


Eclipse ThermJet Burners

Model TJ0200

Data sheet Edition 12.14

Version 2

Parameter	Burner Velocity	Model TJ0200	
Maximum Input, Btu/h (kW)¹	Medium & High Velocity	2,000,000 (528)	
Minimum Input, Btu/h (kW)¹ <i>For lower inputs, contact Eclipse, Inc.</i>	Medium & High Velocity	200,000 (53)	
Minimum Input Fixed Air, Btu/h (kW)¹	Medium & High Velocity	40,000 (11)	
Main Gas Inlet Pressure, "w.c. (mbar) <i>Fuel pressure at gas inlet Tap B (see page 3)</i>	High Velocity	Natural Gas	9.3 (23.0)
		Propane	12.7 (32.0)
		Butane	13.4 (34.0)
	Medium Velocity	Natural Gas	7.1 (18.0)
		Propane	8.5 (21.0)
		Butane	6.9 (17.0)
Air Inlet Pressure, "w.c. (mbar) <i>15% excess air at maximum input Tap A (see page 3)</i>	High Velocity	Natural Gas	12.3 (31.0)
		Propane	14.1 (35.0)
		Butane	14.1 (35.0)
	Medium Velocity	Natural Gas	10.0 (25.0)
		Propane	11.0 (28.0)
		Butane	11.0 (28.0)
High Fire Visible Flame Length, inches (mm) <i>Measured from the outlet end of the combustor</i>	High Velocity	Natural Gas	34 (864)
		Propane	36 (914)
		Butane	36 (914)
	Medium Velocity	Natural Gas	38 (965)
		Propane	38 (965)
		Butane	38 (965)
Approximate Flame Velocity, ft/s (m/s) <i>Approximately 15% excess air at maximum input</i>	High Velocity	500 (152)	
	Medium Velocity	330 (101)	
Maximum Combustion Air Temperature	300°F (149°C). For higher temperatures use TJPCA (Datasheet 206).		
Flame Detection	UV scanner standard. If flame rod is required, please contact Eclipse.		
Fuels² <i>For any other mixed gas, contact Eclipse, Inc.</i>	Natural gas, Propane or Butane		
Approvals			

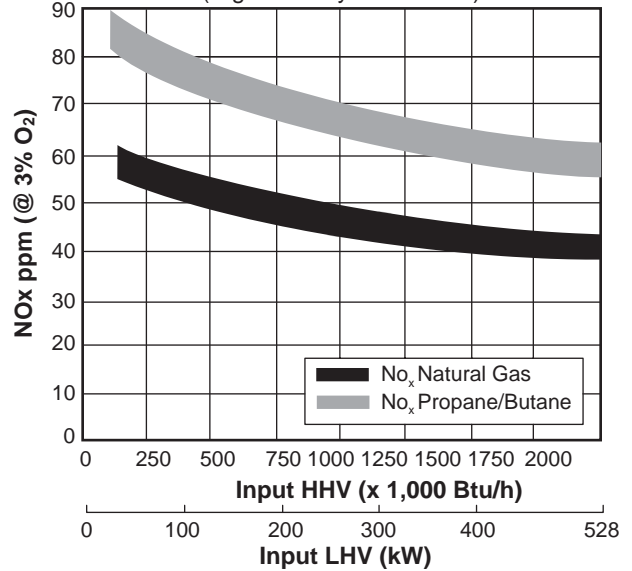
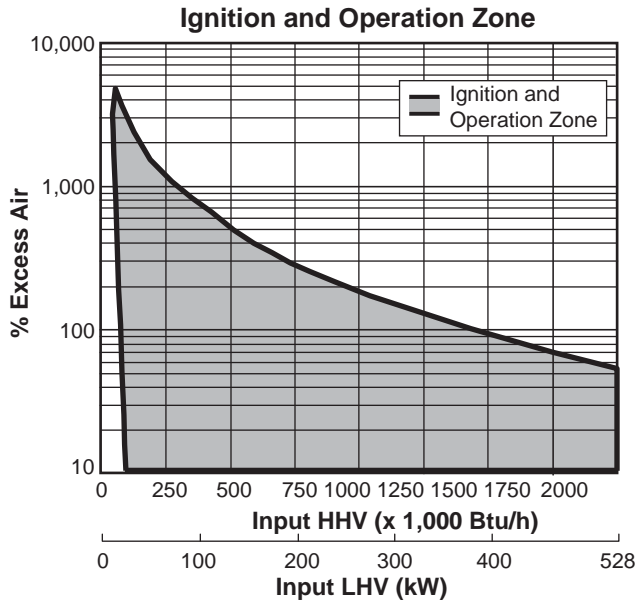
1. All imperial inputs based upon gross calorific values (HHV). All metric inputs based upon net calorific values (LHV). 2. See Design Guide 205 for more information about typical fuel composition and properties.

- 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 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

NO_x Emission

@ 1700°F (930°C) Chamber Temperature
(High Velocity Combustor)



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% O₂.

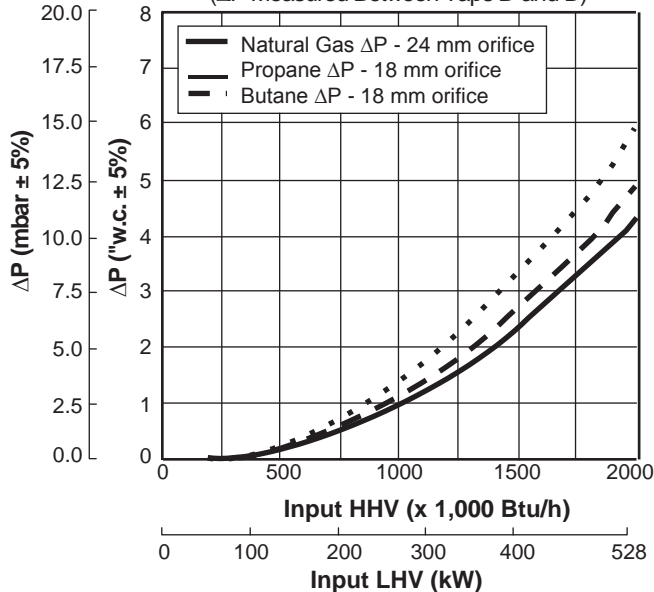
Emissions from the burner are influenced by:

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

For estimates of other emissions, contact Eclipse.

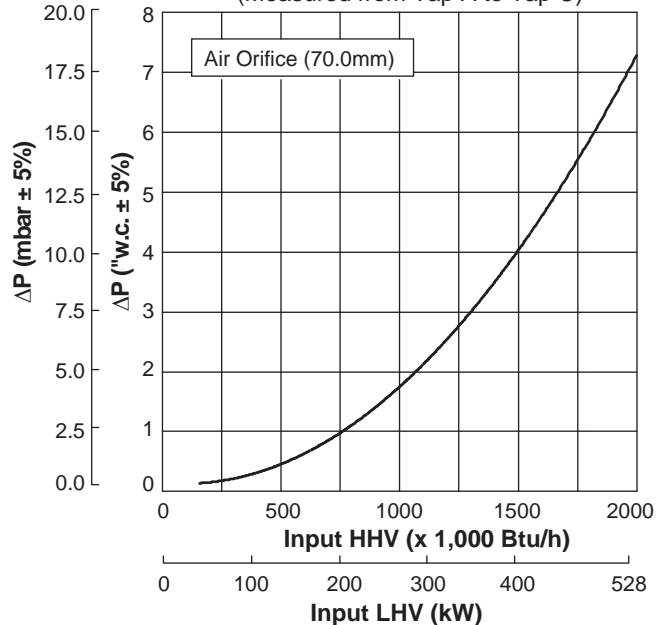
Fuel Orifice ΔP vs. Input

(ΔP Measured Between Taps B and D)



Air Orifice ΔP vs. Input

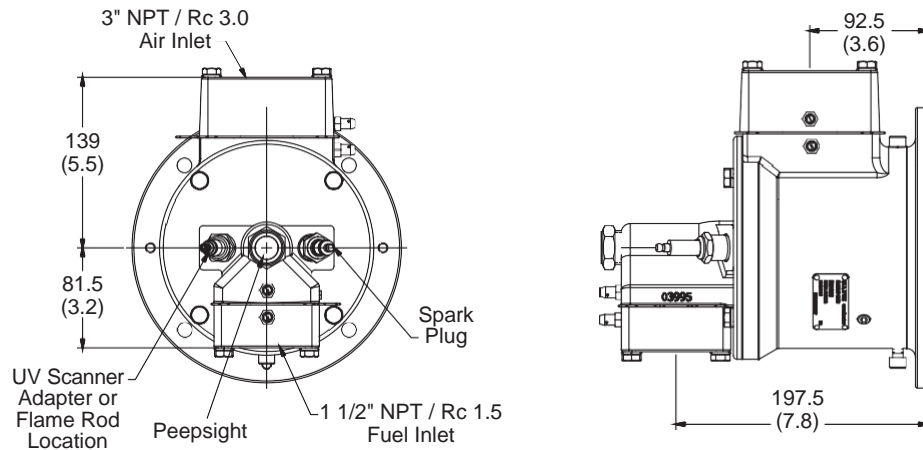
(Measured from Tap A to Tap C)



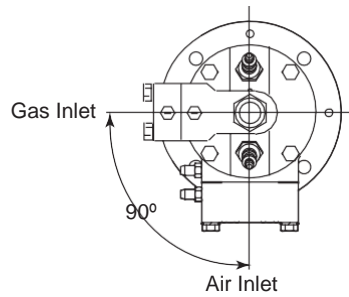
Dimensions and Specifications

Dimensions in mm (inches)

Burner Housing

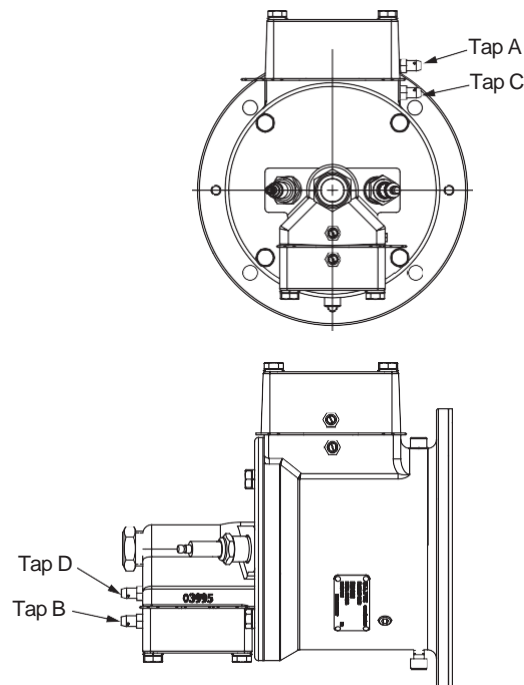


Burner weight less combustor: 42 lbs (19 kg)



If using a flame rod, do not install the burner with the gas inlet at 0° or rotated 90° clockwise with respect to the air inlet

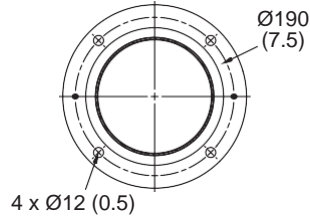
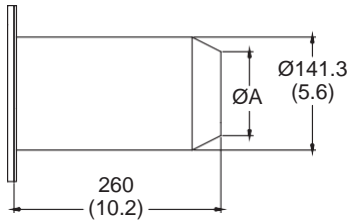
Tap Locations



Dimensions and Specifications

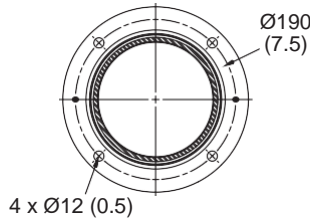
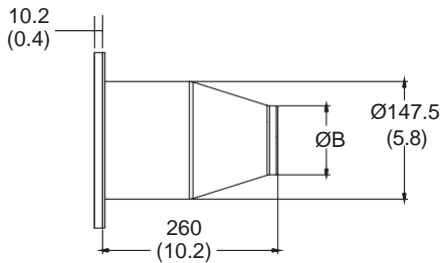
Dimensions in mm (inches)

Combustors



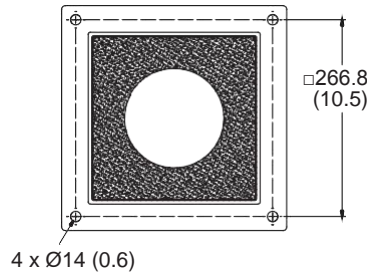
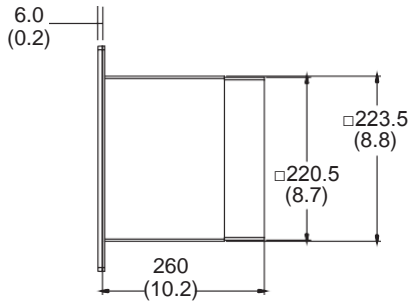
Alloy Combustor (AISI 310)

Weight: 4.2 lbs (1.9 kg)
Maximum Chamber Temp: 1,750°F (950°C)



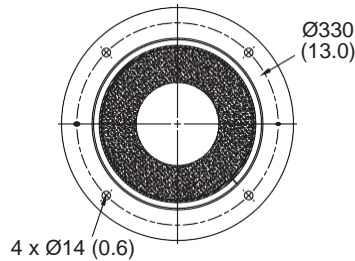
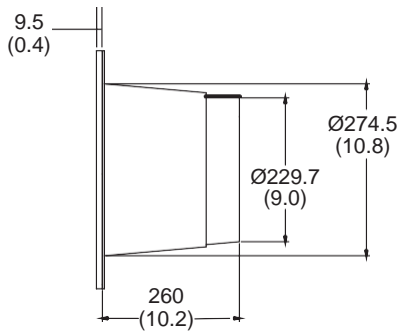
Silicon Carbide Combustor

Weight: 3.1 lbs (1.5 kg)
Maximum Chamber Temp: 2,500°F (1,371°C)



Refractory Combustor with AISI 330 wrapper

Weight: 66 lbs (30 kg)
Maximum Chamber Temp: 2,800°F (1,538°C)



Down Firing Block with AISI 330 wrapper

Weight: 77 lbs (35 kg)
Maximum Chamber Temp: 2,800°F (1,538°C)

NOTE: Mounting gasket shown on right side of combustor flange.
Dimensions shown do not account for mounting gasket.

Dimension	High Velocity	Medium Velocity
ØA	Ø85 (3.3)	Ø105 (4.1)
ØB	Ø85 (3.3)	Ø105 (4.1)