

# DURAFire® Oil Igniter

*The DURAFire® oil igniter delivers the most reliable source of energy for main flame ignition, flame stabilization, and boiler warm-up.*

## Product Overview

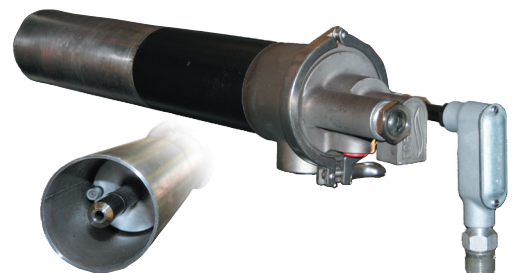
DURAFire® oil igniters are trusted around the world for its reliability, versatility and stable flame. It can be used as a Class 1, Class 2, or Class 3 igniter, depending on the burner capacity. The DURAFire® is easily installed as a retrofit into most burner types based on its size, capacity, and reliable operation.

The DURAFire® oil igniter consists of five major components: a guide tube, an atomizer/head assembly, an oil/air mixture transport tube, a spark rod, and a stainless steel diffuser for pilot stabilization. The guide tube houses the internals, which are attached to the head and 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. This 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 entering the end of the guide tube.

The DURAFire® oil igniter comes 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 non-fouling, surface-gap tip which is replaceable as a unit by a threaded connection. The remaining HESI components consist of a positioning rod, cable and power unit. Optional equipment for the DURAFire® includes mounting hardware, retraction assembly, hoses and flame detector.

## Features & Benefits

- **CLASS 1, 2 OR 3 OIL IGNITER**  
Capacities from 6 to 33 MBtu/hr (1.76 to 9.67 MW).
- **APPLICATION FLEXIBILITY**  
The protected primary combustion zone ensures reliable operation in multiple environments.
- **EASY RETROFIT**  
With a diameter of only 4 inches (101.6mm), the DURAFire® fits most burners.
- **LOW MAINTENANCE REQUIREMENTS**  
No moving parts, a self-cleaning spark tip and no tools required to perform periodic inspection.
- **RELIABLE IGNITION**  
95% ignition rate in most applications.
- **HIGH EFFICIENCY AIR ATOMIZER**  
The internal mix atomizer is selected from a standard set of sizes for each project.
- **COOLING/COMBUSTION AIR**  
Low cooling/combustion air requirements.
- **DURABILITY**  
Heavy duty material and no moving parts to wear out.
- **COMPATIBILITY**  
Fits most existing mount tubes minimizing retrofit installation costs.



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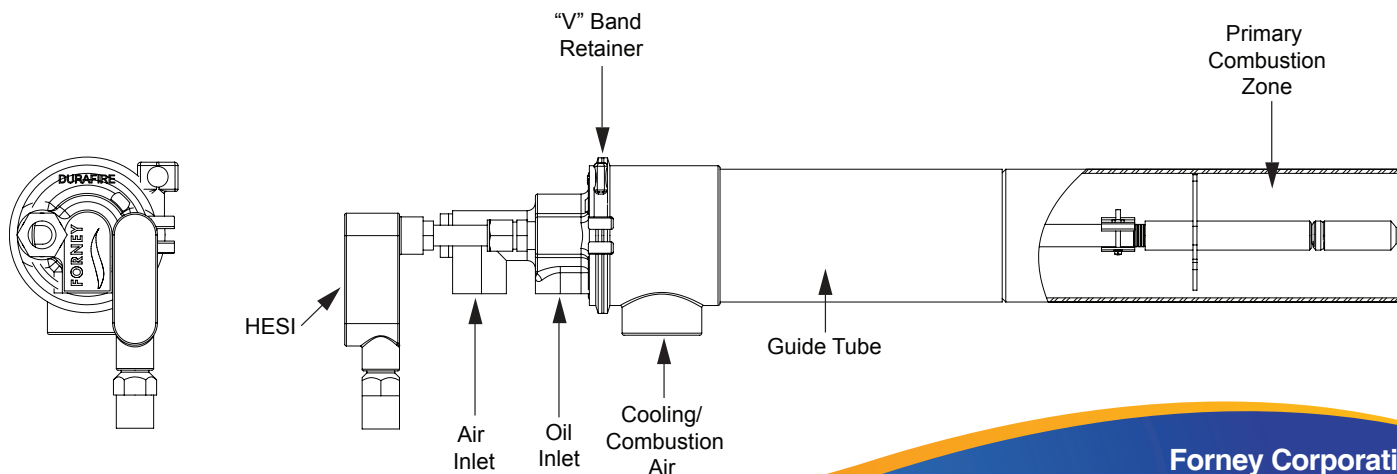
## Specifications

Fuel:	No. 2 oil
Capacity Rating*:	6-33 MBtu/hr (1.76 - 9.67 MW)
Atomization Media:	Air
Fuel Pressure:	60 psig (4.22 kg/cm <sup>2</sup> ) at igniter
Atomizing Air:	Pressure: 80 psig (5.62 kg/cm <sup>2</sup> ) at igniter Flow: 0.40 lb air/1 lb fuel
Cooling / Combustion Air:	Flow: 60 SCFM ( 1.7 Nm <sup>3</sup> /min) at igniter Pressure Drop: Approximately 3 in. (76.2mm )WC across device Connection: 1½ inch NPT female
Length:	Available in 2" (50.8mm) increments from 24 to 180 inches (609 to 4572 mm)
Guide Tube Outside Diameter:	4" (101.6 mm) - igniter can be installed in an existing mount tube for a 4" (101.6 mm) diameter device
Mount Tube Outside Diameter:	4.5" (114.3 mm)
Construction Material:	Guide Tube and Mount Tube - Carbon Steel Furnace End of Guide Tube - 304 Stainless Steel Oil Tip Assembly - 304 Stainless Steel
Retraction Assembly	Per Customer Requirements
Oil Tip Assembly	Narrow or Wide angle, as required
NFPA	Class 1, 2 or 3

\* Individual igniters are sized to the specified capacity requirement when ordered. No turndown is available. To change igniter capacity, please contact the factory.

## 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



**Forney Corporation**

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