

## NOxSTAR Vapor Combustion System

### Proven Reliability With Low-NOx Performance

Increasingly stringent NOx emissions regulations can put a strain on your operation. The new NOxSTAR Vapor Combustion System, however, combines our proven burner technology with emissions control of less than 0.02 lbs NOx/MMBtu so you don't have to sacrifice reliability to get the performance you need.

Using John Zink burner anti-flashback technology recognized by the U.S. Coast Guard and proven in more than 1,100 installations worldwide, NOxSTAR Vapor Combustion Systems deliver dependable performance. In addition, innovative engineering has allowed us to expand the capabilities of our traditional vapor combustors to provide superior emissions control of NOx, VOCs and CO.

### Low Emissions Plus High Capacity And Turndown

The NOxSTAR Vapor Combustion System is the ideal solution for achieving the low NOx and high destruction efficiency demanded by today's regulatory environment. Our unique design also allows for a significantly higher heat release in an individual combustor to deliver unmatched performance and benefits.

**High Capacity:** We can achieve very high stack capacity, often eliminating the need to stage multiple end-control devices. This makes regulatory compliance testing much easier. This high stack capacity can also result in lower installed capital cost, a smaller footprint, and lower maintenance costs.

**High Turndown:** Our staged design allows for a high turndown that's greater than 10:1, giving you a wider range of performance.



*Our NOxSTAR Vapor Combustion System provides up to 99.99% destruction efficiency with less than 0.02 lbs NOx/MMBtu and less than 0.015 lbs CO/MMBtu.*



## Designed To Deliver

With vapor control experience dating back several decades, we've earned our reputation as a leader in research and development, manufacturing, service and support, and more. As a result, you can rely on John Zink Hamworthy Combustion vapor combustion systems to deliver where it counts:

### Proven

- + Enclosed combustors completely hide the flame while combusting hydrocarbon vapors in a controlled manner
- + Temperature control reduces fuel consumption and achieves higher destruction efficiencies

### Flexible

- + The NOxSTAR Vapor Combustion System can handle a wide range of process conditions (high/low flow, rich/lean, inert/non-inert)
- + Performs in many applications including ship/barge loading, truck/railcar loading, tank venting
- + Designed to utilize multiple fuel gases and still achieve same performance standards

### Safe

- + In marine loading applications, we work with the Coast Guard to provide exemptions based on our proprietary burner and operating procedure
- + Detonation arrestor provides flashback protection in the main vapor line, deflagration arrestors are included on each combustion stage
- + Anti-flashback burners allow safe combustion of explosive mixtures that are unsuitable for standard burners (manufactured by JZHC, these burners help prevent flashbacks and provide stable combustion over a wide range of flows and concentrations)
- + Reliable, energy-efficient pilots manufactured by JZHC provide a stable, continuous ignition source for the vapors
- + Burner staging logic ensures safe combustion

## Performance At A Glance

- **Up to 99.99%** destruction efficiency
- **Less than 0.02 lbs** NO<sub>x</sub>/MMBtu
- **Less than 0.015 lbs** CO/MMBtu
- **Simple**, single-device source testing
- **Staged design** for greater than 10:1 turndown
- **Burner staging logic** ensures safe combustion

**Don't sacrifice reliability to get low-NO<sub>x</sub> performance.**

Call us today and get both. **918 234 2903**



## GLOBAL REACH

JZHC has locations all over the map, with thousands of employees worldwide.



### Global Headquarters

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To locate an office in your region, visit [johnzinkhamworthy.com/contacts/office-locator](http://johnzinkhamworthy.com/contacts/office-locator)