Datasheet 205-8
11/23/2011

Eclipse ThermJet Burners

Model TJ0300

Version 2

Parameter	Burner Velocity		Model TJ0300
Maximum Input Btu/h (kW)	Medium & High Velocity		3,000,000 (879)
Minimum Input, On-Ratio Btu/h (kW)	Medium & High Velocity		300,000 (88)
Minimum Input, Fixed Air Btu/h (kW)	Medium & High Velocity		60,000 (18)
Gas Inlet Pressure Required "w.c. (mbar) **Fuel Pressure at Gas Inlet** **(Tap "B" - see page 3)**	High Velocity	Natural Gas	12.5 (31.0)
		Propane	12.7 (32.0)
		Butane	12.2 (30.0)
	Medium Velocity	Natural Gas	6.0 (15.0)
		Propane	6.8 (17.0)
		Butane	6.0 (15.0)
Air Inlet Pressure Required "w.c. (mbar) **15% Excess Air at Maximum Input** **(Tap "A" - see page 3)**	High Velocity	Natural Gas	15.0 (38.0)
		Propane	15.0 (38.0)
		Butane	15.0 (38.0)
	Medium Velocity	Natural Gas	8.5 (21.0)
		Propane	8.5 (21.0)
		Butane	8.5 (21.0)
High Fire Flame Length Inches (mm) **(Measured from End of Combustor)**	High Velocity	Natural Gas	50 (1270)
		Propane	55 (1400)
		Butane	55 (1400)
	Medium Velocity	Natural Gas	64 (1630)
		Propane	66 (1675)
		Butane	68 (1730)
Maximum Flame Velocity ft/s (m/s) **15% Excess Air at Maximum Input**	High Velocity		550 (168)
	Medium Velocity		300 (91)
Maximum Combustion Air Temperature	300°F (149°C). For higher temperatures, use TJPCA (Data 206)		
Flame Detection	Flamerod can be used with all combustors and operating temperatures up to 2,200°F (1,204°C). UV scanners can be used with all combustors. Certain piping configurations prohibit the use of a flamerod, see page 3 for details.		
Fuel	Natural gas, propane or butane. For any other mixed gas, contact Eclipse for orifice sizing.		
Approvals	АИ30		

- 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.

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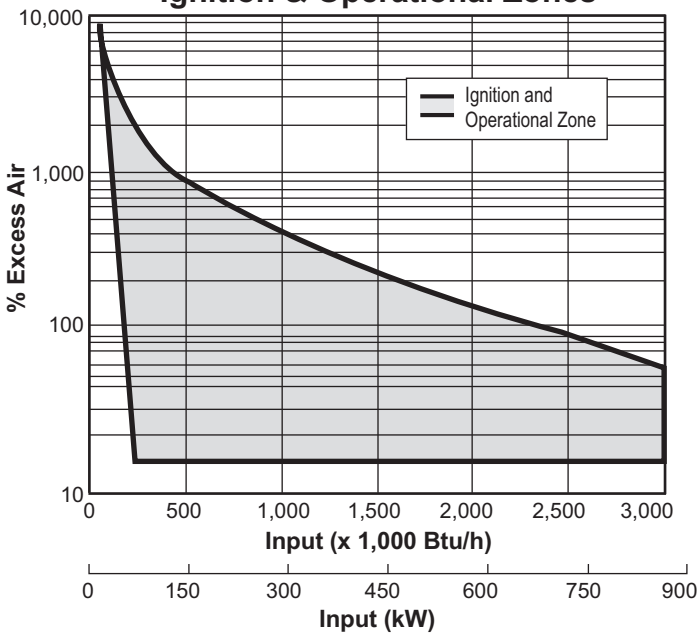
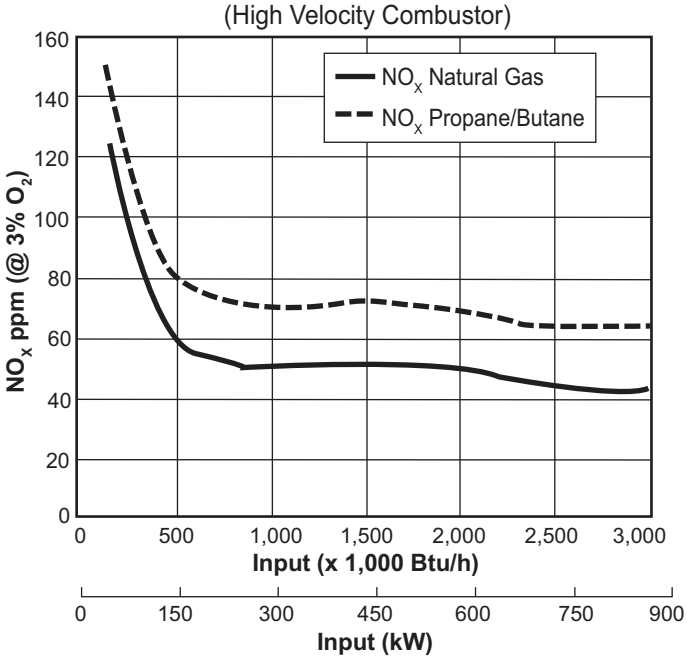
Performance Graphs

Ignition & Operational Zones



NO_x 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_2.

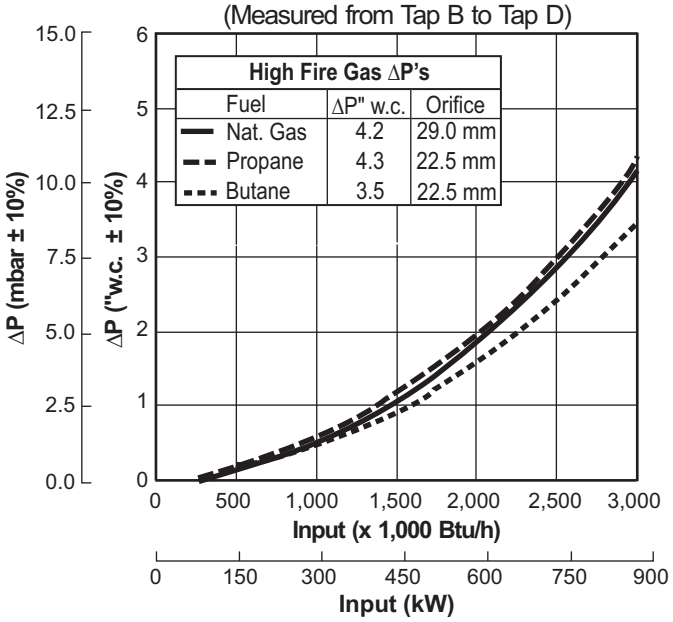
Emissions from the burner are influenced by:

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

For estimates of other emissions, contact Eclipse.

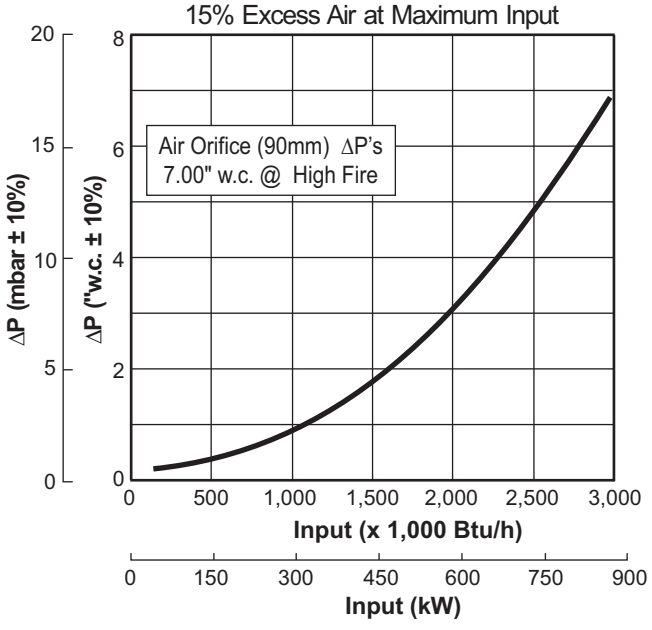
Gas Orifice ΔP vs. Input

(Measured from Tap B to Tap D)

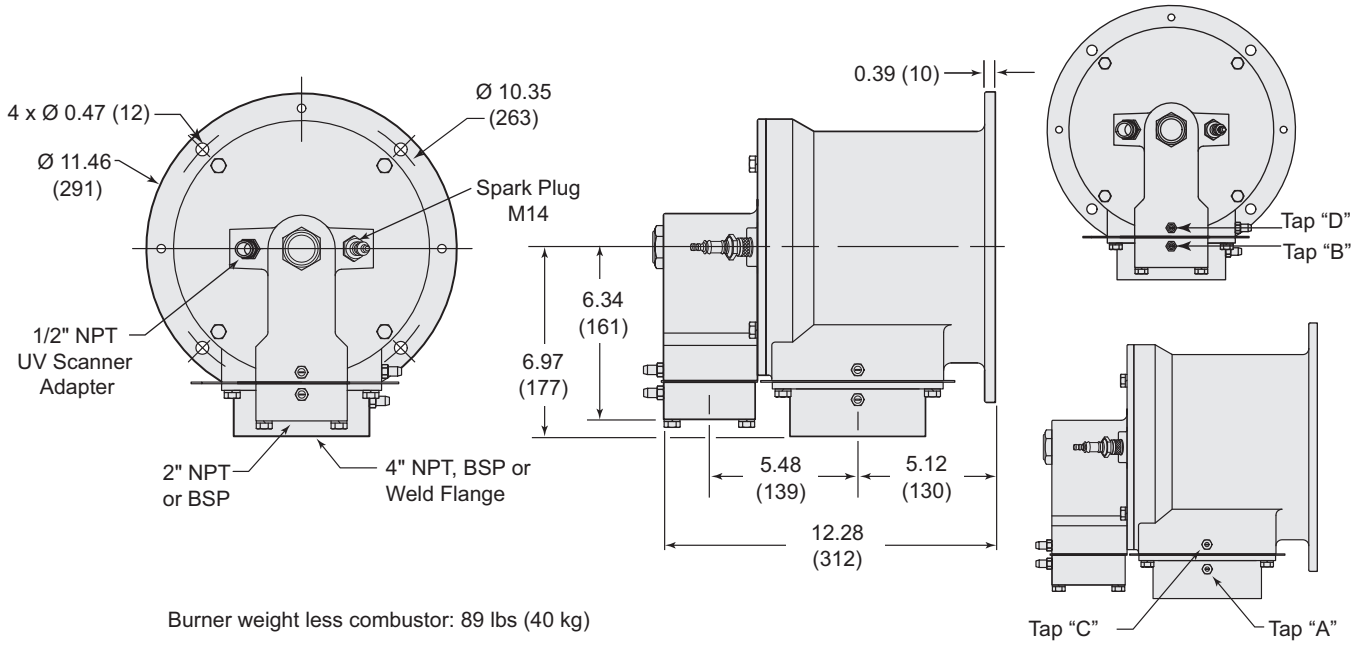


Air Orifice ΔP vs. Input

(Measured from Tap A to Tap C)
15% Excess Air at Maximum Input



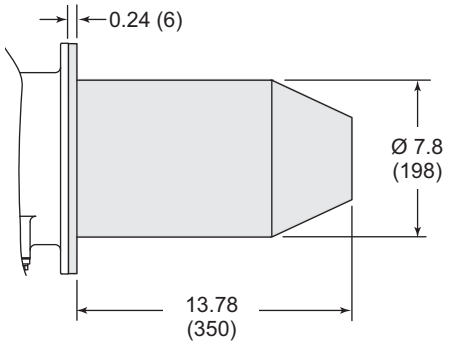
Dimensions in inches (mm)

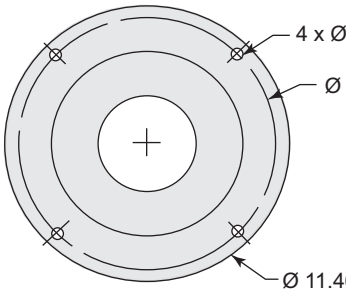


Burner weight less combustor: 89 lbs (40 kg)

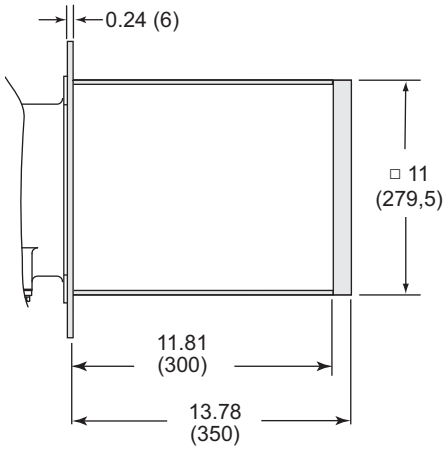
Combustor

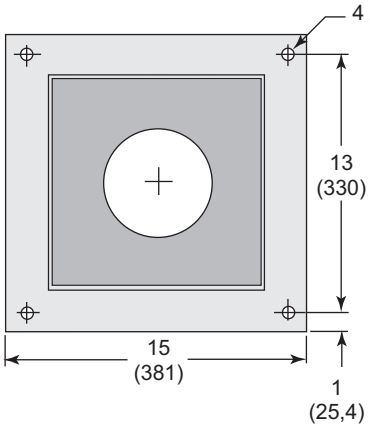
Exhaust Outlet Diameter: High Velocity: Ø 3.94 (100)
Medium Velocity: Ø 5.31 (135)





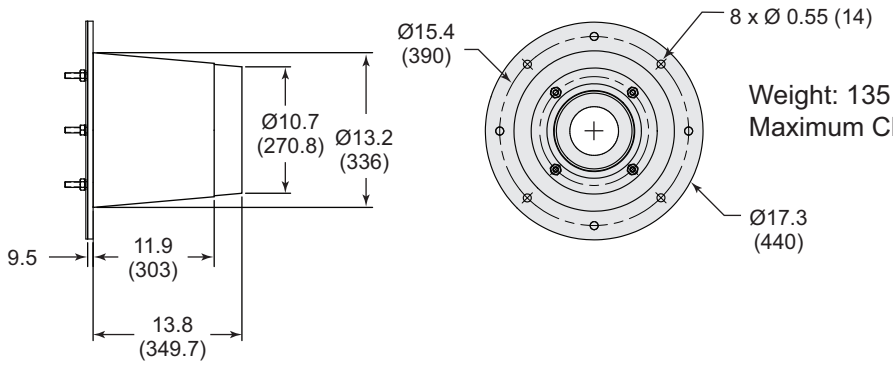
Alloy Tube (AISI 310)
Weight: 13.5 lbs (6 kg)
Maximum Chamber Temp: 1,750°F (950°C)





Refractory Block
(w/ 330 SS wraper)
Weight: 131.4 lbs (60 kg)
Maximum Chamber Temp: 2,800°F (1535°C)

Down Firing Block



Weight: 135 lbs (61.23 kg)
Maximum Chamber Temp: 2800°F (1535°C)

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