PhoenixTM Thermal Profiling Systems are built for specific applications within a broad range of industrial processes, and care has to be taken in the design of the system to ensure all the requirements of the process are met. The paint finishing industry for example, requires the protective thermal barrier to be free of all traces of silicone. In the heat treatment industry profiling systems must be designed to operate in harsh furnace environments and to resist high rates of heating and cooling with minimum distortion.

All industrial processes requiring thermal profiling call for critical knowledge of both the process itself and how conditions within it can affect the performance of the profiling system components. PhoenixTM personnel have worked with these industries for many years and their experience is translated into the superior design of their thermal profiling systems for all industrial applications.

High Temperature Profiling & Surveying System

Developed for profiling and surveying in processes such as carburizing etc., where process temperatures can reach up to 950°C, the PhoenixTM High Temperature Profiling and Surveying System is built to withstand the harsh atmospheres and temperatures found in many heat treatment processes.

This System combines either the TS02-250-1, or the TS02-300-1 thermal barriers, the PTM1 series data loggers with up to 20 channels in a single data logger, and PhoenixTM Thermal View Plus software.

Combined with a range of PhoenixTM mineral insulated thermocouples this is a robust, accurate, system which is ideal for critical profiling and surveying operations.
FEATURES:
- Accurate and robust 10, or 20 channel data logger powered by ‘off the shelf AA’ alkaline batteries
- High temperature stainless steel thermal barrier with micro porous insulation and phase change heat sink, user replaceable thermocouple wear strip and double thermocouple exits for 20 channel logger. Expansion plate construction and 5 point side strengthening.
- Full feature analysis software package
- Optional gas quench deflector
- Optional RF Telemetry output
- High specification mineral insulated thermocouples with Nicrobel sheath, to ANSI MC96.1 (special limits).

DATA LOGGER (CHOICE OF):
- Model Number: PTM1-010, PTM1-020
- No. of channels: 10, 20
- Thermocouple types: K or N
- Measuring range: -100 to 1370°C (K), -100 to 1300°C (N)
- Accuracy: ±0.3°C, 0.1°C
- Resolution: 0.1°C
- Memory total: 200,000 data points NVM
- Max. operating temp: +70°C
- Sampling interval: Adjustable 0.5s to 1 hour

OPTIONAL RF TELEMETRY OUTPUT FROM DATA LOGGER
The PhoenixTM data logger can be equipped with a transmitter and high temperature antenna that allows it to collect temperature data from the process and store it within the data logger’s memory, while simultaneously transmitting it to a coordinator outside the furnace.

THERMAL BARRIER (TS02 Range):
- Model Number: TS02-130-1, TS02-300-1
- Suitable Data Loggers: (PTM1-010, PTM1-020)
- Suitable Heat Sink: 1 x TS00-501, 1 x TS00-500
- Thermal Duration at: (In Still Air)
- 200°C: 6.2 hours, 28.5 hours
- 400°C: 2.2 hours, 16.5 hours
- 600°C: 1.4 hours, 10.5 hours
- 800°C: 1.1 hours, 8.0 hours
- 950°C: 0.9 hours, 7.0 hours
- Height: 130 mm, 300 mm
- Width: 250 mm, 405 mm
- Length: 605 mm (incl. handles), 680 mm (incl. handles)
- Weight: 18 Kg (incl. heat sink), 48 Kg (incl. heat sink)

OPTIONAL GAS QUENCH DEFLECTOR
Strengthened high grade stainless steel lid to deflect high pressure gas quenches from above and below the thermal barrier.

THERMOCOUPLES
Type K, or type N 1.6mm or 2.0mm mineral insulated thermocouple. Nicrobel sheathed Insulated hot junction, terminating in miniature plug. Thermocouples conform to the ANSI MC96.1 special limits specification

SOFTWARE
Thermal View Plus: SW15-ENG. A full function software package featuring enhanced analysis functions including Time above Temperature, Max/Min/Mean calculations, plus Slope calculations, Maximum difference, Area under Curve, Profile Tolerance etc. Full reporting facilities and Import/Export of data as standard.

Note: As products are continually improved, specifications may be changed without prior notice.

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