### Parameter | Burner Velocity | Model TJ0150
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Maximum Input, Btu/h (kW) | Medium & High Velocity | 1,500,000 (440)
Minimum Input On-Ratio, Btu/h (kW) | Medium & High Velocity | 150,000 (44)
Minimum Input Fixed Air, Btu/h (kW) | Medium & High Velocity | 30,000 (9)
Gas Inlet Pressure Required, "w.c. (mbar) Tap B (see page 3) | High Velocity | Natural Gas 14.5 (36.0)
 | | Propane 15.0 (38.0)
 | | Butane 15.5 (39.0)
 | Medium Velocity | Natural Gas 7.0 (17.5)
 | | Propane 6.0 (15.0)
 | | Butane 6.5 (16.0)
Air Inlet Pressure Required, "w.c. (mbar) 15% Excess Air at Maximum Input Tap A (see page 3) | High Velocity | Natural Gas 17.5 (44.0)
 | | Propane 19.5 (49.0)
 | | Butane 19.5 (49.0)
 | Medium Velocity | Natural Gas 9.5 (24.0)
 | | Propane 10.0 (25.0)
 | | Butane 10.5 (26.0)
High Fire Flame Length, inches (mm) Measured from the outlet end of the combustor | High Velocity | Natural Gas 38 (965)
 | | Propane 42 (1065)
 | | Butane 43 (1090)
 | Medium Velocity | Natural Gas 43 (1090)
 | | Propane 42 (1065)
 | | Butane 44 (1120)
Approximate Flame Velocity, ft/s (m/s) 15% Excess Air at Maximum Input | High Velocity | 680 (207)
 | Medium Velocity | 350 (107)
Maximum Combustion Air Temperature | 300° (149°C). For higher temperatures use TJPCA (Datasheet 206).
Flame Detection | Flame rods can be used with all alloy and SiC 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. 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, Inc. | Natural gas, propane or butane
Approvals | 1. See Design Guide 205 for more information about typical fuel composition and properties
2. All information is based on laboratory testing in neutral (0 °w.c., 0 mbar) pressure chamber. Different chamber conditions may affect the data.
3. All information is based on standard combustor design. Changes in combustor will alter performance and pressures.
4. All inputs based upon gross calorific values and standard conditions; 1 atmosphere, 70°F (21°C).
5. 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.
6. Plumbing of air and gas will affect accuracy of orifice readings. All information is based on generally acceptable air and gas piping practices.
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.
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

Tap A
Tap B
Tap C
Tap D
Dimensions and Specifications
Dimensions in mm (inches)

Combustors

Alloy Combustor (AISI 310)
Weight: 3.3 lbs (1.5 kg)
Maximum Chamber Temp: 1,750°F (950°C)

Silicon Carbide Combustor
Weight: 3.1 lbs (1.4 kg)
Maximum Chamber Temp: 2,500°F (1,371°C)

Refractory Combustor with AISI 330 wrapper
Weight: 58.3 lbs (26.5 kg)
Maximum Chamber Temp: 2,800°F (1,538°C)

Exhaust outlet diameter:
High Velocity: Ø64 (2.5)
Medium Velocity: Ø89 (3.5)

Down Firing Block with AISI 330 wrapper
Weight: 75 lbs (34 kg)
Maximum Chamber Temp: 2,800°F (1,535°C)

Datasheet 205-6, 2/11/2013