



BOILER CONTROL, COMBUSTION MANAGEMENT & HARDWARE FOR THE STEAM POWER INDUSTRY

IGNITORS

## Ignitors for Wall-Fired Boilers

Fossil Power Systems Inc. (FPS) Ignitors are designed for both replacement of existing ignitors and for installation in new burners on utility boilers, package boilers, lime kilns, bark boilers, and recovery boilers. For retrofit applications the FPS ignitor is designed as a plug-in replacement for existing ignitors requiring minimal burner modification.

### ADVANTAGES OF FPS IGNITORS

- Available in fixed and retractable models
- Wide turndown ranges
- Integral flame detection, utilizing the SunSpot ionization type flame detector, for reliable ignitor flame monitoring with perfect discrimination
- Design utilizes combustion air to create a strong and lively blow-torch type flame for excellent main fuel light-off
- Combustion air may be sourced from windbox or from an external fan. A clean external combustion air supply is highly recommended for coal-fired applications to prevent problems from flyash accumulation on internal components
- Parts requiring periodic maintenance or replacement are easy to withdraw, service and replace
- Guide tube housing extends through burner or windbox, simplifying installation and protecting internal components
- Stainless steel guide tube end guarantees long service life
- Ignitors are supplied with all necessary peripheral parts



OIL IGNITOR FLAMES

Controlling  
the **power**  
of **steam**



# Oil Ignitors

The 4.5" oil ignitor was designed specifically to fit into the Babcock & Wilcox™ (B&W) DRB-4Z burner but is suitable for other applications where space is restricted.

The reliability of FPS oil ignitors is emphasized by the atomizer design. The atomizer produces small, readily combustible droplets of oil to produce a strong active flame which will be monitored by the SunSpot flame detector.

FPS oil ignitors are equipped with the Plasma Arc Ignition (PAI) system. The PAI produces pulsed high energy sparks during ignition trial time which prevents spark plug fouling and ensures consistent light-off over the long term.

Each FPS oil ignitor is supplied with the following peripheral components:

- PAI power pack in a NEMA 4 enclosure
- Integral SunSpot flame detector electronic module
- Oil hose with quick disconnect coupler
- Atomizing air hose with quick disconnect coupler
- (2) Brass braided flex conduit assemblies for ignitor electrical connections (flame detector and spark)

## SPECIFICATIONS

### ELECTRICAL

- 120 or 240 VAC, 50/60 Hz

### ATOMIZING AIR REQUIREMENT

- Flow: 16 scfm
- Pressure: 90-120 psig

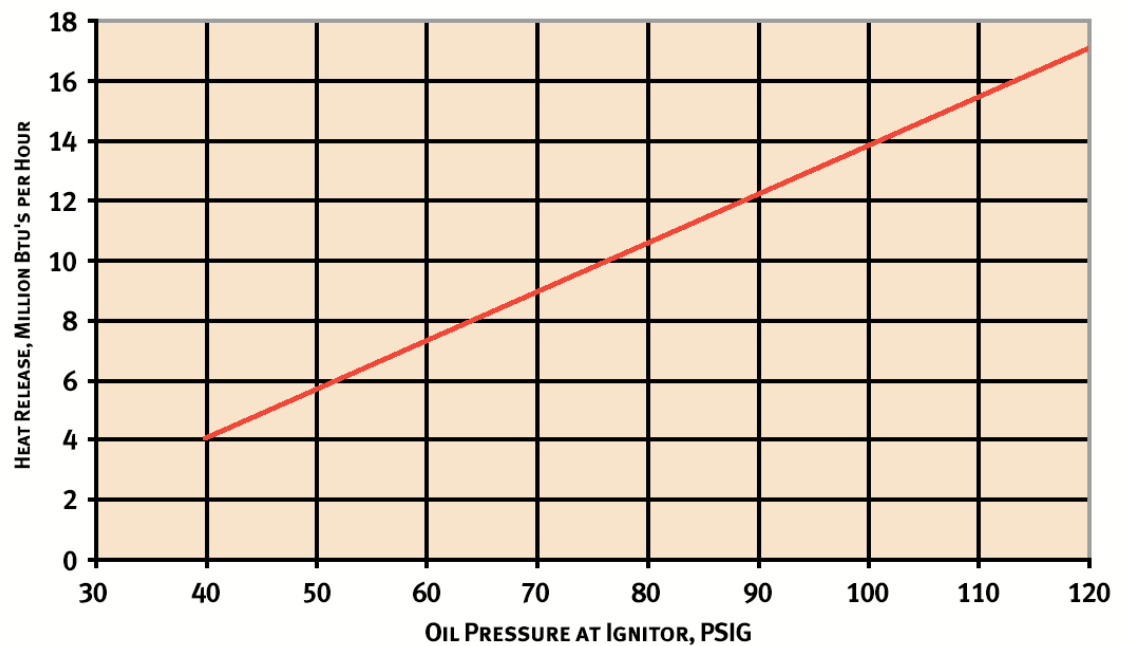
### Fuel

- No. 2 light oil
- Pressure: 40-120 psig

### AVAILABLE MODELS:

GUIDE TUBE OD	MAXIMUM HEAT RELEASE	TURNDOWN
4.5"	4-17 X 10 <sup>6</sup> Btu per hour	4:1
5.6"	4-17 X 10 <sup>6</sup> Btu per hour	4:1

FPS WALL-FIRED OIL IGNITOR FLOW CHART



OIL ATOMIZER ASSEMBLY



# Gas Ignitors

FPS gas ignitors feature three-stage ignition to create a continuous, lively, self-renewing flame unaffected by furnace conditions. Stainless steel gas nozzles are designed to withstand the boiler environment.

Each FPS gas ignitor is supplied with the following peripheral components:

- 10,000 VAC ignition transformer in NEMA 4 enclosure
- Integral SunSpot flame detector electronic module
- Gas hose c/w quick disconnect coupler valve or swivel connector
- (2) Brass braided flex conduit assemblies for ignitor electrical connections (flame detector and spark)

## SPECIFICATIONS

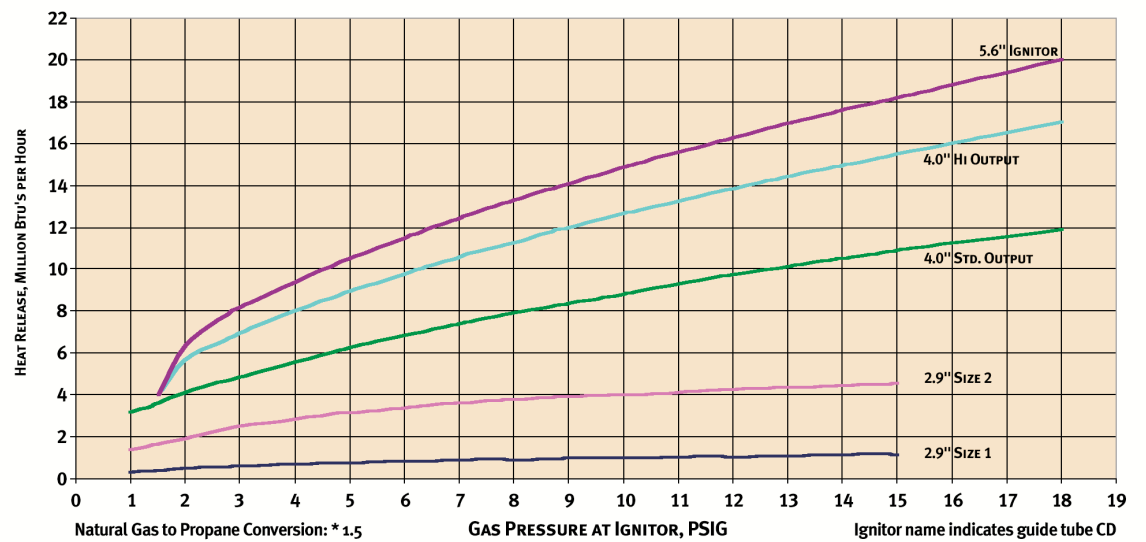
### ELECTRICAL

- 120 or 240 VAC, 50/60 Hz

### FUEL

- Natural gas, propane, butane

**GAS IGNITORS FOR WALL-FIRED UNITS  
GAS FLOW WITH NATURAL GAS**



**5.6" GAS IGNITOR**



**GAS IGNITOR FLAMES**



# Dual Fuel Ignitor

The FPS dual fuel ignitor is designed to burn No. 2 light oil and gas. The 5.6" OD guide tube houses the gas pipe assembly, oil atomizer assembly, spark rod and flame rod. This eliminates the need to swap internals when the fuel changes.

To prevent spark plug fouling and ensure reliable light-off over the long term, FPS dual fuel ignitors are equipped with our Plasma Arc Ignition (PAI) system, which provides pulsed high energy sparks during ignition trial time.

Each FPS dual fuel ignitor is supplied with the following peripheral components:

- PAI power pack in NEMA 4 enclosure
- Integral SunSpot flame detector electronic module
- Oil hose with quick disconnect coupler
- Atomizing air hose with quick disconnect coupler
- Gas hose with swivel adapter
- (2) Brass braided flex conduit assemblies for ignitor electrical connections (flame detector and spark)

## SPECIFICATIONS

### ELECTRICAL

- 120 or 240 VAC, 50/60 Hz

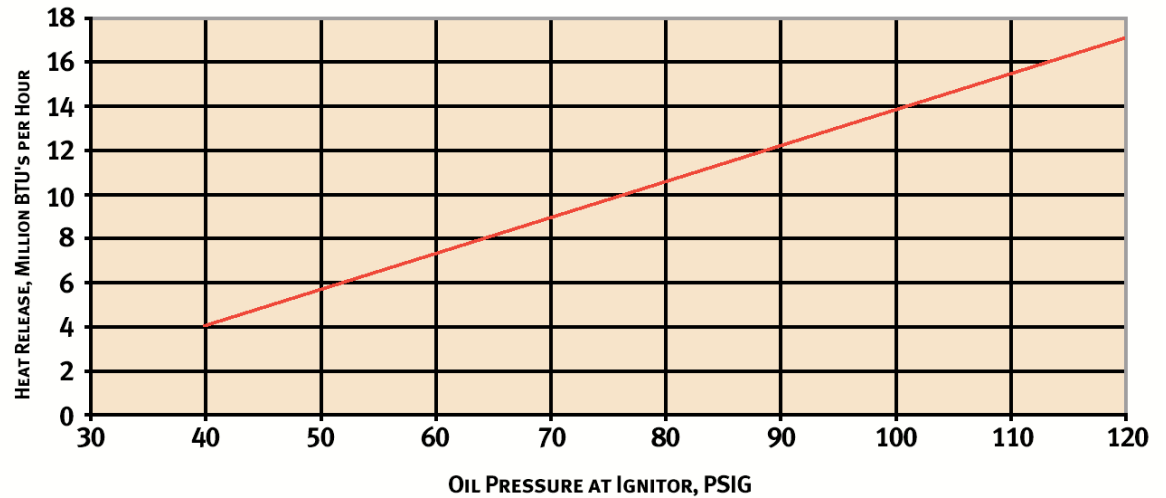
### ATOMIZING AIR REQUIREMENT

- Flow: 16 scfm
- Pressure: 90-120 psig

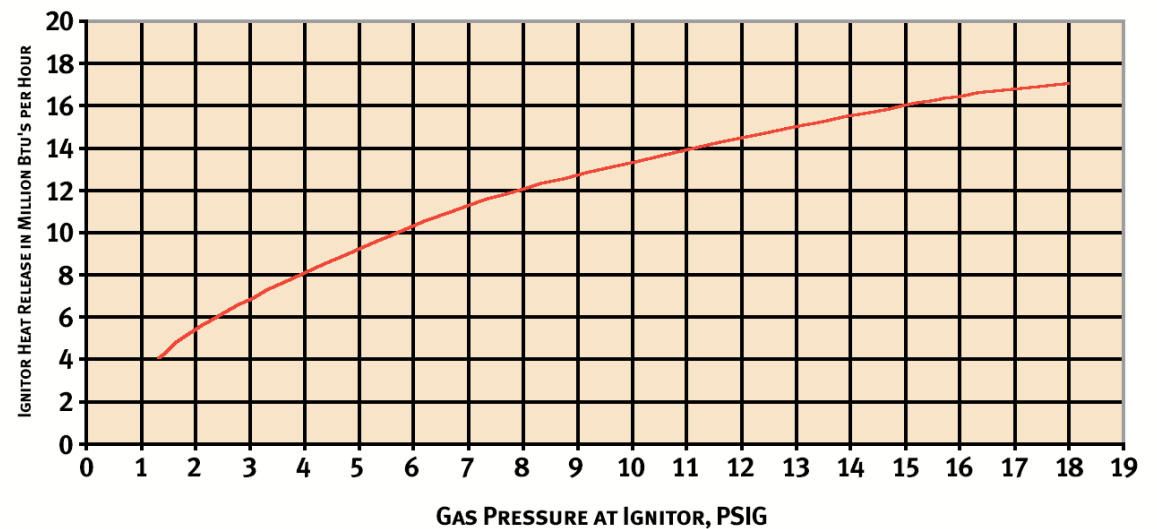
### FUEL

- No. 2 light oil
- Oil Pressure: 40-120 psig
- Natural gas, propane, butane
- Gas Pressure: 2-18 psig

FPS DUAL FUEL IGNITOR OIL FLOW CHART  
No.2 LIGHT OIL



FPS DUAL FUEL IGNITOR GAS FLOW CHART  
NATURAL GAS



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