



# FREE-JET NEXT GENERATION ULTRA-LOW NO<sub>x</sub> BURNER

**GLSF Series**

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## **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<sub>x</sub> production. In addition to superior NO<sub>x</sub> reduction performance, the free jet design offers a superior turndown, typically 10:1 or greater. Each tip only has one large firing port.

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BURNERS



FLARES



INCINERATORS



PARTS & SERVICE

# Free-Jet Next Gen Ultra-Low NOx Burner

## 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  
 NO<sub>x</sub> Reduction Method: ..... Internal Flue Gas Recirculation by Free Jet Mixing  
 Predicted NO<sub>x</sub> Emissions Range (Natural Draft): ..... 6 to 20 ppmv  
 Predicted NO<sub>x</sub> Emissions Range (600° F Air Preheat): ..... 10 to 25 ppmv  
 Combustion Air Induction: ..... Natural, Forced, Induced and Balanced Draft  
 Mounting Options:..... Upfired, Downfired and Sidefired  
 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%

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



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ISO 9001:2008

CERTIFICATION APPLIES TO ZEECO HEADQUARTERS ONLY.

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