Description

The ZEECO® GB staged air/staged fuel burner is designed with a staged fuel gas tip and a staged air annulus, which utilizes only one gas tip and provides lower NOx emissions than conventional raw gas designs. With greater flame stability, the burner provides consistent heat distribution and reduces maintenance costs. This staged air method is designed to offer turndown of 10:1 or greater, which is a drastic improvement over other low NOx designs.

Technology

The GB burner utilizes one tip to produce the primary combustion zone and the secondary combustion zone, which produces inert products of combustion that are induced into the staged fuel gas ejected straight up from the center of the gas tip. These products are then induced into the staged fuel gas ejected straight up from the center of the gas tip. Used in conjunction with staged air, a true staged fuel and staged air effect is achieved. The use of one tip allows for lower NOx production, vastly increased flame stability, and much greater turndown.
Low NOx Staged Air Burner

Design Features
- Stable flame over a wide range of conditions
- Turndown of 10:1 or greater for most cases
- Compact flame shape
- Reasonable cost and great value
- Combustion air is controlled by gears for precise control
- Bearings are used for the combustion air dampers for smooth, precise operation
- Configurations available: plenum mounted or individual windbox
- One (1) primary gas tip with staged fuel gas port
- 310 Stainless Steel (Type HK) gas tips
- Staged air annulus around burner tile assembly

Design Information
Burner Model: GB Staged Air Burner
Fuels: Gas Only
Description: Staged Air, Round Flame Burner
NOx Reduction Method: Staged Air
Predicted NOx Emissions Range (Natural Draft): 35 to 70 ppmv
Predicted NOx Emissions Range (600° F Air Preheat): 50 to 90 ppmv
Combustion Air Induction: Natural, Forced, Induced & Balanced Draft
Mounting Options: Up-fired, Side-fired, and Down-fired
Natural Draft Heat Release Range: 1 to 20 MMBtu/hr [0.293 to 5.860 MW]
Forced Draft Heat Release Range: 1 to 50 MMBtu/hr [0.293 to 14.650 MW]
Turndown: 10 to 25%

ZEECO® combustion and environmental solutions are designed and manufactured to comply with applicable local and international standards as defined by our customers.

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