Eclipse ThermJet Burners
for Preheated Combustion Air
Model TJPCA0015
Version 2

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specifications</th>
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</thead>
<tbody>
<tr>
<td>Maximum Input BTU/hr (kW)</td>
<td>Natural Gas: 150,000 (44)</td>
</tr>
<tr>
<td>Minimum Input, On-Ratio BTU/hr (kW)</td>
<td>15,000 (4.4)</td>
</tr>
<tr>
<td>Gas Inlet Pressure Required &quot;w.c. (mbar)&quot; Fuel Pressure at Gas Inlet</td>
<td>Ambient: 7.5 (18.6)</td>
</tr>
<tr>
<td></td>
<td>300°F (150°C)</td>
</tr>
<tr>
<td></td>
<td>700°F (370°C)</td>
</tr>
<tr>
<td></td>
<td>1000°F (540°C)</td>
</tr>
<tr>
<td>Air Inlet Pressure Required &quot;w.c. (mbar) 15% Excess Air at Maximum Input</td>
<td>Ambient: 3.5 (8.7)</td>
</tr>
<tr>
<td></td>
<td>300°F (150°C)</td>
</tr>
<tr>
<td></td>
<td>700°F (370°C)</td>
</tr>
<tr>
<td></td>
<td>1000°F (540°C)</td>
</tr>
<tr>
<td>High Fire Flame Length Inches (mm) (Measured from End of Combustor)</td>
<td>&lt;11.0 (279)</td>
</tr>
<tr>
<td>Flame Detection</td>
<td>UV scanner available for all combustors.</td>
</tr>
<tr>
<td>Fuel</td>
<td>Natural gas, propane, or butane</td>
</tr>
</tbody>
</table>

- 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

% Excess Air

Input (x 1,000 BTU/hr)

NOX 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 ∆P vs. Input
(Measured from Tap B to Tap D)

High Fire Gas Orifice ∆P’s
Natural Gas - 3.6” w.c.
Propane - 3.3” w.c.
Butane - 3.0” w.c.

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 in inches (mm)

**Combustor**

Exhaust Outlet Diameter - Medium Velocity: Ø 1.26 (32)

**Alloy Tube (AISI 310)**

Weight: 2.1 lbs (0.95 kg)
Max. Chamber Temp: 1,750°F (950°C)
(Not suitable for preheated air over 700°F)

**Silicon Carbide Tube**

Weight: 3.6 lbs (1.63 kg)
Max. Chamber Temp: 2,200°F (1200°C)

**Refractory Block (w/330 SS wrapper)**

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

Burner weight less combustor: 17.9 lbs (8.1 kg)