

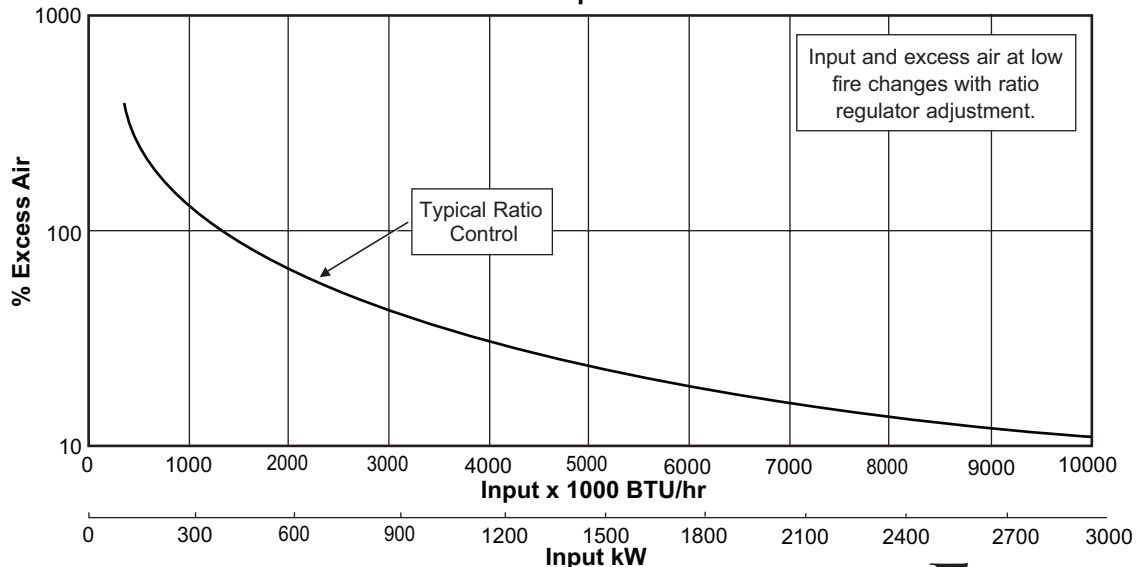
# Eclipse RatioAir Burners

*Model RA1000*  
Version 1

Parameter		Specifications	
		Straight Tube	Medium Velocity Tube
<b>Maximum Input, BTU/hr (kW) at Neutral Chamber Conditions (Natural Gas)</b>	<b>60 Hz Packaged Blower</b>	10,250,000 (3004)	10,030,000 (2940)
	<b>50 Hz Packaged Blower</b>	10,250,000 (2974)	9,950,000 (2916)
<b>Minimum Input, BTU/hr (kW)</b> <i>Lower inputs may be achieved, contact factory.</i>		350,000 (102)	350,000 (102)
<b>Main Gas Inlet Pressure, "w.c. (mbar)</b> <i>Fuel pressure at Ratio Regulator Inlet.</i>		20 to 55 (50 to 137)	20 to 55 (50 to 137)
<b>High Fire Flame Length, Inches (mm)</b> <i>Measured from the Outlet End of the Combustor.</i>		180 (4572)	149 (3785)
<b>Maximum Flame Velocity, Ft/s (m/s)</b> <i>Approximately 15% excess air at maximum input.</i>		-----	250 (75)
<b>Maximum Chamber Temperature °F, °C</b>	<b>Alloy Tube</b>	1500 (816)	1750 (954)
	<b>Block &amp; Holder</b>	1900 (1038)	2800 (1538)
<b>Flame Detection</b>		UV scanner only	
<b>Fuel</b>		Natural Gas <i>For other fuels, contact Eclipse.</i>	

- All information is based on laboratory testing in neutral (0.0" w.c.) chamber with standard combustor design. Different chamber conditions will affect the data.
- Maximum inputs are given for the standard combustion air blower without an air filter.
- All inputs based upon gross calorific values and standard conditions: 1 atmosphere, 70°F (21°C).
- Blower motor service factors greater than 1.0 may be required when firing into negative chamber pressure applications. For specific application questions, contact Eclipse.
- Eclipse reserves the right to change the construction and/or configuration of our products at any time without being obliged to adjust earlier supplies accordingly.

### Control & Operation Zone



## Straight Tube Specifications

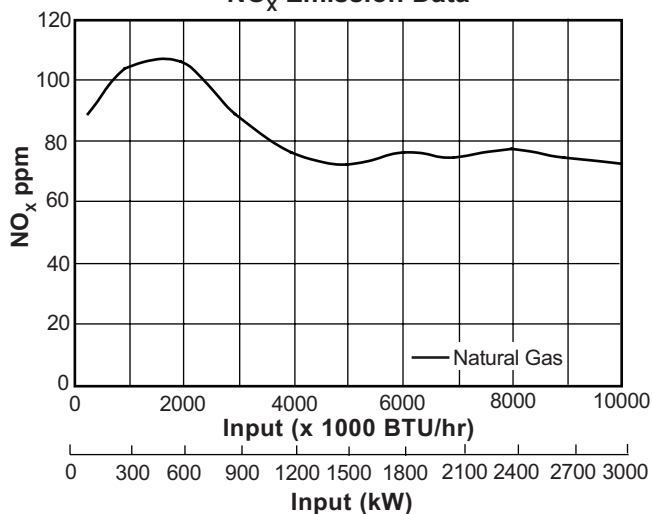
### Blower Model

**60 Hz, 7B (15" w.c. @ 110,000 scfh, 7.5 hp)**

**50 Hz, 7B (15" w.c. @ 110,000 scfh, 5.5 kW)**

Specifications						
Parameter	"w.c.	mbar	60 Hz Packaged Blower		50 Hz Packaged Blower	
			BTU/hr	kW	BTU/hr	kW
<b>Maximum Input vs. Chamber Pressure (Natural Gas)</b>	-2.0	-5.0	10,900,000	3192	10,800,000	3162
	-1.0	-2.5	10,550,000	3089	10,500,000	3075
	0.0	0.0	10,250,000	2935	10,150,000	2972
	1.0	2.5	9,900,000	2898	9,800,000	2870
	2.0	5.0	9,550,000	2796	9,450,000	2767

**NO<sub>x</sub> Emission Data**



NO<sub>x</sub> emission data is given for:

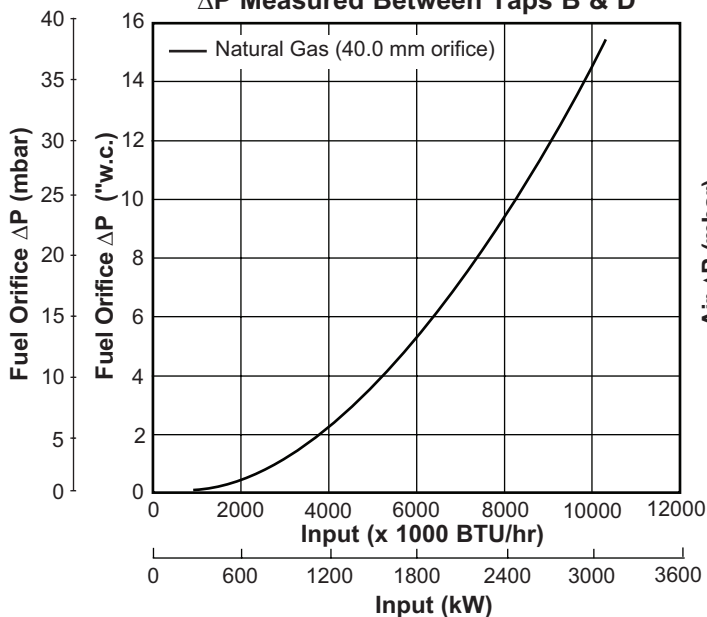
- Ambient Combustion Air ~70°F (20°C)
- Less than 1000°F (538°C) Firing Chamber
- Minimal Process Air Velocity
- ppm Volume Dry at 3% O<sub>2</sub>
- Neutral Chamber Pressure

CO emission is largely influenced by chamber conditions. Contact Eclipse for an estimate of CO emissions on your application.

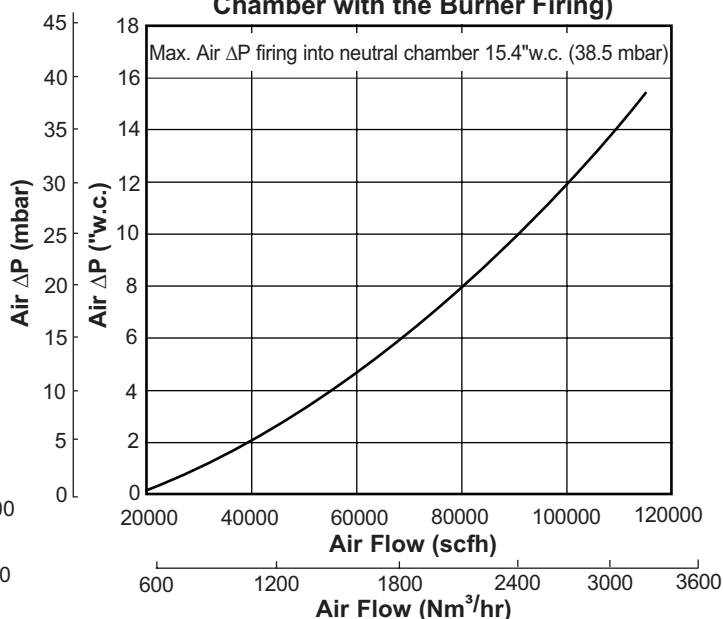
Emissions are influenced by:

- Chamber Conditions
- Fuel Type
- Firing Rate
- Ratio Regulator Adjustment
- Combustion Air Temperature

**Fuel Orifice ΔP vs. Input  
ΔP Measured Between Taps B & D**



**Air ΔP vs. Air Flow  
(Measured Between Tap C & Chamber with the Burner Firing)**



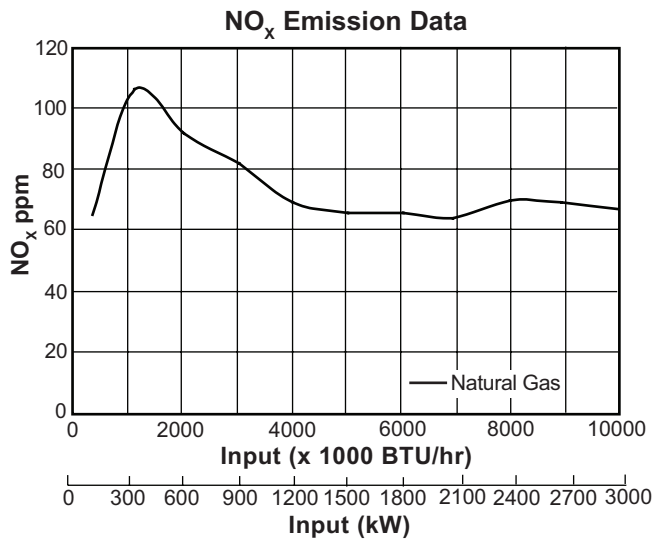
## Medium Velocity Tube Specifications

### Blower Model

**60 Hz, 7B (15" w.c. @ 110,000 scfh, 7.5 hp)**

**50 Hz, 7B (15" w.c. @ 110,000 scfh, 5.5 kW)**

Specifications						
Parameter	"w.c.	mbar	60 Hz Packaged Blower		50 Hz Packaged Blower	
			BTU/hr	kW	BTU/hr	kW
<b>Maximum Input vs. Chamber Pressure (Natural Gas)</b>	-2.0	-5.0	10,650,000	3118	10,550,000	3089
	-1.0	-2.5	10,350,000	3030	10,250,000	3001
	0.0	0.0	10,030,000	3016	9,950,000	2913
	1.0	2.5	9,700,000	2840	9,650,000	2825
	2.0	5.0	9,400,000	2752	9,300,000	2723



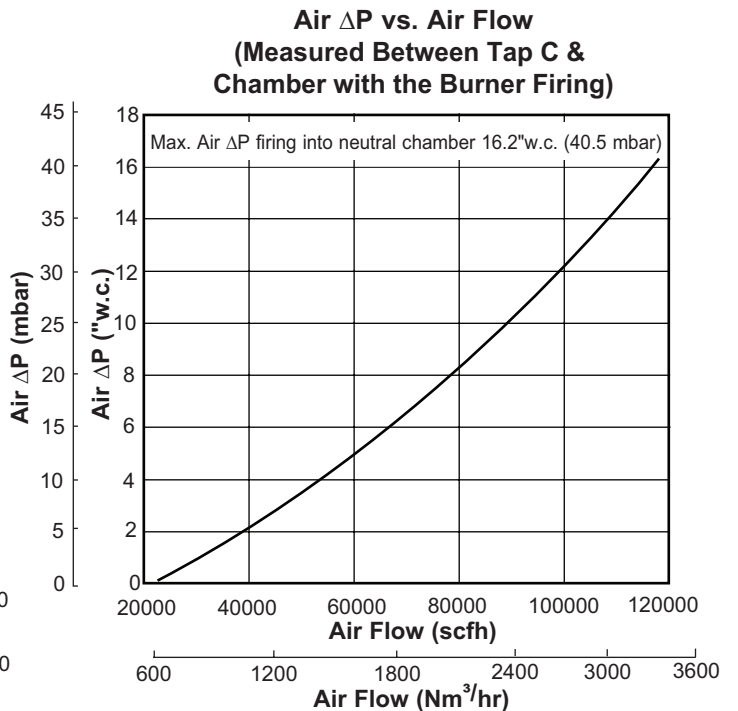
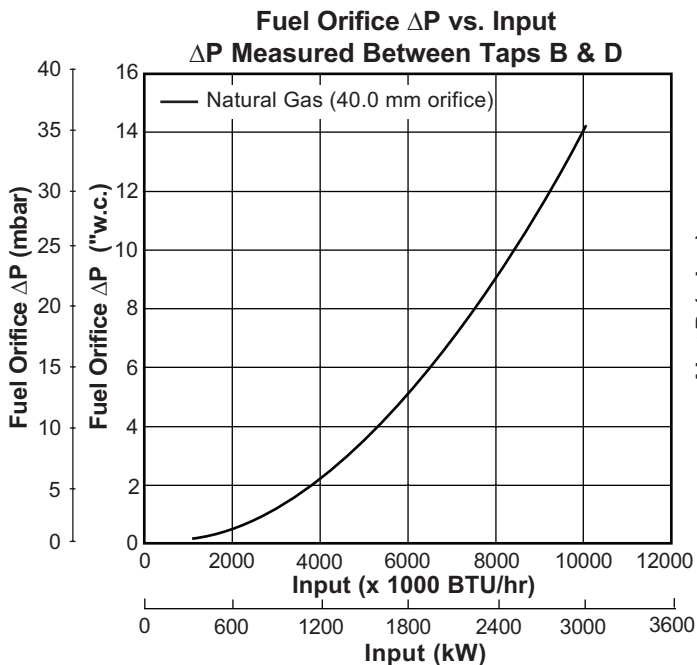
NO<sub>x</sub> emission data is given for:

- Ambient Combustion Air ~70°F (20°C)
- Less than 1000°F (538°C) Firing Chamber
- Minimal Process Air Velocity
- ppm Volume Dry at 3% O<sub>2</sub>
- Neutral Chamber Pressure

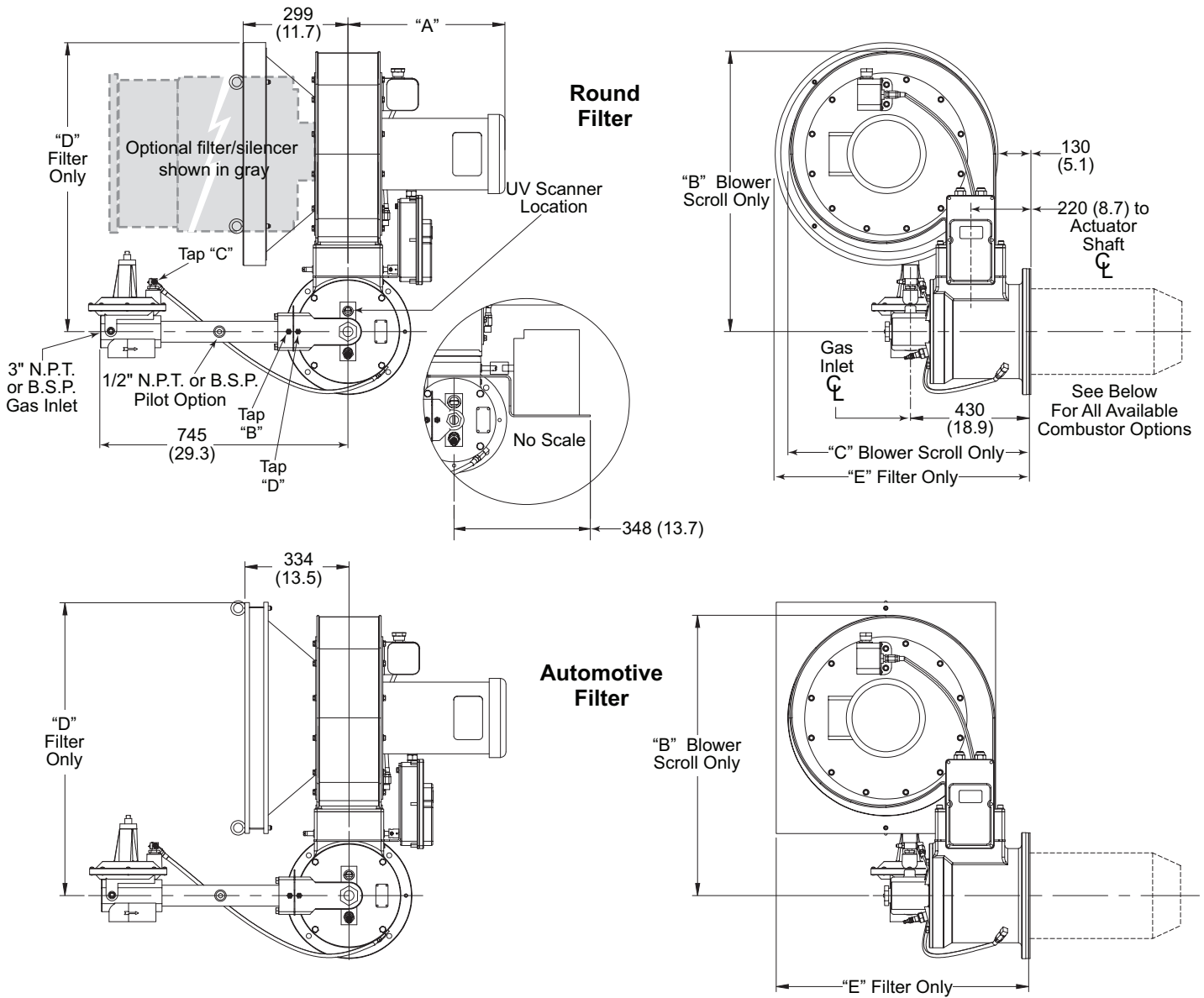
CO emission is largely influenced by chamber conditions. Contact Eclipse for an estimate of CO emissions on your application.

Emissions are influenced by:

- Chamber Conditions
- Fuel Type
- Firing Rate
- Ratio Regulator Adjustment
- Combustion Air Temperature

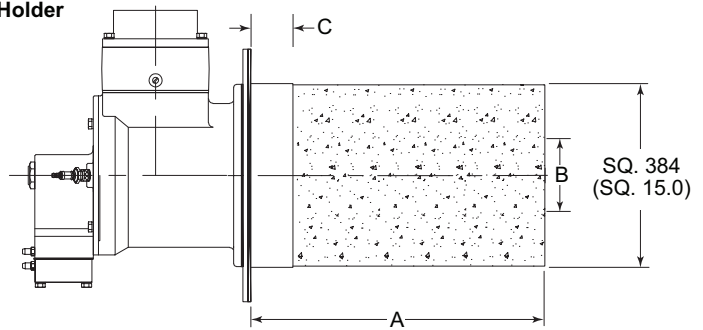
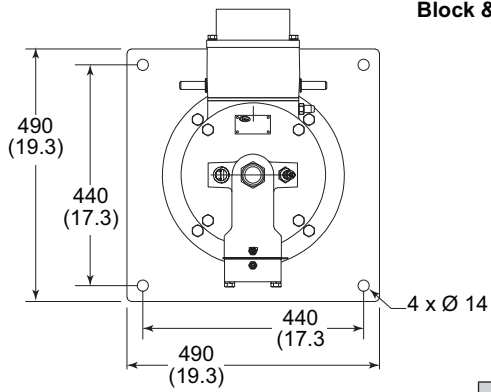
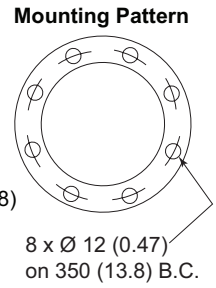
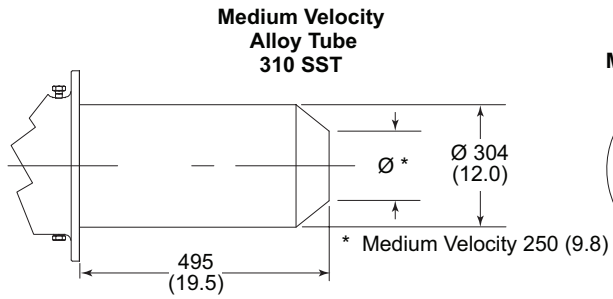
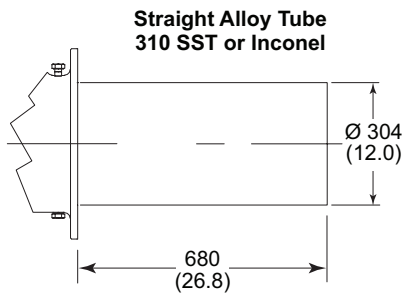


### Dimensions mm (inches)



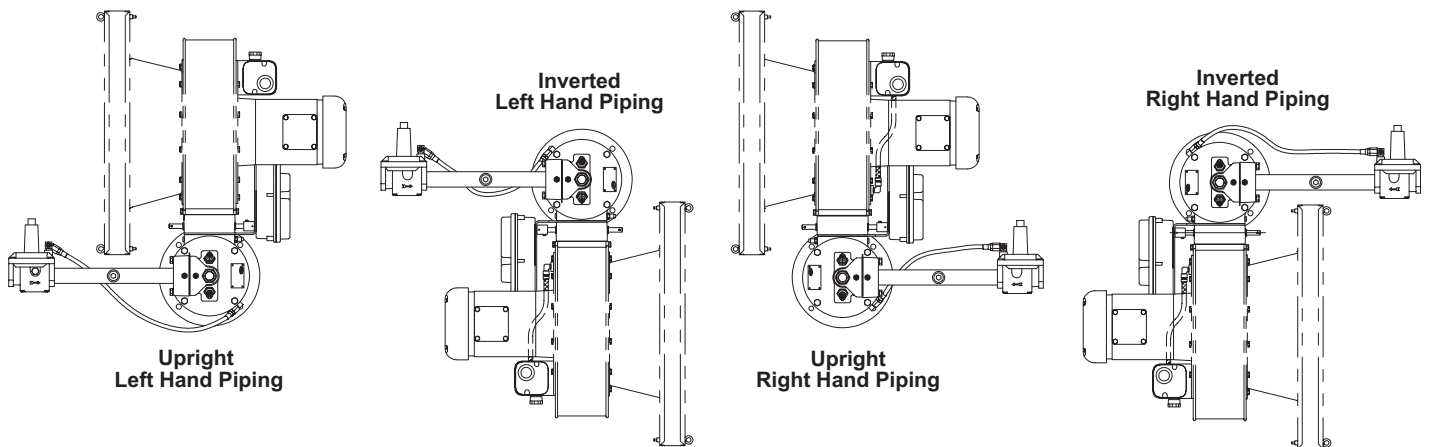
	Combustor Type	Blower Model	Filter Type	Dimensions				
				A	B	C	D	E
<b>60 Hz Blower</b>	Straight	7B	Round	500 (19.7)	896 (15.3)	799 (31.5)	929 (36.6)	837 (33.0)
	Medium Velocity	7B	Round	500 (19.7)	896 (15.3)	799 (31.5)	929 (36.6)	837 (33.0)
	Straight	7B	Automotive	500 (19.7)	896 (15.3)	799 (31.5)	896 (35.3)	902 (35.5)
	Medium Velocity	7B	Automotive	500 (19.7)	896 (15.3)	799 (31.5)	896 (35.3)	902 (35.5)
<b>50 Hz Blower</b>	Straight & Medium Velocity	7B	Round	488 (19.2)	984 (38.7)	921 (36.3)	945 (37.2)	912 (35.9)

## Combustor Options



Block & Holder Option	Dimensions mm (Inches)		
	A	B	C
Straight	494 (19.4)	300 (11.8)	50 (2.0)
Medium Velocity	494 (19.4)	250 (9.8)	50 (2.0)

## Burner Configuration & Piping Arrangement





**Offered By:**

Power Equipment Company  
2011 Williamsburg Road  
Richmond, Virginia 23231  
Phone (804) 236-3800  
Fax (804) 236-3882

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[www.peconet.com](http://www.peconet.com)