Analog Immersion

THERMOCOUPLE PYROMETER

PORTABLE DIRECT READING PYROMETER

APPLICATIONS

The Pyro Immersion Pyrometer can accommodate a wide variety of thermocouple tips that are suited for many types of non-ferrous molten metals.

• Foundries
• Castings
• Molten Copper
• Molten Tin
• Molten Brass
• Molten Bronze
• Molten Aluminum
• Molten Zinc

DESCRIPTION

The Pyro Immersion Pyrometer is a rugged, portable, easy-to-read thermocouple pyrometer that utilizes interchangeable and reusable immersion thermocouples. Temperature accuracy to ±1.0% of reading is achieved by employing an automatic internal cold end junction compensator to prevent temperature measurement errors due to ambient temperature variations. The Pyro Immersion Pyrometer comes complete with a rugged cast aluminum housing, integral extension arm and is ready to use with a wide variety of optional thermocouples.

FEATURES

• Portable, Easy-to-Read 4-3/4" Scale
• Accuracy: ±1.0% Reading
• Temperature Ranges: 0°F - 2500°F (0°C - 1400°C)
• Four Models Available
• Automatic Cold End Junction Compensation
• Rugged Cast Aluminum Housing
• No Batteries Required
• Rigid or Flexible Extension Arms Available
• Interchangeable "K" Type Thermocouples Available

OPERATION

The Pyro Immersion Pyrometer is easy to operate and requires no power source. Simply attach the appropriate thermocouple to the Pyro Immersion Pyrometer’s integral extension arm. The operator can adjust the extension arm angle to target “knuckle” as required for the application. After the Pyro Immersion Pyrometer is immersed into the molten metal being measured, the temperature is read on the direct reading analog meter.

• Simplicity of Operation
• Interchangeability
• Durability/Ruggedness
• No Batteries Required

Mirrored Scale Ensures Accurate Temperature Reading
Pyro offers several extension arm lengths to meet your applications. Rigid extension arms are constructed from rugged 1/2" diameter tubes with protective chrome plating, available in standard 27” or 43” lengths. All extension arms incorporate a saw tooth knuckle for ease of operation. Custom extension arms are available upon request, consult factory.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Extension Arm Length</th>
<th>Temperature Scale</th>
<th>Degree Per Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>21F</td>
<td>27”</td>
<td>0 - 2500°F</td>
<td>50</td>
</tr>
<tr>
<td>41F</td>
<td>43”</td>
<td>0 - 2500°F</td>
<td>50</td>
</tr>
<tr>
<td>21C</td>
<td>27”</td>
<td>0 - 1400°C</td>
<td>20</td>
</tr>
<tr>
<td>41C</td>
<td>43”</td>
<td>0 - 1400°C</td>
<td>20</td>
</tr>
</tbody>
</table>

**CALIBRATION**

- The Pyro Immersion Pyrometer comes complete factory calibrated traceable to NIST Standards.
- Optional “Certificate of Calibration” per point to NIST Standards can also be provided.
- Expert factory service is also available for periodic calibration or maintenance.

**WARRANTY**

Good performance and reliability are what you expect when you buy precision products from The Pyrometer Instrument Company, Inc. The Pyro Immersion Pyrometer comes complete with a one-year factory warranty. For complete details see our Product Warranty Page.
Interchangeable “K” Style Thermocouples & Support Bracket are shown below.

INTERCHANGEABLE “K” IMMERSION TYPE THERMOCOUPLES

Pyro offers a wide range of industrial thermocouple styles to meet your applications. Pyro’s many styles of immersion thermocouples allow for immersion measurement of many non-ferrous molten materials. Pyro thermocouples attach securely into the Pyro Immersion Pyrometer extension arms. All Pyro Immersion type thermocouples are interchangeable. Connections are keyed to ensure correct attachment. Custom thermocouples are available upon request, consult factory.

**Accuracy on “K” Style Thermocouples**

<table>
<thead>
<tr>
<th>Temperature Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>500°F - 2500°F</td>
<td>±3/4%</td>
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</tbody>
</table>

**Model T-11**
Closed End, Bare Wire, Welded Tip
16 & 22 Gauge Wire
Overall Length 18”
Maximum Temperature 1450°F (788°C)
Response Time 7-10 seconds

**Model T-12**
Closed End, Bare Wire, Welded Tip
16 & 22 Gauge Wire
Overall Length 24”
Maximum Temperature 1450°F (788°C)
Response Time 7-10 seconds

**Model T-14**
Open End, Bare Wire Tip
16 & 22 Gauge Wire
Overall Length 24”
Maximum Temperature 1450°F (788°C)
Response Time 7-10 seconds

**Model T-16**
Type 446 SS Protective Tube, 1/2 Dia.
Immersion Length 8”
Overall Length 21”
Maximum Temperature 2500°F (1400°C)
Response Time 7-10 seconds

**Model T-18**
Type 446 SS Protective Tube, 1/2 Dia.
Immersion Length 12”
Overall Length 25”
Maximum Temperature 2500°F (1400°C)
Response Time 7-10 seconds

**Model SP-SPT Thermocouple Support Bracket**
(for above Model T-16 & T-18)
The Model SP-SPT Thermocouple Support Bracket assists in preventing the protected tube style thermocouple’s 1/2” thick ceramic base from breaking should the operator bang the thermocouple against the crucible while removing slag.

Note: For removing slag a stiff wire brush is recommended for this procedure.