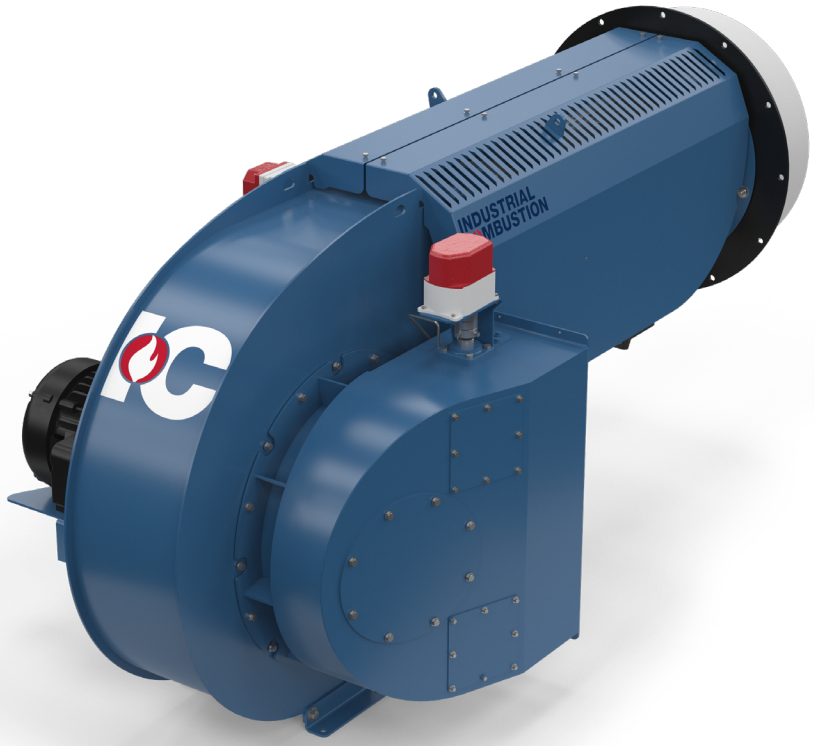
INDUSTRIAL COMBUSTION



SBR-30

LOW-NO_X BURNER

Low Emissions with Highest Efficiency at 30 PPM NO_X with 3% O_2 without FGR

H_2 HYDROGEN BLEND READY

Advanced Technology with Endless Possibilities

The Industrial Combustion SBR-30 series is designed for a variety of boiler types such as firetubes, and watertubes and is suitable for various types of process heaters. Capable of less than 30 ppm NO_x emissions without FGR, the IC SBR-30 series features a unique firing head design to achieve controlled combustion leading to low emissions with 3% O_2. Advanced technology allows the SBR series to offer low-NO_x, low CO emissions and up to 10:1 turndown on natural gas.

Applications

- Process Steam
- Industrial Process
- Waste Heat Recovery
- Hospital and Healthcare
- Laundry and Dry Cleaning
- Refineries and Petrochemical

HYDROGEN BLEND READY

Can be used with a hydrogen blend up to a maximum of 20% H_2. Wobbe index to be within 10% of NG. Supply pressure and gas valve sizing to be selected accordingly. For more information on hydrogen options please connect with Industrial Combustion.

SBR-30 Explained

The IC SBR-30 series burner, capable of less than 30 ppm NO_X emissions without FGR, offers: natural gas fuel option from 16.8 to 54.6 MMBTU/hr. This Low-NO_X burner is also capable of firing #2 Fuel Oil as a backup fuel. The design is ideal for use with applications where low emissions are required and high efficiency is desired. The SBR-30 ppm burner delivers the reliability to meet today's stringent NO_X emission levels, without FGR and avoiding high excess O_2.

SBR-30

Low-NO_X Emissions as low as 30 ppm achieved without FGR

Maximum Efficiency provided by standardized parallel positioning

Uniform Flame for equal heat transfer allowed by premix fuel

Easy Access air housing for internal components

Quiet Operation with an advanced combustion air fan wheel; Less horsepower and less noise

Lower Maintenance Cost with no FGR or air filters needed

Low-NO_X/CO achieved without a fragile surface combustion burner head, making it safer and more reliable

Compatible with several control systems

Capacities and Ratings

Less than 30 ppm Low-NO_x configuration.

Burner Size (BHP)	400	500	600	700	800	900	1000	1100	1200	1300
Heat Input (MMBTU/hr)	16.8	21	25.2	29.4	33.6	37.8	42	46.2	50.4	54.6
Recommended Furnace Diameter (inch)	37	45	45	50	50	52	52	56	56	60
Recommended Furnace Length (inch)	143	146	152	160	160	200	200	210	210	226
Recommended Furnace Pressure @ 15% Excess Air and NO FGR (inwc)	3.6	4.3	5.6	5.4	7	3.5	4.1	4.8	5.6	5.6
Elevation (ft)	0-2,000	0-2,000	0-2,000	0-2,000	0-2,000	0-2,000	0-2,000	0-2,000	0-2,000	0-2,000
Gas Train Inlet Pressure (psig)	5	5	5	5	5	5	8	8	8	8
Oil and Atomizing Air Pressure at Burner Inlet (psig)	100	100	100	100	100	100	100	100	100	100
Fan Motor HP	20	25	30	40	40	50	50	50	60	60
Operating O_2 (%, dry)	3.0~3.5	3.0~3.5	3.0~3.5	3.0~3.5	3.0~3.5	3.0~3.5	3.0~3.5	3.0~3.5	3.0~3.5	3.0~3.5
FGR	No	No	No	No	No	No	No	No	No	No
NO_x (ppm, @3% O_2) burning Natural Gas	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30
NO_x (ppm, @3% O_2) burning #2 Fuel Oil	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled
CO (ppm, @3% O_2) burning Natural Gas or #2 Fuel Oil	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100
Turndown burning Natural Gas*	Up to 10:1	Up to 10:1	Up to 10:1	Up to 10:1	Up to 10:1	Up to 10:1	Up to 10:1	Up to 10:1	Up to 10:1	Up to 10:1
Turndown burning #2 Fuel Oil	Up to 5:1	Up to 5:1	Up to 5:1	Up to 5:1	Up to 5:1	Up to 5:1	Up to 5:1	Up to 5:1	Up to 5:1	Up to 5:1
Smoke # burning #2 Fuel Oil	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Consult manufacturer on availability of burner sizes.

The information in this document is work in progress and subject to change without notice.

The recommended furnace conditions are based on CBEX firetube boilers. Operating conditions and performance criteria may be different if furnace diameter and length are smaller than the recommended values.

*Consult manufacturer with specific conditions to verify applicability.

Burner and Control Upgrades Are Easier Than Ever.

Industrial Combustion has the engineering team to design a turnkey solution for any boiler and any application. Contact an Industrial Combustion authorized distributor to determine what upgrade is right for you.

Evaluate your burner and controls for an upgrade if:

- Existing burners are cycling on/off frequently wasting energy
- Your burner or boiler controls are more than 10 years old
- Burner controls are not fully integrated with boiler loads
- You must reduce emissions while maintaining efficiency
- Alternate fuels could provide energy savings and/or reduced emissions

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