

# KIC<sup>®</sup> EXPLORER<sup>™</sup>



Thermal  
Profiler

## The New Generation of Profilers Compact – Powerful – Easy to Use

- ◆ Highly compact and powerful
- ◆ Robust and modern hardware
- ◆ Best-in-class performance
- ◆ Easy to use software



### Data Acquisition Hardware

The KIC Explorer is a new generation of thermal profilers featuring an impressively compact design. It will easily move through the restrictive process dimensions encountered in today's thermal applications. The KIC Explorer incorporates state-of-the-art SMT technology and high-temperature rated components, backed by our distinguished reputation for reliability. You can depend on this rugged, innovative hardware to endure the harsh conditions of real-world factory use.

The KIC Explorer is available in 7, 9 and 12 channel versions using standard type K thermocouple connectors.

Acquiring more data in a small unit is only the beginning. The KIC Explorer's industry leading performance provides users better data acquisition performance to identify exactly what is going on with each thermal profile and process in the factory. Thermal profile data are conveniently transferred to your computer via a USB connection. The KIC Explorer RF version transfers the profile data in real time to the PC via wireless radio frequency transmitters. Standard AAA batteries power the KIC Explorer and you have the option of using rechargeable batteries if you prefer. The KIC Explorer offers you unmatched performance, flexibility and miniaturization in this new

generation of thermal profilers.

### Data Intelligence Software

The KIC Explorer software uses a modern, graphical interface that intuitively guides you through the task of profiling. All your critical profile and process data are measured, including slope, peak temperature, time above liquidous, etc. In addition, the software measures the Process Window Index<sup>™</sup> (PWI) statistic. The PWI mathematically and objectively identifies your profile's "fit" to the available process window. A PWI less than 100 indicates an in-spec profile. The PWI is lower as your process is centered within the process window. Therefore, the lower your PWI, the more stable and efficient your process.

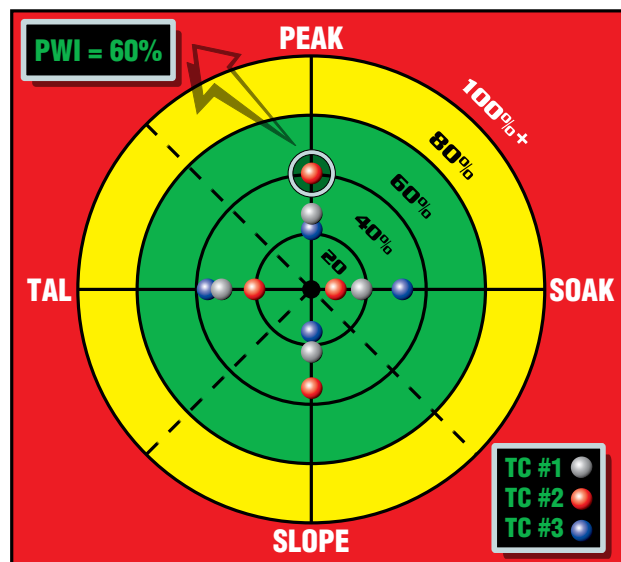
The PWI also instantly reveals where your process or the oven needs to be adjusted. Manual prediction capability comes standard with the KIC Explorer that allows you to manually adjust and improve upon your process or oven set up. The optional KIC Auto-Focus<sup>™</sup> automates process improvement and optimization for you. Within seconds, the KIC Auto-Focus will identify the single best oven set up.

The KIC Explorer hardware and software establish a new generation of profiler to improve your production quality, productivity, and documentation.



*Innovation That Works<sup>™</sup>*

## THE PROCESS WINDOW INDEX™



### Profiling Reduced to a Single Number

The PWI measures the profile's fit to the process window in a mathematical and objective manner by using a single number. This aids in optimizing the process by comparing and ranking alternative profiles in terms of their fit to the available process window. The lower the PWI, the more efficient and stable the process! (See the PWI data sheet for a detailed explanation)

## KIC EXPLORER

System Accuracy: ..... $\pm 1.2^{\circ}\text{C}^1$   
 Resolution:..... $0.1^{\circ}\text{C}$   
 Internal Operating Temp:..... $0^{\circ}\text{C}$  to  $85^{\circ}\text{C}$   
 Sample Rate:.....0.1 to 10 per second  
 Data Points: .....224,640  
 PC Connection: .....USB 2.0 (Std-A/Mini-B)  
 Power Requirements:.....(3) AAA batteries  
 Radio Frequency (RF): .....433.92MHz  
 Thermocouple Compatibility:  
     7, 9, 12-Channel Unit: .....Type K, Standard  
 Dimensions (L x W x H mm):  
     7-Channel Unit: .....201.0 x 60.0 x 17.0  
     9-Channel Unit: .....201.0 x 75.0 x 17.0  
     12-Channel Unit .....210.0 x 98.0 x 17.0  
 Thermal Shields:.....See *Temperature Tolerance Table* below for specifications.

**Datalogger Model:** data are downloaded to the computer through a USB cable after the run.

**Dual Unit Model:** data are sent to the computer in real-time during the run. Data are also stored internally for USB download after the run.

*Note: The KIC Software can interface directly with the oven controller, eliminating the need for manual setpoint data entry. Please consult your oven supplier for availability.*

<sup>1</sup> System accuracy based on accuracy of thermocouple wire used. KIC uses special limits of error type K thermocouple wire for most accurate results.

## 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.

## TEMPERATURE TOLERANCE TABLE

(maximum endurance in minutes at specified temperature)

CONFIGURATION	DIMENSIONS (mm) (Length x Width x Height)	150°C	200°C	250°C	300°C	350°C	400°C
CoolTouch Stainless Steel Shield, 7CH	302.0 x 75.0 x 23.0	17.5	12.0	9.0	7.7	6.5	
CoolTouch Stainless Steel Shield, 9 CH	312.0 x 90.0 x 23.0	18.1	13.1	10.1	8.4	6.7	
CoolTouch Stainless Steel Shield, 12 CH	323.0 x 113.0 x 23.0	17.7	12.0	8.9	7.4	6.1	

## COMPUTER CONFIGURATION

### Minimum System Requirements

- 800 MHz Processor / 256 MB RAM<sup>1</sup>
- 2 GB available storage (for product history)
- Video 1024 x 768 resolution / 16-bit
- 1 available USB port (for data download)
- 1 available parallel port or USB port (for software key options)
- Microsoft® Windows® 2000, XP, Vista, or 7. (32-bit or 64-bit)

<sup>1</sup> When KIC Software is running on a computer with other applications, a faster CPU and more RAM may be required.

### Corporate Headquarters

16120 West Bernardo Drive • San Diego, CA 92127 USA  
 +1(858)673-6050 Phone • +1(858)673-0085 FAX  
[sales@kicmail.com](mailto:sales@kicmail.com) • [tech@kicmail.com](mailto:tech@kicmail.com)

### European Regional Office

[europe.sales@kicmail.com](mailto:europe.sales@kicmail.com) • [europe.tech@kicmail.com](mailto:europe.tech@kicmail.com)

### Asian Regional Office

[asia.sales@kicmail.com](mailto:asia.sales@kicmail.com) • [asia.tech@kicmail.com](mailto:asia.tech@kicmail.com)

[www.kicthermal.com](http://www.kicthermal.com)



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