

## Type K Thermocouple Probes

### Probes for High Performance

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.



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

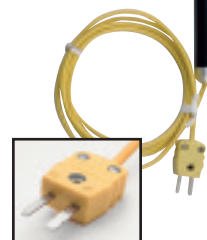


Thin wall 300 series stainless steel sheath results in fast probe response.

Rugged Delrin® handle withstands high temperatures.

Flexible compensated cable takes abuse.

Type K ANSI mini-connector plugs solidly into thermocouple meters.



**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<sup>(2)</sup>. 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 small components with minimal disturbance. Limit of 900°F., 5 sec response<sup>(1)</sup>.

**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, kilns, molds and platens to 1200°F limit with 3

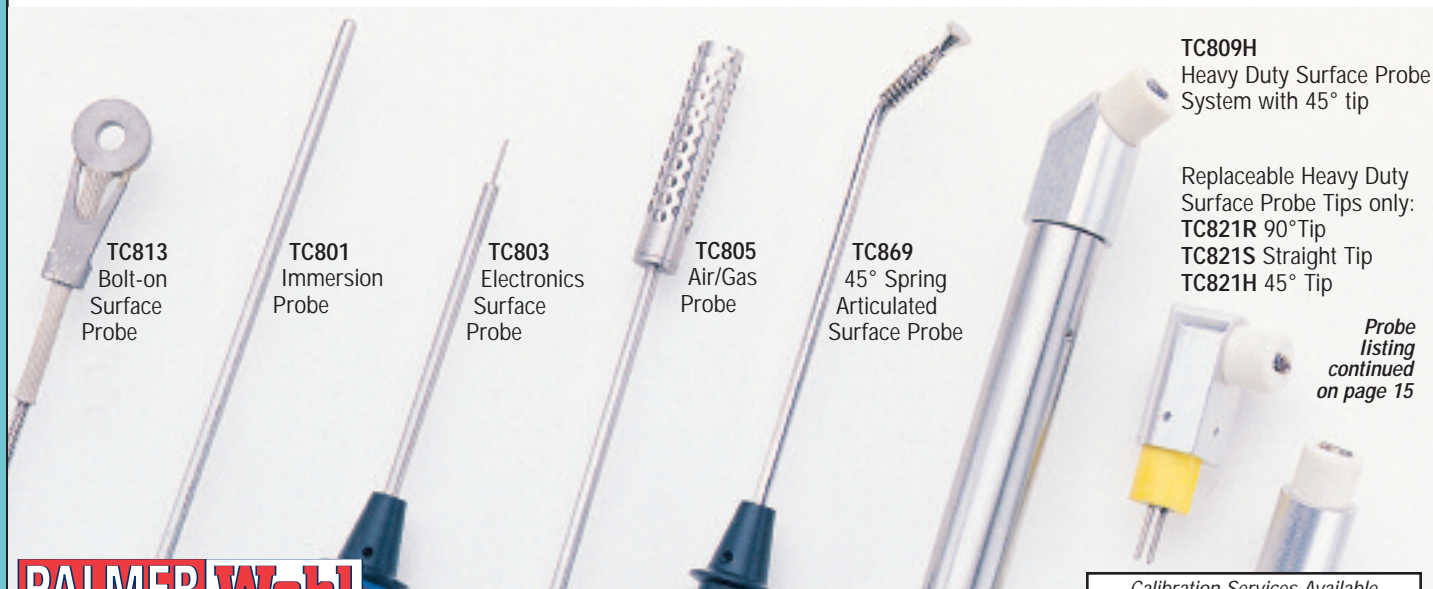
second response<sup>(1)</sup>. Utilizes snap-in, (replaceable and Surface Probe interchangeable) probe tips with miniature Z-tip, spring-loaded thermocouples protected by ceramic housing. Braided stainless steel 4' extension cable, extra heavy duty handle with 5" shank (optional 12" shank). Order with 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.  
**TC809S Heavy Duty Surface Probe**, straight tip; TC809S-12 12" shank.  
**TC809 Tips Only:** TC821H 45° tip; TC821R 90° tip; TC821S straight tip.

Response time legend (to 99% of 212°F): <sup>(1)</sup> clean hot plate surface, <sup>(2)</sup> immersion in boiling water <sup>(3)</sup> 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.



TC813 Bolt-on Surface Probe

TC801 Immersion Probe

TC803 Electronics Surface Probe

TC805 Air/Gas Probe

TC869 45° Spring Articulated Surface Probe

TC809H Heavy Duty Surface Probe System with 45° tip

Replaceable Heavy Duty Surface Probe Tips only:  
 TC821R 90° Tip  
 TC821S Straight Tip  
 TC821H 45° Tip

Probe listing continued on page 15

# 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<sup>(1)</sup>, 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. overbraided cable (no handle). 20 sec. response<sup>(1)</sup>

**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<sup>(2)</sup> 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<sup>(2)</sup>. 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<sup>(1)</sup>.

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

**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.

**TC869 45° Spring Articulated Surface Probe** provides certain surface contact for platens, hot plates, molds, etc. to 1000°F. 1/8" diameter x 8" shank., 250" tip diameter. 4 sec.response<sup>(1)</sup>

**TC871 Threaded Plug-Type Probe** for shell cavities and machinery walls to 850°F, 6 sec response<sup>(1)</sup>. 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 6" handle, flexible bands for rolls, curved surfaces, platens, molds. Ceramic/metal head to 572°F limit, 2 sec response<sup>(1)</sup>, 90° head, 1/2" high, 1/2" tip diameter. Fits in 2-1/2" clearance.

**RB873 Spare bands for TC873**, pkg/2.



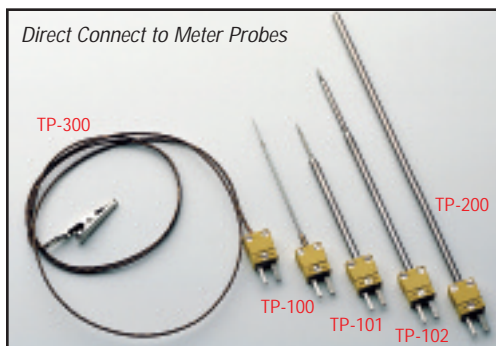
## ECONOMY TYPE K AND J THERMOCOUPLE PROBES

### Economy Type K 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.

Model No.	Description
TP-100	Needle-Tip Penetration Probe, 4" shank, direct connect to meter
TP-101	Fine-Tip Penetration Probe, 4" shank, direct connect to meter
TP-102	Sharp-Tip Penetration Probe, 6" shank, direct connect to meter
TP-200	General-Purpose Immersion Probe, 8" shank, direct connect to meter
TP-300	Alligator Clip-on Oven/Air Probe, 4' length, high temperature insulated connector cable
TCL301J/K*	General Purpose Probe with Delrin handle, 8" shank with .125" diameter
TCL309J/K*	Handle and Probe Set. TCL329K handle sold with TCL383K immersion probe
TCL329J/K*	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.
TCL363J/K*	Unmounted 3' Bare Thermocouple, exposed junction
TCL383J/K*	Immersion Probe, 8" shank with .125" diameter, direct connect to meter

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



TCL329 Extension Handle

Calibration Services Available

# Thermocouple Meter Probe Systems and Extension Handle

# Type K Thermocouple Probe Systems and Extension Handle

**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.

Part No.	Length
TC829-12	12"
TC829-24	24"
TC829-36	36"
TC829-48	48"



*TC829 Systems have a fully articulated head for adjustment to any measurement angle required.*

**RTC822 Z-Tip Fast Response Surface Probe** for molds, platens, dies, bearings, glass or any other clean surface to 1000°F 3 sec. response<sup>(1)</sup>. 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<sup>(1)</sup>. 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<sup>(1)</sup>. 1-1/8" length.

**RB824 Spare Band** package of 2

**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<sup>(1)</sup>.

**RTC826 Penetration Probe** penetrates semi-fluid materials like plastic, rubber and wax to 1200°F. 4 sec. response<sup>(2)</sup>.

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

**RTC827A Heavy Duty Ingot Probe** gouges through surface crusts of copper and aluminum ingots. Close-coupled to minimize resistance errors. Upper temp. limit: 1800°F. 3 sec. response<sup>(1)</sup>.

**RTC828 Immersion Probe** for liquids including corrosive fluids to 1800°F. 12" stainless steel shank. 6 sec. response<sup>(2)</sup> For 24" shank, specify **RTC828-24**.

**RTC842 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<sup>(1)</sup>.

**RTC877 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<sup>(1)</sup>.

**RTC877** for 16" diameter rolls and flat surfaces

**RTC877-1** for 6" to 12" diameter rolls

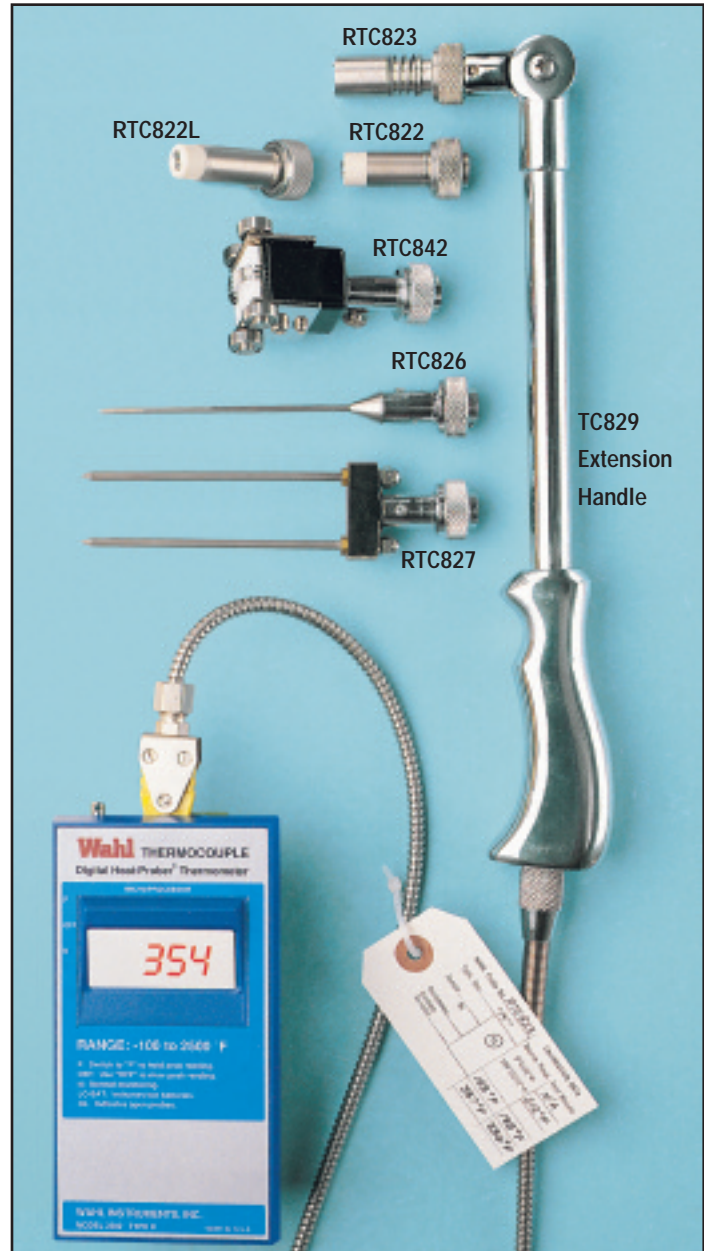
**RTC877-2** for 4" to 8" diameter rolls

**RB877 Spare Band** (1)

Response time legend (to 99% of 212°F): <sup>(1)</sup> clean hot plate surface <sup>(2)</sup> immersion in boiling water



*RTC827A  
Heavy Duty Ingot  
Probe*



**TC829-12** in use with **2500MVX** Meter, page 10.

*RTC825  
Heavy-Duty Curved  
Surface Band Probe*



# Thermocouple Meters New Probes Custom Probes

## New! RTD Sanitary Probe



SPD Sanitary Probe Shown with Cable #12071-02

- 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)

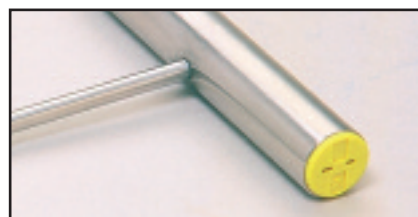
- Optional Cables (order separately): **12071-01** - 4 conductor cable, SPS Series (Both cables are 4 meters in length) **12071-02** - 6 conductor cable, SPD Series

SANITARY PROBES	
Single Sensor	Dual Sensor
SPSXXYY	SPDXXYY

## New! T-Handle Piercing Probe



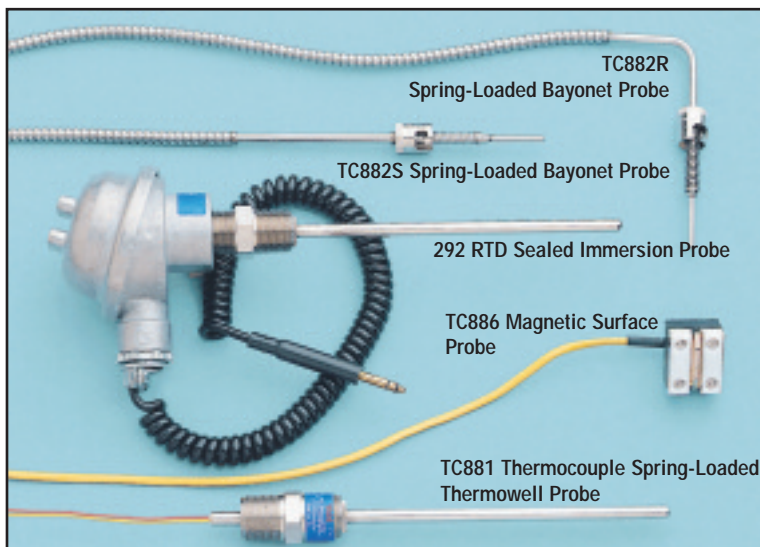
- 304 Stainless Steel Shank
- Equipped with "Mini-T/C Female" connector
- 8" Shank length
- Single or Dual Sensor Type K Thermocouple Probe
- Wide range of applications such as Canning, Meat Processing



Close up of T-Handle Piercing Probe showing thermocouple connection on side of handle.

PTK T-Handle Piercing Probe shown at left with Model DST200C Digi Stem Thermometer, and CA1KMM06 Cable (ordered separately).

T-HANDLE PIERCING PROBES	
Single	Dual
PTKS-8	PTKD-8



**TC881 Spring-Loaded Thermowell Probe** Provides contact in thermowell to reduce time lag. Available as Type K thermocouple and 100-ohm RTD. Stainless steel 6" shank .250" diameter. **TC881-9** 9" shank **TC881-12** 12" shank.

**TC882 Spring-Loaded Type K TC Bayonet Probe** Right-angle and straight. Quick disconnect. 3' armored cable. 1/2" shank x .125" diameter. **TC882R** - Right Angle, **TC882S** - Straight, **TC882R-1**, **TC882S-1** - 1" Shank.

**TC886 Magnetic Surface TC Probe** Fast response 2-lb. pull magnet attaches to ferrous surface. Sensitive, flexible sensor positioned between Teflon bars. 4' cord with connector. Sensor 1" wide x 1-3/8".

**292RTD Sealed Immersion Probe** For installation in thermowells. Connector head, 5' coil cable and plug to fit Heat-Prober. .250" diameter shank. Available as 100ohm RTD and Type K thermocouple.

## 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.



Calibration Services Available

**TRANSCAT**

Visit us at [Transcat.com](http://Transcat.com)!

35 Vantage Point Drive // Rochester, NY 14624 // Call 1.800.800.5001

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