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.

Technology for Optimal Equipment Utilization
**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)

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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.