Elcometer 215 Oven Data Logger

During the powder coating process, the product must pass through an oven. During this baking (or stoving) process the powder melts, flows, gels and finally chemically reacts and cures. It is critical to the coating's final performance and appearance that the parameters for both temperature and time at temperature are controlled.

Failure to maintain the correct temperature profile can cause problems in the final performance and durability of the coating. It is imperative to ensure there are no hot or cold spots within the oven, and also that the temperature of the product being coated is sufficient to meet the technical specifications of the powder coating.

Variation of the oven temperature profile from batch to batch will lead to changes in the coating's life-time performance. Controlling the cure process will ensure a high-quality product time after time.

The Elcometer 215 is the easy to use oven temperature profile solution, used to measure and store the temperature profiles of both the sample and the oven during the cure process.

Features

- Memory stores up to 260,000 readings
- Ideal for testing for powder or liquid coatings in batch or conveyor ovens
- Variable measurement interval, date, time, °C / °F
- High temperature resistant Teflon coated probe cables are easy to clean after each run
- Quick display shows maximum temperature, Cure-Index figure and pass/fail for each probe
- Measure up to 6 different temperatures at one time
- Ideal in situations where powder coated thickness is inconsistent
- Start and stop logging at a pre-set temperature
- Large menu-driven display for easy operation
- Print full colour report directly to any HP printer
- USB data output to ElcoMaster® software and combine with other key inspection measurements

Logging both the product's surface temperature and the air temperature in the oven, the Elcometer 215 identifies the achieved "Temperature Profile" and provides the User with information to ensure consistent quality.

Suitable for powder coating, wet coating, batch and conveyor ovens, the Elcometer 215's measurements, analysis capabilities and tailor-made reporting options generate comprehensive details of the curing processes.

The data logger is fitted with a large display for easy menu-driven operation and an immediate display of the measurement results.

- **Maximize productivity:**
  - Reduce rejects and reworks due to poor oven performance.
- **Minimize energy costs:**
  - Avoid running the ovens at unnecessarily high temperatures or with long through-put times.
- **Optimise finishing quality:**
  - Logging temperature profiles provides the information required to ensure consistent quality.
- **Datalogger software:**
  - Comprehensive calculations and fully customised reports are easily produced with the Elcometer 215 Software supplied as standard with each gauge.
- **Choice of kits available:**
  - Standard and Top models available

Standard Thermal Barrier Kit
With thermal barrier - ideal for single runs

High Temperature Barrier Kit
Thermal barrier & heat sinks for longer time at temperature

Technical Specifications

Part Number	Description	Certificate
G215----2S	Elcometer 215 Oven Data Logger - Standard Thermal Barrier Kit	○
G215----2T	Elcometer 215 Oven Data Logger - High Temp Thermal Barrier Kit*	○
Gauge Measurement Range	-200°C to 1300°C	
Gauge Operating Temperature	-30°C to 65°C without thermal barriers	
Accuracy	5°C to 500°C: ±0.5°C	
	>500°C: ±1.0°C	
Resolution	0.1°C	
Number of Channels	6 K-Type	
Measuring Intervals	Adjustable from 8 per second to 1 per hour	
Memory	260,000 readings or 8 production runs	
Data Output	USB / PLC3	
Power Supply	2 x AA batteries	
Dimensions (Logger Only)	153 x 101 x 23mm	
Weight (Logger Only)	450g	

	Standard Thermal Barrier Kit	High Temperature Thermal Barrier Kit*
Thermal Characteristics	100°C for 140 minutes	100°C for 340 minutes
	150°C for 80 minutes	150°C for 195 minutes
	200°C for 60 minutes	200°C for 130 minutes
	250°C for 50 minutes	250°C for 100 minutes
		300°C for 30 minutes
Weight (Logger & Barrier)	4kg	6kg
Dimensions (Logger & Barrier)	245 x 245 x 115mm	

* Includes Heat Sink
○ Optional Calibration Certificate available

Packing List

Elcometer 215 Oven Data Logger
Thermal Barrier
Heat Sink (only with Top Model)
ElcoMaster Software
USB Cable
Carry Case
2 x AA batteries
Operating Instructions

Accessories

Elcometer 215 Probes

A wide range of K-Type temperature probes is available with a choice of 1.5m, 3m or 6m cable lengths. The Elcometer 215 can be used with a combination of up to 6 probes simultaneously.

- Perfect contact between probe and surface
- Low mass and optimised shape to avoid influence on temperature of the sample
- Extremely strong, highly flexible and easy to clean Teflon® coated cables

All probes have a continuous maximum temperature of 250ºC with a short time maximum of 300ºC.

Clamp Air Probe

Clamp Surface Probe

Magnetic Surface Probe

Combined Clamp & Magnetic Surface Probe

Probe ID Tags

Description	Part Number		
	1.5m	3m	6m
Clamp Air Probe	T21521275	T21521276	T21521277
Magnetic Air Probe	T21521287	T21521288	T21521569
Clamp Surface Probe	T21521278	T21521279	T21521280
Magnetic Surface Probe	T99921281	T99921282	T99921283
Combined Magnetic Clamp Air & Surface Probe	T21521284	T21521285	T21521286

Other Accessories

Probe Identification Tags (Pack of 6) *logger*	T21521241
Standard Thermal Barrier	T21521222
High Temperature Thermal Barrier for Elcometer 215 Model T (Heat Sink Block not included)	T21521217
Heat Sink Block for High Temperature Thermal Barrier	T21521219
Data Logger to PC USB Cable	T21521220

ElcoMaster® Oven Profiling Software

ElcoMaster® is the easy to use software solution designed specifically for the management and assessment of your temperature profile, allowing you to generate professional inspection reports in seconds.

Key Features Explained:

Oven Logger Set Up - Create and store unique oven profile setups, name each of the 6 channels, set sampling rates, number of batch runs, start/stop triggers and transfer them to the gauge.

Coating Parameters - Set up a library of individual paint types incorporating min, mid & max cure temperatures as well as the maximum absolute and minimum cross link temperatures.

Coating Datasheets - Save a copy of the coating's data sheet as a permanent record.

Product Probe Maps - Simply drag and drop up to 6 probe ID markers on to your product photo or drawing to record exact probe placement for each production run.

Customisable Templates - Create your own comprehensive inspection profile - simply choose a relevant gauge setup, paint parameter and product probe map from your library and assign them to your logger data, providing instant, meaningful and professional reports.

Elcometer Cure Value - Using the industry accepted cure value calculation ElcoMaster® provides instant Pass/Fail information by comparing the production run temperature to the coating supplier's cure requirements.

Graphical Reporting - Standard temperature profile graph, cure process and individual profile/cure graphs combined with the product probe map are available as standard.

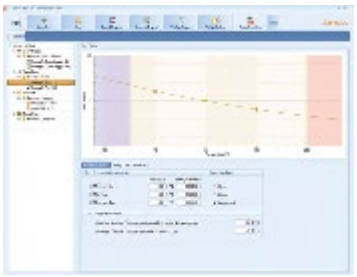
Combined Reports - Fully customisable reports can be quickly generated - allowing oven profile reports to be combined with data from coating thickness, gloss & adhesion gauges.

This easy to use software solution designed specifically for the management and assessment of your oven temperature profile, allows you to generate professional inspection reports in seconds.

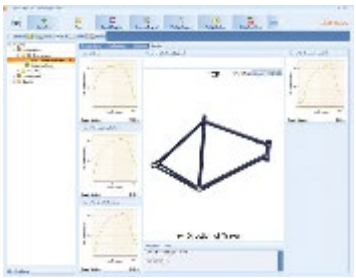
ElcoMaster® Software Oven Profiling Key Features:

- Oven Logger set up & programming
- Paint/Powder parameter library
- Product probe maps
- Fully customisable inspection templates
- Selectable probe/channel traces
- Statistical analysis by probe/channel
- Max, Min, standard deviation, coefficient of variation
- Temperature profile, cure progress, histogram & individual cure value graphs against product
- Time at temperature, time of peak difference
- Time above maximum absolute & minimum cross link temperatures
- Fully customisable inspection reports
- Combined reports - coating thickness, gloss, adhesion, profile, climate, surface cleanliness
- Report generator wizard & PDF generator
- Email or export data
- Import photo's, data sheets, critical data, inspection notes, etc & include on inspection reports
- Cloud computing - allows for cross site collaboration, including internal text messaging tool
- Overlay temperature profiles, review and compare multiple oven profiles over time
- Use additional data loggers for multiple channels or run overlays

Create and store unique oven profile setups and transfer them to the gauge



Set up a library of individual paint parameters



Individual product probe maps record the exact probe placement for each component

Standard temperature profile and cure Process graphs can be viewed at any time

Statistical analysis by probe/channel