

D SERIES

4.2 TO 42.0 MM BTU/HR



**INDUSTRIAL
COMBUSTION**

The Industry Workhorse.

IC performance and reliability since 1969.

The Industrial Combustion D 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 D series, available in uncontrolled, and low NOx configurations offers multi-fuel versatility to meet the toughest air quality standards.

Quality, **HEV-E-duty** construction with a long standing reputation.



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 required

Air Compressor Module

A remote air compressor module provides air for all large oil models. The module includes IC'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 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.

Precise Oil Metering

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

Oil Nozzle

The IC 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.

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.

The D Burner Explained:

The D series burner offers: natural gas, propane gas, air atomized #2-6 oil and combination gas and oil fuel options from 4.2 to 42.0 MM BTU per hour. The LND burner, capable of <30 PPM NOx emissions offers: natural gas, propane gas, air atomized #2 oil and combination gas and oil fuel options from 3.4 to 42.0 MM BTU per hour. Full modulation operation and cam trim are standard for greater efficiency and cost savings. The D burner is an excellent choice when firing alternative fuels such as digester, waste oil, and biodiesel.

D/ LND Burner



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

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

Backward-Curved Impeller provides adequate combustion air for various furnace pressures and high altitude applications

Induced FGR FGR modulating valve and shutoff valve (LND)

No. 2 Oil capability for back-up fuel (LND)

Lower Gas Supply Pressure available for New York City requirements

UL & cUL listed

Emissions	Frame	Model Range	Boiler HP	Capacities		Mode of Operation	Fuel	Parallel Positioning
				MBH	GPH			
Uncontrolled	Size 1 - 8	42 - 420	100 - 1,000	4,200 - 42,000	30 - 300	Full Modulation	Gas, Oil, Comb.	Optional
<30 PPM	Size 1 - 8	34 - 420	80 - 1,000	3,360 - 42,000	24 - 300	Full Modulation	Gas & Comb.	Optional

Uncontrolled Emissions Configuration (DL, DG, DLG)

Burner Model Number & Frame Size	42-1	54-1	63-1	84-2	105-2	145-3	175-4	210-5	252-6	300-6	315-6	336-7	378-8	420-8
Gas Input (MBtu/hr)	4,200	5,400	6,550	8,400	10,500	15,000	17,500	21,000	25,200	30,000	31,500	33,600	37,800	42,000
Oil Input (US gph)	30	39	47	60	75	107	125	150	180	215	225	240	270	300
Boiler HP @ 80% Eff.	100	129	156	200	250	357	417	500	600	714	750	800	900	1,000
Blower Motor HP (S)	3	3	5	5	7 1/2	15	20	20	25	40	-	-	-	-
Blower Motor HP (P)	3	5'	5	7 1/2	10	15	20	25	30	40	60	60	75	75
DL, DLG Integral Oil/Air Unit Motor HP	1	1	1	1	2	2	-	-	-	-	-	-	-	-
DL, DLG Compressor Motor HP	-	-	-	-	-	-	5	5	7 1/2	7 1/2	7 1/2	7 1/2	15	15
DL, DLG Oil Metering Unit Motor HP	-	-	-	-	-	-	1/2	3/4	3/4	3/4	3/4	3/4	1	1
DM, DMG Integral Oil/Air Unit Motor HP	1	1	2	2	2	2	-	-	-	-	-	-	-	-
DM, DMG Compressor Motor HP	-	-	-	-	-	-	5	5	7 1/2	7 1/2	7 1/2	7 1/2	15	15
DM, DMG Oil Metering Unit Motor HP	-	-	-	-	-	-	1/2	3/4	3/4	3/4	3/4	3/4	1	1
DE, DEG Compressor Motor HP	3	3	3	3	3	5	5	5	7 1/2	7 1/2	7 1/2	7 1/2	15	15
DE, DEG Oil Metering Unit Motor HP	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1
Shipping Weight	1,000	1,100	1,200	1,300	1,400	1,850	2,250	2,750	3,100	3,500	3,600	3,800	4,000	4,200

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. Gas input is based on natural gas with 1,000 Btu/cu.ft. and 0.60 gravity. Oil input based on 140,000 Btu/gal. Use model "S" for up to 1.5" w.c. furnace pressure and model "P" for up to 4.0" w.c. furnace pressure. Consult factory for 50Hz. applications. Lower gas supply pressure configurations available for New York City requirements.

<30 PPM Low NOx Configuration (LNDG, LNDLG)

Burner Model Number & Frame Size	34-1	42-1	54-1	63-2	74-2	84-2	105-3	125-3	145-4	175-5	210-6	252-6	300-6.5	315-7	336-8	378-8	420-8
Gas Input (MBtu/hr)	3,360	4,200	5,400	6,550	7,350	8,400	10,500	12,600	15,000	17,500	21,000	25,200	30,000	31,500	33,600	37,800	42,000
Oil Input (US gph)	24	30	38	45	53	60	75	90	105	120	150	180	215	225	240	270	300
Boiler HP @ 80% Eff.	80	100	125	150	175	200	250	300	350	400	500	600	714	750	800	900	1,000
Blower Motor HP	3	5	5	5	7 1/2	10	15	15	20	25	30	40	60	60	75	75	75
Integral Oil/Air Unit Motor HP	1	1	1	1	1	1	2	2	-	-	-	-	-	-	-	-	-
Compressor Motor HP	-	-	-	-	-	-	-	-	5	5	5	7 1/2	7 1/2	7 1/2	15	15	15
Oil Metering Unit Motor HP	-	-	-	-	-	-	-	-	1/2	1/2	3/4	3/4	3/4	3/4	1	1	1
Furnace Pressure ("w.c.)	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Shipping Weight	1,000	1,275	1,275	1,500	1,500	1,500	1,850	1,850	2,250	2,850	3,500	3,750	3,800	4,000	4,750	5,000	5,550

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. Gas input is based on natural gas with 1,000 Btu/cu.ft. and 0.60 gravity. Oil input based on 140,000 Btu/gal.

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