Lanemark FD-C (GA) series packaged burners offer flexible, high turn-down (gas and air) control for process air heating applications in convection ovens, dryers and spray booths where maximum combustion efficiency and minimum emissions are of prime importance.

FD-C (GA) series burners are particularly suited to direct-fired applications and can be mounted directly on to the wall of a dryer, oven or process air heating duct to operate either in line with or at 90˚ to the process air flow.

FD-C (GA) burners utilise the latest 'air pressure lead' (APL) monobloc gas valve technology. Changes in process heat demand are transmitted to the burner by a modulating control signal connected to a motor speed controller which varies the speed of the burner combustion air fan and increases or decreases the burner windbox differential air pressure. These pressure changes are transmitted to the master gas control valve, simultaneously adjusting the gas flow rate, to ensure that safe and efficient gas/air ratios are maintained at all times, even under variable plant operating conditions. Two main advantages of this control method result:

1. Alternative fixed gas/air valve linkage control arrangements are not capable of making these gas flow adjustments in direct response to changing plant conditions.

2. There are no mechanical linkages between the gas and combustion air control valves/dampers. On process plants mechanical linkages are prone to moving 'out of adjustment' or in extreme cases 'sticking' which can lead to potentially dangerous combustion conditions.

Model	Heat Input Range	
FD5-C GA (VCV1)	9 - 220 kW	(30,000 - 750,000 Btu/h)
FD10-C GA (VCV2)	13 - 440 kW	(45,000 - 1,500,000 Btu/h)
FD15-C GA (VCV2)	18 - 660 kW	(60,000 - 2,250,000 Btu/h)
FD20-C GA (VCV3)	22 - 880 kW	(75,000 - 3,000,000 Btu/h)

Burner turn-down is determined by the ratio of the high and low gas firing rates. The maximum turn-down ratio is 40:1.

Typical Applications

- **Product finishing**
  - Pre-treatment dryers
  - Final treatment ovens for paint drying
  - Conveyor and batch ovens
  - Spray booths
- **Textile and fabric dryers**
- **Rotary moulding machines**
- **Food processing**
- **Powder and grain dryers**

FD burners conform to the relevant sections of European Standard EN 746 and are pre-wired and tested prior to despatch.

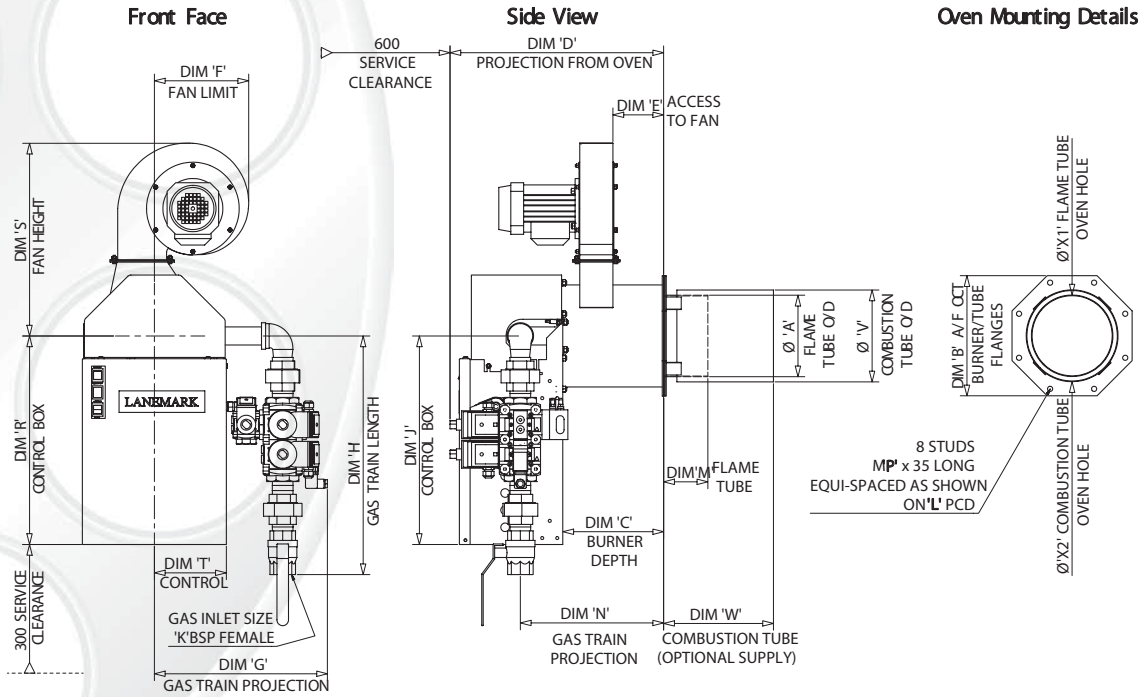
Specifications

The standard FD-C (GA) burner comprises a burner windbox including a protective burner cowl, combustion air fan, a compact monoblock air/gas regulator valve gas train and gas burner controls mounted in a control box. The combustion air fan motor speed controller can be located inside the burner control box or the main oven control panel.

Standard control items include a burner controller, ignition transformer and differential air pressure switch. Two 3-way air valves perform safety checks on the air pressure switch in both open and closed modes each time the burner fires, allowing the independent operation of the combustion air fan in conjunction with oven/dryer main recirculation fans.

	✔ Standard equipment	● Options
Fuels	✔ Natural gas	● Propane
Control voltages	✔ 230V	● 110V
Combustion air fan electrical supplies	✔ 400V/3ph/50Hz	● 230V/1ph/50Hz
Flame sensing	✔ Flame electrode	● UV scanner
Heat output control options	✔ High/low ✔ Modulating (gas and air) 4 - 20mA	● 0 - 10V DC

FD-C (GA) BURNERS



	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	K "BSP	L mm	M mm	N mm	P STUD	R mm	S mm	T mm	V mm	W mm	X1 mm	X2 mm	Net Weight kg	Gross Weight kg
FD5-C(GA) 9-220 kW	Ø150	230	200	420	100	220	380	465	480	1"	225	100	295	M8	480	500	170	Ø179	200	Ø160	Ø200	41	47
FD10-C(GA) 13-440 kW	Ø190	280	250	490	110	240	420	520	490	1"	268	100	340	M8	490	550	170	Ø218	250	Ø200	Ø240	52	58
FD15-C(GA) 18-660 kW	Ø240	340	300	540	150	240	420	520	530	1½"	330	100	430	M10	530	620	170	Ø274	300	Ø250	Ø295	61	67
FD20-C(GA) 22-880 kW	Ø280	390	350	645	170	250	435	715	550	2"	380	100	470	M10	550	700	170	Ø319	350	Ø290	Ø330	80	86

All dimensions in mm, except where stated.

LANEMARK BurnerCare

All FD burners benefit from Lanemark's BurnerCare customer support. BurnerCare services include burner system commissioning/start-up, supply of spare parts and system training. BurnerCare will provide a contract service plan and a rapid response facility, designed to ensure the continued and reliable operation of Lanemark equipment worldwide.

Additional Burner Products *(See individual Data Sheets for full details)*

The FDC-(GA) burner range is just one of the series of forced draught burners available from Lanemark International Ltd.

Also available are the TX small diameter immersion tube tank heating burner systems. The TX range is designed for the heating of process liquids - each system comprising burner, associated controls, submerged tube heat exchanger and exhaust fan. Based on the gross calorific value of the fuel, efficiences averaging 80%+ are readily achieved with every installation. The TRX burner system provides a packaged alternative to the TX series and is ideal for small scale operations.

All illustrations are for guidance only. For reasons of continuous development, Lanemark International Limited reserves the right to alter specifications without prior notice.

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