## **Power Flame Incorporated®**





Premixed, Non FGR Low **NOx Combustion Burner** The Power of Choice

400,000 - 2,200,000 BTU/HR

**Totally Enclosed Control Cabinet** Protection with easy access to burner operating controls

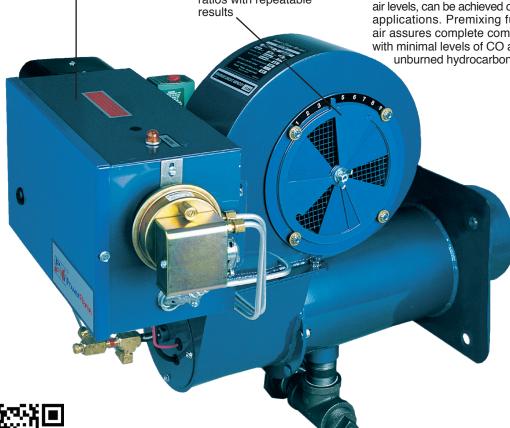
**Multi-Louvered Combustion Air Damper Assembly** Accurate control of fuel-air ratios with repeatable

The Power Flame NPM™ employs a fully premixed, high swirl stabilized combustion technology to provide proven low NOx solutions - Sub 30 PPM - without the use of FGR for commercial, industrial and process applications. Sub 20 PPM operation, at slightly higher excess air levels, can be achieved on many applications. Premixing fuel and air assures complete combustion with minimal levels of CO and unburned hydrocarbons. The

unique stainless steel high swirl diffuser guarantees reliable and consistent performance at the operating conditions necessary to provide low NOx emissions. The NPM is a simple, cost effective, field proven system designed to meet today's most stringent emissions requirements.

Power Flame provides a U.L. listed, factory tested package tailored to your job specific requirements. The NPM is suitable for use on all types of boiler and other heat exchanger applications. It will operate with uniform heat flux and excellent flame stability over a broad range of operating conditions.

The modular concept that is the basis for all Power Flame burners keeps the initial investment low and maintenance costs at a minimum across the life of the burner. The NPM is fitted with a state- of-theart control system and integral panel. All Power Flame packaged burners are factory firetested to ensure cost effective installations and start-ups.



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620-421-0480 WWW.POWERFLAME.COM CSD@ASTECINDUSTRIES.COM **POWER FLAME INCORPORATED** 2001 S. 21<sup>ST</sup> ST. PARSONS, KS 67357 FOLLOW US: ♠ ♠ ◎ ♥

# **Power Flame**

#### STANDARD EQUIPMENT

- 3450 RPM Motor, squirrel cage blower, cabinet with main fuel light and control switch
- Leakage test, pilot and main gas cocks
- Gas electric pilot and gas ignition transformer
- Pilot and main gas pressure regulators (14 in. W.C. inlet max)
- Flame safeguard with flame rod, intermittent pilot and prepurge
- Air safety switch
- Resettable thermal protection
- Low gas pressure switch and indicating light



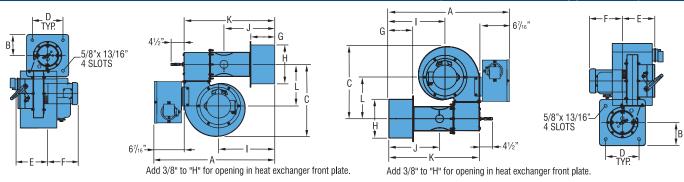
Stainless steel diffuser provides high swirl, stabilized combustion for excellent flame stability at low Nox operating conditions

ADDED FEATURES X-Standard O-Optional	NPM 15-10-24	NPM 15-10-120	NPM 30-12-120	NPM 50-15-120	
24 Volt Flame Safeguard	X	NA	NA	NA	
On-Off diaphragm gas valve with separate gas pressure regulator	NA	0	0	NA	
Low-Hi-Off or Low-Hi-Low with automatic air control	NA	0	0	X	
Modulation with automatic air control	NA	0	0	0	
Single valve body with dual shutoff and regulator	X	NA	NA	NA	
Dual gas safety valves: one (1) combination diaphragm valve (A) with pressure regulator and one (1) auxiliary valve	NA	Х	NA	NA	
Customized control systems and accessories	NA	0	0	0	

<sup>(</sup>A) May be replaced by one (1) proof of closure valve and a separate pressure regulator.

#### **MODEL NPM**

#### **MODEL NPMR (For low centerline applications)**



### **DIMENSIONS** (Inches) Standard Models.

#### **RATINGS & SPECIFICATIONS**

Burner Model	Α	В	С	D	E	F	G	н	ı	J	K	L	CAP Natural Gas MaxMBH*	ACITY <sup>*</sup> Nominal Boiler H.P. Max.	Blower Motor H.P. (3450 RPM)	Gas Pressure Required (In. W.C.)**	
NPM15-10-24	<b>28</b> <sup>1</sup> / <sub>8</sub>	<b>4</b> <sup>5</sup> / <sub>8</sub>	141/8	71/8	13 <sup>7</sup> / <sub>8</sub>	13 <sup>7</sup> / <sub>8</sub>	6	6	15	12 <sup>5</sup> / <sub>8</sub>	21 <sup>3</sup> / <sub>4</sub>	<b>8</b> <sup>3</sup> / <sub>8</sub>	850	20.2	1/4	6.8	
NPM15-10-120	28 <sup>1</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>8</sub>	14 <sup>1</sup> / <sub>8</sub>	71/8	13 <sup>7</sup> / <sub>8</sub>	13 <sup>7</sup> / <sub>8</sub>	6	6	15	12 <sup>3</sup> / <sub>4</sub>	<b>8</b> <sup>3</sup> / <sub>8</sub>	83/8	850	20.2	1/4	6.7	
NPM30A-12-120	281/4	4 <sup>5</sup> / <sub>8</sub>	16 <sup>7</sup> / <sub>8</sub>	71/8	137/8	13 <sup>7</sup> / <sub>8</sub>	6	8	13 <sup>5</sup> / <sub>8</sub>	12 <sup>3</sup> / <sub>4</sub>	217/8	93/4	1,100	26.0	1/3	7.3	
NPM30-12-120	28 <sup>1</sup> / <sub>4</sub>	<b>4</b> <sup>5</sup> / <sub>8</sub>	16 <sup>7</sup> / <sub>8</sub>	71/8	13 <sup>7</sup> / <sub>8</sub>	13 <sup>7</sup> / <sub>8</sub>	6	8	13 <sup>5</sup> / <sub>8</sub>	12 <sup>3</sup> / <sub>4</sub>	21 <sup>7</sup> / <sub>8</sub>	93/4	1,260	30.0	1/2	8.2	
NPM50-15-120	291/4	53/4	18 <sup>1</sup> / <sub>8</sub>	83/8	137/8	13 <sup>7</sup> / <sub>8</sub>	6	10	<b>14</b> <sup>1</sup> / <sub>8</sub>	<b>12</b> <sup>3</sup> / <sub>4</sub>	<b>22</b> <sup>3</sup> / <sub>4</sub>	101/2	2,200	52.4	1	11.6	

NOTES: \* Capacities listed are based on 0.20" W.C. positive pressure. and 30PPM NOx. Derate capacities approximately 5% for each +0.50" W.C. combustion chamber pressure.

\*\* At inlet to main manual shutoff cock to obtain P/F certified ratings with standard U.L. gas train. Optional gas trains available for lower

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<sup>■</sup> Conforms to UL795

pressures.