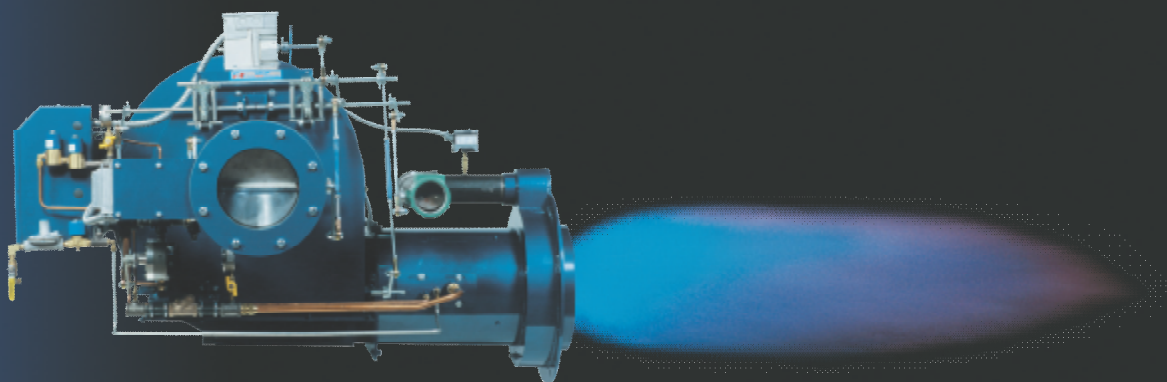


MODEL CM  
FORCED DRAFT  
BURNERS

GAS  
AND OIL

1,260,000 –  
92,400,000  
BTU/HR

# Power Flame® Type CMAX



## Power Flame's Versatile High Capacity Gas / Oil Burner

The Power Flame CMAX burner offers state-of-the-art technology for maximum combustion efficiency and operating performance when firing all types of oil and gaseous fuels.

Designed specifically for today's firetube boilers, the CMAX burner utilizes a unique firing head design which provides stable combustion over a wide turndown range (10:1 on gas and 8:1 on air atomized oil.)

The low NOx option using induced flue gas recirculation provides minimal emissions on gaseous and liquid fuels.

The "easy access" door on the burner blast tube allows convenient maintenance of the firing head components without disturbing either the fuel piping or electrical connections.

The bottom or top-entry, gas manifold connection facilitates left or right hand configurations.

Our modular design concept produces added flexibility for a wide range of optional features. All packaged combustion systems are factory fire-tested to ensure cost effective installation and start-up.

**Characterized Fuel Metering**  
Varicam® provides adjustable and accurately repeatable fuel air ratios throughout the firing range (optional on CM9 – CM10)

### Low Pressure Firing Head

Added flexibility for low gas pressure applications and reduced blower motor horsepower

### Circular Furnace Opening

No special cutting of combustion chamber front plate

### Adjustable Firing Head

Produces optimum fuel-air mixture within the primary combustion zone

### Total Access Panel

Swing out, easily removable top and front panels give total access to circuit board mounted operating controls and Alpha System™ LED Indicators & Switches



CM-0105 Rpt. 1109

# Power Flame

*The Power to Manage Energy*

Unique firing head produces stable combustion over wide turndown.



## STANDARD EQUIPMENT

- 3450 RPM Motor, backward inclined blower wheel, control panel with Alpha System™ LED Indicators (Power, Demand, Main Fuel, FSG Alarm & Customer Selectable), control switches and manual potentiometer.
- Gas electric pilot and ignition transformer
- Combustion air flow safety switch
- Flame safeguard with prepurge and interrupted pilot

## GAS BURNER

- Pressure regulators, pilot and main gas cocks
- Adjustable gas firing head
- UV scanner

## AIR ATOMIZED OIL BURNER

- Nozzle assembly with oil and atomizing air trains
- Air compressor
- Remote pump assembly
- UV scanner

## ADDED FEATURES

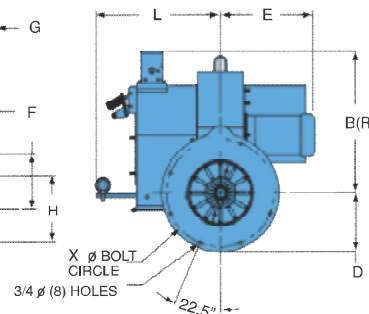
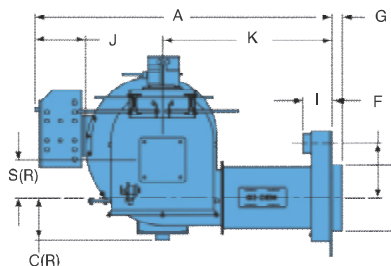
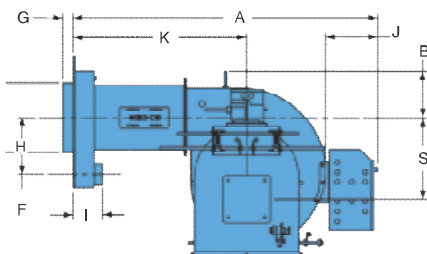
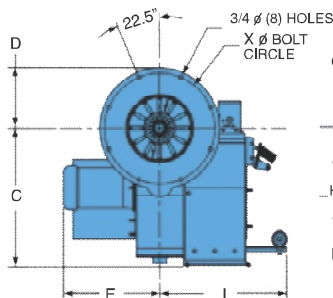
X – Standard O – Optional

	CM9	CM9A	CM9B	CM10	CM10A	CM10B	CM10C	CM11	CM11A	CM12	CM12A	CM13	CM14
Modulation with automatic air control	X	X	X	X	X	X	X	X	X	X	X	X	X
Dual gas and oil safety valves	X	X	X	X	X	X	X	X	X	X	X	X	X
High and low gas pressure switches	X	X	X	X	X	X	X	X	X	X	X	X	X
Manual / Auto switch & manual potentiometer	X	X	X	X	X	X	X	X	X	X	X	X	X
Director™ graphic annunciator	O	O	O	O	O	O	O	O	O	O	O	O	O
Varicam™ characterized fuel metering	O	O	O	O	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A
Characterized gas fuel metering	O	O	O	O	O	O	O	X	X	X	X	X	X
IFGR for low NOx operation	O	O	O	O	O	O	O	O	O	O	O	O	O

NOTE: CM11 through CM14 are not UL Listed – assembled with UL Recognized Components

## MODEL CM (Forced Draft Burner)

## MODEL CMR (For low centerline applications)



## DIMENSIONS (Inches) Standard Models

## RATINGS & SPECIFICATIONS

Burner Model	A	B	B(R)	C	C(R)	D	E	F	****	G	H	I	J	K	L	S	S(R)	X	CAPACITY*			BLOWER MOTOR H.P.	GAS** PRESS. REQ'D (IN.W.C.)
																			# 2 OIL GPH MAX.	NAT. GAS MBH MAX.	NOMINAL BOILER H.P. MAX.		
CM9-G(O)-30	58	8 3/4	28 1/2	26 15/16	8 5/16	11 3/4	18 3/16	10 3/16	2	13 1/4	5 5/8	9 7/8	33 3/32	24 13/16	15 17/32	7 19/32	21 1/2	90.0	12,600	300	3.0	21.0	
CM9A-G(O)-30	58	8 3/4	28 1/2	26 15/16	8 5/16	11 3/4	18 3/16	10 3/16	2	13 1/4	5 5/8	9 7/8	33 3/32	24 13/16	15 17/32	7 19/32	21 1/2	122.0	17,040	406	5.0	44.0	
CM9B-G(O)-30	58	8 3/4	28 1/2	26 15/16	8 5/16	11 3/4	18 3/16	10 3/16	2	13 1/4	5 5/8	9 7/8	33 3/32	24 13/16	15 17/32	7 19/32	21 1/2	152.0	21,300	507	7.5	64.0	
CM10-G(O)-30	63	11 5/16	32 1/8	28 3/8	7 25/32	11 3/4	21 5/8	10 3/16	2	13 1/4	5 5/8	10 3/16	35 5/8	33	10 1/16	13 3/32	21 1/2	158.0	22,165	528	10.0	73.0	
CM10A-G(O)-30	63	11 5/16	32 1/8	28 3/8	7 25/32	11 3/4	21 5/8	10 3/16	2	13 1/4	5 5/8	10 3/16	35 5/8	33	10 1/16	13 3/32	21 1/2	180.0	25,200	600	15.0	93.0	
CM10B-G(O)-30	63	11 5/16	32 1/8	28 3/8	7 25/32	11 3/4	21 5/8	11 13/16	2	15 1/8	5 5/8	10 3/16	35 5/8	33	10 1/16	13 3/32	21 1/2	218.0	30,500	726	15.0	120.0	
CM10C-G(O)-30	63	11 5/16	32 1/8	28 3/8	7 25/32	11 3/4	21 5/8	11 13/16	2	15 1/8	5 5/8	10 3/16	35 5/8	33	10 1/16	13 3/32	21 1/2	257.0	36,000	857	20.0	128.0	
CM11-G(O)-30	68	12 3/4	37 9/16	34 11/16	9 3/16	12 11/16	25 9/16	13 7/32	2	17 1/8	5 11/16	9 3/4	37 7/8	33 1/4	15 13/32	15 13/32	23 3/8	329.0	46,000	1095	25.0	77.0	
CM11A-G(O)-30	68	12 3/4	37 9/16	34 11/16	9 3/16	12 11/16	27 1/4	13 7/32	2	17 1/8	5 11/16	9 3/4	37 7/8	33 1/4	15 17/32	15 13/32	23 3/8	378.0	53,000	1260	30.0	101.0	
CM12-G(O)-40	84	14 1/4	44 7/8	42 5/16	13 3/16	13 11/16	26 7/8	14 7/32	2	19 1/8	5 3/4	9 3/4	48 15/16	38	18 3/4	18 3/4	25 3/8	429.0	60,000	1430	60.0	140.0	
CM12A-G(O)-40	84	14 1/4	44 7/8	42 5/16	13 3/16	13 11/16	26 7/8	14 7/32	2	19 1/8	5 3/4	9 3/4	48 15/16	38	18 3/4	18 3/4	25 3/8	456.0	63,850	1520	75.0	140.0	
CM13-G(O)-40	100	16	***	46 1/4	***	14 11/16	22 3/4	15 1/4	2	21 1/4	5 3/4	14	57 1/4	44 5/8	21 7/8	***	27 3/8	540.0	75,600	1800	100.0	280.0	
CM14-G(O)-40	100	16	***	46 1/4	***	15 11/16	36 3/16	16 1/4	2	23 1/4	5 3/4	14	57 1/4	44 5/8	21 7/8	***	29 3/8	660.0	92,400	2200	125.0	280.0	

Note 1: Dimensions can vary with optional equipment and system arrangements. Final piping connections should be determined after installation.

Note: \* PFI certified capacities listed are based on +1.00" w.c. (CM9) / +2.50" w.c. (CM10) / +4.00" w.c. (CM11) / +8.00" w.c. (CM12-14) combustion chamber pressure. Refer to capacity curves for derates based upon combustion chamber pressure.

\*\* Gas pressures listed are at the inlet to the main shutoff cock and required to obtain PFI certified rating with the standard UL gas train. Optional gas trains are available for lower pressures.

\*\*\* Consult factory

\*\*\*\* Refer to O & M manual for proper insertion and quarl dimensions.



## PowerFlame Incorporated

2001 South 21st Street Phone 620-421-0480

Parsons, KS 67357 Fax 620-421-0948

Web Site: <http://www.powerflame.com>

E-Mail: [csd@powerflame.com](mailto:csd@powerflame.com)

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