-m3 + C 230-85 Eco K3

- 4 circuits with mixing valve
- 1 DHW calorifier B...



### DESCRIPTION

	PACKAGE	REF.
C 230-85 ECO DIEMATIC-m 3	-	100010397
C 230-85 ECO K3	-	100010393
Outlet sensor downstream of the valve	AD199	88017017
2 x PCB + sensor for 1 circuit with mixing valve	2 x FM48	85757743
Relay PCB + sensors for 1 circuit with valve	AD220	100004970
Cascade outlet sensor	AD218	100004781
Calorifier B 800 (tank)	AJ79	7650481
Rigid casing for B 800	AJ95	7650497
Microbubble degasser Rp 2"	SA19	7650334
Sludge separator Rp 2" (8,0 m³/h)	SA26	7650378
DHW sensor	AD212	100000030
Compulsory flue damper	2 x GV24	100011033
Option		
- 4 x Interactive remote control CDI D. iSystem	4 x AD285	100018924