# Tube Firing

## Burners

**Model TFB075**

**Version 2**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Burner Input 1000's Btu/hr (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>400 (117)</td>
</tr>
<tr>
<td>Low firing rate 1000's Btu/hr (kW)</td>
<td>Without Flame Safety</td>
</tr>
<tr>
<td>At 100% excess air</td>
<td>With Flame Safety</td>
</tr>
<tr>
<td>Differential air pressure &quot;w.c. (mbar)&quot; between tap A and B (See Pages 3 &amp; 4)</td>
<td>8.4 (21)</td>
</tr>
<tr>
<td>Recommended air orifice plate mm (in)</td>
<td>34 (1.33)</td>
</tr>
<tr>
<td>Air flow SCFH (m³/hr)</td>
<td>4600 (130.3)</td>
</tr>
<tr>
<td>Differential gas pressure &quot;w.c. (mbar)&quot; 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>
</tbody>
</table>

- **Piping**: N.P.T. or B.S.P. burner piping is available.
- **Flame detection**: U.V. Scanner*, Flame Rod
- **Ignition**: direct spark ignition (6 kVAC)
- **Fuels**: Natural gas, propane, butane

* When using the U.V. scanner, mounting adapter part number 10033 will prevent the U.V. scanner from detecting 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.
Performance Graphs

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.

NOx and CO Emissions
(ambient air burner)

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.

NOx and CO Emissions
(pre-heated air burner)
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 TFB075
Dimensions in inches (mm)

Total Weight 20-25 lb (9-11.3 kg)

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.