

# ***Supplementary LPG Boiler Instructions***

## **Alpha CD12S/20S/28S/25X/28X**

**Wall Mounted, Fan Assisted, Room Sealed, Gas Fired  
High Efficiency Condensing Boilers**

For Technical help or for Service call ...  
**ALPHA HELPLINE Tel: 0844 8718764**  
website :[www.alpha-innovation.co.uk](http://www.alpha-innovation.co.uk)

***Alpha***  
HEATING INNOVATION

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**British Gas**  
Service Listed



Alpha CD12S	British Gas G.C. No. 41 532 17
Alpha CD20S	British Gas G.C. No. 41 532 19
Alpha CD28S	British Gas G.C. No. 41 532 21
Alpha CD25X	British Gas G.C. No. 47 532 40
Alpha CD28X	British Gas G.C. No. 47 532 38



**For use with LPG (Propane) only**

**Leave these instructions with the User**

# 1 INTRODUCTION

This supplement is for the LPG model of the boiler; it **must be** read in conjunction with the 'Installation and Servicing Instructions' supplied with the boiler and provides the extra information which is particular to LPG.

The Alpha CD25X and CD28X are combination boilers providing both central heating and domestic hot water at mains pressure.

The Alpha CD12S, CD20S and CD28S are system boilers providing heating only for sealed central heating systems.

The boilers are designed for use with a fully pumped, sealed and pressurised heating system using only PROPANE gas.

# 2 TECHNICAL DATA

## PERFORMANCE - PROPANE GAS (CAT I3P 3P - G31 - 37 mbar)

### Alpha CD12S

Central Heating		MAX.	MIN.
Heat Input (H <sub>g</sub> ) (Gross)	kW	13.6	2.9
	Btu/h	46 400	9 890
Heat Input (H <sub>i</sub> ) (Net)	kW	12.3	2.6
	Btu/h	41 960	8 870
Heat Output (H <sub>s</sub> condensing) (50°C/30°C)	kW	12.8	2.5
	Btu/h	43 650	8 530
Heat Output (H <sub>i</sub> non-condensing) (80°C/60°C)	kW	12.0	2.4
	Btu/h	40 950	8 200
Differential Burner Pressure	Room sealed chamber panel fitted	mbar	7.57
		in wg	0.18
Gas Supply Pressure (LPG)	mbar	37.0	
	in wg	14.8	
Gas Rate	m <sup>3</sup> /h	0.52	0.11
	ft <sup>3</sup> /h	18.3	3.88

### Alpha CD20S

Central Heating		MAX.	MIN.
Heat Input (H <sub>g</sub> ) (Gross)	kW	20.4	3.8
	Btu/h	69 600	12 960
Heat Input (H <sub>i</sub> ) (Net)	kW	18.4	3.5
	Btu/h	62 780	11 950
Heat Output (H <sub>s</sub> condensing) (50°C/30°C)	kW	19.5	3.5
	Btu/h	66 500	11 950
Heat Output (H <sub>i</sub> non-condensing) (80°C/60°C)	kW	18.0	3.3
	Btu/h	61 420	11 260
Differential Burner Pressure	Room sealed chamber panel fitted	mbar	8.17
		in wg	0.35
Gas Supply Pressure (LPG)	mbar	37.0	
	in wg	14.8	
Gas Rate	m <sup>3</sup> /h	0.78	0.15
	ft <sup>3</sup> /h	27.5	5.29

### Alpha CD28S

Central Heating		MAX.	MIN.
Heat Input (H <sub>g</sub> ) (Gross)	kW	31.8	6.3
	Btu/h	108 500	21 500
Heat Input (H <sub>i</sub> ) (Net)	kW	28.7	5.7
	Btu/h	97 920	19 450
Heat Output (H <sub>s</sub> condensing) (50°C/30°C)	kW	30.1	5.7
	Btu/h	102 700	19 450
Heat Output (H <sub>i</sub> non-condensing) (80°C/60°C)	kW	28.0	5.4
	Btu/h	95 540	18 420
Differential Burner Pressure	Room sealed chamber panel fitted	mbar	7.5
		in wg	0.4
Gas Supply Pressure (LPG)	mbar	37.0	
	in wg	14.8	
Gas Rate	m <sup>3</sup> /h	1.21	0.24
	ft <sup>3</sup> /h	42.7	8.47

Boiler model	%CO <sub>2</sub> content (± 0.2%)			Sedbuk rating	NOx class
	LPG (propane)			Efficiency band	
	Min	CH Max	DHW max		
CD12S	10.2	10.6	-	A	5
CD20S	10.2	10.6	-	A	5
CD28S	10.3	10.6	-	A	5
CD25X	10.0	10.6	10.6	A	5
CD28X	10.1	10.7	10.7	A	5

### Alpah CD25X

Central Heating			MAX.	MIN.
Heat Input (H <sub>g</sub> ) (Gross)	kW		20.4	5.2
	Btu/h		69 600	17 740
Heat Input (H <sub>i</sub> ) (Net)	kW		18.4	4.7
	Btu/h		62 780	16 040
Heat Output (H <sub>s</sub> condensing) (50°C/30°C)	kW		19.5	4.8
	Btu/h		66 530	16 400
Heat Output (H <sub>i</sub> non-condensing) (80°C/60°C)	kW		18.0	4.5
	Btu/h		61 420	15 350
Differential Burner Pressure	Room sealed chamber panel fitted	mbar	4.39	0.54
		in wg	1.76	0.22
Gas Supply Pressure (LPG)	mbar		37.0	
	in wg		14.8	
Gas Rate (LPG)	m <sup>3</sup> /h		0.78	0.24
	ft <sup>3</sup> /h		27.5	8.47

### Alpha CD28X

Central Heating			MAX.	MIN.
Heat Input (H <sub>g</sub> ) (Gross)	kW		27.3	5.5
	Btu/h		93 150	18 760
Heat Input (H <sub>i</sub> ) (Net)	kW		24.6	5.0
	Btu/h		83 930	17 060
Heat Output (H <sub>s</sub> condensing) (50°C/30°C)	kW		25.8	5.1
	Btu/h		88 030	17 400
Heat Output (H <sub>i</sub> non-condensing) (80°C/60°C)	kW		24.0	4.9
	Btu/h		81 900	16 720
Differential Burner Pressure	Room sealed chamber panel fitted	mbar	7.6	0.3
		in wg	3.04	0.12
Gas Supply Pressure (LPG)	mbar		37.0	
	in wg		14.8	
Gas Rate (LPG)	m <sup>3</sup> /h		1.04	0.21
	ft <sup>3</sup> /h		36.7	7.4

## 2.3 GAS SUPPLY

The Alpha CD12S boiler requires a gas rate of 0.96 kg/h (2.1 lb/h) or 1.8 litres/h of liquid gas.

The Alpha CD20S boiler requires a gas rate of 1.44 kg/h (3.1 lb/h) or 2.8 litres/h of liquid gas.

The Alpha CD25X boiler requires a gas rate of 1.86 kg/h (4.0 lb/h) or 3.6 litres/h of liquid gas.

The Alpha CD28X/28S boilers require a gas rate of 2.23 kg/h (4.8 lb/h) or 4.2 litres/h of liquid gas.

The supply pipes must be capable of delivering this quantity of gas in addition to the demand from any other appliances in the house. The boilers require at least a 22 mm gas supply pipe.

The complete installation must be tested for gas soundness against leakage.

The local Propane gas supplier should be consulted, at the installation planning stage, in order to establish the availability of an adequate supply of gas.

## 3 BOILER LOCATION

Installation pipes, cylinders and pressure regulators should be fitted in accordance with BS 5482:1. Bulk tank installation must comply with the requirements of the Home Office code of practice for the storage of liquefied petroleum gas at fixed installations.

The boiler **must not** be installed in a room or internal space below ground level, e.g. in a basement or cellar, except where at least one side is open to ground level.

### Alpha CD25X

Domestic Hot Water			MAX.	MIN.
Heat Input (H <sub>g</sub> ) (Gross)	kW		26.6	5.2
	Btu/h		90 760	17 740
Heat Input (H <sub>i</sub> ) (Net)	kW		24.0	4.7
	Btu/h		81 900	16 040
Output to Water (H <sub>s</sub> ) (modulating)	kW		24.0	4.5
	Btu/h		81 900	15 350
Differential Burner Pressure	Room sealed chamber panel fitted	mbar	7.0	0.54
		in wg	2.8	0.22
Gas Supply Pressure (LPG)	mbar		37.0	
	in wg		14.8	
Gas Rate (LPG)	m <sup>3</sup> /h		1.0	0.24
	ft <sup>3</sup> /h		35.3	8.47
Flow Rate at 35°C Rise	L/min		9.6	
	gal/min		2.2	
Specific Flow Rate (D) at 30°C Rise (Flow rate @ 30K to EN625)	L/min		11.2	
	gal/min		2.5	

### Alpha CD28X

Domestic Hot Water			MAX.	MIN.
Heat Input (H <sub>g</sub> ) (Gross)	kW		31.8	5.5
	Btu/h		108 500	18 760
Heat Input (H <sub>i</sub> ) (Net)	kW		28.7	5.0
	Btu/h		97 900	17 060
Output to Water (H <sub>s</sub> ) (modulating)	kW		28.7	4.9
	Btu/h		97 900	16 720
Differential Burner Pressure	Room sealed chamber panel fitted	mbar	10.2	0.3
		in wg	4.08	0.12
Gas Supply Pressure (LPG)	mbar		37.0	
	in wg		14.8	
Gas Rate (LPG)	m <sup>3</sup> /h		1.21	0.21
	ft <sup>3</sup> /h		42.7	7.4
Flow Rate at 35°C Rise	L/min		11.4	
	gal/min		2.5	
Specific Flow Rate (D) at 30°C Rise (Flow rate @ 30K to EN625)	L/min		13.3	
	gal/min		2.9	

## 4 INSTALLATION

In addition to the regulations and requirements stated in the Installation and Servicing instructions, the boiler **must be** installed in accordance with BS 5482:1 - The Installation of Propane Burning Appliances in Permanent Dwellings.

## 5 COMMISSIONING

The boiler has been tested and factory set for use with Propane gas and it should only be necessary to ensure the correct gas supply pressure of 37 mbar is available.

## 6 PARTS LIST

Only the main burner injectors are special to Propane boilers. For other 'Short List Spare Parts', refer to the Installation and Servicing instructions supplied with the boiler.

Propane components	Qty.	Type	Alpha Part No.
Main burner injector - CD12S	1	2.75 mm	1.025663
Main burner injector - CD20S	1	3.20 mm	1.025664
Main burner injector - CD28S	1	4.20 mm	1.024872
Main burner injector - CD25X	1	4.0 mm	1.022509
Main burner injector - CD28X	1	3.85 mm	1.024176

## 7 SERVICING

When servicing or replacing boiler components follow the procedures as described in the main Installation and Servicing instructions supplied with the boiler.

**Remembering the parts special for Propane boilers and the burner pressures special to Propane boilers given in this leaflet.**

### DETAILS OF BOILER INSTALLATION

Date of Installation:.....

Name of Installer: .....

Address:.....

.....

.....

Postcode:.....

Telephone No:.....

Boiler Serial Number: (LPG)..... (see inside controls panel hinged cover)

# Alpha

HEATING INNOVATION

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*These instructions have been carefully prepared but we reserve the right to alter the specification at any time in the interest of product improvement.  
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**Part No. 1.025634**