

Q-87 Oil or Gas Igniter

The Q-87 oil or gas igniter offers a fully self-contained flexible solution for robust and reliable burner ignition, stabilization and warm-up.

Product Overview

The Q-87 is a self-contained Class 1 oil or gas igniter used for burner ignition, stabilization or boiler warm-up. It is available in capacities ranging from 8 to 30 MBTU/hr (2.34 to 8.8 MW). The Q-87 igniter is suitable for both new and retrofit applications in a wide variety of burner designs. For oil applications, the Q-87 igniter is designed for air, steam or mechanically atomized.

The Q-87 consists of a guide tube assembly, fuel gun and High Energy Spark Igniter (HESI). The guide tube assembly contains the working parts of the igniter and houses the fuel gun and HESI rod. A stainless steel diffuser is attached to the tip of the fuel gun guide tube to assist in providing a stable flame. The fuel gun has a retraction assembly that moves the gun into firing position and back into the guide tube when it is not in service. The guide tube transports cooling air from a low pressure air source to the igniter tip, keeping the gun tip and diffuser cool, as well as foreign material away from the tip.

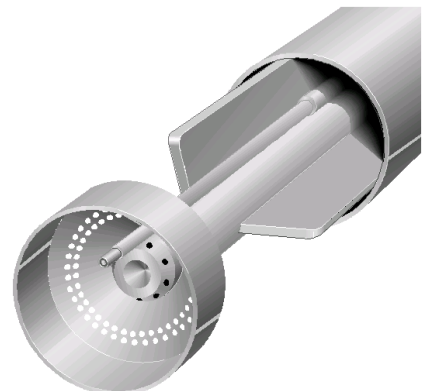
A factory mounted NEMA-4 junction box with all on-board electrical devices pre-wired to terminals is a standard feature which reduces installation time.

A 12-joule HESI provides the ignition source for the fuel. The HESI features non-fouling surface gap spark plug that is easily replaced for maintenance by a threaded connection between the HESI tip and the HESI rod.

As an option, a mount tube can be provided to support the igniter. The mount tube is typically welded to the burner front plate, and the igniter guide tube slides into the mount tube and is secured in place by a split clamping ring and packing gland assembly.

Features & Benefits

- **CAPACITIES UP TO 30 MBTU/HR (8.8MW)** which will provide ignition and stabilization under all burner light-off or operating conditions.
- **EASY RETROFIT**
In most applications, the Q-87 can be installed in your existing 4-inch (101.6 mm) ID mount tube.
- **ATOMIZATION**
For oil applications, the Q-87 igniter can operate with either air, steam or mechanical atomization.
- **STABLE FLAME**
The stainless steel air diffuser creates a low pressure zone which maintains a stable flame at the tip of the igniter.
- **RELIABLE IGNITION**
The 12-joule High Energy Spark Igniter (HESI) easily ignites the fuel during igniter start cycles.



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Specifications

Fuel:	No. 2 Oil	Gas
Atomization Media:	Air, Steam or Mechanical	N/A
Atomizing Pressure: (Differential over oil pressure)	25 psig (1.76 kg/cm ²)	N/A
Guide Tube OD:	4 inches (101.6 mm)	4 - 5 inches (101.6 to 127 mm)
BTU Rating:	8 - 30 MBTU/hr (2.34 to 8.8 MW)	
Fuel Pressure:	60 - 125 psig (4.2 - 8.8 kg/cm ²)	10 - 30 psig (0.7 to 2.11 kg/cm ²) (at full load)
Cooling / Combustion Air Flow:	80 SCFM (2.27 Nm ³ /min)	
Cooling Air Pressure:	6 in. (152.4 mm) WC above furnace pressure	
Length:	As Required	
Mount Tube OD:	4.5 inches (114.3 mm)	4.5 - 5.5 inches (114.3 to 139.7 mm)
Turndown:	2:1	
Material of Construction:	Guide Tube and Mount Tube - Carbon Steel Furnace End of Guide Tube - 304 Stainless Steel Diffuser Cone - 309 Stainless Steel	
Retract Cylinder Air Pressure:	60 to 100 psig (4.22 to 7.03 kg/cm ²) HESI/oil gun	

HESI Specifications

Input Voltage: 120 to 240 VAC, 50/60 HZ

Output Voltage: 2000 VDC

Output Energy: 12 joules per spark

Spark Rate: 3 per second (approx.)

Duty Cycle: 50% at temp -18°C to 57°C
(0°F to 135°F Ambient)

