



Midco  
INTERNATIONAL

*Introducing Midco International's Direct-Fired Gas Burners*

# The Blue Flame Series

## Direct-Fired Gas Burners

### Two Stage Combustion Technology

*Higher Temperature Rise*

*Wider Operation Range*

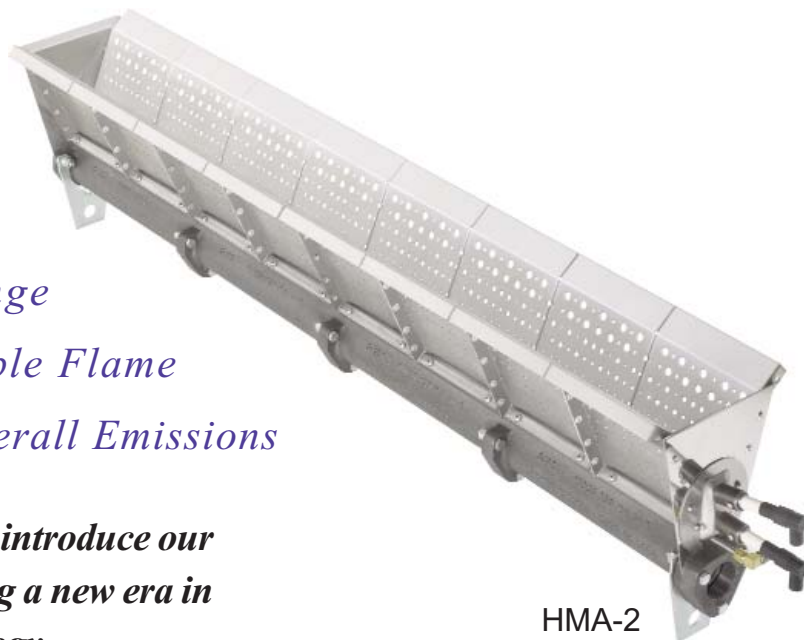
*Shorter, More Stable Flame*

*and Lower Overall Emissions*

***Midco International is proud to introduce our direct-fired gas burner, initiating a new era in direct-fired gas burner technology.***

#### *New Technology in Direct-Fired Gas Burners*

Our innovative two stage combustion burner is not just a modification or improvement of the old, but a completely new approach to direct-fired combustion. The two-stage combustion improves control of the flame process, meets and exceeds the new ANSI Standards while outperforming the competition. By having two separate flames within the burner combustion zone, the flame is more stable, shorter and cleaner, permitting the reduction of emissions levels and allowing for higher temperature rise and higher tolerance to varying conditions when placed in the profile opening.



HMA-2

*Two Stage Combustion*

*Provides Unsurpassed*

*Flame Stability and*

*Lower Emissions*

*Available in Cast Iron or Aluminum Burner Sections*

*Quality Designed for Proven Performance*



# The Blue Flame Series Specifications

*Firing Rate	Gas Manifold Pressure	Pressure Drop Across Burner	Pilot Capacity	Pilot Manifold Pressure	Burner Turn-down Ratio	Flame Length	Air Velocities Across Burner
Up to 750,000 Btu/hr/ft	NG 4.2 - 8" W.C. LP 1.6 - 3" W.C.	0.05 to 1.4" W.C.	12,000 Btu/hr	NG 3.5" W.C. LP 2.0" W.C.	30 to 1	10" full ** firing rate	800 fpm to 4000 fpm ***

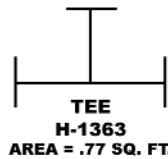
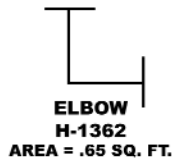
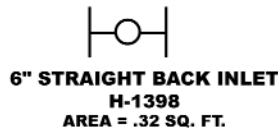
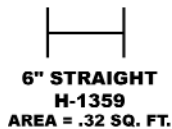
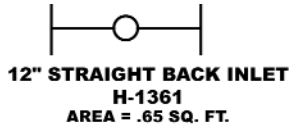
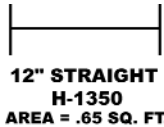
\* Firing rate is dependent on the pressure drop across the burner.  
 \*\* Flame length depends on design pressure drop and is measured from the end of the baffle.  
 \*\*\* For other operating velocities contact our Engineering Department.

## New Technology for

### Direct-Fired Applications

#### Plus Flexibility in Configuration

Straight, elbow and tee sections easily configure to desired capacity maximizing efficiency for installation and performance. Burners may be ignited by proven pilot or direct spark. Pilots are available for flame rectification or ultraviolet detection. Hot surface ignition systems are also available. Contact the factory for specifications.










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#### Features and Benefits

-  **Reduced NO<sub>2</sub> and CO Emissions:** Lower emissions levels that are required to pass the ANSI Z83.4 and Z83.18 standards.
-  **Higher Temperature Rise:** The two stage combustion process lowers NO<sub>2</sub> emissions which is the limiting factor in temperature rise.
-  **Increased Capacity:** Up to 750,000 BTU'S per foot. (Higher BTU levels can be achieved if ANSI Z83 Standards for CO and NO<sub>2</sub> emissions are not of a concern. Process heaters can fire up to 1,000,000 BTU'S a foot or more.)
-  **Increased Differential Pressure Drop and Higher Velocities:** HMA-2 burners can operate between 0.05" to 1.4" W.C. differential pressure range or in air velocity between 800 fpm to 4000 fpm.
-  **Flame Stability:** Two stage combustion provides better flame stability and emission control, allowing for a shorter flame and easier profile configuration.
-  **Reduced Shipping Costs:** A smaller, lighter casting than the competition's, can cut your freight costs up to 50%.
-  **Turndown:** 30-1 turndown can easily be achieved with proper modulation control and valves. (Higher turndown possible depending on equipment design.)

<sup>1</sup> Consult factory for applications using butane fuels.