## Tube Firing Burners

**Model TFB030**

**Version 2.00**

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th><strong>BURNER INPUT (1000’s Btu/hr)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Low firing rate (1000’s Btu/hr) At 100% excess air</td>
<td>Without U.V. scanner</td>
</tr>
<tr>
<td>Differential air pressure (&quot;w.c.) between tap A and B (See Pages 3 &amp; 4)</td>
<td>8.2</td>
</tr>
<tr>
<td>Recommended air orifice diameter mm (in)</td>
<td>18 (0.70)</td>
</tr>
<tr>
<td>Air flow (SCFH) At 15% excess air</td>
<td>1150</td>
</tr>
<tr>
<td>Differential gas pressure (&quot;w.c.) between tap C and D (See Pages 3 &amp; 4)</td>
<td>nat. gas</td>
</tr>
<tr>
<td></td>
<td>propane</td>
</tr>
<tr>
<td></td>
<td>butane</td>
</tr>
<tr>
<td>Recommended gas orifice plate mm (in)</td>
<td>nat. gas</td>
</tr>
<tr>
<td></td>
<td>propane</td>
</tr>
<tr>
<td></td>
<td>butane</td>
</tr>
<tr>
<td>Piping</td>
<td>N.P.T. or B.S.P. burner piping is available.</td>
</tr>
<tr>
<td>Flame detection</td>
<td>U.V. Scanner only*</td>
</tr>
<tr>
<td>Ignition</td>
<td>direct spark ignition (6 kVAC)</td>
</tr>
<tr>
<td>Fuels</td>
<td>Natural gas, propane, butane <em>For any other mixed gas, contact Eclipse Combustion</em></td>
</tr>
</tbody>
</table>

* When using the U.V. scanner, it is necessary to use mounting adapter part number 10033 to ensure that the U.V. scanner will not detect the ignition spark.

**Note:** Pressures shown are for system sizing only. The supply pressure at the burner inlets must be at least 3” w.c. higher than the differential pressure shown in the tables.

- The low firing rate represents the capability of the burner. Achievement of this rate will be affected by the control method and ratio-regulator used in the system design.
- All inputs based on gross caloric 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.
Ignition and Operation Zone

Emissions from the burner are influenced by:
- fuel type
- combustion air temperature
- chamber conditions
- percent of excess air

For estimates of other emissions, contact Eclipse Combustion.
Performance Graphs (Cont.)

Air Orifice $\Delta P$ vs Input @ 3% O$_2$
(Measured from Tap A to Tap B)

Natural Gas Orifice $\Delta P$ vs Input
(Measured from Tap C to Tap D)

Propane Orifice $\Delta P$ vs Input
(Measured from Tap C to Tap D)

Butane Orifice $\Delta P$ vs Input
(Measured from Tap C to Tap D)
Dimensions & Specifications
Model TFB030
Dimensions in inches (mm)

Dimension “B”
Each Therm Thief burner is available in a number of variants which have different air tube lengths (dimension “B”). Based on your application, choose the dimension closest to your requirements. Dimension “B” can be from 3” to 24” in one inch increments.

Total Weight (lb) 19.5 - 24