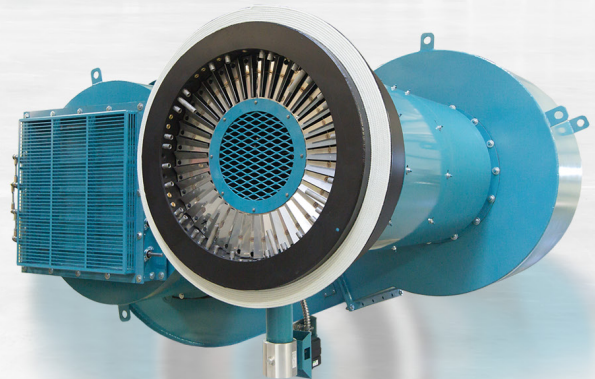
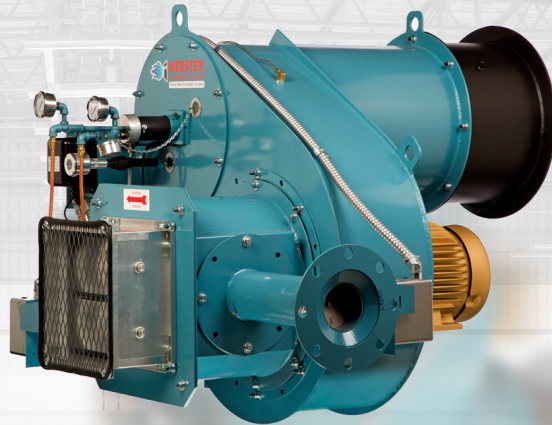
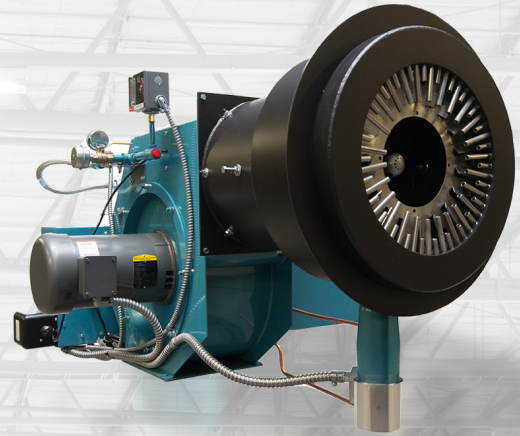


# Boiler Burner Technologies

*For Commercial And Industrial Applications*



**WEBSTER**  
**COMBUSTION**  
A Selas Heat Technology Company



## Webster Combustion Is Committed To Better Fuel Economy, Energy Savings And Reliability For Our Boiler Burner Customers.

Webster Combustion has been a leading manufacturer of custom and semi-custom multi-fuel boiler burners for the commercial, institutional and industrial markets for over 100 years. Our burners combine advanced controls with proven combustion performance to provide heat for the transformation of water to potable hot water, hot water for heating, and steam for heating and process applications. For over a century, Webster has helped customers reduce emission levels, and provided higher efficiencies for both new and existing boiler systems.

Webster's pledge is to provide quality products and service through the use of innovative technologies, cutting edge manufacturing, and a world class customer experience.

Webster is proud to be a part of Selas Heat Technology Company, a global leader in combustion innovation.

**Talk to your local Webster representative today to find out how to reduce costs and improve reliability in your boiler room.**

# Standard Commercial & Industrial Boiler Burners



**NEW**

## SG Burner Series - Gas Only

Webster SG Series gas burners are designed to offer years of dependable operation. Built for economy, Webster SG burners are durable and easy to start up and service. Our exclusive flame retention head design maintains stable and efficient combustion in a wide variety of furnace configurations and conditions.

- 10 to 60 Boiler HP Range
- 300 to 2,500 MBH firing rate



## JB(X) Burner Series

JB Series burners are easily configurable, forced draft burners for boilers and thermal fluid heaters. They are capable of firing a combination of gas, oil, renewable or alternative fuels, and can be configured to achieve low NOx levels for commercial and industrial applications.

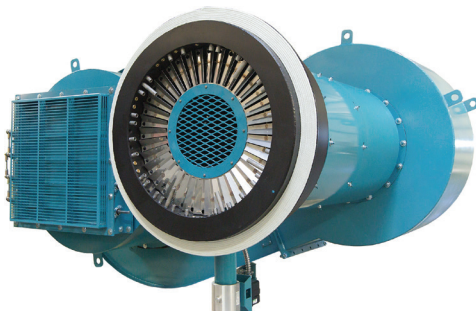
- 10 to 300 BHP design for cast iron and steel boilers
- NOx levels as low as 30 ppm



## HDRV(X) Burner Series

Webster's HDRV Series burners extend our capacity to deliver superior combustion performance for larger commercial, institutional, and industrial applications. The HDRV is offered in several orientations and is capable of firing a combination of gas, oil, renewable or alternative fuels. These burners are also capable of achieving low NOx levels for commercial and industrial applications.

- 250 to 900 BHP design for watertube and firebox boilers
- NOx levels as low as 30 ppm



## HDR(S)(X)-RF Burner Series

The HDR(S)-RF Burner Series is available with a full register and is built for industrial applications with a high efficiency remote fan. It supports a wide range of fuels and is recommended for large firetube and watertube applications.

- 1000 to 2500 BHP design for watertube and firetube boilers
- Turndown up to 10:1 and NOx levels as low as 25 ppm firing natural gas
- Turndown up to 8:1 firing No. 2 Oil

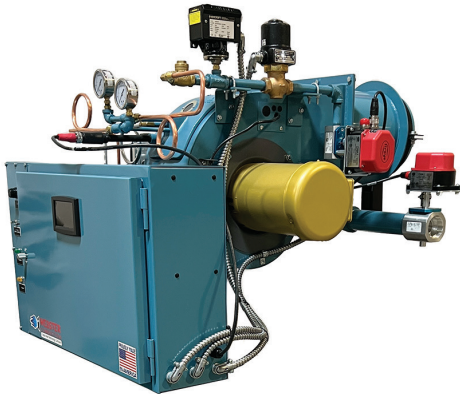
# High Efficiency, High Turndown Boiler Burners

**NEW**

## JB HT Burner Series

Webster JB HT Series burners offer years of efficient operation for high turndown applications. Designed for ease of service, Webster burners are equipped with the latest control and technology options. The JB HT Series burner offers up to 10:1 turndown when firing gas, and 8:1 firing oil.

- 10 BHP to 300 BHP range
- 1000 to 12600 mbh max firing rate



## JBS(X) Burner Series

JBS(X) High Swirl burners reduce emissions while providing turndown rates as high as 12:1 for natural gas. In addition, the JBS(X) Series offers superior combustion efficiency with low excess air and an advanced head design is available with dual manifolds to handle multiple fuels for digester and other specialty fuel applications.

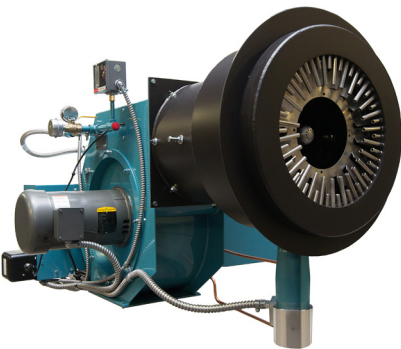
- 40 to 400 BHP design for watertube and firetube boilers
- High turndown
- Low NOx options available



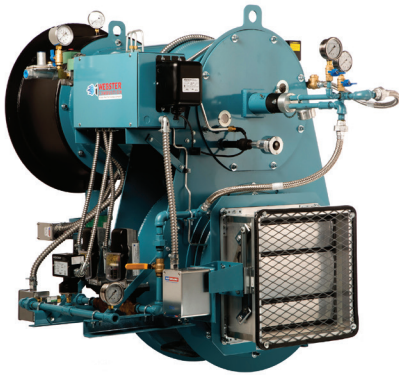
## JBE(X) Burner Series

Webster's JBE(X) burner is a high efficiency, low excess air burner that is designed to improve commercial boiler combustion efficiency. Perfect for hospitals, schools and universities, which are particularly cost sensitive due to tight operating budgets, the JBE(X) achieves boiler horsepower ratings in the 200 to 1,750 HP range using less fuel and electricity than conventional burners. The JBE(X)'s lower horsepower blower motor can result in significant total energy savings, depending on the boiler, burner size and operating conditions.

- Burner sizes: 200 HP up to 1750 HP (JBE) and 200 HP up to 1500 HP (JBEX)
- High turndown rates:
  - Up to 12 to 1 on gas firing
  - Up to 10 to 1 on oil firing
- Low NOx options available



## High Efficiency, High Turndown Boiler Burners (continued)



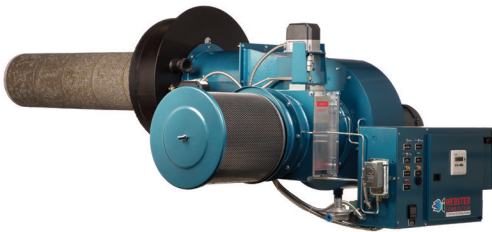
### HDS(X) Burner Series

The HDS(X) Burner Series offers improved emission performance and higher turndowns (12:1 on natural gas). The HDS is designed for low excess air requirements and offers a high swirl firing head to provide thorough fuel/air mixing and superior combustion performance for firetubes, watertubes, and industrial applications. The HDS can be configured as an HDSX where low NOx is required.

- 200 to 1500 BHP design for firetube and watertube boilers
- High turndown
- Low NOx options available

## Ultra Low NOx Boiler Burners: Superior Fuel/Air Mixing

Webster has developed burners that can achieve ultra-low NOx performance when burning natural gas. Our technology creates much better fuel/air mixing at the point of combustion for stable and reliable operation.



### JBFX and HDFX Ultra-Low NOx Burner Series

The JBFX and HDFX series offers advanced NOx compliance and is based on Webster's proven JB and HD series platforms. Using a metallic-alloy-fiber material combustion element over a stainless steel frame, the JBFX is perfect for boiler and heater applications where single-digit NOx levels are required.

- Single-digit (<9 ppm) ultra-low NOx design
- No Flue Gas Recirculation required
- Sizes available up to 1,000 boiler horsepower

## Multi-Fuel Windbox Register Burners

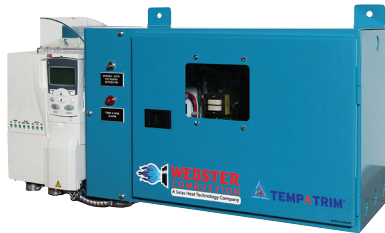


### FDR(X) Series Multi-Fuel Burners

The FDR(X) Forced Draft Register burner is a highly efficient combustion system that combines a windbox, air register, ignitor assembly, fuel train, flame safety control, combustion control and forced draft blower all assembled into one complete package. Our FDR(X) is a heavy-duty package designed for industrial watertube boiler applications.

- 30 ppm NOx available
- Single or multi-fuel models including NG, LP, coke oven, refinery and low BTU gases; fuel oils from diesel to No. 6 oil
- 10:1 turndown firing gas, 8:1 turndown firing oil

## TEMP-A-TRIM® Air Density Trim System Saves Money



Webster Combustion's patented TEMP-A-TRIM air density trim system senses combustion air temperature and automatically varies the fan speed to create a constant mass air flow for combustion. By maintaining optimum fuel/air ratios, the UL-approved TEMP-A-TRIM ensures maximum burner efficiency.

As a result, TEMP-A-TRIM pays for itself in the following ways:

- Up to 3% savings on fuel bills
- Up to 30% savings on electrical bills
- Up to 2% in boiler efficiency gains
- Reduced maintenance costs

### TEMP-A-TRIM Features & Benefits

- Reduces the need for seasonal burner tuning
- Feed-forward control for accurate operation
- Easy to install with no special set-up required
- Compatible with linkage or linkageless controls
- Precisely corrects for changes in air density to automatically optimize combustion efficiency
- Saves fuel and electricity, as well as lowering noise levels
- Available on all sizes of new Webster burners
- Can retrofit to existing Webster burners or other brands
- Lower cost, complexity, and maintenance than typical O<sub>2</sub> trim systems

# System Features & Customer Support

## Webster Burner Systems Features

Webster Combustion combines proprietary control technology with proven combustion performance to reduce your energy costs and emissions. Our burner systems offer fuel flexibility, efficiency, low emissions, and high turndown for new and retrofit applications.

- Dual fuel/multi-fuel capability
- Linkage or linkageless controls
- Conversion door kits for boilers
- TEMP-A-TRIM air density trim control
- Biofuels/waste fuels
- Oil pump sets
- UL-listed products

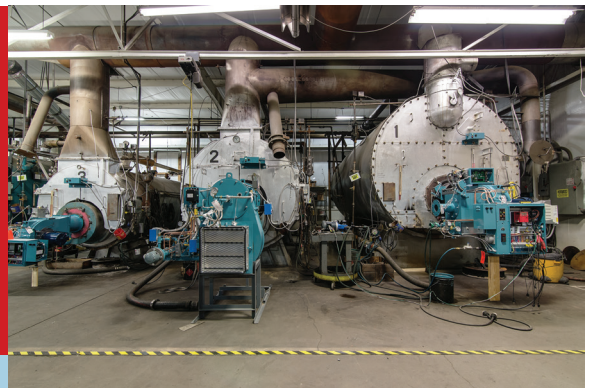
## Pre-Sale & Aftermarket Customer Support

Webster Combustion provides a full range of product support and services to extend burner life and ensure optimal performance. This includes:

- Expert field service & troubleshooting
- Vast inventory of replacement parts
- Combustion College training
- National and local code compliance

## Custom Burner Test Burners

Webster maintains a lab facility with many different boiler types used for testing. We can customize a burner for a customer and they can witness the testing in our lab. All of our burners go through a complete and thorough checkout procedure before being shipped.



## Our History

Webster Combustion Technology LLC was founded by Mr. W. W. Webster in 1922 in Tulsa, Oklahoma to make the Webster Low Pressure Radiant Gas Burner. Mr. Webster and his staff built a highly successful business in the conversion gas burner industry.

Over the decades the company expanded its burner product line, eventually moving to Winfield, Kansas in April 1977 and narrowing its focus to the commercial and industrial burner business.

Webster was acquired by Selas Heat Technology in November of 2013 and the company changed its name to Webster Combustion Technology LLC. Webster has continued to grow, introducing among other things, ultra-low NOx burners and biofuel burners.

Recently, the company has expanded into the asphalt market with its HDRA total air burner and asphalt burner control systems.



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