



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

# Food Systems

Food Temperature Monitoring and HACCP Validation



*...where experience counts!*

# Phoenix<sup>TM</sup> Food Systems for all your cook and chill monitoring needs!

## Data Logger

Phoenix<sup>TM</sup> multi-channel data loggers are designed for use in harsh environments. The electronics are protected by a robust, water resistant, machined aluminium case. Cold junction compensation with feedback error detection and noise reduction ensures accurate and reliable data. Optional two way RF telemetry is available, allowing real time data analysis and for the data logger to be reset and downloaded remotely. All loggers are shipped with a factory calibration certificate traceable to national standards. Optional certification to UKAS (UK) or DKD (Germany) can be supplied if required. For convenience and future reference, a copy of the original calibration certificate and the calibration data are stored within the data logger and can be accessed as required.



### Specification Table:

Type	PTM1-206NT, PTM1-210NT, PTM1-220NT	
No. of channels	6, 10, 20	
Waterproofing	6, 10 Channel data logger IP67	20 Channel data logger IP65
Thermocouple type	K or T	
Measurement range	Type K -200 °C to +400 °C	Type T -200 °C to +375 °C
Accuracy temp range*	+/- 0.3°C (-40 °C - +50 °C)	+/- 0.4°C (+50°C - +80 °C)
Resolution	0.1 °C	
Operating temperature range	-40 °C - +80 °C	
Battery Type	2 x standard Alkaline (AA)	
Sample rate	Adjustable from 0.2 second to 1 hour	
Memory	Up to 3.8 M data points, non-volatile memory	
Start Trigger	Time, Temperature, Start button or Software	
PC Connection	Hard wire or Blue Tooth	
Dimensions	20 x 98 x 200mm (h x w x l)	

Optional "Look as you cook" system with wireless two-way RF telemetry enabling real-time dynamic oven adjustments



Robust and waterproof housing for reliable use in hostile environments



Up to 1000 hours measurement time



Bluetooth PC connection



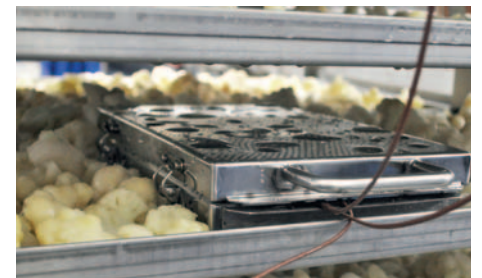
\*Cold junction compensation ensures accuracy with changing operating temperature.

### What is a Phoenix<sup>TM</sup> Temperature Profiling System?

It is a multi-channel temperature data logging system designed to travel through the oven, fryer or freezer measuring actual core product temperatures.

### How does the Phoenix<sup>TM</sup> System work?

The system uses a high temperature data logger, protected by a thermal barrier, to record the temperature of the product from up to 20 thermocouples as it travels through the process. At the end of the profile run, the data stored in the logger is transferred to a PC for analysis within a powerful industry specific software package. Optional two-way wireless RF telemetry allows data to be viewed and evaluated in real time from inside the process.



### What are the benefits of the Phoenix<sup>TM</sup> System?

As the system can be easily placed in the process with the product, it causes less disruption and measures not only the atmosphere temperature, but also actual product temperature. This is vital to ensure that the cook/chill specification is adhered to.

Viewing data in real time enables dynamic oven adjustments, potentially saving valuable time when working on new product developments.

The temperature information obtained can be used for HACCP compliance, process validation and optimisation, product yield management as well as problem solving. The user-friendly Thermal View Food software produces clear and concise reports to verify process compliance.





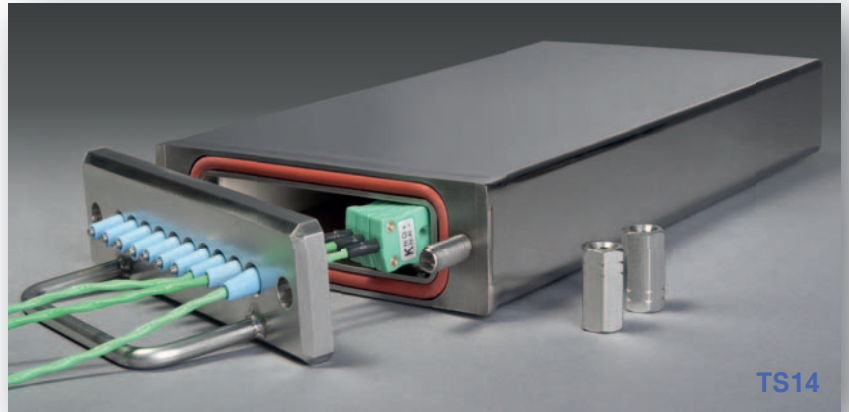
## Thermal Barrier Range

A comprehensive range of stainless steel thermal barriers specifically designed for the food industry. Providing enhanced levels of thermal and mechanical protection for the data logger inside the process.

**TS14** - submersible frying, steam injection cooking or where raining water or brine showers are used.

**TS24** - dry quick high temperature bake / roast or low pressure steam cook applications.

**TS44** - long low temperature cook programs such as large meat joint / Ham stock.



TS14



TS24



TS44

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.

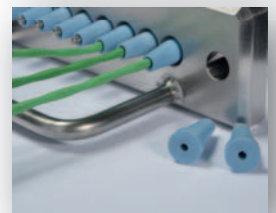
### Specification Table:

Type	TS14-040-1	TS14-080-2	TS24-045-1	TS24-064-1	TS44-120-1
IP rating	IP67	IP67	IP65	IP65	IP67
Heat Sink	NA	NA	NA	Yes	Yes
-150°C /min	30	50	24	90	180
100°C /min	105	150	114	390	960
150°C /min	55	75	60	216	468
200°C /min	40	60	42	150	300
250°C /min	30	40	30	105	246
Height /mm	40	80	45	64	120
Width /mm	148	148	188	235	194
Length /mm	335	360	368	370	394
Weight / kg	2.6	4.2	3.0	6.5	9.0

Easy to clean food grade stainless steel housing.



Water tight thermocouple sealing options for steam, shower or submersion processes

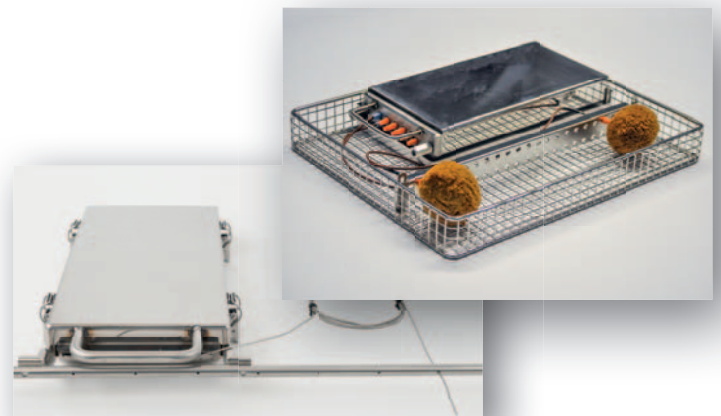


## Thermocouples

A comprehensive range of thermocouple types are available to suit different food types and sizes. Robust and accurate Type T or K thermocouples (standard sub-miniature plugs) come with either PTFE or 316 SS MI cables to suit the complete temperature range. Needle probes of different sizes offer accurate measurement at the core of the product with optional locking collars to retain the measurement tip in the product, through process. Calibrated options allow thermocouple correction factors to be applied optimising measurement accuracy.



To help with efficient and reliable thermocouple placement, food trays and arm assemblies can be also offered.



# Thermal View Food

The easy way to get a perfect result!



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

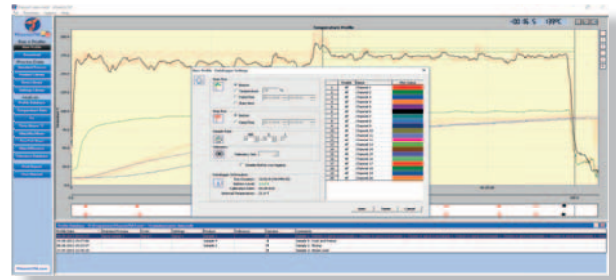
All results are saved in a database for easy access which can be organised in a logical manner using the multi column sorting facility.

**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:**

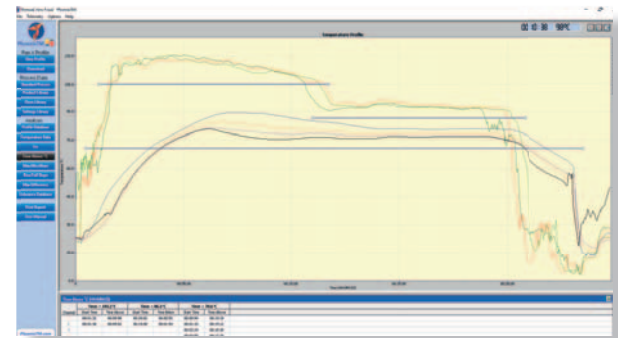
- Temperature Data & Graphical profile
- Multiple Time Above temperature analysis
- Multiple Maximum, Minimum and Mean configurable temperature analysis options
- Multiple rates of change of temperature analysis
- Saved analysis parameters file option
- $F_0$  and  $P_u$  Lethality analysis and library
- Reference Profile to compare results for two different profiles
- On Screen Notes (time, temperature, slope and text)
- Profile splitting tool. Split multiple runs or process steps (cook / chill) in a single run into separate profiles.
- Printed reports
- Thermocouple location library
- Oven settings library
- Data import and export
- Oven start and stop positioning
- Data logger and thermocouple SW offsets to maximise measurement accuracy
- Logger real time measurement option when connected to a pc via USB or RF Telemetry.
- Same site logger license allows multiple users without the need to buy additional software licenses.



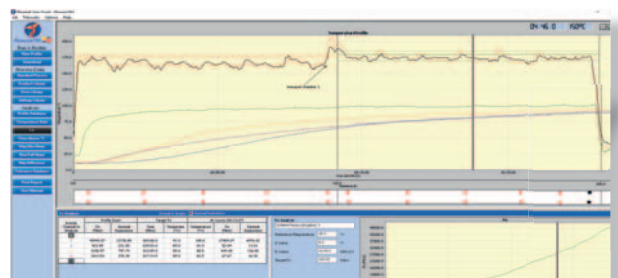
Simply enter:

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

Data logger settings are stored so repeat runs are possible by simply pressing the start button.



Multiple time above temperature, rates of change of temperature and maximum temperature analysis options are available to verify product quality and meet process optimisation requirements.



In-depth  $F_0$  and  $P_u$  analysis and visual confirmation of calculations enables efficient process validation and traceability.

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