



A UTC Fire & Security Company

DURAFire® Oil Igniter

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



Features & Benefits

- **CLASS 1, 2 OR 3 OIL IGNITER**
Capacity range from 6 to 30 MBtu/hr.
- **APPLICATION FLEXIBILITY**
The protected primary combustion zone ensures reliable operation in multiple environments.
- **EASY RETROFIT**
With a diameter of only 4 inches, 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.

Product Overview

The DURAFire® 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 nonfouling, 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.

DURAFire[®] Oil Igniter

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Specifications

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| Fuel: | No. 2 oil |
| BTU Rating: | 6-30 MBtu/hr |
| Atomization Media: | Air |
| Fuel Pressure: | 60 psig (at igniter) |
| Atomizing Air Pressure: | 80 psig (at igniter) |
| Cooling / Combustion Air: | Flow: 60 SCFM (at igniter) Pressure Drop: Approximately 3 in. WC across device |
| Length: | Available in 2 inch increments from 24 to 180 inches (609 to 4572 mm) |
| Outside Diameter: | 4" (igniter can be installed in an existing mount tube for a 4" diameter device) |
| Material of Construction: | Guide Tube and Mount Tube - Carbon Steel Furnance 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 |

HESI Specifications

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| 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 |

