


# Eclipse RatioAir Burners

Model RA1500

Version 2

Parameter		Specifications
Maximum Input, BTU/hr (kW) <sup>1,2</sup>	Chamber Pressure "w.c. (mbar)	Packaged Blower Nominal (60Hz)
	-2.0 (-5,0)	16,335,000 (4786)
	-1.0 (-2,5)	15,820,000 (4637)
	0.0 (0,0)	15,300,000 (4483)
	1.0 (2,5)	14,755,000 (4323)
2.0 (5,0)	14,190,000 (4158)	
Minimum Input, BTU/hr (kW) <i>Lower inputs may be achieved. Contact factory.</i>		350,000 (102)
Main Gas Inlet Pressure, "w.c. (mbar) <sup>3</sup> <i>Fuel pressure at ratio regulator inlet.</i>	Maximum	55 (137)
	Minimum	20 (50)
High Fire Flame Length, inches (mm) <i>Measured from the outlet end of the combustor.</i>		140 (3556)
Maximum Flame Velocity, ft/s (m/s) <i>Approximately 15% excess air at maximum input.</i>		250 (75)
Maximum Application Temperature, °F (°C)	Alloy Combustor	1750 (950)
	Block & Holder	2200 (1205)
Flame Detection		UV scanner only
Blower Motor Power, Hp		15" w.c. @ 190,000 scfh, 15 hp
Weight, lbs (kg) <sup>5</sup>	Alloy Combustor	862 (391)
	Block and Holder	1728 (784)
Fuel <i>For any other mixed gas, contact Eclipse.</i>		Natural Gas <sup>4</sup>
Approvals		 AN30

<sup>1</sup> Maximum inputs for packaged blower versions are given for the standard combustion air blower without an inlet air filter.

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

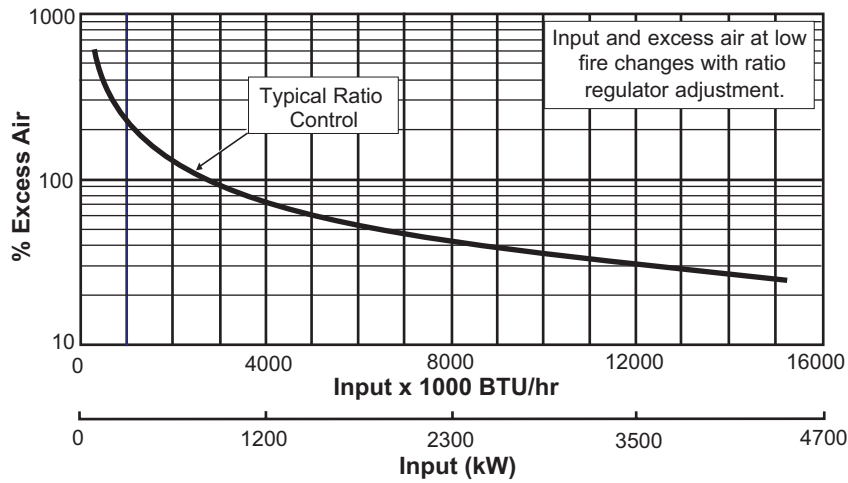
<sup>3</sup> For proper performance, this pressure must be kept constant across the burner operating range.

<sup>4</sup> See Design Guide 111 for more information about typical fuel composition and properties.

<sup>5</sup> All weights are approximate.

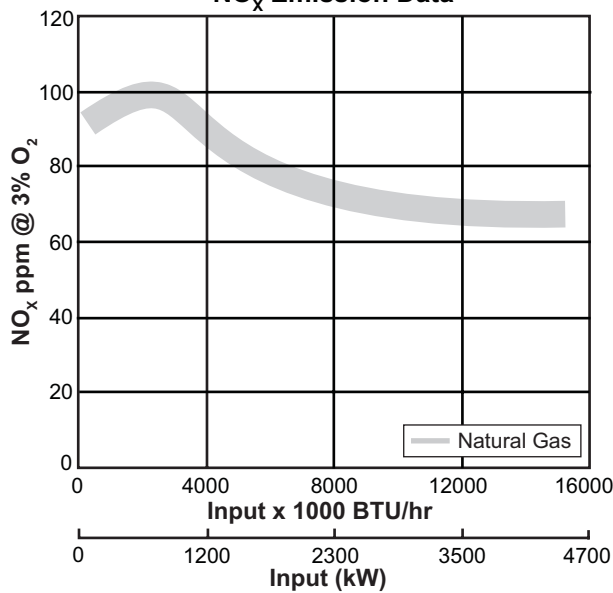
- All inputs based upon gross calorific values and standard conditions: 1 atmosphere, 70°F (21°C).
- Blower motor service factors greater than 1.0 may be required when firing into negative chamber pressure applications. For specific application questions, contact Eclipse.
- Eclipse reserves the right 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 in neutral (0.0" w.c.) chamber with standard combustor design. Different chamber conditions may affect the data.

## Control & Operation Curve



## Medium Velocity Combustor Specifications

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



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

- Ambient combustion air ~70°F (20°C)
- Minimal process air velocity
- ppm volume dry at 3% O<sub>2</sub>
- Neutral chamber pressure

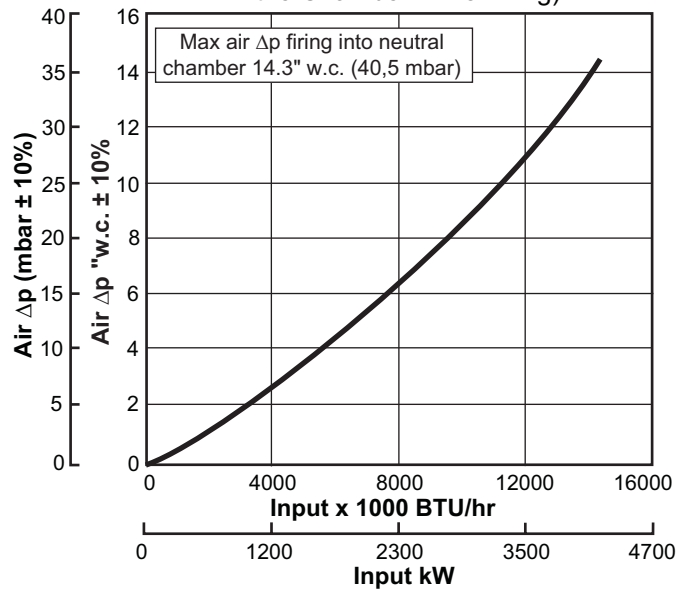
### Emissions are influenced by:

- 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.

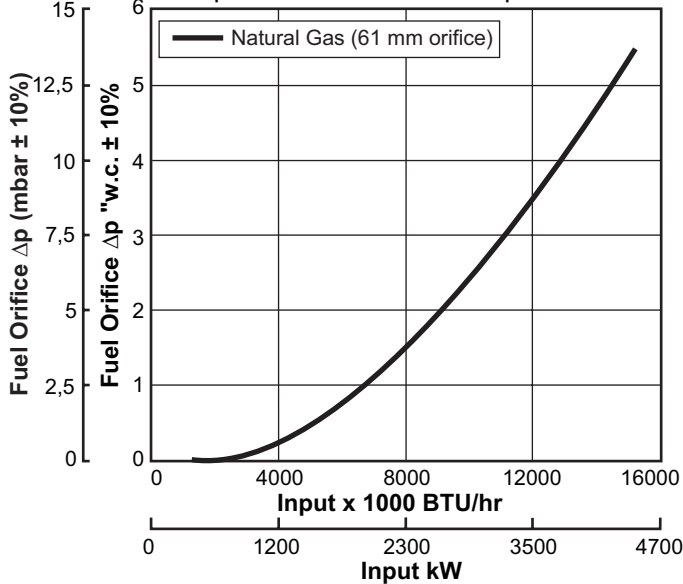
### Air Δp vs. Input

(Measured Between Tap C & the Chamber while Firing)

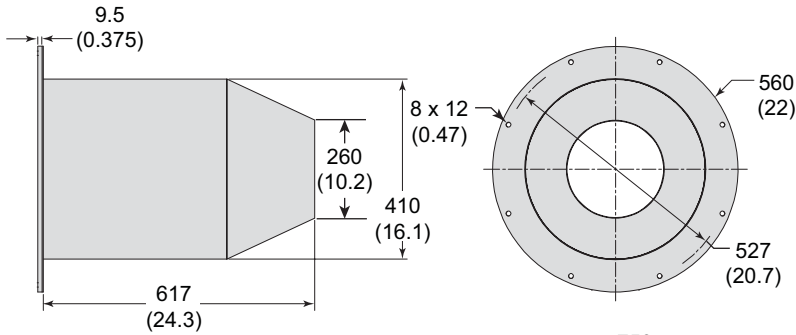
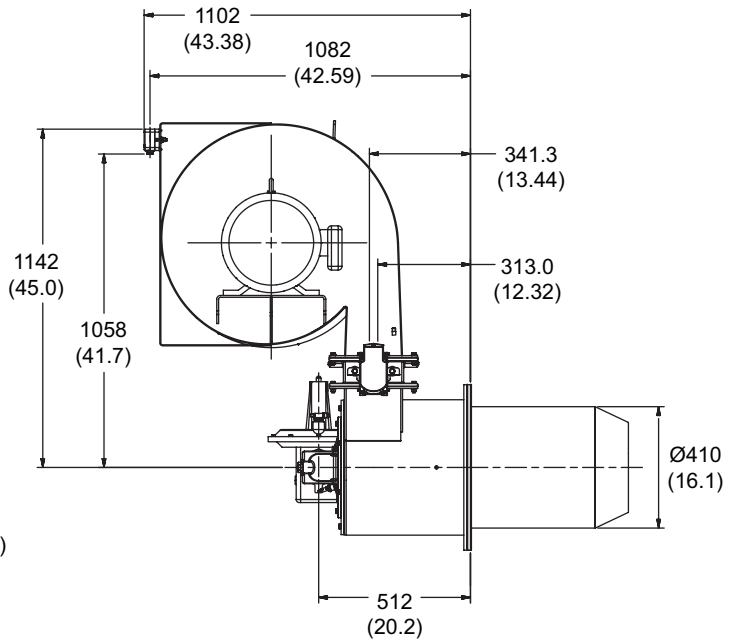
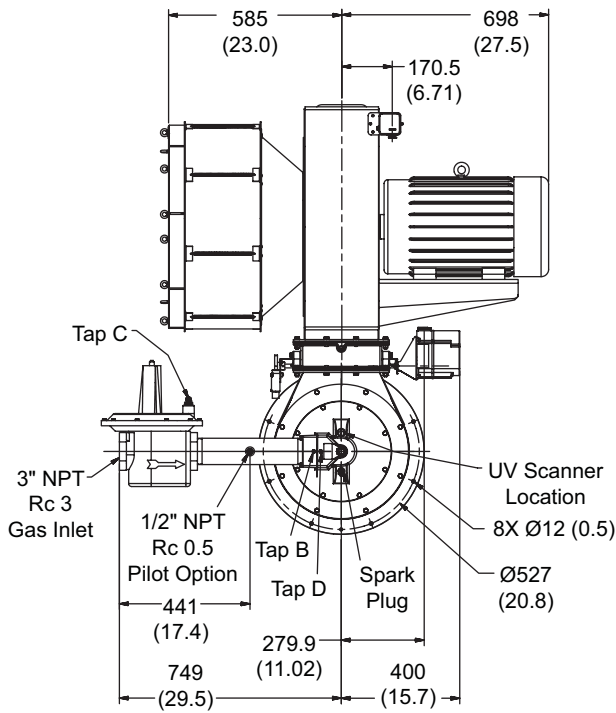


### Fuel Orifice Δp vs. Input

Δp Measured Between Taps B & D

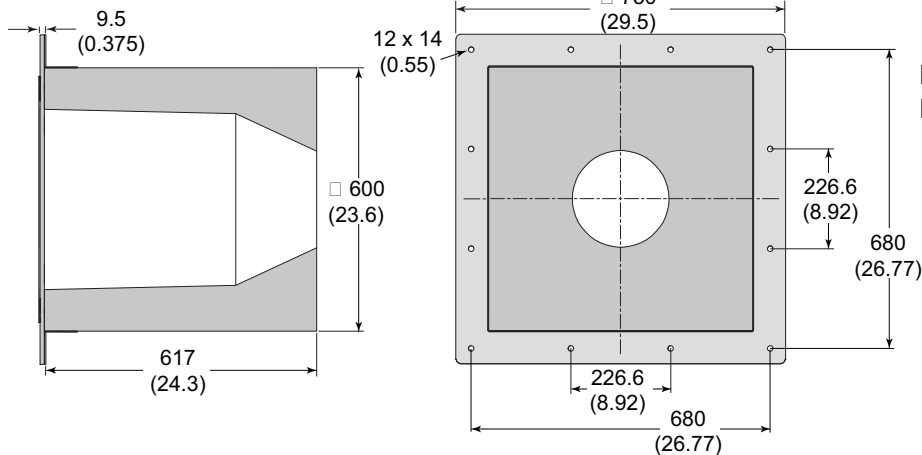


## Dimensions in mm (inches)



### Alloy Combustor

Max. Chamber Temp: 1,750°F (950°C)



### Refractory Block

Max. Chamber Temp: 2,200°F (1204°C)



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