

FREE-JET™ NEXT GEN ULTRA-LOW NO_x BURNER

GLSF Series



BURNERS | FLARES | THERMAL OXIDIZERS | VAPOR CONTROL | RENTALS | AFTERMARKET



FREE-JET™ Burner

Description

The ZEECO® GLSF Free-Jet burner is a next generation ultra-low emissions round flame burner.

Technology

The photo above shows a GLSF Free-Jet round flame burner in operation. This patented burner design uses the free jet method of mixing the fuel gas ejected from the gas tips with the surrounding inert products of combustion which dramatically lowers thermal NO_x production. In addition to superior NO_x reduction performance, the free jet design offers a superior turndown, typically 10:1 or greater. Each tip only has one large firing port.

Design Features

- Stable flame over a wide range of conditions
- High turndown of 10:1 or greater for most cases
- No stabilization metal used in the burner throat
- Tips have only a single firing port and do not require a small ignition port
- Low maintenance cost since tip mass is small and exposed into firebox less than 1" (25 mm)
- Low maintenance cost since the tips do not have small ignition ports which are prone to plug
- Compact design makes this burner an ideal choice for retrofit applications
- Low probability of flame interaction since the burners are smaller and gas is not swirled
- Superior heat flux profile
- Great value
- Combustion air is controlled by gear driven dampers for precise control
- Bearings are used for the combustion air dampers for smooth, precise operation
- Configurations available: plenum mounted or individual windbox
- 304 stainless steel fuel gas risers
- 310 stainless steel (type HK) gas tips



Design Information

Burner Model	GLSF FREE-JET Burner
Fuels	Gas Only
Description	Round Flame Next Generation Ultra-Low Emissions
NOx Reduction Method	Internal Flue Gas Recirculation by FREE-JET Mixing
Predicted NOx Emissions Range (Natural Draft)	6 to 20 ppmv
Predicted NOx Emissions Range (600° F Air Preheat)	10 to 25 ppmv
Combustion Air Induction	Natural, Forced, Induced, & Balanced Draft
Mounting Options	Up-fired, Down-fired, and Side-fired
Natural Draft Heat Release Range	1 to 20 MMBtu/hr [0.293 to 5.86 MW]
Forced Draft Heat Release Range	1 to 350 MMBtu/hr [0.293 to 102.6 MW]
Turndown	10:1
Typical Excess Air Range	10 to 25%

The Zeeco Difference



Our only business is the combustion business. By concentrating on what we do best, Zeeco has grown into a worldwide leader in combustion solutions. We are a privately held company whose ownership stays highly involved in daily operations, with upper management comprised of the world's leading combustion experts.

When you call Zeeco, we answer. When you make a request, you get a quick, efficient response. We are lean and efficient, able to make decisions quickly, without bureaucracy and red tape. Our sales, engineering, and purchasing groups work hand-in-hand to deliver highly competitive quotes and heroic turnaround times. We stand ready and willing to travel anywhere in the world to discuss upcoming projects firsthand, and to ensure that every existing project runs seamlessly.

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