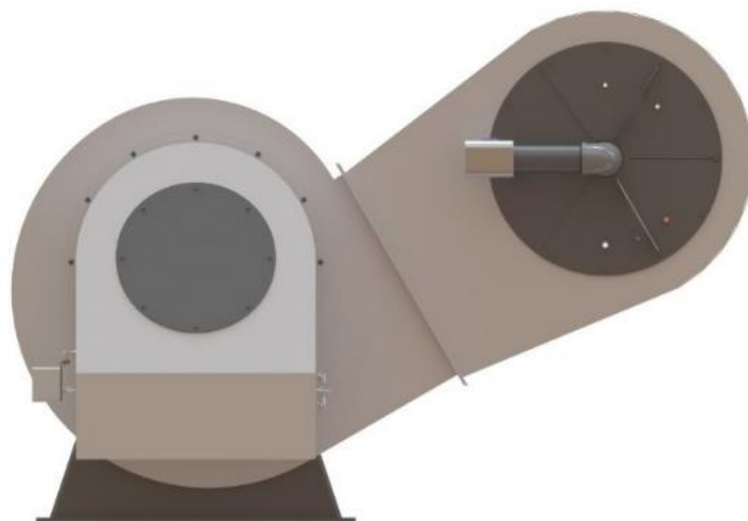


# Environmental Burner Solutions



## MODEL BX BURNER

INDUSTRIAL BURNER DESIGN / ENVIRONMENTAL BURNER SOLUTIONS / AFTERMARKET PARTS / SERVICE

[www.alpha-combustion.com](http://www.alpha-combustion.com)



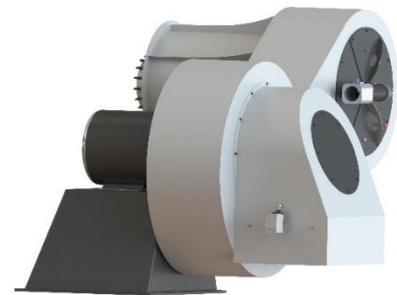
# ENERGY EFFICIENCY LOW EMISSION High Quality Reliable

## MODEL BX

Alpha Combustion **Model BX** Burner utilizes stage flame low NOx combustion technology and flu gas recirculation to achieve low emissions and high efficiency performance. NOx  $\leq 9$  ppm @ 3% O<sub>2</sub> and near zero CO emissions are achieved.

**Model BX** burner is ideal for fire-tube boilers, industrial water-tube boilers, as well as thermal fluid heater applications. Blower location and connection to the burner can be custom engineered to fit the end user specifications.

Full modulation operation is standard and a parallel positioning system is required for burner management and combustion control.



### HEAT RELEASE RANGE

16.8 to 140 mmbtu/hr. (HHV)  
4.4 to 36.5 MW (LHV)

Ideal for boiler size:

400 HP to 3400 HP  
6.0 ton/hr. to 48 ton/hr.

### FUEL

Natural Gas (NG)  
Propane (LP)  
Town Gas (TG)  
Digester Gas (DG)

### BURNER TURNDOWN

Up to 10 to 1 when firing NG  
Up to 8 to 1 when using FGR

### Emission Levels (Gas Only)

Typical FGR Applications:  
 $\leq 30$  ppm NOx at 3% O<sub>2</sub>  
Or  
 $\leq 9$  ppm NOx at 3% O<sub>2</sub>

Exact emission performance may vary based on the application and combustion chamber size. No guarantee of emission is intended or implied without specific written guarantee from Alpha Combustion.

### BURNER MOUNTING OPTIONS

Horizontal  
Vertical  
Up or down firing.

### CONTROL PANEL MOUNTING OPTIONS

Remote panel (Standard)

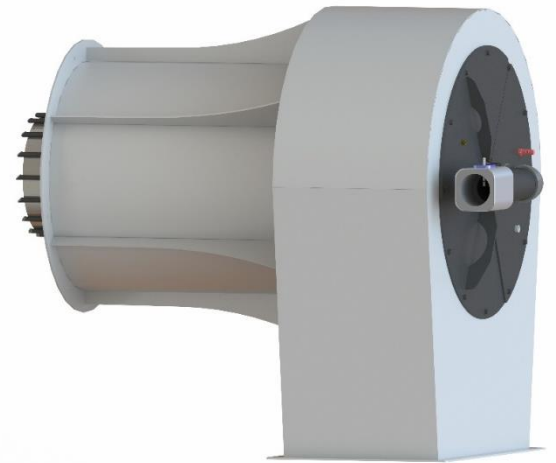
Low Emission

Energy Efficiency

Reliable and High Quality

# ALPHA COMBUSTION

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Burner Model	Frame Size	Burner size		Boiler		Blower Motor HP	Furnace Pressure		Manifold Gas Pres. At High Fire		Recommended Gas Train Size (INCH)	Required Inlet Pres (PSI)	Required Inlet Pres [mBar]
		MMBTU/hr	MW	HP	ton/h		[inch W.C.]	[mBar]	[inch W.C.]	[mBar]			
BX18-0168-FXX	18	16.8	4.38	400	6	15	3.5	8.7	89.8	223.7	2.5	2.0	137.9
BX18-0336-FXX	18	25.2	6.58	600	9	20	4.2	10.4	28.3	70.4	3.0	2.5	172.4
BX22-0378-FXX	22	37.8	9.87	900	13	30	8.1	20.3	42.8	106.6	4.0	2.0	137.9
BX22-0630-FXX	22	63.0	16.44	1500	21	75	5.3	13.1	58.8	146.4	4.0	4.0	275.8
BX32-0672-FXX	32	67.2	17.54	1600	23	80	7.0	17.4	17.7	44.2	4.0	6.0	413.7
BX32-0840-FXX	32	84.0	21.92	2000	29	100	8.0	19.9	16.5	41.0	4.0	8.5	586.1
BX36-0924-FXX	36	92.4	24.12	2200	31	100	8.0	19.9	33.5	83.5	4.0	8.5	586.1
BX36-1400-FXX	36	140.0	36.54	3333	48	150	8.0	19.9	45.7	113.8	6.0	8.5	586.1

Gas input is based on natural gas with 1,000 Btu/cu.ft. and 0.60 gravity.

Motor HP is based on altitude of 2,000 feet or less. If altitude > 2,000 feet and < 8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult Alpha Combustion for higher altitudes.

Burner Model Selection

BX16-0177-AXX

A-(Air), F-(FGR), XX-(Fuel Type: NG, LP, TG, DG)

Input size: 1400-(140 MMBTU)

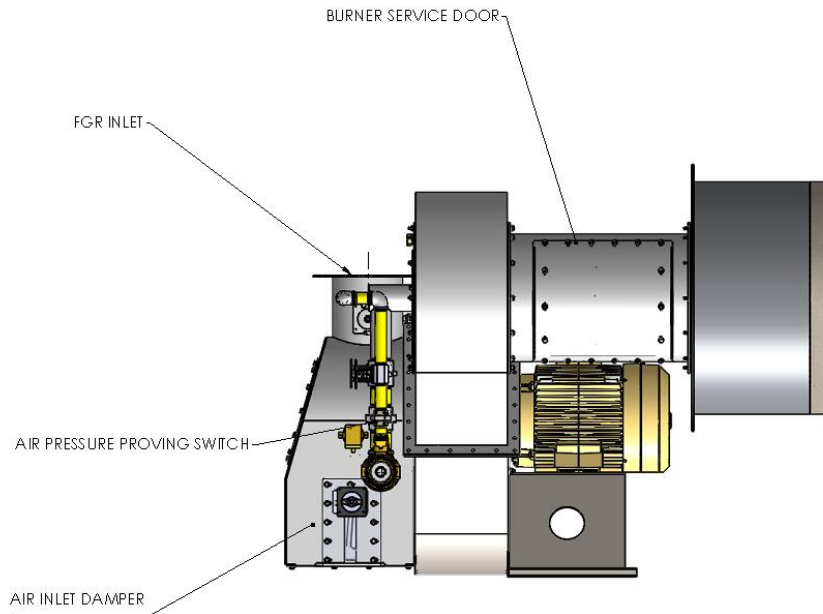
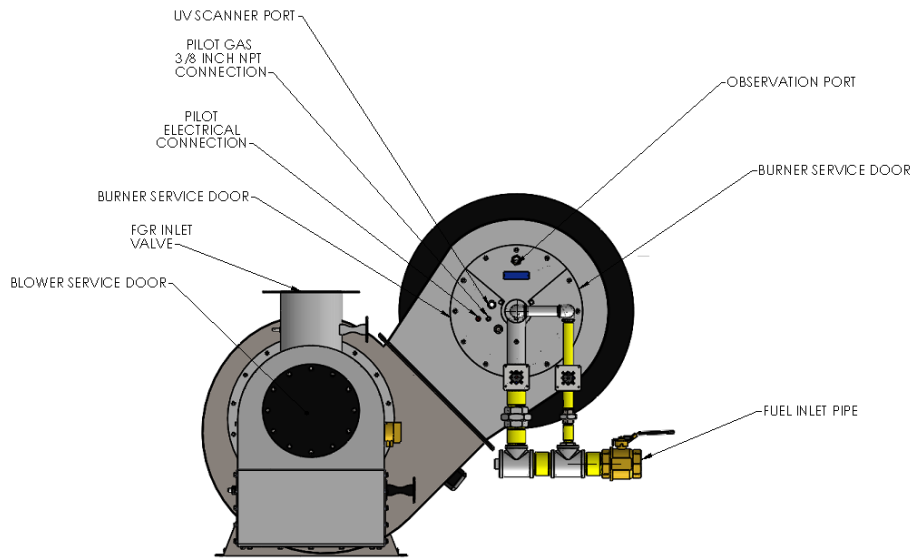
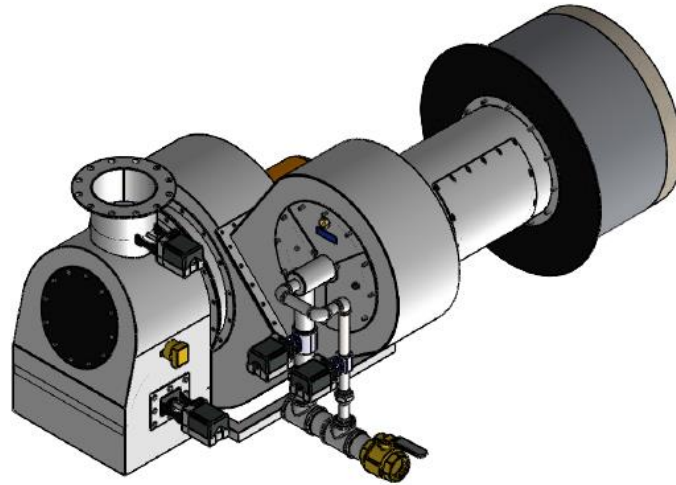
Burner Model and Frame Size

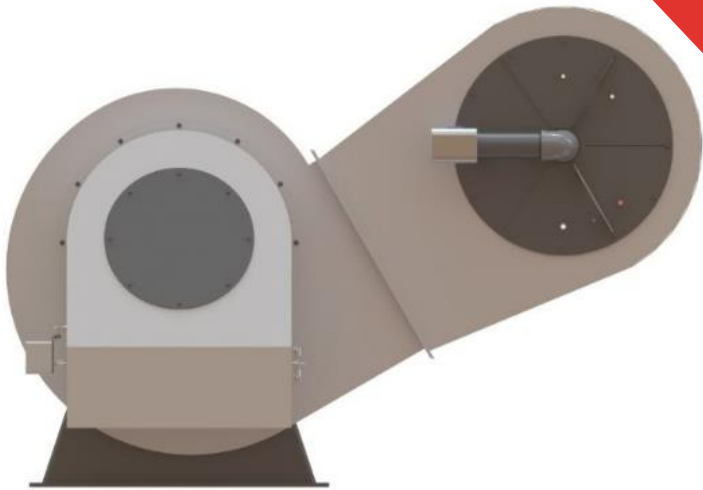
## BX BURNER MATERIALS OF CONSTRUCTION

Burner Part	Material
Burner Housing	1010 Steel
Fan Housing	1010 Steel
Gas nozzles	310 Stainless Steel
Diffuser	310 Stainless Steel
Pilot tube	310 Stainless Steel
Burner Block	Pump-Cast 60 (Service Temp up to 3050F)
Burner Sleeve	330 Stainless Steel
Impeller	Steel
Paint	All External Surfaces are Powder Coated



# TYPICAL BX BURNER LAYOUT





## Contact Information:

**918-851-1751**

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