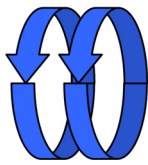


FD68-LN Low NOx Burner



FD68-LN

johnson burners

Reliable 30 ppm NOx Compliance

Wide Turndown • Quiet Operation
Easy To Commission • Easy To Service

System Specs

Capacities:	50 to 1000 boiler HP
Fuels:	Natural Gas, LPG, #2 Fuel Oil
Applications:	Scotch (firetube), Flextube, Watertube and Firebox Boilers, Process Furnaces
Emissions:	25-30 ppm NOx firing Natural Gas
Approvals:	UL listed US & Canada
Standards:	UL standard CSD-1, IRI, FM, NFPA optional
Motor Power	460 V, 3 Ph, 60 Hz standard 230, 380, 575 V, 50 Hz optional
Control Power:	120 V, 60 Hz standard 220 V, 50 Hz optional



US, Canada

Standard Equipment • Gas Fired Units

- Heavy duty, steel welded swing-open housing
- Integral air fan with premium efficiency motor
- Integral fan silencer on all units
- Precise air control damper
- Firing head/diffuser assembly
- Refractory throat, pre-cast with stainless flange
- Gas-electric ignition system
- Butterfly gas control valve
- Gas safety shutoff valves and interlocks



State of the Art Controls

- NEMA 1 control panel
- Linkage-less parallel positioning fuel-air modulation control
- UL listed Flame Safeguard system with status indication
- IR flame scanner
- Annunciating lights for system status
- Motor starter for air fan



Light Oil-Fired Units

- Oil metering control valve
- Oil safety and return valves and interlocks
- Oil pressure regulator
- Oil pump, motor and oil strainer
- Atomizing air compressor on air atomized units
- Motor starters for air compressor and oil pump

Optional Equipment

- Variable Frequency Drive on air fan motor
- Oxygen trim
- NEMA 4 control panel
- Boiler Manager® PLC-based boiler controls with touchscreen interface for higher burner efficiency

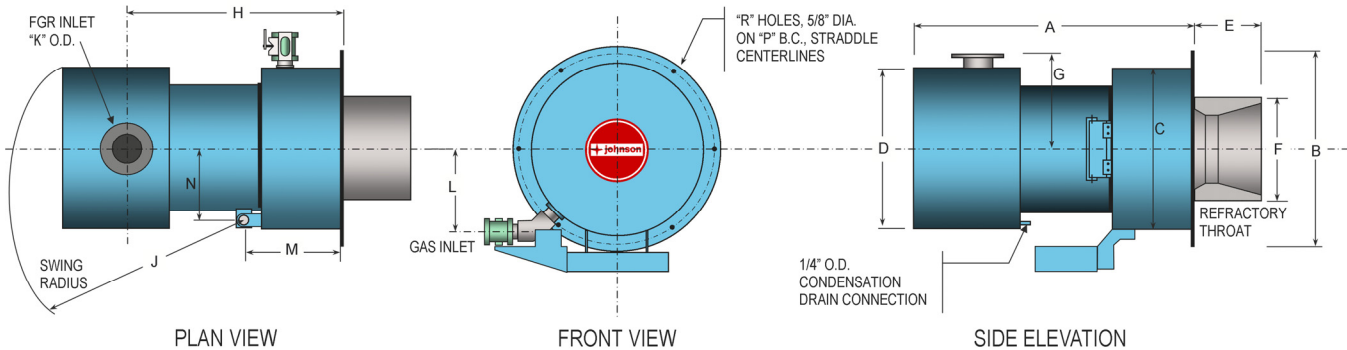
Capacities and Specifications

Burner Size	Burner Capacities ⁽¹⁾		Boiler HP	Blower HP	Oil Pump HP-RPM ⁽²⁾		Air Compr. HP	Emissions Nat Gas ⁽³⁾	
	MBH Gas	GPH #2 Oil			Press. Atom.	Air Atom.		NOx (ppmvd)	CO (ppmvd)
125	4,730	34	112	2	3/4 - 1725	1/3 - 1725	2	30	100
150	6,330	45	150	2	3/4 - 1725	1/3 - 1725	2	30	100
200	8,490	61	202	5	3/4 - 1725	1/3 - 1725	2	30	100
250	9,460	68	225	7 1/2	1 - 1725	1/3 - 1725	2	30	100
300	12,670	91	301	7 1/2	1 1/2 - 3450	1/2 - 1725	2	30	100
400	17,100	122	406	15	n/a	3/4 - 1725	3	30	100
500	21,290	152	506	20	n/a	3/4 - 1725	3	30	100
625	26,600	190	632	25	n/a	3/4 - 1725	5	30	100
800	35,490	254	844	30	n/a	1 - 1150	7 1/2	30	100
1000	39,030	279	928	40	n/a	1 - 1150	7 1/2	30	100
1200	42,000	300	1000	60	n/a	1 - 1150	7 1/2	30	100

- (1) Gas input based on 1,000 BTU/CF gas & 0.64 specific gravity. Boiler capacity based on 80% combustion efficiency. Burner capacity and blower motor HP rated for 0.75" w.c. furnace pressure at sea level and 60 cycle motor power.
- (2) Higher furnace pressure may require a larger burner size and motor HP requirements. Consult factory for job specific requirements.
- (3) Typical emissions corrected to 3% O₂ dry basis.

Dimensions (Inches)

IMPORTANT! FGR inlet size (K dimension) should not be used for sizing FGR ductwork. Required FGR pipe size is affected by burner capacity, required NOx limit, length of piping, and expected number of direction changes. Recommendations will be made on each individual job.



Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
125	39.88	22.5	20.0	15.25	12.00	16.00	12.25	29.50	24.75	4	8.625	11.25	8.0	21.25	6
150-250	41.75	26.5	24.0	19.25	12.75	19.13	22.63	31.75	35.88	4	10.50	13.50	12.5	25.25	6
300	49.00	31.5	29.0	28.75	12.75	19.13	17.38	39.25	43.63	6-8	12.50	16.75	15.0	30.25	6
400	53.13	31.5	29.0	28.75	13.50	22.00	17.38	40.25	43.63	6-8	12.50	16.75	15.0	30.25	6
500	53.88	36.5	34.0	35.00	13.50	22.75	20.50	42.69	51.00	8	14.25	16.75	17.5	35.25	6
625	53.88	36.5	34.0	35.00	13.50	23.75	20.50	42.69	51.00	8	14.25	16.75	17.5	35.25	6
800-1000	80.88	41.0	38.0	39.00	15.00	28.00	21.56	55.13	71.63	10	16.25	20.75	19.5	39.50	12
1200	100.00	41.0	38.0	48.00	16.00	30.25	26.00	64.50	93.00	12	20.25	20.75	21.5	39.50	12

- (1) All dimensions are subject to change without notice. Consult factory for current information.
- (2) Dimensions and specifications may change according to the application and emission targets.
- (3) * Consult factory where noted.

S.T. Johnson Company

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Your authorized S.T. Johnson distributor