

Eclipse ThermJet Burners

for preheated combustion air

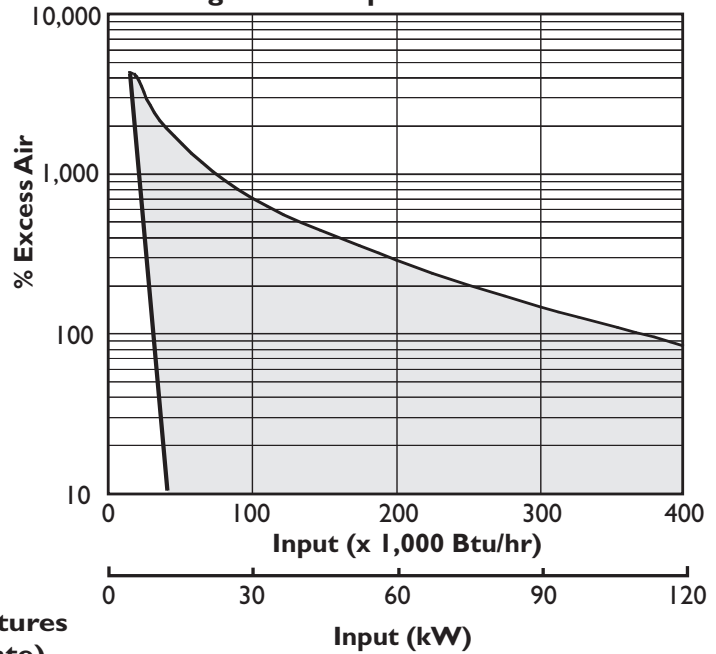
Model TJPCA0040
Version 2

PARAMETER		SPECIFICATION		
		Nat. Gas	Propane	Butane
Maximum Input Btu/hr (kW)		400,000 (117)	400,000 (117)	400,000 (117)
Minimum Input, On-ratio Btu/hr (kW)		40,000 (11.7)	40,000 (11.7)	40,000 (11.7)
Gas Inlet Pressure "w.c. (mbar) • Fuel pressure at gas inlet (Tap "B" – see page 3)	ambient	5.5 (13.7)	5.5 (13.7)	5.0 (12.4)
	300° F	7.2 (17.9)	7.4 (18.4)	6.9 (17.2)
	700° F	10.3 (25.6)	10.9 (27.1)	10.4 (25.8)
	1000° F	12.7 (31.4)	13.5 (33.5)	13.0 (32.3)
Air Inlet Pressure "w.c. (mbar) • 15% excess air at maximum input (Tap "A" – see page 3)	ambient	4.2 (10.5)	4.7 (11.7)	4.7 (11.7)
	300° F	5.9 (14.7)	6.6 (16.4)	6.6 (16.4)
	700° F	9.0 (22.4)	10.1 (25.1)	10.1 (25.1)
	1000° F	11.4 (28.4)	12.7 (31.6)	12.7 (31.6)
High Fire Flame Length Inches (mm)		<18.0 (457)	<19.0 (483)	<19.0 (483)
Flame Detection		U.V. scanner available for all combustors		
Fuel		Natural Gas, Propane, Butane <i>For any other mixed gas, contact Eclipse for orifice sizing.</i>		

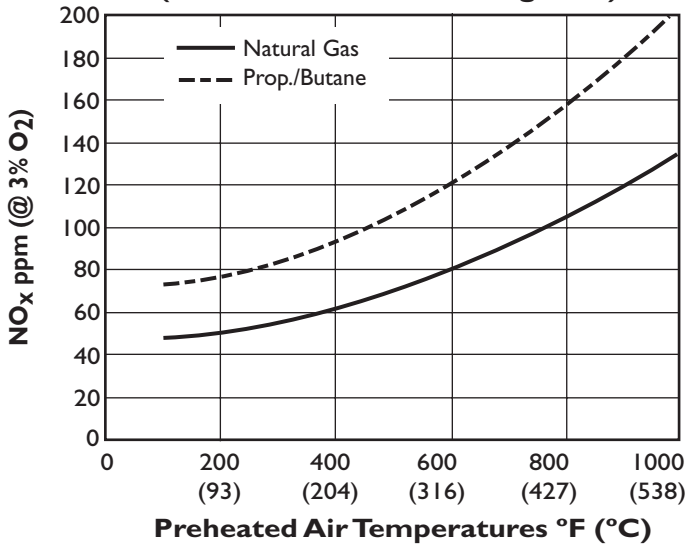
- All information is based on laboratory testing in neutral (0.0"w.c.) pressure chamber. Different chamber size and conditions may affect the data.
- All information is based on standard combustor design. Changes in the combustor will alter performance and pressures.
- All inputs based upon gross calorific 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_x vs Preheated Air Temperatures (Based on Maximum Firing Rate)



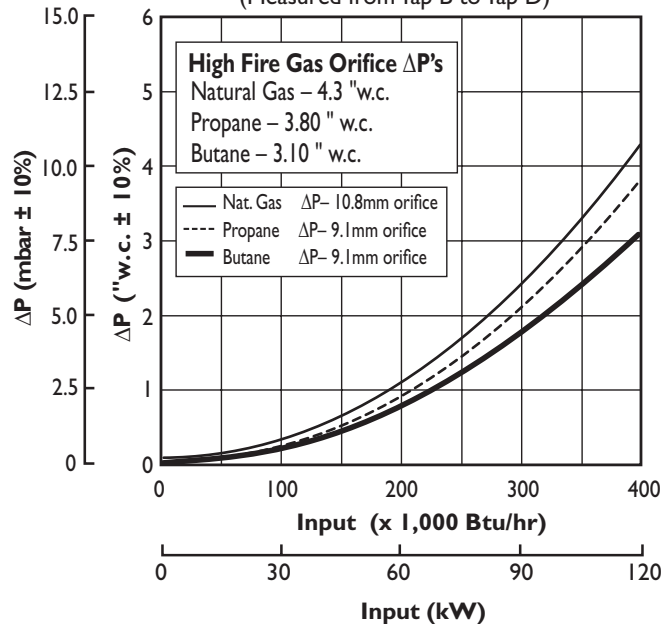
Emissions from the burner are influenced by:

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

For estimates of other emissions, contact Eclipse.

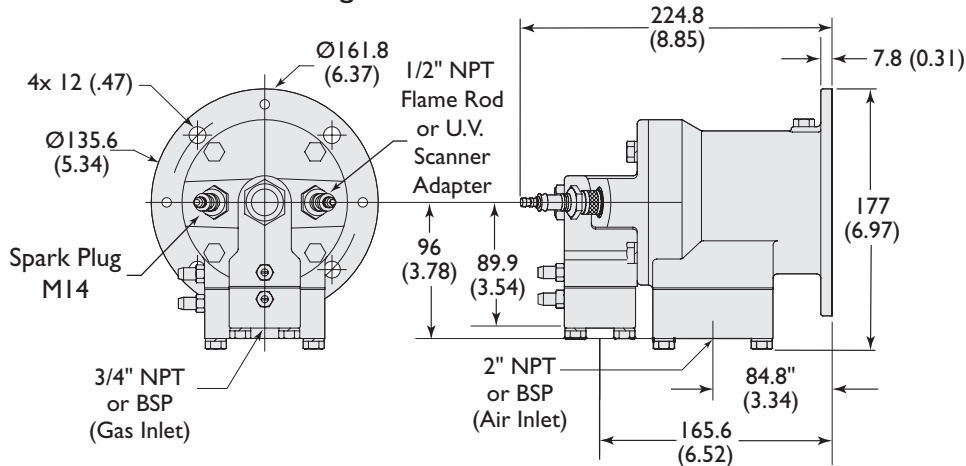
Gas Orifice ΔP vs. Input

(Measured from Tap B to Tap D)

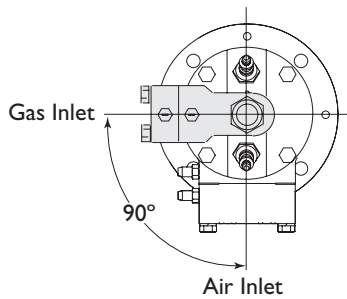


Dimensions & Specifications Millimeters (Inches)

Burner Housing

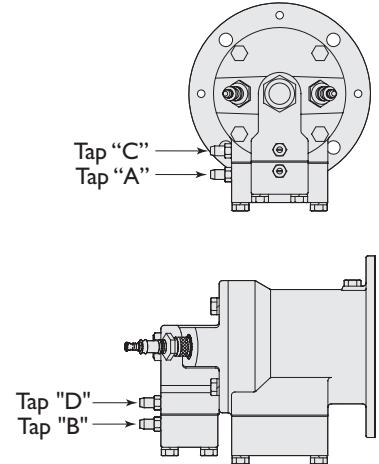


Burner Weight less combustor: 21.6 lb (9.8 kg)



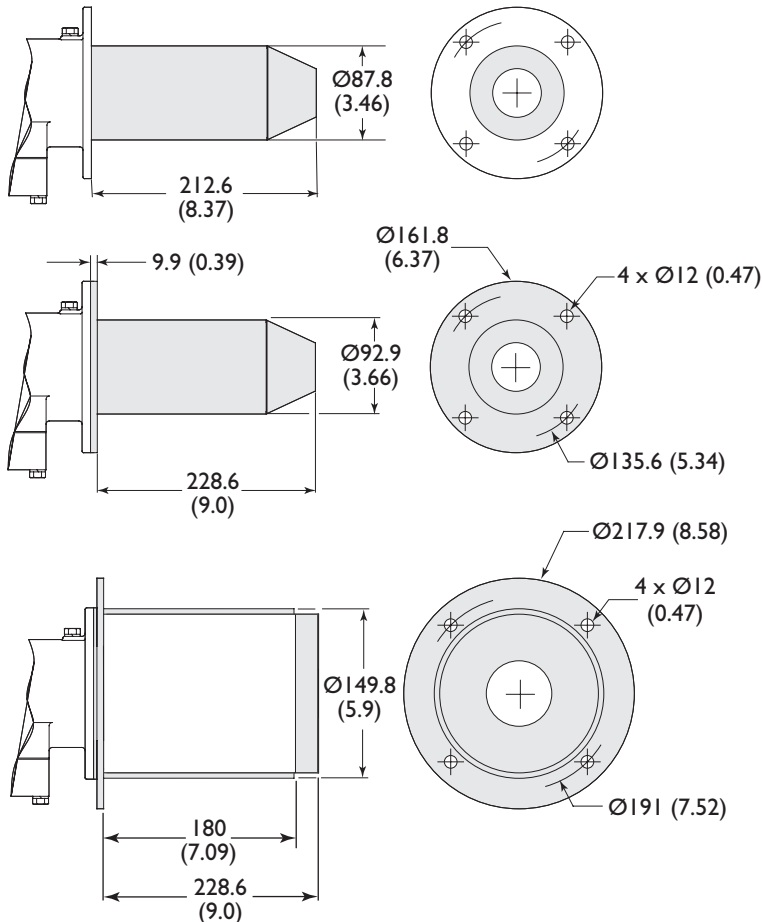
Do not install the burner with the gas inlet rotated 90° clockwise with respect to the air inlet if operating on Natural Gas and using a flamerod.

Tap Locations



Combustor

Exhaust outlet diameter : High Velocity : $\varnothing 42$ (1.65)
Medium Velocity : $\varnothing 60$ (2.36)



Alloy Tube (AISI 310)

Weight: 2.1 lbs. (0.95 kg)
Max. Chamber Temp: 1,750°F (950°C)

Silicon Carbide Tube

Weight: 3.6 lb (1.63 kg)
Max. Chamber Temp: 2,500°F (1371°C)

Refractory Block (w/330 SS wrapper)

Weight: 14 lb (6.35 kg)
Max. Chamber Temp: 2,800°F (1538°C)



Offered By:

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