Foodservice Catalog

Solutions that help you achieve your foodservice goals

EMERSON

SOLUTIONS FOR TODAY AND TOMORROW

A global technology company, Emerson works to make the world healthier, safer, smarter, and more sustainable. We help major industries solve the biggest challenges of modern life by offering a broad, innovative range of industrial, commercial and residential solutions.

Our Automated Solutions platform helps manufacturers maximize production, protect personnel and the environment - all while optimizing energy and operating costs. But we don't stop there. We help businesses and homeowners, too.

Our Commercial and Residential Solutions platform enhances comfort and health, supports food quality and safety, and advances energy efficiency by creating sustainable infrastructure. Our expertise addresses current and future challenges in heating, ventilation, air conditioning, refrigeration, home comfort, and cold chain operations.

We are a leading, single-source partner dedicated to helping customers ensure full cold chain integrity. Emerson provides refrigeration expertise and targeted temperature management solutions throughout your food product's journey.

From farm to table, our growing portfolio of connected devices help make it easy and efficient to achieve cold chain temperature reliability.

Our robust selection of compression/refrigeration system technologies, case controls, facility management devices, temperature loggers, trackers, probing devices, and support services help ensure cold chain compliance you can count on.

Smart Solutions from Temperature Management Experts

With high stakes such as customer safety and satisfaction on the line, it's important to choose what's right for your temperature control and monitoring needs. Businesses all over the world trust Emerson to bring them top-of-the-line, customizable, and reliable instruments for time and temperature from Cooper-Atkins, as well as HACCP-related innovations in technology from Lumity. Our temperature management brands enable consistent food quality and safety for both you and your customers:

- ***Cooper-Atkins™*** is a portfolio of well-tested, versatile mechanical and digital food safety products with more than 135 years of history. This brand is a key component of Emerson's foodservice temperature monitoring expertise.

- ***Lumity™*** is Emerson's forward-looking brand for connected control. Lumity temperature management solutions monitor and deliver actionable data in near real-time. Offerings include analytics software and digital temperature management products.

Rest easy with our limited manufacturer warranty that backs all products and software for temperature management. You can be confident in your investment with Emerson.

Let's Tackle Your Foodservice Challenges Together

Emerson's wide variety of cold chain solutions deliver reliable results to 27 of the top 30 global foodservice brands. We appreciate the opportunity to put our insights and resources to work for you.

Not sure where to start? Our experts will work with you to figure out what's best for you and your specialized needs. We'll guide you to the right products and will even customize existing solutions or create new ones to meet your specific challenges.

Contact Emerson to learn more.

FEATURED PRODUCTS

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!

Transmit Temperatures Wirelessly to Your Mobile Device

LUMITY™

Lumity™
Multi-Function
Thermometer
Page 43

Blue2™
Page 47

Automate HACCP Plans

Lumity™ HACCP Checklist
Page 45

Monitor Your Equipment Wirelessly with Instant Alerts 24/7!

NOTIF EYE
POWERED BY TEMPTRAK

NotifEye™
Page 49
Self-installable wireless monitoring.

Accurate for Life

Accurate for Life · Guaranteed

AFL Digitals
Page 15
A fast, safe and efficient tester for edible oil quality.

Durable, fast response thermocouple for harsh environments

AquaTuff
Page 25
Highly accurate, NIST traceable and IPX7 waterproof rated

Folding Thermocouple Features Interchangeable Type K Probes

KwikSwitch
Page 21
Turns on and off by simply flipping the probe open and closed

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NAFEM ServSafe nqa ISO 9001 Registered Quality Management

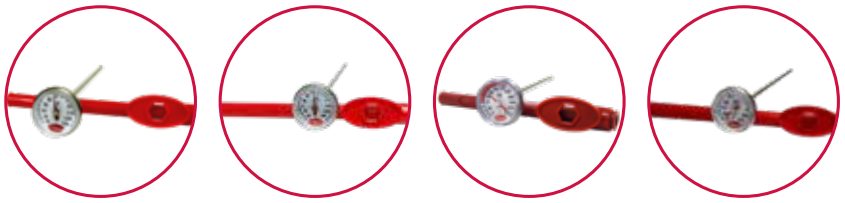
POCKET TEST THERMOMETERS

A pocket test thermometer takes the guesswork out of cooking and assures that a safe temperature has been reached to destroy harmful bacteria. With magnifying lens and crisp dial faces or large LCD 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 stem to indicate the minimum insertion point. Digitals yield a faster response and provide greater overall accuracy with little to no drift out of calibration, so are less likely to give variable readings.

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

Bimetal

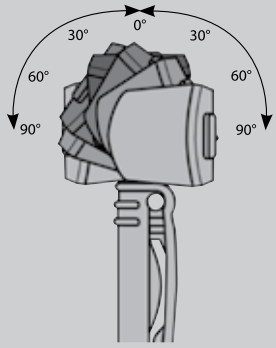


	1236-17	1246-01(C)	1246-02(C)	1246-03(C)
	Bimetal Pocket Test	Bimetal Pocket Test	Bimetal Pocket Test	Bimetal Pocket Test
Temperature Range:	25° to 125°F	-40° to 180°F (-40° to 80°C)	0° to 220°F (-20° to 100°C)	50° to 550°F (10° to 285°C)
Accuracy:	±2°F	±2°F (±1°C)	±2°F (±1°C)	±5°F (±3°C)
Housing Material:	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Dial Diameter:	1" (25cm)	1" (25 mm)	1" (25 mm)	1" (25 mm)
Stem Diameter:	0.150" (3.0 mm)	0.150" (3.0 mm)	0.150" (3.0 mm)	0.150" (3.0 mm)
Stem Length:	5" (127 mm)	5" (127 mm)	5" (127 mm)	5" (127 mm)
Lens Material:	Magnifying Polycarbonate	Magnifying Polycarbonate	Magnifying Polycarbonate	Magnifying Polycarbonate
Antimicrobial Plastic:	-	Yes Sheath Only	Yes Sheath Only	Yes Sheath Only
Weight:	0.5 oz (14 g)	0.5 oz (14 g)	0.5 oz (14 g)	0.5 oz (14 g)
Regulatory Listings::		NSF	NSF	NSF
Warranty	1 Year	1 Year	1 Year	1 Year

Digital

See AFL digital pocket tests on page 16

	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::	CE RoHS	CE RoHS
Warranty	1 Year	1 Year



Adjustable 180º Swivel Head for Easy Viewing from any Angle

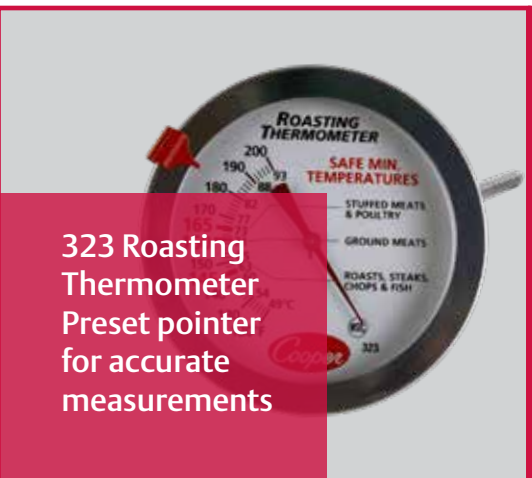
DPS300
Swivel Head Digital
Pocket Test

BIMETAL COOKING THERMOMETERS

Our specialty foodservice thermometers are marked with correct temperature zones for food safety and product quality. With a large selection of NSF-listed thermometers specifically for cooking and hot holding, you will get the results you want every time.

- *HACCP GUIDELINES*
- *STAINLESS STEEL CONSTRUCTION*

	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:	NSF	NSF	-
Warranty:	1 Year	1 Year	1 Year



323 Roasting Thermometer Preset pointer for accurate measurements

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

	3210	3270
	Grill Surface Thermometer	Deep-Fry Thermometer
Temperature Range:	100° to 600°F (50° to 300°C)	50° to 550°F (10° to 285°C)
Accuracy:	±25°F (±12°C)	±10°F (±5°C)
Housing Material:	Aluminum	Stainless Steel
Dial Diameter:	2.5” (64 mm)	2.5” (64 mm)
Stem Diameter:	-	0.25” (6.3 mm)
Stem Length:	-	15” (381 mm)
Lens Material:	Glass	Glass
Weight:	3 oz (85 g)	5.5 oz (156 g)
Regulatory Listings:	NSF	-
Warranty:	1 Year	1 Year

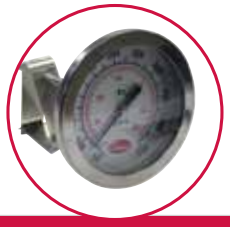
3210
Grill Surface Thermometer
With unique grips for easy removal from hot grill surfaces

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

BIMETAL COOKING THERMOMETERS

Our specialty foodservice thermometers are marked with correct temperature zones for food safety and product quality. With a large selection of NSF-listed thermometers specifically for cooking and hot holding, you will get the results you want every time.

- *HACCP GUIDELINES*
- *STAINLESS STEEL CONSTRUCTION*



	1236-70	2237-04	2238-14
	Espresso Thermometer	**Espresso Thermometer**	**8” Stem Test**
Temperature Range:	0° to 220°F	0° to 220°F (-10° to 104°C)	50° to 550°F (10° to 288°C)
Accuracy:	±2°F	±2°F (±1°C)	±5°F (±3°C)
Housing Material:	Stainless Steel	Stainless Steel	-
Dial Diameter:	1” (25 mm)	1.75” (44 mm)	2” (50 mm)
Stem Diameter:	0.15” (3.6 mm)	0.15” (3.8 mm)	0.15” (3.8 mm)
Stem Length:	5” (127 mm)	7” (178 mm) w/ vessel clip	8” (203 mm) w/ vessel clip
Lens Material:	Magnifying Polycarbonate	Magnifying Polycarbonate	Glass
Weight:	0.5 oz (14 g)	1 oz (28 g)	1 oz (28 g)
Regulatory Listings:	NSF	NSF	NSF
Warranty:	1 Year	1 Year	1 Year

	24HP	26HP
	Oven Thermometer	Holding Cabinet Thermometer
Temperature Range:	100° to 600°F (50° to 300°C)	100° to 175°F (38° to 80°C)
Accuracy:	±25°F (12.5°C)	±3°F (1.5°C)
Housing Material:	Stainless Steel	Stainless Steel
Dial Diameter:	2” (50 mm)	2” (50 mm)
Stem Diameter:	-	-
Stem Length:	-	-
Lens Material:	Glass	Glass
Weight:	1.5 oz (43 g)	1.5 oz (43 g)
Regulatory Listings:	NSF	NSF
Warranty:	1 Year	1 Year

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 systems from small mechanical thermometers that hang or stick inside refrigerated units to more sophisticated panel meters and wireless monitoring are available. Keep constant and accurate temperatures to stay compliant and prevent food spoilage.

- *HACCP GUIDELINES*
- *FOOD GRADE PLASTIC*

	25HP	330	335	535
	Refrigerator Thermometer	Vertical Glass Tube	Horizontal Glass Tube	Cooler Thermometer
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)	-20° to 120°F (-30° to 50°C)
Accuracy:	±2°F (±1°C)	±2°F (±1°C)	±2°F (±1°C)	±5°F (±2°C)
Housing Material:	Stainless Steel	Food Grade Plastic	Stainless Steel	Plastic
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)	2" (51 mm)
Lens Material:	Glass	-	Food Grade Polycarbonate	Plastic
Weight:	1.5 oz (43 g)	0.25 oz (7 g)	1 oz (28 g)	0.5 oz (14 g)
Regulatory Listings:	NSF	NSF	NSF	-
Warranty:	1 Year	1 Year	1 Year	1 Year

	2560	PM180
	Digital Thermometer	**Dual-Cool**
Temperature Range:	-22° to 122°F (-30° to 50°C)	**-25° to 180°F (-32° to 82°C)**
Accuracy:	±1°F (±0.5°C)	**±2°F (±1°C)**
Housing Material:	Antimicrobial Plastic	**Plastic**
Dimensions:	3.562 x 1.25" x 3.5" (90 mm x 32 mm x 89 mm)	-
Lens Material:	Food Grade Polycarbonate	-
Weight:	1.5 oz (43 g)	**5 oz (142 g)**
Regulatory Listings:	CE NSF RoHS	CE RoHS
Warranty:	Lifetime	**1 year**

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.

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

RECALL SEPARATE MIN / MAX TEMPERATURES FOR EACH PROBE!

Min/Max temperature recalled for Probe 1

Min/Max temperature recalled for Probe 2

STORAGE AND WALL

Short term holding for perishable and potentially hazardous foods must be monitored carefully. Foods in dry storage also require proper monitoring. Our oversized wall thermometers allow easy monitoring of temperatures in critical food-related areas and increase employee awareness.

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

	212-150-8	212-158-8
	12” Wall w/ Humidity Scale	12” Dry Storage Prep w/ Humidity Scale
Temperature Range:	-40° to 120°F (-40° to 50°C)	10° to 80°F
Accuracy:	±3°F (1.5°C)	±3°F
Lens Dimensions:	11.5” (292 mm)	11.5” (292 mm)
Lens Material:	Plastic with UV additive	Plastic with UV additive
Weight:	15 oz (425 g)	15 oz (425 g)
Warranty:	1 Year	1 Year
RH Range:	0 to 100%	0 to 100%
RH Accuracy:	±5% @ 50 to 99% RH	±5% @ 50 to 99% RH

	212-159-8	212-159C-8
	12” Cooler/Freeze w/ Humidity Scale	12” Cooler/Freezer w/ Humidity Scale, Celsius
Temperature Range:	-10° to 80°F	-25° to 35°C
Accuracy:	±3°F	±1°C
Lens Dimensions:	11.5” (292 mm)	11.5” (292 mm)
Lens Material:	Plastic with UV additive	Plastic with UV additive
Weight:	15 oz (425 g)	15 oz (425 g)
Warranty:	1 Year	1 Year
RH Range:	0 to 100%	0 to 100%
RH Accuracy:	±5% @ 50 to 99% RH	±5% @ 50 to 99% RH

PANEL METERS

Easily monitor the internal temperature of your coolers and freezers without opening the door. Our NSF-listed panel meters offer an easy solution to reading internal air temperatures perfect for use in walk-in refrigerators, display cases, holding and specialty cabinets, dairy cases, freezers and more.

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

	DM120	DM120S-0-3
	Front Flange, Back Connect	Back Flange, Back Connect
Temperature Range:	-40° to 120°F (-40° to 48°C)	-40° to 120°F (-40° to 48°C)
Accuracy:	±2°F (±1°C)	±2°F (±1°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
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
Weight:	2.5 oz (71 g)	3.5 oz (999 g)
Regulatory Listings:	CE NSF COMPONENT RoHS	CE NSF COMPONENT RoHS
Warranty:	1 year	1 year






	6142-06	6142-13	6142-20 6142-58	6642-06	6812-01 6812-02	7112-05
	Front Flange, Back Connect	Front Flange, Back Connect	Front Flange, Back Connect	Strap Hang, Bottom Connect	Back Flange, Back Connect	Front Flange, Back Connect
Temperature Range:	40° to 240°F (10° to 115°C)	-40° to 120°F (-40 to 50°C)	-40° to 60°F (-40° to 15°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 240°F (10° to 115°C)
Accuracy:	±2°F (±1°C) from 140° to 210°F (60 to 99°C)	±2°F (±1°) at 10° and 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°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)
Dial Dimension:	2” (51 mm)	2” (51 mm)	2” (51 mm)	2” (51 mm)	2” (51 mm)	2.5” (64 mm)
Capillary Length:	48” (1.2 m)	48” (1.2 m)	48” (1.2 m) - 6142-20 20’ (6.1 m) - 6142-58	48” (1.2 m)	48” (1.2 m)	48” (1.2 m)
Case Material:	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Flange:	Front	Front	Front	Strap Hanger no flange	Back	Front - 7112-01
Connection:	Back	Back	Back	Bottom	Back	Back - 7112-01 -
Mounting:	Flush	Flush	Flush	-	Surface	Flush - 7112-01 -
Weight:	5 oz (142 g)	5 oz (142 g)	5 oz (142 g)	5 oz (142 g)	5 oz (142 g)	7 oz (198 g) - 7112-01
Regulatory Listings:	RoHS NSF COMPONENT	RoHS NSF COMPONENT	RoHS NSF COMPONENT	RoHS	RoHS NSF COMPONENT	RoHS
Warranty:	1 year	1 year	1 year	1 year	1 year	1 year

DIGITAL PANEL METERS

Easily monitor the internal temperature of your coolers and freezers without opening the door. Our NSF-listed panel meters offer an easy solution to reading internal air temperatures perfect for use in walk-in refrigerators, display cases, holding and specialty cabinets, dairy cases, freezers and more. Our digital panel meters are suitable for a wide range of applications.

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





	DM450	PM120-08	PMRH120	SP120	SP160-01
	Front Flange, Back Connect	Mini Rectangular, White	Mini Rectangular, Temp & Humidity	Square Solar Panel	Rectangualar Solar
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)	-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 (±2C°) 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)	±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)
Resolution:	0.1°	0.1°	0.1°/1% RH	0.1°	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	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	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)	1.4" x 0.5" (36 mm x 13 mm)
Lead Length:	39" (1 m)	39" (1 m)	39" (1 m)	10' (3 m)	48" (1.2 m)
Case Material:	Stainless Steel	Polycarbonate	Polycarbonate	ABS	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)	4.5" x 1.125" x .625" (114 mm x 29 mm x 16 mm)
Power:	(1) 1.5V #LR754	(1) 1.5V AA	(1) 1.5V AA	Solar w/ battery back-up (1) 1.5V A76	Solar w/ battery back-up (1) 1.5V AAA
Mounting:	Front Flange	Optional Mounting Flange (Model 9302)	Optional Mounting Flange (Model 9302)	Hangs	Hangs
Weight:	3 oz (85 g)	2 oz (57 g)	2.5 oz (71 g)	2.5 oz (71 g)	3 oz (85 g)
Regulatory Listings:	CE RoHS	CE RoHS	CE RoHS	CE RoHS	CE RoHS
Warranty:	1 year	1 year	1 year	1 year	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, accurate and quick-responding digital thermometer. Thermistor instruments can be very accurate within a limited temperature range. Our digital pocket tests will help you obtain readings faster because the thermistor sensor located in the tip of the stem and they have easy to read LCD displays. Made to be durable, the AFL line of digital thermometers boast the industry's only Lifetime Warranty!

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

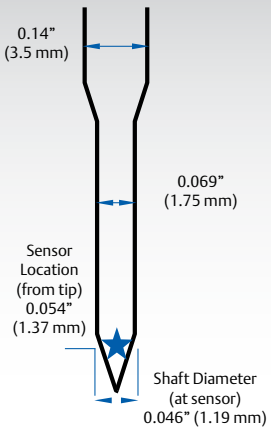
DFP450W
Digital Pocket Test with Temperature Alarm

DPP400W
Pen-style Digital Pocket Test

DPP800W
MAX
Digital Pocket Test

Accurate for Life™ Guaranteed

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



★=Thermistor Sensor Location

The tip diameter of our AFL thermometers is 0.046" (1.19 mm) where the thermistor sensor is located. This location is well within the FDA Food Code's recommended Guidelines.

Not to Scale

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

	DFP450W	DPP400W	DPP800W	TTM41 TTM41-10
	Pocket Test w/ Temperature Alarm	Pen-Style Pocket Test	MAX Pocket Test with Extended Sheath	10”-15” Stem Coolit-Rite Cooling Validator
Temperature Range:	-40° to 450°F (-40° to 232°C)	-40° to 392°F (-40° to 200°C)	-40° to 450°F (-40° to 232°C)	-4° to 302°F (-20° to 150°C)
Accuracy:	±2°F (±1°C)	±2°F (±1°C)	±1°F (0.5°C)	±2°F (±1°C)
Resolution:	0.1°	0.1°	0.1°	0.1°
Response Time (in liquid):	<6 seconds	<6 seconds	<6 seconds	-
LCD Display:	0.875” x 0.375 (22 mm x 9.5mm)	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)
Stem Length:	4.75” (121 mm)	2.75” (70 mm)	4” (102 mm)	15” (381 mm)
Power:	(1) 1.5V #LR44	(1) 1.5V #LR44	(1) 1.5V #LR44	(1) 1.5V #LR44
Battery Life:	500 Hours	500 Hours	500 Hours	1 Year
Auto Off:	10 min.	10 min.	10 min.	-
Water Resistance Rating:	IPX7 Dishwasher Safe	IPX7	IPX7 Dishwasher Safe	Water Resistant
Regulatory Listings:	CE NSF RoHS	CE NSF RoHS	CE NSF RoHS	CE NSF RoHS

INFRARED THERMOMETERS

Non-contact infrared thermometers measure surface temperatures fast. These units are lightweight, ergonomically designed and eliminate cross-contamination during temperature checks. Infrared thermometers are perfect for measuring items in display cases, salad bars, and buffets.

Optical resolution is expressed as a ratio of the distance to the object and the diameter of the temperature measurement area. The larger the ratio number, the better the instrument's resolution, and the smaller the spot size that can be measured. The laser sighting included in some instruments assists in aiming at the measured spot.

- *QUICKLY MEASURE SURFACE TEMPERATURES*
- *LASER SIGHTING*
- *PREVENTS CROSS CONTAMINATION*

412
Gun-style Infrared with Thermocouple Jack

462
Slim-Line Infrared

481
DualTemp2 Infrared with RTD Probe

	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 RoHS	CE RoHS
Warranty:	1 Year	1 Year

	470	480	481
	Mini Infrared	**DualTemp Infrared and Probe**	**DualTemp with Platinum RTD Probe**
Temperature Range:	-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 Accuracy:	Infrared ±3.6°F (±2°C)	Infrared ±4°F (±2°C)	Infrared ±2°F (±1°C)
Probe Accuracy:	-	Thermocouple ±2°F (±1°C)	RTD Probe ±1°F (±0.5°C)
Resolution:	0.1°/1° above 200°F	0.1°/1°F above 200°F	0.1°
Ambient Operating Range:	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)
Laser:	-	-	Illumination Beam
Distance to Spot (D:S):	1:1	1:1	3:1
Emissivity:	Preset at 0.95	0.95 default adjustable from 0.10 to 1.0	Preset at 0.97
Power:	(1) #CR2032	(1) #CR2032	(1) 9V battery
Battery Life:	40 Hours	40 Hours	100 Hours
Auto Off:	15 sec.	15 sec.	20 sec.
Weight:	1 oz (28 g)	2.5 oz (72 g)	6 oz (170 g)
Regulatory Listings:	CE RoHS	CE RoHS	CE NSF COMPONENT RoHS
Warranty:	1 Year	1 Year	1 Year

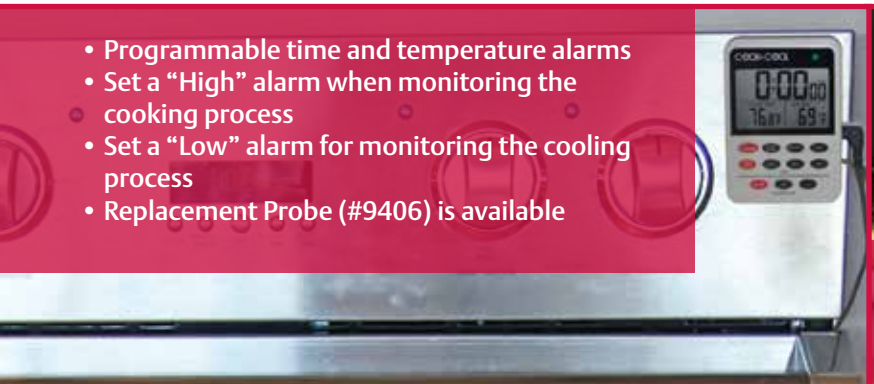
TIMERS

Time and temperature are joint components for many applications. Cooper-Atkins' timers are popular because of their large, easy-to-read displays. Our digital timers feature an adjustable volume control, stopwatch capabilities, wall or magnet mounting, non-skid rubber feet and grease-resistant keypads. Recall settings help save time in the kitchen.

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

	DTT361-01	FT24	TC6	TFS4
	Cook N Cool Thermo-Timer	Large Single-Station Timer	Six-Button Timer	Multi-Station Timer
Unit Range:	-25° to 392°F (-310° to 200°C) 23:59:59 Hours	23:59:59 Hours	23:59:59 Hours	99 Hours 59 Minutes
Resolution:	1 second	1 second	1 second	Hours/Minutes Minutes/Seconds
Power Source:	(3) 1.5V AAA	(4) 1.5V "C"	1.5V AAA	(4) 1.5V "C" 9374 AC Adapter (optional)
Memory / Recall:	Yes	Yes	Yes	Yes
Modes:	Clock, Timer, Preset Temperature	-	Counts up/down	Counts up/down
Alarm Level (Decibel):	80 decibels	90 decibels	85 decibels	90 decibels
Housing:	ABS Plastic Probe and cord temp. limit 400°F/204°C	ABS Plastic	ABS Plastic	ABS Plastic
LCD Dimensions:	2.25" x 1.5" (57 mm x 38 mm)	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)
Weight:	7 oz (198 g)	1 lb 3 oz (539 g)	2 oz (57 g)	1 lb 6 oz (523 g)
Regulatory Listings:	CE RoHS	NSF COMPONENT	CE	CE RoHS
Warranty:	1 Year	2 Years	1 Year	1 Year

- 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



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

	TM60	TS100	TW3
	Long Ring Mechanical Timer	Timer/ Stopwatch	Large Digit Multi-Function Timer
Unit Range:	0 to 60 Minutes	99 Minutes 59 Seconds	99 Minutes 59 Seconds
Resolution:	1 minute	1 second	1 second
Power Source:	Wind up	1.5V LR44	1.5V LR44
Memory / Recall:	-	Yes	Yes
Modes:	Counts down	Counts up	Counts down, counts up after set time is reached
Alarm Level (Decibel):	70 decibels	70 decibels	70 decibels
Housing:	Stainless Steel	ABS Plastic	ABS Plastic
LCD Dimensions:	-	-	1.5" x 2.5" (38 mm x 76 mm)
Weight:	4 oz (113 g)	1 oz (28 g)	3 oz (85 g)
Regulatory Listings:	CE RoHS	CE RoHS	CE RoHS
Warranty:	1 Year	1 Year	1 Year

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

KWIKSWITCH AND STEAK GENIUS FOLDING THERMOCOUPLE

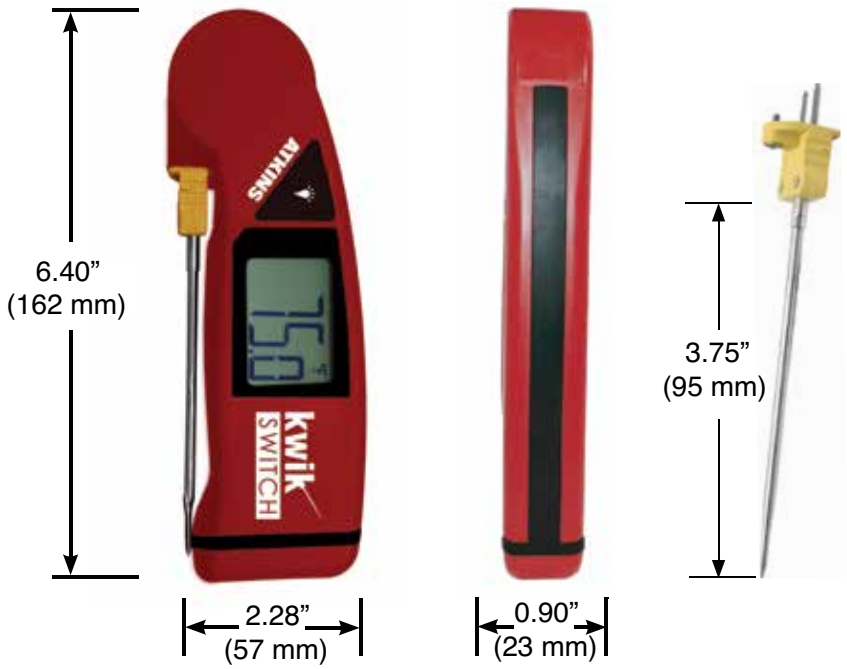
The KwikSwitch is a folding thermocouple instrument featuring a replaceable probe while maintaining a total system accuracy of ±1°F (±0.5°C). This NSF-certified unit is made of durable ABS plastic and is IPX7 waterproof rated. This easy-to-use device turns on and off by simply flipping the probe open and closed, and includes an automatic shut-off after 10 minutes to conserve battery life. The Steak Genius includes the steak doneness reading from rare (R) to well done (WD), depending on the temperature of the meat.

STEAK GENIUS TEMPERATURE TABLE

TEMP. READING °F	STEAK DONENESS
99.9 and below	
100.0 - 104.9	R-
105.0 - 109.9	R
110.0 - 114.9	R+
115.0 - 119.9	MR-
120.0 - 124.9	MR
125.0 - 129.9	MR+
130.0 - 136.9	M-
137.0 - 142.9	M
143.0 - 149.9	M+
150.0 - 154.9	MW-
155.0 - 159.9	MW
160.0 - 164.9	MW+
165.0 - 169.9	W-
170.0 - 173.9	W
174	W+
and above	

94100 KwikSwitch Folding Thermocouple with Probe

94100-01 Steak Genius Folding Thermocouple with probe



Rubber boot 9418 wraps around the unit for protection - sold separately.

Specifications

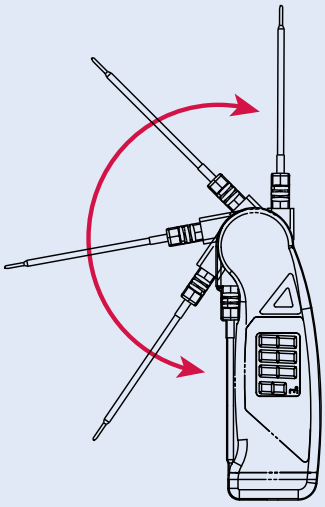
94100 KwikSwitch Folding Thermocouple with Probe
Temperature Range: -40° to 500°F (-40° to 260°C)
Total System Accuracy: ±1°F (±0.5°C) from -40° to 212°F (-40 to 100°C)
Instrument Accuracy: ±0.5°F (±0.3°C) from -40° to 212°F (-40 to 100°C)
Resolution: 0.1
Display Update Rate: 0.5 seconds
ABS Plastic housing
Folding probe with storage slot for 53337-K probe
Large easy to read LCD with 0.75” digits
Auto Shut-off: after 10 minutes of inactivity
Backlight Display
Low battery indicator
IPX7* waterproof rated (*submerged 30” for 30 mins)
Battery operated (2 AAA 1.5V Alkaline)
Battery Life: 1000 hours (without backlight active)
5-year instrument warranty

CE RoHS NSF COMPONENT

53337-K Replacement DuraNeedle Probe
Temperature Range: -40° to 500°F (-40° to 260°C)
Total System Accuracy: ±1°F (±0.5°C) from -40° to 212°F (-40 to 100°C)
Instrument Accuracy: ±0.5°F (±0.3°C) from -40° to 212°F (-40 to 100°C)
Resolution: 0.1
Display Update Rate: 0.5 seconds

Folding Thermocouple features interchangeable Type K probes!

- Maintains Total System Accuracy when replacing with new 53337-K probe
- Compatible with Induction Cooking Equipment



Packaging

Individual Package Weight: 7 oz. (198 grams) w/ probe
Package Dimensions: 5.375” x 9.125” x 1.125” (137 mm x 232 mm x 29 mm)
Package Cube: .03
Units per Package (6)/Units per master carton (36)

ECONOTEMP

Get advanced technology at an affordable price. The EconoTemp™ is a general purpose, thermocouple temperature monitoring instrument that is a step up from the digital pocket test, offering greater speed and more versatility. The removable rubber boot provides superior impact resistance and has molded tabs on the side to hold and store most needle probes.

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

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

Instruments

	32311	32322
	EconoTemp™	EconoTemp™ Plus
Temperature Range:	-40° to 500°F (-40° to 260°C)	-40° to 1000°F (-40° to 538°C)
Accuracy:	±1°F (±0.5°C)	±1°F (±0.5°C)
Housing Material:	ABS	ABS
Resolution:	1°	0.1° up to 495°F (257°C)
Power:	(3) 1.5V AAA	(3) 1.5V AAA
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 COMPONENT RoHS	CE RoHS
Warranty:	5 Year	5 Year

9368 Bracket

See 9368 wall bracket on page ??

Kits






93013-K	93230-K	93232-K	93233-K	93237-K	94020-K
KIT INCLUDES:					
32311-K Instrument	32311-K Instrument	32311-K Instrument	32311-K Instrument	32311-K Instrument	32311-K Instrument
50012-K Probe	50336-K Probe	50306-K Probe	50012-K Probe	31901-K Probe	50337-K Probe
50306-K Probe	9368 Wall Bracket	50336-K Probe	50306-K Probe	31905-K Probe	9368 Wall Bracket
50335-K Probe		14235 Case	50336-K Probe	31907-K Probe	
14057 Case		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 series. The AquaTuff™ Series Thermocouple Instruments are highly accurate, NIST traceable and most importantly, as the AquaTuff™ name implies, are IPX7 waterproof rated for greater reliability and durability in harsh environments. They are ideally suited for wet, steam-filled environments in kitchens and processing areas.

The non-Wrap-n-Stow enclosure design allows for maximum versatility and can be used with any Type K thermocouple probe.

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

35100-K
AquaTuff™ Thermocouple
Instrument

9369
Bracket

See 9369 wall
bracket on page ??

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

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 is your top priority. Total system accuracy ensures this instrument and probe combination will deliver. The probe is calibrated with a TRUE 0.9°F accuracy and probes can be replaced in the field without the need for recalibration. Wrap&Stow™ designs are available with a unique, cable storage channel so that the 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 system accuracy within food safety guidelines without need for further calibration.

The 35340 AquaTuff includes an Intelligent Stabilization (ITS) feature that prevents the temperature from being displayed until a stabilized temperature is reached. The ITS mode also includes a memory function that can store up to 250 readings.

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)

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

Instruments

	35240	35340
	w/ MicroNeedle Probe	ITS w/ MicroNeedle Probe
Temperature Range:	-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	±0.9°F (±0.5°C) total system accuracy
Housing Material:	ABS Plastic	ABS Plastic
Resolution:	0.1°/ 1° selectable	0.1°
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.
Weight:	7 oz (199 g)	7 oz (199 g)
Regulatory Listings:	CE NSF RoHS	CE RoHS
Warranty:	5-Year Instrument	5-Year Instrument
Probe Response Time:	1 second (Liquid)	1 second (Liquid)

THE ENTIRE PROBE ASSEMBLY, SHAFT PROBE AND CABLE CAN WITHSTAND 400°F/ 204°F AND IS FOOD SAFE.

Replacement Probe

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

THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find in the foodservice industry and are well suited for numerous tasks. Each probe is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion-resistant cables. Probes are designed and built to the highest standards allowing for probe interchangeability with minimal impact on total system accuracy.

Used to measure insertion and immersion temperatures of food products including solids, semi-solids and liquids.

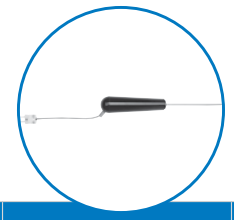
- *MOST EXTENSIVE PROBE LINE IN THE INDUSTRY*
- *ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY*
- *CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS*

HEAVY DUTY PROBE WITH LARGE HANDLE GRIP.

Insertion

	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

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
Temperature Range:	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)
Max Tip Temperature:	932°F (500°C)	400°F (205°C)	500°F (260°C)	400°F (205°C)	500°F (260°C)
Max Cable Temperature:	400°F (205°C)	400°F (205°C)	176°F (80°C)	400°F (205°C)	176°F (80°C)
Response Time (in liquid):	1 second	4 seconds	4 seconds	4 seconds	5 seconds
Shaft Length:	4” (102 mm)	4” (102 mm)	4” (102 mm)	3” (76 mm)	4” (102 mm) 8”, 18” and 24” Available
Shaft Tip Diameter:	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)
Cable Length Max Extended:	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
Weight:	4 oz (113 g)	4 oz (113 g)	4 oz (113 g)	1 lb (454 g)	5 oz (142 g)
Warranty:	1 Year	1 Year	1 Year	1 Year	1 Year

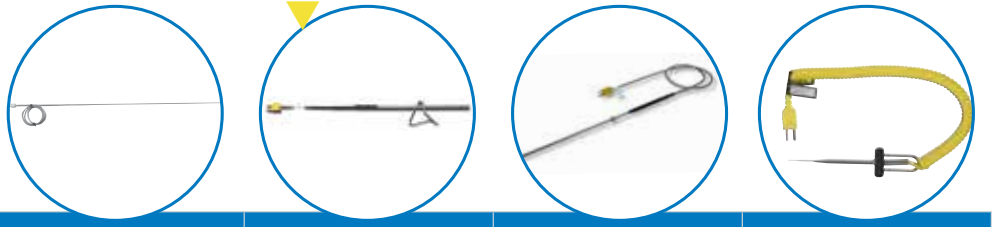
THERMOCOUPLE PROBES

High quality thermocouple thermometers should be coupled with the most appropriate probe for the application. Cooper-Atkins' thermocouple probes are the most extensive line you will find in the foodservice industry and are well suited for numerous tasks. Each probe is designed by Cooper-Atkins engineers, manufactured in our U.S. facility and built with high-temperature, abrasion-resistant cables. Probes are designed and built to the highest standards allowing for probe interchangeability with minimal impact on total system accuracy.

Used to measure insertion and immersion temperatures of food products including solids, semi-solids and liquids.

- *MOST EXTENSIVE PROBE LINE IN THE INDUSTRY*
- *ALL PROBES MANUFACTURED IN AN ISO 9001:2008 FACILITY*
- *CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS*

Insertion

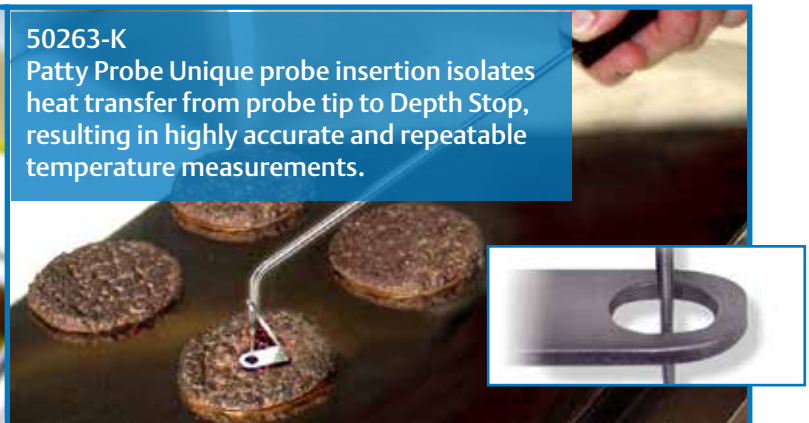


	49140-K	50200-K	50208-K	50209-K
	High Temp Fry Vat probe Armored Cable	Vat Probe w/ Clip	Fry Vat Probe Armored Cable	MicroNeedle - Coil Cable
Temperature Range:	32° to 2012°F (0° to 1100°C)	-40° to 400°F (-40° to 205°C)	-40° to 400°F (-40° to 205°C)	-100° to 500°F (-73° to 260°C)
Max Tip Temperature:	2012°F (1100°C)	400°F (205°C)	400°F (205°C)	500°F (260°C)
Max Cable Temperature:	400°F (205°C)	400°F (205°C)	400°F (205°C)	176°F (80°C)
Response Time (in liquid):	2 seconds	12 seconds	8 seconds	1 second
Shaft Length:	24" (610 mm)	8" (203 mm)	7.3" (185 mm)	3.5" (89 mm)
Shaft Tip Diameter:	0.188" (4.8 mm)	-	0.188" (4.8 mm)	0.043" (1 mm)
Cable Length Max Extended:	36" (914 mm) Flexible Armor	36" (914 mm) FEP Jacket	30" (762 mm) w/Flexible Armored Jacket	48" (1.2 m) Polyurethane Jacket
Weight:	6 oz (170 g)	2 oz (57 g)	3 oz (85 g)	2 oz (57 g)
Warranty:	1 Year	1 Year	1 Year	1 Year

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

Insertion

	50263-K	50264-K	50293-K	50294-K
	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
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)
Max Tip Temperature:	500°F (260°C)	500°F (260°C)	500°F (260°C)	500°F (260°C)
Max Cable Temperature:	176°F (80°C)	176°F (80°C)	176°F (80°C)	176°F (80°C)
Response Time (in liquid):	1 second	1 second	1 second	1 second
Shaft Length:	8" (203 mm)	8" (203 mm)	8" (203 mm)	8" (203 mm)
Shaft Tip Diameter:	0.043" (1 mm)	0.043" (1 mm)	0.043" (1 mm)	0.043" (1 mm)
Cable Length Max Extended:	48" (1.2 m) Polyurethane Jacket	48" (1.2 m) Polyurethane Jacket	48" (1.2 m) Polyurethane Jacket	48" (1.2 m) Polyurethane Jacket
Weight:	3 oz (85 g)	3 oz (85 g)	3 oz (85 g)	3 oz (85 g)
Warranty:	1 Year	1 Year	1 Year	1 Year



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

THERMOCOUPLE PROBES

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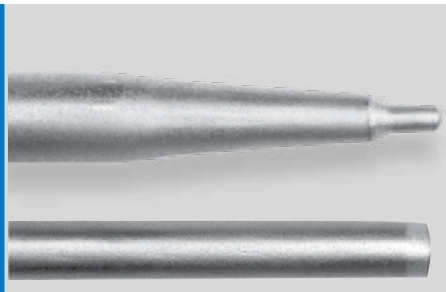
Used to measure insertion and immersion temperatures of food products including solids, semi-solids and liquids.

Insertion




	50334-K	50335-K	50336-K	50360-K
	DuraNeedle - Straight Cable	Needle Probe w/ Coil Cable	DuraNeedle - Coil Cable	Oven Needle Probe
Temperature Range:	-100° to 500°F (-73° to 260°C)	-40° to 500°F (-40° to 260)	-40° to 500°F (-40° to 260)	-40° to 500°F (-40° to 260°C)
Max Tip Temperature:	500°F (260°C)	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)	600°F (316°C)
Response Time (in liquid):	1 second	4 seconds	2 seconds	2 seconds
Shaft Length:	4" (102 mm)	4.5" (114 mm) 8" and 10" Available	6" (152 mm)	5.5" (140 mm)
Shaft Tip Diameter:	0.085" (2.2 mm)	0.125" (3.2 mm)	0.085" (2.2 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	35" (889 m) Stainless Steel Overbraid
Weight:	2 oz (57 g)	2 oz (57 g)	2 oz (57 g)	1 oz (28 g)
Warranty:	1 Year	1 Year	1 Year	1 Year



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

- *MOST EXTENSIVE PROBE LINE IN THE INDUSTRY*
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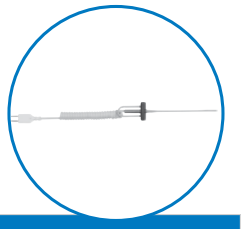
- *CUSTOM MANUFACTURING AVAILABLE FOR UNIQUE APPLICATIONS*

Insertion



	50361-K	50426-K	50427-K	50316-K
	Armored Meat Probe	**4” Reduced Tip - Coil Cable**	**12” Reduced Tip - Coil Cable**	**4” Blunt Tip - Coiled Cable**
Temperature Range:	-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)
Max Tip Temperature:	400°F (205°C)	932°F (500°C)	932°F (500°C)	500°F (260°C)
Max Cable Temperature:	400°F (205°C)	176°F (80°C)	176°F (80°C)	176°F (80°C)
Response Time (in liquid):	4 seconds	1 second	1 second	6 seconds (metal surface) / 1 second (liquid)
Shaft Length:	3.875” (98 mm)	4” (102 mm)	12” (305 mm)	4” (102 mm)
Shaft Tip Diameter:	0.085” (2.2 mm)	0.063” (1.6 mm)	0.063” (1.6 mm)	0.125” (3.2 mm)
Cable Length Max Extended:	10’ (3 m) Flexible Armor	48” (1.2 m) Polyurethane Jacket	48” (1.2 m) Polyurethane Jacket	48” (1.2 m) Polyurethane Jacket
Weight:	6 oz (170 g)	5 oz (142 g)	5 oz (142 g)	2 oz (57 g)
Warranty:	1 Year	1 Year	1 Year	1 Year

THERMOCOUPLE PROBES

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Used to measure insertion and immersion temperatures of food products including solids, semi-solids and liquids.

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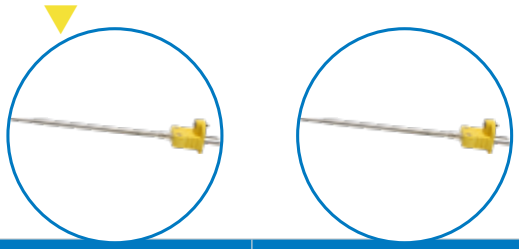
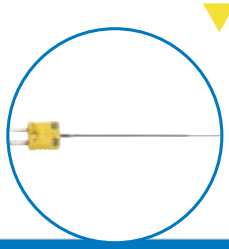
DIRECT CONNECT PROBE ALLOWS FOR SINGLE-HANDED OPERATION!

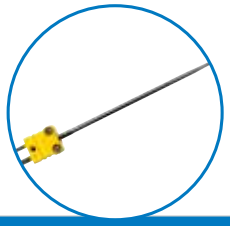
Direct Connect with Flanged Connector



	51210-K	51337-K
	MicroNeedle w/ Flanged Connector	DuraNeedle w/ Flanged Connector
Temperature Range:	-100° to 500°F (-73° to 260°C)	-100° to 500°F (-73° to 260°C)
Max Tip Temperature:	500°F (260°C)	500°F (260°C)
Response Time: (in Liquid)	1 second	1 second
Shaft Length:	3.75" (95 mm)	4" (102 mm)
Shaft Tip Diameter:	0.043" (1 mm)	0.085" (2.2 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

Direct Connect





	50207-K	50210-K	50337-K
	UltraFine Chiseled Tip - Direct Connect	MicroNeedle - Direct Connect	DuraNeedle Direct Connect
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)
Max Tip Temperature:	500°F (260°C)	500°F (260°C)	500°F (260°C)
Response Time: (in Liquid)	1 second	1 second	1 second
Shaft Length:	3.75” (95 mm)	3.75” (95 mm)	4” (102 mm)
Shaft Tip Diameter:	0.043” (1 mm)	0.043” (1 mm)	0.085” (2.2 mm)
Cable Length Max Extended:	Direct Connect (no cable)	Direct Connect (no cable)	Direct Connect (no cable)
Weight:	0.5 oz (14 g)	0.5 oz (14 g)	0.5 oz (14 g)
Warranty:	1 year	1 year	1 year

THERMOCOUPLE PROBES

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Surface probes are suitable for measuring temperatures on a variety of surfaces. Griddles or grills should be checked frequently to ensure that proper cooking temperatures are maintained.

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Surface

	31907-K	50001-K	50012-K
	Bell Surface Probe	Right Angle Flat Surface Probe	120° Angle Surface Probe
Temperature Range:	-40° to 400°F (-40° to 205°C)	-40° to 400°F (-40° to 205°C)	-40° to 500°F (-40° 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)	176°F (80°C)
Response Time:	5 seconds (oiled surface)	7 seconds (oiled surface)	4 seconds (oiled surface)
Shaft Length:	4" (102 mm)	9" (229 mm)	4.5" (114 mm)
Cable Length Max Extended:	24" (610 mm) Silicone Jacket	30" (762 mm) Flexible Armored Cable	48" (1.2 m)
Weight:	1 oz (28 g)	6 oz (170 g)	5 oz (142 g)
Warranty:	1 Year	1 Year	1 Year

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

Note: The major source of error in reading surface temperature is obtaining adequate heat transfer from the surface into the measuring probe tip. To reduce this error: 1) use a small amount of oil or grease to improve heat transfer; 2) use a large contact area and 3) press the probe firmly against the measuring surface.

Surface

	50014-K	50318-K	50319-K
	Weighted Griddle Surface Probe	**Ceramic Tip Straight Stem**	**Ceramic Tip Right Angled**
Temperature Range:	-40° to 500°F (-40° to 260°C)	-40° to 1202°F (-40° to 650°C)	-40° to 1202°F (-40° to 650°C)
Max Tip Temperature:	500°F (260°C)	1202°F (650°C)	1202°F (650°C)
Max Cable Temperature:	400°F (205°C)	176°F (80°C)	176°F (80°C)
Response Time:	2 seconds (oiled surface)	1 second (oiled surface)	1 second (oiled surface)
Shaft Length:	-	4” (102 mm)	5” (127 mm)
Cable Length Max Extended:	30” (762 mm) Flexible Armored Cable	48” (1.2 m) Polyurethane Jacket	48” (1.2 m) Polyurethane Jacket
Weight:	2 lb (907 g)	5 oz (142 g)	6 oz (170 g)
Warranty:	1 Year	1 Year	1 Year

50014-K
Weighted probe allows for hands-free use

THERMOCOUPLE PROBES

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These probes are suitable for measuring air temperatures. Some are designed to measure ambient temperature, while other models monitor internal temperatures and include a clip for attaching the sensor inside freezers, coolers or ovens.

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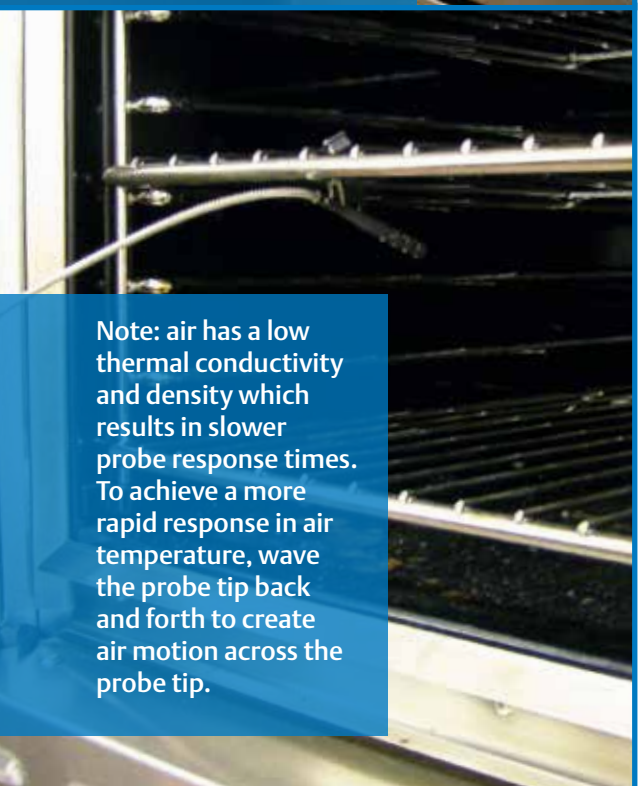
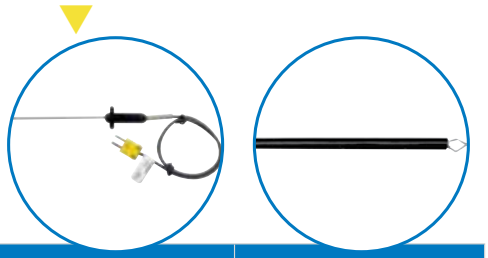
50306-K
Oven/Cooler/Freezer
Probe w/ Clip



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.

Air and Ambient



	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

Air and Ambient

	39032-K	49138-K	50306-K	50332-K
	Hand-Held Air Probe - Straight Cable	**Bare Tip w/ 48" Cable**	**Oven/Cooler/ Freezer Probe w/ Clip**	**Hand-Held Air Probe - Coil Cable**
Temperature Range:	-328° to 400°F (-200° to 205°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)
Max Tip Temperature:	400°F (205°C)	896°F (480°C)	600°F (316°C)	500°F (260°C)
Max Cable Temperature:	400°F (205°C)	896°F (480°C)	600°F (316°C)	176°F (80°C)
Response Time:	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	10 seconds in 5 m/sec. air
Shaft Length:	4" (102 mm)	-	2.125" (54 mm)	4" (102 mm)
Cable Length Max Extended:	36" (914 mm) FEP Cable	48" (1.2 m) Fiberglass Jacket	43" (1.1 m) Stainless Steel Overbraid	48" (1.2 m) Polyurethane Jacket
Weight:	1 oz (28 g)	1 oz (28 g)	1 oz (28 g)	2 oz (57 g)
Warranty:	1 year	1 year	1 year	1 year

THERMOCOUPLE PROBES

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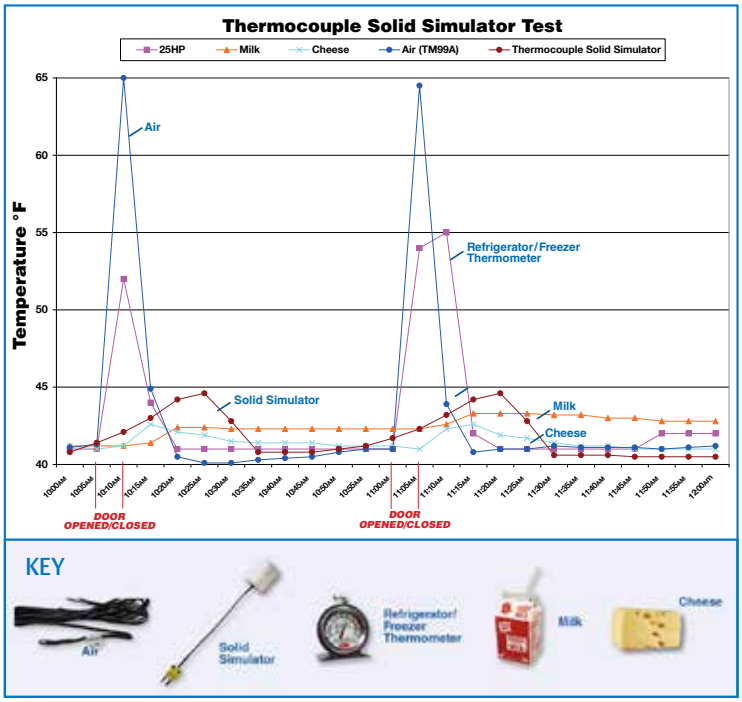
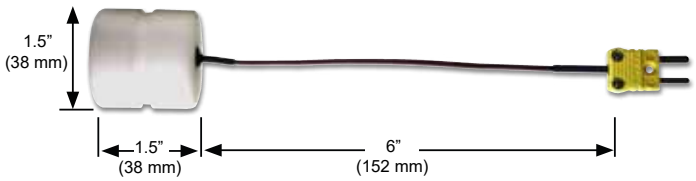
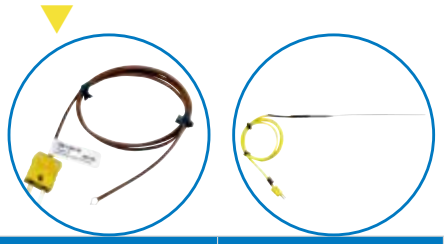
Cooper-Atkins manufactures hundreds of different probes for a multitude of uses that can be custom-designed for specific needs. For information on any item not shown or listed here, please contact Customer Service at 860-347-2256 or visit www.cooper-atkins.com.





Measure Food Temperature Instantly! Walk In and Plug In!

Miscellaneous Probes



	39138-K	49138-K
	Air Bare Tip w/ 36" Cable	Air Bare Tip w/ 48" Cable
Temperature Range:	-328° to 400°F (-200° to 205°C)	32° to 896°F (0° to 480°C)
Max Tip Temperature:	400°F (205°C)	896°F (480°C)
Max Cable Temperature:	400°F (205°C)	896°F (480°C)
Response Time:	1 sec. liquid & 7 sec. 5 m/ sec. air	1 second liquid 9 sec. 5 m/ sec. air
Shaft Length:	-	-
Cable Length Max Extended:	36" (914 mm) FEP Jacket	48" (1.2 m) Fiberglass Jacket
Weight:	1 oz (28 g)	1 oz (28 g)
Warranty:	1 year	1 year

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Miscellaneous Probes

	50305-K	50415-K	50416-K	50701-K	52048-K
	Mountable Freezer/Cooler Probe	Dishwasher Probe	Air Probe Bare Tip 15' Cable	Combo Probe - Heavy Duty T-Handle	Solid Simulator
Temperature Range:	-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)
Max Tip Temperature:	400°F (205°C)	221°F (105°C)	400°F (205°C)	500°F (260°C)	180°F (82°C)
Max Cable Temperature:	176°F (80°C)	221°F (105°C)	400°F (205°C)	400°F (205°C)	-
Response Time:	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
Shaft Length:	-	-	-	35" (889 mm)	-
Cable Length Max Extended:	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
Weight:	3 oz (85 g)	3 oz (85 g)	-	15 oz (425 g)	2.5 oz (71 g)
Warranty:	1 year	1 year	1 year	1 Year	1 year

LUMITY™ MULTI-FUNCTION THERMOMETER

The Lumity™ Multi-Function Thermometer (MFT) transmits temperatures wirelessly to your mobile device via Bluetooth® Low Energy technology. It has an easy-to-read LCD and can utilize any Cooper-Atkins type-K thermocouple temperature probe, making it versatile for insertion, air, or surface temperature measurement.

Kit includes:

- 20200 MFT instrument
- 51337-K DuraNeedle Direct Connect Probe with screw-in flanged connection

920200

20200 MFT INSTRUMENT

The 2020 Multi-Function Thermometer transmits temperatures wirelessly to your mobile device via Bluetooth® Low Energy technology. It has easy LCD and can utilize Cooper-Atkins' type-K thermocouple temperature probe, making it versatile for insertion, air or surface temperature measurement.

Technology Highlights

- Bluetooth 4.2 compliant (Supports Low Energy feature)
- IPX7 Waterproof rated
- 100 ft open field range

51337-K DURANEEDLE PROBE WITH FLANGED CONNECTOR

- Temperature Range: -100o to 500°F (-73° to 260°C)
- Accuracy: +/- 1°F (+/- 0.5°C)
- Response Time: 1 second in liquid
- Probe Length: 4" (102 mm)
- 1-year warranty

TEMPERATURE MONITORING THERMOMETER USING BLUETOOTH® WIRELESS TECHNOLOGY

- Cloud enabled - data can be transmitted to an online portal via the DCC HACCP Manager Mobile app or third party apps
- Over-the-air firmware updates – eliminates the need for inconvenient returns

SPECIFICATIONS
Temperature Range: -100° to 1000°F (-73° to 538°C)
Accuracy: +/- 0.5°F (+/- 0.3°C) at ambient between 68° to 86°F (20° to 30°C). Add +/- 0.1° to accuracy spec per 1° change to ambient temperature outside of 68° to 86°F
Ambient Operating Range: -4° to 122°F (-20° to 50°C). 10% to 90% RH, non-condensing
Resolution: 0.1°F/0.1°C
Radio Protocol: Bluetooth Low Energy 2.4 GHz
RF Range: 100 ft open-field range
Power: (1) AA Alkaline battery
Battery Life: 500 hours
5-year Warranty
IPX7 waterproof rated

Note: EMC Compliance: The instrument may record temperature measurements beyond the stated accuracy when exposed to radio frequency disturbances between 250 Mhz and 1000 Mhz with a field strength in excess of 3.0V/m. This deviation is temporary and the device will recover when the disturbance is removed.

This equipment is not subject to the protection from harmful interference and may not cause interference with duly authorized systems. For more information, see the ANATEL website www.anatel.gov.br.

RoHS NSF COMPONENT R 209-J0022 ANATEL CNC ID: C-24706

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

Kits

92020	92020-14	92020-15
KIT INCLUDES:		
20200 MFT Instrument	20200 MFT Instrument	20200 MFT Instrument
51337-K Duraneedle Direct Connect Probe with screw-in flanged connection	51337-K Duraneedle Direct Connect Probe with screw-in flanged connection	50337-K DuraNeedle Direct Connect Probe
	9424 Mounting Bracket for MFT	9424 Mounting Bracket for MFT
	9409 Lanyard	9409 Lanyard

Accessories

9424	50337-K	9409
Mounting Bracket for MFT	DuraNeedle Direct Connect Probe	Lanyard

LUMITY™ HACCP CHECKLIST

The Lumity HACCP Checklist, an all-in-one food safety, quality, task and checklist management system, enables you to digitalize your HACCP plans and checklists, helping ensure that critical control points are met and that appropriate corrective actions can be taken. Plus, regulatory and compliance issues are now much easier to manage.

FOOD SAFETY MADE EFFICIENT

How It Works

1. First, use the Lumity HACCP Checklist software to build tasks and checklists
2. Download tasks and checklists to data collection devices, using the mobile app
3. Collect data using a smart device and any connected thermometer
4. After data is collected, records can be uploaded to the HACCP Checklist web application

Key Features

- Cloud-based solution relieves your IT staff of the burden of installation, maintenance and software updates
- Software is easy to learn and customize with onboarding and training provided
- Easily move between temperature readings and yes/no questions
- A picture is worth a thousand words — snap a photo that can be instantly incorporated into your report
- Compatible with Blue2™, MFT and any Emerson connected instrument
- NotifEye™ users will be able to integrate with HACCP Checklist to automatically perform sensor temperature readings
- Data is protected via our highly-secured servers with automatic data backups


Reports

EMERSON


Food Prep
N/A
No
Last Answer
Show All Answer
N/A
Last Answer
Show All Answer
N/A

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.

92010-K Kit Includes

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

- *IPX7 WATERPROOF*
- *QUARTER LIMIT WIRE PROBE PROVIDES ±1.5°F TOTAL SYSTEM ACCURACY*
- *LE PAIRING CONSERVES BATTERY LIFEACE ABLE TO NIST STANDARDS*

Interchangeable Probes

Can be used with any Type K probe

51337-K Duraneedle Probe
Utilizes unique screw-lock

Mounting Bracket

See wall bracket on page 44

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

SPECIFICATIONS

#20100-K Blue2 Instrument
Temperature Range: -40º to 999ºF (-40º to 537ºC)
Ambient Operating Range: 32º to 122ºF (0º to 50ºC)
Resolution: 0.1º
Accuracy: ±0.5ºF with ambient temperatures between 68º to 86ºF, add ±0.1ºF 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

RoHS

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.

HACCP MANAGER THERMOCOUPLE THERMOMETER – SOLO

Collecting temperature and task list data has never been easier or more reliable. Use the HACCP Manager Solo in place of paper, pencil and clipboards. This thermocouple thermometer allows you to collect information on everything from HACCP procedures and product temperatures to corrective actions and visual inspections. The Enterprise version allows a multi-location company to set up multiple levels (completely customizable) to accommodate multiple reporting structures, typically including regions, districts, restaurants, etc., and dictate the specific user security permissions at each level. Data can be stored, reviewed, and analyzed from any location. Not only will the quality of your foods be more consistent, but with proper attention to preset CCP's food preparation will be safer from bacterial contamination.

Kits

93710	93751	93755
Solo Kit	Enterprise Kit	Enterprise Kit WiFi-enabled Handheld
Kit includes a 50209-K MicroNeedle Probe, USB Cable, battery charger and software	Kit includes a 37200 Handheld, MicroNeedle Probe, USB Cable and battery charger	Kit includes a 37500 WiFi-enabled Handheld, MicroNeedle Probe, USB Cable and battery charger

Handhelds

37100	37200	37500
Solo Handheld	Enterprise Handheld	Enterprise Kit WiFi Handheld

Software

9384	10755
Solo Software	Enterprise Software

Accessories

9382	9383
US Adapter & Battery Charger	USB Cable

9393	9381
3 pack Adapters Euro, UK & Australia	Replacement Battery

SYSTEM REQUIREMENTS AND OTHER

SOLO
Windows 10 and 11
Universal Serial Bus (USB) port
512 MB of memory
500 MB of hard disk space
USB Drive

HANDHELD SPECIFICATIONS
Temperature Range: -99.9º to 999.9ºF (-73.2º to 537.7ºC)
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

NOTIFEYE

Wireless technology products are the most exciting thing happening in the foodservice industry today – especially when relating to food safety. Imagine, taking temperature/humidity readings of your equipment every 5 minutes (24/7) without lifting a finger; or receiving an alert 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 the restaurant to know what is going on!

The NotifEye monitoring system eliminates the time and expense of manual temperature collecting. No longer will you need to visit and record temperatures of equipment requiring frequent monitoring. This system is a low-cost wireless solution that is self-installable and ready to use out-of-the-box.

The NotifEye sensors can be easily mounted in any location – wirelessly transmitting temperatures to the monitoring software; collecting and recording every temperature like clock-work. Each sensor will monitor temperatures against preset conditions that are defined by the user and will alert the user via email and/or text messages.

SAVE TIME, ENERGY AND MONEY MONITORING YOUR EQUIPMENT!

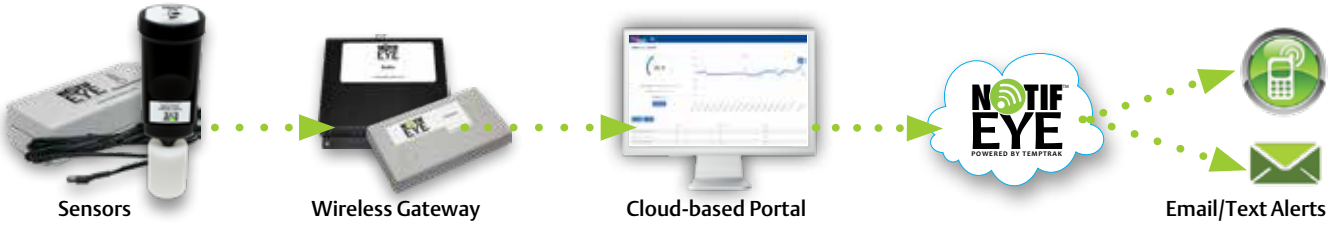
NotifEye™ is a wireless solution that is self-installable and ready to use out-of-the-box. The online portal can also be used to display data from certain Bluetooth-enabled products to allow digital integration within the Cold Chain.

Multiple Applications:

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

How It Works

Wireless Sensors Send Data via Gateways to the NotifEye™ System and Send Out Instant Email and Text Alerts



Sensors | Wireless Gateway | Cloud-based Portal | Email/Text Alerts

Kits*




15906	15907	15916	15917
(4) Sensor Kit	(2) Sensor Kit	(4) Sensor Kit	(2) Sensor Kit

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

Sensors

15200

Temperature Sensor (6’ probe)

15220

Humidity Sensor

15230

Contact Sensor

15201-01

Immersion Probe

15202

Product Solid Simulator

Hardware

15515

Gateway Kit (15504 & 15503)

15506

Repeater

15503

Buffer

15504

Receiver

General Specifications

- Sensor Range: 2500 ft (typical interior range of 500 ft)
- Power: Replaceable 2/3A, 3v Lithium Ion battery
- Battery Life: 2.5 - 3 years
- NIST traceable calibration available
- 1-year warranty

#10185 Retrofit Solid Simulator

- Temperature Range: -25° to 180°F (-32° to 82°C)
- Staballization: Up to 2 hours
- FDA-approved Acetal

#15515 Gateway Kit (Buffer 15503 and Receiver 15504)

- Attached to network via LAN network port
- 16 days (400 hours) of data storage for 200 sensors sampling every 15 minutes.
- Accommodates an unlimited number of sensors

#15506 Repeater

- Extends the range of the transmitters
- Transmits up to 4 miles (open field range)
- Onboard battery back-up with 24 hours of life

#15200 Temperature Sensor*

- Temperature Range: -25° to 180°F (-32° to 82°C)
- Accuracy: ±1°F (±0.5°C)
- Probe Lead Length: 6 ft. (1.82 m)*

#15220 Humidity Sensor

- Relative Humidity Range: 0-90% RH
- Ambient Operating Range: -4° to 140°F (-20° to 60°C)
- Accuracy: ±2% (10-90% RH)

#15230 Contact Sensor

- Magnet operation gap up to 0.75”

#15201-01 Immersion Probe

- Temperature Range: -25° to 180°F (-20° to -60°C)
- Accuracy: ±1°F (±0.5°C)
- Probe Diameter: 0.25” (06.4 mm)

#15202 Product Solid Simulator

- Temperature Range: -4° to 140°F (-20° to 60°C)
- 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)

ACCESSORIES

Cooper-Atkins carries various accessories for your temperature instruments. Protect your investments by storing instruments in cases designed specifically for the unit and use extension cables to increase cable length on any thermocouple probe.

- *INSTRUMENT STORAGE*
- *THERMOCOUPLE EXTENSION CABLES AND CONNECTORS*
- *PROBE WIPES AND THERMOMETER VALIDATION*

Instrument Storage



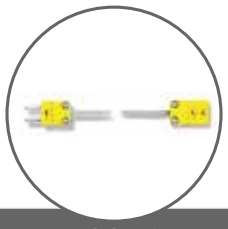

	9339	9368	9369	9391
	Soft Pouch/Case/ Holster	**EconoTemp Wall Bracket**	**AquaTuff Wall Bracket**	**Storage Wire Wall Rack**
Dimensions:	8.5” x 3.5” x 1” (220 mm x 90 mm x 25 mm)	5” x 3-5/8” x 1-1/4” (127mm x 92mm x 32mm)	4-5/16” x 2-7/8” x 1-1/2” (110mm x 73mm x 38mm)	10.5” x 3 x 4.5” (267 mm x 76 mm x 114 mm)
Housing Material:	Nylon	ABS plastic	ABS plastic	Cold-rolled steel frame and ABS plastic cup




	14057	14235	14240	14245
	Soft Carrying Case	**Medium Hard Carrying Case**	**Small Hard Carrying Case**	**Large Hard Carry Case**
Dimensions:	9” x 3.5” x 2” (229 mm x 89 mm x 51 mm)	8” x 12” x 3” (203 mm x 305 mm x 76 mm)	6” x 8.5” x 2.5 (152 mm x 216 mm x 63.5 mm)	12” x 17” x 3” (305 mm x 432 mm x 76 mm)
Housing Material:	Soft Vinyl	ABS plastic	ABS plastic	ABS plastic

See instructions on how to make a proper ice bath on page 54

Extension Cables and Connectors

				
10045	10046	10040-K	PD1389-10	PD1389-52
10' Extension Cable	Reinforced 10' Extension Cable	48" Coiled Retractable Extension Cable	Male Connector	Female Connector

Accessories

			
9150	9325	9351	9366
Boxed Probe Wipes	ValCup Thermometer Validation Cup	.15" Diameter Pan/ Vessel Clip	.25" Diameter Pan/ Vessel Clip

PROBE WIPES ARE IDEAL FOR CLEANING AND SANITIZING.

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

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.

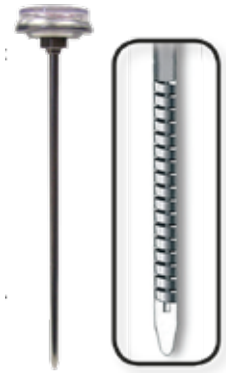
CHOOSING THE RIGHT THERMOMETER

In a food safety system, temperature and time are the two most important components in preventing foodborne illness. Proper cooking, storing, holding and monitoring of temperatures is vital in preventing bacterial growth in foods. Using the correct tools becomes an essential component of your food safety plan.

Different sensor technologies are available that are within the recommended guidelines for the foodservice temperature range. Electronic/digital thermometers tend to be preferred over the older mechanical/bimetal types. Digitals yield a faster response and provide greater overall accuracy with little to no drift out of calibration, so are less likely to give variable readings.

When choosing a thermometer, the following points should be considered: temperature range and resolution, the sensing element & insertion point, accuracy and calibration.

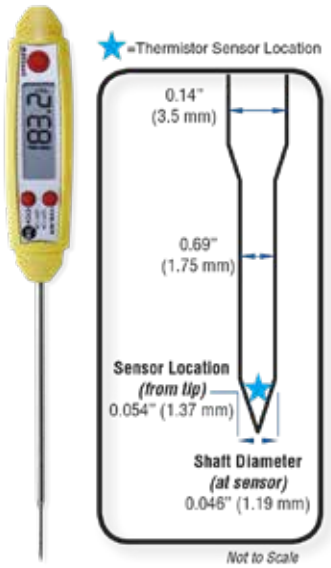
Bimetal. If you cut open a bimetal thermometer stem lengthwise, you would see a coil (about 2" in length) that senses the temperature. To register an accurate temperature, the entire coil must be exposed to the heat or cold source.



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 1º, 2º or even 10º.

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.

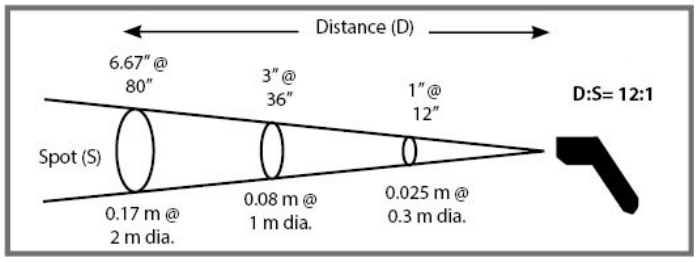
Thermocouple Thermometers. A thermocouple measures voltage produced at the junction of two fine wire conductors located in the tip of the probe. Typically smaller and more robust than a potted thermistor, a thermocouple probe with a welded tip offers a rapid response of 2 to 5 seconds within a much broader 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 ±0.9ºF (±0.5ºC). Even

the more economical systems have a TSA of ±2ºF (±1ºC), and are within the recommended guidelines.

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.

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

Flexible Cable with PVC Jacket:

PVC insulation on primaries and outer jacket. PVC offers good abrasion and chemical resistance.

Coiled Retractable Cable:

Polyurethane outer jacket. PFA insulation on primaries. Polyurethane offers excellent abrasion resistance and good chemical resistance.

Flexible Cable with FEP Jacket:

FEP insulation on primaries and outer jacket. FEP offers excellent abrasion and chemical resistance.

Flexible Cable with Fluoroelastomer Jacket:

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.

Flexible Armored Cable:

FEP-jacketed cable protected by flexible, stainless steel, armored hose. The armored hose protects the cable and offers outstanding abrasion, cut and chemical resistance.

Flexible Cable with Silicone Jacket:

Silicone outer-jacketed cable with Aramid fillers. Silicone offers good abrasion and chemical resistance.

Flexible Cable with Woven Stainless Steel Overbraid:

Polyimide film insulation on primaries and outer jacket. Cable protected by stainless steel overbraid. Offers outstanding abrasion and cut resistance and good chemical resistance.

Flexible Cable with Fiberglass Jacket:

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.

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)

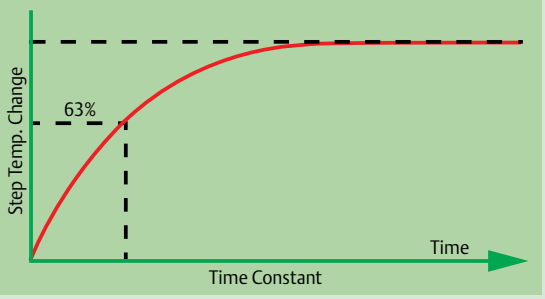
Below 32°F (0°C): No A.N.S.I. specification.

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 Responce Time)



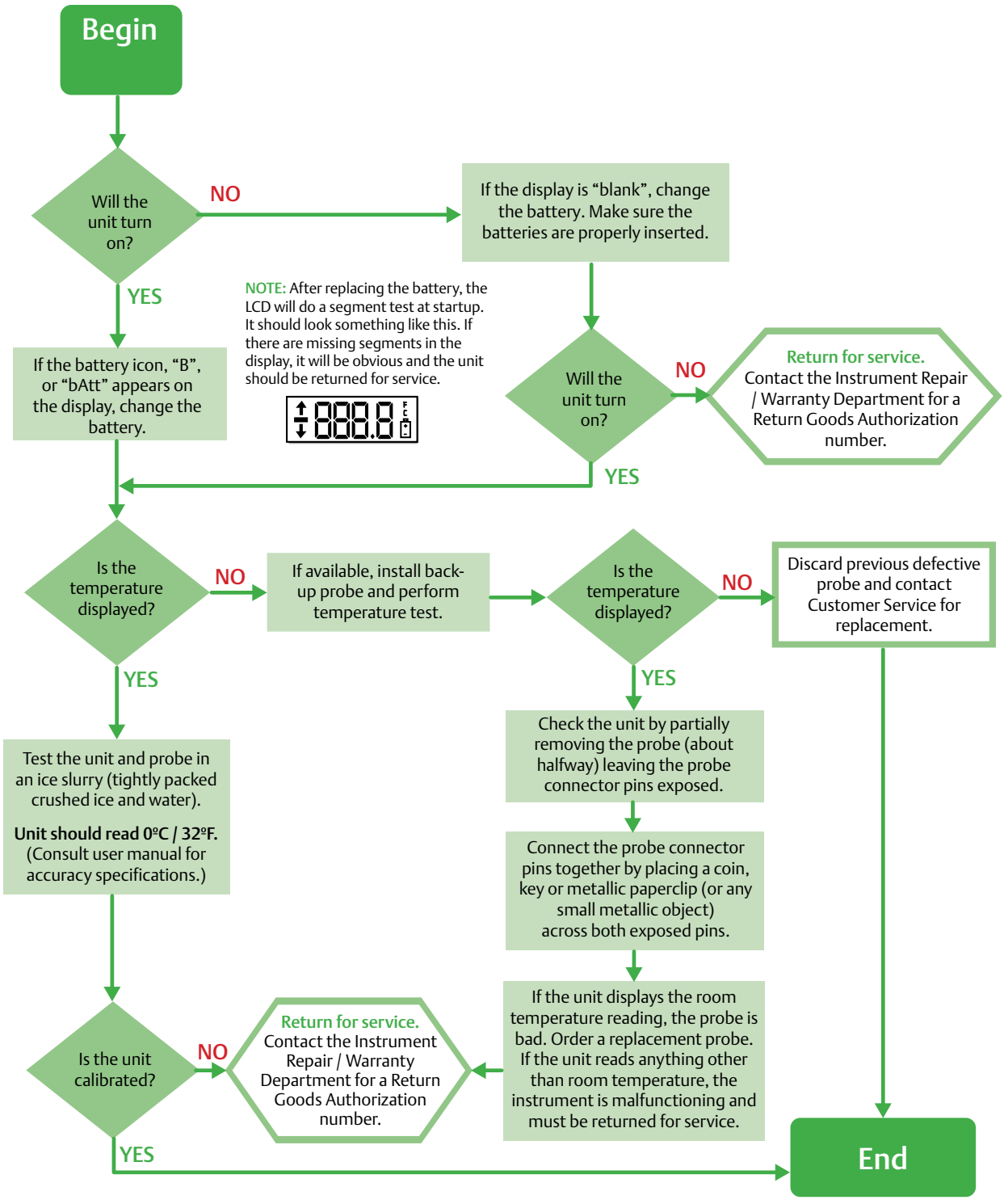
The response time of a thermocouple probe temperature can be graphed as an exponential function. One time constant is defined as the time required to reach 63.2% of the temperature change, two time constants is 86.5% and three is 95% of the temperature change. At Cooper-Atkins, the response time is stated 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 TROUBLESHOOTING

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 860-347-2256 and 8**00-835-5011, option 2**

Email support can be requested at: **techsupport@emerson.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 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

Email: coldchain.technicalservices@emerson.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.

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

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

AquaTuff™ Thermocouple Instruments

EconoTemp™ Thermocouple Instruments

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 X 1.8) + 32 = 68°F.

°F: Fahrenheit
°F = 1.8 x°C + 32
inversely
°C = (°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 instruments 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 con 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 on object by means of detecting and quantifying the infrared radiation emitted therefrom.

ISA: Instrument Society of America

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

K·Type Thermocouple: The two thermocouple wires are mode 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. l00% 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.

PRODUCT INDEX

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

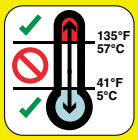
Under Running Water (Water Temperature): 70°F (21°C) or below
In the Refrigerator (Air Temperature): 38°F / 3°C or below

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

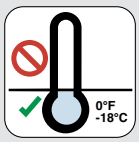
REHEATING:
Reheat food to a minimum temperature of 165°F (74°C)
- Food must reach temperature within 2 hours
- Never let temperature fall below 135°F (57°C)

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



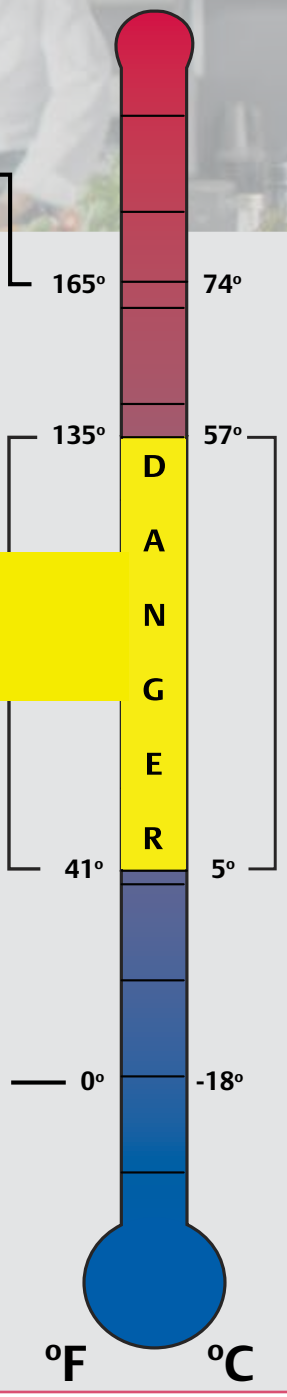
DANGER ZONE !
Temperature: 41° to 135°F (5° to 57°C)
Potentially hazardous foods exposed to this temperature range for more than 4 hours are not safe to eat.

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



COLD HOLDING: FREEZER:
Maintain air temperature at 0°F (-18°C) or below
- Some bacteria may not be killed at even the lowest temperatures

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



Minimum Cooking Temperatures

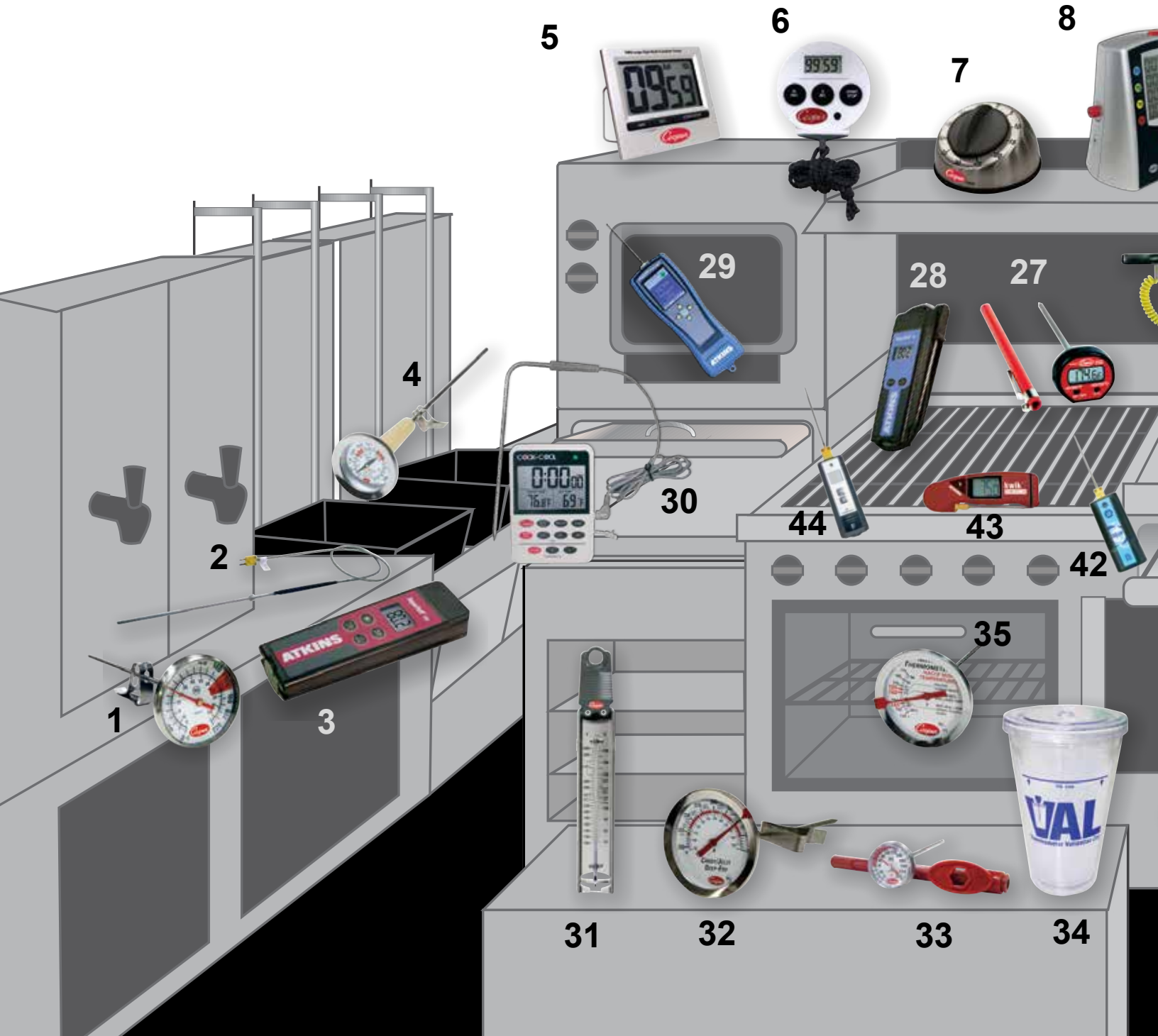
Product	Temperature	Time
Poultry Stuffed meat, seafood, poultry or pasta Stuffing made with fish, meat or poultry	165°F (74°C)	15 seconds
Ground meat & seafood Injected meat & mechanically tenderized meat Ratites (ostrich and emu) Shell eggs - being hot-held for service	155°F (68°C)	15 seconds
Seafood & 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	Temperature	Time
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
Fillets of Fish (lean)	1 - 2 days	4 months
Fillets 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	

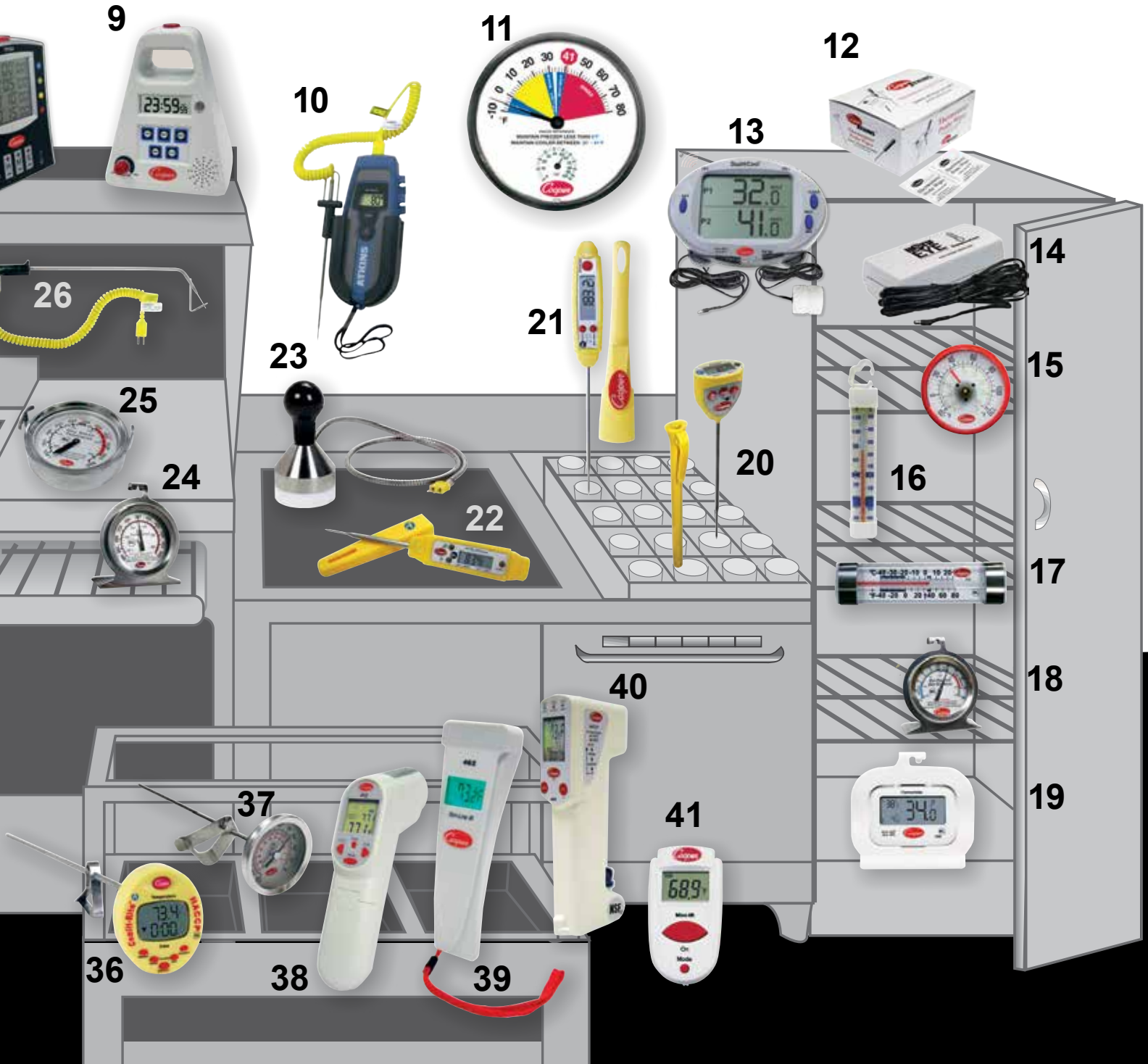
PROFESSIONAL FOOD SAFETY KITCHEN PRODUCTS

1. 2237 Espresso / Milk Frothing Thermometer
2. 50208 Fry Vat Probe
3. 35200-K AquaTuff™ Thermocouple Instrument
4. 3270-05 Deep Fry Thermometer
5. TW3 Large Digit Multi-function Timer
6. TS100 99 Minute Stopwatch / Timer w/ Lanyard
7. TM60 Long-Ring Mechanical Timer
8. TFS4 Multi-Station, 99 Hour Digital Timer
9. FT24 Single-Station 24 Hour Digital Timer
10. 93230-K EconoTemp™ Thermocouple Combo Pack
11. 212-159 Refrigerator / Freezer Wall Thermometer
12. 9150 Boxed Probe Wipes - 200 Count
13. PM180-01 Dual-Cool™ Panel Thermometer
14. 10080 NotifEye
15. 535 Reach-in Cooler Thermometer



16. 330 Refrigerator / Freezer Thermometer
17. 335 Glass Tube Refrigerator / Freezer Thermometer
18. 25HP Bi-metal Refrigerator / Freezer Thermometer
19. 2560 Digital Refrigerator / Freezer Thermometer AM
20. DFP450W Digital Pocket Test Thermometer w/ Temp Alarm AM
21. DPP800W MAX Pen-Style Digital Pocket Test Thermometer AM
22. DPP400W Pen-Style Digital Pocket Test Thermometer AM
23. 50014-K Weighted Griddle Probe
24. 24HP Oven Thermometer
25. 3210-08 Grill Surface Thermometer
26. 50263-K Patty Probe, 60°Angle 3/16" Depth
27. DT300 Oval Style Digital Pocket Test Thermometer AM
28. 35132 AquaTuff™ Wrap&Stow™ Thermocouple with DuraNeedle Probe
29. 37100 HACCP Manager™ Handheld Instrument
30. DTT361 Digital Cooking Thermo-Timer
31. 329 Paddle-Style Deep Fry / Candy / Jelly Therm
32. 322-01 Deep Fry / Candy / Jelly Thermometer
33. 1246-02 Bi-metal Pocket Test, 0° - 220°F AM
34. 9325 ValCup™ Thermometer Validation Cup
35. 323 Meat Thermometer
36. TTM41 Coolit-Rite™ Cooling Validator AM
37. 2238-06 8" Stem Test Thermometer
38. 412 Gun-Style Infrared Thermometer w/ Thermocouple Jack
39. 462 Slim-Line™ Infrared Thermometer
40. 481 DualTemp2™ Infrared Thermometer with RTD Probe
41. 470 Mini Infrared Thermometer
42. 92010 Blue2
43. 94100 Kwik Switch
44. 92020 Multi-Function Thermometer Kit

AM = Includes Anti-Microbial Additive



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