### Eclipse ThermJet Burners

**for Preheated Combustion Air**

*Model TJPCA1000*

**Version 2**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural Gas</strong></td>
<td><strong>Propane</strong></td>
</tr>
<tr>
<td>Maximum Input BTU/hr (kW)</td>
<td>10,000,000 (2930)</td>
</tr>
<tr>
<td>Minimum Input, On-Ratio BTU/hr (kW)</td>
<td>1,000,000 (293)</td>
</tr>
<tr>
<td>Gas Inlet Pressure Required &quot;w.c. (mbar)&quot; (Tap “B” - see page 3)</td>
<td></td>
</tr>
<tr>
<td>Ambient</td>
<td>5.5 (13.7)</td>
</tr>
<tr>
<td>30°F (15°C)</td>
<td>7.1 (17.7)</td>
</tr>
<tr>
<td>70°F (37°C)</td>
<td>10.1 (25.1)</td>
</tr>
<tr>
<td>100°F (54°C)</td>
<td>-</td>
</tr>
<tr>
<td>Air Inlet Pressure Required &quot;w.c. (mbar)&quot; 15% Excess Air at Maximum Input (Tap “A” - see page 3)</td>
<td></td>
</tr>
<tr>
<td>Ambient</td>
<td>4.0 (10.0)</td>
</tr>
<tr>
<td>30°F (15°C)</td>
<td>5.6 (13.9)</td>
</tr>
<tr>
<td>70°F (37°C)</td>
<td>8.6 (21.4)</td>
</tr>
<tr>
<td>100°F (54°C)</td>
<td>-</td>
</tr>
<tr>
<td>High Fire Flame Length Inches (mm) (Measured from End of Combustor)</td>
<td>&lt;149.0 (3785)</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

**NO\textsubscript{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.
Dimensions in inches (mm)

Burner Housing

- Ø 15.35 (390)
- 8 x Ø 0.47 (12)
- 8" welded Pipe Connection
- 3" NPT or BSP Gas Inlet
- Ø 13.78 (350)
- Spark Plug M14

Tap Locations

- Tap "C"
- Tap "A"
- Tap "D"
- Tap "B"

Combustor

Exhaust Outlet Diameter - Medium Velocity: Ø 9.84 (250)

- Ø 15.35 (390)
- 8 x Ø 0.47 (12)
- Ø 13.78 (350)

Alloy Tube (AISI 310)

- Weight: 21 lbs (9.5 kg)
- Max. Chamber Temp: 1,750°F (950°C)
- (Not suitable for preheated air over 700°F)

Refractory Block

- (w/ 330 SS wrapper)
- Weight: 310 lbs (141 kg)
- Max. Chamber Temp: 2,800° (1535°C)

Burner weight less combustor: 133 lbs (60 kg)
Down Firing Block

Weight: 290 lbs (131.54 kg)
Max. Chamber Temp: 2800°F (1535°C)