Airejet® Low NOₓ Coal Burner

**Type:**
Unique low NOₓ coal burner with center air jet for use with overfire air (OFA) systems.

**Design features:**
Developed exclusively for use with OFA systems for the lowest NOₓ emissions. Designed to accelerate coal ignition and intensify combustion for very rapid achievement of fuel rich conditions in the burner zone — the key to minimizing NOₓ emissions. Secondary air is drawn from the windbox to produce an axial air jet, which is surrounded by the coal stream. The coal stream is, in turn, surrounded by two air zones. This “inside-out / outside-in” ignition and combustion of the coal produces a very stable, intense flame. Ceramic materials provide long wear life for the core pipe and coal nozzle. A one-piece, shop-assembled burner facilitates quality and simplifies installation. In retrofit applications, generally plugs into existing wall openings.

**NOₓ removal efficiencies:**
Compared to other advanced low NOₓ burners in use with OFA, the AireJet burner further reduces NOₓ by up to 30% with lower excess air for improved boiler efficiency.
DRB-4Z® Low NOₓ Coal Burner

**Type:**
Multi-air zone coal burner with transition zone.

**Design features:**
Combines primary zone combustion control with fuel and air staging technology to achieve very low NOₓ emissions along with improved combustion efficiency; shop-assembled, one-piece assembly simplifies installation; well suited for use with an overfire air system; in most applications, plugs into wall openings to facilitate its use as a replacement upgrade; burner also can be equipped to fire natural gas or fuel oil.

**NOₓ removal efficiencies:**
Reductions up to 80% from uncontrolled levels in combination with overfire air.
**XCL® Low NOₓ Oil And Gas Burner**

**Type:**
Double air zone oil and gas burner for low NOₓ applications.

**Design features:**
Shop-assembled, one-piece assembly simplifies installation; well suited for use with an overfire air system; ideally suited as an upgrade to existing circular or other wall-fired type burners.

**NOₓ removal efficiencies:**
Reductions exceeding 80% from uncontrolled levels in combination with overfire air and flue gas recirculation systems.
Dual Zone NO$_x$ Port (Overfire Air System)

Type:
An air staging system utilizing ports with two air zones to optimize emission reductions.

Function:
Diverts a portion of combustion air that otherwise would be supplied to the burners to another location downstream in the combustion process; cutting the amount of air supplied to the burners causes a fuel rich/oxygen lean zone to develop; NO$_x$ is suppressed and reduced as it passes through the fuel rich zone. The overfire air system completes the combustion process.

Design features:
Dual zone ports simultaneously provide air across the furnace to mix with combustibles well away from the walls, while also supplying air to mix with combustibles in the proximity of the ports; heavy-duty design is well suited for extreme conditions of utility boilers; on-line adjustability provides means to fine tune mixing and minimize NO$_x$ emissions.

NO$_x$ removal efficiencies:
Dependant on burner design, arrangement and firing conditions, and the fuel being fired.
Wall-Fired Oil And Gas Igniters

Type:
Single or multi-burner wall-fired.

Design features:
FPS™ wall-fired oil and gas igniters are fixed position, low maintenance plug-in designs. The stationary design eliminates pneumatic cylinders and moving parts that can seize during the startup cycle and require maintenance. Variable heat input capabilities allow igniter operation at maximum heat input for boiler warm-up and at an economically reduced heat input for main fuel light-off and ignition support. Igniter flame detection is achieved using an integral flame rod that measures the ionization of gases from the combustion process.

Capacity:
No. 2 Fuel Oil: 4 to 35 MBtu/h.
Natural Gas: 1 to 35 MBtu/h.

Related products:
Dual fuel igniter
Propane igniter
Retractable igniter
Horn Oil And Gas Igniters

Type:
Horn igniters for corner-fired applications.

Design features:
The FPS™ oil and gas horn igniters integrate electrical and mechanical components to fit standard windbox arrangements. Differential pressure between the igniter combustion air source and the furnace propels the turbulent fan-shaped igniter flame out of the horn to penetrate the burner fuel stream and ensure positive light-off of the main fuel. Each igniter assembly is supplied with an integral flame detection system and can be furnished with or without a single pour stainless steel horn. The oil horn igniter is equipped with a low voltage, self cleaning plasma arc ignition system; the gas horn igniter utilizes a high voltage, spark plug type system.

Capacity:
No. 2 Fuel Oil: 1 to 6 MBtu/h. No. 2 Fuel Oil with booster package: 1 to 20 MBtu/h. Natural Gas: 1 to 20 MBtu/h.

Related products:
Dual fuel igniter
Auxiliary oil gun
Horn igniter upgrade products