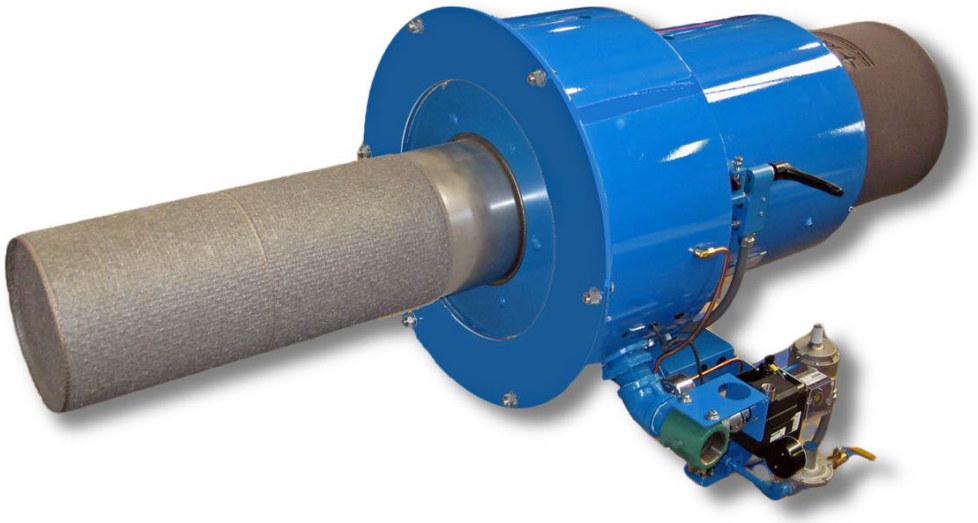
NOXmatic® Ultra Low NOx Burner

johnson burners

NOXmatic®

Compliance out-of-the-box



9 ppm NOx Compliance Out Of The Box

No Flue Gas Recirculation
Easy Installation • Fast Commissioning
No Operational Compromises

johnson burners

NOXmatic®

Ultra Low NOx Compliance Out Of The Box

Full Premix for Inherent Ultra Low NOx Performance

Safe full premix design uses a stainless steel fibermat firing head and requires no FGR to deliver single digit NOx emissions, for a simple, cost effective solution for any application.

The Power of Axial-Flow

The NOXmatic® burner combines proven high performance axial airflow burner design with ultra low NOx technology to create a compact, quiet, and energy efficient unit.

Variable Speed Blower Standard on All Units

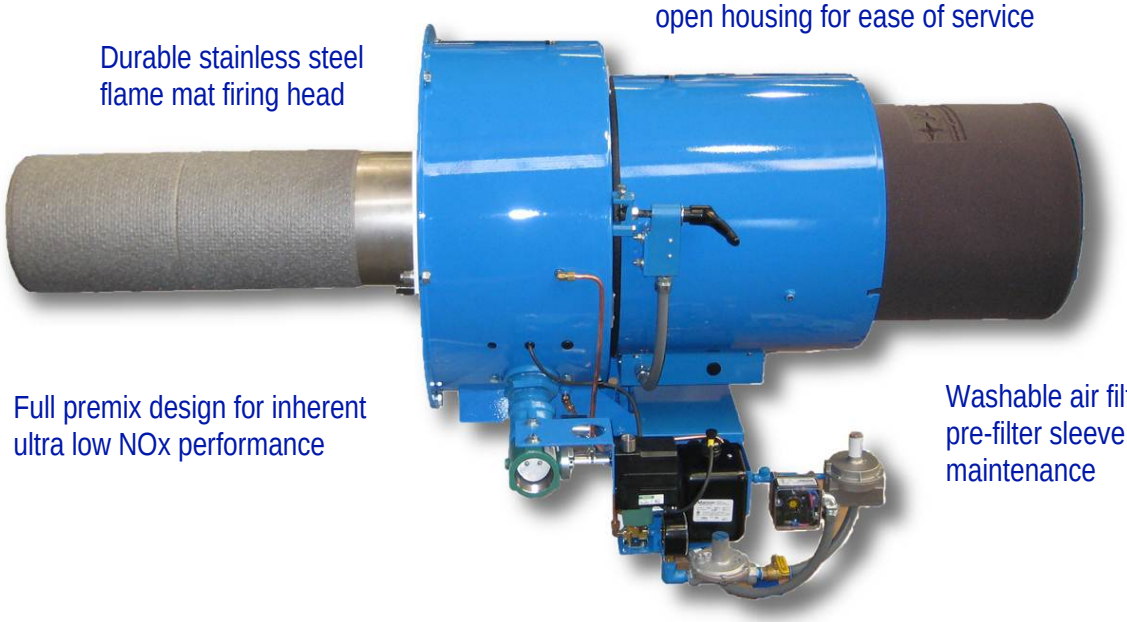
A variable speed blower (VSB) package provides significant cost savings with a 20 to 40% reduction in electrical consumption compared to single-speed blowers.

Heavy Duty, Easy Access Housing

S.T. Johnson's trademark heavy duty, swing-open housing allows easy access to the firing head and all burner components for service without removing the burner from the boiler.

System Specs

Capacities:	50 to 800 boiler HP
Fuels:	Natural Gas, LPG #2 Fuel Oil Backup available with Interchangeable Firing Head
Applications:	Scotch (firetube), Firebox, Watertube Boilers Other furnaces
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
Approvals:	UL 508A approved control panel
Standards:	UL standard CSD-1, IRI, FM or NFPA optional
Emissions:	Sub 9 ppm NOx without FGR firing Natural Gas



Complete Package

Standard Equipment - All Units

- Heavy duty construction, swing-open burner housing
- Ultra low NOx stainless steel fiber mat firing head
- Integral axial air blower with premium efficiency motor
- Gas-electric premix type pilot system with pilot gas train
- Butterfly gas control valve with servo motor
- Air filter with washable element and pre-filter sleeves
- Air filter safety switch
- Field wiring junction box

Main Gas Fuel Train

- Dual block main gas shutoff valves with integrated pressure regulator and proof of closure switch on downstream valve
- Normally open gas vent valve
- High and low gas pressure switches
- Main gas and leak test manual valves

State of the Art Controls

- NEMA 12 enclosure
- UL listed flame safeguard programmer and flame scanner
- Precise parallel-positioning linkage-less fuel-air ratio controller with position feedback and VFD module
- Touchpad operator interface
- Variable Frequency Drive (VFD) for air blower motor
- Annunciating lights for system status
- Cal Code lights for low water and high water
- Alarm horn and silencing switch

Optional #2 Fuel Oil Backup

All the standard equipment above, plus the following:

- Interchangeable fuel oil firing head, easily changed out with swing open housing
- Fuel oil metering valve and servo motor
- Oil shutoff valves, backpressure regulator
- Fuel oil, atomizing air safety interlocks and gages
- Atomizing air valve train, PRV for plant air
- Oil pump and motor, oil strainer
- Optional atomizing air compressor

Optional Low NOx on #2 Oil Backup Units

Optional #2 oil backup equipment, plus the following:

- Induced FGR mix chamber
- FGR control and shutoff valves with servo motors
- Precise triple disk air damper with servomotor

Optional Control System Upgrades

- Optional touchscreen interface in lieu of touchpad
- Oxygen Trim
- Nema 4 control panel
- Boiler Manager® PLC-based boiler controls with touch screen operator interface for higher burner efficiency (refer to Boiler Manager® brochure)

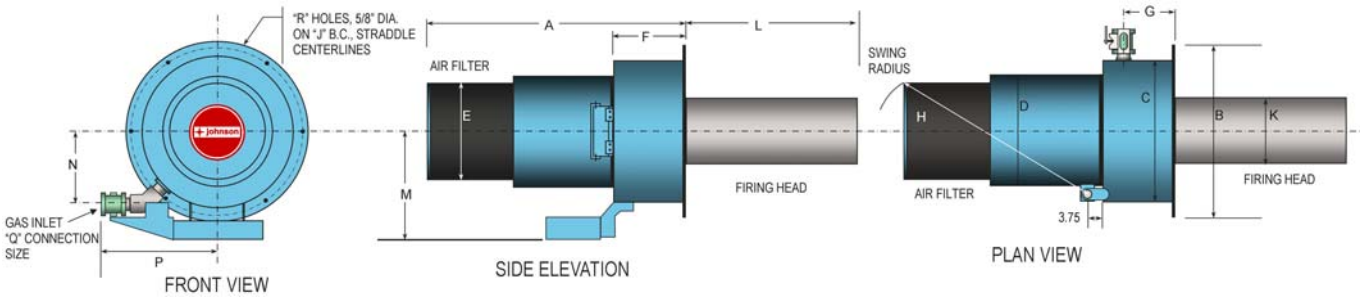
NOXmatic® Burner (NM-A)

Capacities and Specifications

Burner Size	Capacities (1) Gas MBH	Boiler HP	Blower Motor (2) HP	Emissions (3)	
				NOx (ppmdv)	CO (ppmdv)
NM – 100 – A	4,200	100	5	9	50
NM – 125 – A	5,250	125	5	9	50
NM – 150 – A	6,300	150	7.5	9	50
NM – 200 – A	8,400	200	10	9	50
NM – 250 – A	10,500	250	15	9	50
NM – 300 – A	12,600	300	15	9	50
NM – 350 – A	14,700	350	20	9	50
NM – 400 – A	16,800	400	25	9	50
NM – 500 – A	21,000	500	30	9	50
NM – 600 – A	25,200	600	40	9	50
NM – 800 – A	33,600	800	50	9	50

(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% O_2 dry basis. Capacities and specifications shown for 9 ppm NOx.

Dimensions (Inches)



Size	A (1)	B	C	D	E	F	G	H (1)	J	K	L	M	N	P	Q	R
100-150	46	26.5	24	19.38	15.25	11.75	6.625	35.25	25.25	9.5	*	17.5	10.5	17.75	2	6
200	57	31.5	29	28.75	19.63	13	8	40	30.25	11	*	21.5	12.5	20	2.5	6
250-300	57	31.5	29	28.75	19.63	13	8	40	30.25	15	*	21.5	12.5	20	2.5	6
350-400	62	36.5	34	28.88	20	13.5	8	45	35.25	16	*	24	14.63	24	3	6
500-600	70	41	38	32.88	27.25	17.5	10	58.38	39.5	20	*	24	18	26	3	12
800	72	41	38	32.88	39	17.5	10	60	39.5	21.5	*	24	18	26	3	12

(1) On units with optional low NOx oil backup, total length "A" and swing radius "H" increase by 12 to 18 inches. Consult factory for exact dimensions.
(2) All dimensions are subject to change without notice. Consult factory for current information.
(3) Dimensions and specifications may change according to the application and emission targets.
(4) Minimum firetube diameter shall be dimension "K" plus 12 inches.
(5) * Consult factory where noted.

S.T. Johnson Company
5160 Fulton Drive • Fairfield, CA 94534 • USA
Phone (510) 652-6000 • Fax (510) 652-4302
www.johnsonburners.com

Pub. ***NOXmatic A-Type Jan. 2014***

Your authorized S.T. Johnson distributor