


# Eclipse ThermJet

## Burners

Model TJ0040

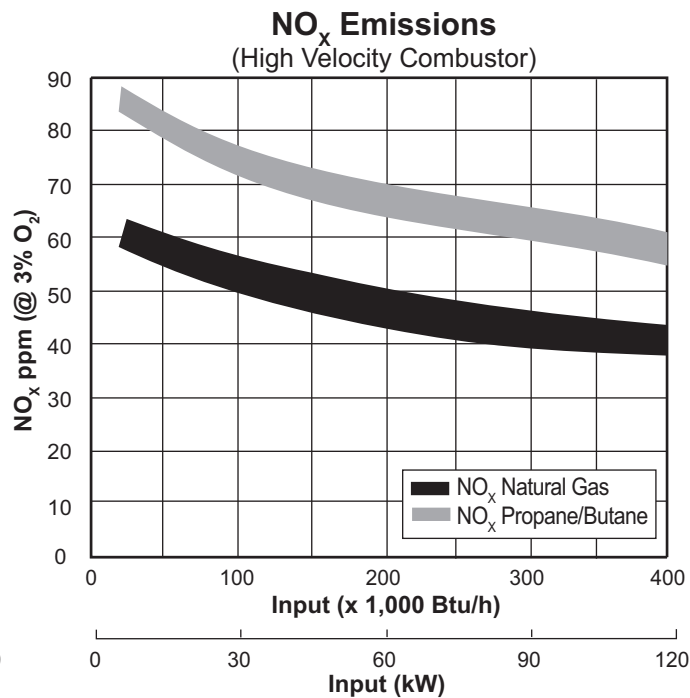
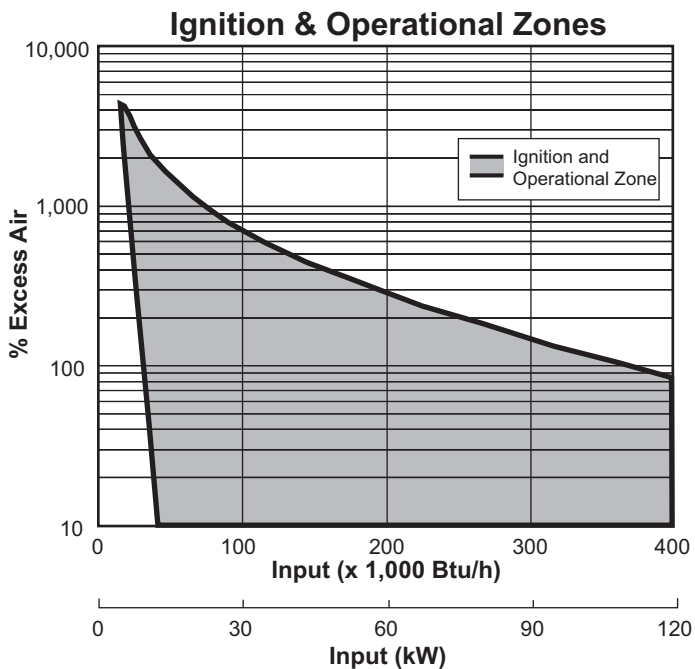
Version 2.7

Parameter	Burner Velocity	Model TJ0040	
<b>Maximum Input, Btu/h (kW)</b>	Medium & High Velocity	400,000 (117)	
<b>Minimum Input On-Ratio, Btu/h (kW)</b>	Medium & High Velocity	40,000 (11.7)	
<b>Minimum Input Fixed Air, Btu/h (kW)</b>	Medium & High Velocity	10,000 (2.9)	
<b>Gas Inlet Pressure Required, "w.c. (mbar) Tap B (see page 3)</b>	High Velocity	Natural Gas	12.0 (29.9)
		Propane	13.0 (32.4)
		Butane	12.0 (29.9)
	Medium Velocity	Natural Gas	5.5 (13.7)
		Propane	5.5 (13.7)
		Butane	5.0 (12.5)
<b>Air Inlet Pressure Required, "w.c. (mbar) 15% Excess Air at Maximum Input Tap A (see page 3)</b>	High Velocity	Natural Gas	15.5 (38.6)
		Propane	17.0 (42.3)
		Butane	17.0 (42.3)
	Medium Velocity	Natural Gas	9.0 (22.4)
		Propane	9.5 (23.7)
		Butane	9.5 (23.7)
<b>High Fire Flame Length, inches (mm) <i>Measured from the outlet end of the combustor</i></b>	High Velocity	Natural Gas	14.0 (356)
		Propane	17.0 (432)
		Butane	17.0 (432)
	Medium Velocity	Natural Gas	18.0 (457)
		Propane	19.0 (483)
		Butane	19.0 (483)
<b>Approximate Flame Velocity, ft/s (m/s) 15% Excess Air at Maximum Input</b>	High Velocity	540 (165)	
	Medium Velocity	320 (98)	
<b>Maximum Combustion Air Temperature</b>	300°F (149°C). For higher temperatures use TJPCA (Datasheet 206).		
<b>Flame Detection</b>	Flame rods can be used with all combustors, natural gas, and operating temperatures up to 2,200°F (1,204°C). UV scanners can be used with all combustors, any fuel listed below, and up to the maximum operating temperature.		
<b>Fuel</b> <i>For any other mixed gas, contact Eclipse, Inc.</i>	Natural gas, propane or butane <sup>1</sup>		
<b>Approvals</b>	 AI30		

1. See Design Guide 205 for more information about typical fuel composition and properties

- All information is based on laboratory testing in neutral (0 "w.c., 0 mbar) pressure chamber. Different chamber conditions may affect the data.
- All information is based on standard combustor design. Changes in combustor will alter performance and pressures.
- All inputs based upon gross calorific values and standard conditions; 1 atmosphere, 70°F (21°C).
- 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.
- Plumbing of air and gas will affect accuracy of orifice readings. All information is based on generally acceptable air and gas piping practices.

## Performance Graphs

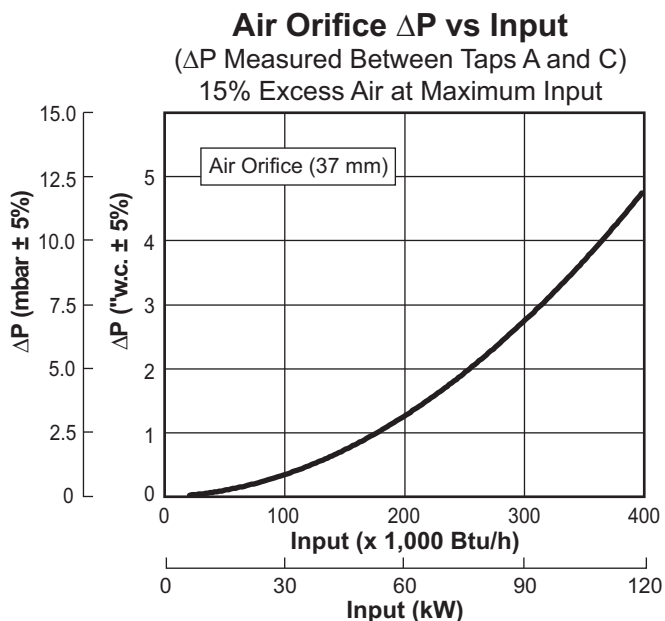
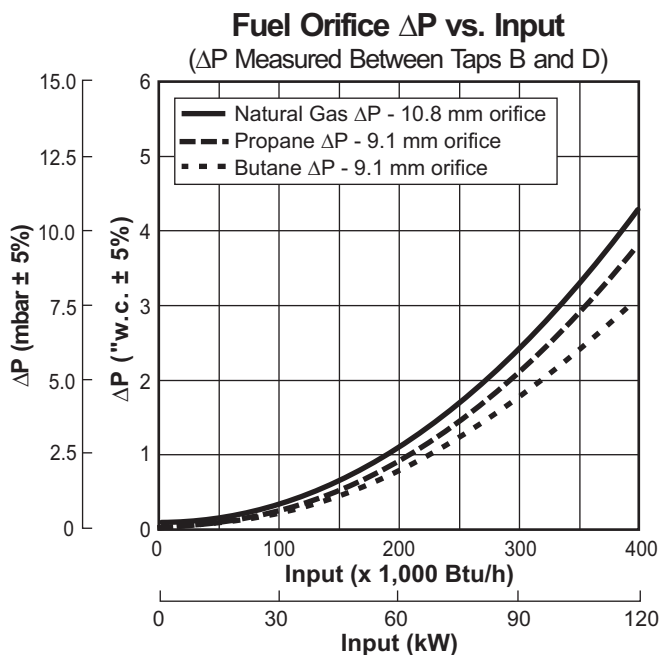


Emissions correction factor for medium velocity combustor is 1.20. Emissions data based on, on-ratio control firing at 15% excess air corrected to 3% O<sub>2</sub>.

Emissions from the burner are influenced by:

- Fuel type
- Combustion air temperature
- Firing rate
- Chamber conditions
- Percent of excess air

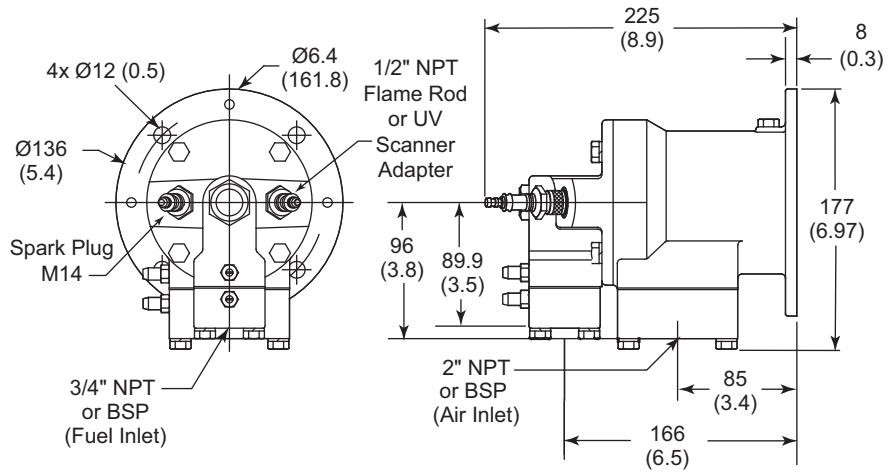
For estimates of other emissions, contact Eclipse.



# Dimensions and Specifications

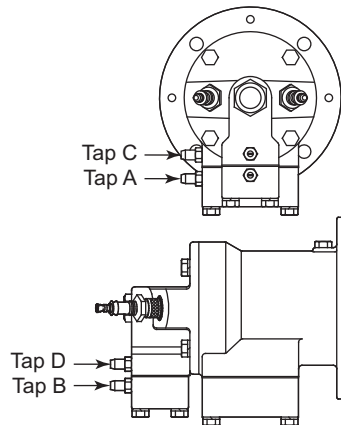
Dimensions in mm (inches)

## Burner Housing



**Burner weight less combustor: 21.6 lbs (9.8 kg)**

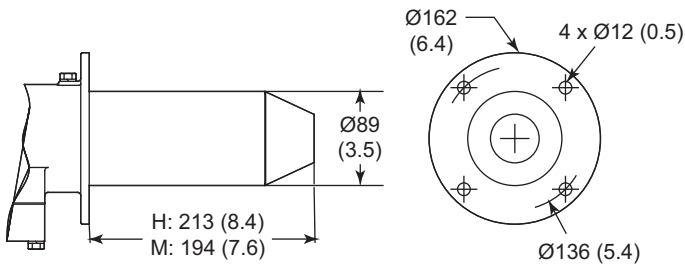
## Tap Locations



## Dimensions and Specifications

Dimensions in mm (inches)

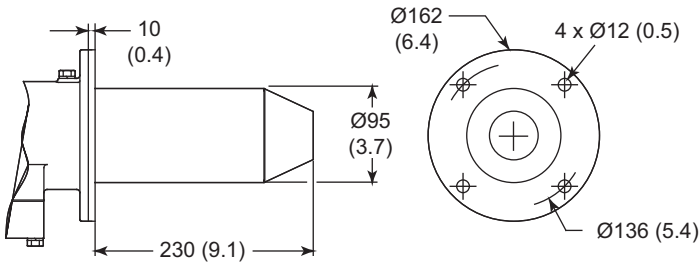
### Combustors



#### **Alloy Combustor (AISI 310)**

Weight: 2.1 lbs (0.95 kg)

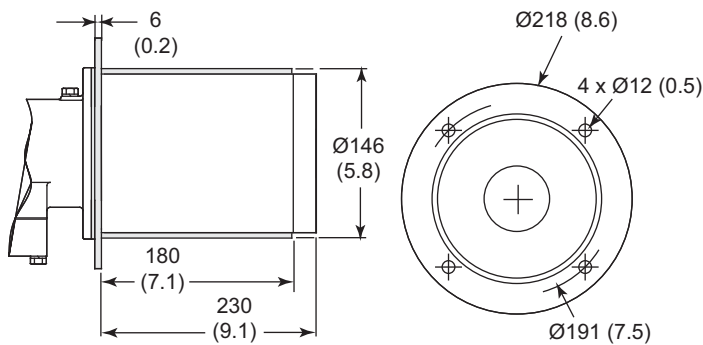
Maximum Chamber Temp: 1,750°F (950°C)



#### **Silicon Carbide Combustor**

Weight: 3.6 lbs (1.63 kg)

Maximum Chamber Temp: 2,500°F (1,371°C)



#### **Refractory Combustor with AISI 330 wrapper**

Weight: 14 lbs (6.4 kg)

Maximum Chamber Temp: 2,800°F (1,538°C)

#### **Exhaust Outlet Diameter:**

High Velocity: Ø42 (1.7)

Medium Velocity: Ø60 (2.4)