FORNEY

MAXFire® Series 100 Gas Igniters

MAXFire® gas igniters provide the most reliable source of energy for main flame ignition, flame stabilization, and boiler warm-up.

www.forneycorp.com

PRODUCT OVERVIEW

The MAXFire® Series 100 gas igniters can be used as a Class 1 , Class 2, or Class 3 igniter, depending on burner capacity. The MAXFire® igniter is easily installed as a retrofit into most burner types based on its size, capacity, and reliable operation.

MAXFire® gas igniters consist of four major components: a guide tube, a gas transport tube, a spark rod, and a stainless steel diffuser for pilot stabilization. The guide tube houses the spark rod and the gas transport tube, which are easily removed from the guide tube for maintenance purposes by releasing a “V” band retainer, requiring no tools. Cooling/combustion airflow is directed down the guide tube to support and maintain the primary combustion zone during operation. The controlled mixture of fuel and air in the primary combustion zone results in a highly reliable, stable igniter flame. While out of service, airflow cools the igniter and prevents debris from migrating into the end of the guide tube.

MAXFire® gas igniters come standard with Forney’s High Energy Spark Igniter (HESI) as the spark source. The HESI produces a powerful 12-joule spark approximately three times per second at the primary combustion zone. The HESI spark tip is a nonfouling, surface-gap tip which is replaceable as a unit by a threaded connection. Optional equipment for the MAXFire® includes a High Tension Spark (HTSI) source in place of the HESI, mounting hardware, hoses, flame rod and an integral or externally mounted optical flame detector.

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FEATURES & BENEFITS

- **Class 1, 2 or 3 Gas Igniter**

  Capacity range from 0.3 to 50 MBtu/hr (0.09 to 14.65 MW).

- **Application Flexibility**

  The protected primary combustion zone ensures reliable operation in multiple environments.

- **Reliable Ignition**

  99% ignition rate in most applications.

- **Cooling / Combustion Air**

  Low cooling/combustion air requirements.

- **Low Maintenance Requirements**

  No moving parts, a self-cleaning spark tip and no tools required to perform periodic inspection.

- **Durability**

  Heavy duty material and no moving parts to wear out.

- **Compatibility**

  Fits most existing mount tubes minimizing retrofit installation costs.

- **Spark Source Options**

  The non-fouling HESI comes standard. A more economically priced option is the HTSI.

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MAXFire® Series 100 Gas Igniters

Specifications:

Fuel:	Natural gas or propane
Minimum Length:	14 inches (356 mm)
Guide Tube Material:	10 & 30 - Stainless steel 35, 40 & 50 - Carbon steel with 12” (305 mm) stainless steel at furnace end

MAXFire Model	Capacity	Guide Tube OD	Connections (NPT)		Cooling Air Require-ment*	Nozzle Type	Typical Fuel Pressure
			Gas	Air			
110	0.3 to 1.5 MBtu/hr (0.09 to 0.44 MW)	1 7/8” (47.63 mm)	1/2” (12.7 mm)	3/4” (19.05 mm)	23 @ 3 0.65 @ 76.2	Straight	5-12 psig (0.35 - 0.84 kg/cm^2)
130	1.5 to 6.0 MBtu/hr (0.44 to 1.76 MW)	2 7/8” (73.03 mm)	3/4” (19.05 mm)	3/4” (19.05 mm)	45 @ 3 1.27 @ 76.2	Straight or wide	5-12 psig (0.35 - 0.84 kg/cm^2)
135	5.0 to 15 MBtu/hr (1.47 to 4.4 MW)	3 1/2” (88.9 mm)	1 1/2” (38.1 mm)	1 1/2” (38.1 mm)	50 @ 6 1.42 @ 152.4	Straight or wide	5-25 psig (0.35 - 1.76 kg/cm^2)
140	5.0 to 25 MBtu/hr (1.47 to 7.33 MW)	4” (101.6 mm)	1 1/2” (38.1 mm)	1 1/2” (38.1 mm)	80 @ 6 2.27 @ 152.4	Straight or wide	5-25 psig (0.35 - 1.76 kg/cm^2)
150	10 to 50 MBtu/hr (2.93 to 14.65MW)	5” (127 mm)	TBD	TBD	120 @ 6 3.40 @152.4	Straight or wide	5-25 psig (0.35 - 1.76 kg/cm^2)

*scfm@inches w.c. (Nm3/min @ mm w.c.) above windbox

HESI Specifications:

Input Voltage:	120 to 240 VAC, 50/60 Hz
Input Power:	120 VAC @ 1.5 A (2-A fuse); 240 VAC @ 0.75A (1-A fuse)
Output Voltage:	2000 VDC
Output Energy:	12 joules per spark
Spark Rate:	3 per second (approximately)
Duty Cycle:	50% at temp 0°F to 135°F (-18°C to 57°C) Ambient

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HTSI Specifications

Amperage:	20 mA
Input Voltage:	120 to 240 VAC 50/60 HZ
Output Voltage:	6000 VAC
Duty Cycle:	100% at temperature rating