



PROFIRE® M SERIES BURNERS

1.4 TO 10.5 MMBTU/HR

Heavy duty forced draft dual fuel burners with multi-fuel versatility.

Multi-Fuel Versatility.

Forced draft dual fuel burner.

The ProFire M series burner forced draft design allows for tried and true trouble-free operation and superior efficiency on boiler, heater, furnace, kiln and dryer applications worldwide. The ProFire M series features low-pressure air atomization of #2-6 fuel oil and combination natural gas/oil in uncontrolled emissions configurations.

The ProFire M series. Setting the *standard* for firing *alternative* fuels.



Precise Air/Oil Metering

An outstanding design feature on all C-B air atomizing burners, the oil metering unit precisely meters light oil volume and is not affected by changes in oil temperature or viscosity.

Air Compressor Module

A remote air compressor module provides air for heavy oil models. The module includes C-B's rotary vane, pressure lubricated air compressor, air/oil lubricating reservoir, oil level indicator, inlet air filter, air pressure adjusting valve and air pressure gauge.

Cam Trim

Cam trim is a standard feature on models M34-M105 that makes it possible to adjust the burner for consistent and precise fuel-to-air ratios throughout the firing range. Excess air is controlled to a minimum through the 14-point adjustment range.

Combustion Air Impeller

Highly efficient backward-curved aluminum impeller with the ability to maintain it's original balance by avoiding the dust collection that is common with forward curved blowers.

Oil Nozzle

The C-B designed low-pressure air-atomizing nozzle achieves the best atomization of oil for each burner model and application. Air is purged through the large nozzle orifice after each burner cycle to prevent after-drip and fouling.

Swing-Away Air Housing

Provides easy access to the nozzle, scanner, pilot and diffuser for inspection or removal. No disconnection of fuel or power lines is required.



The ProFire M Burner Explained:

The ProFire M series burner offers: natural gas, propane gas, air atomized #2-6 fuel oil and combination gas and oil fuel options from 1.4 to 10.5 MM BTU per hour. Full modulation operation is standard for optimum performance to meet load demand. The M burner is an excellent choice when firing alternative fuels such as digester, waste oil, and biodiesel.

ProFire M

Low-pressure air atomizing system on oil with rotary vane compressor

Piston-type positive displacement oil metering system for precise oil control

Cam Trim 14-point adjustment range standard on models M34 - M105

Parallel Positioning available for optimal control throughout the firing range

Nozzle Line Electric Heater standard on medium to heavy oil burners

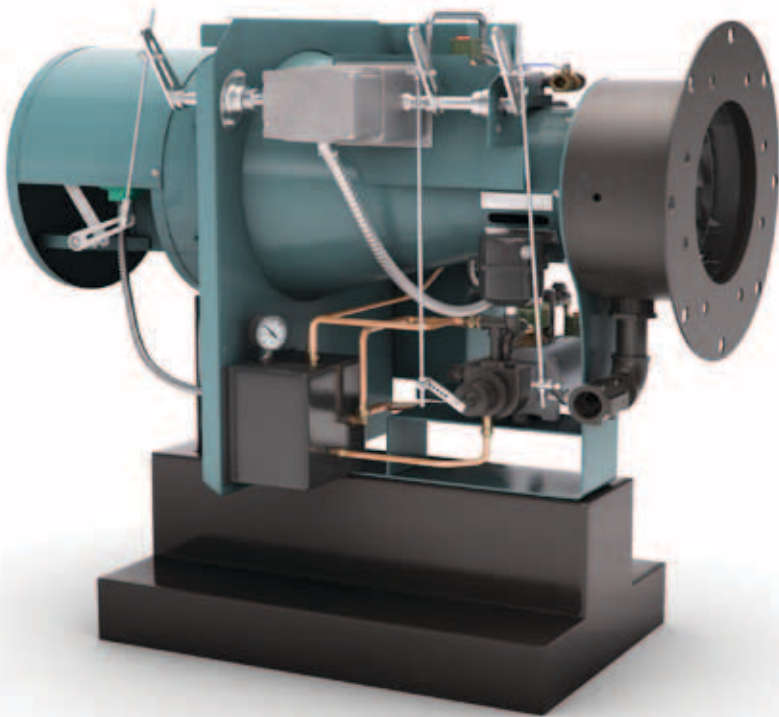
Rotary Air Damper for precise fuel-to-air ratios

Hinged Air Housing for easy access to internal components

Gas Manifold on oil burners standard for easy upgrade to combination units

Combustion Air Impeller provides adequate combustion air for various furnace pressures and high altitude applications

UL & cUL listed



Emissions	Frame	Model Range	Boiler HP	Capacities		Mode of Operation	Fuel	Parallel Positioning
				MBH	GPH ¹			
Uncontrolled	Size 1 - 4	14 - 105	33 - 250	1,400 - 10,500	10 - 75	Full Modulation	Gas, Oil, Comb.	Optional

¹ Oil input (US gph) calculated for #2 Oil @ 140,000 Btu/gal

Uncontrolled Emissions Configuration (MG, MM#2, MMG#2, MM, MMG, ME, MEG)

Burner Model Number & Frame Size	14-1	16-1	19-1	22-1	25-2	28-2	30-2	34-3	42-3	54-3	63-3	84-4	105-4
Gas Input (MBtu/hr)	1,400	1,680	1,960	2,200	2,250	2,800	3,150	3,500	4,200	5,600	6,300	8,400	10,500
Oil Input (US gph) #2 Oil @ 140,000 Btu/gal	10.0	12.0	14.0	15.7	18.0	20.0	22.5	25.0	30.0	40.0	45.0	60.0	75.0
Oil Input (US gph) #4-5 Oil @ 145,000 Btu/gal	9.6	11.6	13.5	15.2	17.4	19.3	21.7	24.1	29.0	38.6	43.5	58.0	72.4
Oil Input (US gph) #6 Oil @ 150,000 Btu/gal	9.3	11.2	13.1	14.7	16.8	18.7	21.0	23.3	28.0	37.3	42.0	56.0	70.0
Boiler HP @ 80% Eff.	33	40	47	52	59	67	75	83	104	133	150	200	250
Minimum Gas Pressure ("w.c.) ¹	10.9	15.7	8.8	10.3	10.1	12.0	14.9	19.0	9.2	16.1	20.3	18.0	15.3
Blower Motor HP "S Model" ²	1/2	1/2	1/2	1/2	2	2	2	2	2	2	3	5	7 1/2
Blower Motor HP "P Model" ³	-	-	-	-	-	-	-	2	2	3	3	7 1/2	7 1/2
MM, MMG, MM#2, MMG#2 Integral Oil/Air Unit Motor HP	3/4	3/4	3/4	3/4	3/4	3/4	3/4	1	1	1	2	2	2
ME, MEG Oil Metering Unit Motor HP ⁴	-	-	-	-	-	-	-	1/2	1/2	1/2	1/2	1/2	1/2
ME, MEG Air Compressor Motor HP ⁴	-	-	-	-	-	-	-	3	3	3	3	3	3
MM, MMG, ME, MEG Nozzle Line Heater (kW)	3	3	3	3	3	3	3	3	3	3	3	5	5
Shipping Weight	450	450	450	450	500	500	650	650	650	750	750	1,200	1,250

¹ Standard gas pressure only, consult factory for lower gas pressures

² Use model "S" up to 0.75" w.c. furnace pressure, consult factory for higher pressures

³ Use model "P" up to 2.0" w.c. furnace pressure, consult factory for higher pressures

⁴ Models ME & MEG 14-30 use the integral oil/air unit as standard. Models ME & MEG 34-105 use the oil metering unit and separate compressor as standard.

Input is based on fuel Btu content and altitude of 2,000 feet or less. If altitude > 2,000 feet and < 8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult factory for higher altitudes. If furnace pressure exceeds listed value, derate capacity 5% for every 0.5" w.c. of pressure in excess of stated. Consult factory if derate exceeds 20%. Gas input is based on natural gas with 1,000 Btu/cu.ft., 0.60 gravity, 0 "w.c. furnace pressure and the aforementioned conditions. Consult factory for 50Hz. applications.



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