# CTL2000
## CARCASS TEMPERATURE DATA LOGGER

**VALUTEMP PTE LTD**
*WARMS YOUR HEART*

### Features
- IP67, dust proof and splash proof
- Pushbutton or programmable start
- Channel naming for location detection

### Benefits
- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

### Applications
- Carcass Temperature Monitoring during Pasteurization
- Verification and Validation of Pathogen Reduction

MadgeTech's redesigned CTL2000 Carcass Temperature data logger is a rugged, one of a kind solution for temperature monitoring during carcass pasteurization cycles. Equipped with eight thermocouple ports, the CTL2000 monitors and records the temperatures of various sections of the carcass during pasteurization, providing a continuous and accurate temperature profile to verify and validate that harmful microorganisms are effectively depleted.

The durable enclosure is drop tested and designed to survive the elements of the slaughter environment. The top of the enclosure is made of food grade stainless steel with an industrial quality custom machined base that skirts the thermocouple ports to guard against debris infiltration and harsh wash down cycles. The quality materials and form factor options were chosen using sanitary standards and guidelines, and made with materials certified for direct food contact as described by NSF-51.

Measuring only eight inches in length and weighing only three pounds, the CTL2000 is easy to handle and hangs securely from the carcass by a single stainless steel hook. This device is capable of withstanding temperatures from -20 °C to 100 °C (-4 °F to +212 °F), allowing it to monitor the entire pasteurization process.
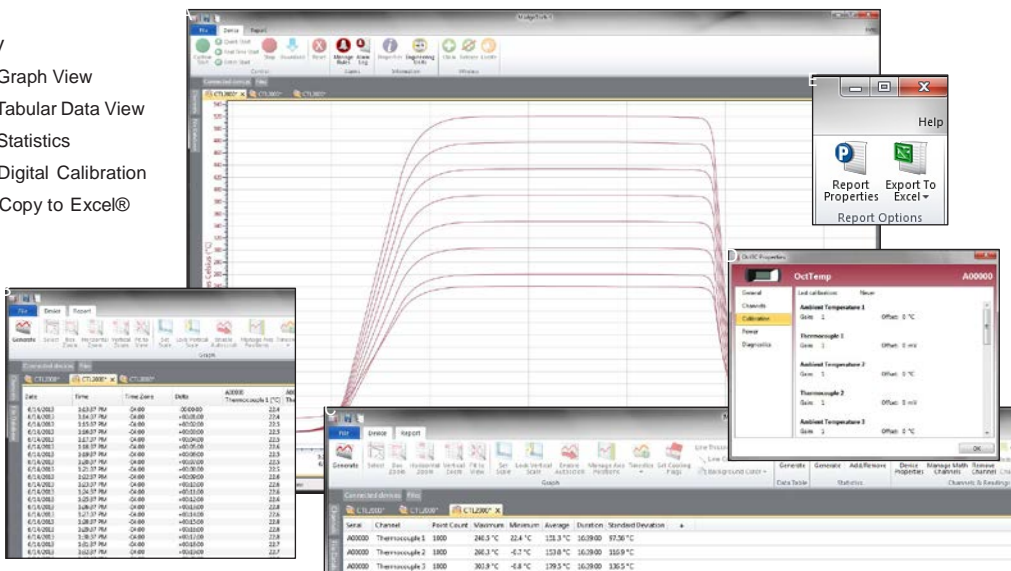
Each channel of the CTL2000 can store up to 129,024 readings which aids in the logging of multiples cycles. Reading rate capabilities range from as fast as four readings per second or as infrequently as one reading every 24 hours. The CTL2000 operates on user replaceable batteries and features a pushbutton start option directly on the device. Delayed start is user programmable from within the MadgeTech Software for up to six months in advance.

The MadgeTech software offers a wealth of data display and reporting options to easily analyze the results of each cycle and provide verification for USDA regulation compliance.

## MADGETECH DATA LOGGER SOFTWARE

### Key
- Graph View
- Tabular Data View
- Statistics
- Digital Calibration
- Copy to Excel®

**Software Features:**
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Data table view
- Automatic report generation
- Summary view
- Multilingual

# CTL2000 SPECIFICATIONS*

## Temperature

**8 Internal Channels**

| | |
|---|---|
| Internal Channel Temperature Sensor: | Semiconductor |
| Temperature Range: | -20 °C to +100 °C (-4 °F to +212 °F) |
| Temperature Resolution: | 0.01 °C (0.018 °F) |
| Calibrated Accuracy: | ±0.5 °C (+10 °C to +80 °C) |

**8 Remote Channels**

| | |
|---|---|
| Remote Channel Temperature Sensor: | Compatible with Type K Only *(Thermocouples sold separately)* |
| Thermocouple Connection Type: | Female Subminiature (SMP) |
| Cold Junction Compensation: | Automatic, based on internal channel |
| Thermocouple Temperature Range: | -270 °C to +1370 °C (-454 °F to +2498 °F) |
| Temperature Resolution: | 0.1 °C (0.18 °F) |
| Calibrated Accuracy: | ±0.5 °C (±0.9 °F) |

*BATTERY WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 100 °C (212 °F), INCINERATE, CRUSH, OR EXPOSE CONTENTS TO WATER.*

| | |
|---|---|
| Reading Rate: | 4 readings every second up to 1 reading every 24 hours |
| Memory: | 129,024 readings per channel |
| LED Functionality: | Green LED:<br>• Blinks every 2 seconds to indicate unit is logging<br>• Blinks every 5 seconds to indicate unit is in delay start mode |
| Start Modes: | Software programmable immediate start, pushbutton or delay start up to six months in advance. |
| Password Protection: | An optional password may be programmed into the device to restrict access to configuration options. Data may be read without the password. |
| Memory Wrap Around: | Yes |
| Battery Type: | (2) 3.6V lithium battery included; user replaceable |
| Battery Life: | 4 years typical at a 5 minute reading rate |
| Calibration: | MadgeTech recommends annual factory calibration. Digital calibration within the software is also available. |
| Calibration Date: | Automatically recorded within the device |
| Data Format: | Date and time stamped ºC, ºF, K, ºR, mV, V |
| Time Accuracy: | ±1 minute/month |
| Computer Interface: | IFC200 USB (Interface cable required) |
| Operating System Compatibility: | XP SP3/Vista/Windows 7/Windows 8 |
| MadgeTech Software Compatibility: | • Standard Software version 4.2.5.0 or later<br>• Secure Software version 4.2.4.0 or later |
| Operating Environment: | Continuous use: -20 °C to +100 °C (-4 °F to +212 °F) 0 %RH to 100 %RH |
| IP Rating: | IP67 |
| Dimensions: | 8.1 in x 6.5 in x 3.1 in (205 mm x 165 mm x 80 mm) |
| Weight: | 3.1 lb (49 oz) |
| Materials: | • Enclosure & Hook: 316 Stainless Steel<br>• Gasket Seal: EPDM rubber *(NSF-51)* |

# ORDERING INFORMATION

| MODEL | DESCRIPTION |
|---|---|
| CTL2000 | Carcass Temperature Monitoring Data Logger. |
| CTL2000 (Thermocouple Bundle) | Carcass Temperature Monitoring Data Logger with 8 type K thermocouple probes with a 3 or 6 inch sheath. |
| TC-K-60-3-125 Probe (3" sheath) | Type K Thermocouple assembly. 60 in PFA wire with a 1/8 in dia. 3 in Stainless Steel Sheath. |
| TC-K-60-6-188 Probe (6" sheath) | Type K Thermocouple assembly. 60 in PFA wire with a 1/8 in dia. 5.75 in Stainless Steel Sheath. |
| IFC200 | Software, Manual and USB interface cable. |
| NIST | NIST Calibration Certificate. |
| TLH-5903 | Replacement battery for CTL2000. |

*To order the product with the NIST certificate add -*CERT* to the end of the part number.

**ASK ABOUT OUR OTHER DATA LOGGERS**

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage Wireless
Intrinsically Safe
Spectral Vibration
Motion

For enquiries, please contact
sales@valutemp.com.sg
or visit our website at
www.valutemp.net