

MODEL CGO
MODEL CGO HTD
FORCED DRAFT
BURNERS

GAS
LIGHT OIL

98,000 -
19,100,000
BTU/HR.

Power Flame® Type C



Power Flame's Versatile High Performance Gas-Light Oil Burner

The Power Flame Model CGO dual fuel burner presents optimum state-of-the-art design for maximum combustion efficiency and operating dependability. These packaged combustion systems will fire all types of gaseous fuels, as well as #2 or similar distillate liquid fuels. The Model CGO HTD (High Turndown) will fire natural gas at turndowns up to 10 to 1. The flame retention firing head incorporates a single nozzle pressure atomizing assembly for liquid fuels and a nozzle mix multiport combustor for gaseous fuels. The

stable performance in both positive or negative combustion chambers. Operating system adjustments have been minimized to provide trouble-free start up and operation.

The Model CGO provides efficient combustion without the aid of refractory or other costly flame support devices. Options include the premix and low gas pressure firing heads for limited size combustion chamber configurations or low gas pressure conditions. Modular design produces added flexibility for a wide range of optional features. All Power Flame packaged combustion systems are factory fire-tested.

Alpha System™
LED indicators, switches and operator annunciator. (Optional additional 6-light board shown on right.)

Adjustable Premix Firing Head
Produces optimum fuel-air mixture within the premix combustion zone*

Circular Furnace Opening
No special cutting of combustion chamber front plate

Low Gas Pressure Firing Head
Added flexibility of application for low gas pressure conditions*

Characterized Fuel Metering
Varicam® provides adjustable and accurately repeatable fuel-air ratios throughout the firing range*

Total Access Panel
Swing out, easily removable top and front panels give total access to state-of-the-art, compact DIN rail mounted components

unique *air sandwich* firing head design produces full range

Graphic Burner Management System
Director® graphic annunciation of critical burner functions*



PowerFlame

The Power to Manage Energy

The optional Varicam® has 14 adjustable set-points to maintain optimum fuel/air ratios from low to high fire settings.

STANDARD EQUIPMENT

- Alpha System™ LED indicators (power, demand, main fuel, FSG alarm, customer selectable) & control switch
- Pressure regulators, pilot and main gas cocks
- Oil valve, nozzle assembly, manual fuel selector switch
- Air safety switch & leakage test cock
- Gas electric pilot and gas ignition transformer

ADDED FEATURES

X-Standard O-Optional NA-Not Available

- Flame Safeguard with UV and prepurge with interrupted pilot
- On-Off diaphragm gas valve with fixed air control manual adjustment
- Low-Hi-Off motorized gas valve with automatic air control
- Low-Hi-Low motorized gas valve with automatic air control
- Modulation with automatic air control
- Integral 2 stage fuel unit (C1, C2 single stage)
- Remote mounted 2 stage fuel unit (single stage for C6-C8)
- Dual gasⓅ and dual oil safety valves
- High and Low gas pressure switches
- Direct spark ignition (oil)
- Low fire oil start with automatic air control
- Man/Auto switch - manual potentiometer - modulation only

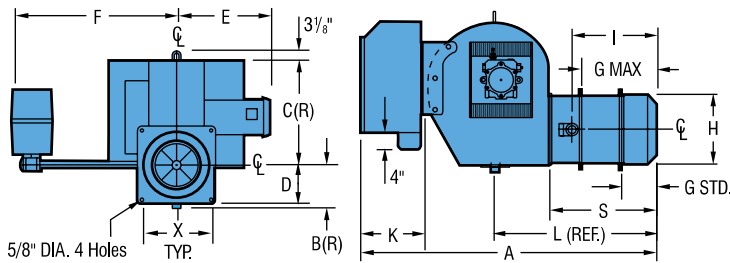
- Ⓟ Postpurge standard on C2-GO-20B and all C3 to C8 models
- Conforms to UL 296 and UL 795



C1-GO-10 C1-GO-12 C2-GO-15	C2-GO-20A	C2-GO-20B	C3-GO-20 C3-GO-25 C3-GO-25B	C4-GO-25	C4-GO-30 C5-GO-30(B) C6-GO-30	C7-GO-30 C8-GO-30
X	X	ⓅX	ⓅX	ⓅX	ⓅX	ⓅX
X	NA	NA	NA	NA	NA	NA
O	X	X	X	X	NA	NA
O	O	O	O	O	NA	NA
O	O	O	O	O	X	X
X	X	X	X	X	NA	NA
O	O	O	O	O	X	X
X	X	X	X	X	X	X
O	O	X	X	X	X	X
O	O	O	O	O	O	O
O	X	X	X	X	X	X
X	X	X	X	X	X	X

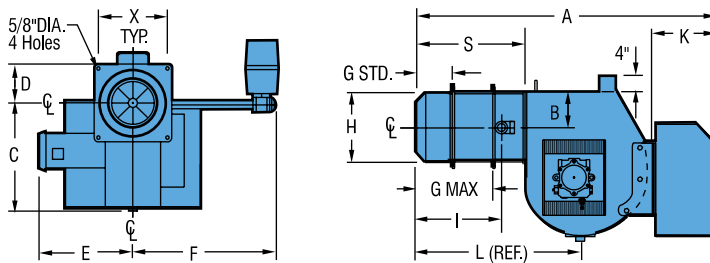
- Ⓟ 5,000 MBH and below may be replaced by one (1) proof of closure valve; above 5,000 MBH one (1) of the safety valves will include proof of closure feature.

MODEL CR (For low centerline applications)



Add 3/8" to "H" for size of opening in boiler front plate

MODEL C



Add 3/8" to "H" for size of opening in boiler front plate

DIMENSIONS (Inches) Standard Models.

- * This dimension may be increased. Consult factory.
- ** This dimension depicts space required to accommodate a standard gas train.

RATINGS & SPECIFICATIONS

Burner Model	CAPACITY ¹																#2 Oil GPH Max.	Natural Gas/MBH Max.	Nominal Boiler H.P. Max.	Blower Motor H.P. (3450 RPM)	Std. Gas Train (In.)	Pressure Pump Suction (GPH)	Gas Pressure Required (In. W.C.) ²
	A	B	B(R)	C	C(R)	D	E	F**	G Std.	G *Max.	H	I	K	L	S	X							
C1-GO-10	34 ¹ / ₈	3 ¹³ / ₁₆	5 ⁹ / ₁₆	14 ¹ / ₂	14 ¹ / ₂	4 ⁵ / ₈	12 ¹ / ₄	20	3 ¹ / ₄	4 ³ / ₄	7 ¹ / ₄	7 ³ / ₈	10 ¹ / ₄	17 ¹ / ₈	12 ⁵ / ₈	7 ¹ / ₄	7.0	980	23.5	1/3	1	†19	5.6
C1-GO-12	34 ¹ / ₈	3 ¹³ / ₁₆	5 ⁹ / ₁₆	14 ¹ / ₂	14 ¹ / ₂	4 ⁵ / ₈	12 ¹ / ₄	20	3 ¹ / ₄	4 ³ / ₄	7 ¹ / ₄	7 ³ / ₈	10 ¹ / ₄	17 ¹ / ₈	12 ⁵ / ₈	7 ¹ / ₄	9.7	1,360	32.3	1/2	1 ¹ / ₄	†19	5.3
C2-GO-15	39 ¹ / ₈	4 ¹ / ₂	6 ¹ / ₈	14 ⁷ / ₈	14	5 ¹ / ₄	14	20	4	6 ³ / ₄	8 ³ / ₄	8 ¹ / ₂	10 ¹ / ₄	18 ¹ / ₈	13 ³ / ₈	8 ¹ / ₂	15.7	2,200	52.3	3/4	1 ¹ / ₂	†70	5.2
C2-GO-20A	39 ¹ / ₈	4 ¹ / ₂	6 ¹ / ₈	14 ⁷ / ₈	14	5 ¹ / ₄	14	20	4	6 ³ / ₄	8 ³ / ₄	8 ¹ / ₂	10 ¹ / ₄	18 ¹ / ₈	13 ³ / ₈	8 ¹ / ₂	17.5	2,500	60.0	1	2	70	4.8
C2-GO-20B	39 ¹ / ₈	4 ¹ / ₂	6 ¹ / ₈	14 ⁷ / ₈	14	5 ¹ / ₄	14	20	4	6 ³ / ₄	8 ³ / ₄	8 ¹ / ₂	10 ¹ / ₄	18 ¹ / ₈	13 ³ / ₈	8 ¹ / ₂	22.0	3,080	73.5	1	2	70	4.8
C3-GO-20	44	5 ¹ / ₄	7	16 ⁵ / ₈	15 ¹ / ₄	6	16	22 ³ / ₈	4 ¹ / ₂	8	10 ¹ / ₈	11 ¹ / ₂	10 ¹ / ₄	22	15 ¹ / ₂	10	30.0	4,200	100.0	2	2	105	7.6
C3-GO-25	44	5 ¹ / ₄	7	16 ⁵ / ₈	15 ¹ / ₄	6	16	22 ³ / ₈	4 ¹ / ₂	8	10 ¹ / ₈	11 ¹ / ₂	10 ¹ / ₄	22	15 ¹ / ₂	10	33.7	4,718	112.0	2	2 ¹ / ₂	105	7.0
C3-GO-25B	44	5 ¹ / ₄	7	16 ⁵ / ₈	15 ¹ / ₄	6	16	22 ³ / ₈	4 ¹ / ₂	8	10 ¹ / ₈	11 ¹ / ₂	10 ¹ / ₄	22	15 ¹ / ₂	10	37.5	5,250	125.0	3	2 ¹ / ₂	135	7.2
C4-GO-25	50	6 ¹ / ₄	7 ⁵ / ₁₆	18 ⁷ / ₈	17 ¹¹ / ₁₆	7	18 ¹ / ₂	28	6	9	12 ¹ / ₈	14 ¹ / ₄	10 ¹ / ₄	26 ⁵ / ₈	19 ¹ / ₈	12	45.0	6,300	150.0	5	2 ¹ / ₂	135	8.0
C4-GO-30	50	6 ¹ / ₄	7 ⁵ / ₁₆	18 ⁷ / ₈	17 ¹¹ / ₁₆	7	18 ¹ / ₂	28	6	9	12 ¹ / ₈	14 ¹ / ₄	10 ¹ / ₄	26 ⁵ / ₈	19 ¹ / ₈	12	56.0	7,840	190.0	5	3	†135	12.1
C5-GO-30(B)	50	6 ¹ / ₄	7 ⁵ / ₁₆	18 ⁷ / ₈	17 ¹¹ / ₁₆	7	18 ¹ / ₂	26 ¹ / ₂	6	9	12 ¹ / ₈	14 ¹ / ₄	10 ¹ / ₄	26 ⁵ / ₈	19 ¹ / ₈	12	75.0	10,500	250.0	7 ¹ / ₂	3	†250	19.9, 17.8
C6-GO-30	49 ⁷ / ₈	6 ¹ / ₄	7 ⁵ / ₁₆	18 ⁷ / ₈	17 ¹¹ / ₁₆	7 ³ / ₄	19 ⁷ / ₈	26 ¹ / ₂	5	11 ³ / ₄	13 ⁵ / ₈	14 ¹ / ₈	10 ¹ / ₄	26 ¹ / ₂	19	13 ¹ / ₂	101.5	14,215	340.0	10	3	†250	26.5
C7-GO-30	51 ¹¹ / ₁₆	8 ¹ / ₈	10 ¹ / ₈	24 ⁵ / ₁₆	22 ³ / ₈	8 ³ / ₄	18	21 ¹³ / ₁₆	4 ⁷ / ₈	11 ¹ / ₄	15 ⁵ / ₈	13 ³ / ₈	9 ¹ / ₈	26 ¹ / ₂	19	13 ¹ / ₂	121.4	17,000	404.0	15	3	235	40.0
C7-GO-30B	51 ¹¹ / ₁₆	8 ¹ / ₈	10 ¹ / ₈	24 ⁵ / ₁₆	22 ³ / ₈	8 ³ / ₄	18	21 ¹³ / ₁₆	4 ⁷ / ₈	11 ¹ / ₄	15 ⁵ / ₈	13 ³ / ₈	9 ¹ / ₈	26 ¹ / ₂	19	13 ¹ / ₂	126.4	17,700	421.0	20	3	235	45.0
C8-GO-30	56 ⁹ / ₁₆	8 ¹ / ₈	10 ¹ / ₈	27 ¹ / ₈	27 ⁵ / ₈	8 ³ / ₄	20	24 ³ / ₈	3 ¹ / ₄	9 ⁵ / ₈	15 ⁵ / ₈	12 ¹ / ₄	9 ¹ / ₈	24 ⁷ / ₈	17 ⁵ / ₁₆	13 ¹ / ₂	136.4	19,100	454.0	15	3	235	50.0

1. Capacities listed are based on 0.20" W.C. positive pressure, except for C5-GO-30B, which is rated for 250 BHP at +1.2" W.C. Refer to capacity curves for derates based upon combustion chamber pressure.
 2. At inlet to main manual shutoff cock to obtain P/F certified ratings with standard U.L. gas train. Optional gas trains and combustion heads available for lower pressures.
- † Remote Pump Set with 200 (208) or 230/460/3/60 motor, 3450 RPM - 3/4 HP - C4; 1750 RPM - 1 HP - C5, C6; 1750 RPM - 1-1/2 HP - C7, C8.
- †† For On-Off and modulating firing modes only. Refer to C Manual for capacities on other modes.



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