HEAT-PROBER®
Hand-Held Thermometers

www.palmerwahl.com

170 Years of Continued Innovation

392 Series Meters are no longer FM approved. Call 1-800-421-2853 for more information.

Digital version of catalog may differ from printed version.
Meters are the basic component of a Heat-Prober System. Probes, no matter how well designed and constructed, will not compensate if the wrong meter is chosen for the job. Wahl Heat-Probers are offered in three basic measurement types:

**Platinum RTD**
Platinum Resistance Temperature Detectors (RTD’s) are recognized as the most reliable standard for measuring temperature information. Platinum provides long-term stability, response and repeatability for use as a primary standard. It has a wide useful temperature range and can be used in varying conditions, making it ideal for many applications.

**Thermocouple**
Thermocouple portable temperature sensors have the advantage over other types due to their fast response, wide temperature range, and ruggedness. The sensors are small in size, versatile and convenient to use. An added advantage of thermocouple use is derived from their wide-spread availability and meter/probe compatibility.

**Thermistor**
Thermistor sensors offer excellent accuracy and long-term stability, but over a relatively narrow temperature range. Thermistors are generally used to measure moderate temperatures in applications demanding greater accuracy than thermocouples, but less demanding than Platinum RTD Thermometer Systems.

Each type has advantages and characteristics described in the catalog sections to follow. Basically the differences center on accuracy, temperature range, type of display and price.
Measurement with Thermocouple, RTD or Thermocouple and RTD

Rugged IP54 Construction for On Site Use

User friendly and robust, the New Wahl TM Series Pocket Thermometers are designed to simplify temperature transmitters and probes maintenance and commissioning. They feature **0.02% Accuracy** and measure in Thermocouples and/or RTD’s. Resolution is programmable for better reading by user with up to 1mΩ or 1µV.

- **TM602 Thermocouple Thermometer**
- **TM612 RTD Thermometer**
- **TM630 Thermocouple and RTD Thermometer**

- Well adapted for different process job procedures due to their wide choice of ranges and specific functions such as data recording
- Very low temperature coefficient: 15ppm/°C in thermocouples, 10ppm/°C in resistance
- Optional DATACAL Calibration Management Software
- Accuracy is maintained even in harsh environmental conditions
- Measurement of 14 thermocouples and 12 RTD types
- Data Recording and On screen analysis
- High Accuracy: 0.02% of Reading
- Display in °C, °F, mV and Ohm

**What is a Heat-Prober®?**

Wahl pocket-sized digital Heat-Probers are complete, high performance portable temperature measurement systems. Wahl originated the systems approach to provide engineers, technicians and research scientists the high confidence required for “routinely critical” temperature measurement.

A Heat-Prober “system” consists of a meter and a sensing probe. The Heat-Prober meter serves (by means of a microprocessor) to accurately interpret the temperature sensed by the probe, provide digital output and allow measurement options such as peak reading hold or maximum/minimum memory. The meter also contains the power (battery) to allow complete system portability. Heat-Prober probes are designed to be interchangeable. This allows a meter/probe system to be formed with any number of probes for specific applications used interchangeably with the meter. More probes for additional applications or replacement probes may be purchased, or an additional or replacement meter can be utilized without replacing existing probes.

**Accuracy**

Because of the Heat-Prober meter’s microprocessor, the probe’s sensor can be linearized to yield maximum accuracy at all points within the measuring range. Probe design is also a large factor in accuracy. The ability to select a standard or custom probe specific to the task and constructed from superior materials, is a key in “system accuracy.”

**Portability and Ruggedness**

A Heat-Prober’s battery power and rugged compact design make them the perfect choice for service and maintenance technicians who must use their temperature measurement equipment on the move and in a variety of tough environments. Kits with user-selected probes are available for many of the meters. Heat-Probers store away in small spaces without special requirements.

**Versatility**

Wahl offers Heat-Prober meters utilizing platinum RTD, Thermocouple and Thermistor technology. Many meters offer range, display and kit options. All meters have a full set of interchangeable probes carefully designed and built to perform specific measurement tasks. This approach allows Heat-Prober users maximum versatility in specifying, purchasing, utilizing and maintaining a temperature measuring system suited to their needs.

**Cost Effectiveness**

Buy meters and interchangeable probes specifically for your applications and needs. Replacement and additional probes can be purchased as required.

**Service**

Wahl maintains a complete calibration lab with NIST traceability. This service allows your Heat-Prober meters, probes or systems to be calibrated at standard or user-specified points. Wahl also offers repair service for meters and probes.
392A High Performance Platinum RTD Thermometer System

Exceptional Accuracy and Long-Term Stability in a Versatile Meter System with Interchangeable Probes

- **392AHPF Meter** Range: -290°F to 1450°F
- **392AHPC Meter** Range: -180°C to 788°C
- **392AHPD Dual Scale Meter** Range: -290°F to 1450°F (−180°C to 788°C)

- Meter Accuracy ±0.1°F/C at 32°F (0°C)
- System Accuracy ±0.25% of reading (392AHP Meter & 202HP Immersion Probe)
- Complete tracing of the platinum standard DIN 43760 to 0.1°F conformity over the entire temperature range
- Readings updated 2.5 times per second
- Bright 0.33” high-visibility LED display
- Maxi-Temp® holds peak temperature reading
- Tough, drop tested meter assembly
- Interchangeable, 4-wire snap-in connection HP Series probes
- Automatic compensation for probe calibration of temperature at ice point and alpha
- Noise suppression circuit
- NIST traceable conforming to ITS-90

Wahl invented the portable Platinum-RTD Thermometer (Pat. No. 4,050,309) to provide exceptional accuracy and conformity in laboratory and industrial applications. The 392AHP Meter/Probe System represents the ultimate in Heat-Prober System Performance.

Thousands of 392AHP Heat-Probers are used by various industries, making critical temperature measurements as well as calibrating sensors and other instruments.

Use the 392AHP system to calibrate installed sensors, to make quality assurance tests and to make highly accurate process temperature measurements. An internal feedback loop maintains system calibration during use. And you can order additional HP probes at any time without calibration.

The 392AHP features a special noise rejection program for use near high EMF machines.

See pages 6-7 for complete meter specifications, options, accessories, and money saving kits.

See pages 8-9 for Platinum RTD Probe listings.

### Applications
- Petrochemical
- Food
- Photographic
- Aerospace
- Electronics
- Nuclear Power

The performance of our meters is warranted for three years against defects in parts and workmanship.

5-Point NIST Traceable RTD Calibrators

Assures System Reliability Before Every Measurement

**CAL392HP-HT** High Temperature Calibrator for 392HP only, NIST Certificate optional.

**Calibration Points:**
- -58°F, 32°F, 212°F, 284°F, 752°F
- -50°C, 0°C, 100°C, 140°C, 400°C

**CAL392HP-LT** Low Temperature Calibrator for 392HP only Ice Point to Boil

**Calibration Points:**
- 32°F, 68°F, 104°F, 140°F, 212°F
  - 0°C, 20°C, 40°C, 60°C, 100°C

**10786-NIST** Certificate of NIST Traceability with Test Data.

To request Custom Calibrators with special calibration points, please contact Customer Service.

Application Example with 392AMF Meter and optional 5-point Calibrator, CAL392-HT

Calibration Services Available
392A Series Platinum RTD Thermometer Systems

392 Precision Systems Offer Wide Temperature Range and Meter Options

- **392AMF Meter** Range -60° to 752°F
- **392AMC Meter** Range -51.1° to 400°C
- **392AMD Dual Scale Meter** Range -60° to 752°F (-51.1° to 400°C)
- Meter options for display type and power source
- Meter accuracy of ±0.1°F/C ±1 digit at 32°F (0°C)
- System accuracy ± 0.5% of reading (392A Meter & 202 Immersion Probe)
- Large LED or LCD display for indoor or outdoor readings
- Interchangeable Platinum RTD probes
- Peak Hold and Auto-Ranging display features.
- Interchangeable probes compensated for calibration at ice point
- NIST traceable conforming to ITS-90

A precision, microprocessor driven meter is the heart of a complete, portable and rugged Heat-Prober temperature measurement system. Using 392A Meters, engineers in maintenance, quality assurance, energy conservation and process control can now have laboratory accuracy anywhere in the plant, laboratory, or field.

The 392A system gives you outstanding accuracy with a choice of interchangeable probes for measuring surfaces, liquids, semi-solids and gases. Interchangeable 3-wire, snap-in connection Platinum-RTD probes are shown on pages 8 and 9. In addition, 392A Meter/Probe Systems are ideal for use as an in-house calibration standard for less accurate thermometers and to calibrate installed thermowells.

For complete portability and ease of use, Wahl Heat-Prober Meters are battery powered. The 392A Series are supplied with rechargeable batteries that allow 8 hours continuous operation. The supplied recharger allows these meters to be used as a continuously operating bench unit. For field backup, a spare rechargeable battery pack (page 6) may be purchased.

### 5-Point NIST Traceable RTD Calibrators

All 392A Series Meters assure laboratory accuracy in the field when used in conjunction with the NIST traceable Calibrator CAL392.

**Assures System Reliability Before Every Measurement**

**CAL392-HT** High Temperature Calibrator

Calibration Points:
- -58°F, 32°F, 212°F, 284°F, 752°F
- -50°C, 0°C, 100°C, 140°C, 400°C

**CAL392-LT** Low Temperature Calibrator

Calibration Points:
- 32°F, 68°F, 104°F, 140°F, 212°F
- 0°C, 20°C, 40°C, 60°C, 100°C

NIST Certificate optional

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**Model 392AM** features a bright .33" high red LED display for normal to low lighting conditions. It operates on a rechargeable NiCad battery pack. Includes battery recharger and AC line adapter.

**Model 392AMX** features a .4" high red LCD for normal to bright lighting conditions and operates on a rechargeable NiCad battery pack. Includes battery recharger and AC line adapter.

**Model 392AVX** features a .4" high red LCD for normal to bright lighting conditions and is powered by a 9-volt alkaline battery for 8 hours continuous use making it an excellent choice for field tests.

Use F, C, or D Model No. suffix to designate Fahrenheit, Celsius, or Dual Range °F/°C Switchable.

See pages 6-7 for complete meter specifications, options, accessories, and money saving kits.

See pages 8-9 for Platinum RTD Probe listings.

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Platinum RTD Meter 392AMF shown with 5-point calibrator CAL392-HT
### 392A Series RTD Meter Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>392AHP</th>
<th>392AM</th>
<th>392AM-S</th>
<th>392AVX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>-290° to 1450°F</td>
<td>-60° to 752°F</td>
<td>-60° to 752°F</td>
<td>-60° to 752°F</td>
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<tr>
<td>Digital Display</td>
<td>Bright 0.33” LED</td>
<td>392AM</td>
<td>Bright 0.33” high LED</td>
<td>Discontinued</td>
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<tr>
<td>Resolution</td>
<td>0.1° below 375°F (190°C). Auto Ranges to 1° above 375°F (190°C).</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>System Accuracy (Meter with 202 immersion probe)</td>
<td>±0.1°F ±1 digit at ice point, ±0.25% reading thereafter</td>
<td>±0.1°F ±1 digit at ice point, ±0.5% reading thereafter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.2°F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Operating Range</td>
<td>0° to 130°F (-18° to +55°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>0.01 deg/deg over ambient range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FM (Factory Mutual) Approved*</td>
<td>Discontinued</td>
<td>Discontinued</td>
<td>Discontinued</td>
<td>Not Available</td>
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<tr>
<td>Power</td>
<td>11681-1 6.25 V NiCad Battery</td>
<td>11681-1 6.25 V NiCad Battery</td>
<td>11681-2 9V Alkaline battery (NEDA 1604A)</td>
<td></td>
</tr>
<tr>
<td>Battery Life</td>
<td>6 hours. per charge</td>
<td>8 hours per charge</td>
<td>Discontinued</td>
<td>8 hours. per charge</td>
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<tr>
<td>Low Battery Indicator</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise Rejection</td>
<td>Greater than 40 dB at 60 Hz increasing at 20 dB per decade. Spurious noise attenuated by internal 16 Hz filter. 392AHP includes special noise rejection program for use in presence of rampant EMF such as spark ignition engines.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>3” W x 6” L x 1.5” D (7.5 cm x 15 cm x 3.75cm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>12 oz. (340 grams)</td>
<td>12 oz. (340 grams)</td>
<td>7 oz. (198 grams)</td>
<td></td>
</tr>
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</table>

All 392A Models Available in °F, °C, or Dual Scale, add “F”, “C” or “D” to Model Number.

### 392 Series Meter Accessories

<table>
<thead>
<tr>
<th>DA-4</th>
<th>Silicone Paste</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-6</td>
<td>Belt-Clip Meter Case with Hand Strap</td>
</tr>
<tr>
<td>DA-10</td>
<td>Nylon Safety Wrist Strap</td>
</tr>
<tr>
<td>12423-06</td>
<td>Shock-Proof Attache-Style Instrument Case</td>
</tr>
<tr>
<td>MA-150</td>
<td>Battery Recharger, 120V AC 50/60Hz</td>
</tr>
<tr>
<td>MA-150E</td>
<td>Battery Recharger, 220V AC 50/60Hz, European</td>
</tr>
<tr>
<td>11681-1</td>
<td>Spare NiCad Battery Pack</td>
</tr>
<tr>
<td>11681-2</td>
<td>Discontinued</td>
</tr>
<tr>
<td>12232</td>
<td>Standard 9V Alkaline Battery</td>
</tr>
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</table>

### Meter Options

<table>
<thead>
<tr>
<th>392NIST</th>
<th>Certificate with 3 Standard Calibration Points between 32°F (0°C) &amp; 500°F (250°C) Meter calibration includes one probe.</th>
</tr>
</thead>
<tbody>
<tr>
<td>392NIST-1</td>
<td>Certificate with 3 User-specified Calibration Points between -40°F (-40°C) &amp; 600°F (315°C) Meter calibration includes one probe.</td>
</tr>
</tbody>
</table>

Calibration Services Available
RTD Meter/Probe Kits

Compact, ready-to-use Heat-Prober Kits provide everything you need for precise temperature measurements anytime, anywhere.

As of April 2010, all pre-configured Meter Kits have been Discontinued. You can now customize your kit and receive a FREE Carrying Case when you buy any meter and 2 related items!

Heat-Prober High Performance Kit
K392HP-1 and K392HP-2

Choose the high performance kit to:
• Calibrate installed sensors
• Calibrate portable instruments
• Measure temperatures with accuracy to ±0.25% of reading

K392HP-1 includes:
Discontinued
392HP Thermometer,
Specify F (°F), C (°C), or D (°F/°C Dual Scale)
202HP Sensitive Immersion Probe
CAL392HP-HT Calibrator
DA-60 Shock-proof attache-style Instrument Case
MA150 Battery Charger, specify 120V AC or 220V AC

K392HP-2 includes:
Discontinued
392HP Thermometer,
Specify F (°F), C (°C), or D (°F/°C Dual Scale)
145HP Surface Probe
202HP Sensitive Immersion Probe
CAL392HP-HT Calibrator
DA-4 Silicone Paste
DA-60 Shock-proof attache-style Instrument Case
MA150 Battery Charger, specify 120V AC or 220V AC

Heat-Prober Precision RTD Kit
K392VX Discontinued

Choose the versatile high accuracy kit to:
• Measure most surfaces, liquids and gases with excellent repeatability
• Calibrate installed sensors
• Full line of interchangeable probes available without meter recalibration

K392VX includes:
Discontinued
392VX Thermometer,
Specify F (°F), C (°C), or D (°F/°C Dual Scale)
145 Spring Articulated Surface Probe
202 High Sensitivity Immersion Probe
CAL392-HT Calibrator
DA-4 Silicone Paste
DA-60 Shock-proof attache-style Instrument Case. You may substitute Heat-Prober Thermometer 392M, 392MX, 392M-S, or 392MX-S. Specify 120V AC or 220 V AC for recharger.

You may also add or substitute any Wahl Platinum-RTD probe listed on pages 8 and 9. Contact Customer Service for prices and for additional portable Platinum RTD probes. Remember that additional probes purchased with a kit are priced at 15% off.

Custom Probes for Your Applications
Contact Wahl for custom-made probes to your specifications, or let us help you design the right probe for your application.
Platinum resistance temperature detectors (RTD’s) are recognized worldwide by metrology laboratories as the most reliable standard for measuring and comparing temperature information. Platinum provides long-term stability and repeatability for use as a primary standard. It has a wide useful temperature range which makes it ideal for laboratory and industrial applications.

Our accurate, stable platinum sensors are housed in thin wall stainless steel shanks with low mass tips that don’t compete with the measured object. That’s why Wahl probes have fast response, and provide an accuracy of ±0.2°F at ice point, ±0.5% of reading thereafter.

Every probe is engineered to do a specific job in measuring surfaces, liquids, semi-solids or gasses. Each probe has a high quality, heat-resistant Delrin® handle, a coiled 5-foot cord and a snap-in connector that mates it solidly to our thermometer (exceptions noted in descriptions below).

Every probe is calibrated at two or three temperature points on NIST traceable secondary standards and tagged “Wahl Test Certified” with calibration data. You can order a NIST certificate with test data for meters and probes. See page 6.

For 392AHP Probes, simply add “HP” after Model Number

112 Fine-Tip Penetration Probe for foods and other soft substances. .084” diameter, 1” long tip at the end of a 2-3/4’ overall length shank. 450°F temperature limit with 3 second response^2.

114 Heavy-Duty Piercing Probe for plastic melts, rubber, asphalt, frozen foods, or other semi-solids. Adjustable penetration depth limiter. 900°F temperature limit with 3.7 second response^2. 4-1/2’ shank length is 1/8” diameter with penetration tip.

121 Spring Articulated Straight Surface Probe for molds, dies, platens, electronics, machine housings and all other surfaces.

Spring tip allows conformity and maximum contact to measured surface. 900°F temperature limit; 2-second response^1. 4-1/4” shank, .25” diameter, straight tip design. Also with -12” and -18” shank lengths.

123U Right Angle Fast Surface Probe sealed sensor design with low profile 90° bend tip for reaching into die and mold cavities, electronic chassis, or other restricted areas. 900°F temperature limit, 3-second response^1. 4’ shank, .250” diameter tip

124 Rigid Shank Fast Surface Probe. Sealed sensor design for rugged applications. 4’ shank length, straight tip. 900°F temperature limit with 3 second response^1.

Every probe is calibrated at two or three temperature points on NIST traceable secondary standards and tagged “Wahl Test Certified” with calibration data. You can order a NIST certificate with test data for meters and probes. See page 6.

145 45° Spring Articulated Surface Probe, for molds, dies, platens, electronics, and all other surfaces. Spring tip allows conformity and maximum contact. 4’ shank and 45° tip angle.

155 Bolt-on Surface Probe for permanent installation. Used to monitor engine or reactor surface temperatures. Copper sheathed sensor with .218” diameter bolt hole. 10’ stainless steel covered cable and connector. 930°F; 2 second response^1. No handle.

172 Self-Adhesive Surface Probe Polymer-encased sensor in a 1.25” x 1”, pressure-sensitive adhesive patch. 10’ Teflon coated cable (no handle). Used for monitoring environmental tests, curing cycles, and oven processing. 350°F temperature limit with 1 second response^1.

201 General Purpose Immersion Probe for liquids, foods, candy, granular materials, and semi-solids. 5.75” long X .125” diameter shank. For measurements to 600°F with 1.7 second response^1.

202 Sensitive Immersion Probe with low mass .084” diameter. 5” long shank. Super fast response time of 1.4 seconds^2 for use in all liquids and semi-solids. Temperature limit of 900°F.

Response time legend (to 63%):  (1) Measured on flat surface at 400°F;  (2) Measured in boiling water;  (3) Measured in air at 10 fps

Look for the “Wahl Tested Certified” calibration tag on every probe.

Custom Probes for Your Applications
Contact Wahl for custom-made probes to your specifications, or let us help you design the right probe for your application.
Wahl Platinum -RTD Probes Are Interchangeable Without Recalibration

Only Wahl offers an interchangeable probe system that assures consistent accuracy and ±0.2°F repeatability without meter recalibration. Our most popular probes are shown on these pages. Contact Wahl for more of our precision Platinum-RTD probes.

Wahl Exclusive Surface Probes

For surface probes where it is necessary to bring the greatest amount of surface heat in direct contact with the sensor, a unique design developed for the U.S. Space Program is employed. The coil is bonded to a platinum base plate of low thermal resistance which contacts the measured surface. The platinum base, in turn, is bonded directly to a thin stainless steel, bell-shaped housing of low mass. Heat loss is impeded by high thermal resistance elements: stainless steel housing, shank and coil spring.

The coil spring in Wahl 121 and 145 surface probes provides automatic articulation of the tip for conformity and uniform contact with the surface being measured. This is especially useful in blind recesses where contact measurements are made by “feel” instead of sight.

203 Teflon-Coated Immersion Probe for use where corrosive solutions and possible metallic contamination are a concern. 5” shank, .084” diameter 450°F limit, 2 second response②.

204 12” Long-Reach Immersion Probe with 12” shank (.125” diameter.) for baths, vats, kettles and other deep vessels. 900°F limit with 2 second response③.

204CT Paddle Probe for crystallization and fluid temperatures while agitating liquids. 3/4” wide paddle tip; .125” diameter shank is 10” long to the paddle tip. 900°F limit with 2 second response③.

205 Heavy-Duty Immersion Probe for solder baths, liquids, granular materials, and gas. 8” shank. Also with -12”, -18”, and -24” shank lengths. All have .125” diameter tip. 900°F limit; 3 second response③. Consult factory for Teflon coating option.

205SH Heavy-Duty Shielded Immersion Probe. Shield protects the tip from the shock of hitting vat or container walls. 24” length shank has .125” diameter. with 3/8” diameter. shield. Temperature limit of 900°F; 7.25 second response③.

Custom Probes for Your Applications

Contact Wahl for custom-made probes to your specifications, or let us help you design the right probe for your application.

For 392AHP Probes, simply add “HP” after Model Number

212 Fully Immersible Probe with no handle for plating baths, dipping solutions, brewing vats, storage vats, tanks, rivers and streams. Temperature limit of 450°F; 2 second response③. 0.125” diameter. by 10’ Teflon cable with connector.

302 Air/Gas Probe with perforated sensor shield to induce good velocity and prevent radiation errors, used in industrial application such as ovens, stacks and ducts. 600°F temperature limit, 6 second response③. 6-5/8” shank, 3/8” diameter. 2” long shield.

305 Miniature Air/Gas Probe highly sensitive, low mass sensor is shielded by thin, small diameter (.120”) perforated steel tube for fast response HVAC applications. 450°F limit, 4 second response③.

Response time legend (to 63%):
① Measured on flat surface at 400°F
② Measured in boiling water;
③ Measured in air at 10 fps

Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • www.palm erwahl.com

170 Years of Continued Innovation
2500/1370 Series Type K Thermocouple Meters

- 2500 Meter Range -100°F to 2500°F
- 1370 Meter Range -70°C to 1370°C
- Meter options for °F or °C range, display type and power
- Meter accuracy is ±0.2% of reading ±1 digit
- Maxi-Temp® automatically holds peak reading
- Accepts all type K probes with ANSI mini-connectors
- Microprocessor circuitry for thermocouple linearization

Heat-Prober® Thermocouple Thermometers and Probes are rugged and reliable instruments made for process and maintenance temperature measurements.

The pocket-sized microprocessor-based Heat-Prober Type K thermometer updates readings three times per second with an accuracy of ±0.2% of reading ±1 digit in 1°F or °C resolution. The precision cold junction is compensated with a unique, permanently calibrated circuit.

The Wahl Maxi-Temp peak hold switch, available on all models, permits the Heat-Prober to hold and display the highest temperature reached. This function is ideal where the operator must concentrate on the probe when making the measurement and where an instantaneous transient peak is to be recorded. Maxi-Temp meters also can be switched to normal operation.

Advanced electronics are housed in ABS plastic, thoroughly tested for environmental integrity and subjected to 4-foot drop tests, battery life and running life tests. All units are calibrated with simulated EMF inputs and powered during a high-temperature burn-in cycle.

Model 2500M (-100°F to 2500°F) features a bright .33” high red LED display for normal to low lighting conditions. It operates on a rechargeable 6.25V NiCad battery pack. Includes battery recharger/AC line adapter.

Model 1370M as above with -70° to 1370°C range.

Model TCMR-K °F/°C switchable.

Model 2500MX (-100° to 2500°F) features a .5” high red LCD display for normal to bright lighting conditions. It operates on a rechargeable 6.25V NiCad battery pack. Includes battery recharger/AC line adapter.

Model 1370MX as above with -70° to 1370°C range.

Model TCMR-KX °F/°C switchable.

Model 2500MVX (-100° to 2500°F) features a .5” high red LCD display for normal to bright lighting conditions and is powered by an easily replaceable single standard 9V battery.

Model 1370MVX as above with -70° to 1370°C range.

Model TCMR-KVX °F/°C switchable.

See Meter specifications on page 12.
See page 12-13 for 2500/1370 Series meter, probe, and accessory money-saving kits.
See pages 14-17 for interchangeable thermocouple probes.

NIST TRACEABLE THERMOCOUPLE CALIBRATORS

This thermocouple meter accessory allows calibration over the meter’s full range.

Useful for quick field diagnostics, it assures meter accuracy whenever a measurement is in question.

Accuracy is ±0.3°F/°C or 0.2% of reading, whichever is greater.

User sends the calibrator only back to the factory for NIST Certification.

One Calibrator maintains NIST traceability for all in-house meters.

**Thermocouple Calibrator Models**

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Calibration Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAAFK</td>
<td>K</td>
<td>Discontinued</td>
</tr>
<tr>
<td>TAAFK</td>
<td>K</td>
<td>100°F - 155°F - 200°F - 250°F - 300°F</td>
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<tr>
<td>TAAFK</td>
<td>K</td>
<td>130°F - 650°F - 1300°F - 1900°F</td>
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<td>K</td>
<td>70°C - 400°C - 800°C - 1200°C</td>
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</tr>
</tbody>
</table>
The Wahl TM410 Type K Thermocouple Digital Heat Prober<sup>®</sup> Thermometer is economical and compact. It provides the highest accuracy at the lowest price of any Thermocouple Instrument on the market today.

- Accuracy of ±1.0°F (±0.5°C) in an operating range of 32°F to 200°F (0°C to 93°C)
- Meets and exceeds FDA Requirements (Food Code requires ± 2°F)
- Optional probes plug into the top of TM410 for easy single-handed use
- Optional TCL329K Extension Handle for extended reach
- Built in pocket/belt clip on back of unit
- Reduced dirt-harboring crevices for easy cleaning
- °F and °C Switchable

**Wahl TP Probes** (shown left with TM410, described on page 15) are specially manufactured with food service in mind to give fast and accurate results. They can be inserted into the TM410 for single handed operation and are durable enough to withstand the rigors of a busy kitchen. Probes can be safely passed through the dishwasher for ease of cleaning. Accuracy is maintained regardless of which probe is attached, assuring greater certainty of safe food temperature, and tighter control over the quality of the finished product.

**TM500 Thermocouple Meter**

The Wahl TM500 Heat Prober Meter offers value with exceptional features. The TM500 has advanced microprocessor functions, dual display and dual probe capability for more advanced testing in critical process and laboratory applications.

- **TM500 Type J** Range of -328°F to 1922°F (-200°C to 1050°C).
- **TM500 Type K** Range of -328°F to 2498°F (-200°C to 1370°C).
- Large LCD and Dual probe input accepts one or two Type J or Type K Thermocouple probe(s) with standard ANSI mini-connectors.
- Selectable temperature scale, Fahrenheit or Celsius readings.
- Main LCD displays the temperature reading from either selected probe or the temperature difference between the two.
- Third LCD displays time or timing duration (hours, minutes, seconds) of MAX/MIN or AVERAGE temperature events.
- “Recording” mode allows data storage for MAX, MIN, and AVERAGE temperatures reached over a time period.
- “Set” mode allows entry of reference and alarm points.
- Supplied with water and shock resistant rubber boot, built-in easel stand, 9V battery, and two Type K test probes.

See Specifications for both Meters above on page 12.

See page 13 for Thermocouple Meter, probe, and accessory money-saving kits.

See pages 14-17 for interchangeable thermocouple probes.

---

**TM500 Calibrator**

<table>
<thead>
<tr>
<th>Type K Range</th>
<th>-328°F to 2498°F and -200°C to 1370°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type J Range</td>
<td>-328°F to 1922°F and -200°C to 1050°C</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 °, °F or °C</td>
</tr>
<tr>
<td>Meter Accuracy</td>
<td>±0.05% reading ±0.6°F (0.3°C) @ -58°F/2498°F (-50°C to 1370°C)</td>
</tr>
<tr>
<td></td>
<td>±0.05% reading ±1.4°F (0.7°C) @ -58°F/32°F (-50 to 200°C)</td>
</tr>
<tr>
<td>Power</td>
<td>One standard 9V, NEDA 1604 or equiv.</td>
</tr>
<tr>
<td>Display</td>
<td>5 Digit LCD</td>
</tr>
<tr>
<td>Meter Size</td>
<td>7-5/8” x 3-5/8” x 2-1/8” (190 x 92 x 54mm)</td>
</tr>
</tbody>
</table>

---

Calibration Services Available
## Thermocouple Meter Specifications

### Thermocouple Meter Specifications

<table>
<thead>
<tr>
<th>Thermocouple Meter Specifications</th>
<th>2500M</th>
<th>2500MX</th>
<th>2500MVX</th>
<th>1370M</th>
<th>1370MX</th>
<th>1370MVX</th>
<th>2500M</th>
<th>2500MX</th>
<th>2500MVX</th>
<th>1370M</th>
<th>1370MX</th>
<th>1370MVX</th>
<th>TM410</th>
<th>TM500</th>
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<tbody>
<tr>
<td><strong>Model</strong></td>
<td>2500M</td>
<td>2500MX</td>
<td>2500MVX</td>
<td>1370M</td>
<td>1370MX</td>
<td>1370MVX</td>
<td>2500M</td>
<td>2500MX</td>
<td>2500MVX</td>
<td>1370M</td>
<td>1370MX</td>
<td>1370MVX</td>
<td>TM410</td>
<td>TM500</td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>-100°/2500°F</td>
<td>-70°/1370°C</td>
<td>-40°/1999°F</td>
<td>0°/120°F</td>
<td>-40°/1092°C</td>
<td>-328°/2498°F</td>
<td>-200°/1370°C</td>
<td>-70°/1370°C</td>
<td>-40°/1092°C</td>
<td>-328°/2498°F</td>
<td>-200°/1370°C</td>
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<td>-200°/1370°C</td>
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<tr>
<td><strong>Digital Display</strong></td>
<td>LED</td>
<td>LCD</td>
<td>LCD</td>
<td>LED</td>
<td>LCD</td>
<td>LCD</td>
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<tr>
<td><strong>F/C Switch</strong></td>
<td>Optional</td>
<td>Optional</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
<td>1.0° or 0.1°</td>
<td>0.1°</td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
<td>1°</td>
</tr>
<tr>
<td><strong>Meter Accuracy</strong></td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
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<td>±0.2%</td>
<td>±0.2%</td>
<td>±0.2%</td>
</tr>
<tr>
<td><strong>Peak Hold</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Ambient Operating Range</strong></td>
<td>-20°/120°F</td>
<td>0°/120°F</td>
<td>-20°/120°F</td>
<td>0°/120°F</td>
<td>0°/120°F</td>
<td>32°/122°F</td>
<td>0°/50°C</td>
<td>32°/122°F</td>
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<td>32°/122°F</td>
<td>0°/50°C</td>
<td></td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>6.25V NiCad Recharge Pk</td>
<td>9V</td>
<td>6.25V NiCad Recharge Pk</td>
<td>9V</td>
<td>Three 1.5V AAA</td>
<td>9V</td>
<td>Three 1.5V AAA</td>
<td>9V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AC Power</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tr>
<tr>
<td><strong>Battery Life</strong></td>
<td>8 hours</td>
<td>50 hours</td>
<td>50 hours</td>
<td>8 hours</td>
<td>50 hours</td>
<td>50 hours</td>
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<td>50 hours</td>
<td>140 hours</td>
<td>100 hours</td>
<td>140 hours</td>
<td>100 hours</td>
<td></td>
</tr>
<tr>
<td><strong>Low Battery Ind</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Recharger</strong></td>
<td>Included</td>
<td>N/A</td>
<td>7.5V @ 100 mA 110 or 220 V AC</td>
<td>N/A</td>
<td>7.5V @ 100 mA 110 or 220 V AC</td>
<td>N/A</td>
<td>7.5V @ 100 mA 110 or 220 V AC</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>6” x 3” x 1”</td>
<td>6” x 3” x 1”</td>
<td>6” x 2” x 3/4”</td>
<td>6” x 2” x 3/4”</td>
<td>7.5” x 4” x 2”</td>
<td>7.5” x 4” x 2”</td>
<td>7.5” x 4” x 2”</td>
<td>7.5” x 4” x 2”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>10.5 oz. (298 grams)</td>
<td>10.5 oz. (298 grams)</td>
<td>3.6 oz. (102 grams)</td>
<td>3.6 oz. (102 grams)</td>
<td>15.5 oz. (439 grams)</td>
<td>15.5 oz. (439 grams)</td>
<td>15.5 oz. (439 grams)</td>
<td>15.5 oz. (439 grams)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Thermocouple Meter Accessories

- **DA-4**: Silicone Paste
- **DA-6**: Belt-Clip Meter Case with Hand Strap
- **DA-10**: Nylon Safety Wrist Strap
- **MA-150**: Battery Recharger, 110V AC 50/60Hz
- **MA-150E**: Battery Recharger, 220V AC 50/60Hz, European connector
- **TA-60**: Shock-Proof attache-style Instrument Case
- **11681-1**: Spare NiCad Battery Pack
- **12232**: Standard 9V Alkaline Battery
- **12234-02**: 3V, Lithium, coin Cell Battery for TA30 and TA50
- **12235**: 7.5V, Alkaline, Multi-Cell Battery for TA50 and TA70

### Meter Options

- **NIST-12**: Certificate with 3 Standard Calibration Points between 32°F (0°C) & 500°F (250°C). Meter calibration includes one probe.
- **NIST-12-1**: Certificate with 3 User-specified Calibration Points between -40°F (-40°C) & 600°F (315°C). Meter calibration includes one probe.

---

Sample Meter Kit sold on pages 7 and 13. Kit includes Meter, Carrying Case, Calibrator, Wrist Strap, Recharger and Probe.
Heat-Prober Kits can be custom-ordered to include meters, probes, extension handle systems and accessories for your temperature measurement needs.

Kit prices are 15% less than total prices of component models purchased individually. **PLUS** Save 15% on any additional probes purchased with kits.

You may substitute Heat-Prober Thermometers 2500M and 2500MX in any kit. Specify 120V AC or 220V AC for recharger.

**K2500VX °F Extension Handle Kit:**
**Discontinued**
For your toughest factory applications.
- 2500MVX Type K thermometer
- TC829-12 12" Extension Handle
- RTC822 Z-Tip Fast Response Surface Probe
- RTC828 Replaceable Immersion Probe
- TA70AF Calibrator
- DA-4 Silicone Paste
- TA-60 Shock proof attache-style Instrument Case

For °C meter, specify K1370VX
For °F/°C switchable meter, specify KTCMR-KVX

**K2501VX °F Extension Handle Kit:**
**Discontinued**
For surface measurements.
- 2500MVX Type K thermometer;
- TC829-12 12" Extension Handle;
- RTC822 Z-tip Fast Response Surface Probe
- TA-60 Shock proof attache-style Instrument Case

For °C meter, specify K1371VX
For °F/°C switchable meter, specify KTCMR-KVX

**K2502VX °F Meter/Probe Kit:**
**Discontinued**
For general purpose use.
- 2500MVX Type K thermometer
- TC809 H Heavy-Duty Surface Probe, 45° tip
- TC801 Immersion Probe
- TA70AF Calibrator
- DA-4 Silicone Paste
- TA-60 Shock proof attache-style Instrument Case

For °C meter, specify K1372VX
For °F/°C switchable meter, specify KTCMR-KVX

**Custom TM410 Food Service Kit:**
Contact Wahl for custom-made probes to your specifications, or let us help you design the right probe for your application.

**Type K Probes** (See pg 14 & 15 for part number and description, Economy TP Probes are best suited for Food Service programs)

**Temp-Plate® Temperature Labels** #414-160F-071C (box of 20)(recommended for testing internal water temperature of dishwashers)
The quality of temperature measurement depends principally on the probe design as it relates to the object being measured. That’s why each of Wahl’s interchangeable thermocouple Type K probes is scientifically engineered to do a specific job.

Wahl thermocouple probes are designed for the fastest response possible depending upon use. Each starts with the thermocouple junction, precision welded for virtually instant response. Then a stainless steel sheath is created with a thin wall for fast measurements or a thicker wall for heavy duty applications. Surface probe tips are Wahl-engineered to provide optimum contact with the least thermal load.

Portable probes have (except as noted) rugged Delrin® handles, ANSI mini-connectors and 5-foot flexible compensated cables.

These probes are compatible and interchangeable for use with Wahl Heat-Prober Meters 2500/1370 series (page 10), TM410, and TM500 (page 11).

Calibration Traceable to NIST
All thermocouple probes are individually calibrated at two temperature points to the same NIST-traceable secondary standards and tagged with calibration data. Probes are calibrated with your purchased meter or with a factory maintained standard, so you get guaranteed precise temperature measurements in the harshest environments.

TC801 Immersion Probe S.S. sheath with grounded junction and 1/8” diameter, 10” shank for fluids, corrosive mixtures, solder baths and viscous materials to 1600°F, 6 sec. response. For 24” shank, order TC801-24.

TC803 Electronics Tip Probe for electronic and biological applications. Low mass, 0.032” diameter fine-point sensing tip measures pc boards and small components with minimal disturbance. Limit of 900°F, 5 sec response.

TC805 Air/Gas Probe with perforated radiation shield over bare head thermocouple junction for fast response and good accuracy in high temperature radiation backgrounds. 8” shank, to 1200°F, 45 sec response in circulation oven. Available as TC805-24 with 24” shank.

TC809 Heavy-Duty Surface Probe System. Low mass provides accurate and fast response for surface temperature measurement of ingots, furnaces, kils, molds and platens to 1200°F limit with 3 second response. Utilizes snap-in, (replaceable and Surface Probe interchangeable) probe tips with miniature Z-tip, spring-loaded thermocouples protected by ceramic housing. Braided stainless steel 4’ extension cable, extra heavy duty handle with 5” shank (optional 12” shank). Order with desired tip below.

TC809H Heavy Duty Surface Probe, 45° tip; TC809H-12 for 12” shank.
TC809R Heavy Duty Surface Probe, 90° tip; TC809R-12 for 12” shank.
TC808S Heavy Duty Surface Probe, straight tip, TC808S-1212” shank.

TC809 Tips Only: TC821H 45° tip; TC821R 90° tip; TC821S straight tip.

Response time legend (to 99% of 212°F): (1) clean hot plate surface, (2) immersion in boiling water, (3) immersion in liquid solder bath.

Custom Probes for Your Applications
Contact Wahl for custom-made probes to your specifications, or let us help you design the right probe for your application.
Type K Thermocouple Probes

TC812K Magnetic Surface Probe with 3 lb, pull magnet attaches easily to ferrous surfaces. Measurements to 450°F, 30 sec response, 4-ft over-braid cable (no handle). Spring loaded follower holds thermocouple junction firmly against surface.

TC813 Bolt-On Surface Probe for continuous monitoring, withstands hazardous environments to 1600°F. Rigid 5/8” diameter, 1/8” thick S.S. washer, high-temperature 4 ft. overbraid cable (no handle). 20 sec. response

TC814 Hypodermic Probe for minimal disruption when inserted into semi-solids up to 1000°F, 2-1/2” long stainless steel shank is 0.05” diameter. Sharpened tip yields extremely fast readings (0.5 second response) response.

TC817 Heavy-Duty Piercing Probe for plastic melts, rubber, asphalt, frozen foods, or other semi-solids. Adjustable penetration depth limiter. 1000°F temperature limit with 4 second response. 4-1/2” shank is 3/16” diameter with penetration tip which tapers to 0.1”.

TC861 Pencil-Type Electronic Tip Probe with 7/16” hardened shank, 0.032” diameter. For electronic component testing up to 600°F. Response of 2 seconds response.

TC867 Soldering Iron Tester Probe unique patented TC Sensor. Instant checking of iron for critical operations. Probe contains solder at junction tip. Soldering iron melts solder to establish true temperature as required by MIL specifications.

TC871 Threaded Plug-Type Probe for shell cavities and machinery walls to 850°F, 6 sec response. 188˚ cone with backup, 7/16” hex nut threaded 3/8” - 24NF, 4 ft over-braided cable (no handle).

TC873 Right Angle Surface Probe with long reach handle, flexible bands for rolls, curved surfaces, platens, molds. Ceramic/metal head to 482˚F limit, 2 sec response, 90˚ head, 1/2” high, 1/2” tip diameter. Fits in 2-1/2” clearance.

TC875 Contact Tip Probe

Economy Type K and J Thermocouple Probes

For routine maintenance and testing applications, TCL329K Extension Handle allows use of interchangeable, “direct to meter” probes with one handle and cord set. This economical and compact Type K probe system is usable with any Wahl Thermocouple Meter, but works especially well with TM-410, page 11.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-100</td>
<td>Needle-Tip Penetration Probe, 4” shank, direct connect to meter</td>
</tr>
<tr>
<td>TP-101</td>
<td>Fine-Tip Penetration Probe, 4” shank, direct connect to meter</td>
</tr>
<tr>
<td>TP-102</td>
<td>Sharp-Tip Penetration Probe, 6” shank, direct connect to meter</td>
</tr>
<tr>
<td>TP-200</td>
<td>General-Purpose Immersion Probe, 8” shank, direct connect to meter</td>
</tr>
<tr>
<td>TP-300</td>
<td>Alligator Clip-on Oven/Air Probe, 4’ length, high temperature insulated connector cable</td>
</tr>
<tr>
<td>TCL301J/K*</td>
<td>General Purpose Probe with Delrin handle, 8” shank with .125” diameter</td>
</tr>
<tr>
<td>TCL308J/K*</td>
<td>Handle and Probe Set. TCL329K handle sold with TCL383K immersion probe</td>
</tr>
<tr>
<td>TCL329J/K*</td>
<td>Handy Extension Handle for use with direct connect probes. 4” Handle accepts all ANSI mini-connector type J or K probes. 5’ coiled lead connects to meter.</td>
</tr>
<tr>
<td>TCL363J/K*</td>
<td>Unmounted 3’ Bare Thermocouple, exposed junction</td>
</tr>
<tr>
<td>TCL383J/K*</td>
<td>Immersion Probe, 8” shank with .125” diameter, direct connect to meter</td>
</tr>
</tbody>
</table>

* Specify J or K at end of Model Number. For additional Type J Thermocouple Sensors Probes, consult Customer Service for specifications, availability, and pricing.

Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com

05/08 Rev D
**TC829** Extension Handles are designed for rugged, long-reach applications. The TC829 Handle/Probe System is compatible with any Wahl Thermocouple Heat-Prober Meter. Screw on any of the replaceable **RTC Series** probes and go to work with confidence. The TC829 has an articulated head and a three-foot stainless steel armored cable with reinforced ANSI mini-connector. The chrome-plated handle is contoured to assure a solid grip. Order by length.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td>TC829-12</td>
<td>12&quot;</td>
</tr>
<tr>
<td>TC829-24</td>
<td>24&quot;</td>
</tr>
<tr>
<td>TC829-36</td>
<td>36&quot;</td>
</tr>
<tr>
<td>TC829-48</td>
<td>48&quot;</td>
</tr>
</tbody>
</table>

**RTC822 Z-Tip Fast Response Surface Probe** for molds, platens, dies, bearings, glass or any other clean surface to 1000°F in 3 sec. response. 1/2" diameter tip x 1" length.

**RTC822L Heavy Duty Z-Tip Fast Response Surface Probe** has an upper temperature limit of 1500°F, 5 sec. response. 1/2" diameter tip x 2 1/4" length.

**RTC823 Spring-Loaded Z-Tip Surface Probe** has patented protective collar. Mechanical stop provides 0.020" clearance for ceramic tip to increase life of probe. Upper temperature limit: 1000°F, 3 sec. response. 1-1/8" length.

**RTC825 Heavy-Duty Curved Surface Band Probe** for large diameter rolls or other curved surfaces. Surface speed limit 600ft/min. Place flexible band in static or sliding contact with surface. Heavy-duty band, 1/4" x 5", supported by flexible spring plate. Also recommended for pipe surfaces. Limit to 600°F, 12 sec. response.

**RTC825 Heavy-Duty Curved Surface Band Probe** for large diameter rolls or other curved surfaces. Surface speed limit 600ft/min. Place flexible band in static or sliding contact with surface. Heavy-duty band, 1/4" x 5", supported by flexible spring plate. Also recommended for pipe surfaces. Limit to 600°F, 12 sec. response.

**RTC826 Penetration Probe** penetrates semi-fluid materials like plastic, rubber and wax to 1200°F, 4 sec. response.

**RTC827 Ingot Probe** gives fast measurement of hot, soft aluminum, or brass ingots. Upper temp. limit: 1800°F, 1 sec. response.


**RTC828 Immersion Probe** for liquids including corrosive fluids to 1800°F, 12" stainless steel shank. 6 sec. response. For 24" shank, specify RTC828-24.

**RTC828 Roll Surface Probe** for moving surfaces up to 600ft/min. such as heating rolls, moving strip steel, rubber or paper. Head can be rotated 90°. Upper temperature limit: to 450°F, 5 sec. response.

**RTC828 Moving Surface Probe** with Teflon bars for moving surfaces or rotating rollers to 2600ft/min. Reduced friction keeps temperature rise to less than 1°F on smooth surface. Upper temp. limit: 450°F, 5 sec. response.

**RTC827 for 24" diameter rolls and flat surfaces**

**RTC827-1 Discontinued** (for 6" to 24" diameter rolls)

**RTC827-2 Discontinued** (for 4" to 6" diameter rolls)

**RB887 Spare Band (1)**

Response time legend (to 99% of 212°F):
- clean hot plate surface
- immersion in boiling water

Calibration Services Available

16170 Years of Continued Innovation

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05/08 Rev D
New! RTD Sanitary Probe

- Single 4 wire or Dual 3 wire RTD Sensors
- "No Tool Required" IP-68 rated connector
- 316 Stainless Steel construction
- Vibration resistant
- Flange available in 1.5", 2.0", 2.5", and 3.0".
  Insert Flange Code: 1.5, 2.0, 2.5, or 3.0 in place of XX (in table, above)
- Standard Stem Lengths in 2.5", 3.5", 4.5" and 6.0" (Other lengths available)
  Insert Stem Length Code: 2.5, 3.5, 4.5, or 6.0, in place of YY (in table, above)
- Optional Cables (order separately): 12071-01 - 4 conductor cable, SPS Series
  (Both cables are 4 meters in length) 12071-02 - 6 conductor cable, SPD Series

New! T-Handle Piercing Probe

- 304 Stainless Steel Shank
- Equipped with "Mini-T/C Female" connector
- 8" Shank length
- Single or Dual Sensor Type K Thermocouple Probe
- Wide range of applications such as Canning, Meat Processing

Wahl Will Custom-Engineer and Build Probes To Your Requirements.

If you have a unique requirement for temperature probes, Wahl will custom-engineer and build them for you. We have produced more than 2000 custom designs.

It's simple: FAX a sketch of dimensional requirements, environmental conditions, temperature limits, output (TC or RTD) and quantity. We will promptly return an engineered design and price quotation.

In addition to the thermocouple and platinum-RTD probes shown throughout, Wahl offers off-the-shelf probes for immersion in liquids and semi-fluids, insertion, penetration, air and gas calibration, surface measurements, and other applications.
Dipstick Thermometer Systems

Measure Molten Metals Quickly, Safely, and Accurately

- TC840 Type S Range 3200°F / 1770°C
- TC850 Type K Range 2500°F / 1370°C
- Measure ferrous and nonferrous molten metals
- User-selected lance lengths and expendable or reusable tips
- Bright, large displays make readings easy to see
- Maxi-Temp circuit holds peak temperature
- Resolution 1°F/°C; system accuracy ±0.3% or reading

Wahl's family of Heat-Prober Dipstick high-temperature monitors combine high accuracy, fast-response, comfort, and convenience in rugged, reliable systems. Special Wahl "dip tip" Type K and S thermocouples are designed to measure molten metals and other high temperature processes.

All systems feature the Maxi-Temp circuit that holds and displays peak temperature reading, even if the expendable tips burn open. System accuracy at molten metal temperatures with a Wahl meter and probe is typically ±9°F with a Type S thermocouple and ±11° with a Type K. Dipstick can be configured with any 2500/1370 Series Meter.

**Type S Dipstick Thermometer Systems**

**Ferrous Metal Systems**

Use in molten iron and steel alloys with or without slag for measuring melts in ladles and melt-pots. Stable readings are obtained in 6-8 seconds. Dipstick comes with one expendable tip. Spare tips are sold separately.

- TC840-1F or C - 48" length dipstick with 45° angle bend (12” from tip), meter with RTC832 expendable tip.
- TC840-2F or C - 60" length dipstick with 45° angle bend (12” from tip), meter and RTC832 expendable tip.
- TC840-3F or C - 60" straight dipstick meter with RTC832 expendable tip.
- RTC832 Expendable Type S 1-3/4" quartz covered (exposed) tip for shallow dips, box of 100.
- RTC832S Expendable Type S 1-3/4" quartz covered (exposed) tip with 12” cardboard sleeve for deeper dips, slag, box 50.
- RTC832SCL Expendable Type S 1-3/4” quartz covered (exposed) tip with 12” ceramic impregnated sleeve for better protection, box 50.

For molten gold applications use the TC840 Meter with the RTC832 Tip.

**Type K Dipstick Thermometer Systems**

**Nonferrous Metal Systems**

Rugged reusable chrome-tip with Type K thermocouple measures nonferrous metals such as brass, bronze and aluminum, and enclosures such as furnaces, stacks, and ovens. It can be used for hundreds of dips, depending on composition of process materials.

- TC850-1F or C - 55” length dipstick with right angle bend, meter, chrome/iron tip 1/2” diameter x 8” long.
- TC850-2F or C - 72” length dipstick with right angle bend, meter, chrome/iron tip 1/2” diameter x 8” long.
- 10693-2 Replacement 8” chrome/iron tip.
- 10694-2 Replacement 15” chrome/iron tip.

RTCP832 Type S Dipstick for nonferrous metals

TC850 Type K Dipstick for nonferrous metals

Expendable Type S tips RTC832 and RTC832S

WARRANTY
700 Series Thermistor and Probes

High accuracy Digital Thermometer is microprocessor based and accepts interchangeable probes.

- **700MC Meter** Range -1.00° to 60.99°C
- **700MF Meter** Range 30.20° to 141.78°F
- Resolution .01°C/°F
- Accuracy ±0.03°C (±.06°F)
- Large 0.33” LED display
- Rechargeable Battery Pack Powered

Apply the latest technological advances to laboratory and field work with Wahl's exceptionally sensitive and stable Model 700M Thermistor Heat-Prober. With a resolution of 0.01°C/°F and matching sensitivity, the 700M features ±0.03°C accuracy over a range of -1° to 60.99°C. Available with five precision interchangeable probes (below). The meter design is similar to platinum meter Model 392M Heat-Prober described on page 5.

*Response time is based on 63% in water moving at 3 feet per second.

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**Probe Description**

- **LN0250 Flexible Immersion Probe** Vinyl sheath and .135” diameter epoxy tip. Small and flexible. 3.6 Second response time*.
- **LN0252 Button Surface Probe** Solid .375” diameter button can be attached with pressure sensitive adhesive tape or epoxy. Stainless steel contact surface. 1.1 Second response time*.
- **LN0253 Screw-In Immersion Probe** For measurements in pipes, vessels or reactors. 3.6 Second response time*.
- **LN0255 Immersion Probe** For liquid and semi-solids. Stainless steel. For foods, chemical, pharmaceutical and laboratory work. 0.1°C interchangeability, 6” long stem. .125” diameter. For 12” length option, order LN0255-12.
- **LN0255A Immersion Probe** With .05°C interchangeability, 6” shank .250” diameter. For 12” length option, order LN0255A-12.

*Response time is based on 63% in water moving at 3 feet per second.

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**700M Thermistor Meter Interchangeable Probes**

Probes are supplied with 5 foot cord and plug to connect with meter.
Wahl designs and manufactures to the most stringent quality standards. We provide certified, traceable calibration data in support of companies whose requirements include meeting ISO 9001:2008, FAA and FDA quality standards. Calibrations to both IPTS-68 and ITS-90 are available. Choose from two levels of calibrations services to meet your quality system requirements.

**Calibration Services**

**STANDARD CERTIFICATION:** Unit is calibrated to factory specifications using NIST traceable equipment. Unit is provided with:

- **Certificate of Conformance** - Statement that our product meets published specifications. Included on the packing list with each shipment.
- **“Long Form” Certificate of Conformance** - Available upon request.
- **Calibration Sticker** - (or tag) Advising you of the date your instrument(s) was/were calibrated, and the suggested date for its next calibration. This is provided with most products at time of purchase, and when you return a product for calibration.

**NIST TRACEABLE TEST REPORT:** Unit is calibrated to factory specifications using NIST Traceable equipment. Unit is provided with:

- **NIST Traceable Test Report** - Our Quality Management System is certified to conform to ISO9001:2008. We maintain a calibration system in conformance with ANSI/NCSL Z-540 and MIL-STD-45662A.
- **“As Received” and “As Left” Data** with Out-of-Tolerance conditions noted.
- **Calibration Sticker** (see above).

**Repair and Other Services**

**REGISTER YOUR PRODUCT:** Registration is fast and easy. In about a minute you can register your product for Warranty Protection and our Calibration Reminder Service to keep your QC Program in compliance. Go to [www.palmerwahl.com/register](http://www.palmerwahl.com/register).

**REPAIR SERVICES:** Palmer Wahl offers repair and calibration services on most products we sell. Contact Customer Service for pricing, and an RMA. Please see note below.

- **Detailed Repair Report** - Available upon request, this report provides details of evaluation and repairs made.
- **Custom Points** - Palmer Wahl will calibrate your instruments at your specified temperature or pressure points.
- **Special Requests** - When calibrating your instrument, our experienced personnel will help you to achieve the level of quality that you need in your facility.

**Note:** You must have a **Return Merchandise Authorization Number** (RMA) before returning a product for repair or calibration. To obtain an RMA, please call Customer Service at 1-800-421-2853 or go to [www.palmerwahl.com](http://www.palmerwahl.com) and click on: Service > Product Return Request.

Palmer Pressure Gauges are available from: