

The REOTEMP logo features the brand name in a bold, white, sans-serif font, with a white swoosh underline that starts under the 'R' and ends under the 'P'.

# REOTEMP

INSTRUMENTS

“Service Inspired, Quality Driven”

- REOTEMP's TC/RTD Background
- Field Solutions
- Product Overview
- The REOTEMP *difference*



- REOTEMP's TC/RTD Background
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# REOTEMP **Background**

## INSTRUMENTS

- REOTEMP, a manufacturer of temperature instruments since 1965, has been providing thermocouple & RTD sensors to the industrial market for over 15 years.
- Manufactured in San Diego, CA.
- Built a long term reputation for:
  - High Quality/Competitive Price
  - Exceptional Customer Service
  - Full Line - all Styles & Materials



- REOTEMP's TC/RTD background
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- The REOTEMP *difference*



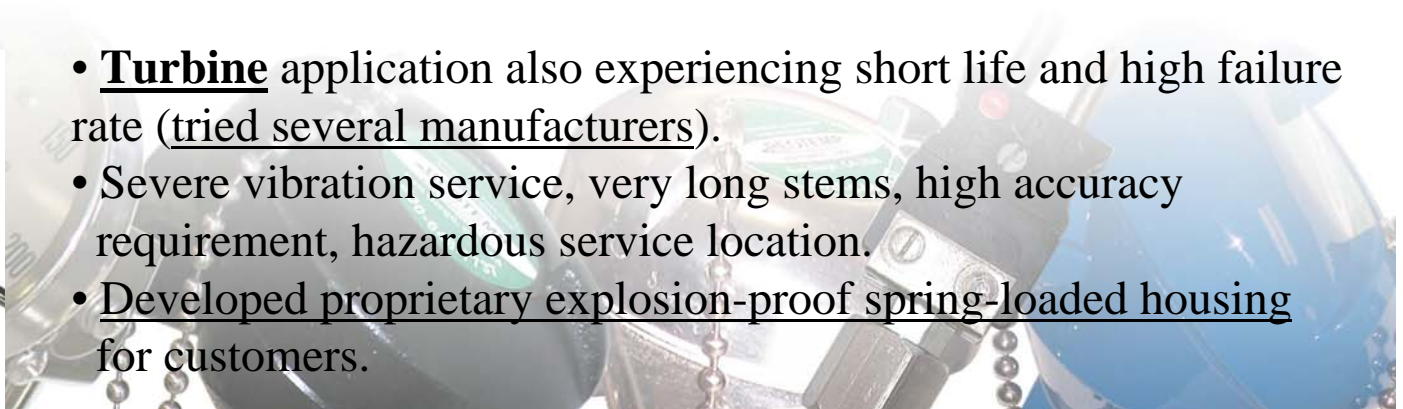


## RTD's & TC's Field Solutions

**Are custom jobs a problem? We have your solution.**



- **Chemical plant** with a severe service/multiple temperature application.
- 18 Sensors in one assembly, 12 feet thru 65 feet, Incoloy 800 material, custom pressure seal feed-thru.
- Measures gas temperature in a stratified environment
- High temperatures and pressures, corrosive element
  
- **Food processor** was experiencing short life and high failure rate (tried several manufacturers).
- Needed high accuracy fast response probe (requires small diameter) yet extremely robust for automated machine performing mechanical movement and cycling around the clock.
- Provided custom metric housing
  
- **Turbine** application also experiencing short life and high failure rate (tried several manufacturers).
- Severe vibration service, very long stems, high accuracy requirement, hazardous service location.
- Developed proprietary explosion-proof spring-loaded housing for customers.

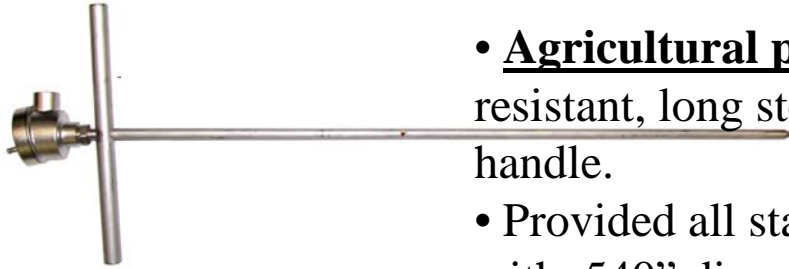




INSTRUMENTS

## RTD's & TC's Field Solutions - continued

**Are custom jobs a problem? We have your solution.**



- **Agricultural processor** needed extremely strong, corrosion resistant, long stem, piercing tip assembly with heavy duty handle.
- Provided all stainless steel welded construction RTD assembly with .540" diameter heavy wall stem that was 5 feet long.



- **Government power generating station** brought in failed dual RTD. They needed replacement to have same European electrical male and female connection as the original.
- Reotemp redesigned assembly by greatly improving each weak area of the original, providing greatly increased immunity to oil penetration, vibration, and mechanical wear.
- Customer picked up replacement the next day



- Customer had **special metric thermocouple** fail on machine built overseas.
- Could not obtain replacement or sensor specifications
- Customer had exact replacement in-house in 3 days.



INSTRUMENTS

## RTD's & TC's Field Solutions - continued

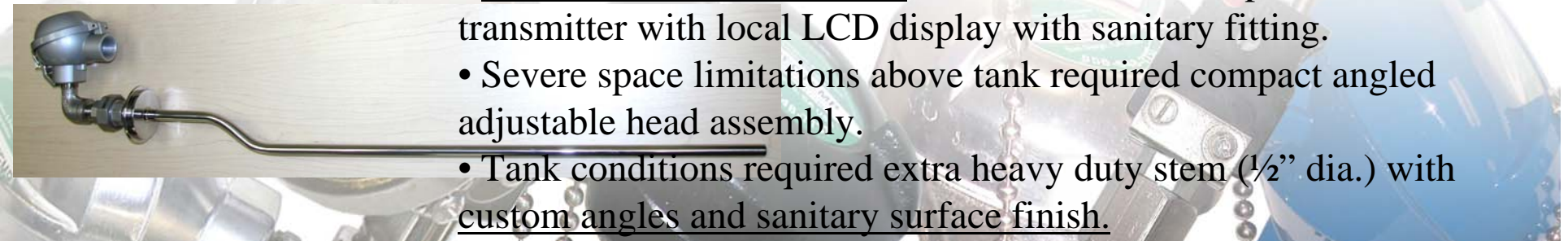
**Are custom jobs a problem? We have your solution.**



- **Major Petrochemical processor** needed a custom thermocouple probe.
- Required sturdy leads that would expand and retract with machine cycling.
- Provided custom mounting orientation and fitting



- **Municipality** needed to monitor outdoor temperatures of work environment.
- Needed equipment to mount on truck dash board and wire into vehicle. Needed rugged housing and good readability at a distance.
- Provided turn-key system with flexible outdoor probe



- **Pharmaceutical customer** needed 4-20 mA temperature transmitter with local LCD display with sanitary fitting.
- Severe space limitations above tank required compact angled adjustable head assembly.
- Tank conditions required extra heavy duty stem (1/2" dia.) with custom angles and sanitary surface finish.

- REOTEMP's TC/RTD background
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- The REOTEMP *difference*





INSTRUMENTS

## Industrial Head Assemblies

The head assembly is the most commonly used sensor. They come in a variety of head and stem configurations.



- Exp. Proof N-U-N



Epoxy coated head -

### Features:

- Welded or spring loaded stem
- Optional transmitter
- Easy to use P/N system
- Thermocouple or RTD

### Markets:

- All major markets
- Used wherever temperature sensing is necessary

### Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance





## In-head transmitters assemblies

### Features:

- 4-20 mA output
- Hart, Foundation Fieldbus, Profibus-compatible
- Intrinsically safe, Atex versions
- Local digital display available
- Field programmable

### Markets:

- All major markets
- Used wherever temperature sensing is necessary

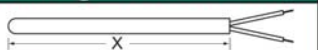

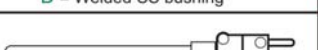
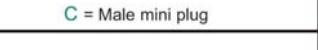
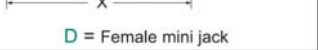

### Advantages:


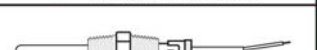
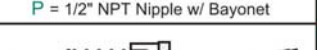
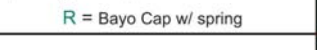


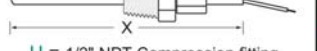
- 3-5 day standard delivery
- Highest quality
- Application assistance



# REOTEMP Stem Assemblies

## INSTRUMENTS

Table A RTD & TC Styles	
	<b>A</b>
A = Plain stem (choose this for all lead assemblies)	
	<b>B</b>
B = Welded SS bushing	
	<b>C</b>
C = Male mini plug	
	<b>D</b>
D = Female mini jack	
	<b>F</b>
F = Male standard plug	
	<b>G</b>
G = Female standard jack	

	<b>H</b>
H = Spring loaded bushing	
	<b>P</b>
P = 1/2" NPT Nipple w/ Bayonet	
	<b>R</b>
R = Bayo Cap w/ spring	
	<b>S</b>
S = Load Spring only	
	<b>T</b>
T = 1/4" NPT Compression fitting, loose on stem	
	<b>U</b>
U = 1/2" NPT Compression fitting, loose on stem	
	<b>W</b>
W = Weld Pad	

### Features:

- Many styles available
- All materials and sizes

### Markets:

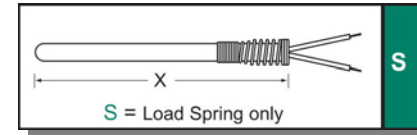
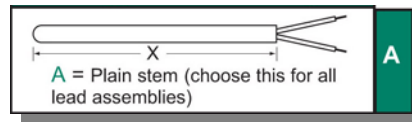
- All major markets
- Used wherever temperature sensing is necessary

### REOTEMP Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance



### Plain Lead Wires



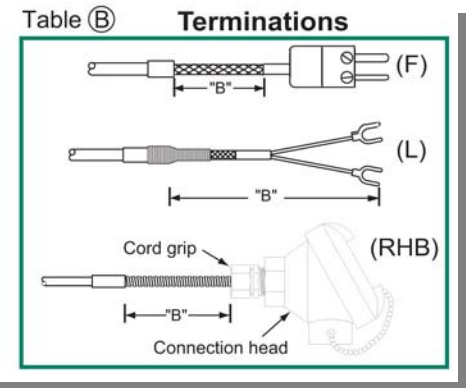
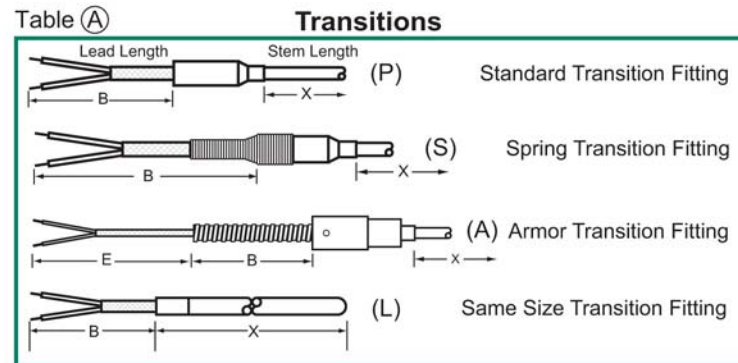
### Features:

- Plain lead wires
- All other styles

### Markets:

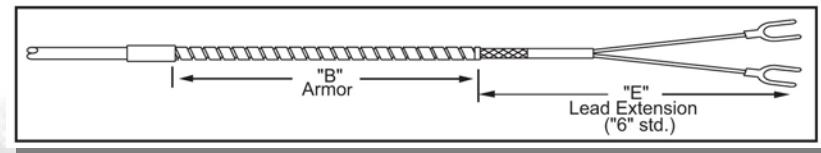
- All major markets
- Used wherever temperature sensing is necessary

### Transitions



### REOTEMP Advantages:

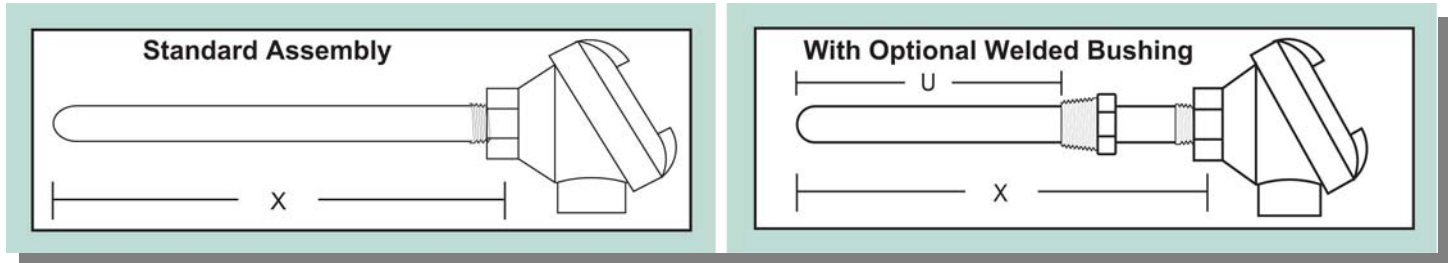
- 3-5 day standard delivery
- Highest quality
- Application assistance





# Metal Tube Assemblies

INSTRUMENTS



## Features:

- Std. Metal  
Tube assembly

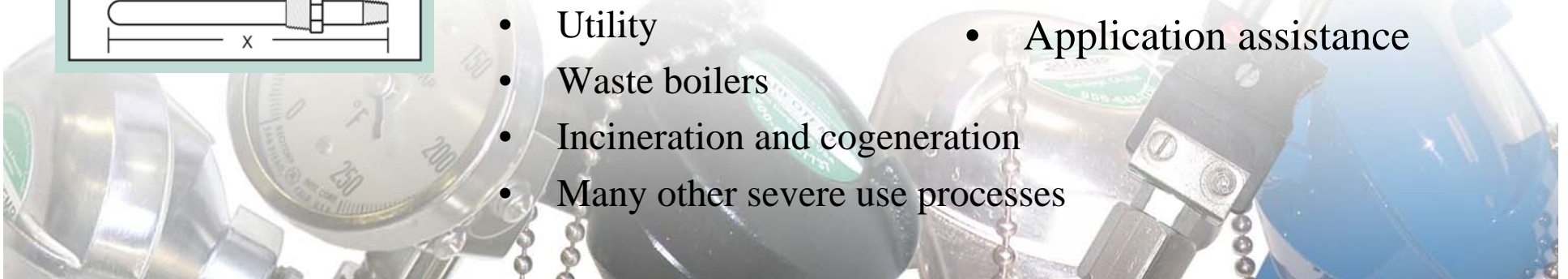
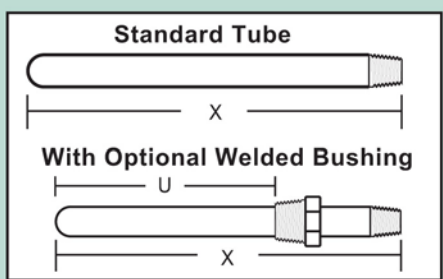
- Cast iron or cast aluminum
- Optional Welded Bushing

## Applications:

- Heat treating
- Forging
- Smelting and melting
- Utility
- Waste boilers
- Incineration and cogeneration
- Many other severe use processes

## REOTEMP Advantages:

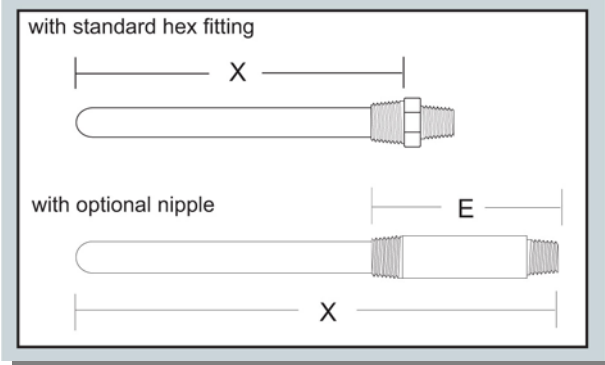
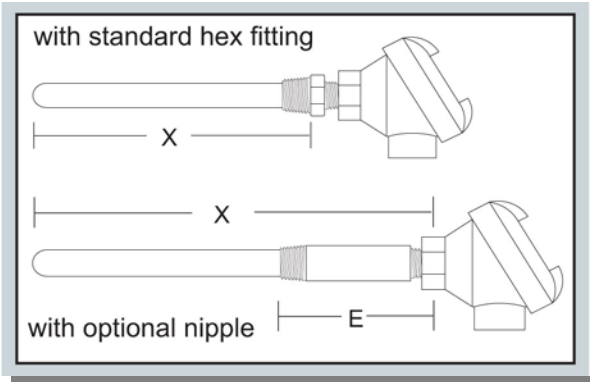
- 3-5 day standard delivery
- Highest quality
- Application assistance



# REOTEMP

INSTRUMENTS

## Ceramic Tube Thermocouples



- Std. Ceramic  
Tube assembly

### Features:

- For high temperature process heating applications
- Alumina (max 3400°F) or Mullite (max 2700°F)
- Base metal or Noble metal thermocouples

### Applications:

- Kilns
- Furnaces
- Gas heaters
- Incinerators
- Heat treating
- Smelting
- Foundry

### REOTEMP Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance





## Replacement Elements

For use in REOTEMP protection tubes, or in other manufacturers' protection tubes.

### Features:

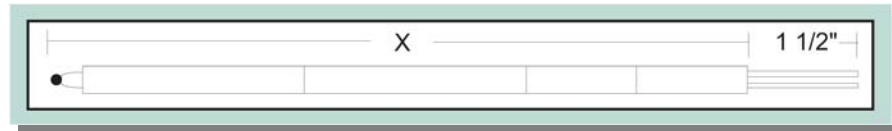
- Base metal TC's
- Noble metal TC's
- Variety of hot junction styles

### Applications:

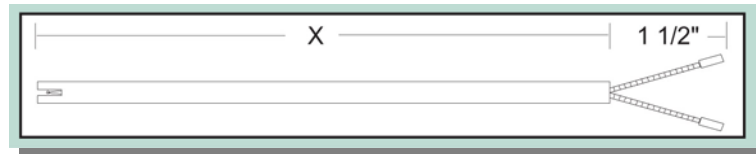
- Heat treating
- Forging
- Smelting and melting
- Utility
- Waste boilers
- Incineration and cogeneration
- Many other severe use processes



### Base Metal Thermocouples



### Noble Metal Thermocouples



### REOTEMP Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance





# Cut-to-Length TC's & RTD's

INSTRUMENTS

## Thermocouples



### Features:

- For on-the-spot replacements
- Order your max length and keep on shelf.
- Simply cut shorter for your other lengths
- Use standard tube cutter. Minimum length 3"
- Spring loaded bushing kits, heads, terminal blocks available

### Markets:

- All major markets
- Used wherever temperature sensing is necessary

### REOTEMP Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance

## RTD's

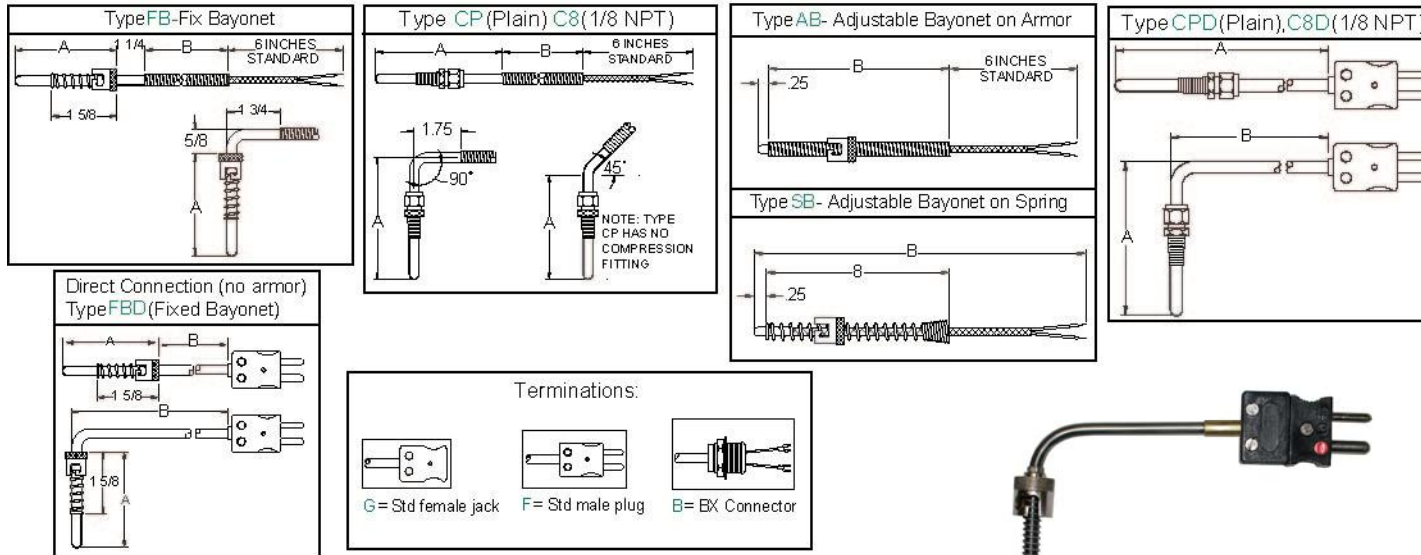




# Plastic Industry TC's & RTD's

## INSTRUMENTS

## Plastic Sensor Choices



## Features:

- Wide variety of plastic sensors
- Optional bend angle
- Variety of probe lengths “A”

## Markets:

- Plastic
- Rubber
- Packaging

## REOTEMP Advantages:

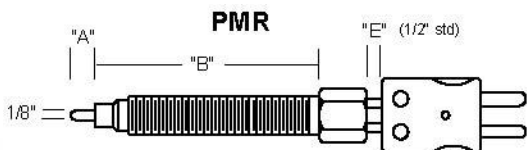
- 3-5 day standard delivery
- Highest quality
- Application assistance



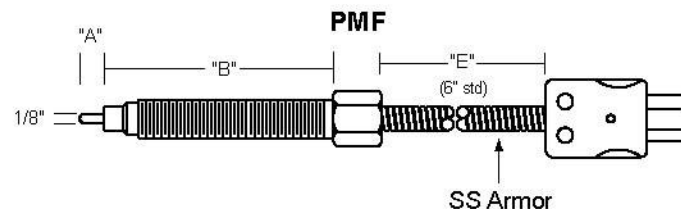
# REOTEMP Melt Bolt Sensors

INSTRUMENTS

## PMR = Rigid Style



## PMF = Flexible Style



### Features:

- Extruder heads
- Die adapters
- Tip goes directly into plastic melt

### Markets:

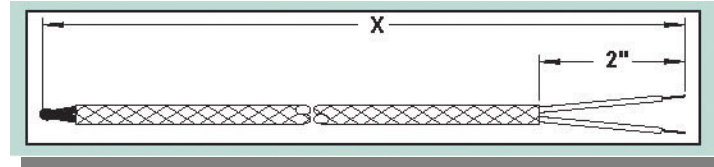
- Plastic
- Rubber
- Packaging

### REOTEMP Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance



### Plain Wire



### Plain Wire



### Features:

- Standard thermocouples (Type J, K, T, & E)
- Insulation options are fiberglass & Teflon
- Variety of wire terminations to choose from (stripped labels, mini male plug, std. male plug, spade lugs, & terminal pins).

### Markets:

- All major markets
- Used wherever temperature sensing is necessary

### REOTEMP Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance



# **REOTEMP** Bulk Wire

INSTRUMENTS

## **Bulk Wire**



### **Features:**

- Standard thermocouples (Type J, K, T, & E)
- Std. insulation: PVC, fiberglass, & Teflon

### **Markets:**

- All major markets
- Used wherever temperature sensing is necessary

### **REOTEMP Advantages:**

- In stock
- Highest quality
- Application assistance



# REOTEMP

INSTRUMENTS

## Thermistor Sensor (Model TM99A & Case)



### Features:

- All solid state
- High accuracy
- Detachable probes
- Wide variety of probes
- Kit (digital therm. & probe)

### Markets:

- All major markets
- Used wherever temperature sensing is necessary

## Thermocouple Sensors



Model HI 9063

## Model 701K

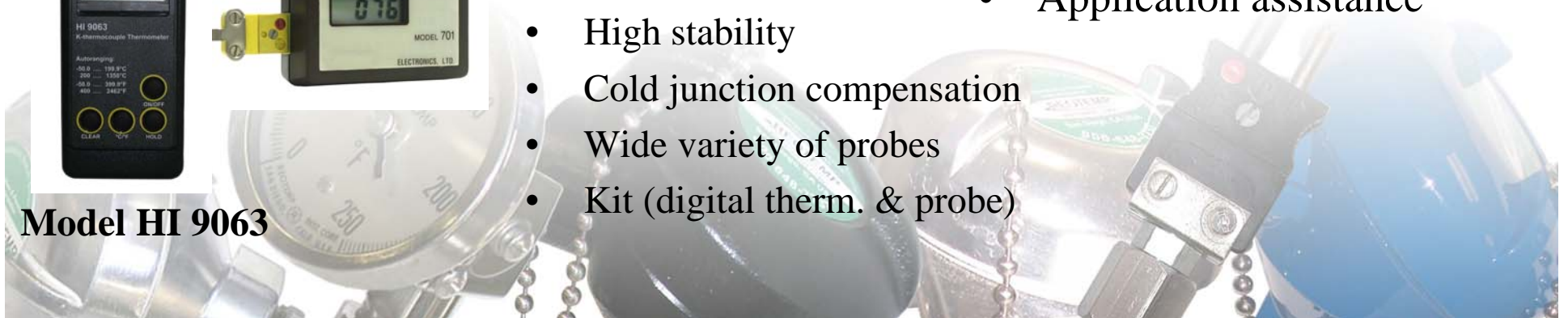


### Features:

- All solid state
- High stability
- Cold junction compensation
- Wide variety of probes
- Kit (digital therm. & probe)

### REOTEMP Advantages:

- In stock
- Highest quality
- Application assistance



# REOTEMP Sanitary RTD's & TC's

INSTRUMENTS



- Sanitary RTD head assembly



## Features:

- Ideal for CIP (clean-in-place) or SIP
- All wetted parts highly polished to exceed 3A requirements.
- Quick-connect tri-clamp design
- Fast response tip available
- Variety of stem and termination options

Table A Stem Options	Table B Termination Options
<p><b>Standard 1/4" Dia. stem (Type A)</b></p> <p>TYPE 316 SS, 1/4" OD S/S Sanitary Cap</p>	<p>Type S = FDA Compliant White Polypropylene Screw Cover Head (standard)</p> <p>Connection head-Type S, Y, or T</p> <p>3" S/S Sanitary Cap</p>
<p><b>Reduced Tip Stem (Type B, C, E)</b></p> <p>1 1/4" S/S Sanitary Cap</p>	<p><b>Type L (with Teflon Leads)</b></p> <p>E Lead Length (STD. =6") 3.5"</p>
<p><b>Mini-Stem (Type D)</b></p> <p>3/16" OD 3/4" Triclamp is standard</p>	

## Markets:

- Food & Beverage
- Pharmaceutical
- Dairy

## REOTEMP Advantages:

- 3-5 day standard delivery
- Highest quality
- Application assistance





## Dual-Mode Thermometers

### REOTEMP Advantages:

- Rugged & Reliable Design (Unique to REOTEMP).
- Field Proven Worldwide.

### Standard Dual Mode Thermometer -



### - Dual Mode Remote Gas Dial Thermometer with Integral RTD or TC or TC



### Features:

- Local readout with TC (RTD) output
- Redundant sensors for simple, effective correlation.
- 2 sensors in 1 = 1/2 the hassle, 1/2 the installation, 1/2 the thermowells.
- Many configurations available
- Available with in-head 4-20 mA transmitters

# REOTEMP

INSTRUMENTS

## Thermowells

Thermowells are mated with spring loaded RTD's & TC's. Each stainless thermowell is die stamped with the type of material from which it is made.

### Features:

- Material certification available
- 4 types to choose from
- 3 shank styles

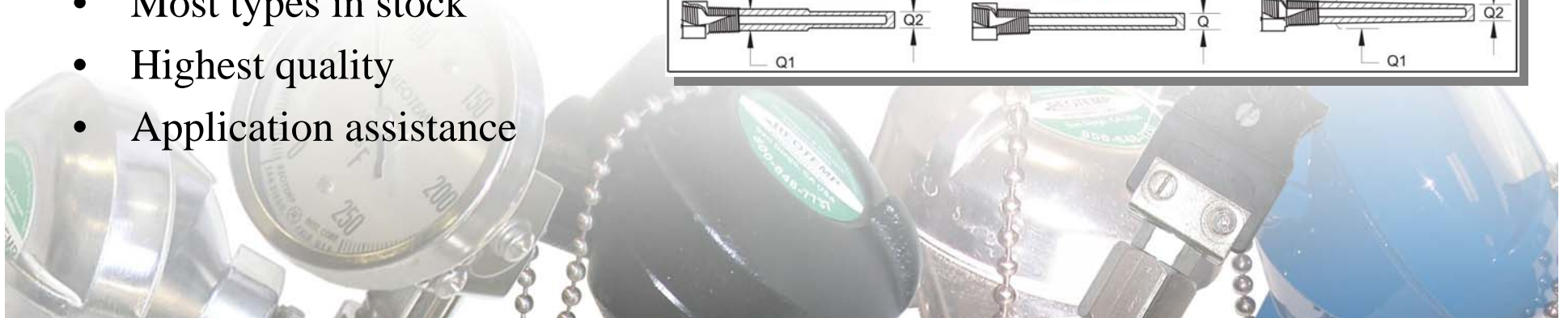
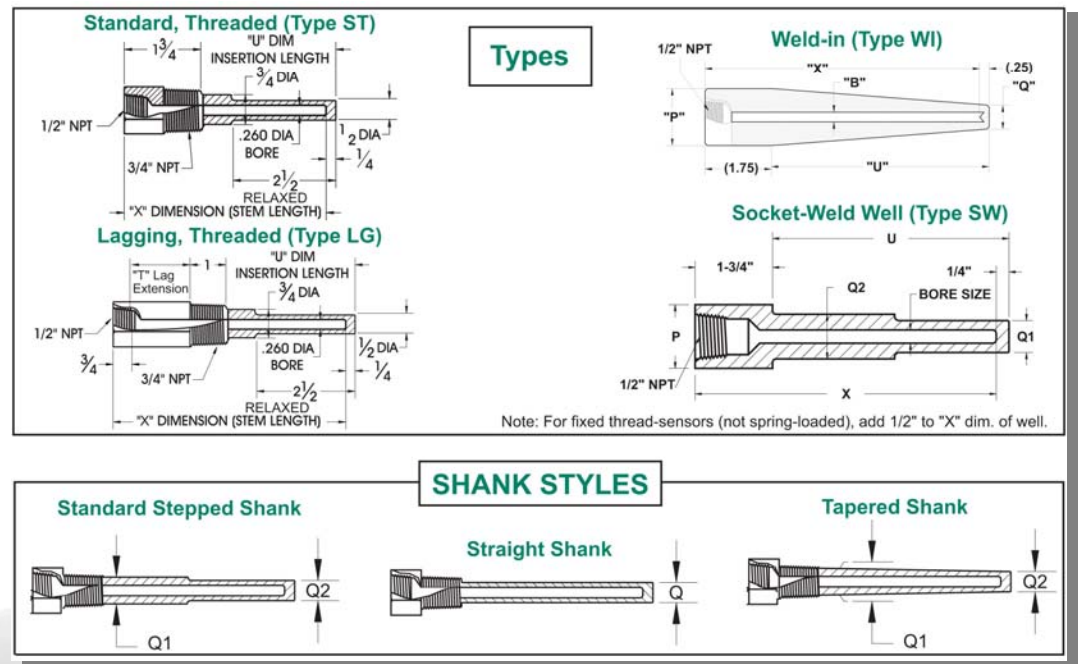
### Markets:

- All major markets
- Used wherever temperature sensing is necessary

### REOTEMP Advantages:

- Most types in stock
- Highest quality
- Application assistance

### Types & Shank Styles



### Accessories / Components

- *Heads, Blocks, Plugs, Jacks*
- *Spring Loaded Connection Kits*
- *Bayonet Adapters, Compression Fittings*
- *Handheld Readers, Digital Panel Meters*
- *Transmitters*
- *Turn On & Go, Assembled & Calibrated Sensor, Cable, Display to Your Requirements*



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- The REOTEMP *difference*





INSTRUMENTS

## Distribution & REOTEMP

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- Partnership
  - Establish strategic goals
  - Planning and support
- Service
  - 3 to 5 day turnaround
  - Custom solutions
  - Training and Education
- Inventory
  - Factory stock support



# REOTEMP Services of RTD's & TC's

## INSTRUMENTS

- Knowledgeable & friendly staff
- Expedite/emergency delivery available
- Easy to use catalog – makes ordering & specifying quick & simple.
- Co-engineering for your applications
- We will cross over other mfr's part numbers.
- We will put the right sensor on your transmitter and set up, calibrate, certify, etc., the assembly as needed.
- A wealth of sales materials, sample cases, training, customer visits available.
- Visit our website at: [www.reotemp.com](http://www.reotemp.com)

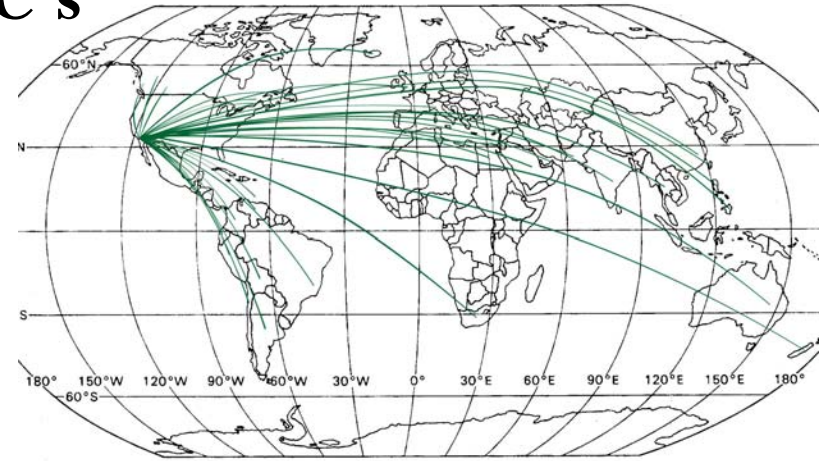




## Our vision for RTD/TC

### REOTEMP's vision for RTD's & TC's

- Dedicated to nationwide coverage
- Dedicated to international coverage
- Focused on each distributor's success
- Providing quick deliveries by manufacturing in San Diego, CA
- Maintain competitive pricing
- Great Value





## Other products available

Also available are a wide variety of pressure and temperature instrumentation.

### Pressure Products



### Temperature Products



***“Service Inspired, Quality Driven”***