



CE Ignitor Upgrade Products

Fossil Power Systems Inc. (FPS) offers the variety of products to improve the performance and reliability of existing CE ignitors on corner-fired boilers. Each upgrade product can be added individually, allowing gradual upgrade of old ignitors, where budget constraints exist.

FPS offers the following products for these upgrades:

- Horns (oil and gas)
- Ignitor Booster (oil only)
- SunSpot II Flame Detector (oil and gas)
- (PAI) Plasma Arc Ignition System (oil only)
- Flow Regulator (oil only)
- Ignitor Control Box (oil and gas)

HORNS

FPS ignitor horns are fabricated to exacting standards utilizing high quality cast stainless steel. Horn assemblies are available for all mounting arrangements.

IGNITOR BOOSTER (OIL ONLY)

A booster package is available for installation on existing oil horn ignititors. The ignitor booster provides an additional 14million Btu/hour heat input. Adding the booster permits the ignitor to be used for warm-up and load support as well as main fuel ignition. This package includes the ignitor booster, solenoid valve, and oil and atomizing air hoses with quick disconnect couplers. Installation requires only minor modifications to the ignitor mounting plate and horn.

SUNSPOT II FLAME DETECTOR RETROFIT KIT

The SunSpot II Retrofit Kit replaces DP (differential pressure) type flame detectors with ionization flame detection system on CE gas or oil ignitors in tangentially fired boilers. The easily installed retrofit kit requires no modification to existing CE ignitor hardware. Probes are available in various lengths and configurations to meet the specific application requirements.

PLASMA ARC IGNITION SYSTEM (PAI) (OIL ONLY)

In older horn ignitors, it is common for carbon to build up on the spark plug. This reduces the reliability of the ignition system and overall ignitor performance. The PAI ignition system is an efficient and easily installed solution to this widespread phenomenon by producing a high energy spark to instantaneously light the fuel oil. Each powerful spark creates a shock at the spark plug tip, dispersing any material adhering to the tip. This continuous cleaning of the spark tip eliminates the need for manual cleaning and ensures optimal sparking for effective ignition.



**SUNSPOT II FLAME DETECTOR
RETROFIT KIT**



**PAI SHOWN WITH HIGH
TEMPERATURE EXTENSION ROD**



FPS FLOW REGULATOR

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



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FLOW REGULATOR (OIL ONLY)

The FPS Oil Flow Regulator improves the operation of oil horn ignitors by maintaining the optimal level of oil flow required to achieve efficient fuel atomization and burning within the horn environment.

IGNITOR CONTROL BOX (OIL)

FPS manufactures ignitor control box/valve assemblies designed to replace old ignitor control boxes and valves on tangentially-fired boilers.

Assemblies include a NEMA 4 control box with door-mounted pilot devices to allow local control and monitoring of ignitor operation. The control box houses the SunSpot flame detector module, interposing relays, and field terminals for ignitor and ignitor valve electrical connections.

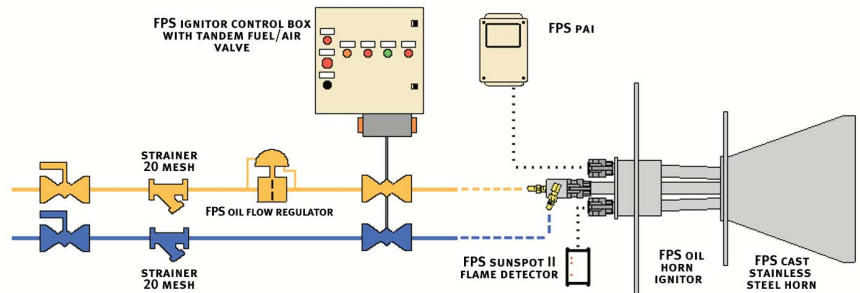
In oil installations, it is common to install a control box/valve assembly at each ignitor. Valves are mounted on, and wired into, the control valve box, which typically includes:

- Manual shutoff valves on oil and atomizing air inlets
- Strainers on oil and air inlets
- Oil flow regulator
- Automatic tandem fuel/air valve assembly c/w pneumatic actuator, electric solenoid and explosion proof limit switch
- Purge solenoid valve
- Purge check valve

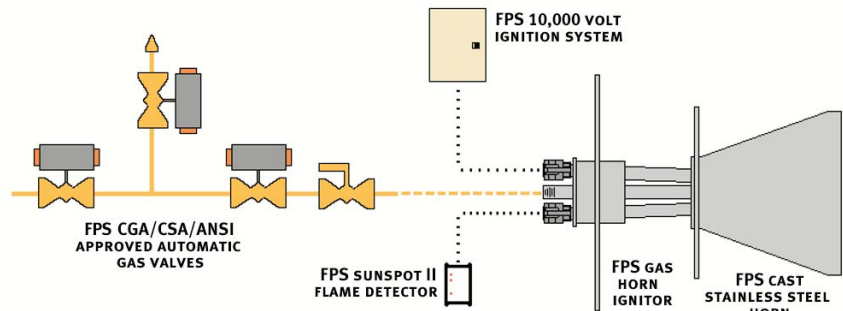
IGNITOR CONTROL BOX (GAS)

In gas ignitor installations, it is common to install a control cabinet/valve rack assembly at each corner to serve the gas ignitors on that corner. A typical control box/gas valve assembly includes:

- NEMA 4 Control Box (not shown)
- Gas header line with take-offs for each ignitor and blow-down line
- Vent header line with flex connection to each ignitor vent valve and with blow-down maintenance purge line
- Manual shutoff valve on inlet for each ignitor valve set
- Automatic double block and vent valve assembly for each ignitor



FUEL SCHEMATIC SHOWING FPS PRODUCTS (OIL)



FUEL SCHEMATIC SHOWING FPS PRODUCTS (GAS)

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