



**Phoenix<sup>TM</sup>**  
Phoenix Temperature Measurement

# Compact System

Temperature Profiling For Curing Ovens



*... Where experience & value counts !*

# Compact Systems For paint and powder coating processes up to 300°C

The Compact Finishing System is designed to travel through the curing oven measuring actual product temperatures, providing a low cost durable profiling solution. The system uses a data logger, protected by a thermal barrier, to record the temperature of product as it passes through the oven. Information obtained can then be used to optimise the process.

## Data Logger

Combining rugged reliability, accuracy and ease of use, the Phoenix™ Compact data logger is designed specifically for use in curing applications. Protected by a robust aluminium case the data logger design includes cold junction compensation and an over temperature cut off to ensure the accuracy of data recorded. Supplied as standard with a calibration certificate traceable to national standards and with the option to certificate to UKAS (UK) or DAkkS (Germany).



Type	PTM1-006C
No. of channels	6
Thermocouple type	K
Measurement range	0°C to 500°C
Accuracy	+/- 0.3°C
Resolution	0.1°C
Max operating temperature	80°C
Battery type	2 x Standard Alkaline (AA)
Sampling rate	adjustable from 0.5 second to 1 hour
Memory	440.000 data points, non-volatile memory
Start trigger	time, temperature, start button or software
Dimensions	20 x 70 x 200mm (h x w x l)
Weight	396 g

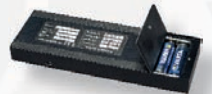
Real time measurement while connected to a PC via USB for batch oven profiling



Robust housing for reliable use in harsh industrial environment



Up to 1000 hours measurement time



## What is temperature profiling?

All industrial ovens use installed thermocouples to control the zone temperatures. However, these thermocouples measure only atmosphere temperature in their respective zones and do not indicate the true temperature of the product, which is vital to ensure the product coating cure schedule is attained.

## The Value of Product Temperature Profiling

### Quality

Provide evidence that the coating is cured correctly against coating suppliers cure schedule.

### Fault Finding

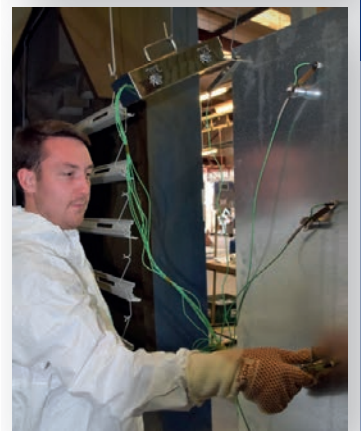
Identify process problems "Cold Spots" quickly and use profile data to recommend and validate corrective action. Minimise costly production downtime.

### Process Optimisation

Use profile data to fine tune oven operation to maximise product throughput (Line Speed) or improve energy efficiency without compromising quality.

### Regulatory Compliance

Provide traceable and certified process QA documentation to meet essential quality standards CQI-12, Qualicoat or Accredited Applicator Status.





## TS04 thermal barriers

Featuring robust aluminium case\*, microporous insulation, phase change heatsink and 100% silicone free construction, the TS04 thermal barrier range offers ease of handling and high performance.

\*Stainless steel case options also available



Thermal Barrier range performance:

Type	TS04-090-4	TS04-113-3
°C	Hours	Hours
100	2.0	7.5
150	1.4	3.5
200	1.0	2.2
250	0.8	1.6
Dimensions	mm	mm
Height	90	113
Width	161	161
Length	311	320
	Kg	Kg
Weight	2.3	3.7
Construction	Al	Al
Heat Sink	NA	TS00-537

Magnetic plate for thermocouple storage and efficient transfer to the product.



Heat sinks with very high thermal capacity and gas tight seals.



Dual thermocouple exit to reduce wear and increase thermal barrier life. Silicone free construction.



Need a thermal barrier to suit your application? Tell us your requirements and if it's possible we'll design and manufacture it for you! We are constantly developing and looking forward to any new challenge.

## Thermocouples

All Phoenix<sup>TM</sup> finishing thermocouples are manufactured using the highest quality materials and conform to ANSI 96.1 special limits specification.

The thermocouples are designed to withstand rough handling and uniquely include **user replaceable\* sensors to minimise long term running costs.**

Available as magnetic, clamp or exposed junction, the thermocouples are PTFE insulated, triple wrapped with stainless steel braid, and have a final overall PTFE insulation.



TC52 Clamp Surface\*



TC50 Magnetic Surface\*



TC60 MiniMag Compact Magnetic Surface\*



TC54 Exposed Junction



TC55 Fast Response Self Adhesive



TC56 Washer

# Thermal View

The easy way to get a perfect result!



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PhoenixTM Thermal View software has all the essential functions required to understand and optimise your process.

All results are saved in a database for easy access which can be organised in a logical manner using the multi column sorting facility.

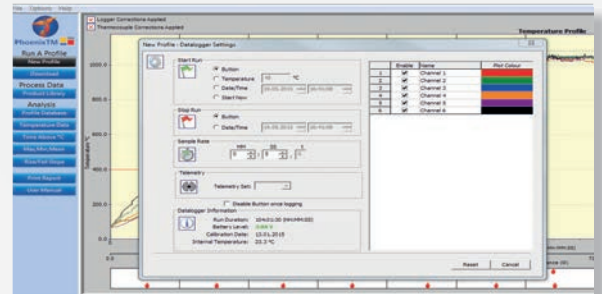
Simplicity: Screen layout is clear, concise and intuitive making the software user friendly, uncluttered and easy to use without compromise to the analysis detail available.

Clarity: Single screen layout provides graphical representation for the process with instant access to analysis options and results.

**PhoenixTM software has all the essential functions you require to keep your process under control:**

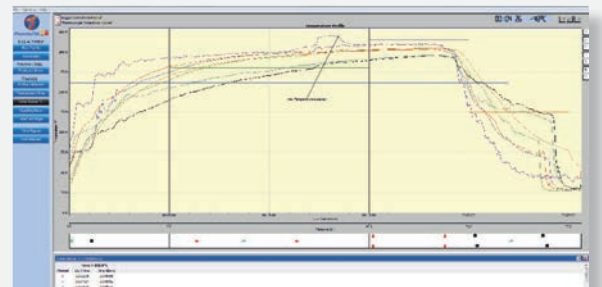
- Temperature Data
- Multi Max, Min, Mean analysis
- Rate of change analysis
- On Screen Notes
- Data import and export
- Real time data (USB Cable)
- Multiuser site license
- Multi Time Above temperature
- Phoenix Factor (Cure Index)
- Reference Profile
- Thermocouple location library
- Oven start and stop correction
- Printed reports

\* Software upgrade option to Thermal View Finishing available with even more analysis and reporting power.

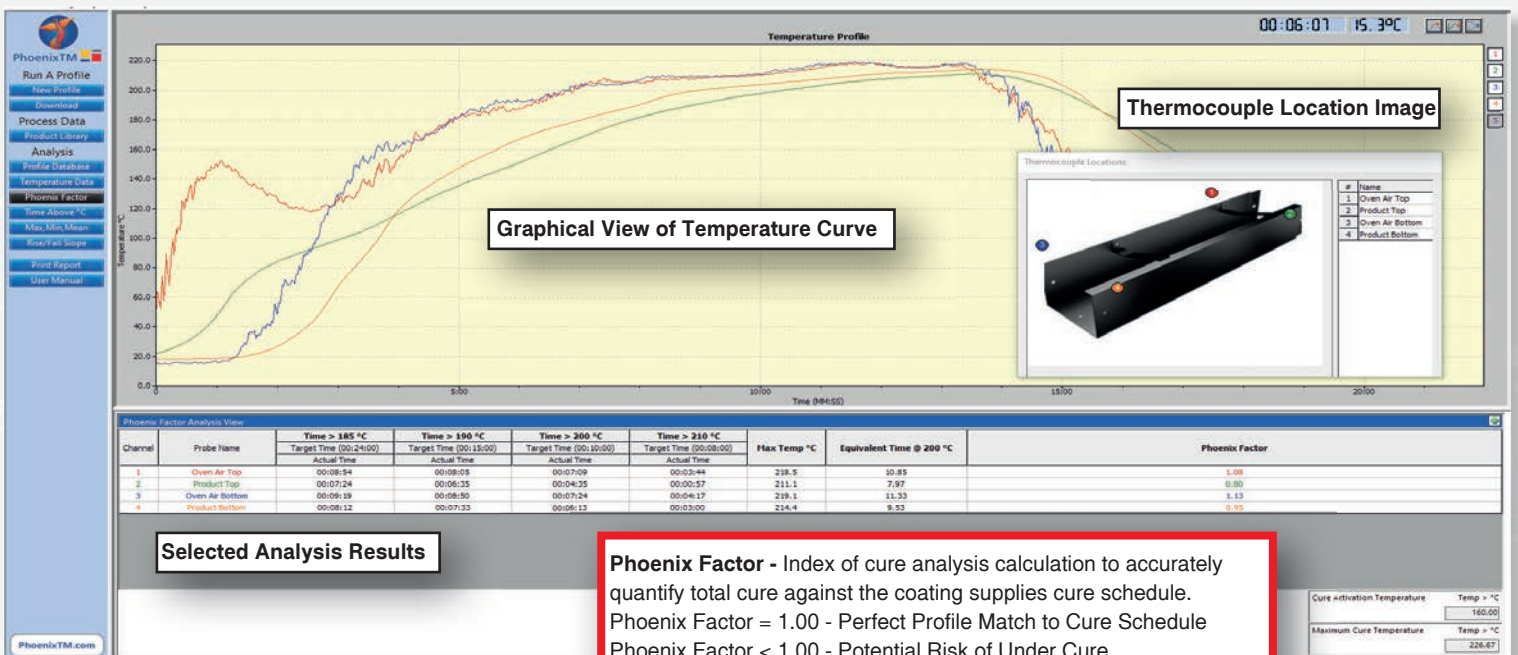


Simply enter:

- How to start the data logger
- The rate at which data is to be collected
- The number of thermocouples to be used.



On screen notes allow for sharing of process information and the highlighting of specific process conditions.



**Phoenix Factor** - Index of cure analysis calculation to accurately quantify total cure against the coating supplies cure schedule.  
 Phoenix Factor = 1.00 - Perfect Profile Match to Cure Schedule  
 Phoenix Factor < 1.00 - Potential Risk of Under Cure  
 Phoenix Factor > 1.00 - Over Cure with Wasted Energy / Productivity

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