PhoenixTM
Phoenix Temperature Measurement

HTS07 Systems

For Steel Reheat Processes

...where experience counts !

PhoenixTM HTS07 Systems for Steel Reheat Processes

Data Logger

PhoenixTM data loggers are designed for use in harsh industrial environments. The electronics are protected by a robust, water resistant, machined aluminum 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

Type	PTM1-206HT, PTM1-210HT, PTM1-220HT
No. of channels	6,10 or 20
Thermocouple type	K or N
Measurement range	Type K: -100°C - +1370°C Type N: -100°C - +1300°C
Accuracy	+/- 0.3°C
Resolution	0.1°C
Max operating temperature	110°C
Battery type	2 x replaceable Lithium (AA)
Sampling 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 Bluetooth
Dimensions	20 x 98 x 200mm (h x w x l)

Two way radio transmission as an option

Robust and waterproof housing for reliable use in hostile environments

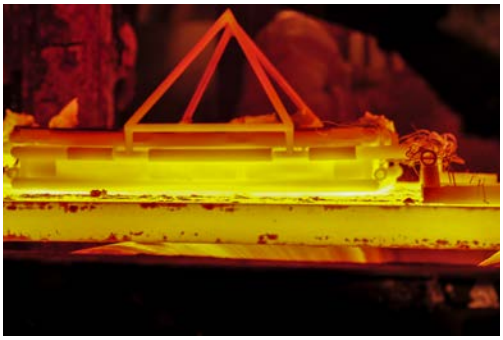
Bluetooth PC connection

Bluetooth™

Up to 1000 hours measurement time

What is temperature profiling?

All industrial ovens or furnaces use 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 heat treatment specification is adhered to.



PhoenixTM can provide a solution:

Our monitoring system travels through the furnace with the product, logging temperatures from up to 20 thermocouples connected to the product or distributed in the load to get an accurate thermal 'balance'. The system is easily placed on the line with the product causing less disruption and gives a more accurate picture of true product or load temperature. At the end of the profile run a powerful software package analyses the logged data to determine whether the specification has been met.

The profiling trials can be quickly carried out allowing you to resolve any furnace problems quickly, and to provide your customers with an assurance of a consistent process control.

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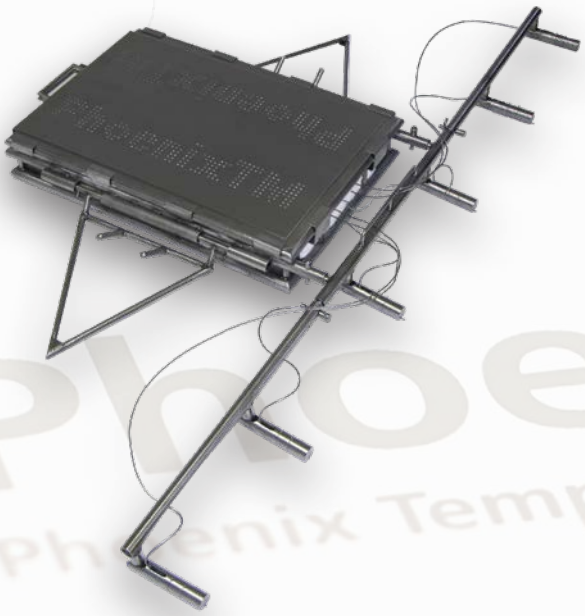
TS07 Thermal Barriers

TS07 thermal barriers are specifically developed for reheat processes in the steel industry where temperature data from deep inside the slab or billet is required. Manufactured using graded insulation layers and an evaporative inner barrier, the TS07 range accepts 10 and 20 channel data loggers and is designed for repeated use at temperatures up to 1350°C.

Standard TS07 range performance:

Type	TS07-265 (Billet)	TS07-300 (Slab)	TS07-100 (Mini-Mill)
1200°C / h	3.0	9.0	0.7
1300°C / h	2.5	7.5	
Height / mm	265	300	100
Width / mm	285	595	1500 (arms)
Length / mm	615	707	838
Weight / kg	40.6 / 45.0	61.0 / 88.0	38.0 / 44.2



The TS07-100 Thermal Barrier System is specifically designed for Mini-Mill (CSP) applications. It provides thermal protection for the Data Logger combined with a support arm for the thermocouples measuring both surface and atmosphere temperature. After preparation the system is lowered onto the moving slab using the foldable suspension arms by an overhead crane. When positioned on the slab the arms are lowered to ensure the low height profile of the system is maintained.

High specification materials allow for repeated use at temperatures upto 1350°C

Integrated logger tray with thermocouple clamps for ease of data logger installation and removal

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

For reheat applications mineral insulated thermocouples with a diameter of 3mm are the first choice. For easier handling we supply probes with a 10cm or 20cm PTFE tail.

In reheat applications, thermocouple bushes are used to accurately position the thermocouple hot junction at the correct measuring depth.

For short duration Mini Mill processes where surface and atmosphere temperatures are to be measured 2mm diameter thermocouples are used for increased flexibility and fast response.

Thermal View Plus

The easy way to get a perfect result!

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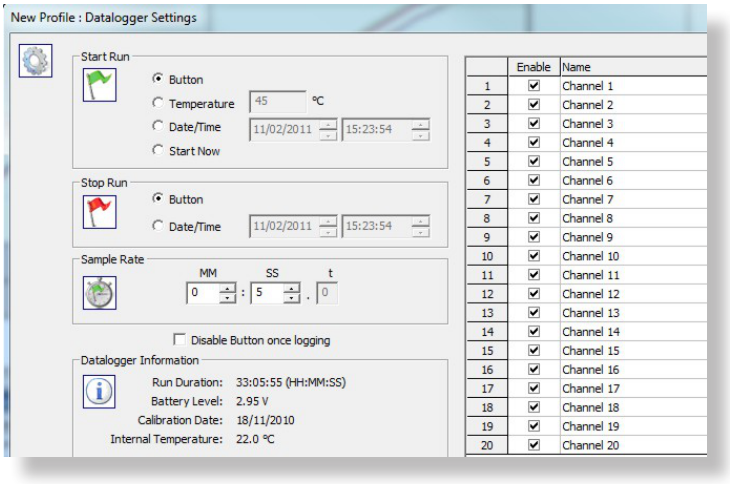
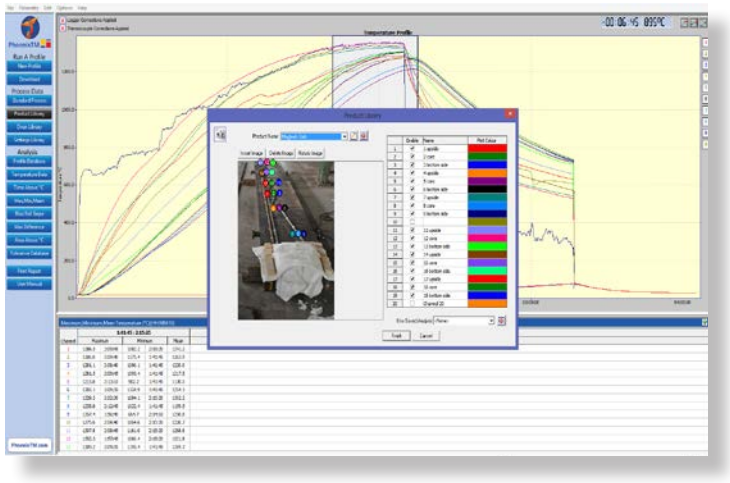


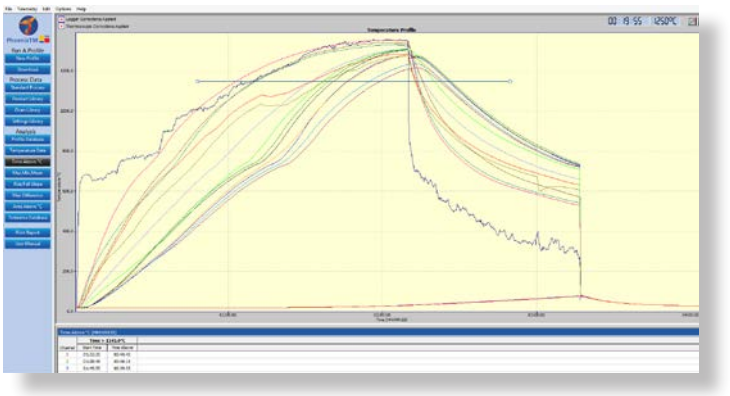
Simply enter:

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

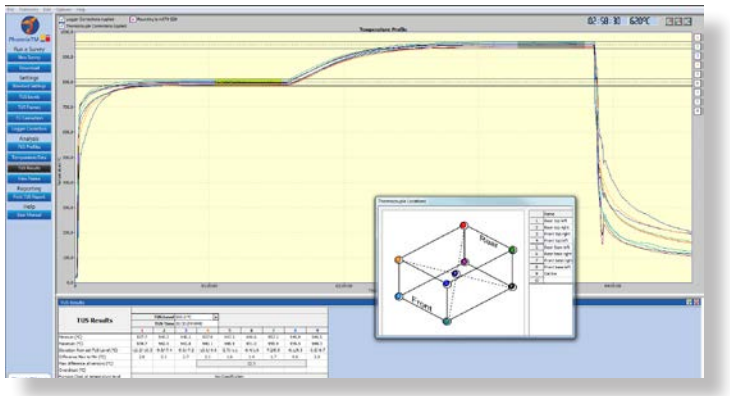
For regular measurements these can be set with one mouse click or pressing the data logger start button.



The temperature profile is displayed in the graphics window of the Thermal View software. Thermocouple profiles can be switched on or off individually and you can zoom in for more detailed analysis.



Comprehensive analysis tools are located on the left side of the screen for single click analysis and report generation. Data import and export in both .csv and PhoenixTM formats are available allowing electronic transfer of process data.



A separate software package, "Thermal View Survey" is available for surveying furnaces to AMS2750 requirements. Featuring thermocouple and data logger correction factors, user defined TUS levels and tolerances, View Frame analysis, overshoot search, data import / export, printed AMS2750 report. Contact us for a demo version!

PhoenixTM Ltd
25 Earith Business Park
Meadow Drove,
Earith, Cambridgeshire
PE28 3QF, UK
Tel.: +44 1353 223100
www.Phoenixtm.com
sales@phoenixtm.com

PhoenixTM LLC, USA
info@phoenixtm.com

PhoenixTM GmbH, Germany
info@phoenixtm.de