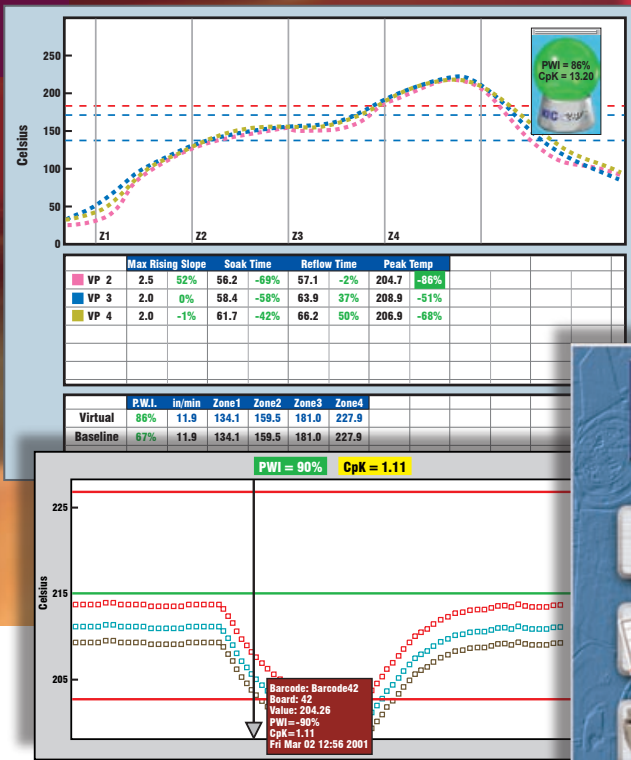




Thermal Management System



- ◆ Automatic SPC Charting: Cpk and process data for every product
- ◆ Real-time process information for improved decision making
- ◆ Traceability for every product
- ◆ Eliminate verification profiles
- ◆ Zero-defect thermal process
- ◆ Intuitive interface
- ◆ Easy transition to low-cost lead-free production



Technology for Optimal Equipment Utilization

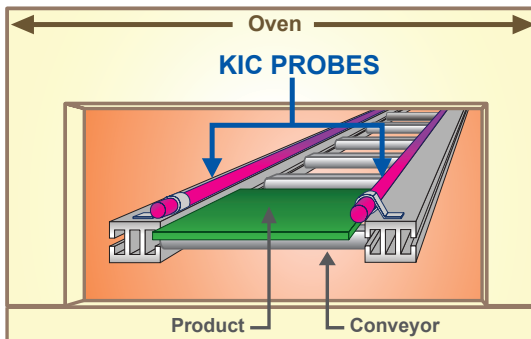
The KIC 24/7 brings an innovative level of automation to the thermal process: *around-the-clock* monitoring, SPC charting, analysis, documentation, and production traceability – ALL in a single, intuitive product. Continuous tracking occurs in the background, never interrupting your production. The real-time process data enables engineers and managers to make crucial cost containment and quality control decisions.

Automated Thermal Monitor

The KIC 24/7 utilizes custom probes installed inside the oven at the product level to gather and record real-time thermal process data for every product. The KIC 24/7 automatically calculates a specific product profile – including all pertinent process data – for every product manufactured, eliminating the need for periodic verification profiles.

SPC Charting

Process data is automatically charted for all critical process specs: peak temperature, soak time, time above liquidous, etc. The data is plotted on *real-time control charts* and Process Capability (Cpk) is calculated for each specification. The overall Process Window Index (PWI) is charted, providing a *real-time Cpk for the entire process*. Any process drift outside of control limits or defined Cpk value will immediately trigger an alarm. Real-time Cpk tracking provides a zero-defect, fail-safe system that automatically identifies potential defects *before* they happen.



**KIC gives you the optimal process ...and keeps you there 24/7!**



## KIC 24/7 SYSTEM

### Base System Components

**KIC Probes (2):** Each probe contains 15 internal TC's for monitoring process temperature. The probes run the length of the process and are installed at the product level (see KIC PROBES diagram).

**Sensor/Encoder:** Sensor monitors, tracks and documents all product that passes through the oven. Encoder continuously measures conveyor speed.

**eTPU:** The ethernet Thermocouple Processing Unit acquires data from the probes and sensors, and transmits it to the computer.

**Communication cables:** Cables are included for connecting the eTPU to the KIC Probes, Product Sensor and computer. A USB to Serial Adapter is included for connecting the SlimKIC 2000 to the computer.

**Software and User Manual**

### Optional System Components

**KIC RPM™ (Remote Process Monitoring):** Process data for every board is output and monitored remotely in real-time. See the KIC RPM data sheet for complete product details and specifications.

**Alarm Relay:** The KIC Alarm Relay connects to the eTPU and allows KIC 24/7 to activate warning lights, audible alarms, and/or stop the process feed conveyor.

**Barcode Options:** With a customer-supplied serial barcode reader, the Barcode options enable Process Traceability and/or Process Control for every product linked to its barcode number.

### eTPU/KIC Probes

Accuracy: ..... ±1.2°C

Readings/second:..... 13

Thermocouples:..... Type K

Temperature Range: . -150°C to 450°C

Dimensions:

eTPU (LxWxH): ..... 308.6mm x 173.5mm x 35.8mm

KIC Probes: ..... length and thermocouple spacing is customized to each oven

Communications:..... Ethernet, RJ-45 connector

Computer Capability: PC

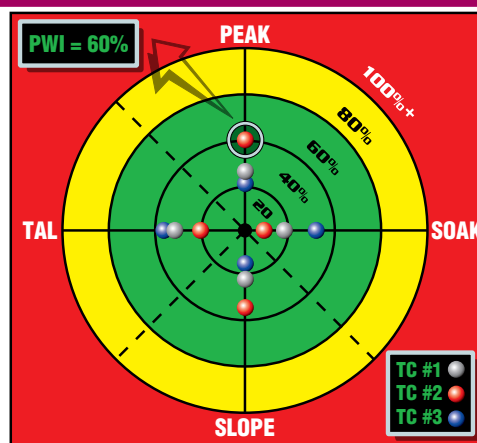
Power Requirements:.. 12V AC @ 300mA

### Notes

The KIC 24/7 requires a SlimKIC® 2000 Thermal Profiler. See the SlimKIC 2000 product data sheet for complete product details and specifications.

The KIC 24/7 can interface directly with the oven controller. Setpoints are automatically sent to the oven eliminating the need for separate data entry. The number of direct-link ovens is growing; consult your oven supplier to determine availability.

## THE PROCESS WINDOW INDEX™



### Profiling Reduced to a Single Number

For precise ranking of profile performance, the KIC 24/7 uses the Process Window Index (PWI). The PWI calculates how much of the available process window is used by a given profile in relation to its process specifications. Therefore, the lower the PWI, the more efficient and stable the process! (See the PWI data sheet for a detailed explanation)

## COMPUTER CONFIGURATION

### Minimum System Requirements

- 400 MHz Processor / Celeron / 256 Mb RAM<sup>1</sup>
- 2 Gb available storage (for product history)
- Video 1024 x768 resolution / 16-bit
- 1 NIC (Network Interface Card) or 1 USB with ethernet adapter
- 1 available USB port
- Microsoft® Windows® 2000, XP<sup>2</sup>

<sup>1</sup> When KIC 24/7 is running on the same computer as the Oven software, and/or when additional KIC 24/7 options are installed, a faster CPU and more RAM may be required.

<sup>2</sup> Contact KIC for issues with operating systems other than those listed.

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## RISK-FREE GUARANTEE

All KIC products are designed to give maximum value and fast payback by streamlining your thermal process. Investment in a KIC product is a step toward total process control and quality management. All KIC products come with a no questions asked, 30-day money back guarantee.