Eclipse RatioAir Burners

Model RA0040

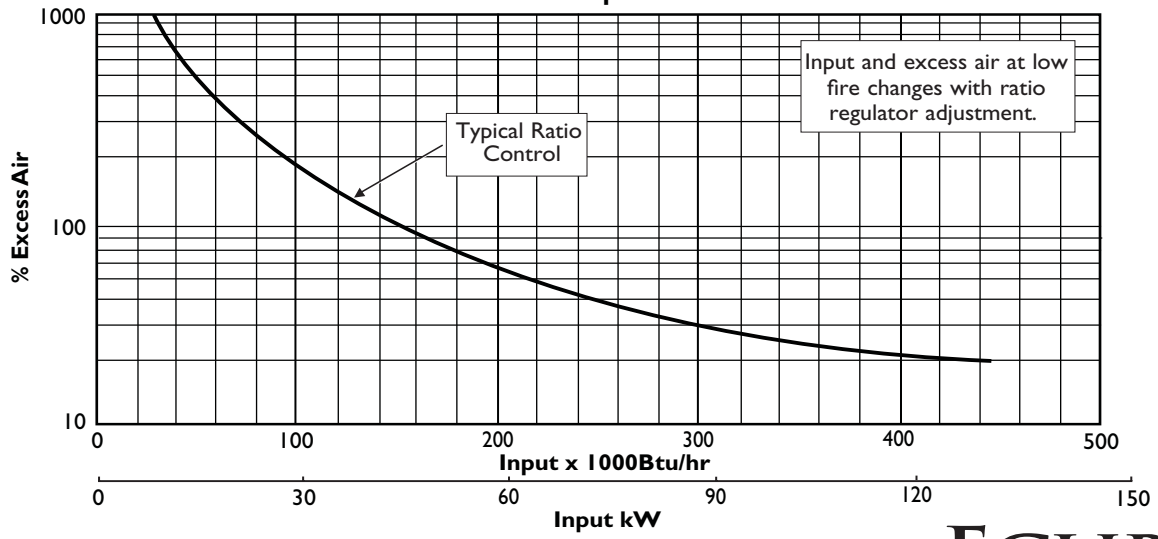
Version 1

Main Specifications - RA0040

PARAMETER		SPECIFICATIONS		
		Straight Tube	**Medium Velocity Tube**	**High Velocity Tube**
Maximum input, Btu/hr (kW) at neutral chamber conditions 60Hz Packaged Blower	Natural Gas	445,000 (130)	400,000 (117)	390,000 (114)
	Propane	420,000 (123)	410,000 (120)	370,000 (108)
	Butane	420,000 (123)	400,000 (117)	390,000 (114)
Maximum input, Btu/hr (kW) at neutral chamber conditions 50Hz Packaged Blower	Natural Gas	462,000 (135)	410,000 (120)	Not Available
	Propane	429,000 (126)	419,000 (123)	Not Available
	Butane	429,000 (126)	409,000 (120)	Not Available
Minimum input, Btu/hr (kW) • *Lower inputs may be achieved. Contact factory.*		30,000 (8.8)	30,000 (8.8)	30,000 (8.8)
Main Gas Inlet Pressure, "w.c. (mbar) • *Fuel pressure at ratio regulator inlet.*		10 to 24 (25 to 60)	10 to 24 (25 to 60)	15 to 24 (37 to 60)
High Fire Flame Length, inches (mm) • *Measured from the outlet end of the combustor.*		24 (610)	18 (457)	14 (356)
Maximum Flame Velocity, ft/s (m/s) • Approximately 15% excess air at maximum input.		----------	250 (75)	500 (150)
Maximum chamber temperature, °F (°C)	Alloy tube	1500 (816)	1750 (954)	1750 (954)
	SiC tube	1900 (1038)	2500 (1370)	2500 (1370)
	Block & Holder	1900 (1038)	2800 (1538)	2800 (1538)
Flame detection		UV scanner available for all combustors. Flame rod available for alloy or SiC tubes		
Fuel		Natural Gas, Propane and Butane *(For any other gas, contact Eclipse Combustion for orifice sizing.)*		

- 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 your Eclipse Combustion representative.
- 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 and Operation Zone

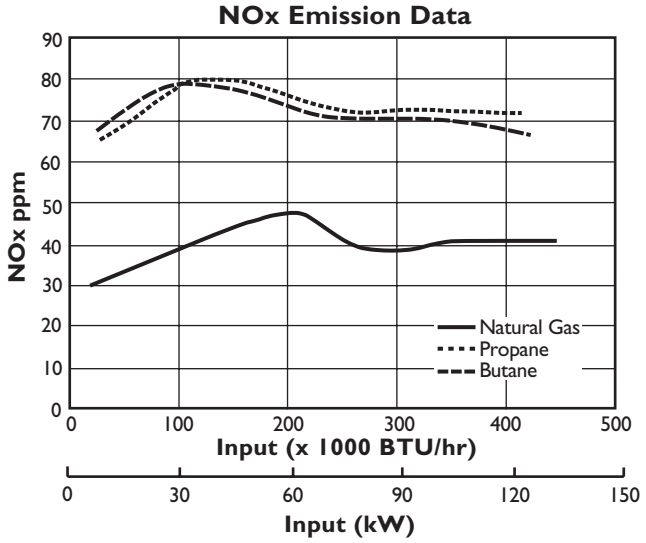


ECLIPSE®
Innovative Thermal Solutions

Straight Tube Specifications

Blower Model
60Hz, 2G (6"w.c. @ 5,500 scfh, 1/3 hp)
50Hz, 2B (6"w.c. @ 5,500 scfh, .18 kW)

Specifications						
			60Hz Packaged Blower		50Hz Packaged Blower	
Parameter	"w.c.	(mbar)	Btu/hr	kW	Btu/hr	kW
Maximum Input vs. Chamber Pressure (Natural Gas)	-2.0	-5,0	530,000	155	525,000	154
	-1.0	-2,5	490,000	144	494,000	145
	0.0	0,0	445,000	130	462,000	135
	1.0	2.5	396,000	116	427,000	125
	2.0	5,0	340,000	100	389,000	114



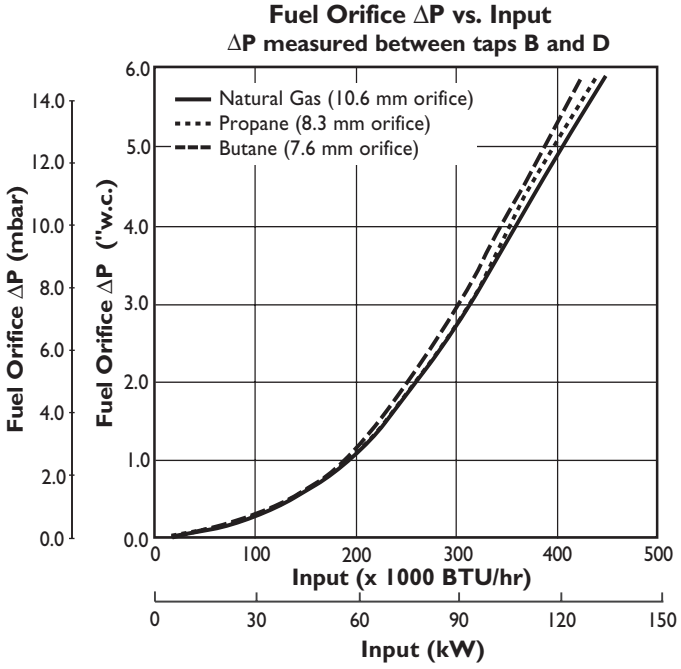
NOx emission data is given for:

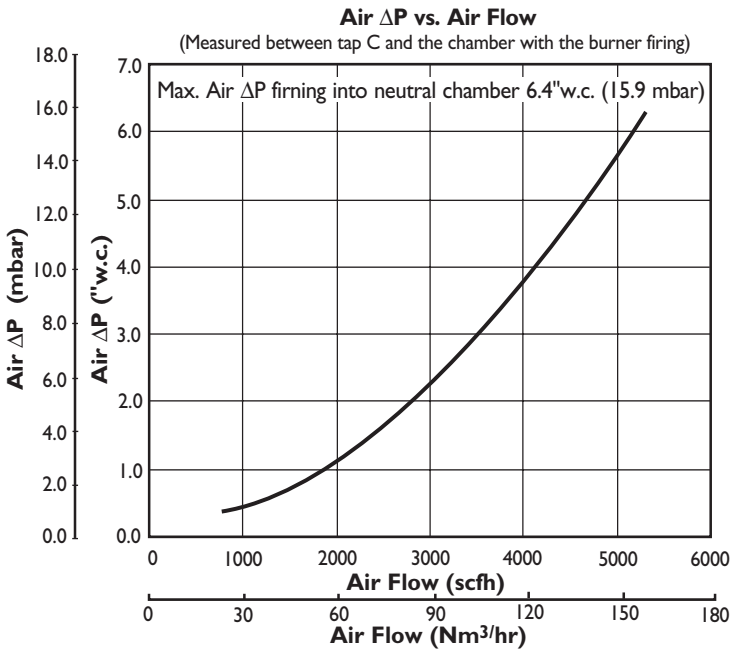
- Ambient combustion air ~70 °F (20 °C)
- Minimal process air velocity
- ppm volume dry at 3% O_2
- Neutral chamber pressure

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

Emissions are influenced by:

- Chamber conditions
- Fuel type
- Firing rate
- Ratio regulator adjustment
- Combustion air temperature

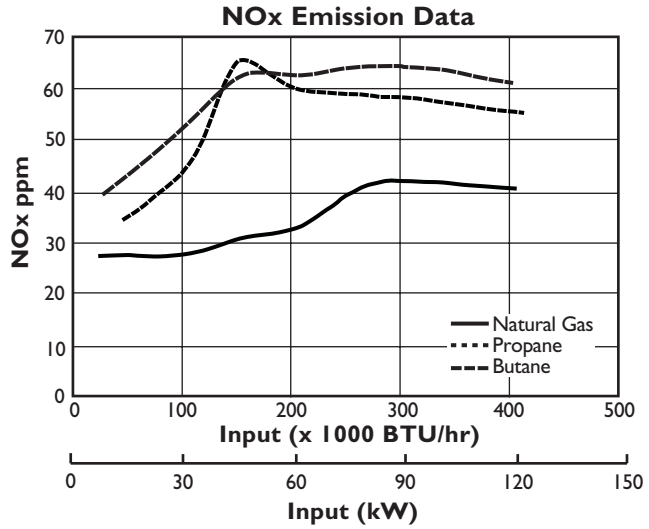




Medium VelocityTube Specifications

Blower Model
60Hz, 2G (6"w.c. @ 5,500 scfh, 1/3 hp)
50Hz, 2B (6"w.c. @ 5,500 scfh, .18 kW)

Specifications						
			60Hz Packaged Blower		50Hz Packaged Blower	
Parameter	"w.c.	(mbar)	Btu/hr	kW	Btu/hr	kW
Maximum Input vs. Chamber Pressure (Natural Gas)	-2.0	-5,0	457,000	134	466,000	136
	-1.0	-2,5	430,000	126	440,000	129
	0.0	0,0	400,000	117	410,000	120
	1.0	2.5	368,000	108	380,000	111
	2.0	5,0	334,000	98	346,000	101



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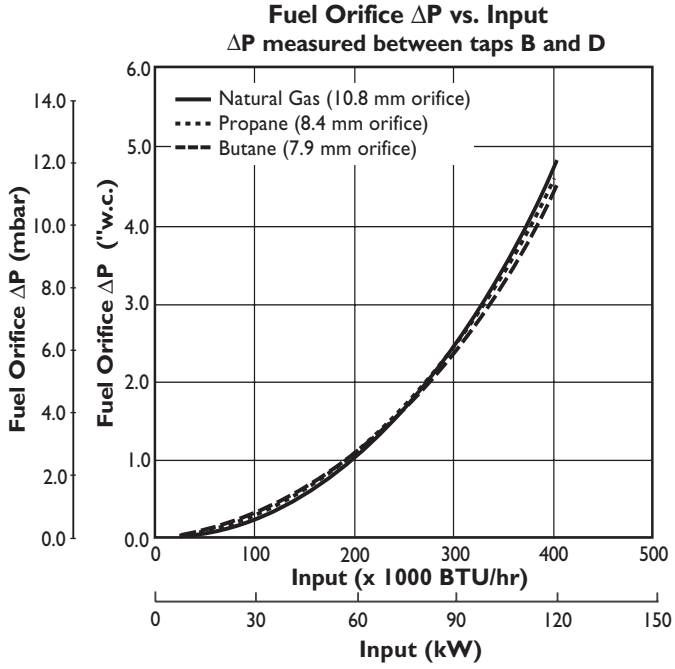
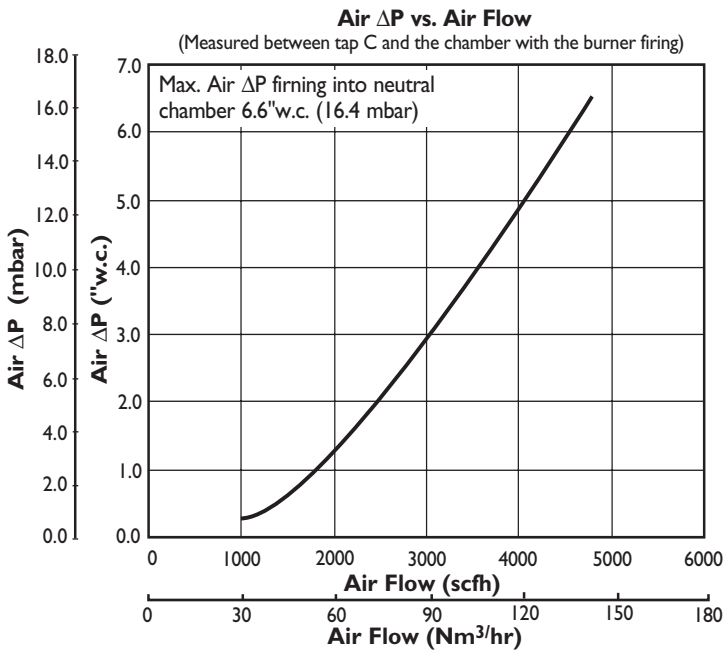
Emissions are influenced by:

- Chamber conditions
- Fuel type
- Firing rate
- Ratio regulator adjustment
- Combustion air temperature

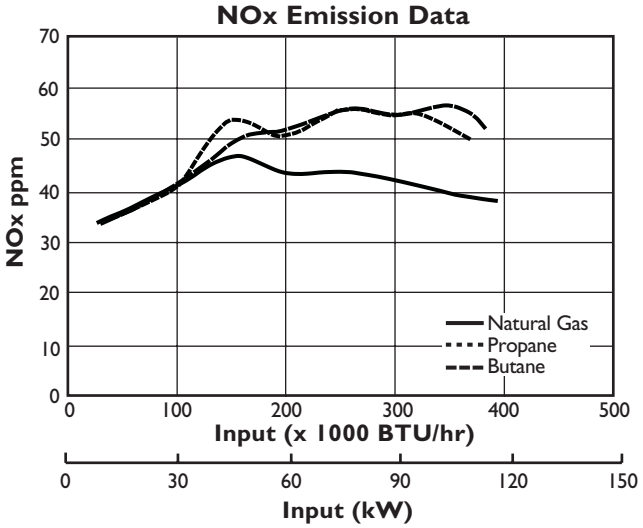




High VelocityTube Specifications

Blower Model – 2C
(10"w.c. @ 5,500 scfh, 1/3 hp)

Specifications					
Parameter	**Frequency**	**Btu/hr**	**"w.c.**	**kW**	**(mbar)**
Maximum Input vs. Chamber Pressure (Natural Gas)	60Hz Packaged Blower	440,000	-2.0	129	-5,0
		420,000	-1.0	123	-2,5
		400,000	0.0	117	0,0
		380,000	1.0	111	2.5
		360,000	2.0	105	5,0



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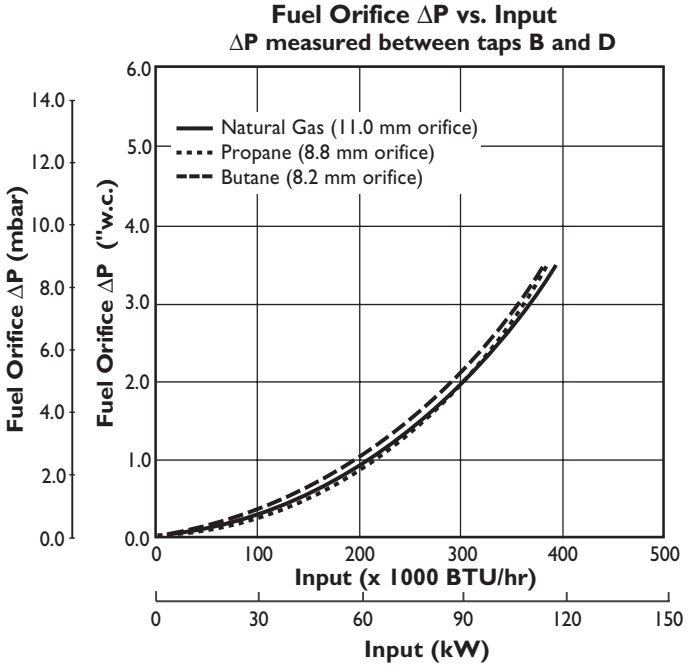
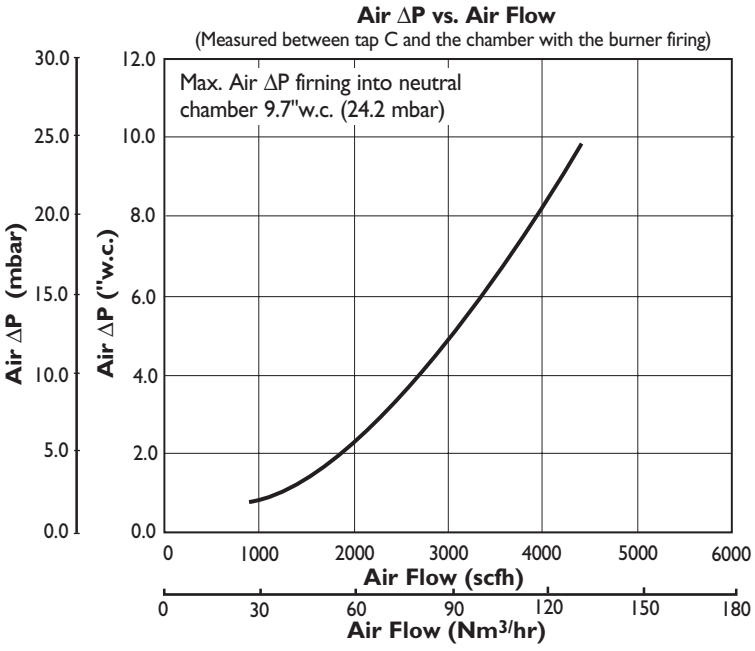
- Minimal process air velocity
- ppm volume dry at 3% O_2
- Neutral chamber pressure

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

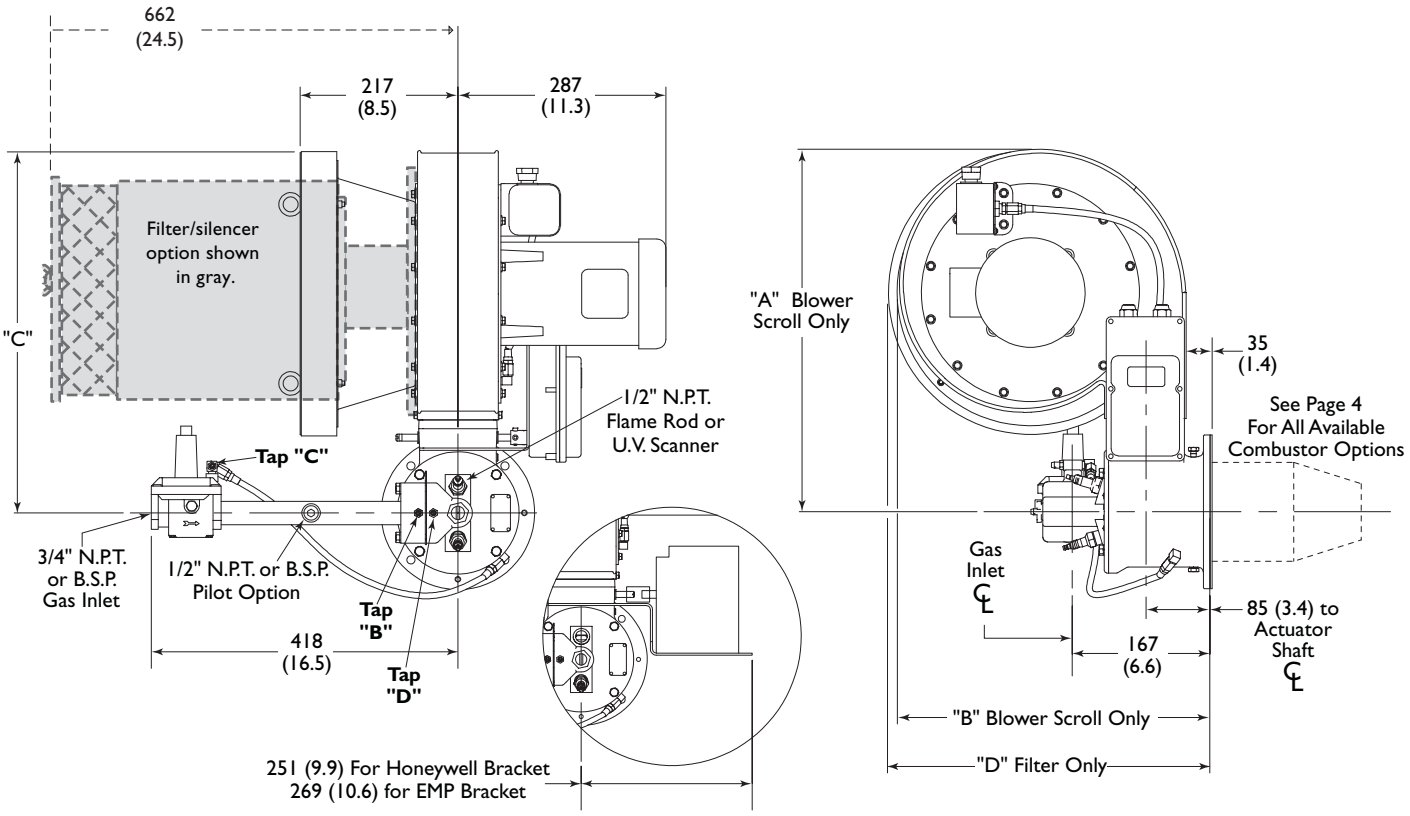
Emissions are influenced by:

- Chamber conditions
- Fuel type
- Firing rate
- Ratio regulator adjustment
- Combustion air temperature





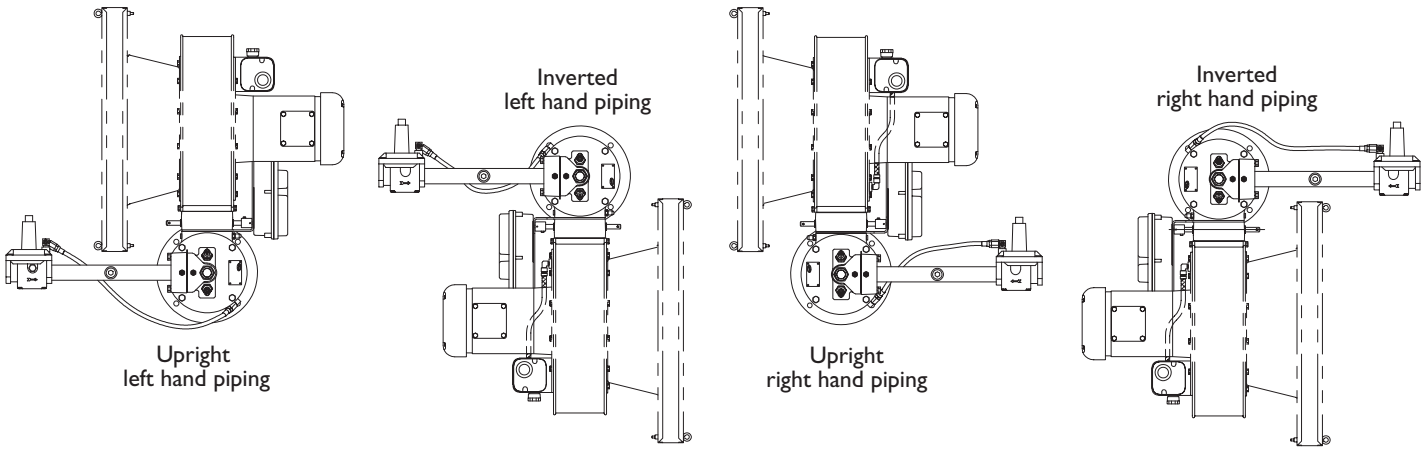
Dimensions mm (Inches)



	Combustor Type	Blower Model	Filter Type	Dimensions mm (inches)			
				A*	B	C*	D
60Hz Blower	Straight & Medium Velocity	2G	Round	412 (16.2)	394 (15.5)	442 (17.4)	432 (17.0)
	High Velocity	2C	Round	503 (19.8)	475 (18.7)	489 (19.3)	469 (18.5)
50Hz Blower	Straight & Medium Velocity	2B	Round	503 (19.8)	475 (18.7)	489 (19.3)	469 (18.5)

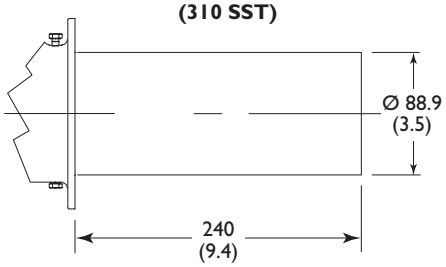
*When using Honeywell or Siemens actuators with right hand piping, add 35mm (1.4")

Burner Configuration & Piping Arrangement

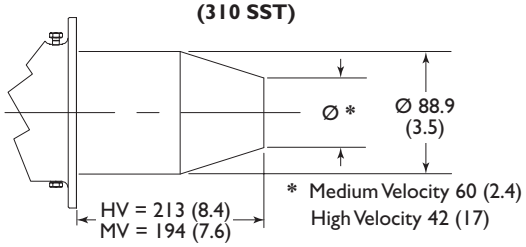


Combustor Options

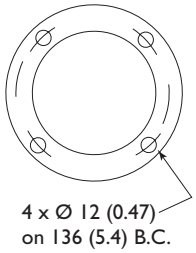
Straight Alloy Tube (310 SST)



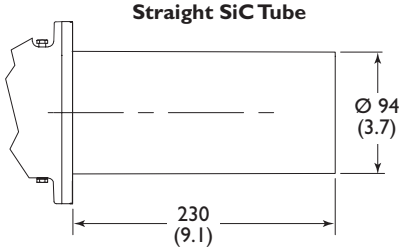
Medium & High Velocity Alloy Tube (310 SST)



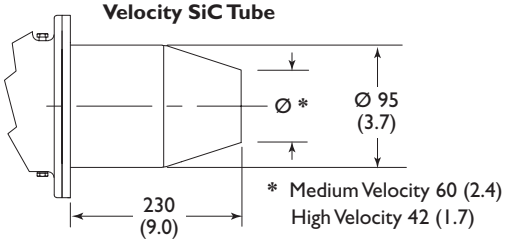
Mounting Pattern



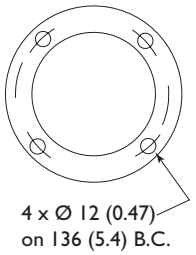
Straight SiC Tube



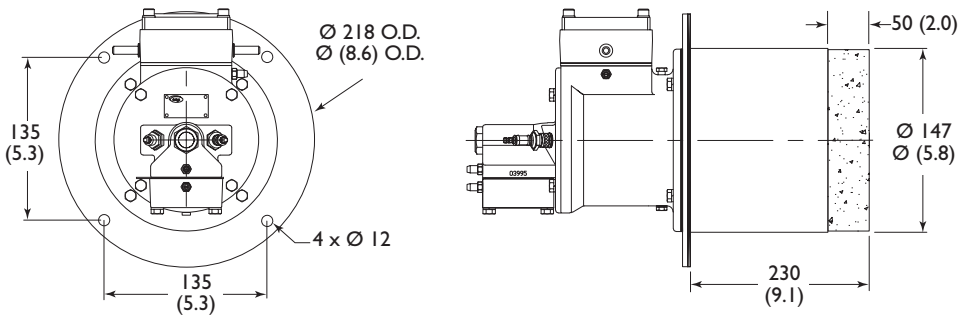
Medium & High Velocity SiC Tube



Mounting Pattern



Block & Holder



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