Datasheet 115-7
6/9/2012

Eclipse RatioAir Burners

Model RA0025

Version 2

Parameter		Specifications		
		Packaged Blower Nominal (50Hz and 60Hz)		
Maximum Input, Btu/h (kW)[1, 2]	Chamber Pressure "w.c. (mbar)	Straight Combustor	Medium Velocity Combustor	High Velocity Combustor
	-2.0 (-5.0)	330,000 (97)	306,000 (90)	290,000 (85)
	-1.0 (-2.5)	300,000 (88)	290,000 (85)	280,000 (82)
	0.0 (0.0)	266,000 (78)	266,000 (78)	266,000 (78)
	1.0 (2.5)	230,000 (67)	240,000 (70)	250,000 (73)
	2.0 (5.0)	Not Available	220,000 (64)	240,000 (70)
Minimum Input On-Ratio, Btu/h (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)[3] *Fuel pressure at ratio regulator inlet.*	Maximum	24 (60)	24 (60)	24 (60)
	Minimum	10 (25)	12 (30)	15 (37)
High Fire Flame Length, inches (mm) *Measured from the outlet end of the combustor.*		20 (508)	14 (356)	12 (305)
Approximate Flame Velocity, ft/s (m/s) *Approximately 15% excess air at maximum input.*		-	250 (75)	500 (150)
Maximum Chamber Temperature, °F (°C)	Alloy Combustor	1500 (820)	1750 (955)	1750 (955)
	SiC Combustor	1900 (1040)	2500 (1370)	2500 (1370)
	Block & Holder	1900 (1040)	2800 (1540)	2800 (1540)
Flame Detection		UV scanner available for all combustors. Flame rod available for alloy or SiC combustors.		
Blower Motor Power, Hp	60 Hz	3" w.c. @ 4,600 scfh, 1/6 hp	6" w.c. @ 5,500 scfh, 1/3 hp	10" w.c. @ 5,500 scfh, 1/3 hp
	50 Hz	4.2" w.c. @ 4,580 scfh, 0.18 kW	6" w.c. @ 5,500 scfh, 0.18 kW	-
Weight, lbs (kg)[5]	Alloy Combustor	110 (50)		
	Block and Holder	128 (58)		
Fuels *For any other mixed gas, contact Eclipse, Inc.*		Natural Gas, Propane or Butane[4]		
Approvals		АИ30		

[1] Maximum inputs for packaged blower versions are given for the standard combustion air blower without an inlet air filter.

[2] Blower motor service factors greater than 1.0 may be required when firing into negative chamber pressure applications. For specific application questions, contact Eclipse.

[3] For proper performance, this pressure must be kept constant across the burner operating range.

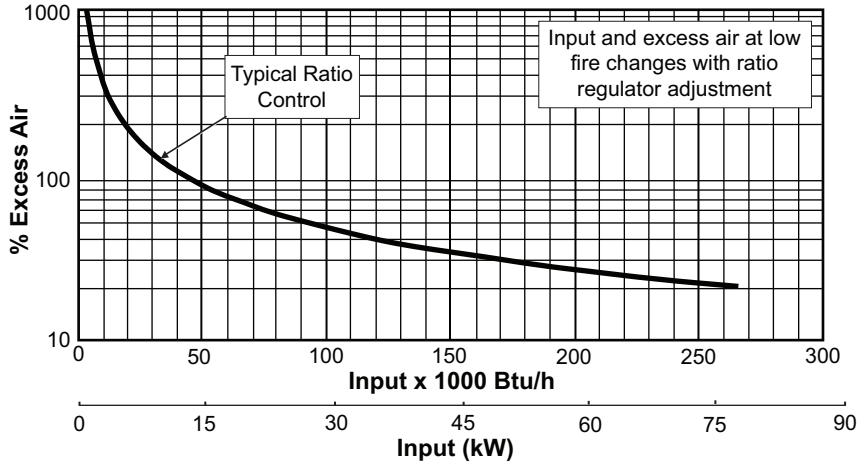
[4] See Design Guide 111 for more information about typical fuel composition and properties.

[5] All weights are approximate.

- 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.
- All information is based on laboratory testing. Different chamber conditions will affect the data.

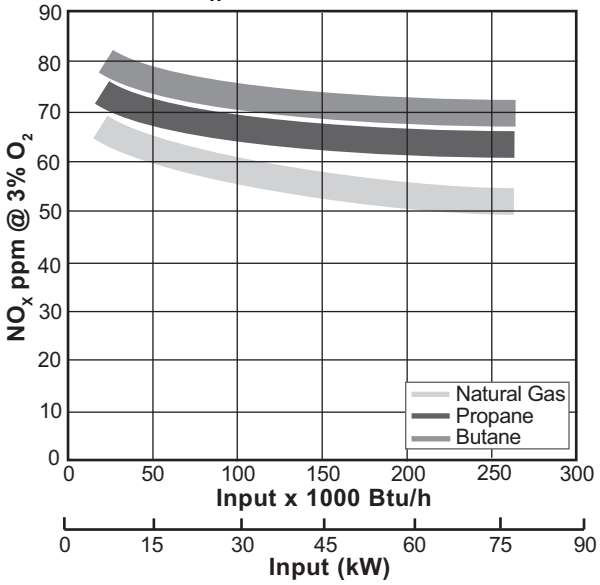
ECLIPSE®
Innovative Thermal Solutions

Control Zone



Straight Combustor Specifications

NO_x Emission (On ratio)



NO_x emission data is given for:

- Ambient combustion air ~70°F (21°C)
- Minimal process air velocity
- ppm volume dry at 3% O_2
- Neutral chamber pressure

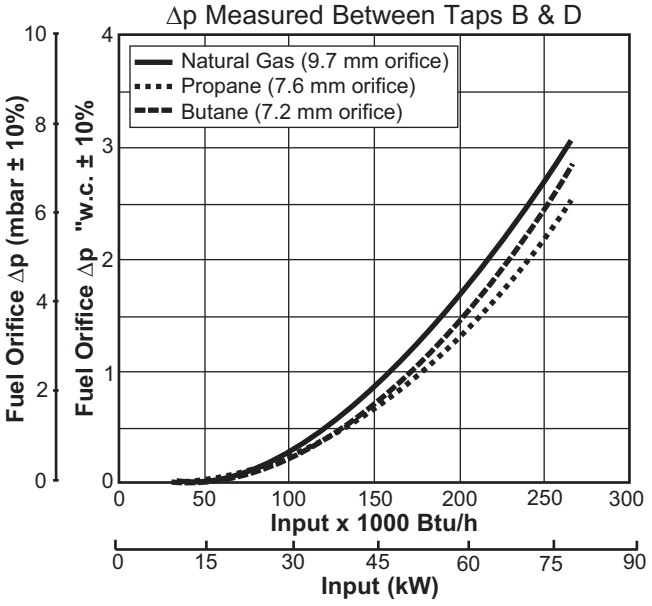
Emissions from the burner are influenced by:

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

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

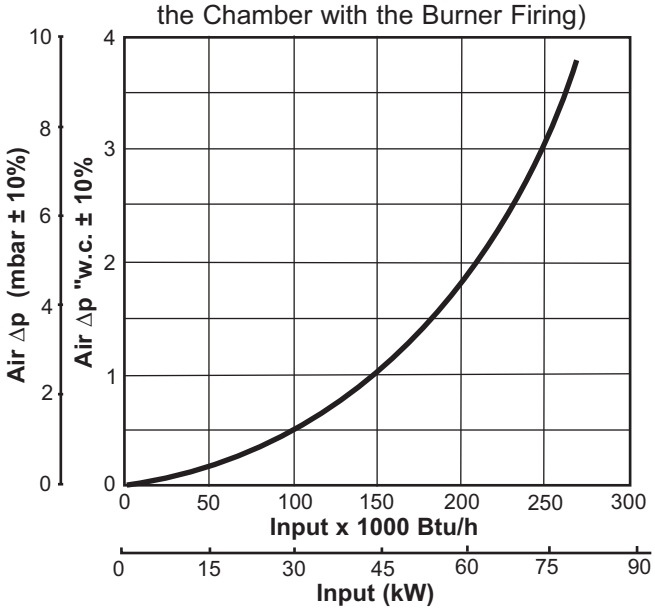
Fuel Orifice Δp vs. Input

Δp Measured Between Taps B & D

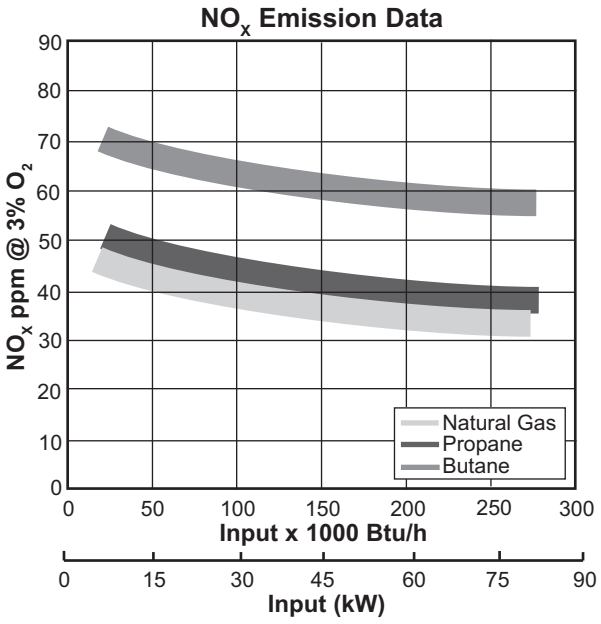


Air Δp vs. Input

(Measured Between Tap C & the Chamber with the Burner Firing)



Medium Velocity Combustor Specifications



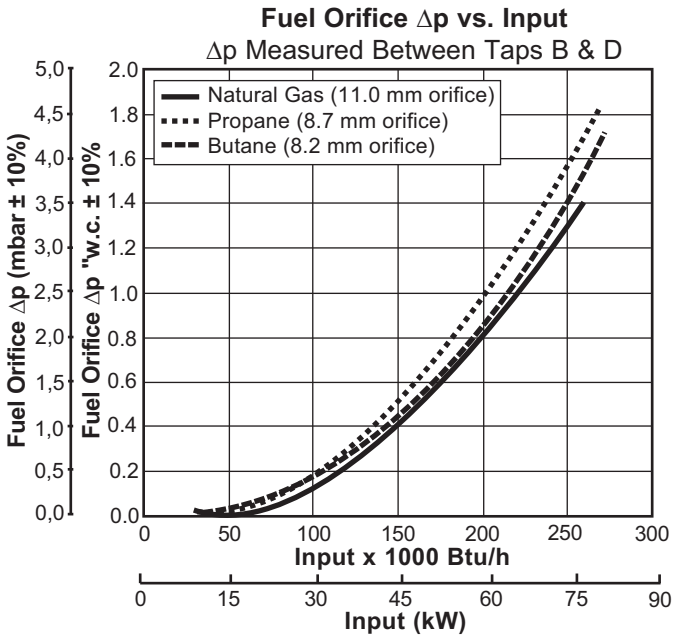
NO_x emission data is given for:

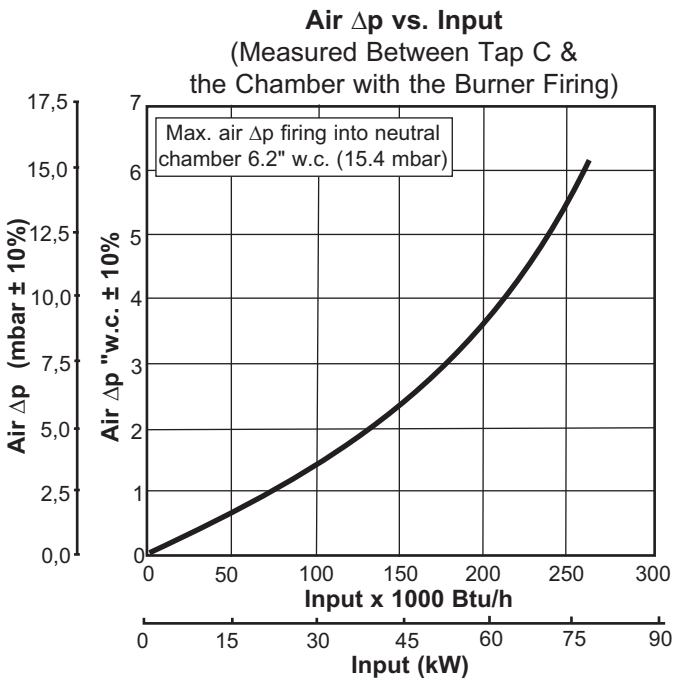
- Ambient combustion air ~70°F (21°C)
- Minimal process air velocity
- ppm volume dry at 3% O_2
- Neutral chamber pressure

Emissions from the burner are influenced by:

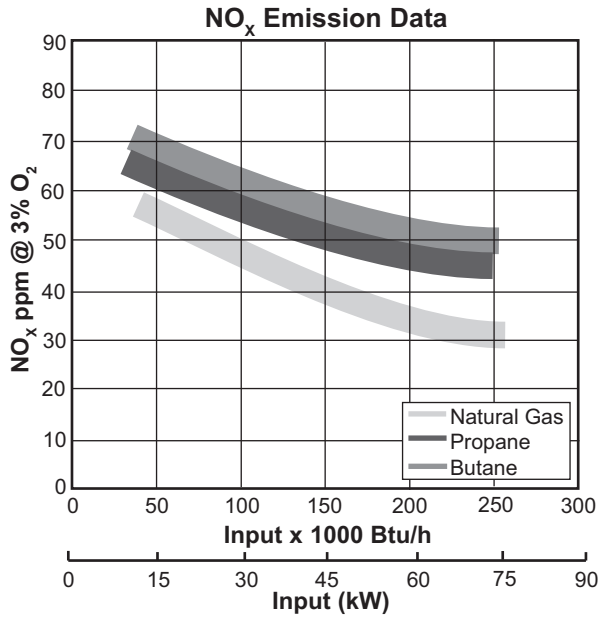
- Chamber conditions
- Fuel type
- Firing rate
- Ratio regulator adjustment
- Combustion air temperature

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





High Velocity Combustor Specifications



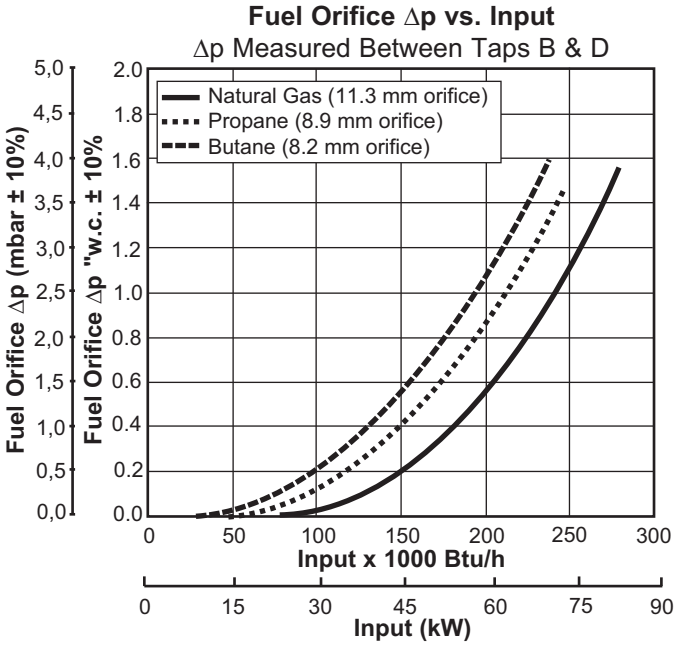
NO_x emission data is given for:

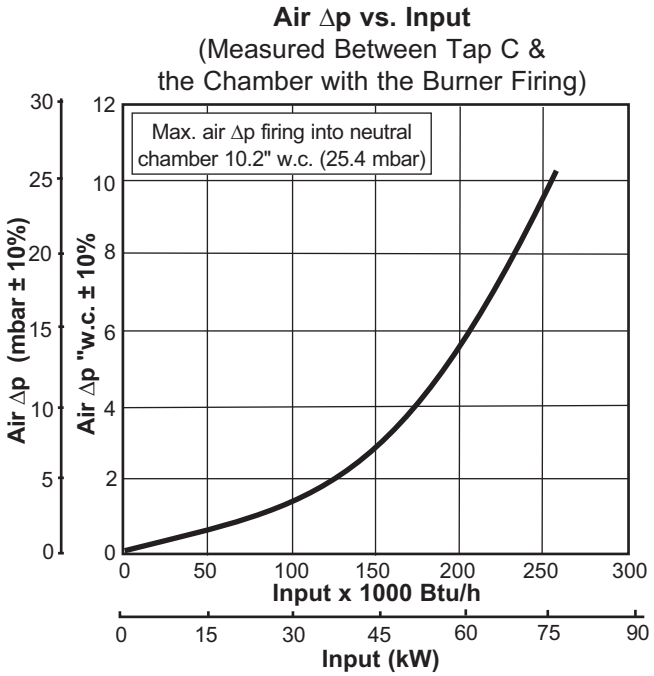
- Ambient combustion air ~70°F (21°C)
- Minimal process air velocity
- ppm volume dry at 3% O_2
- Neutral chamber pressure

Emissions from the burner are influenced by:

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

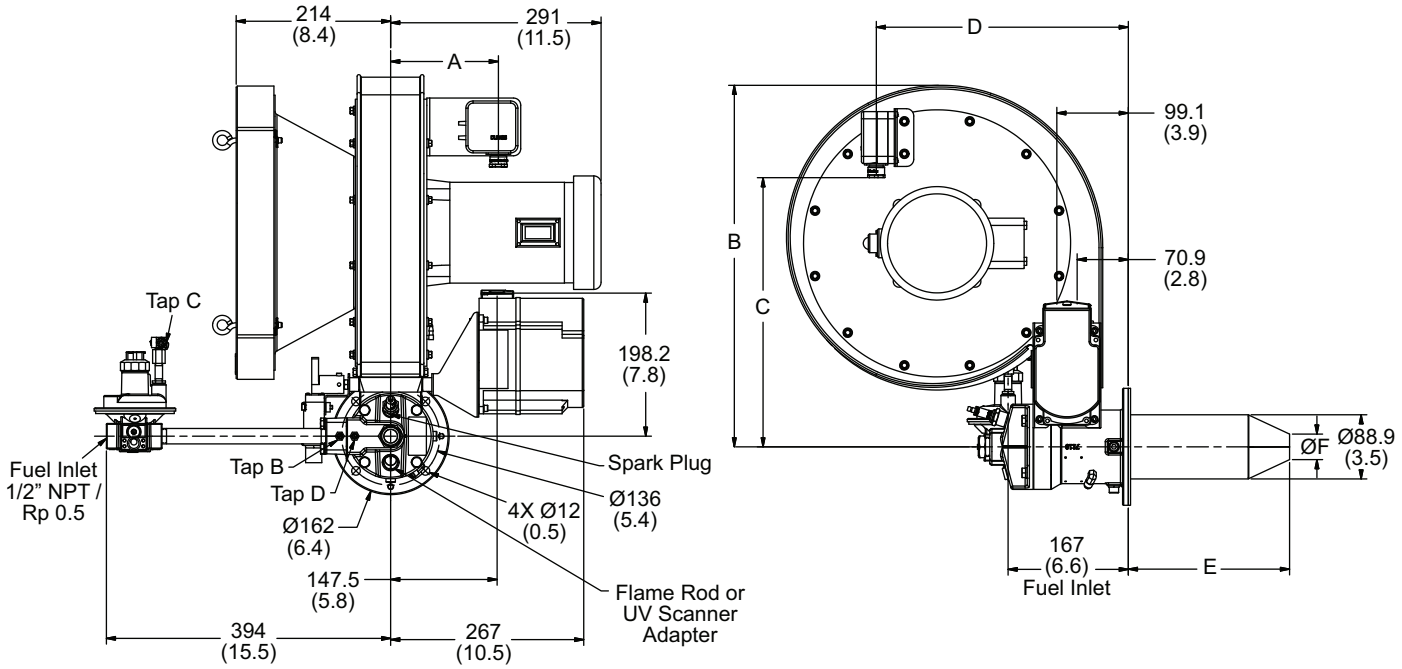
CO emission is largely influenced by chamber conditions. Contact your local Eclipse representative for an estimate of CO emission on your application.





Dimensions and Specifications

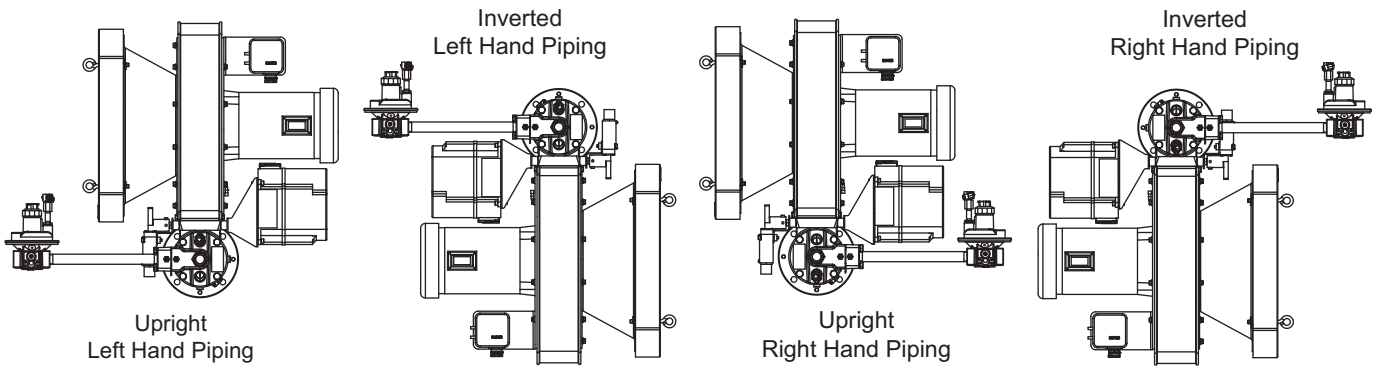
Dimensions in mm (inches)



	Dimensions			
	A	**B**	**C**	**D**
60 Hz Blower	149 (5.9)	501 (19.7)	373 (14.7)	349 (13.7)
	149 (5.9)	438 (17.2)	251 (9.9)	361 (14.2)
	144 (5.7)	387 (15.2)	206 (8.1)	330 (13.0)
50 Hz Blower	149 (5.9)	501 (19.7)	373 (14.7)	349 (13.7)
	149 (5.9)	445 (17.5)	263 (10.4)	375 (14.8)

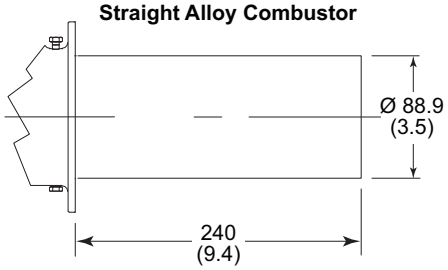
Combustor Type	E	F
Straight Alloy Tube	240 (9.4)	84.7 (3.3)
Straight Silicon Carbide Tube	230 (9.1)	84.3 (3.3)
Medium Velocity Alloy Tube	224 (8.8)	42.0 (1.7)
Medium Velocity Silicon Carbide Tube	230 (9.1)	42.0 (1.7)
High Velocity Alloy Tube	213 (8.4)	32 (1.3)
High Velocity Silicon Carbide Tube	230 (9.1)	32 (1.3)

Burner Configuration

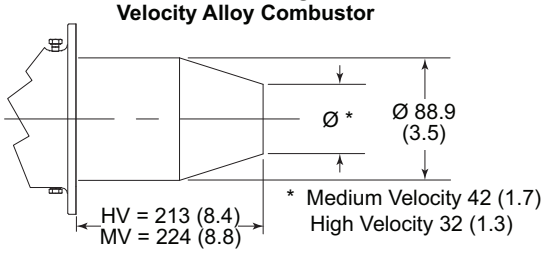


Combustor Options

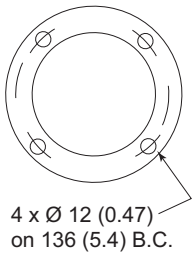
Straight Alloy Combustor



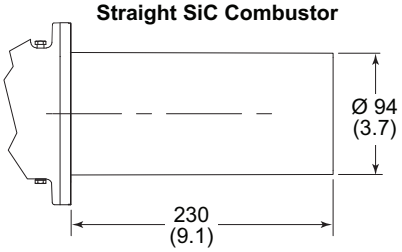
Medium & High Velocity Alloy Combustor



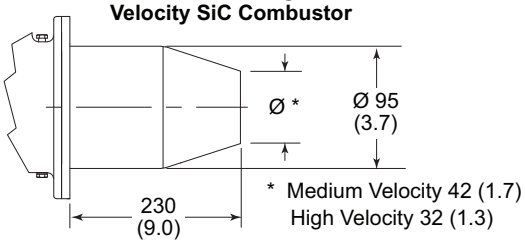
Mounting Pattern



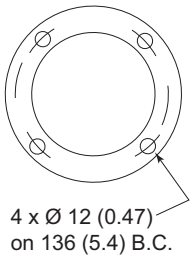
Straight SiC Combustor



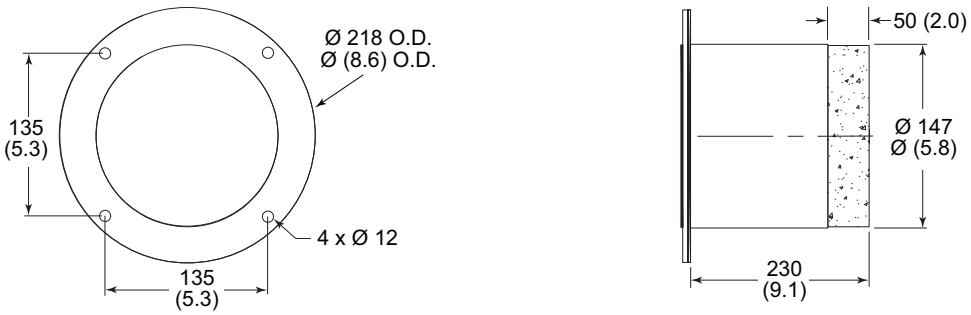
Medium & High Velocity SiC Combustor



Mounting Pattern



Block & Holder



ECLIPSE®
Innovative Thermal Solutions
www.eclipsenet.com