

# LYOTEMP LYOPHILIZATION DATA LOGGER



## Features

- Ultra low Operating Temperature
- Hermetically Sealed Thermistor
- LED Status Indicators
- Manual Start and Stop Options
- Configurable Alarms
- Password Protection
- Real Time Recording

## Benefits

- Compact
- Simple Setup and Installation
- Minimal Long-Term Maintenance

## Applications

- Monitoring Lyophylization
- Dry Ice Shipments
- Plasma and Red Cell Freezers

The LyoTemp Data Logger is designed for use in ultra-low operating temperatures for processes such as Lyophilization. The LyoTemp has an operating range of -60 °C to 75 °C, and is designed with a hermetically sealed thermistor temperature sensing element in a long thin flexible cable form, making it ideal for monitoring products during the lyophilization process.

The LyoTemp data logger offers a smart, affordable solution for a wide range of applications including the preparation of biological pharmaceuticals, monitoring plasma and red cell freezers or dry ice shipments.

The compact size and simple operation make the LyoTemp user friendly and reliable. The LyoTemp has three LED indicators to alert or inform the user of the logging status and manual start and stop options available at the device. Other features of the LyoTemp include delayed start configuration, real-time recording, user configurable alarms and password protection. The LyoTemp requires minimal maintenance and with average use will require annual calibration.

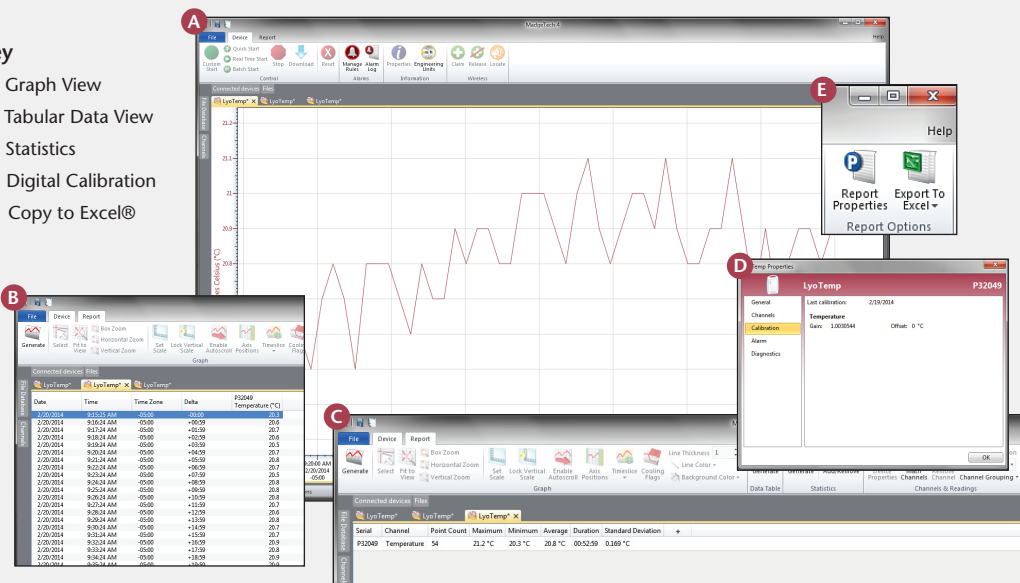
The LyoTemp utilizes the MadgeTech 4 Data Logger Software, available as a free download from [www.madgetech.com](http://www.madgetech.com). MadgeTech 4 software provides device management and an all-in-one package for storing, analyzing and sharing data.



## MADGETECH DATA LOGGER SOFTWARE

### Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** 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

# LYOTEMP SPECIFICATIONS\*

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

<b>Temperature Sensor:</b>	NTC Thermistor
<b>Temperature Range:</b>	-60 °C to +75 °C (-76 °F to +167 °F)
<b>Temperature Resolution:</b>	0.1 °C (0.18 °F)
<b>Calibrated Accuracy:</b>	±0.5 °C
<b>Reading Rate:</b>	1 reading every 5 seconds up to 1 reading every 30 minutes
<b>Memory:</b>	32,767 readings; software configurable memory wrap
<b>Start Modes:</b>	Software programmable immediate start, delay start up to 30 days in advance or manual start with magnetic switch.
<b>Temperature Alarm:</b>	Software programmable high and low alarm limits, high and low warn limits each set point may be individually enabled or disabled
<b>Alarm Delay:</b>	Software programmable time delay for warn/alarm limits. Logger will not indicate out of range status until the temperature has been out of range for a set period of time.
<b>LED Status Indicators:</b>	<ul style="list-style-type: none"> <li>• <b>Green:</b> Blinks to indicate safe conditions during logging</li> <li>• <b>Yellow:</b> Blinks to indicate warn limits have been exceeded</li> <li>• <b>Red:</b> Blinks to indicate alarm criteria (limits/delay) have been exceeded</li> </ul>

**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.

<b>Password Protection:</b>	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.
<b>Calibration:</b>	Digital calibration through software
<b>Calibration Date:</b>	Automatically recorded within device
<b>*Battery Type:</b>	3.6V lithium battery (LTC-7PN), <b>*Must be sent to MadgeTech for battery replacement.</b>
<b>Battery Life:</b>	1 year typical at a 10 minute reading rate
<b>Data Format:</b>	Date and time stamped °C, °F, K, °R
<b>Time Accuracy:</b>	±5 minutes/month at -80 °C (-112 °F)
<b>Computer Interface:</b>	USB docking station to PC (IFC300); 38,400 baud
<b>Operating System Compatibility:</b>	XP SP3/Vista/Windows 7/Windows 8
<b>MadgeTech Software Compatibility:</b>	<ul style="list-style-type: none"> <li>• Standard Software Version: 4.1.10.0 or later</li> <li>• Secure Software Version: 4.1.9.0 or later</li> </ul>
<b>Operating Environment:</b>	<ul style="list-style-type: none"> <li>• -60 °C to +75 °C (-76 °F to +167 °F)</li> <li>• 0 %RH to 100 %RH</li> <li>• 0.002 PSIA to 100 PSIA</li> </ul>
<b>Dimensions:</b>	<ul style="list-style-type: none"> <li>• Body: 3.25 in x 2.10 in x 0.41 in (82.5 mm x 53.3 mm x 10.3 mm)</li> <li>• Probe Length: 48 in (1219 mm)</li> </ul>
<b>Ingress Protection (IP Rating):</b>	IP50
<b>Enclosure:</b>	ABS plastic, white, polycarbonate labeling
<b>Weight:</b>	1.4 oz (40 g)
<b>Approvals:</b>	CE

## ORDERING INFORMATION

MODEL	DESCRIPTION
LyoTemp	Lyophilization Data Logger
IFC300	Software, manual, docking station and USB connection cable
Calibration Certificate	Calibration Certificate available for data logger

**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 Quantity Discounts call 603-456-2011 or email [sales@madgetech.com](mailto:sales@madgetech.com)