


# Eclipse ThermJet

## Burners

Model TJ1500

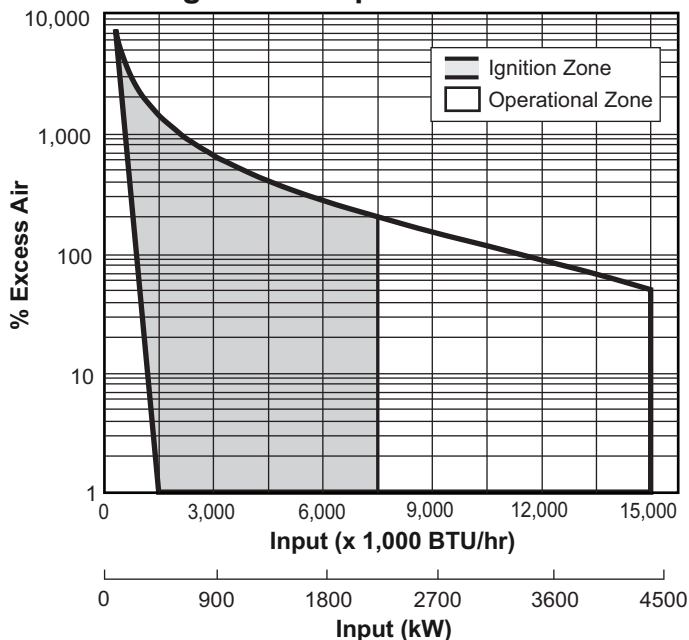
Version 2

Parameter	Burner Velocity	Model TJ1500	
Maximum Input BTU/hr (kW)	Medium & High Velocity	15,000,000 (4400)	
Minimum Input, On-Ratio BTU/hr (kW)	Medium & High Velocity	1,500,000 (440)	
Minimum Input, Fixed Air BTU/hr (kW)	Medium & High Velocity	300,000 (88)	
Gas Inlet Pressure Required "w.c. (mbar) Fuel Pressure at Gas Inlet (Tap "B" - see page 3)	High Velocity	Natural Gas	15.7 (39,1)
		Propane	15.7 (39,1)
		Butane	15.7 (39,1)
	Medium Velocity	Natural Gas	3.7 (9,2)
		Propane	3.7 (9,2)
		Butane	3.7 (9,2)
Air Inlet Pressure Required "w.c. (mbar) 15% Excess Air at Maximum Input (Tap "A" - see page 3)	High Velocity	Natural Gas	19.7 (49,1)
		Propane	19.7 (49,1)
		Butane	19.7 (49,1)
	Medium Velocity	Natural Gas	8.4 (20,9)
		Propane	8.4 (20,9)
		Butane	8.4 (20,9)
High Fire Flame Length Inches (mm) (Measured from End of Combustor)	High Velocity	Natural Gas	84 (2134)
		Propane	108 (2743)
		Butane	108 (2743)
	Medium Velocity	Natural Gas	144 (3660)
		Propane	185 (4700)
		Butane	185 (4700)
Maximum Flame Velocity ft/s (m/s) 15% Excess Air at Maximum Input	High Velocity	500 (152,4)	
	Medium Velocity	250 (76,2)	
Maximum Combustion Air Temperature	300°F (149°C). For higher temperatures, use TJPCA (Data 206).		
Flame Detection	UV scanner only. (Available for all combustors.)		
Fuel	Natural gas, propane, or butane. For any other mixed gas, contact Eclipse for orifice sizing.		
Approvals			

- All information is based on laboratory testing in neutral (0.0" w.c.) pressure chamber. Different chamber size and 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.
- 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.

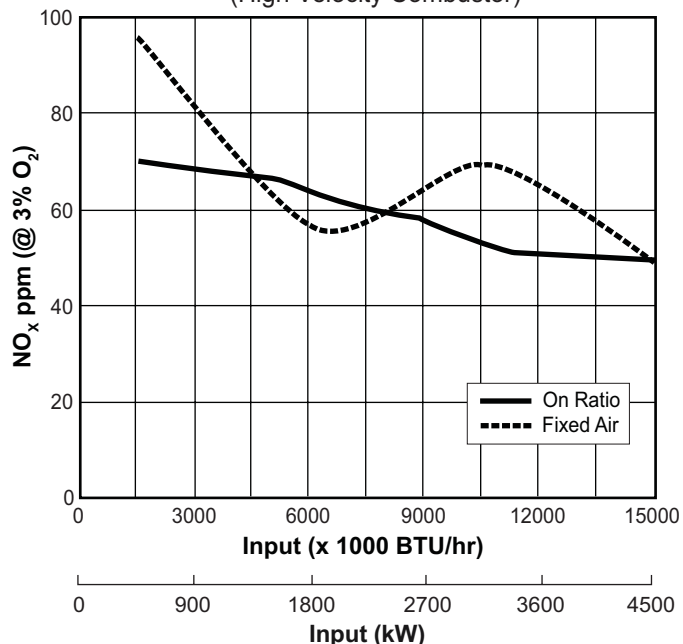
## Performance Graphs

### Ignition & Operational Zones



### NO<sub>x</sub> Emissions

(High Velocity Combustor)



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

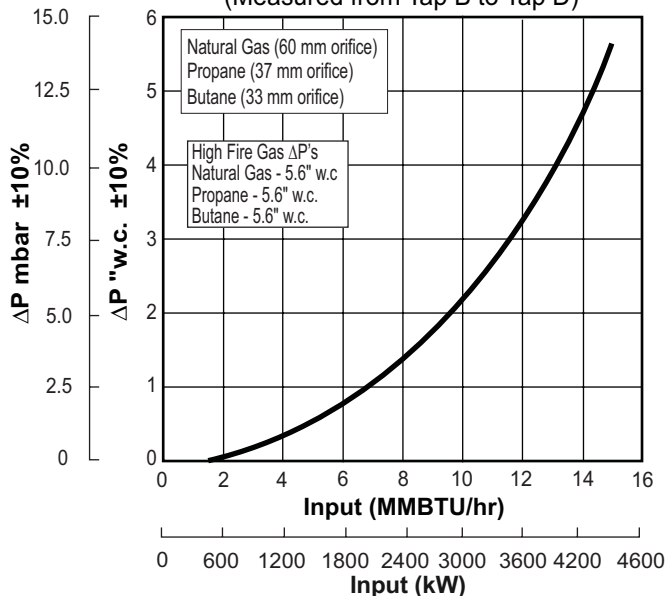
Emissions from the burner are influenced by:

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

For estimates of other emissions, contact Eclipse.

### Gas Orifice $\Delta P$ vs. Input

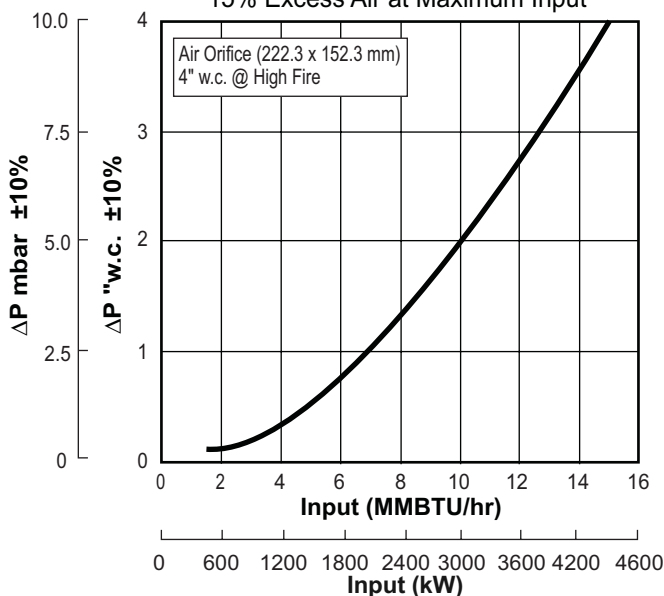
(Measured from Tap B to Tap D)



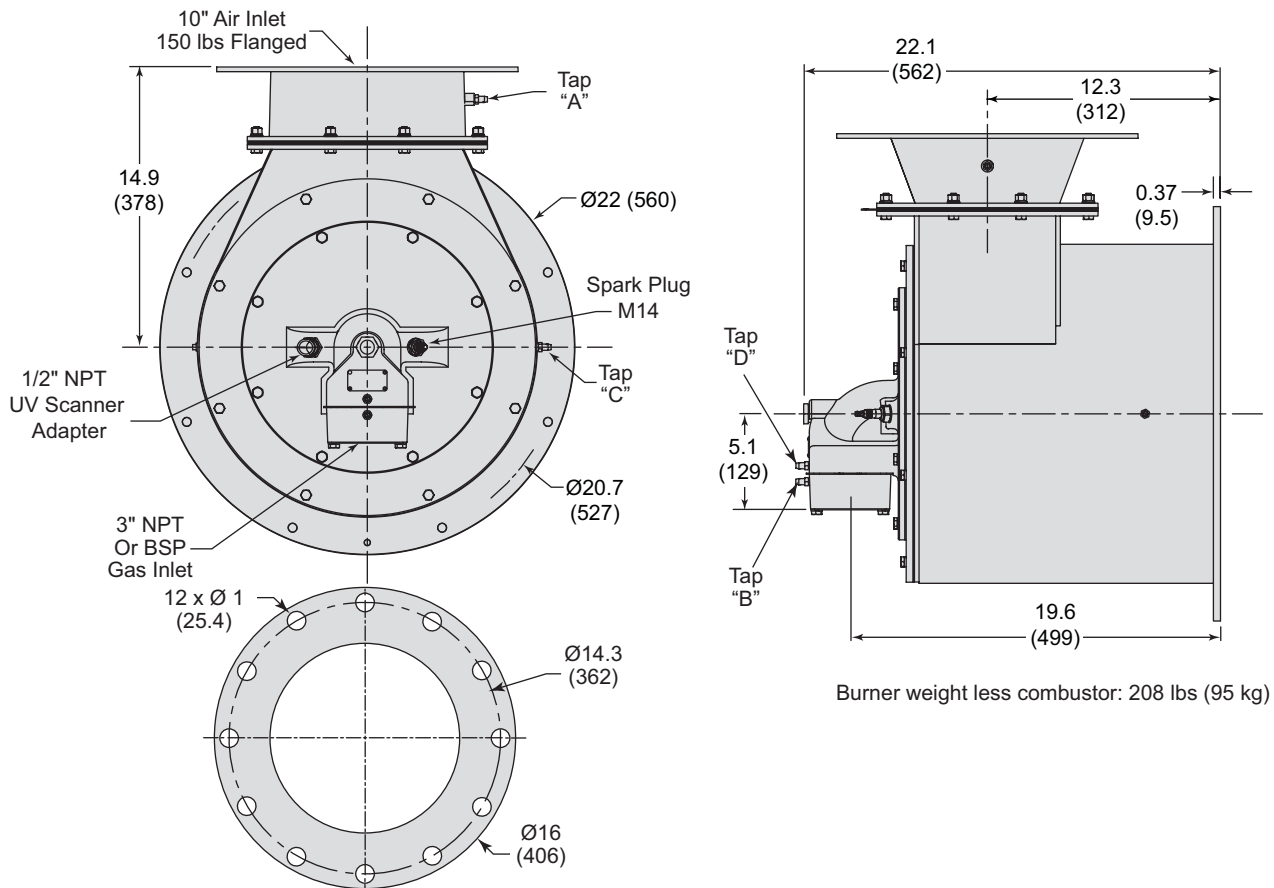
### Air Orifice $\Delta P$ vs. Input

(Measured from Tap A to Tap C)

15% Excess Air at Maximum Input



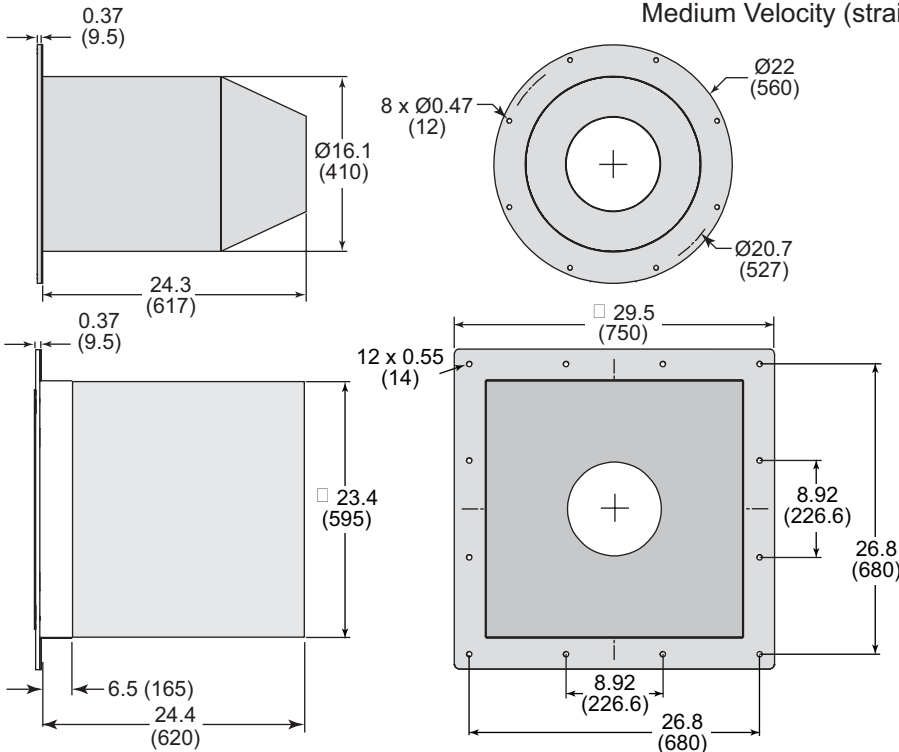
## Dimensions in inches (mm)



**Air Inlet Mounting Detail**

### Combustor

Exhaust Outlet Diameter: High Velocity (tapered): Ø8.66 (220)  
 Medium Velocity (straight): Ø15.16 (385)



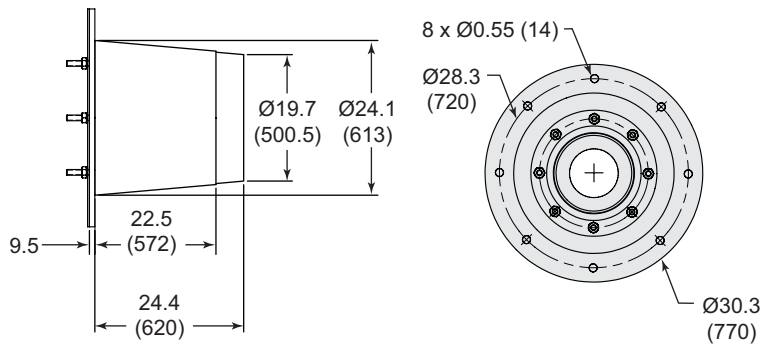
#### **Alloy Tube (AISI 310)**

Weight: 44 lbs (20 kg)  
 Max. Chamber Temp: 1,750°F (950°C)

#### **Refractory Block**

(w/ 330 SS wrapper)  
 Weight: 1000 lbs (454 kg)  
 Max. Chamber Temp: 2,800°F (1535°C)

# Down Firing Block



Weight: 610 lbs (276.69 kg)  
Max. Chamber Temp: 2800°F (1535°C)



**Offered By:**

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