

# NOXmatic Series

## Ultra Low-NOx Burners

**MODELS:** NMA / NMV / NM-RF

**SIZE RANGE:** 40 - 1,500 HP

# Features of the NOXmatic Series



## RUGGED INDUSTRIAL DESIGN

### ► SUPERIOR HOUSING

Cylindrical windbox design provides greater stability than the square geometries of competitors' burners.

### ► HEAVY-DUTY MATERIALS

Our flanges are 1/4-inch; our rolled steel is 3/16-inch. Using thicker steel in our burners provides greater safety, durability, and service life.

### ► ANTI-FLASHBACK DESIGN

Axial counter-flow design makes the burner head significantly more stable and safer than competing designs.

### ► INDUSTRY'S QUIETEST BURNER

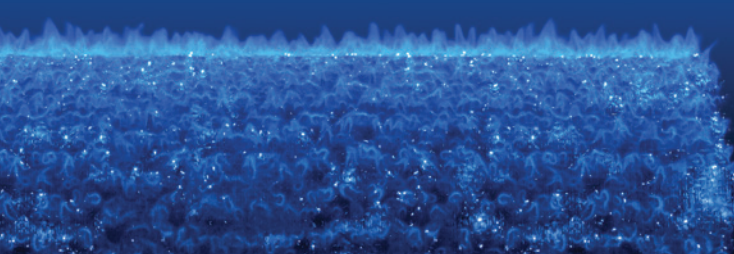
Industry-leading sound attenuation due to axial flow burner and heavy-duty, cylindrical burner housing means lower operating noise.



## ULTRA LOW-NO<sub>x</sub> WITHOUT FLUE-GAS RECIRCULATION

- **Sub 9 PPM standard** and capable of lower emissions\* without the hassle and cost of FGR.
- **Turndown up to 8:1** for improved load balancing and system efficiency.
- **Precise combustion air control** maintains optimum combustion throughout firing range.

\* Committed to adhering to the world's strictest air emissions standards adopted by the state of California.



## CONTROL FEATURES\*

- Combustion fan VFD
- Oxygen trim
- NEMA 4/12
- HMI touch-screen
- Parallel positioning
- Single-point power connection



\* Some features optional

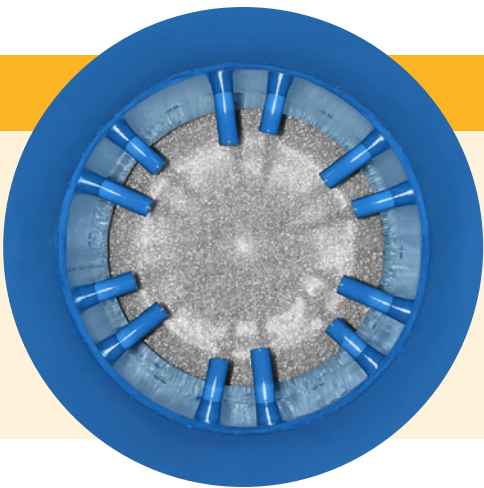
## APPROVALS & STANDARDS

UL-508A, CSD-1, GE Gap, FM or NFPA optional

# Model NMV

## HIGH-TURNDOWN VENTURI BURNER

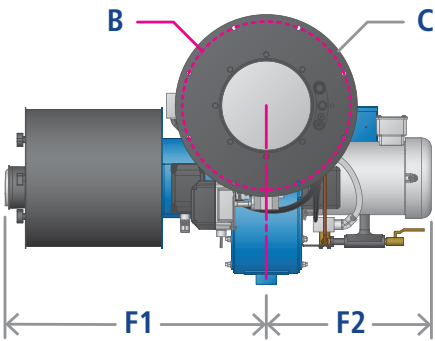
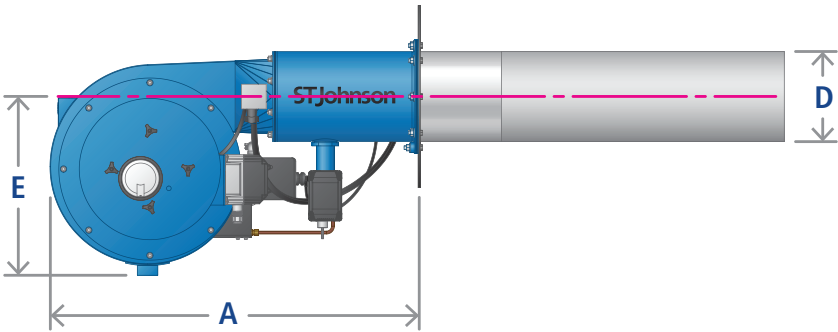
SIZE RANGE	40 – 250 HP
EMISSIONS	9 ppm NOx
TURNDOWN	Up to 8:1
FUELS	Natural Gas



### VENTURI FUEL DELIVERY

Using CFD modeling, gas injector design and positioning have been optimized to ensure more complete combustion through the uniform mixing of air and gas. This decreases NOx emissions and guarantees the highest possible efficiency for all burner firing rates.

Robust and simple injector design ensures robust and reliable performance with high turndown.



		MODEL:	4F	4X	5F	5X	6F	6X	7F	7X
SPECIFICATIONS	Boiler Output	HP	40 - 50	60	80	100	125	150	200	250
	Gas Capacity	MMBH	2,100	2,520	3,360	4,200	5,250	6,300	8,400	10,500
	Blower Motor	HP	1.5	2	5	5	7.5	7.5	10	15
	Gas Pressure	PSIG	1	1	1	1	1	1	1	1
	Furnace Pressure	IN W.C.	2	2	4	4	4	4	4	4
	Ship Weight	LBS	550	550	600	600	700	700	900	900
DIMENSIONS	A	IN	35	35	38.7	38.7	39.7	39.7	46.2	46.2
	B	IN	16.5	16.5	16.5	16.5	18	18	18	18
	C	IN	18	18	18	18	19.5	19.5	19.5	19.5
	D	IN	8	8	8	8	10	10	10	10
	E	IN	17.5	17.5	19.2	19.2	19.2	19.2	21.5	21.5
	F1 / F2	IN	21 / 16	21 / 16	22 / 17.7	22 / 17.7	28 / 17.7	28 / 17.7	37.8 / 18.6	37.8 / 18.6



# Model NMA

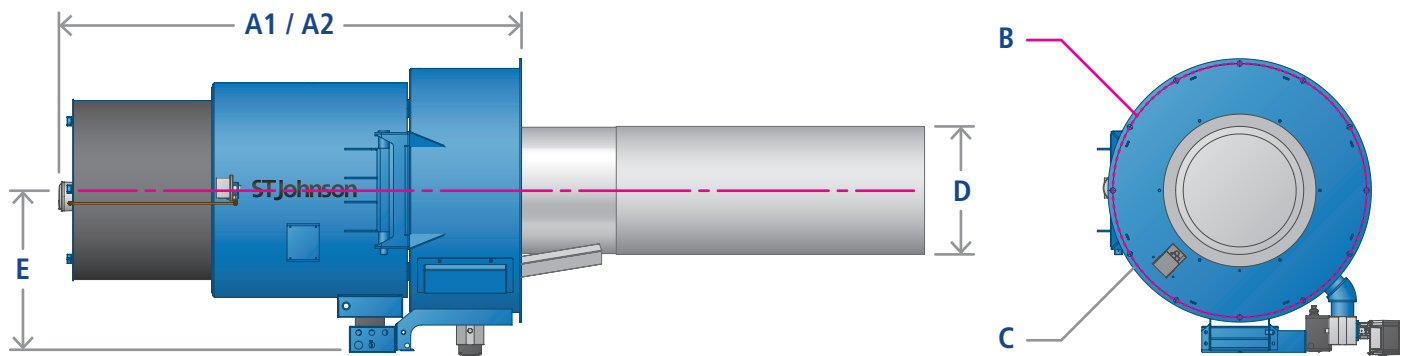
## QUIET & RELIABLE AXIAL-FLOW BURNER

SIZE RANGE	100 – 800 HP
EMISSIONS	5 – 9 ppm NOx
TURNDOWN	Up to 6:1
FUEL OPTIONS	Natural Gas or Dual-Fuel (#2 Oil)



### EASY TO SERVICE & MAINTAIN

The NMA features a convenient swing-open housing which provides quick and easy access to burner head. This streamlines routine burner maintenance and makes dual-fuel conversion simple and fast.

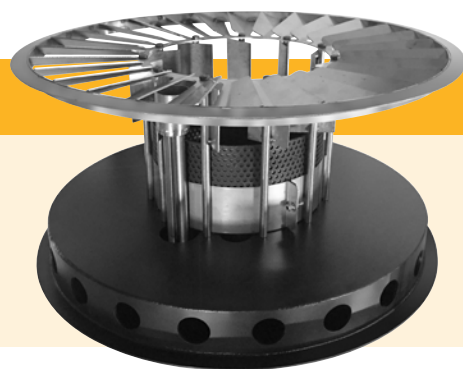


			MODEL:	100A	125A	150A	200A	238A	250A	300A	350A	400A	500A	600A	800A
SPECIFICATIONS	Boiler Output	HP		100	125	150	200	238	250	300	350	400	500	600	800
	Gas Capacity	MMBH		4,200	5,250	6,300	8,400	10,000	10,500	12,600	14,700	16,800	21,000	25,200	33,600
	Blower Motor	HP		5	5	7.5	10	10	15	15	20	25	40	40	75
	Gas Pressure	PSIG		1.5	1.7	1.9	2.3	2.0	2.1	1.7	1.9	2.1	1.9	2.2	1.9
	Furnace Pressure	IN W.C.		2	2	2	2	2	4	4	4	4	4	4	4
	Ship Weight	LBS		1,000	1,000	1,000	1,200	1,200	1,500	1,500	1,600	1,600	2,000	2,000	2,500
DIMENSIONS	A1	IN		47.9	47.9	47.9	58.3	58.3	58.3	58.3	69	69	72	72	78.4
	A2 (Swing Length)	IN		50.6	50.6	50.6	62.3	62.3	62.3	62.3	73.5	73.5	81	81	89.7
	B	IN		25.25	25.25	25.25	30.25	30.25	30.25	30.25	35.25	35.25	39.5	39.5	39.5
	C	IN		26.5	26.5	26.5	31.5	31.5	31.5	31.5	36.5	36.5	41	41	41
	D	IN		9.5	9.5	9.5	11	11	14	14	16	16	20	20	21.5
	E	IN		17.9	17.9	17.9	20.5	20.5	20.5	20.5	23.2	23.2	25.2	25.2	25.2

# Model NM-RF

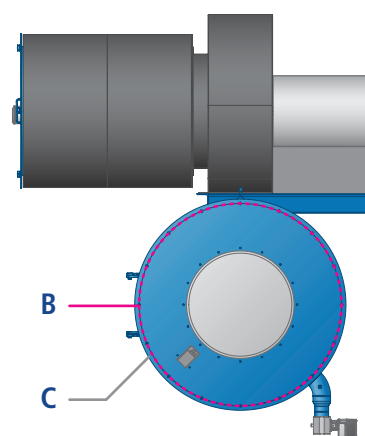
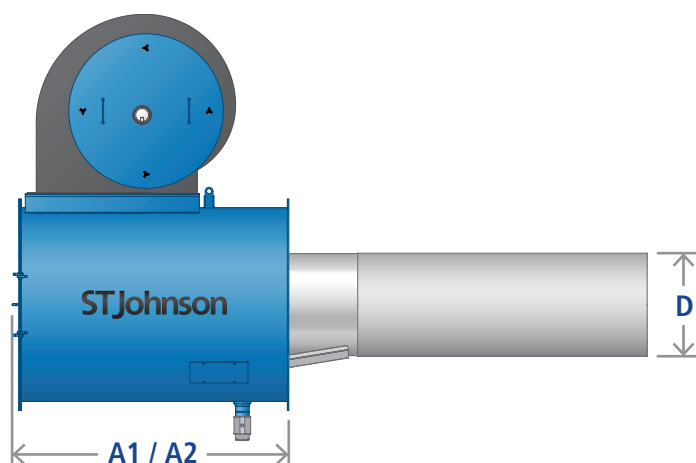
## REMOTE FAN BURNER FOR LARGER APPLICATIONS

SIZE RANGE	800 – 1,500 HP
EMISSIONS	5 – 9 ppm NOx
TURNDOWN	Up to 6:1
FUELS	Natural Gas or Dual-Fuel (#2 Oil)



### DUAL-FUEL CONFIGURATION

Both the NMA and NM-RF models are capable of dual-fuel configuration using #2 oil for emergency backup. This option ensures redundancy in the event of a fuel disruption for customers with critical heating processes.




		MODEL:	800RF	900RF	1000RF	1100RF	1200RF	1300RF	1400RF	1500RF
SPECIFICATIONS	Boiler Output	HP	800	900	1,000	1,100	1,200	1,300	1,400	1,500
	Gas Capacity	MMBH	33,600	37,800	42,000	46,200	50,400	54,600	58,800	63,000
	Blower Motor	HP	60	75	75	75	100	100	100	100
	Gas Pressure	PSIG	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Furnace Pressure	IN W.C.	4	4	4	4	4	4	4	4
	Ship Weight	LBS	*	*	*	*	*	*	*	*
DIMENSIONS	A1	IN	70.75	70.75	70.75	70.75	70.75	70.75	70.75	70.75
	A2 (Swing Length)	IN	124	124	124	124	124	124	127.25	127.25
	B	IN	51.75	51.75	51.75	51.75	51.75	51.75	54.875	54.875
	C	IN	54	54	54	54	54	54	57	57
	D	IN	21.5	26	26	26	26	26	30	30

\*Consult Factory

# Heat Transfer Heritage

We are a family-owned business that has been building better burners since 1903. We are experts in rugged and reliable burner designs with low-emissions and out-of-box compliance.

Use the table below to find the right model for your application.

BURNER MODELS	FUEL OPTIONS	NO <sub>x</sub> LEVELS	SIZE RANGE (HP)																
			40	50	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
 <b>FD68</b>	NG, LPG, Biogas or Dual-Fuel (#2-6 Oil)	Uncontrolled		50 – 1,200 HP															
 <b>FD68-LN</b>	NG, LPG, Biogas or Dual-Fuel (#2-6 Oil)	Sub 30 ppm		50 – 1,200 HP															
 <b>FD68-RF</b>	NG, LPG, Biogas or Dual-Fuel (#2-6 Oil)	Uncontrolled or Sub 30 ppm															1,200 – 1,500 HP		
 <b>NMV</b>	Natural Gas	9 ppm	40 – 200 HP																
 <b>NMA</b>	Natural Gas or Dual-Fuel (#2 Oil)	5 - 9 ppm			100 – 800 HP														
 <b>NM-RF</b>	Natural Gas or Dual-Fuel (#2 Oil)	5 - 9 ppm											800 – 1,500 HP						

**NOTE:** All specifications and dimensions provided in this document are approximate and for reference only. S.T. Johnson practices continuous product improvement and reserves the right to change specifications and/or dimensions without notice. Graphics shown may not be representative of actual product.



S.T. Johnson Company  
5160 Fulton Drive  
Fairfield, CA 94534

Call: (510) 652-6000  
Fax: (510) 652-4302  
[www.stjohnson.com](http://www.stjohnson.com)

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