Custom Packages Provide Superior Performance

The Pyronics TFR Packaged Immersion Tube Burner is a pre-packaged burner system specially designed for small bore (2.5” to 8” diameter) immersion tubes in liquid tanks. For use with Natural Gas or Propane, TFR packages are designed to produce high fire thermal inputs up to 3.5 MM Btu/hr. A robust, high velocity flame scrubs the tube surface promoting possible system efficiencies over 80%. Higher firing rates are possible with induced draft exhaust fans and/or higher capacity, external combustion air blowers. Customizable packages offer compact, pre-piped, pre-wired, prepackaged burners ready to fire in all typical immersion tube applications.

Capacity Range:
With Integral Blower 239,000 BTU/hr to 2.6 MM BTU/hr
With External Blower 512,000 BTU/hr to 3.5 MM BTU/hr

Applications:
- Parts Cleaning
- Water Heating
- Salt Bath Heaters
- Produce Washing
- Quench Tanks
- Vaporizers
- Bottle Washers
- Plating Solutions
- Acid Bath Heaters
- Spray Washers
- Product Storage Tanks
- Liquid Tank Heating
- Specially Designed for Small Bore Tube Applications
Typical Burner Packages Include:

- Basic burner assembly includes burner, spark ignitor, flame rod, and peep sight.
- Integral combustion air blower fitted with 50 Hz or 60 Hz TEFC blower motor.
- Air and fuel control provided by a control motor and threaded butterfly valve offers proportional air and gas modulation.
- Gas train includes automatic shut-off valves, air and gas pressure switches, and proof of closure, meeting the requirements of NFPA 86 & CSA for operation in North America.
- Mounted, pre-wired NEMA 12 control panel with external display Includes on-off switch, reset button, and burner run and flame failure indication lights.
- Configurations for operation in other countries are available, consult the factory.

Add-on Options

- External combustion air blower
- Ultra-violet scanner
- Temperature controller
- High temperature limit
- Main gas regulator
- Remote terminal control panel

**Split Combustion Cone for Ultimate Thermal Output**

To prevent over heating of the burner components and immersion tubes during high firing rates, the burner has been designed with a split combustion cone head where air is introduced into the flame at three points to provide cooling and improve flame stability.

**Immersion Tube Applications**

For burner applications that require 512,000 to 3.5 MM Btu/hr, TFR Package Burners offer length to diameter ratios up to 150:1 depending upon tube diameter. The TFR is designed with a small “footprint” to allow mounting in applications where other burners may not fit. External combustion blowers can be configured on packages for applications requiring higher thermal inputs or for firing into longer immersion tubes. For immersion tube applications for larger diameter bores, a TF package burner may be better suited. Gas trains can be configured for use in all countries, contact factory.

### Features

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<thead>
<tr>
<th>Feature</th>
<th>Benefits</th>
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<tr>
<td>External blowers available</td>
<td>Higher heat output capable of firing into longer tubes than integral combustion blower</td>
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<tr>
<td>Pilot gas train comes standard</td>
<td>Ensures reliable ignition and flame stability</td>
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<td>Flame sensor and spark plug can be removed without removing burner casing</td>
<td>Reduced maintenance time and effort</td>
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<td>100% tested before leaving the factory</td>
<td>Ensures reliable start-up</td>
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