

FDGA BURNERS DATA

Lanemark FDGA series packaged burners offer flexible, high turndown (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.

FDGA 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 airflow.

FDGA burners utilise the latest 'Air Pressure Lead' (APL) monoblock gas valve technology. Changes in process heat demand are transmitted to the burner by a modulating 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. This ensures that safe and efficient gas / air ratios are maintained at all times, even under variable plant operating conditions.

The main advantages of this control method are –

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



Vertical arrangement

TYPICAL APPLICATIONS

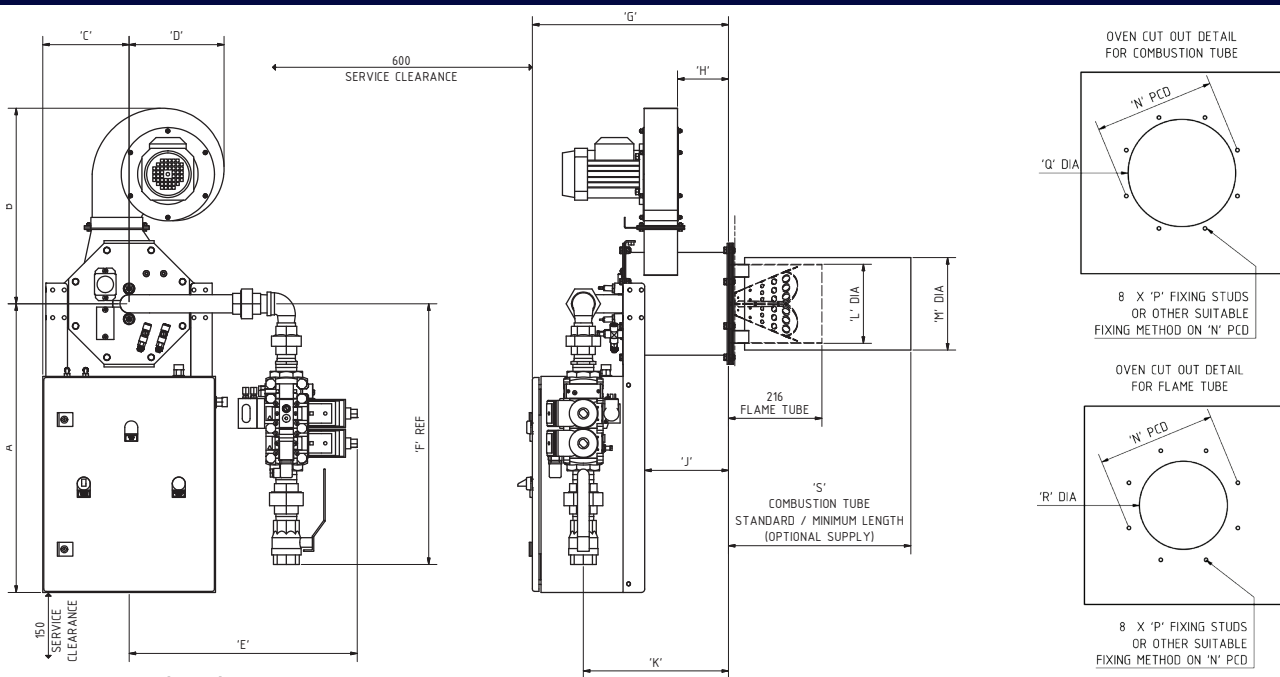
- **Product finishing**
 - Pre / final treatment dryers / ovens for paint drying and curing
 - Conveyor and batch ovens
 - Spray booths
- **Textile and fabric dryers**
- **Rotary moulding machines**
- **Food processing**
- **Powder and grain dryers**

MODEL	HEAT INPUT RANGE	TYPICAL GAS CONNECTION SIZE
FD5GA	9 - 220 kW	1" BSP
FD10GA	13 - 350 kW	1" BSP
FD10GA	13 - 440 kW	1½" BSP
FD15GA	18 - 660 kW	1½" BSP
FD20GA	25 - 880 kW	2" BSP
FD25GA	45 - 1150 kW	2" BSP
FD30GA	45 - 1350 kW	2" BSP
FD35GA	45 - 1550 kW	2" BSP

PRODUCT DESCRIPTION

FDGA burners comprise a burner windbox, combustion air fan, a compact monoblock air / gas valve gas train and gas burner controls, including the combustion air fan motor speed controller, mounted within a 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.



Dimensions (mm, except where shown)

MODEL	GAS TRAIN	A	B	C	D	E	F	G	H	J	K	L DIA	M DIA	N PCD	P	Q DIA	R DIA	S
FD5	VCV1	643	423	200	207	361	456	416	101	156	294	150	175	225	M8x50	195	160	360
FD10	VCV1	668	452	200	220	506	486	449	118	185	336	183	214	268	M8x50	240	200	410
FD10	VCV2	668	452	200	220	528	602	449	118	185	336	183	214	268	M8x50	240	200	410
FD15	VCV2	693	507	217	218	535	624	516	153	256	432	232	270	330	M8x50	295	250	460
FD20	VCV3	742	562	199	219	626	684	556	180	315	473	267	315	380	M10x50	335	290	510
FD25	VCV3	742	743	199	346	620	684	556	158	315	473	267	315	380	M10x50	335	290	510
FD30	VCV3	766	706	233	375	653	705	646	190	359	550	307	370	445	M10x50	390	330	585
FD35	VCV3	766	795	233	417	653	705	646	190	359	550	307	370	445	M10x50	390	330	585

SPECIFICATIONS	STANDARD EQUIPMENT	OPTIONS
Fuels	Natural gas	Propane
Control voltages	230 V / 1ph / 50 Hz	110 V / 1ph / 50-60 Hz
Exhaust fan electrical supplies	400 V / 3ph / 50 Hz or 230 V / 3ph / 50 Hz	-
Flame sensing	Flame electrode	UV scanner
Heat output control options	Modulating (gas and air) 4-20 mA / 0-10 V DC / 3 Wire Direct Drive	Ultra low

Lanemark FDGA burners are pre-wired / tested prior to despatch and conform with relevant sections of European Standard EN 746 Part 2 or NFPA 86 for US applications.



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

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



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