ThermoVault
Oven Temperature Profiling System

PRODUCT
USER GUIDE

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PRODUCT USER GUIDE

Product Overview

The ThermoVault is an oven temperature profiling system that consists of a TC101A-ST data logger inside a thermal enclosure. The thermal enclosure acts as a buffer and allows the device to be placed in higher operating environments for certain durations of time. The chart below outlines the maximum temperature and time duration to which the device can be exposed.

MAXIMUM EXPOSURE TIME (based on initial temperature of 25 °C/77 °F)	
Ambient Temperature	Maximum Duration in Minutes
100 °C (212 °F)	136
125 °C (257 °F)	100
150 °C (302 °F)	80
175 °C (347 °F)	66
200 °C (392 °F)	56
225 °C (437 °F)	49
250 °C (482 °F)	44
275 °C (527 °F)	39
300 °C (572 °F)	36
325 °C (617 °F)	32
350 °C (662 °F)	30

Installation Guide

Installing the Software

The Software can be downloaded from the MadgeTech website at **madgetech.com**. Follow the instructions provided in the Installation Wizard.

Installing the Interface Cable

IFC200 (sold separately) — Insert the device into a USB port. The drivers will install automatically.

Ordering Information

- 901724-00 — ThermoVault
- 900298-00 — IFC200
- 900352-00 — LTC-7PN Replacement Battery

Device Operation

Connecting and Starting the Data Logger

1. Once the software is installed and running, plug the USB interface cable into the data logger.
2. Connect the cable into an open USB port on the computer.
3. The device will appear in the Connected Devices list. Highlight the desired data logger.
4. For most applications, select **Custom Start** from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click **Start**.
   - **Quick Start** applies the most recent custom start options
   - **Batch Start** is used for managing multiple loggers at once
5. The status of the device will change to **Running**, **Waiting to Start** or **Waiting to Manual Start**, depending upon your start method.
6. Disconnect the data logger from the USB cable. Place the logger into the ThermoVault and latch it securely. Place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading Data from a Data Logger

1. Connect the data logger to the computer with the interface cable.
2. Highlight the data logger in the **Connected Devices** list. Click **Stop** on the menu bar.
3. Once the data logger is stopped, with the logger highlighted, click **Download**.
4. Downloading will offload and save all the recorded data to the PC.

PRODUCT USER GUIDE

Thermocouple Type

To change the thermocouple type:

- In the **Connected Devices** panel, click the device desired.

- On the **Device** Tab, in the **Information** Group, click **Properties**. Or, right-click the device and select **Properties** in the context menu.

- On the **General** Tab, change the **Thermocouple type** in the drop down menu.

- **Apply** these changes, there will be a prompt to reset the device, select **yes**.

Alarm Settings

To change the settings for the alarm:

1. Select **Alarm Settings** from the **Device Menu** in the MadgeTech Software. A window will appear allowing to set the high and low alarms and warning alarms.

2. Press **Change** to edit the values.

3. Check **Enable Alarm Settings** to enable the feature and check each high and low, warn and alarm box to activate it. The values can be entered in the field manually or by using the scroll bars.

4. Click **Apply** to write these changes to the device. To clear an active alarm or warn, press the **Clear Alarm** or **Clear Warn** button.

5. To set an alarm delay, enter the duration of time into the **Alarm Delay** box in which the readings can be outside of the alarm parameters.

Multiple Start/Stop Mode Activation

To start device: Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging.

To stop the device: Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.

Set Password

To password protect the device so that others cannot start, stop or reset the device:

1. In the **Connected Devices** panel, click the device desired.

2. On the **Device** Tab, in the **Information** Group, click **Properties**. Or, right-click the device and select **Properties** in the context menu.

3. On the **General** Tab, click **Set Password**.

4. Enter and confirm the password in the box that appears, then select **OK**.

LED Functionality

🟢	**Green LED:** Flashes 10 seconds to indicate logging and 15 seconds to indicate delay start mode
🔴	**Red LED:** Flashes 10 seconds to indicate low battery and/or memory and 1 second to indicate an alarm condition

Device Maintenance

Battery Replacement

Materials: Small Phillips Head Screwdriver and Replacement Battery (LTC-7PN)

1. Open the ThermoVault and remove the data logger.

2. Puncture the center of the back label with the screw driver and unscrew the enclosure.

3. Remove the battery by pulling it perpendicular to the circuit board.

4. Insert the new battery into the terminals and verify it is secure.

5. Screw the enclosure back together securely.

Note: *Be sure not to over tighten the screws or strip the threads.*

Recalibration

Recalibration is recommended annually. To send devices back for calibration, visit **madgetech.com**.

NEED HELP?

Product Support & Troubleshooting:

- Visit our Resources online at **madgetech.com/resources**.

MadgeTech 4 Software Support:

- Refer to the built-in help section of the MadgeTech 4 Software.
- Download the MadgeTech 4 Software Manual at **madgetech.com**.

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■Tel:+86 755-8420 0058 ■Fax:+86 755-2822 5583 ■E-mail:sales@eofirm.com ■http://www.eofirm.com