Environmental Monitoring Solutions For Food Processing
Company History
The inventor of the first bi-metal oven thermometer, David G. Cooper, founded The Cooper Oven Thermometer Company in 1885. During the 1960s, the company developed three cooking product lines and with the acquisition of The Croydon Thermometer Company expanded into weather instrumentation. Two separate marketing groups were established for the consumer and industrial markets to advance these new product lines.

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

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

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

Company Overview
Since its establishment in 1885, Cooper-Atkins has built a 130-year, rock-solid reputation providing quality environmental monitoring solutions to top brands such as Mars Chocolate, Subway, Pepsico, Quaker Oats, Nestle, and many, many more. Our proven track record speaks for itself.

In today’s rapidly changing world, we continue to expand our technological capabilities to support and protect brand integrity by providing the right tools that ensure consistent food quality and safety across all our business units.

Mission Statement
“A customer-centric technology leader in monitoring solutions for the global Foodservice, Healthcare and Industrial markets.”
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Timers
The realistic answer is you can’t afford not to.
If you are a food processing facility, a product recall due to an outbreak of foodborne illness far outweighs the financial investment in a monitoring system that is designed to mitigate that risk.

As a leader in the marketplace, we understand those concerns and proactively listen to our customers. We are constantly 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!

McDonald’s awarded Cooper-Atkins the “Global Supplier of the Year 2015”

Our Customer Solutions Approach
Today’s facilities utilize a wide variety of equipment that require consistent monitoring programs. We recognize that increased government compliance and regulations have burdened customers with digital record-keeping in the food processing marketplace.

Our products are designed to be used together as a core element of your business. They will help solve monitoring issues, reduce risk and streamline your operation—saving you time and money.

Our customer solution approach offers you:

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

These state-of-the-art products typically comprise a measuring device with powerful, back-end software that helps collect, sort and filter data and reports. Utilizing products that can monitor multiple environmental conditions from one platform, especially remote locations, gives you incredible flexibility and convenience.
The Industrial Market - a Changing Landscape

Emerging wireless and digital technology is at the forefront of indoor and environmental temperature monitoring. As an industry leader, we continue to provide state-of-the-art technology to help meet our customers’ needs.

Facilities are becoming “smart” and automated and we recognize the need to: integrate into current Building Automation & Control Networks (BACnet); offer real-time monitoring of labs and indoor air-quality; and provide wireless monitoring and alerting capabilities to satisfy government regulatory compliance for food processing facilities! Below are just some of the niche markets that we serve that are expanding under the industrial business umbrella.

Market Sectors

Food Processing

During processing, temperature monitoring and control of pathogens are both critical to ensuring a food-safe environment. Automating both temperatures and humidity monitoring will increase efficiency and allow detailed reporting and compliance with current HARPC/HACCP plans.

Laboratory

Monitor the temperature and humidity level in your clean room with speed and accuracy. Scientists and technicians rely on Cooper-Atkins products that are traceable to the standards of NIST and are durable, waterproof and meet recognized industry certifications.

HVAC/R

Technicians and contractors trust our products in critical IAQ applications when measuring temperatures on pipe surfaces; air flow in rooms and duct work; or analyzing system pressures in heating/ air-conditioning. The reliability and scalability of products increases field efficiency.

Agriculture

With the organic and medicinal industries on the upsurge, there is a need to control the temperature & humidity of greenhouses and holding silos. Our line of specialty products are designed for the agriculture and horticulture markets. Versatile and scalable, they also conform to current government compliances and regulations.

Facilities Maintenance

Quality tools for the Maintenance Engineer range from simple Bi-Metal thermometers to wireless temperature monitoring enterprise systems. We are committed to providing the right measurement / testing instrument, tool or test equipment for the job.

Refrigeration

Quality tools for the refrigeration technician range from simple Bi-Metal and vapor tension thermometers to state-of-the-art wireless monitoring systems. Used for measuring temperatures on pipe surfaces, or analyzing system pressures in refrigeration equipment, the durability, reliability and expandability of our products have been time tested.

Warehousing

Maintaining specific temperature ranges is important in all areas of a controlled environment. Monitoring of temperature and humidity in refrigerators, walk-ins, freezers, distribution and shipping area is an important part of the cold chain management. Accurate temperature profiling over prolonged periods ensures accurate storage temperatures for your products.

Logistics

Monitor product storage temperatures during transport to comply with "Farm-to-Fork" traceability. Analyze data to ensure product temperatures are not compromised.
Proper receiving, storing, holding, and monitoring of temperatures is vital in preventing bacterial growth in foods. The accurate reporting and logging of data is now a standard measure to ensure HACCP compliance. EnviroTrak offers 24/7 monitoring of temperature, humidity, door open/close, etc., eliminating the need for labor-intensive manual temperature logs.

**EnviroTrak™ Wireless Monitoring Solution**

**Hardware**
- Scalable to any size building or campus
- Multiple locations
- Waterproof housing accessories
- Automatic battery backup
- Available in 900 MHz and Wi-Fi
- 900 MHz and Wi-Fi hardware can coexist and integrate with outside wireless communications
- All EnviroTrak probes function with 900 MHz and 802.11 Wi-Fi transmitters

**Software**
- View anywhere capability online
- Real-time & historical Data
- Instant alerts with escalation levels
- Documentation of corrective actions
- Customized views & reports
- Easy to use navigation
- Enhanced security access controls
- Reports for trend analysis
- Compatible with multiple browsers

**Service and Support**
- Requires minimal infrastructure
- Automated database backups
- 24/7 live emergency support
- Unlimited web-based training
- Software upgrades
- Mapping Services
- IQ/OQ Services

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

*compatible with current generation smartphones and tablets

LEARN MORE!
Departmental Configuration and Training Services

Basic Remote Training
This remote training is for those seeking basic understanding of the concepts, functionality, navigation of the user interface, reporting features alerts and notifications. Unlimited remote WebEx and eLearning training is available to all customers with an I-Care Support Contract.

Departmental Configuration Assistance
Departmental Configuration Assistance is a remote comprehensive offering performed by a EnviroTrak specialist providing essential configuration and ongoing program development for one year past the date of installation. It is recommended this service be used in conjunction with Basic Remote Training.

On-Site Departmental Configuration and Training
The most in-depth service offering, including on-site departmental configuration and training performed by a EnviroTrak Specialist (1 day per dept.) and includes ongoing program development for one year past the date of installation. It is recommended this service be used in conjunction with Basic Remote Training.

Time-based Validation Service
Service based on “8-hour Time Blocks”, allowing customers the flexibility to utilize a Cooper-Atkins technician to evaluate all aspects of the EnviroTrak Enterprise system such as communication integrity, condition of the field hardware, and training. This enables customers to meet their business objectives and utilize technicians as needed. At the completion of the service, a “Daily Report” is published to document the work performed. It summarizes the work performed, open issues (if any), system status and will contain system generated reports.

EnviroTrak System Validation Recording Qualification Data (IQ/OQ)
This service is an aid for the development and recording of validation/qualification data. This documents system functionality and accuracy after full installation of EnviroTrak hardware and software, prior to going live with EnviroTrak. This is not intended to be an all-inclusive validation that would include your company-specific SOP validation requirements. It will be used to assist end-user documentation of the EnviroTrak system hardware and software validation (typically facilities that are FDA inspected). The service incorporates the major tasks along with achievable end points to demonstrate validation of the EnviroTrak system’s operation and performance at the time of installation. When completed successfully, this will provide important documentation that EnviroTrak performs correctly and meets industry requirements.
Extended Services

Clustering
The EnviroTrak Clustering feature for v5.0+ provides high availability and redundancy for the application and database components of EnviroTrak. In the event of a system failure, this ensures constant data collection, retention, end-user access to EnviroTrak, its regulatory reports and continued notifications. A seamless transition from the primary to a secondary server takes just seconds to complete and ensures that facilities will be consistently monitored, protecting valuable inventory, equipment and data around the clock during both scheduled and unscheduled server downtime. The Clustering feature is available for EnviroTrak v5.0+.

Interactive Voice Response (IVR)
EnviroTrak utilizes the reliability of an outside IVR hosting company whose sole business model is to deliver critical phone alerts to clients. When a monitoring device exceeds preset limits, EnviroTrak relays the alert notification to the outside IVR hosting company. The IVR hosting company will then make the phone call and play the notification message to the recipient. When the recipient answers, they will be prompted to press a key to accept receipt of the call, which in turn stops the calling to other employees. The EnviroTrak database maintains records of phone call notification and the employees that were alerted. By requiring alerts to be accepted, phone calls help ensure that out of range activity is addressed and corrected, while maintaining regulatory compliance and staff accountability. Keep in mind however, phone alert acceptance does not clear the alarm, a user must take corrective action by fixing the issue and documenting corrective action in the EnviroTrak system. High-level interactive voice response (IVR) is available on EnviroTrak v5.0+.

BACnet Compatibility
EnviroTrak information can be transferred to automation and control systems via an optional BACnet Gateway interface software module. The BACnet Gateway interface allows any Automation System, employing BACnet IP, to access EnviroTrak’s sensory information. With the BACnet Gateway, automation system users can monitor real-time status of equipment that contains critical assets with familiar applications and tools, effectively decreasing losses while increasing maintenance quality. Utilizing EnviroTrak’s wireless sensors and the BACnet Gateway, adding monitor points is quick and cost effective for an automation system owner. The BACnet Gateway option is available for EnviroTrak versions 4.5 and higher.

Calibration Services

Periodic calibration of transmitters and probes is highly recommended. We provide factory trained technicians to calibrate your EnviroTrak equipment and provide the required documentation to stay in compliance with regulations and requirements.

SysCal™ On-site Calibration (in situ)
The SysCal™ process was designed for field calibration of NIST traceable EnviroTrak transmitters and solid simulator probes. The process calibrates the transmitter and probe together as a system in place within the customer use environment. There is no longer a need to send simulator probes back to the factory for recalibration. This in turn saves you money and eliminates any downtime.

The SysCal calibration process is compliant to ISO/IEC Standard 17025:2005 and is traceable through NIST or other National Standards Institutes when performed by a trained Cooper-Atkins technician. A Certificate of Calibration is created and stored in the EnviroTrak software so it can be accessed at any time.

ISO 17025:2005 Compliant Calibration
The U.S. Food and Drug Administration (FDA) will be requiring labs to be accredited to ISO or an equivalent standard if they do detained samples, pending approval (Hortegas, S. FSN May 2013).
ISO 17025 is designed to focus attention on the production of precise and accurate testing. It evaluates the competence of the staff from a technical nature, validity of methods of testing, traceability, quality assurance of data and the calibration and maintenance of equipment. This calibration should provide a Certificate of Calibration that includes specific information such as documented uncertainty, calibration pass/fail results, device name and model number.

Cooper-Atkins offers factory calibration of transmitters and probes that conforms to ISO 17025 standards. This hardware is accompanied by a Certificate of Calibration for the transmitter and the probe. Annual recalibration can be done on-site while transmitters and probes remain in situ as noted with SysCal (pg 8).

EnviroTrak Calibration Certificate Storage

EnviroTrak now provides electronic storage of Cooper-Atkins Certificates of Calibration. During yearly audits, the necessary calibration records can be accessed from within EnviroTrak to demonstrate compliance in real time.

In addition to providing immediate access to electronic copies of the Certificates of Calibration, this feature also provides notice to customers about upcoming calibration needs based on past calibration history. This ensures that customers are informed about calibration schedules and helps them remain in compliance in the future.

**Reporting Tools**

Microsoft SQL Reporting Services is the standard reporting tool in TempTrak. By utilizing an industry-standard database structure, nearly any available reporting tool on the market is able to interface with the TempTrak data for reporting and analysis (including tools such as Microsoft Excel, Microsoft Access, and Crystal Reports).

The TempTrak browser interface includes a number of standard reports of transmitter data. All reports are available for exporting and printing through Microsoft SQL Reporting Services. Reports can be scheduled to automatically email, archive and/or export to multiple formats (e.g., Excel, PDF, Word, CSV, XML, TIFF and MHTML). If other formats are required, custom reporting is available.

Types of reports available include:

- Current transmitter readings
- Transmitter RF communication status
- Current and recently acknowledged alerts
- Low-battery alarm conditions
- Audit reporting
- System configuration change report
- Historical sensor alerts by selected date
- Daily summary report for a transmitter
- NIST summary validation report
- 4 hour, 12 hour or 24 hour daily sensor data summary
- Contact Transmitter open/close
- Monthly equipment QA performance analysis
- Sensor history report
- Comparative graphical history for multiple transmitters
- Database backup history
Cooper-Atkins’ 900 MHz EnviroTrak transmitters operate in a frequency-hopping spread spectrum, reaching up to 762 meters (2,500 feet) open-field range* and are battery operated.

**Intelli-Base Buffer and Receiver**
- Attaches to the network either via the LAN network port or serially direct to a single station PC
- In the event of a network outage, the buffer stores all temperature readings in memory
- Storage capacity of an Intelli-Base Buffer with 200 transmitters, communicating every 15 minutes, will have data stored for 720 hours (30 days)

**Repeater (Signal Booster)**
- A repeater can boost an unlimited number of transmitters
- Transmission range up to 4 miles open field range*
- In the event of a power outage each EnviroTrak Repeater has an on board battery backup with up to 24 hours of life*

**Contact Transmitter (Door Open/Close)**
- Magnetic Reed switch
- Terminal block allows for remote signal activation

**Internal Temperature/Humidity Transmitter**
- Temperature Range: -20° to 60°C (-4° to 140°F)
- Relative Humidity Range: 0% to 90%

**External Temperature/Humidity Transmitter**
- Temperature Range: -4° to 140°C (-20° to 60°F)
- Relative Humidity Range: 0% to 100%

**Dual Internal & External Temperature Transmitter**
- Internal Temperature Range: -20° to 60°C (-4° to 140°F)
- External Temperature Range: -200° to 260°C (-328° to 572°F)

**Analog Transmitter**
- Supports two external instruments via terminal blocks
- Connects up to two external instruments that output a 4 to 20 mA, 0 to 5 V, or 0 to 10 V signal so the instruments can be monitored

*Under lab conditions*
EnviroTrak™ WI-FI (802.11 B/G/N) Hardware

EnviroTrak Wi-Fi transmitters are high-speed wireless modules supporting standard security protocols including PEAPv0 (PEAP) enterprise security, capable of collecting, storing and transmitting data over a standard 802.11 b/g/n (Wi-Fi RF Frequency 2.4 to 2.497 GHz) with UDP protocol. Each transmitter passes information to the EnviroTrak software, which can be located on any Wi-Fi-enabled network.

All transmitters are powered by either (2) 3.6V Lithium AA batteries or an external Micro-USB power supply. In the event of a power outage each Wi-Fi transmitter using external power will switch to the on-board battery without interruption, where up to 4,096 samples can be stored.

### Dual External Temperature Transmitter
- Supports up to two external temperature probes
- Temperature Range: -200° to 300°C (-328° to 572°F)
- Accuracy: ±0.5°C (±1°F)

### Internal Temperature/Humidity Transmitter
- Supports one internal temperature sensor and one internal relative humidity sensor
- Temperature Range: -18° to 60°C (0° to 140°F)
- Accuracy: ±0.4°C (±0.7°F) at 25°C (77°F)
- Relative Humidity Range: 0 to 95%
- Relative Humidity Accuracy: ±3.0%

### Analog Transmitter
- Supports two external instruments via terminal blocks
- Connects up to two external instruments that output a 4 to 20 mA, 0 to 5 V, or 0 to 10 V signal so the instruments can be monitored

### Contact Transmitter (Door Open/Close)
- Reed switch activates with magnet
- Terminal block allows for remote signal activation

### Optional Wi-Fi/900 MHz Accessories

#### AC Adapter for Wi-Fi Transmitters
- 100V-250V AC, 5V/1A
- Cord Length: 6’ (0.91 m)

#### Waterproof Enclosure Wi-Fi/900 MHz
- Mount with included screws or double-sided tape
EnviroTrak™ 900 MHZ ISO 17025 Calibrated Hardware

EnviroTrak ISO 17025 temperature transmitters are specifically calibrated and are covered by a Certificate of Traceability and Calibration. This confirms that the measurement standards and instruments used during product calibration are traceable to an ISO/IEC 17025 accredited testing laboratory and that the calibration process is compliant with ISO/IEC 17025 requirements.

Refrigerator Kits

**900 MHZ Temperature Transmitter**
- Includes a #31200 transmitter and (1) simulator probe
- Temperature Range: -32° to 82°C (-25° to 180°F)
- Calibration Test Point: 41°F
- Tolerance: ±1°F

Freezer Kits

**900 MHZ Temperature Transmitter**
- Includes a #31200 transmitter and (1) simulator probe
- Temperature Range: -32° to 82°C (-25° to 180°F)
- Calibration Test Point: -13°F
- Tolerance: ±1°F

EnviroTrak™ Wi-Fi ISO 17025 Calibrated Hardware

EnviroTrak ISO 17025 products can be recalibrated in-situ using our SysCal™ Calibration System. This saves time and money by eliminating the need to return equipment to our corporate headquarters for recalibration.

For more information please refer to Calibration Services on page 8.

Refrigerator Kits

**Wi-Fi Temperature Transmitter**
- Includes a #31200-802 transmitter and (1) simulator probe
- Temperature Range: -32° to 82°C (-25° to 180°F)
- Calibration Test Point: 41°F
- Tolerance: ±1°F

Freezer Kits

**Wi-Fi Temperature Transmitter Freezer Kits**
- Includes a #31200-802 transmitter and 1 simulator probe
- Temperature Range: -32° to 82°C (-25° to 180°F)
- Calibration Test Point: -13°F
- Tolerance: ±1°F

Refrigerator/Freezer Kits

**Wi-Fi Temperature Transmitter**
- Includes a #31200-802 transmitter and (1) refrigerator simulator probe and (1) freezer simulator probe

* See individual refrigerator and freezer probe specifications listed above
Probes & Accessories

All EnviroTrak probes function with 900 MHz and Wi-Fi (802.11 b/g/n) wireless transmitters. There are several types of EnviroTrak probes available, each designed with unique functionality, from temperature and humidity monitoring to CO₂ and pressure differential. All EnviroTrak probes come with a 1-year warranty and a select number are available with NIST traceability.

General Insertion Probe
- Temperature Range: -40 to 150°C (-40° to 302°F)
- Cable Length: 1.2 m (4’)

Air Probe
- Temperature Range: -32 to 82°C (-25° to 180°F)
- Cable Length: 1.8 m (6’)

Pipe Clamp Temperature Probe
- Temperature Range: -32 to 100°C (-25° to 212°F)
- Cable Length: 3.7 m (12’)

Leak Detector Probe
- Temperature Range: -20° to 80°C (-4° to 176°F)
- Cable Length: 1.2 m (4’)

Solid Simulator Probe
- Temperature Range: -32° to 82°C (-25° to 180°F)
- Cable Length: 1.2 m (4’)

High Temperature/Hot Probe
- Temperature Range: -60° to 150°C (-75° to 302°F)
- Cable Length: 3 m (10’)

Dishwasher Probe
- Temperature Range: -60° to 150°C (-75° to 302°F)
- Cable length: 3 m (10’)

Retrofit Solid Simulator Sleeve
- Temperature Range: -32° to 82°C (-25° to 180°F)
- For use with the #2033 Air Probe

Screw-in Probe with 1/8” NPT Fitting
- Temperature Range: -40° to 300°F / -40° to 149°C
- Cable Length: 1.8 m (6’)

#31600
#31600-032 – NIST Traceable

#31601
#31601-032 – NIST Traceable

#31607

#31604
#31604-032 – NIST Traceable

#31602
#31602-032 – NIST Traceable

#31603
#31603-032 – NIST Traceable

#31605 (use with #31601)

#31606
#31606 -032 – NIST Traceable
EnviroTrak offers a number of different specialty devices to monitor various environmental conditions.

**PowerTrak™ Power Detection Device**
Monitors power of A/C outlets of plugged-in equipment

- Temperature Range: 0° to 50°C (32° to 122°F)
- Power Requirements: 12V 1.0A AC Power Adapter supplied

**Air Velocity Monitor**
Monitors air flow of ducts/Air hoods in HVAC and Lab environment

- Temperature Range: 0° to 50°C (32° to 122°F)
- Probe Length: 6” (305 mm)
- Bright LED Display
- Ranges to 0 to 5000 fpm
- Response Time (Flow): 1.5 seconds to 95% of final value

**O₂ Depletion Monitor**
Monitors oxygen levels in flash freezing rooms in food processing

- Measurement Range: 0–25% Oxygen
- Accuracy:±0.75% Oxygen over 5.0 to 25%
  ±1% Oxygen over 0.1 to 5%
- 2 preset alarms: 9.5% & 18%
- Power Requirements: 110V AV power supply with battery backup

**CO₂ Monitor**
Measures CO₂ levels in harsh and humid environments

- Measurement Ranges:
  0–5%
  0–10%
  0–20%
- Probe Length: 6.5’ (2 m)
- Power Requirements: 100 to 240 VAC, 50 to 60 HZ
  (External transformer supplied)

**Steam Trap**
Measures temps of pipe, upstream and downstream of steam traps as well as temperature differential.

- Temperature Range: -40°F to 392°F (-40°C to 200°C)
- Temperature Accuracy: ±5°F (±2.8°C)
- Cable Length: 3ft (0.9m)
- U.S ISM 900MHz, FHSS (902-928 )@50mW
- Power Requirements: Battery, (2) 2/3A 3.0v Lithium
Incorporating the HACCP Manager into a safety program will help to eliminate the laborious planning and training involved in a traditional HARPC/HACCP food safety programs. In addition to time and money savings, it will increase consumer confidence and ultimately improve the overall customer experience.

The Handheld is a portable data-collecting instrument designed to simplify the gathering of temperatures, manage standard checklist processes and document corrective actions. The planning and training involved in a paper-based HACCP food safety program is laborious, costly and can be a burden to your business.

**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

Works as a standalone system with software residing on a local PC. Not Mac Compatible.
The HACCP Manager Enterprise application is used to build menus and checklists, which are then downloaded to any of the data collection devices (handheld or mobile app). The HACCP Manager Mobile app is downloaded to your personal smart device and works in conjunction with the Blue2 unit.

This state-of-the-art system allows a HARPC/HACCP plan, that complies with local health codes, to be custom built for any food business. Addressing health safety concerns is vital in today’s foodservice industry and is, in some cases, government mandated.

Handhelds send critical data to our hosted server via a USB or Wi-Fi connection.

**Hosting**

HACCP Manager Enterprise is a hosted software solution. It reduces entry related start-up costs and reduces the reliance on IT for maintenance and installation of servers and the software itself. Simple monthly payments provide ongoing support, secure storage, report analysis and management and software updates.

**Kits & Accessories**

The two main kits differ in the Handhelds and how they transfer information. This 37200 Handheld connects to a Network-based computer tool via USB cable. This allows communication with the software database.

The 37500 Handheld has a built-in WiFi module to allow wireless data transfer. This model communicates primarily via Wi-Fi. It operates via the USB cable, in the event a Wi-Fi connection cannot be established.

**Type K Probes**

Interchangeable Type K probes, enable the HACCP Manager to be used to check temperatures of various food types and equipment throughout your facility.

**Specifications**

| Temperature Range: | -99.9° to 999.9°F (-73.2° to 537.7°C) |
| Accuracy:          | ±1°F (±0.5°C)                           |
| Stores up to:      | 3,000 temperatures and 300 menu items  |
| Stores:            | 1,500 checklist records (150 questions) |
| Water resistant    |                                          |
| ABS Plastic with protective rubber boot |                     |
| Accepts all Type K thermocouple probes |                           |
| Traceable to NIST standards |                                |
| Rechargeable lithium ion battery |                              |
| 5-year warranty    |                                          |
The HACCP Manager Mobile app is downloaded to your smart device and works in conjunction with the Blue2 unit.

To reduce managing reams of paper logs that are laborious to analyze, the HACCP Manager Mobile app, used with the Blue2 instrument, collects and stores that information right to your smart device. This data can then be uploading to your cloud software on the fly, significantly saving time and streamlining the process of specific HACCP requirements.

The Blue2 is available as part of a kit that includes a Type K DuraNeedle Direct Connect probe. The Blue2 instrument transmits temperatures wirelessly to your mobile device via Bluetooth Low Energy. The app provides the capability to be used in multiple languages to increase versatility.

- Switch menus and checklists on the fly
- Multiple language support
- Works with the Blue2 device
- Can be used in conjunction with Enterprise handhelds

Daily Summary/Report Criteria

Daily Summary

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Total Records</th>
<th>Records Marked “No”</th>
<th>Records Below Range</th>
<th>Records Above Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>3</td>
<td>N/A</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

- Pizza Calzone
- Min: 155°F
- Max: 190°F
- Corrective Action: Notify Manager
- Enter notes about the item

<table>
<thead>
<tr>
<th>Location</th>
<th>Item</th>
<th>Min / Max</th>
<th>Temperature</th>
<th>Record Timestamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Buffer</td>
<td>Luchan; Beque</td>
<td>135/185</td>
<td>173.2°F</td>
<td>09/27/2015 12:41:19 PM</td>
</tr>
<tr>
<td>Hot Buffer</td>
<td>Spaghetti</td>
<td>135/165</td>
<td>173.2°F</td>
<td>09/27/2015 12:41:19 PM</td>
</tr>
<tr>
<td>Hot Buffer</td>
<td>Spaghetti</td>
<td>135/165</td>
<td>173.2°F</td>
<td>09/27/2015 12:41:19 PM</td>
</tr>
</tbody>
</table>
The 92010-K Kit is made up of the 20100-K Blue2 Wand and the 51337-K DuraNeedle Direct Connect Probe. The Blue2 Wand transmits temperatures wirelessly to your mobile device via Bluetooth Low Energy. The wand can utilize any interchangeable Type-K temperature probe making it versatile for insertion, air or surface temperature measurement. The device works with the HACCP Manager mobile app and the data can also be integrated into existing third party applications.

Kit Includes:
- 20100-K Blue2 Wand
- 51337-K DuraNeedle
- Direct Connect Probe

Interchangeable Probes
Can be used with any Type K probe

51337-K Duraneedle Probe
Utilizes unique screw-lock

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 (30.5 m), 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

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.

#51337-K DuraNeedle Probe
- Temperature Range: -100º to 500ºF (-73º to 260ºC)
- Accuracy: ±1ºF
- Response Time: 1 second in liquid
- Probe Length: 4" (102 mm)
- 1-year Warranty

Watch The Video!

The Blue2 unit works with the HACCP Manager Mobile app and 3rd party apps for increased versatility.
The NotifEye™ cloud-based temperature monitoring and notification system is a low-cost wireless solution. System data is accessible on-line 24/7, while out-of-range notifications are sent in real-time as e-mail and text alerts. Sensors pass information wirelessly to the software database which collects and records data 24/7. Each sensor is battery operated and monitors against preset conditions that are user-defined within the NotifEye application.

To View the online system and Live Data!
Log Into: monitoring.notifeyewireless.com
User Name: notifeye
Password: notifeye

How It Works

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

Gateway Kit #15906 Includes:
- (4) Temp Sensors #15200
- (4) Batteries
- (1) Gateway #15505
- (1) Buffer Cable
- (1) Ethernet Cable
- 1-Year Web Hosting*

Gateway Kit #15907 Includes:
- (2) Temp Sensors #15200
- (2) Batteries
- (1) Gateway #15505
- (1) Buffer Cable
- (1) Ethernet Cable
- 1-Year Web Hosting*

*Renewal fee each additional year thereafter

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

#15200 Temperature Sensor*
Temperature Range: -25° to 180°F (-32° to 82°C)
Accuracy: ±1°F (±0.5°C)

#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: ±1.2°F (±0.5°C)
Probe Diameter: 0.25" (06.4 mm)

#15505 Gateway Specifications
- Operating range: 32° to 140°F (5° to 50°C), up to 90% RH
- 200 Monitoring Points = 30 Days of Storage

#15506 Repeater
- Extends sensor range, transmits up to 4 miles (open field range)

General Specifications
- Sensor Range: 2500 ft (typical interior range of 500 ft)
- Probe Lead Length: 6 ft (1.82 m)*
- Battery Life: 2.5 - 3 years
- 1-year warranty

*Temperature sensors available with longer probe leads: 15200-10 - 10 ft. (3.05 m) and 15200-30 - 30 ft. (9.14 m)
Install this easy-to-use system to wirelessly monitor soil and air temperatures to ensure environmental conditions are optimal for planting. This kit is ideal for monitoring both temperature and humidity levels in a greenhouse. Monitoring heat and moisture levels in a growing environment is necessary for successful germination and a key factor for producing quality crops.

Analyze the system data to make adjustments and save energy by heating only until optimal growing can be sustained. Also, as an exception-based system, alerts can be sent when preset temperature and humidity limits are exceeded.

Growers Kit #15910 Includes:
- (2) Temperature Sensor #15200-10
- (1) Humidity Sensor #15220
- (1) Immersion Probe #15201-01
- (1) Gateway #15505
- 1-year Hosting (included)

Sensor Features:
- Unlimited Number of Networks, Sensors, Gateways and Users Supported
- Sensor Mapping Tool (Visual Placement)
- Data Reports and Sensor History Storage
- Visual Charts and Exports

Alert Features:
- On-screen Alerts and Notifications sent via Email and SMS Text
- Permission-based Access Control and Reporting
- List of Recent Alerts for Individual Sensors

With the organic and medicinal industries on the upsurge, there is a need to control the temperature & humidity of greenhouses and holding silos. Our line of specialty products are versatile and scalable and conform to current government compliances and regulations.
TravAlert™ is most commonly used for monitoring storage temperatures during transportation and provides highly accurate data for use in the foodservice and industrial markets. It can also be used to monitor and record temperatures of stationary refrigeration units or hot-holding cabinets.

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

2300
TravAlert™ Data Logger Kit
• 9387 Data Logger (5)
• 9364 i-Button Reader Cable (2)
• 9365 USB Adapter (2)
• 9386 Software CD (2)

Features
- Unique user-defined session identity
- Go/No-Go Icon for immediate visual feedback based on user-defined parameters
- All readings for session shown in graph and tabular format
- Printable to PDF at destination
- Quick session summary display

TransTrak™ Reports & Sessions
Temperatures exceeding pre-programmed limits during transit can be easily evaluated by a unique Transport Session report.

Specifications
- Temperature Range: -40° to 185°F (-40° to 85°C)
- Accuracy: ±2°F (±1°C) from -22° to 176°F (-30° to 70°C)
- Resolution: 1°F (0.5°C) increments
- Recording Intervals: 1-255 user-programmable intervals up to 2,048 readings
- Tag: ABS plastic tag with stainless steel button
  - Water resistant
  - Reprogrammable for multiple uses
- Battery: Lithium
- Warranty: 1 year

Out of Range Indicator - signals immediately if temperature limits were exceeded
AquaTuff™ Thermocouple Instruments

Cooper-Atkins’ line of hand-held thermocouple instruments continues the proud heritage of products designed and manufactured in an ISO 9001:2008 registered facility in the USA. The powerful microprocessor in Cooper-Atkins’ thermocouple instruments delivers speed and reliability and has a unique memory that stores the calibration settings and will never need recalibration.

The AquaTuff™ Series Thermocouple Instruments are highly accurate, NIST traceable and most importantly, as the AquaTuff™ name implies, is IPX7 waterproof rated for greater reliability and durability in harsh environments. The non-Wrap&Stow™ enclosure design allows for maximum versatility, and can be used with any Type K thermocouple probe.

<table>
<thead>
<tr>
<th>35100-K</th>
<th>35200-K</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>-100° to 999°F (-73° to 537°C)</td>
</tr>
<tr>
<td><strong>Instrument Accuracy:</strong></td>
<td>±0.5°F (±0.3°C)</td>
</tr>
<tr>
<td><strong>Resolution:</strong></td>
<td>0.1°</td>
</tr>
<tr>
<td><strong>Housing:</strong></td>
<td>ABS Plastic</td>
</tr>
<tr>
<td><strong>Hold:</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Backlight:</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Power:</strong></td>
<td>(2) 1.5V AAA</td>
</tr>
<tr>
<td><strong>Battery Life:</strong></td>
<td>1800 hours</td>
</tr>
<tr>
<td><strong>Auto Off:</strong></td>
<td>10 min.</td>
</tr>
<tr>
<td><strong>Replacement Item For:</strong></td>
<td>38653-K</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>5 oz (142 g)</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>5 Year</td>
</tr>
</tbody>
</table>

**IPX7 Waterproof** The AquaTuff™ thermocouple instruments are IPX7 waterproof rated and durable for harsh environments. An IPX7 reading means the instrument can be submerged in 1 meter of water for 30 minutes without water damage occurring.

Twist-open battery hatch

The non-Wrap&Stow enclosed design instruments are compatible with all Type K thermocouple probes for maximum versatility.

93970-K AquaTuff™ Thermocouple Kit
- 35200-K Instrument
- 50012-K Surface Angled Bell Probe
- 50306-K Air/Oven Probe
- 50335-K Needle Probe
- 14235 Medium Case
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. The Wrap&Stow™ probe is factory-calibrated with the instrument for a higher degree of total system accuracy. The AquaTuff™ Total System Accuracy (instrument and probe accuracy combined) of 0.5°C (0.9°F) over the entire range is a result of rigorous testing traceable to NIST standards.

<table>
<thead>
<tr>
<th>Probe Included:</th>
<th>35132 AquaTuff™ Wrap&amp;Stow™ Thermocouple Instrument</th>
<th>35135 AquaTuff™ Wrap&amp;Stow™ with Angled Surface Probe</th>
<th>35140 AquaTuff™ Wrap&amp;Stow™ with MicroNeedle Probe</th>
<th>35232 AquaTuff™ Wrap&amp;Stow™ with DuraNeedle™ Probe</th>
<th>35235 AquaTuff™ Wrap&amp;Stow™ with Surface Probe</th>
<th>35240 AquaTuff™ Wrap&amp;Stow™ with MicroNeedle Probe</th>
<th>35340 AquaTuff™ Wrap&amp;Stow™ ITS™ Thermocouple Instrument with MicroNeedle Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range:</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
</tr>
<tr>
<td>Accuracy:</td>
<td>±0.9°F (±0.5°C) total system accuracy</td>
<td>±0.5°F (±0.3°C)*</td>
<td>±0.9°F (±0.5°C) total system accuracy</td>
<td>±0.9°F (±0.5°C) total system accuracy</td>
<td>±0.9°F (±0.3°C)*</td>
<td>±0.9°F (±0.5°C) total system accuracy</td>
<td>±0.9°F (±0.5°C) total system accuracy</td>
</tr>
<tr>
<td>Resolution:</td>
<td>0.1°</td>
<td>0.1°</td>
<td>0.1°</td>
<td>0.1°/1° selectable</td>
<td>0.1°/1° selectable</td>
<td>0.1°/1° selectable</td>
<td>0.1°</td>
</tr>
<tr>
<td>Hold:</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Backlight:</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Power:</td>
<td>(2) 1.5V AAA</td>
<td>(2) 1.5V AAA</td>
<td>(2) 1.5V AAA</td>
<td>(2) 1.5V AAA</td>
<td>(2) 1.5V AAA</td>
<td>(2) 1.5V AAA</td>
<td>(2) 1.5V AAA</td>
</tr>
<tr>
<td>Battery Life:</td>
<td>1800 hours</td>
<td>1800 hours</td>
<td>1800 hours</td>
<td>1800 hours</td>
<td>1800 hours</td>
<td>1800 hours</td>
<td>1800 hours</td>
</tr>
<tr>
<td>Auto Off:</td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
</tr>
<tr>
<td>Weight:</td>
<td>7 oz (199 g)</td>
<td>8 oz (227 g)</td>
<td>7 oz (199 g)</td>
<td>7 oz (199 g)</td>
<td>8 oz (227 g)</td>
<td>7 oz (199 g)</td>
<td>7 oz (199 g)</td>
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<tr>
<td>Regulatory Listings:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warranty:</td>
<td>5 Year</td>
<td>5 Year</td>
<td>5 Year</td>
<td>5 Year</td>
<td>5 Year</td>
<td>5 Year</td>
<td>5 Year</td>
</tr>
</tbody>
</table>

Instrument with ITS™ and Memory Storage
The Intelligent Temperature Stabilization (ITS™) feature, on the 35340 AquaTuff™ Wrap&Stow™ ITS™ Thermocouple, prevents the temperature from being displayed until the final stabilized temperature is reached. While in the ITS mode, you have the option of recording the stabilized temperature into the 35340 memory. The memory can store up to 250 readings, which can then be reviewed by scrolling up or down.
EconoTemp™ Thermocouple Instruments & Kits

The EconoTemp’s™ slim line design sits nicely in the palm of your hand and provides an ergonomic grip. The removable rubber boot provides superior impact resistance and withstands multiple drops from six feet onto a cement floor. The rubber boot also has molded tabs on the side to hold and store most needle probes. The EconoTemp™ is an ideal transitional instrument from the digital pocket test. It has greater speed and flexibility with interchangeable probes. Food safety kits include instruments and probes recommended by foodservice professionals and can be made to order. Let us build a specialized kit for you!

**32311-K**
with 50336-K DuraNeedle Probe

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

**94020-K**
EconoTemp™ Single-handed Combo Pack
- 32311-K Instrument
- 50337-K Direct Connect DuraNeedle Probe
- 9368 Wall-mount Bracket

**93233-K**
EconoTemp™ Kit
- 32311-K Instrument
- 50012-K Surface-angled Bell Probe
- 50306-K Oven/Freezer Probe
- 50336-K DuraNeedle Probe
- 9368 Wall-mount Bracket
- 14235 Medium Case
- Weight: 2 lb 3 oz (851 g)

**93230-K**
EconoTemp™ Combo Pack
- 32311-K Instrument
- 50336-K DuraNeedle Probe
- 9368 Wall-mount Bracket

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**Direct Connect Probe Allows for Single-handed Operation!**

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**Temperature Range:**
- 32311-K: -40° to 500°F (-40° to 260°C)
- 32322-K: -40° to 1000°F (-40° to 538°C)

**Instrument Accuracy:**
- 32311-K: ±1°F (±0.5°C)
- 32322-K: ±1°F (±0.5°C)

**Resolution:**
- 32311-K: 1°
- 32322-K: 0.1° up to 495°F (257°C)

**Housing:**
- ABS

**Power:**
- (3) 1.5V AAA

**Battery Life:**
- 4500 hours

**Auto Off:**
- 10 min.

**Weight:**
- 6 oz (170 g)

**Regulatory Listings:**

**Warranty:**
- 5 Year

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**For maximum versatility, EconoTemp™ Instruments are compatible with all Type K thermocouple probes.**

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**5-Year Instrument Warranty**

Any instrument which proves to be defective in material or workmanship within five years of original purchase will be repaired or replaced without charge upon receipt. This Limited Warranty does not cover damage in shipment or failure caused by tampering, obvious carelessness or abuse, and is the purchaser’s sole remedy.
Cooper-Atkins’ thermocouple probes are the most extensive line in the foodservice industry. Many different types of probes are produced for all kinds of temperature measuring applications, from internal food to equipment surface temperatures. All probes are manufactured at the headquarters in Connecticut and depending on the application, custom-built probes can be specially manufactured. All our probes are manufactured in an ISO 9001:2008 facility.

<table>
<thead>
<tr>
<th>Insertion/Needle Probes</th>
<th>31901-K</th>
<th>50207-K</th>
<th>50208-K</th>
<th>50209-K</th>
<th>50263-K</th>
<th>50335-K</th>
<th>50336-K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Needle Probe</td>
<td>Direct Connect MicroNeedle Probe Chisel Tip</td>
<td>Fry Vat Probe</td>
<td>MicroNeedle Probe</td>
<td>60° Patty Probe w/ 3/16&quot; (4.76 mm) Depth Indicator (other angles available)</td>
<td>Needle Probe (other sizes available)</td>
<td>DuraNeedle Probe</td>
</tr>
<tr>
<td>Temperature Range:</td>
<td>-40° to 400°F (-40° to 205°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
</tr>
<tr>
<td>Max Tip Temperature:</td>
<td>-40° to 400°F (-40° to 205°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
<td>-100° to 500°F (-73° to 260°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
<td>-40° to 500°F (-40° to 205°C)</td>
</tr>
<tr>
<td>Max Cable Temperature:</td>
<td>400°F (205°C)</td>
<td>500°F (260°C)</td>
<td>500°F (260°C)</td>
<td>500°F (260°C)</td>
<td>500°F (260°C)</td>
<td>500°F (260°C)</td>
<td>500°F (260°C)</td>
</tr>
<tr>
<td>Max Cable Temperature:</td>
<td>400°F (205°C)</td>
<td>-</td>
<td>400°F (205°C)</td>
<td>500°F (260°C)</td>
<td>176°F (80°C)</td>
<td>176°F (80°C)</td>
<td>176°F (80°C)</td>
</tr>
<tr>
<td>Response Time (in liquid):</td>
<td>4 seconds</td>
<td>1 second</td>
<td>8 seconds</td>
<td>1 second</td>
<td>1 second</td>
<td>4 seconds</td>
<td>2 seconds</td>
</tr>
<tr>
<td>Shaft Length:</td>
<td>4&quot; (102 mm)</td>
<td>3.75&quot; (95 mm)</td>
<td>7.3&quot; (185 mm)</td>
<td>3.5&quot; (89 mm)</td>
<td>8&quot; (203 mm)</td>
<td>4.5&quot; (114 mm)</td>
<td>6&quot; (152 mm)</td>
</tr>
<tr>
<td>Cable Length Max Extended:</td>
<td>24&quot; (610 mm)</td>
<td>Direct Connect No Cable</td>
<td>30&quot; (762 mm) w/ Flexible Armored Cable</td>
<td>48&quot; (1.2 m)</td>
<td>48&quot; (1.2 m)</td>
<td>48&quot; (1.2 m)</td>
<td>48&quot; (1.2 m)</td>
</tr>
<tr>
<td>Accuracy:</td>
<td>± 1°F</td>
<td>± 1°F</td>
<td>± 1°F</td>
<td>± 1°F</td>
<td>± 1°F</td>
<td>± 1°F</td>
<td>± 1°F</td>
</tr>
<tr>
<td>Warranty:</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

Surface Probes | 50012-K | 50014-K | 50318-K |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Bell Surface Probe</td>
<td>Weighted Grid-dle Probe</td>
<td>Ceramic Tip Surface Probe</td>
</tr>
<tr>
<td>Temperature Range:</td>
<td>-40° to 500°F (-40° to 260°C)</td>
<td>-40° to 500°F (-40° to 260°C)</td>
<td>-40° to 1202°F (-40° to 650°C)</td>
</tr>
<tr>
<td>Max Tip Temperature:</td>
<td>500°F (260°C)</td>
<td>500°F (260°C)</td>
<td>1202°F (650°C)</td>
</tr>
<tr>
<td>Max Cable Temperature:</td>
<td>176°F (80°C)</td>
<td>400°F (205°C)</td>
<td>176°F (80°C)</td>
</tr>
<tr>
<td>Response Time (on oiled surface):</td>
<td>4 seconds</td>
<td>2 seconds</td>
<td>1 second</td>
</tr>
<tr>
<td>Shaft Length:</td>
<td>4.5&quot; (114 mm)</td>
<td>4&quot; (102 mm)</td>
<td></td>
</tr>
<tr>
<td>Cable Length Max Extended:</td>
<td>48&quot; (1.2 m)</td>
<td>30&quot; (762 mm) w/ Flexible Armored Cable</td>
<td>48&quot; (1.2 m)</td>
</tr>
<tr>
<td>Weight:</td>
<td>5 oz (142 g)</td>
<td>2 lb (907 g)</td>
<td>5 oz (142 g)</td>
</tr>
<tr>
<td>Warranty:</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

The Total System Accuracy (instrument and probe accuracy combined) over the entire range is a result of rigorous testing against established standards using NIST-traceable equipment.

For our extensive line of probes please refer to our ATKINS Thermocouple Instrument & Probe Catalog #67-1240.
## Thermocouple Probes & Accessories

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

<table>
<thead>
<tr>
<th>Air Probes</th>
<th>39032-K</th>
<th>39138-K</th>
<th>50306-K</th>
<th>52048-K</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Handheld Air Probe</td>
<td>Bare Tip Probe</td>
<td>Oven/Freezer Probe</td>
<td>Solid Product Simulator</td>
</tr>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>-328° to 400°F (-200° to 205°C)</td>
<td>-328° to 400°F (-200° to 205°C)</td>
<td>-100° to 600°F (-73° to 316°C)</td>
<td>-40° to 180°F (-40° to 82°C)</td>
</tr>
<tr>
<td><strong>Max Tip Temperature:</strong></td>
<td>400°F (205°C)</td>
<td>400°F (205°C)</td>
<td>600°F (316°C)</td>
<td>180°F (82°C)</td>
</tr>
<tr>
<td><strong>Max Cable Temperature:</strong></td>
<td>400°F (205°C)</td>
<td>400°F (205°C)</td>
<td>600°F (316°C)</td>
<td>400°F (204°C)</td>
</tr>
<tr>
<td><strong>Response Time:</strong></td>
<td>11 seconds 5m/sec. air steam</td>
<td>1 sec. liquids 7 sec. 5m/sec. air</td>
<td>1 second liquid 10 sec. 5m/sec. air</td>
<td>Up to 2 hours to stabilize</td>
</tr>
<tr>
<td><strong>Shaft Length:</strong></td>
<td>4” (102 mm)</td>
<td>-</td>
<td>2.125” (54 mm)</td>
<td>1.5” (38 mm)</td>
</tr>
<tr>
<td><strong>Cable Length Max Extended:</strong></td>
<td>36” (914 mm)</td>
<td>36” (914 mm)</td>
<td>43” (1.1 m) w/ Stainless Steel Overbraid</td>
<td>6” (152 mm)</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>1 oz (28 g)</td>
<td>1 oz (28 g)</td>
<td>1 oz (28 g)</td>
<td>2.5 oz (71 g)</td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

### 9150
**Probe Wipes - Box**  
- 200 individual foil-wrapped wipes  
- Packet Size: 2” x 2” (51 mm x 51 mm)

### 9391
**Wire Rack & Cup**  
- Holds Thermocouple  
- Instrument  
- Storage cup holds pocket tests
Infrared Thermometers

Infrared thermometers are perfect for measuring items in display cases, salad bars, and buffets without touching the food or causing cross-contamination. They are also ideal for checking moving machinery, pipes and overhead equipment in any kitchen or cafeteria. Non-contact infrared thermometers provide an immediate surface temperature. Simply point the infrared (some available with a visible laser) directly at an area to obtain its temperature.

**Models 480 and 481** come with an insertion probe to obtain internal food temperatures. Model 412 accepts any Type K thermocouple probe.

**D:S (Distance to Spot Ratio)**
The further away from the object, the larger the surface area measured. Optical resolution is expressed as a ratio of the distance to the resolution spot divided by the diameter of the spot.

<table>
<thead>
<tr>
<th></th>
<th>412</th>
<th>462</th>
<th>470</th>
<th>480</th>
<th>481</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>Infrared -76° to 932°F (-60° to 500°C) Type K Thermocouple Jack -83° to 1999°F (-64° to 1400°C)</td>
<td>Infrared -40° to 536°F (-40° to 280°C)</td>
<td>Infrared -27° to 428°F (-33° to 220°C)</td>
<td>Infrared -27° to 428°F (-33° to 220°C) Probe</td>
<td>Infrared -40° to 536°F (-40° to 280°C) Probe -67° to 626°F (-55° to 330°C)</td>
</tr>
<tr>
<td><strong>Infrared Accuracy:</strong></td>
<td>Infrared ±4°F (±2°C)</td>
<td>Infrared ±2°F (±1°C)</td>
<td>Infrared ±3.6°F (±2°C)</td>
<td>Infrared ±4°F (±2°C)</td>
<td>Infrared ±2°F (±1°C)</td>
</tr>
<tr>
<td><strong>Probe Accuracy:</strong></td>
<td>Thermocouple Jack ±2°F (±1°C)</td>
<td>-</td>
<td>-</td>
<td>Thermocouple Probe ±2°F (±1°C)</td>
<td>RTD Probe ±2°F (±1°C)</td>
</tr>
<tr>
<td><strong>Resolution:</strong></td>
<td>0.1° 1°F/°C above 200°F</td>
<td>0.1° 1°F/°C above 230°F</td>
<td>0.1° 1°F above 200°F</td>
<td>0.1° 1°F above 200°F</td>
<td>0.1°</td>
</tr>
<tr>
<td><strong>Ambient Operating Range:</strong></td>
<td>32° to 122°F (0° to 50°C)</td>
<td>32° to 122°F (0° to 50°C)</td>
<td>32° to 122°F (0° to 50°C)</td>
<td>32° to 122°F (0° to 50°C)</td>
<td>32° to 122°F (0° to 50°C)</td>
</tr>
<tr>
<td><strong>Laser:</strong></td>
<td>Single Dot</td>
<td>Single Dot</td>
<td>-</td>
<td>-</td>
<td>Illumination Beam</td>
</tr>
<tr>
<td><strong>Distance to Spot (D:S):</strong></td>
<td>12:1</td>
<td>6:1</td>
<td>1:1</td>
<td>1:1</td>
<td>3:1</td>
</tr>
<tr>
<td><strong>Emissivity:</strong></td>
<td>0.95 default Adjustable from 0.10 to 1.0</td>
<td>Preset at 0.97</td>
<td>Preset at 0.95</td>
<td>0.95 Default, Adjustable from 0.10 to 1.0</td>
<td>Preset at 0.97</td>
</tr>
<tr>
<td><strong>Power:</strong></td>
<td>(2) 1.5V AAA</td>
<td>(1) 9V battery</td>
<td>(1) #CR2032</td>
<td>(1) #CR2032</td>
<td>(1) 9V battery</td>
</tr>
<tr>
<td><strong>Battery Life:</strong></td>
<td>180 Hours</td>
<td>12 Hours</td>
<td>40 Hours</td>
<td>40 Hours</td>
<td>100 Hours</td>
</tr>
<tr>
<td><strong>Auto Off:</strong></td>
<td>60 sec.</td>
<td>7 sec.</td>
<td>15 sec.</td>
<td>15 sec.</td>
<td>20 sec.</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>6 oz (170 g)</td>
<td>5 oz (142 g)</td>
<td>1 oz (28 g)</td>
<td>2.5 oz (72 g)</td>
<td>6 oz (170 g)</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>
The same innovative technology incorporated in our popular thermocouple instruments, used by the most sophisticated restaurant chains in the world, is also available in select digital thermometers. With settings stored in a non-volatile memory chip, field adjustment has become a thing of the past. Cooper-Atkins is committed to ensuring the accuracy of our products that they are guaranteed for life. Look for the logo on Cooper-Atkins’ products and ask your local representative for more details.

DFP450W
Digital Pocket Test
with Temperature Alarm

DPP400W
Pen-style
Digital Pocket Test

DPP800W MAX
Digital Pocket Test

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

<table>
<thead>
<tr>
<th>DFP450W</th>
<th>DPP400W</th>
<th>DPP800W</th>
<th>TTM41</th>
<th>TTM41-10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>-40°F to 450°F (-40° to 232°C)</td>
<td>-40°F to 392°F (-40° to 200°C)</td>
<td>-40°F to 450°F (-40° to 232°C)</td>
<td>-4°F to 302°F (-20° to 150°C)</td>
</tr>
<tr>
<td><strong>Accuracy:</strong></td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
</tr>
<tr>
<td><strong>Resolution:</strong></td>
<td>0.1°F</td>
<td>0.1°F</td>
<td>0.1°F</td>
<td>0.1°F</td>
</tr>
<tr>
<td><strong>Response Time (in liquid):</strong></td>
<td>&lt;6 seconds</td>
<td>&lt;6 seconds</td>
<td>&lt;6 seconds</td>
<td>-</td>
</tr>
<tr>
<td><strong>Stem Length:</strong></td>
<td>4.75&quot; (121 mm)</td>
<td>2.75&quot; (70 mm)</td>
<td>4&quot; (102 mm)</td>
<td>15&quot; (381 mm)</td>
</tr>
<tr>
<td><strong>Power:</strong></td>
<td>(1) 1.5V #LR44</td>
<td>(1) 1.5V #LR44</td>
<td>(1) 1.5V #LR44</td>
<td>(1) 1.5V #LR44</td>
</tr>
<tr>
<td><strong>Auto Off:</strong></td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
<td>-</td>
</tr>
<tr>
<td><strong>Accurate for Life:</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Water Resistance Rating:</strong></td>
<td>IPX7 Dishwasher Safe</td>
<td>IPX7</td>
<td>IPX7 Dishwasher Safe</td>
<td>Water Resistant</td>
</tr>
<tr>
<td><strong>Antimicrobial Plastic:</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>0.7 oz (20 g)</td>
<td>1 oz (28 g)</td>
<td>1 oz (28 g)</td>
<td>2 oz (56 g) w/clip</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>Lifetime</td>
<td>Lifetime</td>
<td>Lifetime</td>
<td>Lifetime</td>
</tr>
</tbody>
</table>

The tip diameter is 0.046” (1.19 mm) where the thermistor sensor is located. This stem thickness complies with the FDA Food Code’s recommended Guidelines.
Thermometer Validation

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

Calibration is a formal comparison of any item to a known standard that is of higher accuracy. The comparison is normally conducted under controlled environmental conditions and typically not done onsite. It is traceable to a known standard through an unbroken chain of comparison to the National Institute of Standards and Technology (NIST).

Other manufacturers include an option for adjustment known as a calibration button on their thermometers. This allows the user to reset the expected error/accuracy drift in the thermometer 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! Cooper-Atkins’ Accurate For Life digital thermometers require no “field” adjustment of calibration settings, which eliminates the risk of introducing error into the instrument.

Validation is a quick, less formal comparison of any item against a single temperature point. When validating thermometers, it is usually by means of a single test point such as an ice bath (32°F/0°C). It can be performed regularly onsite, and is a confirmation that the instrument is accurate to within acceptable tolerances.

Periodic checking of thermometer accuracy is recommended as standard practice to satisfy certain governmental regulations. Over its lifetime, the digital thermometer may exhibit some minor accuracy shift, due in part to environmental variations, and in part to normal aging of the components used. 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.
Refrigerator/Freezer Thermometers

2560
Digital Refrigerator/Freezer Thermometer

The 2560 is a low temperature digital thermometer designed to hang, stand or mount within the food zone inside cold storage cabinets. Cable-ties included for added mounting security.

2560 vs 25HP
Size Comparison

PM180
Dual-Cool™ Panel Thermometer

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 or two locations inside of the same reach-in, walk-in or hot-holding cabinet.

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

PM180-02
• PM180 Panel Thermometer
• (2) 2013 Air Probes

PM180-03
• PM180 Panel Thermometer
• (2) 2113 Solid Simulator Probes

PM180-032
• PM180 Panel Thermometer
• (2) 2113 Solid Simulator Probes
The Cooper-Atkins’ bi-metal pocket test thermometers have an external dimple on the stem to indicate the minimum insertion point. The 1246 Series is not recommended for thin, delicate foods such as hamburger patties, seafood and pork chops. The bi-metal pocket tests have a magnifying lens for improved reading and a pocket sheath with adjustment wrench, made with antimicrobial plastic. Our 1246-02 dials have a blue indicator mark at 32° (freezing point) for ease of adjustment and a HACCP danger zone highlighted in red.

**Bi-metal Insertion Thermometers**

<table>
<thead>
<tr>
<th></th>
<th>1246-01</th>
<th>1246-02</th>
<th>1246-03</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>-40° to 180°F (-40° to 80°C)</td>
<td>0° to 220°F (20° to 100°C)</td>
<td>50° to 550°F (10° to 285°C)</td>
</tr>
<tr>
<td><strong>Accuracy:</strong></td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±5°F (±3°C)</td>
</tr>
<tr>
<td><strong>Housing Material:</strong></td>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td><strong>Dial Diameter:</strong></td>
<td>1&quot; (25 mm)</td>
<td>1&quot; (25 mm)</td>
<td>1&quot; (25 mm)</td>
</tr>
<tr>
<td><strong>Stem Diameter:</strong></td>
<td>0.140&quot; (3.5 mm)</td>
<td>0.140&quot; (3.5 mm)</td>
<td>0.140&quot; (3.5 mm)</td>
</tr>
<tr>
<td><strong>Stem Length:</strong></td>
<td>5&quot; (127 mm)</td>
<td>5&quot; (127 mm)</td>
<td>5&quot; (127 mm)</td>
</tr>
<tr>
<td><strong>Lens Material:</strong></td>
<td>Magnifying Polycarbonate</td>
<td>Magnifying Polycarbonate</td>
<td>Magnifying Polycarbonate</td>
</tr>
<tr>
<td><strong>Antimicrobial Plastic:</strong></td>
<td>Yes Sheath Only</td>
<td>Yes Sheath Only</td>
<td>Yes Sheath Only</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>0.5 oz (14 g)</td>
<td>0.5 oz (14 g)</td>
<td>0.5 oz (14 g)</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

**To ensure accuracy minimum insertion point 2" (51 mm)**

**1246-02**
Bi-metal Stem Test Thermometer
Adjustment Wrench

**Antimicrobial**
The antimicrobial additive does not protect users or others against food bacteria. Always wash, rinse and sanitize this product thoroughly before and after each use.

**2237-04**
1.75" Dial Espresso Milk Frothing Thermometer

**1246-02**
Ice Slurry Adjustment

**1236-70**
1" Dial Espresso/Cafe Thermometer

Vessel clips included for hands free temperature monitoring

**322-01**
Candy/Jelly/Deep-Fry Thermometer

<table>
<thead>
<tr>
<th></th>
<th>322-01</th>
<th>1236-70</th>
<th>2237-04/04C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>200° to 400°F (90° to 200°C)</td>
<td>0° to 220°F</td>
<td>0° to 220°F (-10° to 104°C)</td>
</tr>
<tr>
<td><strong>Accuracy:</strong></td>
<td>±5°F</td>
<td>±2°F</td>
<td>±2°F (±1°C)</td>
</tr>
<tr>
<td><strong>Housing Material:</strong></td>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td><strong>Dial Diameter:</strong></td>
<td>2.5&quot; (64 mm)</td>
<td>1&quot; (25 mm)</td>
<td>1.75&quot; (178 mm)</td>
</tr>
<tr>
<td><strong>Stem Diameter:</strong></td>
<td>0.190&quot; (4.8 mm)</td>
<td>0.140&quot; (3.6 mm)</td>
<td>0.15&quot; (3.8 mm)</td>
</tr>
<tr>
<td><strong>Stem Length:</strong></td>
<td>6&quot; (152.4 mm) w/ vessel clip</td>
<td>5&quot; (127 mm)</td>
<td>7&quot; (178 mm) w/ vessel clip</td>
</tr>
<tr>
<td><strong>Lens Material:</strong></td>
<td>Glass</td>
<td>Magnifying Polycarbonate</td>
<td>Magnifying Polycarbonate</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>2 oz (57 g)</td>
<td>0.5 oz (14 g)</td>
<td>1 oz (28 g)</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td>ABC</td>
<td>ABC</td>
<td>ABC</td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>
Protecting food during the preparation process is extremely important. When working with potentially hazardous foods you need to make sure it spends less than 4 hours in the "Danger Zone" between 41°F and 135°F (5°C - 57°C). Food exposed to this temperature for too long is not safe to consume. The final cooking temperature should always be tested with a thermometer, never just by looking at or touching the food.

<table>
<thead>
<tr>
<th></th>
<th>323</th>
<th>2238-06</th>
<th>2238-14</th>
<th>3270-05</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>120° to 200°F (49° to 93°C)</td>
<td>0° to 220°F (-10° to 100°C)</td>
<td>50° to 550°F (20° to 280°C)</td>
<td>50° to 550°F (10° to 285°C)</td>
</tr>
<tr>
<td><strong>Accuracy:</strong></td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±5°F (±2.5°C)</td>
<td>±10°F (±5°C)</td>
</tr>
<tr>
<td><strong>Housing Material:</strong></td>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td><strong>Dial Diameter:</strong></td>
<td>2.5&quot; (64 mm)</td>
<td>2&quot; (51 mm)</td>
<td>2&quot; (51 mm)</td>
<td>2.5&quot; (64 mm)</td>
</tr>
<tr>
<td><strong>Stem Diameter:</strong></td>
<td>0.190&quot; (4.8 mm)</td>
<td>0.140&quot; (3.5 mm)</td>
<td>0.140&quot; (3.5 mm)</td>
<td>0.250&quot; (6.4 mm)</td>
</tr>
<tr>
<td><strong>Stem Length:</strong></td>
<td>6&quot; (152 mm)</td>
<td>8&quot; (203 mm)</td>
<td>8&quot; (203 mm)</td>
<td>15&quot; (381 mm)</td>
</tr>
<tr>
<td><strong>Lens Material:</strong></td>
<td>Glass</td>
<td>Glass</td>
<td>Glass</td>
<td>Glass</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>2 oz (57 g)</td>
<td>1.5 oz (43 g)</td>
<td>1.5 oz (43 g)</td>
<td>5.5 oz (156 g)</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

**Bi-metal Insertion/Cooking Thermometers**

**24HP**
HACCP Dial Oven Thermometer

The 24HP was voted the Most Reliable Oven Thermometer by America’s Test Kitchen.
Get accurate internal temperature readings without opening any doors. Cooper-Atkins' panel meters are the perfect choice for use in walk-in refrigerators, tanks, refrigerated display cases, holding cabinets, dairy cases, and more. Save time and lower energy costs by monitoring cold storage temperatures from the outside.

<table>
<thead>
<tr>
<th></th>
<th>250-0-1</th>
<th>255-06</th>
<th>255-14</th>
<th>268</th>
<th>6142-20</th>
<th>SP160-01/01</th>
<th>PM120</th>
<th>T158</th>
</tr>
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<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal:</td>
<td>32° to 122°F (-40° to 50°C)</td>
<td>(Internal):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External:</td>
<td>-58° to 158°F (-50° to 70°C)</td>
<td>(External):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy:</strong></td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±1.8°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td></td>
</tr>
<tr>
<td><strong>Housing Material:</strong></td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Stainless Steel</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
</tr>
<tr>
<td><strong>Lens Dimensions:</strong></td>
<td>4.5&quot; (114 mm)</td>
<td>3.75&quot; (95 mm)</td>
<td>3.75&quot; (95 mm)</td>
<td>-</td>
<td>2&quot; (51 mm)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Lens Material:</strong></td>
<td>Clear Acrylic</td>
<td>Clear Acrylic</td>
<td>Clear Acrylic</td>
<td>-</td>
<td>Polycarbonate</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Power:</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Solar with battery backup 1.5v (AAA)</td>
<td>1.5v (AA)</td>
<td>1.5v (AAA)</td>
<td></td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>4 oz (113 g)</td>
<td>3 oz (85 g)</td>
<td>3 oz (85 g)</td>
<td>2 oz (57 g)</td>
<td>5 oz (142 g)</td>
<td>3 oz (85 g)</td>
<td>2 oz (57 g)</td>
<td>5.5 oz (156 g)</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
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<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

6142-20 Vapor Tension Thermometer

255-14 6" Refrigerator/Freezer Thermometer
HACCP reference color-zoned dial and large, black pointer are for ease of viewing

268 Glass stick Indoor/Outdoor Thermometer with Suction Cups

SP160-01 Digital Solar Panel Thermometer

PM120 Mini Rectangular Panel Thermometer

T158 Digital with Remote Sensor Thermometer
## Temperature & Humidity Thermometers

<table>
<thead>
<tr>
<th>Model</th>
<th>12” Wall Thermometer/Humidity Meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRH158</td>
<td>The TRH158 measures both temperature and %Relative Humidity. It features Min/Max memory and is °C/°F selectable.</td>
</tr>
<tr>
<td>TRH122M</td>
<td>HACCP reference color-zone dial and large black pointer for easy viewing. Oversized wall thermometers allow easy monitoring of temperatures in critical food-related locations.</td>
</tr>
<tr>
<td>TRH122</td>
<td>The TRH122M measures both temperature and %Relative Humidity. It features Min/Max memory and is °C/°F selectable.</td>
</tr>
<tr>
<td>212-159C</td>
<td>HACCP reference color-zone dial and large black pointer for easy viewing. Oversized wall thermometers allow easy monitoring of temperatures in critical food-related locations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>12” Prep Area &amp; Dry Storage Thermometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>212-150</td>
<td>Measure both temperature and humidity with the TRH158. It is wall or desk mountable and is °C/°F selectable.</td>
</tr>
<tr>
<td>212-158</td>
<td>The 212-158 has a HACCP reference color-zoned dial and a large black pointer for easy monitoring.</td>
</tr>
</tbody>
</table>

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>TRH158</th>
<th>TRH122</th>
<th>212-150</th>
<th>212-158</th>
<th>212-159</th>
<th>212-159C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature Range:</strong></td>
<td>32°F to 122°F (0°C to 50°C)</td>
<td>14°F to 122°F (-10°C to 50°C)</td>
<td>-40°F to 120°F (-40°C to 50°C)</td>
<td>10°F to 80°F</td>
<td>-10°F to 80°F</td>
<td>-25°F to 35°C</td>
</tr>
<tr>
<td><strong>Accuracy:</strong></td>
<td>±2°F (±1°C)</td>
<td>±2°F (±1°C)</td>
<td>±3°F (1.5°C)</td>
<td>±3°F</td>
<td>±3°F</td>
<td>±1°C</td>
</tr>
<tr>
<td><strong>Relative Humidity:</strong></td>
<td>25 to 90%</td>
<td>10 to 99%</td>
<td>0 to 100%</td>
<td>0 to 100%</td>
<td>0 to 100%</td>
<td>0 to 100%</td>
</tr>
<tr>
<td><strong>RH Accuracy:</strong></td>
<td>±5%</td>
<td>±5%</td>
<td>±5%</td>
<td>±5%</td>
<td>±5%</td>
<td>±5%</td>
</tr>
<tr>
<td><strong>Housing Material:</strong></td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic</td>
</tr>
<tr>
<td><strong>Lens Dimensions:</strong></td>
<td>-</td>
<td>-</td>
<td>11.5” (292 mm)</td>
<td>11.5” (292 mm)</td>
<td>11.5” (292 mm)</td>
<td>11.5” (292 mm)</td>
</tr>
<tr>
<td><strong>Lens Material:</strong></td>
<td>-</td>
<td>-</td>
<td>Plastic with UV additive</td>
<td>Plastic with UV additive</td>
<td>Plastic with UV additive</td>
<td>Plastic with UV additive</td>
</tr>
<tr>
<td><strong>Power:</strong></td>
<td>1.5v (AAA)</td>
<td>1.5v (AAA)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>4.5 oz (127 g)</td>
<td>3 oz (85 g)</td>
<td>15 oz (425 g)</td>
<td>15 oz (425 g)</td>
<td>15 oz (425 g)</td>
<td>15 oz (425 g)</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td>-</td>
<td>-</td>
<td>CE Right</td>
<td>CE Right</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th></th>
<th>DTT361-01</th>
<th>FT24</th>
<th>TC6</th>
<th>TFS4</th>
<th>TM60</th>
<th>TS100</th>
<th>TW3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Range:</strong></td>
<td>23:59:59 Hours</td>
<td>23:59:59 Hours</td>
<td>23:59:59 Hours</td>
<td>99 Hours 59 Minutes</td>
<td>0 to 60 Minutes</td>
<td>99 Minutes 59 seconds</td>
<td>99 Minutes 59 seconds</td>
</tr>
<tr>
<td><strong>Resolution:</strong></td>
<td>1 second</td>
<td>1 second</td>
<td>1 second</td>
<td>Hours/Minutes/Minutes/Seconds</td>
<td>1 minute</td>
<td>1 second</td>
<td>1 second</td>
</tr>
<tr>
<td><strong>Power Source:</strong></td>
<td>(3)1.5 v AAA</td>
<td>(4) 1.5V “C”</td>
<td>1.5 v AAA</td>
<td>(4) 1.5v “C”</td>
<td>AC Adapter (optional)</td>
<td>Wind up</td>
<td>1.5 v LR44</td>
</tr>
<tr>
<td><strong>Memory / Recall:</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Modes:</strong></td>
<td>-</td>
<td>-</td>
<td>Counts up/down</td>
<td>Counts up/down</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Alarm Level (Decibel):</strong></td>
<td>80 decibels</td>
<td>90 decibels</td>
<td>85 decibels</td>
<td>90 decibels</td>
<td>70 decibels</td>
<td>70 decibels</td>
<td>70 decibels</td>
</tr>
<tr>
<td><strong>Housing:</strong></td>
<td>ABS Plastic</td>
<td>ABS Plastic</td>
<td>ABS Plastic</td>
<td>ABS Plastic</td>
<td>Stainless Steel</td>
<td>ABS Plastic</td>
<td>ABS Plastic</td>
</tr>
<tr>
<td><strong>LCD Dimensions:</strong></td>
<td>2.25” x 1.5” (57 mm x 38 mm)</td>
<td>0.875” x 2.25” (22 mm x 54 mm)</td>
<td>0.625” x 1.625” (16 mm x 41 mm)</td>
<td>3” x 3” (76 mm x 76 mm)</td>
<td>-</td>
<td>-</td>
<td>1.5” x 2.5” (38 mm x 76 mm)</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>7 oz (198 g)</td>
<td>1 lb 3 oz (539 g)</td>
<td>2 oz (57 g)</td>
<td>1 lb 6 oz (523 g)</td>
<td>4 oz (113 g)</td>
<td>1 oz (28 g)</td>
<td>3 oz (85 g)</td>
</tr>
<tr>
<td><strong>Regulatory Listings:</strong></td>
<td>Urea</td>
<td>Urea</td>
<td>Urea</td>
<td>Urea</td>
<td>Urea</td>
<td>Urea</td>
<td>Urea</td>
</tr>
<tr>
<td><strong>Warranty:</strong></td>
<td>1 Year</td>
<td>2 Years</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

**TS100**
Stopwatch Timer

**TM60**
Long-Ring 60 Minute Mechanical Timer

**TW3**
Large Digit Multi-Function Timer

**DTT361-01**
Cook n Cool Cooking Thermo-Timer with Time/Temperature Alarm
For additional information on system features, server requirements or on-site visits please contact your Cooper-Atkins Representative.