

# Foodservice Catalog



Solutions that help you achieve your foodservice goals

**COOPER-ATKINS™**

  
**EMERSON™**

# COMPANY OVERVIEW

Cooper-Atkins, acquired by Emerson in early 2018, is a longtime technology leader serving the food service and food processing markets. Since its establishment in 1885, Cooper-Atkins has built a 130-year, rock-solid reputation and has a comprehensive offering of temperature management products and monitoring solutions. These are essential for spot inspection and fixed location uses, including restaurants, supermarkets and other facilities where food is handled, prepared and stored.

The added expertise from Cooper-Atkins complements—and significantly extends—Emerson's global capabilities in monitoring food service facilities throughout the entire supply chain. In today's rapidly changing world, we continue to expand our technological capabilities to support and protect brand integrity by providing the right tools that ensure consistent food quality and safety.

## Company History

The inventor of the first bi-metal oven thermometer, David G. Cooper, founded *The Cooper Oven Thermometer Company* in 1885.

During the 1960s, the company developed three cooking product lines and with the acquisition of *The Croydon Thermometer Company* expanded into weather instrumentation. Two separate marketing groups were established for the consumer and industrial markets to advance these new product lines.

In 1984, the industrial division of *Electromedics (Electro-Therm)* was purchased, immediately launching Cooper into the digital thermometer business. The company officially became *Cooper Instrument Corporation* strengthening its presence in the HVAC/R, OEM and industrial markets.

In 2001, after acquiring *Atkins Technical* (a leader in thermocouple instrument technology), the company became known as *Cooper-Atkins Corporation*.

In 2003 the corporation acquired *KTG, Inc.*, a developer of wireless enterprise solutions for temperature monitoring and food safety.

IN 2018, Cooper-Atkins was acquired by Emerson to expand their Cold Chain offerings and temperature management solutions across its foodservice, food processing, healthcare, and industrial businesses.



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## Mission Statement

*"A customer-centric technology leader in monitoring solutions for the global Foodservice, Healthcare and Industrial markets."*

## Serving Safe Food is Your Business. Food Safety is Ours.

Food safety should always be at the forefront of brand protection. While bacteria outbreaks such as E.coli and salmonella do occur, we can all mitigate the risks by implementing industry-wide best practices designed to protect everyone involved.

We are committed to providing our customers with what they need in an ever-changing technological landscape. As a leading manufacturer of monitoring solutions, Cooper-Atkins offers state-of-the-art food safety technologies to help you protect your brand.

Our customer solution approach offers you:

- Brand Protection
- Regulatory Compliance
- Turn-key Solutions
- Workflow Automation
- Scalability, Expandability and Security
- Cost Savings

## Our Customer Solutions Approach

Today's foodservice establishments require consistent monitoring programs. We recognize that increased government compliancy and regulations have burdened customers with digital record-keeping. Our products are designed to be used together as a core element of your business. They will help solve monitoring issues, reduce risk and streamline your operation—saving you time and money.

## Excellence. Earned.

There is a reason top brands turn to Cooper-Atkins. As a leader in the industry, we pride ourselves on forging long-lasting partnerships with our customers. We have a rock-solid reputation providing quality monitoring solutions to top brands such as McDonald's, Burger King, Subway, Wendy's, Taco Bell, and many, many more.

Our proven track record speaks for itself.

We help protect brand integrity by providing the right tools that ensure consistent quality and food safety

McDonald's awarded  
Cooper-Atkins the

**"Global Supplier  
of the Year 2015"**



## New Products & HACCP Management Systems

As a leader in the marketplace, we understand those concerns and proactively listen to our customers. We are always looking to keep ahead of the curve and provide the best tools for our end-users. As a result, we are constantly researching and developing "intelligent" tools that you don't even know you need...yet!

### Automate HACCP Plans with Your Smart Device



**HACCP Manager™ Mobile**  
Page 47

Mobile App for HACCP Manager Enterprise with multilingual support.

### Automate HACCP Plans for Multiple Locations



**HACCP Manager™ Enterprise**  
Page 45

Web-based software for integrated reporting of multiple locations.

### Monitor Your Equipment Wirelessly with Instant Alerts 24/7!



**NotifEye™**  
Page 49

Self-installable wireless monitoring.

### Transmit Data To Your Smart Device via Bluetooth Technology



**Blue2™**  
Page 48

Wireless transmission for HACCP Manager Mobile and 3rd Party Applications.

### Maintain Menus and Checklists Digitally



**HACCP Manager™ Solo**  
Page 43

Eliminates manual record keeping and data logs.

### Monitor Your Cooking and Cooling Processes



**CooknCool**  
Page 19

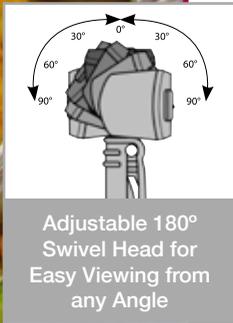
Digital Thermo-Timer with time and temperature rising and declining alarms

# POCKET TEST THERMOMETERS

A pocket test thermometer takes the guesswork out of cooking and assures that a displays, taking the temperatures of food, liquids, and surfaces are an easy task.

Cooper-Atkins' bimetal pocket test thermometers have an external dimple on the little to no drift out of calibration, so are less likely to give variable readings.

- ▶ PROTECTIVE POCKET SHEATH
- ▶ MAGNIFYING LENS FOR EASY VIEWING



**DPS300**  
Swivel Head Digital Pocket Test



		Bimetal	
		1236-17	1246-01C
		<b>Bimetal Pocket Test</b>	<b>Bimetal Pocket Test</b>
Temperature Range:		25° to 125°F	-40° to 180°F (-40° to 80°C)
Accuracy:		±2°F	±2°F (±1°C)
Housing Material:		Stainless Steel	Stainless Steel
Dial Diameter:		1" (25cm)	1" (25 mm)
Stem Diameter:		0.150" (3.0 mm)	0.150" (3.0 mm)
Stem Length:		5" (127 mm)	5" (127 mm)
Lens Material:		Magnifying Polycarbonate	Magnifying Polycarbonate
Antimicrobial Plastic:		-	Yes Sheath Only
Weight:		0.5 oz (14 g)	0.5 oz (14 g)
Regulatory Listings::			
Warranty		1 Year	1 Year

safe temperature has been reached to destroy harmful bacteria. With magnifying lens and crisp dial faces or large LCD

stem to indicate the minimum insertion point. Digitals yield a faster response and provide greater overall accuracy with



**1246-02C**

**1246-03C**

**Bimetal  
Pocket Test**

**Bimetal  
Pocket Test**

0° to 220°F  
(-20° to 100°C)

50° to 550°F  
(10° to 285°C)

±2°F (±1°C)

±5°F (±3°C)

**Stainless  
Steel**

**Stainless  
Steel**

1" (25 mm)

1" (25 mm)

0.150"  
(3.0 mm)

0.150"  
(3.0 mm)

5" (127 mm)

5" (127 mm)

**Magnifying  
Polycarbonate**

**Magnifying  
Polycarbonate**

**Yes  
Sheath Only**

**Yes  
Sheath Only**

0.5 oz (14 g)

0.5 oz (14 g)



**1 Year**

**1 Year**

**Digital**



**DPS300**

**DT300**

**Swivel Head  
Digital**

**Oval Style Digital**

**Temperature  
Range:**

-40° to 302°F  
(-40° to 150°C)

-40° to 302°F  
(-40° to 150°C)

**Accuracy:**

±2°F (±1°C)

±2°F (±1°C)

**Resolution:**

0.1°

0.1°

**Response Time:**

<18 seconds

<20 seconds

**Stem Length:**

4.75" (121 mm)

4.625" (117 mm)

**Shaft Diameter:**

0.150" (3.8 mm)

0.150" (3.8 mm)

**Housing:**

**ABS  
Plastic**

**ABS  
Plastic**

**Power:**

(1) 1.5V #LR44

(1) 1.5V #LR44

**Auto Shut-Off:**

10 min

-

**Display LCD:**

0.5" (13 mm)

0.875" (22 mm)

**Weight:**

1 oz (28 g)

0.5 oz (14 g)

**Regulatory Listings::**



**Warranty**

**1 Year**

**1 Year**

# BIMETAL COOKING THERMOMETERS

Our specialty foodservice thermometers are marked with correct temperature and hot holding, you will get the results you want every time.

- ▶ HACCP GUIDELINES
- ▶ STAINLESS STEEL CONSTRUCTION



### 323 Roasting Thermometer

Preset pointer for accurate measurements



3270 Deep Fry Thermometer  
Wooden Handle and Hold/Ideal zoned dial

	322	323	329
	Candy/Jelly/Deep-Fry Thermometer	Roasting Thermometer	Deep-Fry Confection Paddle Thermometer
Temperature Range:	200° to 400°F (90° to 200°C)	120° to 200°F (49° to 93°C)	100° to 400°F (40° to 200°C)
Accuracy:	±5°F	±2°F (±1°C)	±2°F (±1°C)
Housing Material:	Stainless Steel	Stainless Steel	Stainless Steel
Dial Diameter:	2.5" (64 mm)	2.5" (64 mm)	-
Stem Diameter:	0.19" (4.8 mm)	0.19" (4.8 mm)	-
Stem Length:	6" (152.4 mm) w/ vessel clip	6" (152 mm)	12.5" (318 mm)
Lens Material:	Glass	Glass	Non-toxic liquid-filled glass tuber
Weight:	2 oz (57 g)	2 oz (57 g)	4 oz (113.4 g)
Regulatory Listings:			
Warranty:	1 Year	1 Year	1 Year

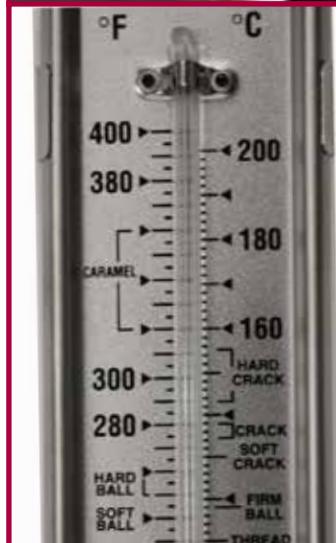
zones for food safety and product quality. With a large selection of NSF-listed thermometers specifically for cooking



**3210 Grill Surface Thermometer**  
With unique grips for easy removal from hot grill surfaces



**329 Paddle Thermometer**  
With easy to grip plastic handle and preset pointers



	3210	3270	1236-70
	Grill Surface Thermometer	Deep-Fry Thermometer	Espresso Thermometer
	100° to 600°F (50° to 300°C)	50° to 550°F (10° to 285°C)	0° to 220°F
	±25°F (±12°C)	±10°F (±5°C)	±2°F
	Aluminum	Stainless Steel	Stainless Steel
	2.5" (64 mm)	2.5" (64 mm)	1" (25 mm)
	-	0.25" (6.3 mm)	0.15" (3.6 mm)
	-	15" (381 mm)	5" (127 mm)
	Glass	Glass	Magnifying Polycarbonate
	3 oz (85 g)	5.5 oz (156 g)	0.5 oz (14 g)
		-	
	1 Year	1 Year	1 Year

## BIMETAL COOKING THERMOMETERS

Our specialty foodservice thermometers are marked with correct temperature and hot holding, you will get the results you want every time.

- ▶ HACCP GUIDELINES
- ▶ STAINLESS STEEL CONSTRUCTION



**2237-04**  
Make the perfect espresso every time!



	2200-07	2237-04
	Cooling Thermometer	Espresso Thermometer
Temperature Range:	30° to 165°F	0° to 220°F (-10° to 104°C)
Accuracy:	±2°F (±1°C)	±2°F (±1°C)
Housing Material:	Stainless Steel	Stainless Steel
Dial Diameter:	2" (50 mm)	1.75" (44 mm)
Stem Diameter:	0.197" (6.3 mm)	0.15" (3.8 mm)
Stem Length:	18" (466 mm) w/ vessel clip	7" (178 mm) w/ vessel clip
Lens Material:	Glass	Magnifying Polycarbonate
Weight:	3 oz (85 g)	1 oz (28 g)
Regulatory Listings:		
Warranty:	1 Year	1 Year

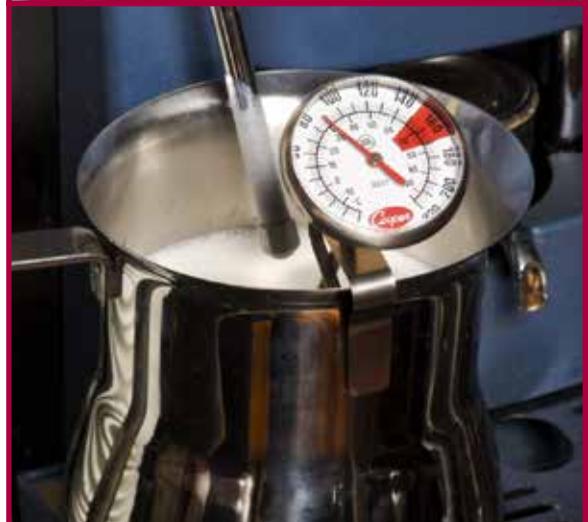
zones for food safety and product quality. With a large selection of NSF-listed thermometers specifically for cooking



2238-14	24HP	26HP
8" Stem Test	Oven Thermometer	Holding Cabinet Thermometer
50° to 550°F (10° to 288°C)	100° to 600°F (50° to 300°C)	100° to 175°F (38° to 80°C)
±5°F (±3°C)	±25°F (12.5°C)	±3°F (1.5°C)
-	Stainless Steel	Stainless Steel
2" (50 mm)	2" (50 mm)	2" (50 mm)
0.15" (3.8 mm)	-	-
8" (203 mm) w/ vessel clip	-	-
Glass	Glass	Glass
1 oz (28 g)	1.5 oz (43 g)	1.5 oz (43 g)
		
1 Year	1 Year	1 Year



**2200-07**  
Cooling Thermometer  
Monitor temperatures as it cools



**24HP**  
Voted Most Reliable Oven  
Thermometer by America's  
Test Kitchen

## REFRIGERATOR AND FREEZER THERMOMETERS

Freezers and coolers protect the freshness of food and ingredients. Temperature meters and wireless monitoring are available. Keep constant and accurate

- ▶ HACCP GUIDELINES
- ▶ FOOD GRADE PLASTIC



	25HP	330	335	
	Refrigerator Thermometer	Vertical Glass Tube	Horizontal Glass Tube	
Temperature Range:	-20° to 80°F (-29° to 27°C)	-40° to 120°F (-40° to 50°C)	-40° to 80°F (-40° to 25°C)	
Accuracy:	±2°F (±1°C)	±2°F (±1°C)	±2°F (±1°C)	
Housing Material:	Stainless Steel	Food Grade Plastic	Stainless Steel	
Dimensions:	2.375 x 1.5" x 3" (60 mm x 38 mm x 76 mm)	0.625 x 0.25" x 4.25" (16 mm x 6.4 mm x 108 mm)	4.75 x 0.875" x 1.125" (121 mm x 22mm x 29mm)	
Lens Material:	Glass	-	Food Grade Polycarbonate	
Weight:	1.5 oz (43 g)	0.25 oz (7 g)	1 oz (28 g)	
Regulatory Listings:				
Warranty:	1 Year	1 Year	1 Year	

systems from small mechanical thermometers that hang or stick inside refrigerated units to more sophisticated panel temperatures to stay compliant and prevent food spoilage.



	535	2560	PM180
	Cooler Thermometer	Digital Thermometer	Dual-Cool
	-20° to 120°F (-30° to 50°C)	-22° to 122°F (-30° to 50°C)	-25° to 180°F (-32° to 82°C)
	±5°F (±2°C)	±1°F (±0.5°C)	±2°F (±1°C)
	Plastic	Antimicrobial Plastic	Plastic
	2" (51 mm)	3.562 x 1.25" x 3.5" (90 mm x 32 mm x 89 mm)	-
	Plastic	Food Grade Polycarbonate	-
	0.5 oz (14 g)	1.5 oz (43 g)	5 oz (142 g)
	-	CE NSF RoHS	CE RoHS
	1 Year	Lifetime	1 year



**RECALL SEPARATE MIN / MAX TEMPERATURES FOR EACH PROBE!**

- PM180-01**
- PM180 Panel Thermometer
  - 2013 Air Probe
  - 2113 Solid Simulator Probe

- PM180-02**
- PM180 Panel Thermometer
  - (2) 2013 Air Probe

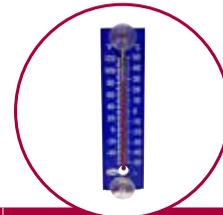
- PM180-03**
- PM180 Panel Thermometer
  - (2) 2113 Solid Simulator Probe

**Dual-Cool (PM180)**  
Cooper-Atkins' first dual temperature panel thermometer with interchangeable probes, Min/Max alarm settings and Hi/Lo temperature recall. Equipped with user-adjustable settings, it can simultaneously measure temperatures within two separate storage environments.

## STORAGE AND WALL

Short term holding for perishable and potentially hazardous foods must be monitoring of temperatures in critical food-related areas and increase employee

- ▶ **HACCP GUIDELINES**
- ▶ **OVERSIZED WALL THERMOMETERS FOR EASY VIEWING**



	268	212-150-8
	Glass Stick Indoor/Outdoor	12" Wall w/ Humidity Scale
Temperature Range:	40° to 120°F (-40° to 50°C)	-40° to 120°F (-40° to 50°C)
Accuracy:	±2°F (±1°C)	±3°F (1.5°C)
Lens Dimensions:	-	11.5" (292 mm)
Lens Material:	-	Plastic with UV additive
Weight:	2 oz (57 g)	15 oz (425 g)
Warranty:	1 Year	1 Year
RH Range:	-	0 to 100%
RH Accuracy:	-	±5% @ 50 to 99% RH

monitored carefully. Foods in dry storage also require proper monitoring. Our oversized wall thermometers allow easy awareness.



212-158-8	212-159-8	212-159C-8	255-06	255-14
12" Dry Storage/ Prep w/ Humidity Scale	12" Cooler/ Freezer w/ Humidity Scale	12" Cooler/ Freezer w/ Humidity Scale, Celsius	6" Indoor/ Outdoor	6" Cooler/ Freezer
10° to 80°F	-10° to 80°F	-25° to 35°C	60° to 120°F (-50° to 50°C)	10° to 80°F
±3°F	±3°F	±1°C	±2°F (±1°C)	±2°F
11.5" (292 mm)	11.5" (292 mm)	11.5" (292 mm)	3.75" (95 mm)	3.75" (95 mm)
Plastic with UV additive	Plastic with UV additive	Plastic with UV additive	Clear Acrylic	Clear Acrylic
15 oz (425 g)	15 oz (425 g)	15 oz (425 g)	3 oz (85 g)	3 oz (85 g)
1 Year	1 Year	1 Year	1 Year	1 Year
0 to 100%	0 to 100%	0 to 100%	-	-
±5% @ 50 to 99% RH	±5% @ 50 to 99% RH	±5% @ 50 to 99% RH	-	-

## PANEL METERS

Easily monitor the internal temperature of your coolers and freezers without use in walk-in refrigerators, display cases, holding and specialty cabinets, dairy

- ▶ **RETRO-FIT APPLICATIONS**
- ▶ **REMOTE INTERIOR TEMPERATURE READINGS**



	DM120	DM120S-0-3		6142-13	
	Front Flange, Back Connect	Back Flange, Back Connect		Front Flange, Back Connect	
Temperature Range:	-40° to 120°F (-40° to 48°C)	-40° to 120°F (-40° to 48°C)		-40° to 120°F (-40 to 50°C)	
Accuracy:	±2°F (±1°C)	±2°F (±1°C)		±2°F (±1°) at 10° and 40°F (-12° and 4.5°C) ±5°F (±2.5°C) at 110°F (43°C)	
Resolution:	0.1°	0.1°			
Ambient Operating Range:	15° to 150°F up to 90% non-condensing	15° to 150°F up to 90% non-condensing			
Response Time:	30 second updates	30 second updates			
LCD:	1.3" x 0.5" (33 mm x 13 mm)	1.3" x 0.5" (33 mm x 13 mm)			
Lead Length:	39" (1 m)	39" (1 m)			
Case Material:	Stainless Steel	Stainless Steel		Stainless Steel	
Case Dimensions:	3.0" x 1.375" (76 mm x 27 mm)	3.47" x 1.1" (88 mm x 28 mm)			
Power:	(1) 1.5V #LR754	(1) 1.5V #LR754			
Mounting:	Front Flange	Back Flange		Flush	
Weight:	2.5 oz (71 g)	3.5 oz (999 g)		5 oz (142 g)	
Regulatory Listings:	CE NSF RoHS	CE NSF RoHS		RoHS	
Warranty:	1 year	1 year		1 year	

opening the door. Our NSF-listed panel meters offer an easy solution to reading internal air temperatures perfect for cases, freezers and more.



	6142-06	6142-20 6142-58	6642-06	6812-02	7112-01 7612-06
	Front Flange, Back Connect	Front Flange, Back Connect	Strap Hang, Bottom Connect	Back Flange, Back Connect	Front Flange, Back Connect
	40° to 240°F (10° to 115°C)	-40° to 60°F (-40° to 15°C)	-40° to 60°F (-40° to 15°C)	-40° to 120°F (-40° to 50°C)	-40° to 60°F (-40° to 15°C)
	±2°F (±1°C) from 140° to 210°F (60 to 99°C)	±2°F (±1°C) at 10° to 40°F (-12° to 4.5°C)	±2°F (±1°C) at 10° to 40°F (-12° and 4.5°C)	±2°F (±1°C) at 10° to 40°F (-12° and 4.5°C) ±5°F (±2.5°C) at 110°F (43°C)	±2°F (±1°C) at 10° to 40°F (-12° to 4.5°C)
	2" (51 mm)	2" (51 mm)	2" (51 mm)	2" (51 mm)	2.5" (64 mm)
	48" (1.2 m)	48" (1.2 m) - 6142-20 20' (6.1 m) - 6142-58	48" (1.2 m)	48" (1.2 m)	Strap Hanger (7612-06)
	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Front	Front	Strap Hanger no flange	Back	Front - 7112-01 Bottom - 7612-06
	Back	Back	Bottom	Back	Back - 7112-01 -
	Flush	Flush	-	Surface	Flush - 7112-01 -
	5 oz (142 g)	5 oz (142 g)	5 oz (142 g)	5 oz (142 g)	7 oz (198 g) - 7112-01 5.6 oz (159 g) - 7612-06
	RoHS	RoHS	RoHS	RoHS	RoHS
	1 year	1 year	1 year	1 year	1 year

## DIGITAL PANEL METERS

Easily monitor the internal temperature of your coolers and freezers without use in walk-in refrigerators, display cases, holding and specialty cabinets, dairy

### ▶ RETRO-FIT APPLICATIONS ▶ REMOTE INTERIOR TEMPERATURE READINGS



	DM450	PM120-08	PMRH120	SP120
	Front Flange, Back Connect	Mini Rectangular, White	Mini Rectangular, Temp & Humidity	Square Solar Panel
Temperature Range:	-40° to 450°F (-40° to 230°C)	-40° to 122°F (-40° to 50°C)	-12° to 140°F (-24° to 60°C)	-58° to 158°F (-50° to 70°C)
Accuracy:	±2°F (±1°C) from -40° to 300°F ±2% of reading from 301° to 450°F	±1.8°F (±1°C) from -4° to 122°F (-20° to 50°C) ±3.6°F (±2°C) below -4°F (20°C)	±2°F (±1°C) ±5% RH from 30° to 75%RH/ at 32° to 122°F (0° to 50°C)	±2°F (±1°C)
Resolution:	0.1°	0.1°	0.1°/1% RH	0.1°
Ambient Operating Range:	0° to 150°F up to 90% non-condensing	0° to 120°F up to 90% non-condensing	0° to 120°F up to 90% non-condensing	0° to 120°F up to 90% non-condensing
Response Time:	30 seconds 10 second updates	30 seconds	5 seconds	30 seconds 10 second updates
LCD:	1.3" x 0.5" (33 mm x 13 mm)	1.875" x 0.625" (48 mm x 16 mm)	1.875" x 0.625" (48 mm x 16 mm)	1.875" x 0.625" (48 mm x 16 mm)
Lead Length:	39" (1 m)	39" (1 m)	39" (1 m)	10' (3 m)
Case Material:	Stainless Steel	Polycarbonate	Polycarbonate	ABS
Case Dimensions:	3.0" x 1.375" (76 mm x 27 mm)	2.7" x 1.4" x 1.1" (69 mm x 36 mm x 28 mm)	2.75" x 1.5" x 1" (70 mm x 38 mm x 25 mm)	2.75" x 2.75" x .75" (70 mm x 70 mm x 19 mm)
Power:	(1) 1.5V #LR754	(1) 1.5V AA	(1) 1.5V AA	Solar w/ battery back-up (1) 1.5V A76
Mounting:	Front Flange	Optional Mounting Flange (Model 9302)	Optional Mounting Flange (Model 9302)	Hangs
Weight:	3 oz (85 g)	2 oz (57 g)	2.5 oz (71 g)	2.5 oz (71 g)
Regulatory Listings:	CE  RoHS	CE  RoHS	CE  RoHS	CE  RoHS
Warranty:	1 year	1 year	1 year	1 year

opening the door. Our NSF-listed panel meters offer an easy solution to reading internal air temperatures perfect for cases, freezers and more. Our digital panel meters are suitable for a wide range of applications.



SP160
Rectangular Solar
-58° to 158°F (-50° to 70°C)
±1°F (0.5°C) from 32° to 122°F (0 to 50°C) ±2°F from -4° to 32°F (-20° to 50°C) ±3.6°F/2°C <-4°F (-20°C) and > 122°F (50°C)
0.1°
0° to 120°F up to 90% non-condensing
10 second updates
1.4" x 0.5" (36 mm x 13 mm)
48" (1.2 m)
ABS
4.5" x 1.125" x .625" (114 mm x 29 mm x 16 mm)
Solar w/ battery back-up (1) 1.5V AAA
Hangs
3 oz (85 g)
CE RoHS
1 year

	T158	TRH122M	TRH158-0
	Digital w/ Remote Sensor	Mini Thermometer Hygrometer	Min/Max Thermometer Hygrometer
Temperature Range:	(Internal) 32° to 122°F (0° to 50°C) (External) -58° to 158°F (-50° to 70°C)	14° to 122°F (-10° to 50°C)	32° to 122°F (0° to 50°C)
Accuracy:	±2°F (±1°C)	±2°F (±1°C)	±2°F (±1°C) ±5% RH
Humidity:		10% to 99% RH	25% to 90% RH
RH Accuracy:	-	±5% from 25% to 95% RH	±5%
Unit Dimensions:	5" x 1.5" x 3.5" (127 mm x 38mm x 89mm)	2.75" x .75" x 4.25" (17 mm x 19mm x 108mm)	5" x .875" x 3.5" (127 mm x 22mm x 89mm)
Resolution:	-	0.1°	0.1°/1.0%RH
Display - LCD	2.875" x 2.125" (73 mm x 54 mm)	1.5" x 0.5" (38 mm x 13 mm)	2.875" x 2.125" (73 mm x 54 mm)
Power:	(1) 1.5V Battery AAA	(1) 1.5V Battery AAA	(1) 1.5V Battery AAA
Mounting:	Hangs or Stands	Hangs	Hangs or Stands
Weight:	5.5 oz (156 g)	3 oz (85 g)	4.5 oz (127 g)
Regulatory Listings:	CE RoHS	CE RoHS	CE RoHS
Warranty:	1 Year	1 Year	1 Year

# AFL DIGITAL THERMOMETERS

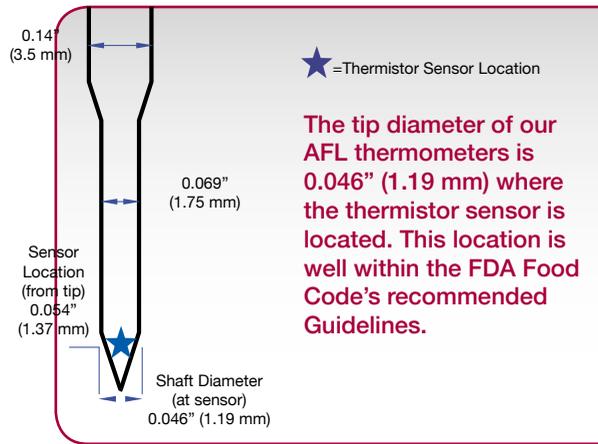
Thermistor-based technology has developed over time to produce an inexpensive, temperature range. Our digital pocket tests will help you obtain readings faster durable, the AFL line of digital thermometers boast the industry's only Lifetime



- ▶ EASY READ DIGITAL DISPLAY
- ▶ LIFETIME WARRANTY
- ▶ QUICK RESPONSE TIME

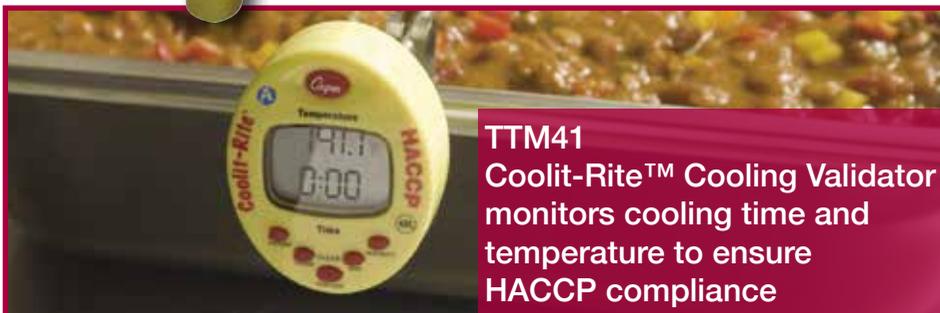


- 1 Waterproof IPX7
- 2 Max/Min and Hold Modes
- 3 Antimicrobial Plastic
- 4 Flashing Temperature Alarm
- 5 °F/°C Selectable
- 6 Reduced Tip for <6 Second Response Time



Not to Scale

	DFP450W	
	Pocket Test w/ Temperature Alarm	
Temperature Range:	-40° to 450°F (-40° to 232°C)	
Accuracy:	±2°F (±1°C)	
Resolution:	0.1°	
Response Time (in liquid):	<6 seconds	
LCD Display:	0.875" x 0.375 (22 mm x 9.5mm)	
Stem Length:	4.75" (121 mm)	
Power:	(1) 1.5V #LR44	
Battery Life:	500 Hours	
Auto Off:	10 min.	
Water Resistance Rating:	IPX7 Dishwasher Safe	
Regulatory Listings:	CE NSF RoHS	



**TTM41 Coolit-Rite™ Cooling Validator** monitors cooling time and temperature to ensure HACCP compliance

accurate and quick-responding digital thermometer. Thermistor instruments can be very accurate within a limited because the thermistor sensor located in the tip of the stem and they have easy to read LCD displays. Made to be Warranty!



**DPP400W**

**DPP800W**

**TTM41**

**TTM41-10**

Pen-Style  
Pocket Test

MAX Pocket  
Test with  
Extended Sheath

15" Stem  
Coolit-Rite  
Cooling Validator

10" Stem  
Coolit-Rite  
Cooling Validator

-40° to 392°F  
(-40° to 200°C)

-40° to 450°F  
(-40° to 232°C)

-4° to 302°F  
(-20° to 150°C)

-4° to 302°F  
(-20° to 150°C)

±2°F (±1°C)

±1°F (0.5°C)

±2°F (±1°C)

±2°F (±1°C)

0.1°

0.1°

0.1°

0.1°

<6 seconds

<6 seconds

-

-

0.975" x 0.25  
(22 mm x 6mm)

1.5" x 0.5  
(38 mm x 13mm)

1.25" x 1  
(32 mm x 25mm)

1.25" x 1  
(32 mm x 25mm)

2.75" (70 mm)

4" (102 mm)

15" (381 mm)

10" (254 mm)

(1) 1.5V #LR44

(1) 1.5V #LR44

(1) 1.5V #LR44

(1) 1.5V #LR44

500 Hours

500 Hours

1 Year

1 Year

10 min.

10 min.

-

-

IPX7

IPX7  
Dishwasher Safe

Water  
Resistant

Water  
Resistant



**DFP450W**  
Digital Pocket Test  
with Temperature Alarm



**DPP400W**  
Pen-style  
Digital Pocket Test



**DPP800W**  
MAX  
Digital Pocket Test

## INFRARED THERMOMETERS

Non-contact infrared thermometers measure surface temperatures fast. These thermometers are perfect for measuring items in display cases, salad bars, and

Optical resolution is expressed as a ratio of the distance to the object and resolution, and the smaller the spot size that can be measured. The laser

- ▶ QUICKLY MEASURE SURFACE TEMPERATURES
- ▶ LASER SIGHTING



462  
Slim-Line Infrared



481  
DualTemp2 Infrared  
with RTD Probe



412  
Gun-style Infrared  
with thermocouple  
jack



	412	462
	Infrared w/ Thermocouple Jack	Slim-Line Infrared
Temperature Range:	Infrared -76° to 932°F (-60° to 500°C) Type K Thermocouple Jack -83° to 1999°F (-64° to 1400°C)	-40° to 536°F (-40° to 280°C)
Infrared Accuracy:	Infrared ±4°F (±2°C)	Infrared ±2°F (±1°C)
Probe Accuracy:	Thermocouple Jack ±2°F (±1°C)	-
Resolution:	0.1°/1° above 200°F	0.1°/1° above 230°F
Ambient Operating Range:	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)
Laser:	Single Dot	Single Dot
Distance to Spot (D:S):	12:1	6:1
Emissivity:	0.95 default Adjustable from 0.10 to 1.0	Preset at 0.97
Power:	(2) 1.5V AAA	(1) 9V battery
Battery Life:	180 Hours	12 Hours
Auto Off:	60 sec.	7 sec.
Weight:	6 oz (170 g)	5 oz (142 g)
Regulatory Listings:	CE <del>RoHS</del>	CE <del>RoHS</del>
Warranty:	1 Year	1 Year

units are lightweight, ergonomically designed and eliminate cross-contamination during temperature checks. Infrared buffers.

the diameter of the temperature measurement area. The larger the ratio number, the better the instrument's sighting included in some instruments assists in aiming at the measured spot.

► PREVENTS CROSS CONTAMINATION



470	480	481
Mini Infrared	DualTemp Infrared and Probe	DualTemp with Platinum RTD Probe
-27° to 428°F (-33° to 220°C)	Infrared -27° to 428°F (-33° to 220°C) Probe -67° to 626°F (-55° to 330°C)	Infrared -40° to 536°F (-40° to 280°C) Probe -40° to 392°F (-40° to 200°C)
Infrared ±3.6°F (±2°C)	Infrared ±4°F (±2°C)	Infrared ±2°F (±1°C)
-	Thermocouple Jack ±2°F (±1°C)	RTD Probe ±1°F (±0.5°C)
0.1°/1° above 200°F	0.1°/1°F above 200°F	0.1°
32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)
-	-	Illumination Beam
1:1	1:1	3:1
Preset at 0.95	0.95 default Adjustable from 0.10 to 1.0	Preset at 0.97
(1) #CR2032	(1) #CR2032	(1) 9V battery
40 Hours	40 Hours	100 Hours
15 sec.	15 sec.	20 sec.
1 oz (28 g)	2.5 oz (72 g)	6 oz (170 g)
CE RoHS	CE RoHS	CE NSF RoHS
1 Year	1 Year	1 Year

**TIMERS**

Time and temperature are joint components for many applications. Cooper-control, stopwatch capabilities, wall or magnet mounting, non-skid rubber feet

- ▶ **LARGE, EASY READ DISPLAY**
- ▶ **ADJUSTABLE VOLUME CONTROL**
- ▶ **MEMORY RECALL FEATURE**



- Programmable time and temperature alarms
- Set a “High” alarm when monitoring the cooking process
- Set a “Low” alarm for monitoring the cooling process
- Replacement Probe (#9406) is available



Wire hanger is perfect for mounting on coffee urns and air pots.



**FT24 Timer**  
With volume control and a flashing red light when alarm goes off

	<b>DTT361-01</b>	
	<b>Cook N Cool Thermo-Timer</b>	
<b>Unit Range:</b>	-25° to 392°F (-310° to 200°C) 23:59:59 Hours	
<b>Resolution:</b>	1 second	
<b>Power Source:</b>	(3) 1.5V AAA	
<b>Memory / Recall:</b>	Yes	
<b>Modes:</b>	Clock, Timer, Preset Temperature	
<b>Alarm Level (Decibel):</b>	80 decibels	
<b>Housing:</b>	ABS Plastic	
<b>LCD Dimensions:</b>	2.25" x 1.5" (57 mm x 38 mm)	
<b>Weight:</b>	7 oz (198 g)	
<b>Regulatory Listings:</b>	CE RoHS NSF COMPONENT	
<b>Warranty:</b>	1 Year	

Atkins' timers are popular because of their large, easy-to-read displays. Our digital timers feature an adjustable volume and grease-resistant keypads. Recall settings help save time in the kitchen.



FT24	TC6	TFS4	TM60	TS100	TW3
Large Single-Station Timer	Six-Button Timer	Multi-Station Timer	Long Ring Mechanical Timer	Timer/Stopwatch	Large Digit Multi-Function Timer
23:59:59 Hours	23:59:59 Hours	99 Hours 59 Minutes	0 to 60 Minutes	99 Minutes 59 Seconds	99 Minutes 59 Seconds
1 second	1 second	Hours/Minutes Minutes/Seconds	1 minute	1 second	1 second
(4) 1.5V "C"	1.5V AAA	(4) 1.5V "C" 9374 AC Adapter (optional)	Wind up	1.5V LR44	1.5V LR44
Yes	Yes	Yes	-	Yes	Yes
-	Counts up/down	Counts up/down	Counts down	Counts up	Counts down, counts up after set time is reached
90 decibels	85 decibels	90 decibels	70 decibels	70 decibels	70 decibels
ABS Plastic	ABS Plastic	ABS Plastic	Stainless Steel	ABS Plastic	ABS Plastic
0.875" x 2.25" (22 mm x 54 mm)	0.625" x 1.625" (16 mm x 41 mm)	3" x 3" (76 mm x 76 mm)	-	-	1.5" x 2.5" (38 mm x 76 mm)
1 lb 3 oz (539 g)	2 oz (57 g)	1 lb 6 oz (523 g)	4 oz (113 g)	1 oz (28 g)	3 oz (85 g)
CE	CE <del>RoHS</del>	CE <del>RoHS</del>	-	CE <del>RoHS</del>	CE <del>RoHS</del>
1 Year	1 Year	1 Year	1 Year	1 Year	1 Year

# ECONOTEMP

Get advanced technology at an affordable price. The EconoTemp™ is a general speed and more versatility. The removable rubber boot provides superior impact

The slim line design sits nicely in the palm of your hand and provides an

- ▶ **INDUSTRY LEADING 5-YEAR WARRANTY**
- ▶ **ERGONOMIC DESIGN**
- ▶ **WATER RESISTANT**



## Instruments



	32311	32322	93013-K
	EconoTemp™	EconoTemp™ Plus	
Temperature Range:	-40° to 500°F (-40° to 260°C)	-40° to 1000°F (-40° to 538°C)	32311-K Instrument
Accuracy:	±1°F (±0.5°C)	±1°F (±0.5°C)	50012-K Probe
Housing Material:	ABS	ABS	50306-K Probe
Resolution:	1°	0.1° up to 495°F (257°C)	50335-K Probe
Power:	(3) 1.5V AAA	(3) 1.5V AAA	14057 Case
Battery Life:	4500 hours	4500 hours	
Auto Off:	10 min.	10 min.	
Weight:	6 oz (170 g)	6 oz (170 g)	
Regulatory Listings:	CE NSF RoHS	CE RoHS	
Warranty:	5 Year	5 Year	

purpose, thermocouple temperature monitoring instrument that is a step up from the digital pocket test, offering greater resistance and has molded tabs on the side to hold and store most needle probes.

ergonomic grip.

**Kits**



**93230-K**

**93232-K**

**93233-K**

**93237-K**

**94020-K**

**KIT INCLUDES:**

	32311-K Instrument				
	50336-K Probe	50306-K Probe	50012-K Probe	31901-K Probe	50337-K Probe
	9368 Wall Bracket	50336-K Probe	50306-K Probe	31905-K Probe	9368 Wall Bracket
		14235 Case	50336-K Probe	31907-K Probe	
		9368 Wall Bracket	14235 Case	14240 Case	
			9368 Wall Bracket	9368 Wall Bracket	

# AQUATUFF

For a durable, fast response thermocouple, look no further than the AquaTuff the AquaTuff™ name implies, are IPX7 waterproof rated for greater reliability and areas.

The non-Wrap-n-Stow enclosure design allows for maximum versatility and can

- ▶ **INDUSTRY LEADING 5-YEAR WARRANTY**
- ▶ **IPX7 WATERPROOF**
- ▶ **ERGONOMIC DESIGN**



**93970-K  
AquaTuff™  
Thermocouple Kit**



**Easy twist-open  
battery hatch  
9370**

**35100-K  
AquaTuff™  
Thermocouple Instrument**

## Instruments



	35100	35200
	Waterproof Thermocouple	Waterproof Thermocouple
Temperature Range:	-100° to 999°F (-73° to 537°C)	-100° to 999°F (-73° to 537°C)
Accuracy:	±0.5°F (±0.3°C)	±0.5°F (±0.3°C)
Housing Material:	ABS Plastic	ABS Plastic
Resolution:	0.1°	0.1°/ 1° selectable
Hold:	-	Yes
Backlight:	-	Yes
Power:	(2) 1.5V AAA	(2) 1.5V AAA
Battery Life:	1800 hours	1800 hours
Auto Off:	10 min.	10 min.
Replacement Item For:	38653-K 38658-K	39658-K
Weight:	5 oz (142 g)	5 oz (142 g)
Regulatory Listing:	CE NSF RoHS	CE NSF RoHS
Warranty:	5 Year	5 Year

series. The AquaTuff™ Series Thermocouple Instruments are highly accurate, NIST traceable and most importantly, as durability in harsh environments. They are ideally suited for wet, steam-filled environments in kitchens and processing

be used with any Type K thermocouple probe.



**Kits**



93086-K

93970-K

94003-K

**KIT INCLUDES:**

35100-K Instrument	35200-K Instrument	35100-K Instrument
50012-K Probe	50012-K Probe	50209-K Probe
50209-K Probe	50306-K Probe	9369 Wall Bracket
50306-K Probe	50335-K Probe	
14235 Medium Case	14235 Medium Case	

THE NON WRAP&STOW™ INSTRUMENTS ARE COMPATIBLE WITH ANY TYPE K THERMOCOUPLE PROBE FOR MAXIMUM VERSATILITY. THERMOCOUPLE INSTRUMENTS AND PROBES ALSO AVAILABLE IN TYPE J AND T

**IPX7 WATERPROOF**

All the AquaTuff™ instruments are IPX7 waterproof rated and durable for harsh environments.

An IPX7 level reading means the instrument can be completely submerged in 1 meter of water for 30 minutes without water damage.



# AQUATUFF™ WRAP & STOW™

The AquaTuff series with Wrap&Stow™ probes are the right choice when accuracy calibrated with a TRUE 0.9°F accuracy and probes can be replaced in the field heavy duty, patented probe can be stored safely alongside the unit housing.

Wrap & Stow probes can be replaced at your location and maintain a total

The 35340 AquaTuff includes an Intelligent Stabilization (ITS) feature that includes a memory function that can store up to 250 readings.

- ▶ **INDUSTRY LEADING 5-YEAR WARRANTY**
- ▶ **IPX7 WATERPROOF**
- ▶ **UNIQUE CABLE STORAGE CHANNEL**

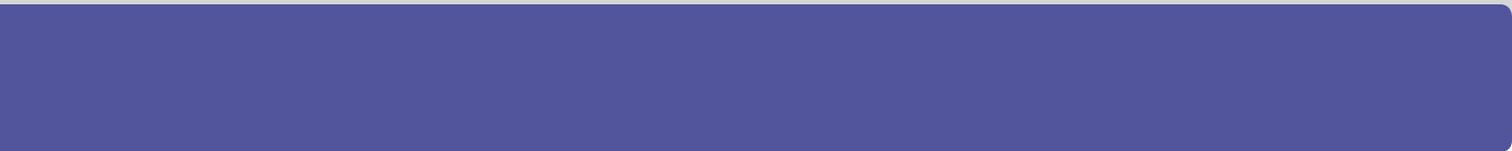
## Instruments



	35132	35135	35140	35232	35235
	w/ DuraNeedle Probe	w/ Angled Surface Probe	w/ MicroNeedle Probe	w/ DuraNeedle	w/ Angled Surface Probe
Temperature Range:	-100° to 500°F (-73° to 260°C)	-100° to 500°F (-73° to 260°C)	-100° to 500°F (-73° to 260°C)	-100° to 500°F (-73° to 260°C)	-100° to 500°F (-73° to 260°C)
Accuracy:	±0.9°F (±0.5°C) total system accuracy	±0.5°F (±0.3°C)	±0.9°F (±0.5°C) total system accuracy	±0.9°F (±0.5°C) total system accuracy	±0.5°F (±0.3°C)
Housing Material:	ABS Plastic	ABS Plastic	ABS Plastic	ABS Plastic	ABS Plastic
Resolution:	0.1°	0.1°	0.1°	0.1°/ 1° selectable	0.1°/ 1° selectable
Hold:	No	No	No	Yes	Yes
Backlight:	No	No	No	Yes	Yes
Power:	(2) 1.5V AAA	(2) 1.5V AAA	(2) 1.5V AAA	(2) 1.5V AAA	(2) 1.5V AAA
Battery Life:	1800 hours	1800 hours	1800 hours	1800 hours	1800 hours
Auto Off:	10 min.	10 min.	10 min.	10 min.	10 min.
Weight:	7 oz (199 g)	8 oz (227 g)	7 oz (199 g)	7 oz (199 g)	8 oz (227 g)
Regulatory Listings:	CE NSF RoHS	CE RoHS	CE NSF RoHS	CE NSF RoHS	CE RoHS
Warranty:	5 Year Instrument	5 Year Instrument	5 Year Instrument	5 Year Instrument	5 Year Instrument
Probe Response Time:	1 second (Liquid)	2 seconds (Oiled Surface)	1 second (Liquid)	1 second (Liquid)	2 seconds (Oiled Surface)

is your top priority. Total system accuracy ensures this instrument and probe combination will deliver. The probe is without the need for recalibration. Wrap&Stow™ designs are available with a unique, cable storage channel so that the system accuracy within food safety guidelines without need for further calibration.

prevents the temperature from being displayed until a stabilized temperature is reached. The ITS mode also



	35240	35340
	w/ MicroNeedle Probe	ITS w/ MicroNeedle Probe
	-100° to 500°F (-73° to 260°C)	-100° to 500°F (-73° to 260°C)
	±0.9°F (±0.5°C) total system accuracy	±0.9°F (±0.5°C) total system accuracy
	ABS Plastic	ABS Plastic
	0.1°/ 1° selectable	0.1°
	Yes	-
	Yes	-
	(2) 1.5V AAA	(2) 1.5V AAA
	1800 hours	1800 hours
	10 min.	10 min.
	7 oz (199 g)	7 oz (199 g)
	CE NSF RoHS	CE RoHS
	5 Year Instrument	5 Year Instrument
	1 second (Liquid)	1 second (Liquid)

**Replacement Probe**



55032	55035	55040
DuraNeedle Replacement Probe	MicroNeedle Replacement Probe	Angled Surface Replacement Probe



**WRAP & STOW PROBES CAN BE REPLACED AT YOUR LOCATION AND MAINTAIN THE TOTAL SYSTEM ACCURACY WITHOUT CALIBRATION.**

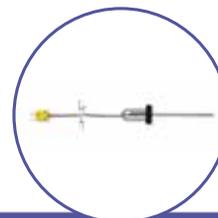
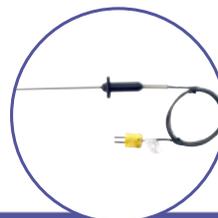


# THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most in the foodservice industry and are well suited for numerous tasks. Each probe resistant cables. Probes are designed and built to the highest standards allowing

Used to measure insertion and immersion temperatures of food products

- ▶ **MOST EXTENSIVE PROBE LINE IN THE INDUSTRY**
- ▶ **ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY**



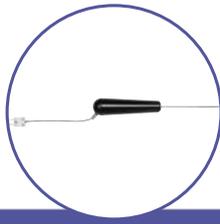
	31901-K	39035-K	49122-K
	Needle Probe	1/8" Diameter Straight Cable	Ultra Fine Chisel Tip Probe 4" Stem
Temperature Range:	-40° to 400°F (-40° to 205)	-40° to 400°F (-40° to 205°C)	-100° to 500°F (-73° to 260°C)
Max Tip Temperature:	400°F (205°C)	400°F (205°C)	500°F (260°C)
Max Cable Temperature:	400°F (205°C)	400°F (205°C)	221°F (105°C)
Response Time (in liquid):	4 seconds	4 seconds	3 seconds
Shaft Length:	4" (102 mm)	4" (102 mm)	4" (102 mm)
Shaft Tip Diameter:	0.125" (3.2 mm)	0.125" (3.2 mm)	0.065" (1.7 mm)
Cable Length Max Extended:	24" (610 mm)	36" (914 mm) FEP Jacket	36" (914 mm) PVC Jacket
Weight:	1 oz (28 g)	1 oz (28 g)	1 oz (28 g)
Warranty:	1 Year	1 Year	1 Year

appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion-for probe interchangeability with minimal impact on total system accuracy.

including solids, semi-solids and liquids.

## ▶ CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS

### Insertion



49126-K	49135-K	50145-K	50101-K	50143-K
4" Reduced Tip - Straight Cable	4" Rugged Needle - Straight Cable	4" Rugged Needle - Coil Cable	Frozen Product Needle Probe	Heavy Duty Needle Probe
32° to 932°F (0° to 500°C)	-40° to 400°F (-40° to 205°C)	-40° to 500°F (-40° to 260°C)	-40° to 400°F (-40° to 205°C)	-40° to 500°F (-40° to 260°C)
932°F (500°C)	400°F (205°C)	500°F (260°C)	400°F (205°C)	500°F (260°C)
400°F (205°C)	400°F (205°C)	176°F (80°C)	400°F (205°C)	176°F (80°C)
1 second	4 seconds	4 seconds	4 seconds	5 seconds
4" (102 mm)	4" (102 mm)	4" (102 mm)	3" (76 mm)	4" (102 mm) 8", 18" and 24" Available
0.063" (1.6 mm)	0.125" (3.2 mm)	0.125" (3.2 mm)	0.150" (3.8 mm)	0.150" (3.8 mm)
36" (914 mm) FEP Jacket	36" (914 mm) FEP Jacket	48" (1.2 m) Polyurethane Jacket	30" (762 mm) Flexible Armored Cable	48" (1.2 m) Polyurethane Jacket
4 oz (113 g)	4 oz (113 g)	4 oz (113 g)	1 lb (454 g)	5 oz (142 g)
1 Year	1 Year	1 Year	1 Year	1 Year

# THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most in the foodservice industry and are well suited for numerous tasks. Each probe resistant cables. Probes are designed and built to the highest standards allowing

Used to measure insertion and immersion temperatures of food products

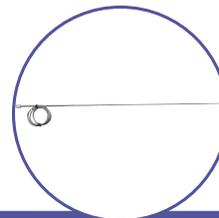
- ▶ **MOST EXTENSIVE PROBE LINE IN THE INDUSTRY**
- ▶ **ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY**



**50208-K**  
Fry Vat Probe Unique Depth Stop allows you to place probe through fryer basket ensures consistent temperature checks.



**50263-K Patty Probe**  
Unique probe insertion isolates heat transfer from probe tip to Depth Stop, resulting in highly accurate and repeatable temperature measurements.



	49140-K	50200-K
	High Temp Fry Vat probe Armored Cable	Vat Probe w/ Clip
Temperature Range:	32° to 2012°F (0° to 1100°C)	-40° to 400°F (-40° to 205°C)
Max Tip Temperature:	2012°F (1100°C)	400°F (205°C)
Max Cable Temperature:	400°F (205°C)	400°F (205°C)
Response Time (in liquid):	2 seconds	12 seconds
Shaft Length:	24" (610 mm)	8" (203 mm)
Shaft Tip Diameter:	0.188" (4.8 mm)	-
Cable Length Max Extended:	36" (914 mm) Flexible Armor	36" (914 mm) FEP Jacket
Weight:	6 oz (170 g)	2 oz (57 g)
Warranty:	1 Year	1 Year

appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion-for probe interchangeability with minimal impact on total system accuracy.

including solids, semi-solids and liquids.

▶ **CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS**

**Insertion**



50208-K	50209-K	50263-K	50264-K	50293-K	50294-K
Fry Vat Probe Armored Cable	MicroNeedle - Coil Cable	60° Patty Probe w/ 3/16" depth	60° Patty Probe w/ 1/4" depth	90° Patty Probe w/ 3/16" depth	90° Patty Probe w/ 1/4" depth
-40° to 400°F (-40° to 205°C)	-100° to 500°F (-73° to 260°C)				
400°F (205°C)	500°F (260°C)				
400°F (205°C)	176°F (80°C)				
8 seconds	1 second				
7.3" (185 mm)	3.5" (89 mm)	8" (203 mm)	8" (203 mm)	8" (203 mm)	8" (203 mm)
0.188" (4.8 mm)	0.043" (1 mm)	0.043" (1 mm)	0.043" (1 mm)	0.043" (1 mm)	0.043" (1 mm)
30" (762 mm) w/Flexible Armored Jacket	48" (1.2 m) Polyurethane Jacket				
3 oz (85 g)	2 oz (57 g)	3 oz (85 g)			
1 Year	1 Year	1 Year	1 Year	1 Year	1 Year

# THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most in the foodservice industry and are well suited for numerous tasks. Each probe resistant cables. Probes are designed and built to the highest standards allowing

Used to measure insertion and immersion temperatures of food products

- ▶ **MOST EXTENSIVE PROBE LINE IN THE INDUSTRY**
- ▶ **ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY**



**50316-K**  
Flat-tipped immersion probe that can be used to take surface temperatures.



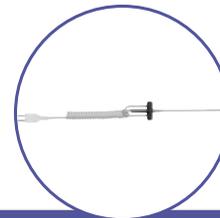
	50334-K	50335-K	50336-K
	DuraNeedle - Straight Cable	Needle Probe w/ Coil Cable	DuraNeedle - Coil Cable
Temperature Range:	-100° to 500°F (-73° to 260°C)	-40° to 500°F (-40° to 260)	-40° to 500°F (-40° to 260)
Max Tip Temperature:	500°F (260°C)	500°F (260°C)	500°F (260°C)
Max Cable Temperature:	400°F (205°C)	176°F (80°C)	176°F (80°C)
Response Time (in liquid):	1 second	4 seconds	2 seconds
Shaft Length:	4" (102 mm)	4.5" (114 mm) 8" and 10" Available	6" (152 mm)
Shaft Tip Diameter:	0.085" (2.2 mm)	0.125" (3.2 mm)	0.085" (2.2 mm)
Cable Length Max Extended:	34" (864 mm) Fluoroelastomer Jacket	48" (1.2 m) Polyurethane Jacket	48" (1.2 m) Polyurethane Jacket
Weight:	2 oz (57 g)	2 oz (57 g)	2 oz (57 g)
Warranty:	1 Year	1 Year	1 Year

appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion- for probe interchangeability with minimal impact on total system accuracy.

including solids, semi-solids and liquids.

## ▶ CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS

### Insertion



50360-K	50361-K	50426-K	50427-K	50316-K
Oven Needle Probe	Armored Meat Probe	4" Reduced Tip - Coil Cable	12" Reduced Tip - Coil Cable	4" Blunt Tip - Coiled Cable
-40° to 500°F (-40° to 260°C)	-40° to 400°F (-40° to 205°C)	32° to 932°F (0° to 500°C)	32° to 932°F (0° to 500°C)	-100° to 500°F (-73° to 260°C)
500°F (260°C)	400°F (205°C)	932°F (500°C)	932°F (500°C)	500°F (260°C)
600°F (316°C)	400°F (205°C)	176°F (80°C)	176°F (80°C)	176°F (80°C)
2 seconds	4 seconds	1 second	1 second	6 seconds (metal surface) / 1 second (liquid)
5.5" (140 mm)	3.875" (98 mm)	4" (102 mm)	12" (305 mm)	4" (102 mm)
0.085" (2.2 mm)	0.085" (2.2 mm)	0.063" (1.6 mm)	0.063" (1.6 mm)	0.125" (3.2 mm)
35" (889 m) Stainless Steel Overbraid	10' (3 m) Flexible Armor	48" (1.2 m) Polyurethane Jacket	48" (1.2 m) Polyurethane Jacket	48" (1.2 m) Polyurethane Jacket
1 oz (28 g)	6 oz (170 g)	5 oz (142 g)	5 oz (142 g)	2 oz (57 g)
1 Year	1 Year	1 Year	1 Year	1 Year

## THERMOCOUPLE PROBES

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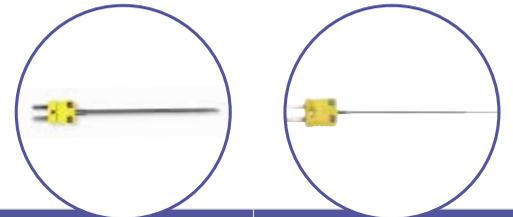
Direct Connect probes plug directly into the instrument without a cable to

- ▶ **MOST EXTENSIVE PROBE LINE IN THE INDUSTRY**
- ▶ **ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY**



50207-K  
MicroNeedle Probe

**DIRECT CONNECT  
PROBE ALLOWS FOR  
SINGLE-HANDED  
OPERATION!**



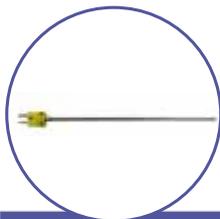
	49127-K	50207-K	
	Reduced-Tip Direct Connect	MicroNeedle - Chiseled Tip	
Temperature Range:	32° to 932°F (0° to 500°C)	-100° to 500°F (-73° to 260°C)	
Max Tip Temperature:	932°F (500°C)	500°F (260°C)	
Response Time: (in Liquid)	1 second	1 second	
Shaft Length:	4" (102 mm)	3.75" (95 mm)	
Shaft Tip Diameter:	0.063" (1.6 mm)	0.043" (1 mm)	
Cable Length Max Extended:	Direct Connect (no cable)	Direct Connect (no cable)	
Weight:	0.5 oz (14 g)	0.5 oz (14 g)	
Warranty:	1 year	1 year	

appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion- for probe interchangeability with minimal impact on total system accuracy.

provide easy one-handed operation.

▶ **CUSTOM MANUFACTURING AVAILABLE FOR  
UNIQUE APPLICATIONS**

**Direct Connect**



50210-K

50337-K

50405-K

51210-K

51337-K

MicroNeedle -  
Hemi Tip

DuraNeedle  
Direct Connect

Blunt-Tip Direct  
Connect

MicroNeedle  
w/ Flanged  
Connector

DuraNeedle  
w/ Flanged  
Connector

-100° to 500°F  
(-73° to 260°C)

500°F (260°C)

500°F (260°C)

500°F (260°C)

500°F (260°C)

500°F (260°C)

1 second

1 second

6 seconds  
(oiled surface)  
1 second (liquid)

1 second

1 second

3.75" (95 mm)

4" (102 mm)

7.5" (190 mm)

3.75" (95 mm)

4" (102 mm)

0.043" (1 mm)

0.085" (2.2 mm)

0.125" (3.2 mm)

0.043" (1 mm)

0.085" (2.2 mm)

Direct Connect  
(no cable)

0.5 oz (14 g)

0.5 oz (14 g)

.5 oz (14 g)

0.5 oz (14 g)

0.5 oz (14 g)

1 year

1 year

1 year

1 year

1 year

# THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most in the foodservice industry and are well suited for numerous tasks. Each probe resistant cables. Probes are designed and built to the highest standards allowing

Surface probes are suitable for measuring temperatures on a variety of surfaces.

Note: The major source of error in reading surface temperature is obtaining or grease to improve heat transfer; 2) use a large contact area and 3) press the

- ▶ **MOST EXTENSIVE PROBE LINE IN THE INDUSTRY**
- ▶ **ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY**



**50012-K**  
Swiveling bell sensor self-orientes to the surface for superior contact.



**50014-K**  
Weighted probe allows for hands-free use



	31907-K	50001-K	
	Bell Surface Probe	Right Angle Flat Surface Probe	
Temperature Range:	-40° to 400°F (-40° to 205°C)	-40° to 400°F (-40° to 205°C)	
Max Tip Temperature:	400°F (205°C)	400°F (205°C)	
Max Cable Temperature:	400°F (205°C)	400°F (205°C)	
Response Time:	5 seconds (oiled surface)	7 seconds (oiled surface)	
Shaft Length:	4" (102 mm)	9" (229 mm)	
Cable Length Max Extended:	24" (610 mm) Silicone Jacket	30" (762 mm) Flexible Armored Cable	
Weight:	1 oz (28 g)	6 oz (170 g)	
Warranty:	1 Year	1 Year	

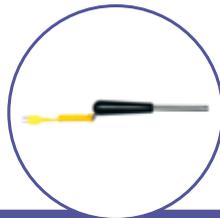
appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion-for probe interchangeability with minimal impact on total system accuracy.

Griddles or grills should be checked frequently to ensure that proper cooking temperatures are maintained.

adequate heat transfer from the surface into the measuring probe tip. To reduce this error: 1) use a small amount of oil probe's tip firmly against the measuring surface.

▶ **CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS**

**Surface**



50012-K	50014-K	50318-K	50319-K
120° Angle Surface Probe	Weighted Griddle Surface Probe	Ceramic Tip Straight Stem	Ceramic Tip - Right Angled
-40° to 500°F (-40° to 260°C)	-40° to 500°F (-40° to 260°C)	-40° to 1202°F (-40° to 650°C)	-40° to 1202°F (-40° to 650°C)
500°F (260°C)	500°F (260°C)	1202°F (650°C)	1202°F (650°C)
176°F (80°C)	400°F (205°C)	176°F (80°C)	176°F (80°C)
4 seconds (oiled surface)	2 seconds (oiled surface)	1 second (oiled surface)	1 second (oiled surface)
4.5" (114 mm)	-	4" (102 mm)	5" (127 mm)
48" (1.2 m)	30" (762 mm) Flexible Armored Cable	48" (1.2 m) Polyurethane Jacket	48" (1.2 m) w/ Polyurethane Jacket
5 oz (142 g)	2 lb (907 g)	5 oz (142 g)	6 oz (170 g)
1 Year	1 Year	1 Year	1 Year

## THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most in the foodservice industry and are well suited for numerous tasks. Each probe resistant cables. Probes are designed and built to the highest standards allowing

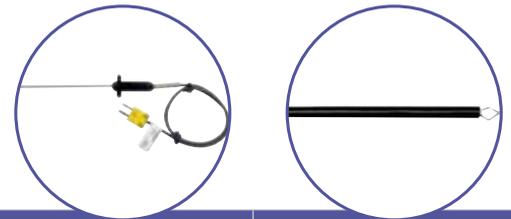
These probes are suitable for measuring air temperatures. Some are clip for attaching the sensor inside freezers, coolers or ovens.

- ▶ **MOST EXTENSIVE PROBE LINE IN THE INDUSTRY**
- ▶ **ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY**



50306-K  
Oven/Cooler/Freezer  
Probe w/ Clip

**NOTE: AIR HAS A LOW THERMAL CONDUCTIVITY AND DENSITY WHICH RESULTS IN SLOWER PROBE RESPONSE TIMES. TO ACHIEVE A MORE RAPID RESPONSE IN AIR TEMPERATURE, WAVE THE PROBE TIP BACK AND FORTH TO CREATE AIR MOTION ACROSS THE PROBE TIP.**



	31903-K	31905-K	
	Hand-Held Air Probe	Bare Tip Probe	
Temperature Range:	-40° to 400°F (-40° to 205°C)	-40° to 400°F (-40° to 205°C)	
Max Tip Temperature:	400°F (205°C)	400°F (205°C)	
Max Cable Temperature:	400°F (205°C)	400°F (205°C)	
Response Time:	9 seconds in 5 m/sec. air	1 sec. (liquid) 3 sec. 5 m/ sec. air	
Shaft Length:	4" (102 mm)	-	
Cable Length Max Extended:	24" (610 mm) Silicone Jacket	24" (610 mm) Silicone Jacket	
Weight:	1 oz (28 g)	1 oz (28 g)	
Warranty:	1 year	1 year	

appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion- for probe interchangeability with minimal impact on total system accuracy.

designed to measure ambient temperature, while other models monitor internal temperatures and include a

▶ **CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS**

**Air and Ambient**



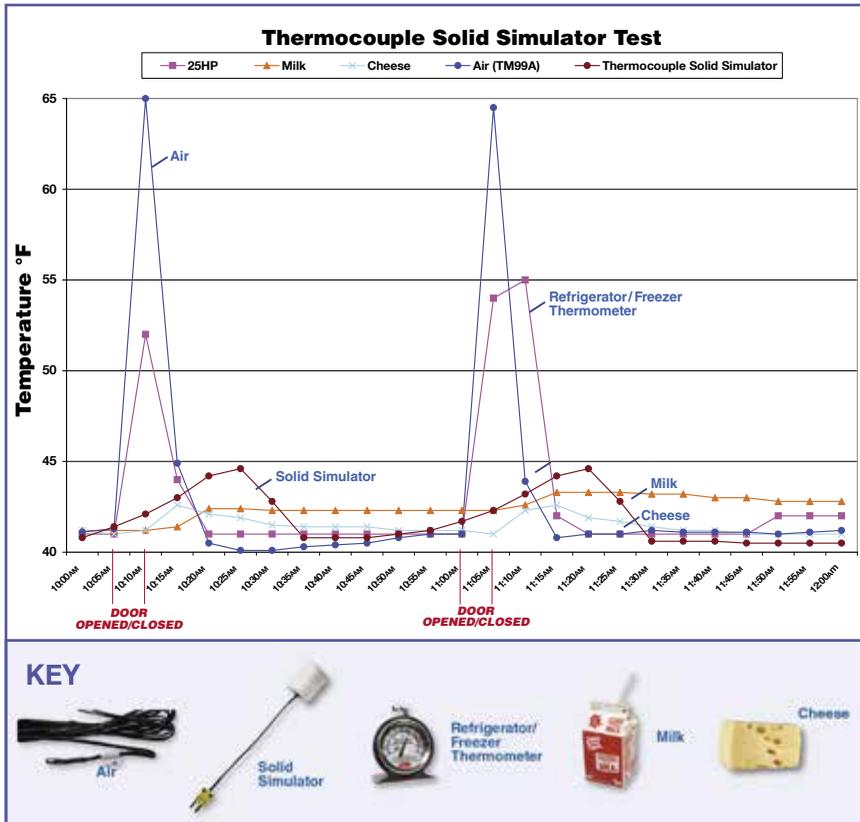
39032-K	49138-K	50302-K	50306-K	50332-K
Hand-Held Air Probe - Straight Cable	Bare Tip w/ 48" Cable	Air Probe w/ Shield/Clip	Oven/Cooler/Freezer Probe w/ Clip	Hand-Held Air Probe - Coil Cable
-328° to 400°F (-200° to 205°C)	32° to 896°F (0° to 480°C)	32° to 896°F (0° to 480°C)	-100° to 600°F (-73° to 316°C)	-100° to 500°F (-73° to 260°C)
400°F (205°C)	896°F (480°C)	896°F (480°C)	600°F (316°C)	500°F (260°C)
400°F (205°C)	896°F (480°C)	896°F (480°C)	600°F (316°C)	176°F (80°C)
11 seconds in 5 m/sec. air steam	1 second (liquid) 9 sec. 5 m/sec. air	1 second (liquid) 10 sec. 5 m/second air	1 second (liquid) 10 sec. 5 m/second air	10 seconds in 5 m/sec. air
4" (102 mm)	-	2.125" (54 mm)	2.125" (54 mm)	4" (102 mm)
36" (914 mm) FEP Cable	48" (1.2 m) Fiberglass Jacket	46.5" (1.2 m) Fiberglass Jacket	43" (1.1 m) Stainless Steel Overbraid	48" (1.2 m) Polyurethane Jacket
1 oz (28 g)	1 oz (28 g)	1 oz (28 g)	1 oz (28 g)	2 oz (57 g)
1 year	1 year	1 year	1 year	1 year

# THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most in the foodservice industry and are well suited for numerous tasks. Each probe resistant cables. Probes are designed and built to the highest standards allowing

Cooper-Atkins manufactures hundreds of different probes for a multitude of uses Customer Service at 860-347-2256 or visit [www.cooper-atkins.com](http://www.cooper-atkins.com).

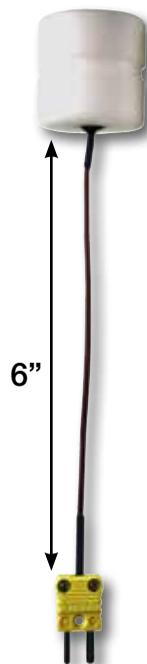
- ▶ **MOST EXTENSIVE PROBE LINE IN THE INDUSTRY**
- ▶ **ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY**



	39138-K
	Air Bare Tip w/ 36" Cable
Temperature Range:	-328° to 400°F (-200° to 205°C)
Max Tip Temperature:	400°F (205°C)
Max Cable Temperature:	400°F (205°C)
Response Time:	1 sec. liquid & 7 sec. 5 m/sec. air
Shaft Length:	-
Cable Length Max Extended:	36" (914 mm) FEP Jacket
Weight:	1 oz (28 g)
Warranty:	1 year



**52048-K Thermocouple Solid Simulator Simulates food product temperature. Mounted with a cable-tie.**

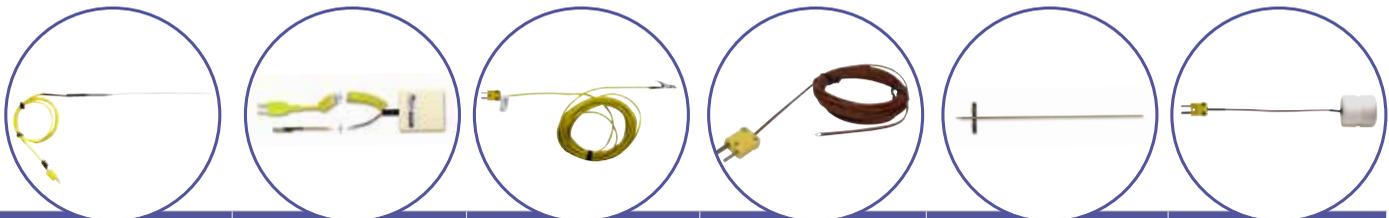


appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion-for probe interchangeability with minimal impact on total system accuracy.

that can be custom-designed for specific needs. For information on any item not shown or listed here, please contact

▶ **CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS**

Miscellaneous Probes



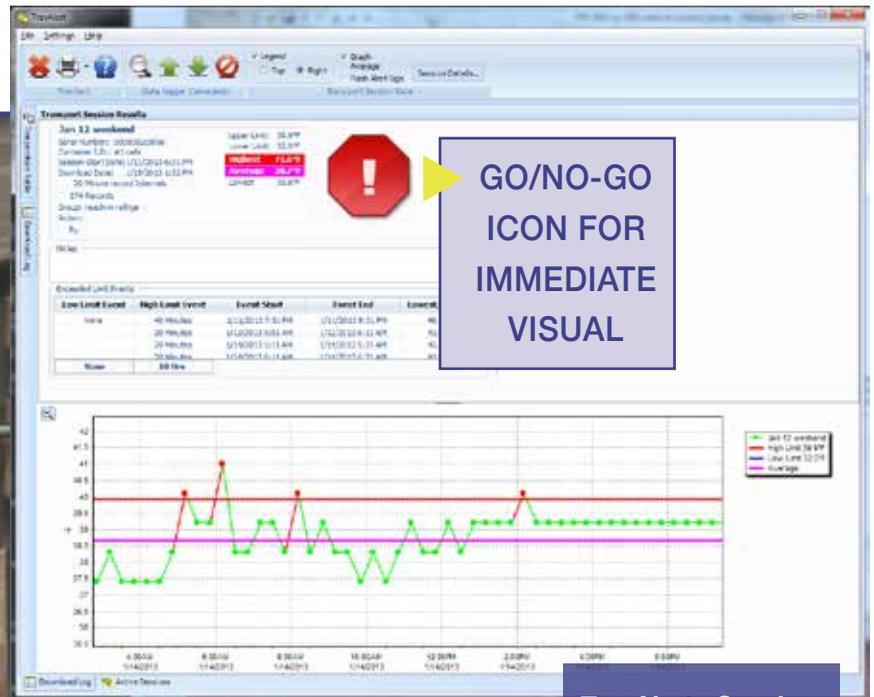
	49138-K	50305-K	50415-K	50416-K	50701-K	52048-K
	Air Bare Tip w/ 48" Cable	Mountable Freezer/Cooler Probe	Dishwasher Probe	Air Probe Bare Tip 15' Cable	Combo Probe - Heavy Duty T-Handle	Solid Simulator
	32° to 896°F (0° to 480°C)	-40° to 400°F (-40° to 205°C)	-67° to 221°F (-55° to 105°C)	-328° to 400°F (-200° to 205°C)	-100° to 500°F (-73° to 260°C)	-40° to 180°F (-40° to 82°C)
	896°F (480°C)	400°F (205°C)	221°F (105°C)	400°F (205°C)	500°F (260°C)	180°F (82°C)
	896°F (480°C)	176°F (80°C)	221°F (105°C)	400°F (205°C)	400°F (205°C)	-
	1 second liquid 9 sec. 5 m/sec. air	25 seconds air	9 seconds in 5 m/sec. air	1 sec. liquid & 7 sec. 5 m/sec. air	2 seconds liquid	Stabilization of Simulator - up to 2 hours
	-	-	-	-	35" (889 mm)	-
	48" (1.2 m) Fiberglass Jacket	24" (610 mm) FEP Jacket	15' (4.6 m) PVC Jacket	15' (4.6 m) FEP Jacket	36" (914 mm) Fluoroelastomer Jacket	6" (152 mm) FEP Jacket
	1 oz (28 g)	3 oz (85 g)	3 oz (85 g)	-	15 oz (425 g)	2.5 oz (71 g)
	1 year	1 year	1 year	1 year	1 Year	1 year

# DATALOGGERS

Dataloggers are commonly used for monitoring storage temperatures during and record temperatures of stationary refrigeration units or hot-holding cabinets, resistant.

▶ ALL READINGS FOR SESSION SHOWN IN GRAPH AND TABULAR FORMAT

## IN-TRANSIT DATA LOGGING



GO/NO-GO  
ICON FOR  
IMMEDIATE  
VISUAL

TravAlerts Session Report



The self-powered Data Logger is a time and temperature, PC interfacing device that can record up to 2,048 temperatures (in intervals from 1 minute to 4 hours) and is splash, dirt and impact resistant.

transportation and provide highly accurate data for use in the foodservice industry. They can also be used to monitor Our self-powered data loggers are time and temperature, PC interfacing devices that are splash, dirt and impact

- ▶ **RECORD UP TO 2,048 TEMPERATURES  
(IN INTERVALS FROM 1 MINUTE TO FOUR HOURS)**
- ▶ **REPROGRAMMABLE FOR MULTIPLE USES**

**TravAlert**

**2300**

- 9387 Data Logger (5)
- 9364 i-Button Reader Cable (2)
- 9365 USB Adapter (2)
- 9386 Software CD (2)



**9386**

Software  
CD-Rom



**9387**

Logger Tag

**2302**

- 9387 Data Logger (5)
- 9364 i-Button Reader Cable (1)
- 9365 USB Adapter (1)
- 9386 Software CD (1)

**GL100**

**GL100-01**

- 9387 Data Logger (5)
- 9364 i-Button Reader Cable (1)
- 9365 USB Adapter (1)
- 9386 Software CD (1)



**9345**

GL100 Software



**GL100**

Data Logger Kit

**Accessories**



**9364**

2300/GL100  
Reader Cable



**9365**

2300/GL100  
USB Adapter



**9378**

Disposable  
Transit Pouches

**SPECIFICATIONS**

**Temperature Range:** -40° to 185°F (-40° to 85°C)

**Accuracy:** ±2°F (±1°C) from -22° to 176°F (-30° to 70°C)

**Resolution:** 1°F (0.5°C) increments

**Recording Intervals:** 1-255 user-programmable intervals up to 2,048 readings

**Tag:** ABS plastic, water-resistant tag with stainless steel button  
Reprogrammable for multiple uses

**Battery:** Lithium

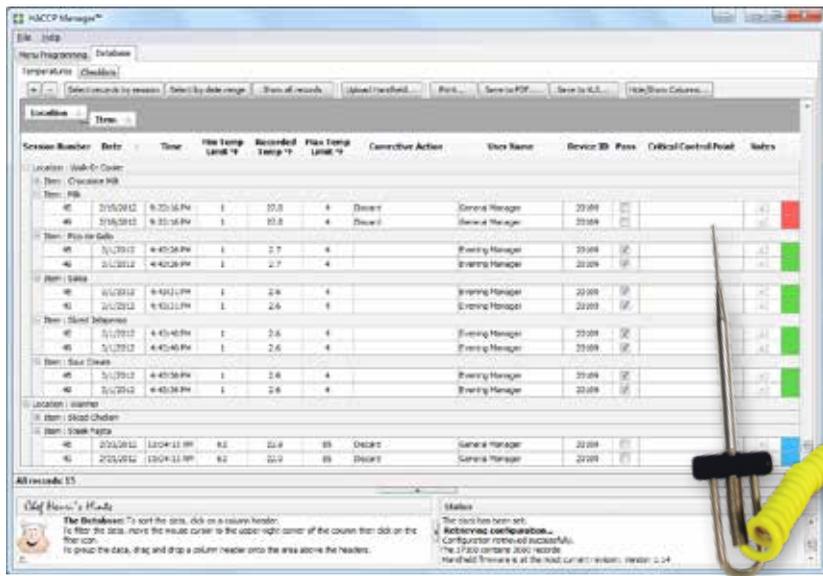
**Warranty:** 1 year

# HACCP MANAGER SOLO

Collecting temperature and task list data has never been easier or more reliable. of-the-art system features a thermocouple thermometer that allows you to collect Not only will the quality of your foods be consistent, but with proper attention to

- ▶ **TRANSFER DATA EASILY BETWEEN HANDHELD AND PC**
- ▶ **HANDHELD STORES UP TO 3,000 RECORDS**

## MAINTAIN MENUS AND CHECKLISTS DIGITALLY



To reduce managing reams of paper logs that are laborious to analyze, the Handheld collects and stores that information, significantly saving time and streamlining the process of specific HACCP requirements - a huge benefit.



Use the HACCP Manager in place of paper, pencil and clipboards and stop stuffing those filing cabinets! This state-information on everything from HACCP procedures, product temperatures, corrective actions and visual inspections. preset CCP's food preparation will be safe from bacterial contamination.

**▶ STORE MULTIPLE MENUS FOR EASY RECALL**

**Kits**

**93710**

**Solo Kit**

Kit includes a 50209-K MicroNeedle Probe, USB Cable and battery charger.

**Software**

**9384**

**Solo Software**

USB Installable Software

The easy-to-install software comes with a comprehensive Help menu should there be a question on setting up CCPs and parameters, downloading or running reports.

**Handhelds**



**37100**

**Solo Handheld**

**Accessories**






**9382**      **9382**      **9393**      **9381**

**US Adapter & Battery Charger**      **USB Cable**      **3 pack Adapters Euro, UK & Australia**      **Replacement Battery**

Specifications
Temperature Range: -99.9° to 999.9°F (-73.2° to 537.7°C)
Accuracy: ±1°F (±0.5°C)
Stores up to 3,000 temperatures and 300 menu items
Stores 1,500 checklist records (150 questions)
Water resistant
ABS Plastic with protective rubber boot
Accepts all Type K thermocouple probes
Traceable to NIST standards
Rechargeable lithium ion battery
5-year warranty

**GREAT FOR SMALL AND SINGLE LOCATION BUSINESSES**

System Requirements
Windows XP, Vista, Windows 7
Universal Serial Bus (USB) port
512 MB of memory
500 MB of hard disk space
USB Drive

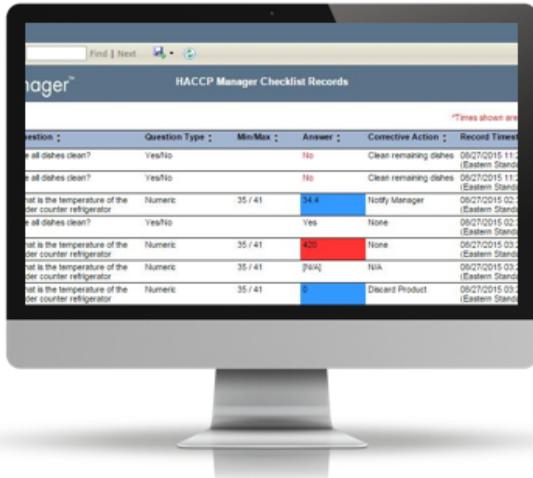
# HACCP MANAGER ENTERPRISE

A more versatile HACCP Manager system, HACCP Manager Enterprise was from HACCP Manager Solo is that the Enterprise version allows a company of multiple reporting structures, typically including regions, districts, restaurants, etc, any location.

Two models of the Handheld are available, the 37200 and 37500 Wi-Fi. The main for communication.

▶ **MULTIPLE LOCATIONS' DATA AVAILABLE AND MANAGED FROM A SINGLE, REMOTE PLATFORM**

## AUTOMATE HACCP PLANS FOR MULTIPLE LOCATIONS!



DEVELOPED WITH A CUSTOM HIERARCHY THAT ALLOWS YOU TO MIMIC YOUR SPECIFIC RESTAURANT STRUCTURE!

### Kits

93751	93755
37200 Handheld	37500 WiFi-enabled Handheld
Both Kits include a 50209-K MicroNeedle probe, USB cable and battery charger.	



developed in order to allow users to network multiple locations within a single dashboard. The main functional difference any size and any number of locations to set up multiple levels (completely customizable) that can accommodate and dictate the specific user security permissions at each level. All data can be stored, reviewed and analyzed from

difference is the 37500 has a built-in WiFi module to allow wireless data transfer, whereas the 37200 requires a USB

- ▶ **CREATE GLOBAL MENUS AND TASKS/CHECKLISTS FOR MULTIPLE LOCATIONS**
- ▶ **CUSTOMIZE ADVANCED PERMISSION SETTINGS BASED ON USER ROLES FOR SPECIFIC FUNCTIONS**

Software	Handhelds	
		
<b>10755</b>	<b>37200</b>	<b>37500</b>
HACCP Manager Enterprise Software	Enterprise Handheld	Enterprise WiFi Handheld

**SUPPORT & TRAINING**

On-board training speeds up configuration and remote support with any issues simplify and speed up diagnosing and helping with issues.

Accessories			
			
<b>9382</b>	<b>9383</b>	<b>9393</b>	<b>9381</b>
US Adapter & Battery Charger	USB Cable	3 pack Adapters Euro, UK & Australia	Replacement Battery

**MINIMAL UPFRONT COSTS**

Hosted software requires minimal capital - nothing to install, manage, or keep up to date; accessible from anywhere with internet access.

Specifications
Temperature Range: -99.9° to 999.9°F (-73.2° to 537.7°C)
Accuracy: ±1°F (±0.5°C)
Stores up to 3,000 temperatures and 300 menu items
Stores 1,500 checklist records (150 questions)
Water resistant
ABS Plastic with protective rubber boot
Accepts all Type K thermocouple probes
Traceable to NIST standards
Rechargeable lithium ion battery
5-year warranty

System Requirements
Windows XP, Vista, Windows 7 or higher
Internet Explorer 8 or higher, Firefox, Opera, Chrome or Safari
Microsoft XML
2 GB RAM
Intel/AMD Processor 2.0+ GHz
Network Card 10/100/1000 MB
20GB Hard Drive
Adobe Acrobat Reader, Microsoft Word/Excel (recommended for viewing exported reports)
USB Drive (for connecting the 37200 handheld and configuring the 37500)

## HACCP MANAGER MOBILE

The HACCP Manager Mobile™ App is designed to allow you to easily perform menu and checklist work activities with a smart device. The HACCP Manager Mobile App is downloaded to a personal smart device, working in conjunction with the Cooper-Atkins Blue2 thermocouple instrument. Temperature data that is collected from the Blue2 and checklist data that has been entered is stored in the app, and then transferred to the HACCP Manager Enterprise software.

- ▶ **MULTILINGUAL - ENGLISH, SPANISH, FRENCH, DUTCH, GERMAN, MANDARIN**
- ▶ **CORRECTIVE ACTION PROMPTS**
- ▶ **TEMPERATURE STABILIZATION WITH OUT-OF-RANGE INDICATORS**



### Minimum App Requirements

#### iOS Devices

- The minimum iOS version is 7.0
- iPhone 4S and later, iPod Touch 5th gen and later,
- iPad 3rd gen and later, iPad mini

#### Android Devices

- Android 4.4 (KitKat) or later operating system
- The Samsung Galaxy S series, Galaxy Tab series, Motorola Moto G 3rd Generation, ASUS ZenPad 9.0 perform well
- Sub-standard devices include: Lenovo Tab 2 A10-70 running KitKat, RCA 10 Viking Pro running Lollipop, Nextbook Ares 8 running Lollipop

#### Windows Devices

- Windows phones require Windows version 8.1
- All other devices (tablets, laptops, etc) require Windows 10

#### For Blue2 Instrument Compatibility

- Device must have Bluetooth 4.0+ radio to work with the Blue2 instrument

### Instructions

The Cooper-Atkins HACCP Manager Mobile App can be downloaded for free from Google Play, Apple Store, and Microsoft Store.



**BLUE2**

The Blue2 eliminates handwritten temperature monitoring by wirelessly transmitting temperatures to a Bluetooth-enabled smart device. The Blue2 instrument was designed to support and improve current business practices such as HACCP compliance as well as automating your checklists and other travel path processes. The Blue2 instrument can utilize any interchangeable Type-K thermocouple temperature probe making it versatile for insertion, air or surface temperature measurement. The data can be integrated into existing third party applications.

- ▶ **IPX7 WATERPROOF**
- ▶ **QUARTER LIMIT WIRE PROBE PROVIDES ±1.5°F TOTAL SYSTEM ACCURACY**
- ▶ **LOW ENERGY (LE) PAIRING CONSERVES BATTERY LIFE**
- ▶ **STANDARDS THAT ARE TRACEABLE TO NIST**



The Blue2 unit works with the HACCP Manager Mobile app and third party apps for increased versatility.



**92010-K Kit Includes**

- 20100-K Blue 2 Instrument
- 51337-K DuraNeedle
- Direct Connect Probe



Specifications
<b>#20100-K Blue2 Instrument</b>
Temperature Range: -40° to 999°F (-40° to 537°C)
Ambient Operating Range: 32° to 122°F (0° to 50°C)
Resolution: 0.1°
Accuracy: ±0.5°F with ambient temperatures between 68° to 86°F, add ±0.1°F per degree outside of this ambient range
RF Range: 100 feet, line-of-sight
Bluetooth Low Energy
Power: Replaceable 3v Lithium cell battery (CR123A) (Included)
Battery Life: 500 hours
ABS plastic housing with antimicrobial additive
IPX7 waterproof rated
Traceable to NIST standards
5-year Warranty
<p><i>Note: EMC Compliance: The Blue2 probe may record temperature measurements beyond the stated accuracy when exposed to radio frequency disturbances between 250Mhz and 1000Mhz with a field strength in excess of 3.0V/m. This deviation is temporary and the Blue2 will recover when the disturbance is removed.</i></p>

# NOTIFEYE

Wireless technology products are the most exciting thing happening in the your equipment every 5 minutes (24/7) without lifting a finger; or receiving an alert the restaurant to know what is going on!

The NotifEye monitoring system eliminates the time and expense of manual monitoring. This system is a low-cost wireless solution that is self-installable and

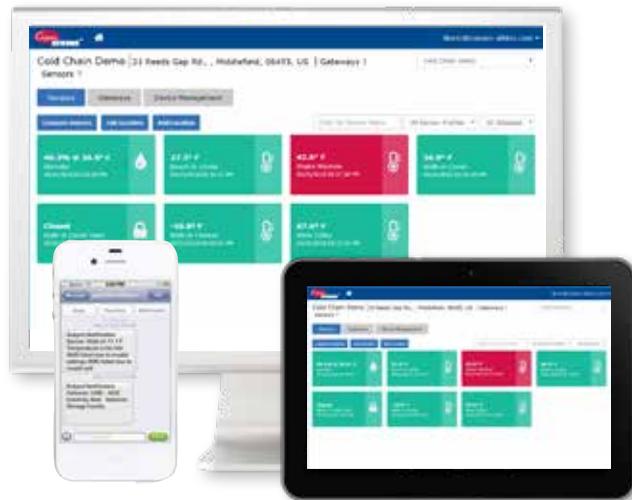
The NotifEye sensors can be easily mounted in any location – wirelessly transmitting monitor temperatures against preset conditions that are defined by the user and

## SAVE TIME, ENERGY AND MONEY MONITORING YOUR EQUIPMENT!



**Multiple Applications:**

- Refrigerator/Freezers
- Walk-ins/Reach-ins
- Prep Areas
- Dry Storage
- Salad/Deli Bars
- Steam Tables
- Open Air Cases
- Hot-holding Cabinets



NotifEye™ is a wireless solution that is self-installable and ready to use out-of-the-box. The online portal can also be used to display data from certain Bluetooth-enabled products to allow digital integration within the Cold Chain.

### Kits\*



**15906**

(4) Sensor Kit



**15907**

(2) Sensor Kit



**15916**

(4) Sensor Kit



**15917**

(2) Sensor Kit

\*1-Year Web Hosting - Renewal fee each additional year thereafter

### How It Works

Wireless Sensors Send Data via Gateways to the NotifEye™ System. System sends out Email and Text Alert Notifications.



foodservice industry today – especially when relating to food safety. Imagine, taking temperature/humidity readings of knowing that the cooler door is open and has been for the last 20 minutes. Better yet, you don't even have to be at

temperature collecting. No longer will you need to visit and record temperatures of equipment requiring frequent ready to use out-of-the-box.

temperatures to the monitoring software; collecting and recording every temperature like clock-work. Each sensor will will alert the user via email and/or text messages.

**Sensors**



**15200**

**15220**

**15230**

**15201-01**

**15202**

**Temperature Sensor (6' probe)**

**Humidity Sensor**

**Contact Sensor**

**Immersion Probe**

**Product Solid Simulator**

**Hardware**



**15515**

**15506**

**15503**

**15504**

**Gateway Kit (15504 & 15503)**

**Repeater**

**Buffer**

**Receiver**

<b>General Specifications</b>	<b>#15200 Temperature Sensor*</b>
Sensor Range: 2500 ft (typical interior range of 500 ft)	Temperature Range: -25° to 180°F (-32° to 82°C)
Power: Replaceable 2/3A, 3v Lithium Ion battery	Accuracy: ±1°F (±0.5°C)
Battery Life: 2.5 - 3 years	Probe Lead Length: 6 ft. (1.82 m)*
1-year warranty	<b>#15220 Humidity Sensor</b>
<b>#10185 Retrofit Solid Simulator</b>	Relative Humidity Range: 0-90% RH
Temperature Range: -25° to 180°F (-32° to 82°C)	Ambient Operating Range: -4° to 140°F (-20° to 60°C)
Stabilization: Up to 2 hours	Accuracy: ±2% (10-90% RH)
FDA-approved Acetal	<b>#15230 Contact Sensor</b>
<b>#15515 Gateway Kit (Buffer 15503 and Receiver 15504)</b>	Magnet operation gap up to 0.75"
Attached to network via LAN network port	<b>#15201-01 Immersion Probe</b>
16 days (400 hours) of data storage for 200 sensors sampling every 15 minutes.	Temperature Range: -25° to 180°F (-20° to -60°C)
Accommodates an unlimited number of sensors	Accuracy: ±1°F (±0.5°C)
<b>#15506 Repeater</b>	Probe Diameter: 0.25" (06.4 mm)
Extends the range of the transmitters	<b>#15202 Product Solid Simulator</b>
Transmits up to 4 miles (open field range)	Temperature Range: -4° to 140°F (-20° to 60°C)
Onboard battery back-up with 24 hours of life	Accuracy: ±1°F (±0.5°C)

\*Temperature sensors available with longer probe leads: 15200-10 - 10 ft. (3.05 m), 15200-30 - 30 ft. (9.14 m)

# TEMPTRAK

Many facilities are required to maintain consistent monitoring programs to ensure protocols are implemented is a challenge. Mistakes can compromise valuable Enterprise Wireless Environmental Monitoring. When seeking a facilitywide wireless technology for over 12 years.

Whether collecting and sharing data across town or across the country, the robust software platform.

## THE DATA COLLECTED ASSISTS IN MEETING ELECTRONIC RECORD KEEPING COMPLIANCES FOR:

- FDA 21 CFR PART 11
- JOINT COMMISSION
- CDC
- HACCP



**EZ Link\***  
Respond to TempTrak alarms via your mobile device 24/7.

*\*compatible with current generation smartphones and tablets*

### Why Choose TempTrak Enterprise?

- Facility-wide Solution
- Data Clustering
- On-site Recalibration
- BACnet Compatibility
- ISO 17025 Compliant
- NIST Traceable
- Professional Services
- Regulatory Compliance
- 900 MHz and/or WiFi
- Multiple Alert Options
- Cloud-based Software Deployment
- Made in the USA

### 900 Hardware



**10000-5-P-US**

**10050-US**

10000-PDT Buffer  
10000-US Receiver

Repeater

### Accessories



**9398**

**10119/10110**

AC Adapter for WiFi Units

Waterproof Enclosure

There are many, many more probe and monitoring options available. To view additional items, and review item specifications, please visit our website or contact us for more details!

food safety, product quality and government regulatory compliance. With manual data logs, ensuring that proper inventory, cause spoilage and put consumers' lives at risk. These challenges can be overcome by utilizing the TempTrak solution, more than 1200 businesses/campuses worldwide have selected TempTrak, a product at the forefront of

system allows monitoring of an unlimited number of points in an unlimited number of locations with a single, incredibly

**900 MHz Transmitters**

			
<b>10080DT</b>	<b>10071</b>	<b>10100-DT</b>	<b>10086</b>
Dual Temperature	Temperature Humidity	Contact	Analog

**WiFi Transmitters**

			
<b>11078</b>	<b>11079</b>	<b>11109</b>	<b>11089</b>
Dual Temperature	Temperature Humidity	Contact	Analog

**Popular Probes**

			
<b>2020</b>	<b>2033</b>	<b>10113</b>	<b>10140</b>
Insertion Probe	Air Probe	Solid Simulator Probe	Dishwasher Probe

# ACCESSORIES

Cooper-Atkins carries various accessories for your temperature instruments. Increase cable length on any thermocouple probe.

## ▶ INSTRUMENT STORAGE ▶ THERMOCOUPLE EXTENSION CABLES AND CONNECTORS



▶ PROBE WIPES ARE IDEAL FOR CLEANING AND SANITIZING.



▶ SEE PAGE 56 FOR INSTRUCTIONS ON HOW TO MAKE A PROPER ICE BATH

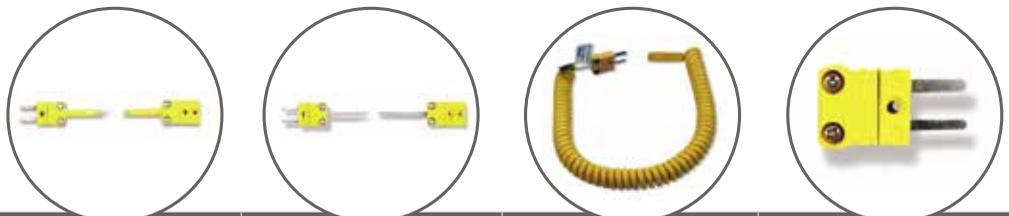


**93230-K**  
with 50336-K DuraNeedle Probe and wall mount



	9339	9368
	Soft Pouch/Case/Holster	EconoTemp Wall Bracket
Dimensions:	8.5" x 3.5" x 1" (220 mm x 90 mm x 25 mm)	5" x 3-5/8" x 1-1/4" (127mm x 92mm x 32mm)
Housing Material:	Nylon	ABS plastic

## Extension Cables and Connectors



10045	10046	10040-K	PD1389-10
10' Extension Cable	Reinforced 10' Extension Cable	48" Coiled Retractable Extension Cable	Male Connector

Protect your investments by storing instruments in cases designed specifically for the unit and use extension cables to

## ► PROBE WIPES AND THERMOMETER VALIDATION

### Instrument Storage



9369

AquaTuff  
Wall Bracket

4-5/16" x 2-7/8"  
x 1-1/2"  
(110mm x 73mm  
x 38mm)

ABS plastic



9391

Storage Wire  
Wall Rack

10.5" x 3 x 4.5"  
(267 mm x 76  
mm x 114 mm)

Cold-rolled  
steel frame  
and ABS  
plastic cup



14057

Soft Carrying  
Case

9" x 3.5" x 2"

Soft Vinyl



14235

Medium Hard  
Carrying Case

8" x 12" x 3"  
(203 mm x 305  
mm x 76 mm)

ABS plastic



14240

Small Hard  
Carrying Case

6" x 8.5" x 2.5

ABS plastic



14245

Large Hard  
Carry Case

12" x 17" x 3"  
(304 mm x 431  
mm x 76 mm)

ABS plastic

### Accessories



PD1389-52

Female  
Connector



9150

Boxed Probe  
Wipes



9325

ValCup  
Thermometer  
Validation Cup



9351

.15" Diameter  
Pan/Vessel Clip



9366

.25" Diameter  
Pan/Vessel Clip

## CARE & CLEANING

Properly cleaning your Cooper-Atkins instrument ensures quality performance and extends the life of your product.

### General Instrument Care Guidelines

Do not clean with abrasives or solvents, use only mild detergents. Avoid contact with corrosive materials such as alcohol or other caustic cleaning agents. Wipe with a soft damp cloth to avoid scratching. If the unit is not waterproof, do not submerge or use excessive liquids when cleaning. Refer to our website for product specifications and waterproof ratings. Avoid exposing the instrument to severe shock. Be sure to utilize the supplied carrying case, storage pouch or wall-mount bracket. This provides a safe storage area and prevents build up of dust. After the instrument is cleaned and sanitized, dry and store. Do not use or store in excessively hot or cold areas.



### Infrared Thermometers

Do not allow water or soap to get inside the instrument or on the lens. Avoid splashes and spills and do not submerge. The sensor lens is the most delicate part of the instrument and should be kept clean. Care should be taken when cleaning the lens. To remove particles from the lens, either wipe with a soft damp cloth, cotton swab with medical alcohol (on lens only), or use low pressure, compressed air. Do not use solvents to clean the lens as this may cause damage. Allow the lens to fully dry before using.

### Thermocouple / Thermistor Insertion Probes & Digital / Bi-Metal Thermometers

To avoid cross-contamination, always clean thermometer stems thoroughly before and after each use. Do not allow the probe tip to remain in sanitizing solution for an extended period of time. Remove stubborn grease from the stem with a scouring pad or fine steel wool. Cooper-Atkins probe wipes help meet HACCP guidelines and are an ideal way of cleaning and sanitizing probe shafts between temperature checks. Avoid exposing the probe / thermometer to extreme temperatures.



### Battery Replacement

If there is no display when the thermometer is turned on, check the condition of the batteries. Also check that the battery terminals are clean and batteries are properly installed. If batteries show signs of corrosion, remove immediately and replace. Refer to the product Operating Instructions or User Guide and Instrument Warranty booklet for battery installation and replacement guidelines. Always wash, rinse and sanitize these products.

### Anti-Microbial Additive

The anti-microbial additive used in specified instrument housings, thermometer sheaths and timers, inhibits the growth of bacteria on the unit. However, it does not protect users or others against food bacteria.

**For further information or questions on caring for your Cooper-Atkins products contact customer service at: [info@cooper-atkins.com](mailto:info@cooper-atkins.com)**

## VALIDATION & CALIBRATION

Using accurately calibrated thermometers is an essential component of any basic HACCP plan. Cooper-Atkins believes that every foodservice professional should implement validation testing into their regular routine to ensure their thermometers are accurate.

### FACT OR FICTION?

**Thermometer calibration is an FDA requirement.**

**FACT:** Regular calibration of the device is an important practice and a provision of the Food Code. While calibration is a requirement, there are many misconceptions about the meaning of calibration. True calibration is a formal comparison of an item to a known standard of higher accuracy and is conducted within a controlled environment.

Validation, which many people think of as calibration, is the confirmation that your thermometers are accurate to within acceptable tolerances. It is a quick and easy comparison of a thermometer against a single temperature point, such as an ice bath, and can be performed onsite in your facility.

Requiring calibration does not mean adjusting the calibration settings.

### FACT OR FICTION?

**An appropriate foodservice thermometer must be adjustable in the field in order to meet calibration requirements.**

**FICTION:** Against popular belief, adjusting a thermometer's accuracy is not a requirement. Some digital thermometers include an adjustment feature, often referred to as a calibration button, that allows a user to reset the accuracy that eliminates any error in the instrument that may have developed over time.

While this may sound like a useful feature, if the conditions are not controlled accurately, it could introduce more error at critical test temperatures! For example, say the actual temperature a thermometer is measuring is 36°F, but assumed to be 32°F (i.e. due to an improperly made ice bath) and is then adjusted to display 32°F. When this thermometer is used again and takes a reading of 40°F, the true temperature of the item being measured is really 44°F! When no "field" adjustment of calibration settings is introduced, you eliminate the risk of introducing error into the instrument .

### FACT OR FICTION?

**Using the ice bath method is an effective way to quickly validate the accuracy of your thermometers.**

**FACT:** When validating thermometers, it is usually by means of a single test point such as an ice bath (32°F) and is a confirmation that the instrument is accurate within acceptable tolerances. When creating a proper ice bath, use crushed, not cubed ice and just enough water to displace the air that may be present between the ice chips. Tests show that using cubed ice can result in an ice bath with a baseline temperature higher than 32°F, which may result in a false reading.

While validation is a useful and important activity, it should not replace regularly scheduled calibration.

*Cooper-Atkins' ValCup™ was designed to accurately validate all types of thermometers quickly and easily. Just follow the simple directions printed on the cup and insert your thermometer for fast results.*



## CHOOSING THE RIGHT THERMOMETER

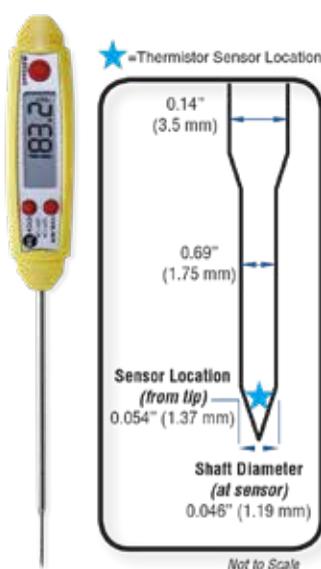
In a food safety system, temperature and time are the two most important in preventing bacterial growth in foods. Using the correct tools becomes an

Different sensor technologies are available that are within the recommended mechanical/bimetal types. Digitals yield a faster response and provide greater

When choosing a thermometer, the following points should be considered:

**Bimetal.** If you cut open a bimetal thermometer stem lengthwise, you would see a coil (about 2" in length) that senses the temperature. To register an accurate temperature, the entire coil must be exposed to the heat or cold source. Some thermometers have a dimple on the stem as a guide for insertion depth, and should not be used for thin product, like burger patties. The 0.14" (3.5 mm) diameter of the stem could leave an unsightly hole in some foods.

The coil expands (unwinds) or contracts (winds tighter) with change in temperature, turning the pointer on the dial, which could take up to 20 seconds to stabilize. The accuracy can be affected by shakes, drops and exposure to extreme hot and cold temperatures, so they are designed with a nut that can be turned to adjust the pointer. Even with its magnifying lens, a bimetal thermometer can be difficult to read and accurately assess where the pointer sits. Each tick mark, if viewed from the slightest angle, could throw the interpretation of the reading off by 1°, 2° or even 10°.



**Thermistor Thermometers.** Thermistors are a bead type ceramic-semiconductor-thermal resistor whose resistance varies with temperature. This bead is potted in a high-thermal conductive epoxy within the tip for a quick, <6 second response time. Thermistors are highly accurate within the regulatory temperature range and are ideal for use as compliance tools.

Cooper-Atkins AFL digital thermometers' tip diameter is 0.046" (1.19 mm) where the thermistor sensor is located, which is well within the recommended guidelines. Some digitals have tips soldered with alloys to achieve a thinner diameter stem, but this can lead to corrosion and possible breakage - leaving the tip in your food. Cooper-Atkins' NSF digital thermometers are laser welded of appropriate material to ensure maximum durability.

With a large digital display and tenth degree resolution there can be no assumptions made or judgement calls about the temperature reading. There are handheld thermistor instruments with interchangeable probes available, but the development of small chip technology also allows for pocket-size housing. A digital thermometer has factory calibrations set in its memory chip that cannot be affected by physical impact.

**Thermocouple Thermometers.** A thermocouple measures voltage produced at the junction of two fine wire conductors located in the tip of the probe. Typically smaller and more robust than a potted thermistor, a thermocouple probe with a welded tip offers a rapid response of 2 to 5 seconds within a much broader temperature range.

The small junction size enables it to fit in the narrowest of probe shafts. The FDA recommends the use of a thermocouple device for determining the temperature of thin foods such as hamburger patties, pork chops, and chicken breasts. Cooper-Atkins' extensive line of probes offer multiple options that fall within these guidelines.

The best units available have a total-system-accuracy, or TSA (the accuracy of the probe and instrument combined) of  $\pm 0.9^{\circ}\text{F}$  ( $\pm 0.5^{\circ}\text{C}$ ). Even the more economical systems have a TSA of  $\pm 2^{\circ}\text{F}$  ( $\pm 1^{\circ}\text{C}$ ), and are within the recommended guidelines.



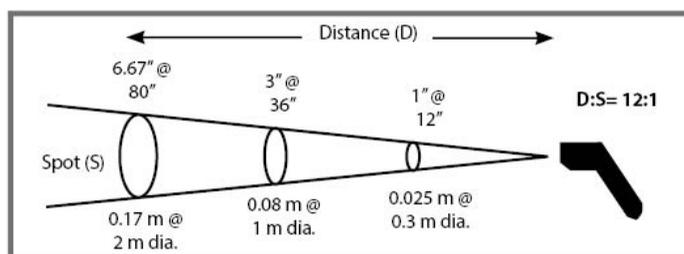
components in preventing foodborne illness. Proper cooking, storing, holding and monitoring of temperatures is vital essential component of your food safety plan.

guidelines for the foodservice temperature range. Electronic/digital thermometers tend to be preferred over the older overall accuracy with little to no drift out of calibration, so are less likely to give variable readings.

temperature range and resolution, the sensing element & insertion point, accuracy and calibration.

**Infrared Thermometers.** Non-contact infrared thermometers measure surface temperatures. The further away you are from the object, the larger the surface area is being measured. This optical resolution is expressed as a ratio of the distance to the diameter of the spot. An infrared thermometer collects the energy from a circular measurement spot and focuses it on the detector which converts the energy to an electrical signal that can be displayed in units of temperature after being compensated for ambient temperature variation.

When an infrared thermometer measures surface temperatures, it can potentially sense all three types of energy; therefore, the instrument must be adjusted to read only emitted energy. Some infrared thermometers allow you to change the emissivity in the unit. Others have a fixed, pre-set emissivity. Cooper-Atkins Infrared Thermometers are set at 0.95 or .97, which is the emissivity value for most organic materials and painted or oxidized surfaces. When measuring shiny surfaces such as aluminum or stainless steel, the reflectivity of the surface may skew the reading of an infrared thermometer. If needed, coat the shiny surface with a non-stick cooking spray prior to taking the reading.



**Data Loggers.** Temperature logging devices collect temperature data while sensitive inventory is in transit. Typically used in stationary equipment and meal delivery carts, these small battery operated data loggers document environmental data. When the shipment arrives at its destination, the data logger is connected to a PC to view the data to ensure proper temperatures were maintained throughout transit, allowing the recipient to accept or reject the delivery.

**Automated Handheld Devices.** Portable handheld devices combine sophisticated software with a traditional thermocouple instrument to collect, track, and store food temperature data. Some models also allow users to walk through procedural checklists, helping to ensure key tasks are completed consistently. These portable hand-held devices make adhering to HACCP guidelines less cumbersome. When a temperature or checklist item is out of the user designated range, many of today's models prompt users to take corrective action, all of which is documented for later viewing and analysis via the accompanying software.



**Wireless Equipment Monitoring.** Wireless monitoring systems protect inventory and help ensure equipment is working correctly by automatically measuring critical metrics, such as temperature and humidity. Equipment including walk-ins, freezers, dish machines, hot-holding boxes, and dry storage rooms, can all be monitored to ensure food quality and safety. If readings fall outside of preset limits, notifications can be sent to the appropriate people. This type of technology is a great investment that ensures food is kept at safe temperatures, and will prevent costly food spoilage due to equipment failure.

# PROBE INFORMATION

Thermocouple Types: The probe thermocouple Type (J, K, or T) must match that of the thermocouple instrument. Specifications shown in this catalog are for thermocouple Type K models. Probes are also available in thermocouple types J and T (as indicated in the probe tables). In some cases, the upper temperature limits for types J and T may differ from that shown in the catalog. For availability or specifications please contact Customer Service at: 800.835.5011 or 860.347.2256.

## PROBE CABLE STYLES

	<b>Flexible Cable with PVC Jacket:</b> PVC insulation on primaries and outer jacket. PVC offers good abrasion and chemical resistance.
	<b>Coiled Retractable Cable:</b> Polyurethane outer jacket. PFA insulation on primaries. Polyurethane offers excellent abrasion resistance and good chemical resistance.
	<b>Flexible Cable with FEP Jacket:</b> FEP insulation on primaries and outer jacket. FEP offers excellent abrasion and chemical resistance.
	<b>Flexible Cable with Fluoroelastomer Jacket:</b> Custom, patented Cooper-Atkins cable with Aramid fillers and metal braid for strength. Fluoroelastomer offers outstanding abrasion and chemical resistance. Connector design for use of Wrap&Stow™ Thermocouple Instruments.
	<b>Flexible Armored Cable:</b> FEP-jacketed cable protected by flexible, stainless steel, armored hose. The armored hose protects the cable and offers outstanding abrasion, cut and chemical resistance.
	<b>Flexible Cable with Silicone Jacket:</b> Silicone outer-jacketed cable with Aramid fillers. Silicone offers good abrasion and chemical resistance.
	<b>Flexible Cable with Woven Stainless Steel Overbraid:</b> Polyimide film insulation on primaries and outer jacket. Cable protected by stainless steel overbraid. Offers outstanding abrasion and cut resistance and good chemical resistance.
	<b>Flexible Cable with Fiberglass Jacket:</b> Woven fiberglass insulation with a resin coating on primaries and outer jacket. Excellent for high temperature applications. Not recommended for abrasive, high-flex or foodservice applications.

**Type K**



**Type J**



**Type T**



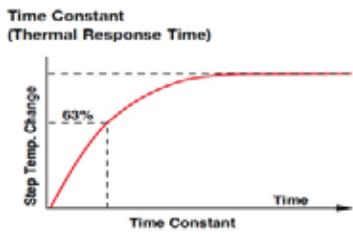
**Accuracy Tolerances for Standard Thermocouples (A.N.S.I. MC 96.1 - 1982)**

**Type K Thermocouples**  
 Above 32°F or 0°C: ±0.75% of reading (or ±4°F (2.2°C) whichever is greater) to 2,282°F (1,250°C)  
 Below 32°F (0°C): ±2.0% of reading (or ±4°F (2.2°C) if greater) to -328°F (-200°C)

**Type J Thermocouples**  
 Above 32°F or 0°C: ±0.75% of reading (or ±4°F (2.2°C) whichever is greater) to 1,382°F (750°C)  
 Below 32°F (0°C): No A.N.S.I. specification.

**Type T Thermocouples**  
 Above 32°F or 0°C: ±0.75% of reading (or ±1.8°F (1.0°C) whichever is greater) to 662°F (350°C)  
 Below 32°F (0°C): ±1.5% of reading (or ±1.8°F (1.0°C) if greater) to -328°F (-200°C)

**Time Constant (Thermal Response Time)**

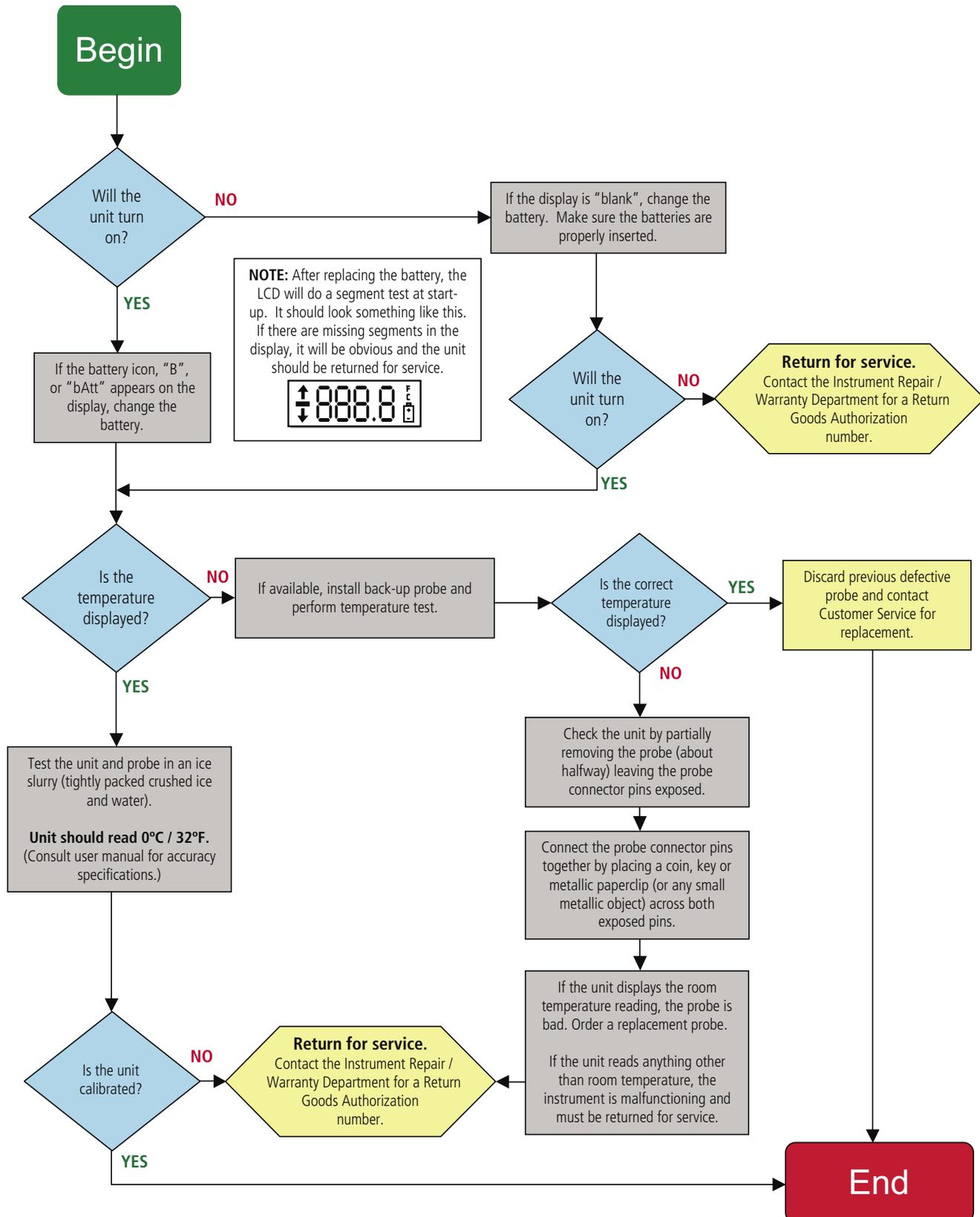


The response time of a thermocouple probe temperature can be graphed as an exponential function. One time constant is defined as the time required to reach 63.2% of the temperature change, two time constants is 86.5% and three is 95% of the temperature change. At Cooper-Atkins, the response time is stated at three time constants of the temperature change. Response times are intended as a general guideline and can differ in actual usage conditions. All testing done at the factory is under controlled conditions.

Probes with special limits of error cables are available for quote to high volume users. Avoid damage by not over-stretching or kinking the probe cables. Detach probe from the instrument by holding the plug firmly; do not pull plug out by the cable or damage may result.

## THERMOCOUPLE INSTRUMENT TROUBLESHOOTING GUIDE

Follow these steps to troubleshoot your thermocouple issue.



## SERVICE & SUPPORT

When you purchase from Cooper-Atkins, you are receiving the highest quality products available and the best overall value for your investment. The quality, features and benefits built into our instruments offer you the protection of knowing a critical piece of your food safety plan is highly reliable and guaranteed.

### Hardware Support

When you call our Technical Service Centers, a representative will attempt to isolate the problem over the phone. If they are unable to isolate the problem, you will be asked to return the product for further inspection.

In this case:

- You will be given a Return Goods Authorization (RGA) number.
- You will be asked to send the item(s) to our Service Center for evaluation by our Technical Service Specialists.
- The item(s) will be serviced, and if the problem is covered under our warranty terms, the item will be repaired/replaced in 3-5 business days and returned to you, free of charge. If the problem is not covered by our warranty terms, the Cooper-Atkins Instrument Repair/Warranty Department will call you within 3-5 days of receipt of your instrument to offer the option of repair at the repair price, or ordering a new unit at a discounted price. Based upon your approval, Cooper-Atkins will ship the repaired or replacement items and/or probes to you.

#### COOPER-ATKINS WARRANTY DEPARTMENT

Phone support is available during regular work hours: 8am-5pm M-F, Eastern Time  
at **800-835-5011, option 2**

Email support can be requested at: **[techsupport@cooper-atkins.com](mailto:techsupport@cooper-atkins.com)**

#### Return Address

Cooper-Atkins Corporation  
ATTN: Returns Department  
33 Reeds Gap Road  
Middlefield, CT 06455-0450 U.S.A.

### Software Support

We know how important both after-sale and ongoing factory support is to the successful implementation of a complete temperature monitoring program. That is why we utilize only our staff to install, train and support all of our customers. Our I-Care Support Team has been developed to provide the highest level of customer service.

#### CONTACT INFO

Business Hours: Mon-Fri 8am-8pm EST, Closed Sat-Sun  
Phone: (513) 793-5366 Toll Free: (888) 533-6900  
Email: [I-Care@cooper-atkins.com](mailto:I-Care@cooper-atkins.com)

## THERMOCOUPLE AND PROBE WARRANTY

Atkins' Thermocouple Instruments and Probes are covered by the industry's leading Warranty program. This Warranty program, combined with Cooper-Atkins' 128+ years of equipment experience, assures your instrument will provide many years of reliable service as it is specifically designed to withstand the rigors of a foodservice application.

### THERMOCOUPLE WARRANTY

Your Thermocouple Instrument has a 5-year warranty against manufacturing or material defect.

For the AquaTuff™ Instruments you can identify the date of manufacture by the serial number located on the back of all models. For the EconoTemp™ models, the serial number is located inside the battery compartment.

Your Thermocouple Instrument has a 9-digit code, followed by the model number. The first two digits represent the month of manufacture, the second two digits represent the day of manufacture, and the third two digits are the year of manufacture.

#### AquaTuff™ Thermocouple Instruments



The AquaTuff Thermocouple Instrument above, serial number 011612049-35100-K, was manufactured on January 16, 2012.

#### EconoTemp™ Thermocouple Instruments



The EconoTemp Thermocouple Instrument above, serial number 011011020-32311-K, the date of manufacture was January 2011.

### PROBE WARRANTY

**Your Thermocouple Probe has a 1-year warranty against manufacturing or material defect.**

You can identify when your probe was manufactured by the 4-digit serial number. On the coiled retractable cable probes and the direct connect probes, the serial number is located on the label fastened just above the mini-connector. On the Wrap&Stow™ probes, the serial number is located on the underside of the connector below the 2 insertion pins.

The first two digits represent the week and year of manufacture and the second two digits represent the year of manufacture. (For example: serial number 4612 was manufactured in the 46th week of 2012.)

#### Probe with Coil Cable



#### Direct Connect Probe



#### Wrap&Stow Probe



## GLOSSARY

**C:** Celsius (or centigrade) relationship between Centigrade and Fahrenheit can be found by multiplying Celsius degrees by 1.8 and then adding 32. For example 20°C is equal to  $(20 \times 1.8) + 32 = 68^\circ\text{F}$ .

**°F:** Fahrenheit  
 $^\circ\text{F} = 1.8 \times ^\circ\text{C} + 32$   
 inversely  
 $^\circ\text{C} = (^\circ\text{F} - 32) / 1.8$

**ABS:** Acrylonitrile-Butadiene-Styrene plastic known for its toughness, impact strength, dimensional stability, lightweight, and surface appearance.

**Accuracy:** The accuracy of a measurement is its closeness to a defined true or reference value.

**Ambient:** The conditions surrounding the instrument (temperature, humidity, etc.)

**Ambient Operating Range:** Range in the ambient temperature and Relative Humidity over which the instrument is designed to operate.

**Blackbody:** A theoretical object that radiates the maximum amounts of energy at a given temperature, and absorbs all the energy incident upon it. (The name blackbody was chosen because the color black is defined as the total absorption of light energy). Used in testing calibration of infrared thermometers.

**Boiling Point:** The temperature at which a substance in the liquid phase transforms to the gaseous phase; commonly refers to the boiling point of water which is 212°F (100°C) at sea level.

**Calibration:** Zeroing of an instrument to a known standard.

**Calibration Procedure:** A procedure that is performed to determine and set the parameters affecting an instrument's performance in order to ensure its designed function within prescribed limits.

**Capillary:** A tube with a small bore connecting the sensor to the meter.

**Clear:** To restore a device to a prescribed initial state, usually the zero state.

**Cold Junction:** The point at which thermocouple wires are joined inside the meter.

**Contamination:** The unintended presence of harmful

substances or micro-organisms in food.

Three contamination types are:

**Biological:** Bacteria, viruses, parasites, and fungi

**Chemical:** Pesticides, food additives, cleaning supplies

**Physical:** Foreign matter such as dirt, broken glass and other objects that get into the food.

**Control Point:** Temperature at which a system is to be maintained.

**Critical Control Point (CCP):** A step at which control can be applied and is essential to prevent or eliminate a hazard or to reduce it to an acceptable level.

**Cross-contamination:** The transfer of harmful substances or disease-causing micro-organisms to food by hands, food-contact surfaces, or cleaning cloths that touch raw food, are not cleaned and sanitized, and then touch ready-to-eat food. Cross contamination can also occur when contaminated food or stored raw food touches or drips fluids on cooked or ready-to-eat food.

**Data/Temperature Hold:** The ability to freeze the display on any given measurement. Useful in applications where the instrument is not easily read while a measurement is being made.

**Delta:** Represents the difference between two temperatures: i.e., higher temperature minus lower temperature. Delta is the difference.

**Emissivity:** At a given wavelength the ratio of the infrared energy radiated by an object at a given temperature to that emitted by a blackbody at the same temperature. The emissivity of a blackbody is unity in all wavelengths.

**Environment:** The surroundings in which an operation is carried out including the buildings, facilities, stationary and moveable equipment, personnel, raw materials, utensils, ingredients and other materials that are used in the process.

**Food Pathogens:** Micro-organisms that can cause foodborne disease.

**Foodborne Illness:** A disease that is carried or transmitted to people by food.

**Freezing Point:** The temperature at which the substance goes from the liquid phase to the solid phase.

**HACCP:** Hazard Analysis Critical Control Points, is a quality safety system that focuses on the process of food in an operation to reduce risk.

**Hygrometer:** An instrument used in measuring humidity.

**Ice Point:** A comparison of values from a temperature measurement device to a more accurate device, where the medium is at an ice point reference of 32°F (0°).

**Ice Slurry:** Used in calibrating thermometers, an ice slurry is a glass of crushed ice filled with water. This brings the temperature to 32°F (0°C) for low-end calibration.

**Infrared:** An area in the electromagnetic spectrum extending beyond red light from 760 nanometers to 1000 microns. It is the form of radiation used for making non-contact temperature measurements.

**Infrared Thermometer:** An instrument that determines the temperature of an object by means of detecting and quantifying the infrared radiation emitted therefrom.

**ISA:** Instrument Society of America

**J-Type Thermocouple:** The two thermocouple wires are made of Iron and Copper-Nickel

**K-Type Thermocouple:** The two thermocouple wires are made of Nickel Chromium and Nickel Aluminum.

**LCD, Liquid Crystal Display:** Used on many handheld instruments because of its easy readability and very low power use.

**LED, Light Emitting Diode:** A semiconductor diode that emits light when voltage is applied.

**Maximum Operating Temperature:** The maximum temperature at which an instrument or sensor can be safely operated.

**Min/Max/Average:** Some instruments will record the minimum and maximum temperature and give the average temperature reading based on the min and max.

**NIST:** National Institute of Standards and Technology, USA

**NIST Traceability:** Calibration in accordance with and against standards traceable to NIST. Traceability to NIST is a means of ensuring that reference standards remain valid and their calibration remains current.

**NSF:** National Sanitation Foundation, is best known for its role in the developing of standards and criteria for equipment, products, and services that bear upon health. The NSF mark is widely recognized as a sign that the article to which it is affixed complies with the applicable NSF standard.

**Range:** The full scale value for a specific instrument setting.

**Ready-to-Eat Meat & Poultry Products (RTE):** Meat and poultry products that do not require further heating prior to consumption.

**Reference Junction:** The cold junction in a thermocouple circuit which is held at a stable, known temperature. The standard reference temperature is 32°F (0°C).

**Resolution:** The smallest unit that can be detected and displayed by a measurement device.

**RH:** Relative Humidity in % as opposed to absolute humidity which is in ppm. 100% RH means that at hot particular temperature, the air cannot absorb anymore humidity and any additional amount will become water. As the temperature increases, the % RH drops hence allowing more water to be absorbed.

**RTD:** Resistance Temperature Detectors

**Sanitize:** Reducing the harmful micro-organisms on a surface to safe levels. It is not a substitute for cleaning. Food-contact surfaces must be cleaned and rinsed before they can be effectively sanitized.

**Spirit Filled:** A glass tube that uses an alcohol or petroleum liquid inside instead of mercury.

**Storage Temperature Range:** The ambient temperature range on instrument can survive in non-operating mode and perform within specifications when expected.

**Target:** The target upon which the temperature is determined in an infrared reading.

**Temperature Error:** The maximum change in output, at any measured value within the specified range, when the transducer temperature is changed from room temperature to specified temperature extremes.

**Thermistor:** A semiconductor device whose resistance changes with the temperature.

**Thermocouple:** Denotes two wires composed of dissimilar metals that are joined together at both ends. When one end is heated, a potential difference is generated that is proportional to the junction temperature.

**Thermometer:** An instrument that measures temperature.

**T-Type Thermocouple:** The two thermocouple wires are made of Copper and Copper-Nickel

**UL, Underwriters Laboratories:** An independent testing agency traceable to the National Bureau of Standards. Tests products for safety and performance.

**Validation:** the determination of the degree of validity of a measuring device.

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## STORING, PREPPING & HANDLING

### RECEIVING:

- Check temperatures of food upon receipt and reject any potentially hazardous foods out of acceptable ranges
- Put perishable foods away promptly

**Refrigerated (Food) Temperature:** 41°F (5°C) or below  
**Frozen (Food) Temperature:** 0°F (-18°C) or below

### STORING:

- Use open shelving
- Check foods in multiple locations throughout a cold storage area; temperature may not be uniform
- Comply with storage time standards.

**Dry Storage:** 50° to 70°F (10° to 21°C)

**Refrigerator (Food) Temperature:** 41°F (5°C) or below

**Refrigerator (Air) Temperature:** 38°F (3°C) or below

**Deep Chiller (Air) Temperature:** 26° to 32°F (-3° to 0°C)

**Freezer (Food & Air) Temperature:** 0°F (-18°C) or below

### THAWING / PREPPING:

- Do not thaw frozen food at room temperature
- If you thaw in a microwave, immediately begin cooking the food afterwards

**Under Running Water (Water Temperature):** 70°F (21°C) or below  
**In the Refrigerator (Air Temperature):** 38°F / 3°C or below

### COOLING:

**From Hot Temperature: Cool to 70°F (21°C) within 2 hours; and down to 41°F (5°C) or below within 4 hours (6 hours total)**

- Do not cool at room temperature
- Divide food into small units or use a shallow pan
- Use an ice bath or blast chiller to hasten cooling

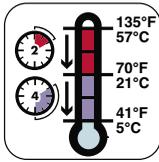
### SINK / WATER TEMPERATURES:

**Handwashing Water:** 120°F / 49°C

**Sanitizing Solutions (Heat):** 171°F (77°C) for 30 sec. min.

**Sanitizing Solutions (Chemical):** 75° to 120°F (24° to 49°C)

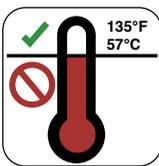
**Dish Machine (Warewashing) Final Rinse:** 180° to 190°F max (82° to 88°C) hot water sanitizing



### REHEATING:

**Reheat food to a minimum temperature of 165°F (74°C)**

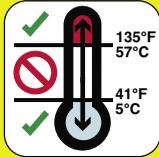
- Food must reach temperature within 2 hours
- Never let temperature fall below 135°F (57°C)



### HOT HOLDING:

**Temperature: 135°F (57°C) or above**

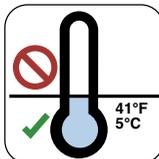
- Keep food covered
- Stir hot food frequently
- Take actual food temperature; do not rely on a thermostat setting
- Check temperature every 2 hours
- Do not use hot holding equipment to heat food



### DANGER ZONE !

**Temperature: 41° to 135°F (5° to 57°C)**

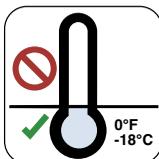
**Potentially hazardous foods exposed to this temperature range for more than 4 hours are not safe to eat.**



### COLD HOLDING:

**Temperature: 41°F (5°C) or below**

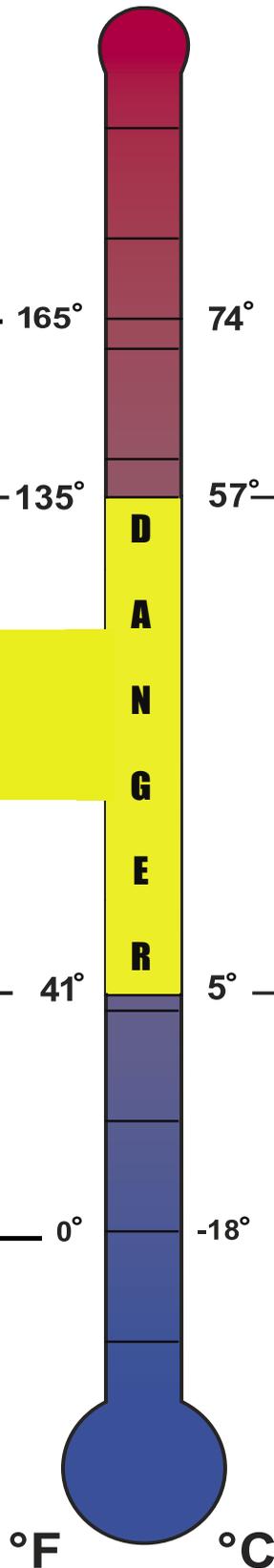
- Keep food covered
- Take actual food temperature; do not rely on a thermostat setting
- Check temperature every 2 hours
- 35° to 38°F (2° to 3°C) is the ideal air temperature



### FREEZER:

**Maintain air temperature at 0°F (-18°C) or below**

- Some bacteria may not be killed at even the lowest temperatures



### Minimum Cooking Temperatures

Product	Temperature	Time
Poultry Stuffed meat, seafood, poultry or pasta Stuffing made with fish, meat or poultry	165°F (74°C)	15 seconds
Ground meat & seafood Injected meat & mechanically tenderized meat Ratites (ostrich and emu) Shell eggs - being hot-held for service	155°F (68°C)	15 seconds
Seafood & commercially raised game Chops of pork, beef, veal and lamb Shell eggs - being served immediately	145°F (63°C)	15 seconds
Roasts of pork, beef, veal and lamb	145°F (63°C)	4 minutes
Fruit, vegetables, grains and legumes - hot held	135°F (57°C)	15 seconds

### Cold Storage Shelf Life

Product	Refrigerator	Freezer
Fresh Beef	3 - 6 days	6 - 12 months
Fresh Veal, Lamb	3 - 4 days	6 - 9 months
Fresh Pork	1 - 2 days	3 - 6 months
Ground Beef, Veal and Lamb	1 - 2 days	3 - 4 months
Ground Pork	1 - 2 days	1 - 3 months
Variety Meats	1 - 2 days	3 - 4 months
Chicken, Turkey, Duck	1 - 2 days	6 months
Filletts of Fish (lean)	1 - 2 days	4 months
Filletts of Fish (fat)	1 - 2 days	3 months
Shellfish	1 - 2 days	2 - 4 months
Vegetables	1 - 2 days	8 - 10 months
Eggs	7 days	
Milk	5 to 7 days	

**CHECK YOUR LOCAL REGULATIONS ON ALL REQUIRED TEMPERATURES AS THEY MAY VARY**

## About Emerson

Emerson (NYSE: EMR), headquartered in St. Louis, Missouri (USA), is a global technology and engineering company providing innovative solutions for customers in industrial, commercial, and residential markets. Our Emerson Automation Solutions business helps process, hybrid, and discrete manufacturers maximize production, protect personnel and the environment while optimizing their energy and operating costs. Our Emerson Commercial and Residential Solutions business helps ensure human comfort and health, protect food quality and safety, advance energy efficiency, and create sustainable infrastructure.

For more information visit **Emerson.com**.

### **Emerson Commercial & Residential Solutions**

Cooper-Atkins

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