



IRON FIREMAN®

Models AO, AG & AGO

4.2 thru 25.5

Forced Draft Industrial Oil, Gas & Gas/Oil Burners

Features

The Air Atomizing AO & AGO Forced Draft Modulating Oil Burner is a complete fuel burning system; factory assembled, wired, piped and tested. The unit includes a burner, forced draft blower, and a totally enclosed electrical control panel which contains a sensitive programming electronic combustion safety control plus motor starter, signal lights, combustion air flow proving switch, etc.

These packaged units may be readily applied to all types of boilers of high or low pressure, including Scotch Marine, by bolting the burner assembly to the boiler front. Refractory work is usually minor. Precisely directed air from the blower whirls the oil droplet fog produced by the compressed air atomizing nozzle – mixing it so thoroughly that a refractory combustion chamber is not normally required to obtain efficient combustion.

The flame is highly efficient and operates equally well with boilers having either positive or negative draft in the combustion chamber.

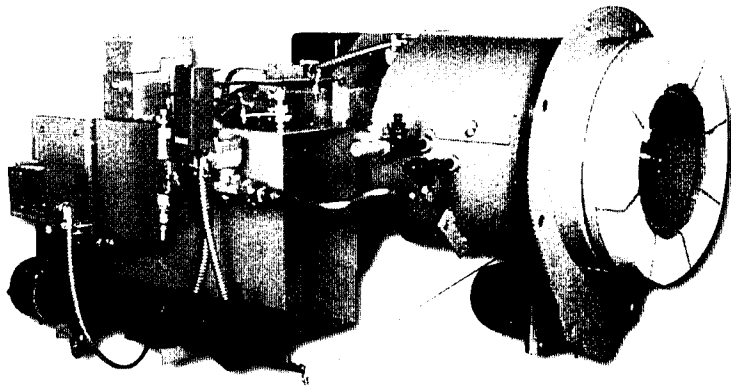
New firing head mixes air and fuel instantly with a resultant short clean flame and complete combustion.

Specially shaped refractory combustion chamber is usually not necessary to assist combustion.

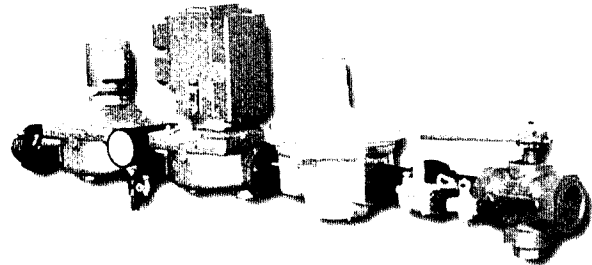
Eliminates need for draft-producing stack or induced draft fan. Burner blower has sufficient capacity to provide air flow through burner head and overcome frictional resistance of products of combustion in most boiler designs.

No draft controls are necessary in stub stacks. Barometric dampers only are required in stacks from 40 feet high to 80 feet high. Motorized stack dampers are recommended in stacks exceeding 80 feet in height.

Reduces "stand-by" loss to negligible amount.



AO-6.3 or 9.8 Burner



Gas Piping Group



+F.M., I.R.I., NYC B.A.R., Minnesota and other codes available



IRON FIREMAN®

Models AO, AG & AGO 4.2 thru 25.5 Forced Draft Industrial Oil, Gas & Gas/Oil Burners

Specifications

AO Series Air Atomizing Oil Burners

BURNER MODEL NUMBER	MAXIMUM FIRING RATE GPH	MAXIMUM FURNACE PRESSURE	BLOWER MOTOR HP	COMPRESSOR MOTOR HP	OIL PUMP MOTOR HP	ELECTRIC OIL HEATER KW	FLAME SAFEGUARD MODEL		APPROX. SHIPPING WEIGHT
AO-2-4.2	30	1.0" W.C.	3	2	1/3	—	EPD160/EUV1		750
AO-2-6.3	48	2.0" W.C.	5	2	1/3	—	EPD160/EUV1		800
AO-2-9.8	75	2.0" W.C.	7-1/2	3	1/3	—	EPD160/EUV1		800
AO-2-15	107	3.0" W.C.	15	3	1/2	—	EPD160/EUV1		1000
AO-2-22.5	150	2.0" W.C.	20	3	1	—	EPD160/EUV1		1200
AO-2-25.5	180	2.0" W.C.	25	5	1	—	EPD160/EUV1		1200
AO-4-4.2	30	1.0" W.C.	3	2	1/3	5	EPD160/E1R1		750
AO-4-6.3	45	2.0" W.C.	5	2	1/3	5	EPD160/E1R1		800
AO-4-9.8	70	2.0" W.C.	7-1/2	3	1/3	5	EPD160/E1R1		800
AO-4-15	100	3.0" W.C.	15	3	1/2	7-1/2	EPD160/E1R1		1000
AO-4-22.5	140	2.0" W.C.	20	3	1	10	EPD160/E1R1		1200
AO-4-25.5	168	2.0" W.C.	25	5	1	10	EPD160/E1R1		1200
AO-6-4.2	30	1.0" W.C.	3	2	1/3	5	EPD160/E1R1		750
AO-6-6.3	45	2.0" W.C.	5	2	1/3	5	EPD160/E1R1		800
AO-6-9.8	70	2.0" W.C.	7-1/2	3	1/2	5	EPD160/E1R1		800
AO-6-15	100	3.0" W.C.	15	3	1/2	7-1/2	EPD160/E1R1		1000
AO-6-22.5	140	2.0" W.C.	20	3	3/4	10	EPD160/E1R1		1200
AO-6-25.5	168	2.0" W.C.	25	5	3/4	10	EPD160/E1R1		1200

Specifications

AG Series Gas Burners

BURNER MODEL NUMBER	MAXIMUM FIRING RATE GPH	MAXIMUM FURNACE PRESSURE	BLOWER MOTOR HP	COMPRESSOR MOTOR HP	OIL PUMP MOTOR HP	ELECTRIC OIL HEATER KW	FLAME SAFEGUARD MODEL	STANDARD GAS TRAIN SIZE	MINIMUM GAS PRESSURE	APPROX. SHIPPING WEIGHT
AG-6.3	6,300	2.0" W.C.	5	—	—	—	EPD160/EUV1	3"	8" W.C.	550
AG-9.8	10,500	2.0" W.C.	7-1/2	—	—	—	EPD160/EUV1	3" H.F.	11" W.C.	575
AG-15	15,000	3.0" W.C.	15	—	—	—	EPD160/EUV1	3" & 4" H.F.	9" W.C.	650
AG-22.5	21,000	2.0" W.C.	20	—	—	—	EPD160/EUV1	4" H.F.	15" W.C.	750
AG-25.5	25,000	2.0" W.C.	25	—	—	—	EPD160/EUV1	4" H.F.	19" W.C.	800

Specifications

AGO Series Gas & Air Atomizing Oil Burners

BURNER MODEL NUMBER	MAXIMUM FIRING RATE GPH	MAXIMUM FURNACE PRESSURE	BLOWER MOTOR HP	COMPRESSOR MOTOR HP	OIL PUMP MOTOR HP	ELECTRIC OIL HEATER KW	FLAME SAFEGUARD MODEL	STANDARD GAS TRAIN SIZE	MINIMUM GAS PRESSURE	APPROX. SHIPPING WEIGHT
AGO-2-4.2	4,200/30	1.0" W.C.	3	2	1/3	—	EPD160/EUV1	2"	8" W.C.	750
AGO-2-6.3	6,300/45	2.0" W.C.	5	2	1/3	—	EPD160/EUV1	3"	8" W.C.	800
AGO-2-9.8	10,500/75	2.0" W.C.	7-1/2	3	1/3	—	EPD160/EUV1	3" H.F.	11" W.C.	800
AGO-2-15	15,000/100	3.0" W.C.	15	3	1/2	—	EPD160/EUV1	3" & 4" H.F.	9" W.C.	1000
AGO-2-22.5	21,000/150	2.0" W.C.	20	3	1	—	EPD160/EUV1	4" H.F.	15" W.C.	1200
AGO-2-25.5	25,000/180	2.0" W.C.	25	5	1	—	EPD160/EUV1	4" H.F.	19" W.C.	1200
AGO-4-4.2	4,200/30	1.0" W.C.	3	2	1/3	5	EPD160/E1R1	2"	8" W.C.	750
AGO-4-6.3	6,300/45	2.0" W.C.	5	2	1/3	5	EPD160/E1R1	3"	8" W.C.	800
AGO-4-9.8	10,500/70	2.0" W.C.	7-1/2	3	1/3	5	EPD160/E1R1	3" H.F.	11" W.C.	800
AGO-4-15	15,000/100	3.0" W.C.	15	3	1/2	7-1/2	EPD160/E1R1	3" & 4" H.F.	9" W.C.	1000
AGO-4-22.5	21,000/140	2.0" W.C.	20	3	1	10	EPD160/E1R1	4" H.F.	15" W.C.	1200
AGO-4-25.5	25,000/168	2.0" W.C.	25	5	1	10	EPD160/E1R1	4" H.F.	19" W.C.	1200
AGO-6-4.2	4,200/30	1.0" W.C.	3	2	1/3	5	EPD160/E1R1	2"	8" W.C.	750
AGO-6-6.3	6,300/45	2.0" W.C.	5	2	1/3	5	EPD160/E1R1	3"	8" W.C.	800
AGO-6-9.8	10,500/70	2.0" W.C.	7-1/2	3	1/2	5	EPD160/E1R1	3" H.F.	11" W.C.	800
AGO-6-15	15,000/100	3.0" W.C.	15	3	1/2	7-1/2	EPD160/E1R1	3" & 4" H.F.	9" W.C.	1000
AGO-6-22.5	21,000/140	2.0" W.C.	20	3	3/4	10	EPD160/E1R1	4" H.F.	15" W.C.	1200
AGO-6-25.5	25,000/168	2.0" W.C.	25	5	3/4	10	EPD160/E1R1	4" H.F.	19" W.C.	1200

Model Number Explanation

AO = OIL FIRED — 2 = NO. 2 OIL; 4 = NO. 4 OIL; 6 = NO. 6 OIL — MODEL SIZE
 AG = GAS FIRED — MODEL SIZE
 AGO = COMBINATION — GAS & 2 = NO. 2 OIL; 4 = NO. 4 OIL; 6 = NO. 6 OIL — MODEL SIZE

NOTES: A. Additional heating equipment required when firing No. 5 & No. 6 oils. Standard burners require approximately 200 F. oil delivered to the burner.

B. Gas train sizes based on natural gas at minimum pressure shown up to 1 psi gas supply pressure. For other supply pressures and gas types, consult factory for alternate gas trains.

Standard Equipment – Type AO and AGO Air Atomizing Burners

Burner

Forced Draft Fan w/Motor
Full Modulation
Gas-Electric Ignition (interrupted)
Gas Pressure Regulator for Pilot
Gas Shut-Off Valve for Pilot, manual
Gas Solenoid Valve for Pilot
Housing Complete with Access
Low Fire Start Proving Switch
Modutrol Motor and Linkage
Flame Observation Port

Control Panel (Cabinet)

30" L x 13-3/8" H x 6-3/4" D
Totally Enclosed and Factory Mounted & Wired
Control Circuit Fuse
Combustion Air Proving Switch
Control Circuit Transformer, 115v
Electronic Combustion Control
Lights: Pilot, Main Fuel(s), & Lockout
Manual On-Off Switch
Manual Fuel Changeover Switch (GO models)
Manual Potentiometer
Pre and Post Purge
Starter For Fan Motor
Starter For Compressor/Pump
Motor (Starter not included for oil pump motor — For #6 oil firing)
Terminal Strips and Wiring
Flame Signal Meter
Sonalert Alarm (with I.R.I. models)

Electrical

Motors are 208-230/460V 3ph 60cy
Controls are 115V, 60cy, 1 Phase
Electric Oil Heaters are 208-230/460V 3ph 60cy

Ignition is natural gas type (L.P. gas type available — Order must specify).

Oil Firing Units

Oil Metering Valve
Oil Suction Strainer
Oil Pump and Motor
Oil Nozzle
Dual Oil Solenoid Valves
Electric Oil Heater for #4, #5 or #6 Oil Firing & Temperature Switch,
Temperature Gauge, and Heater Contactor
#6 Oil Burners Include:
Circulating Valve, Discharge Oil Strainer, Oil Pump Relief Valve
Low Oil Pressure Switch

Gas Firing Units

High Gas Pressure Switch
Butterfly Gas Metering Valve
Gas Controls Group

Gas-Oil Firing Units

All Standard Equipment for Oil Firing
Manual Fuel Selector Switch
Natural or L.P. Gas Firing

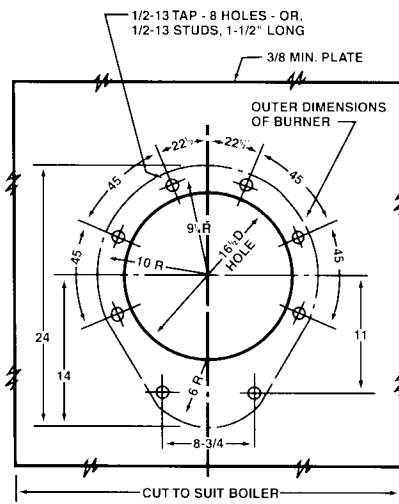
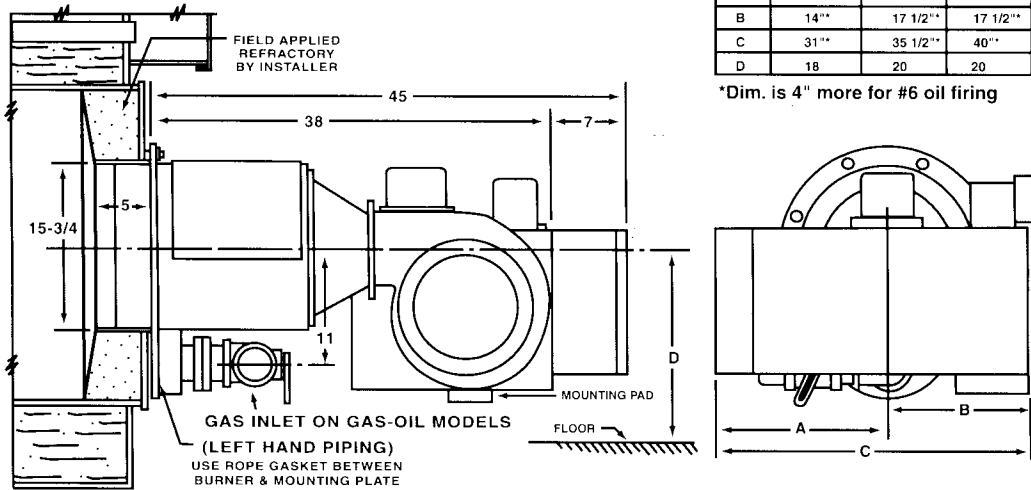
Air Compressor

Piston Type Air Compressor with Air Filter & Lubrication
Atomizing Air Proving Switch

NOTE: Maximum firing rates are based upon test results at 1500 ft. elevation with combustion air at 70° F. Capacities may vary dependent upon elevation and air temperature and combustion chamber configuration, dimensions, etc.

Dimensions-Inches (general)

4.2, 6.3, 9.8, 15, 22.5, and 25.5 Burner



4.2, 6.3, 9.8, 15, 22.5, and 25.5 Burners
Details for Mounting Plate
(Plate not furnished)



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