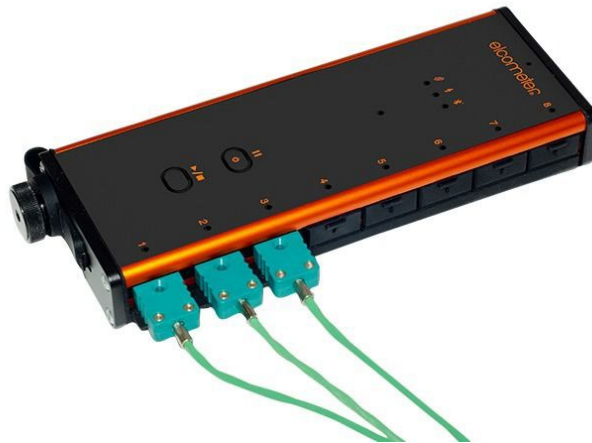


Elcometer 215 Oven Temperature Profiling System



The **New Elcometer 215 Oven Data Profiler** provides the critical data needed to ensure a high-quality, durable finish, optimise production efficiency, and maintain robust quality control, to meet the highest industry standards.

Oven profiling monitors oven and product temperatures, providing insight into curing conditions, helping to ensure coating quality, boost efficiency, reduce energy use, and support process certification.

Optimise the oven set up to provide the appropriate cure profile for the coating/product combination to ensure the highest physical and cosmetic properties.

Reduce energy costs, curing times and streamline operations - no need to remove the gauge from the thermal barrier, simply connect to the ElcoMaster App wirelessly via Bluetooth.

Assure clients and regulators of your high standards with traceable oven profile reports that clearly verify the consistency and reliability of your process.

Features

Ensure Optimum Cure & Quality

Time at Temperature

- Coatings require a specific time at a set temperature to fully cure and achieve their intended properties (hardness, adhesion, gloss, etc.).
- The Elcometer 215 Oven Data Profiler accurately records the temperature profile of the powder coated product during the curing process, ensuring they reach and maintain the necessary temperature for the correct duration as specified by the powder manufacturer's cure schedule.

Prevent Under-Cure

- Insufficient temperature or time at temperature leads to an under or partially cured coating which is soft, prone to scratching and poor adhesion for example, meaning it will not meet the expected quality. The Elcometer 215 Oven Profiler provides clear evidence on whether the products experienced the required thermal cycle.

Prevent Over-Cure

- Excessive temperature or time at temperature can also be detrimental, leading to discoloration, brittleness, and a loss of coating properties.
- The Elcometer 215 Oven Temperature Profiler identifies over-baking by providing a detailed temperature profile history.

Optimise Efficiency & Reduce Costs

Identify Hot and Cold Spots

- Ovens can have uneven temperature distribution. The Elcometer 215 Oven Temperature Profiling System can map these variations, allowing operators to adjust airflow, conveyor speed & burner settings, or product placement to achieve the optimal set up for your powder coated product. This optimises energy consumption and ensures a consistent and uniform cure.

Optimise Line Speed

- By understanding the actual time it takes for parts to reach cure temperature, manufacturers can optimise conveyor speeds, potentially increasing throughput without compromising quality.

Reduce Rework and Scrap

- Consistent and proper curing minimises defects, reducing the need for costly rework or scrapping improperly coated products.

Maintain Quality & Traceability

Document the Cure Process

- The Elcometer 215 Oven Data Logger provides a permanent record of the oven's temperature performance during the curing process. This documentation is crucial for quality control, internal audits, and demonstrating compliance with customer specifications.

Troubleshoot Coating Issues

- If any coating defects arise, the temperature data can be analysed to help identify if the curing process was within the specified parameters, helping to understand and correct the root cause of the problem.

Ensure Consistency

- By regularly profiling and setting up the oven for each product using oven temperature data loggers, you can ensure that the curing process remains consistent even with variations in product, batch size or ambient conditions.

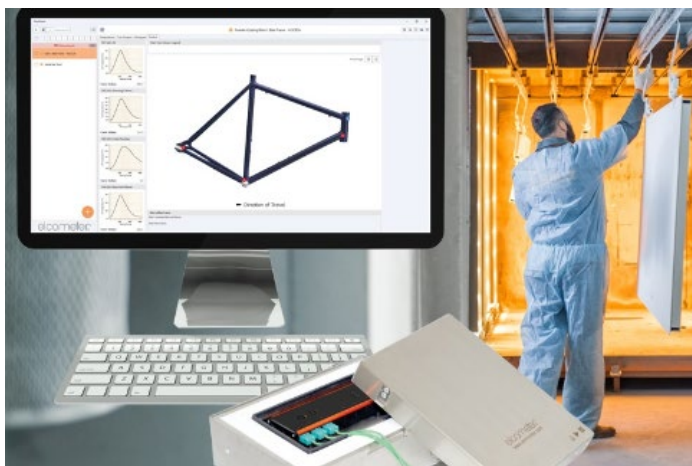
Elcometer 215 Oven Data Profiler Thermal Barrier

	Powerful Robust thermal barrier for prolonged use at high temperature - run at 100°C for up to 180 minutes or up to 300°C for up to 60 minutes. Wide range of K-type temperature probes with strong, highly flexible and easy to clean Teflon® coated cables
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Elcometer 215 Oven Data Profiler Thermocouples

				
Clamp Air Probe	Clamp Surface Probe	Magnetic Air Probe	Magnetic Surface Probe	Combined Clamp & Magnetic Probe
A clamp air probe, often located in channel 1, is the main trigger for oven processes. Its low thermal mass allows it to respond quickly to changes in oven temperature, initiating and halting operations based on the ambient heat around the product.	Clamp surface probes accurately monitor the temperature of the product being coated, ideal for coated products with varying geometries or surfaces that are difficult to attach a magnetic probe to.	Located in channel 1 as the main trigger for oven processes, its low thermal mass responds quickly to changes in oven temperature, initiating and halting operations based on the ambient heat around the product.	Magnetic contact probes monitor the heat within the thermal mass (product). Magnetic probes are useful to get into the centre of a product however these are only useful for ferrous powder coated products	The combined probe either measures the surface temperature by physical contact or measures the air when bent upwards. You can only use it either as an air sensor or surface sensor but not both at the same time.

How it works



1. Set Up

Set up the profile requirements in the free ElcoMaster® software app using the paint manufacturer's datasheet and send to the Elcometer 215 Oven Logger via USB or Bluetooth

2. Cure

Attach up to eight air or surface temperature thermocouples around your product to monitor the air and surface temperatures at key points during the cure process.



3. Analyse

Once cured the gauge will provide an instant pass/fail based on the collected data.

You can then download all temperature data to ElcoMaster® allowing you to create professional temperature profile reports in seconds.

Technical Specifications

Part Number	Description	Certificate
G215-DL	Elcometer 215 Oven Temperature Profiling System (includes thermal barrier)	•
T215-DL	Elcometer 215 Oven Data Profiler	•
Gauge Measurement Range	-200°C to 1300°C	
Gauge Operating Temperature	-20°C to 80°C without thermal barrier	
Accuracy	0°C to 500°C: $\pm 0.5^{\circ}\text{C}$ >500°C: $\pm 1.0^{\circ}\text{C}$	
Resolution	0.1°C	
Number of Channels	8	
Sensor Type	Type K, Type T, Type J, Type N, Type S, Type E, Type B, Type R Thermocouples	
Measurement Intervals	Adjustable from 1 per second to 1 per hour	
Memory	1,000,000 readings	
Multiple Run Capability	Up to 40 profile runs before returning to PC	
Batches	Up to 40 sequential batches (25,200 readings per batch)	
Display	LED's	
Data Output	USB or Bluetooth®1	
Housing Material	Anodised Aluminium	
Power Supply	3 x AA batteries or USB	
Battery Life	150+ Hours	
Thermal Barrier Characteristics	100°C for 180 minutes	
	150°C for 120 minutes	
	200°C for 90 minutes	
	250°C for 80 minutes	
	300°C for 60 minutes	
Gauge Dimensions	191 x 73 x 25mm	
Dimensions (in thermal barrier)	245 x 245 x 115mm	
Gauge Weight	464g	
Weight (in thermal barrier)	5.62kg	

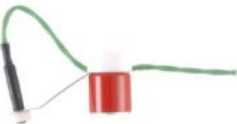
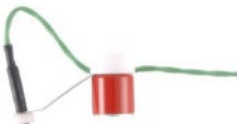
1. Bluetooth range can be affected by any obstruction between the gauge and software device (PC) as well as the type of Bluetooth® used within the software device (typically older devices will have reduced range). For optimum Bluetooth range when inside the thermal barrier, ensure that the software device is in the 'line of sight' of the thermocouple exit point of the thermal barrier.

Part Numbers

	
Elcometer 215 Oven Temperature Profiling System (includes thermal barrier)	Elcometer 215 Oven Data Profiler
Part Number: G215-DL	Part Number: T215-DL



Accessories

 Clamp Air Probe 1.5m Part Number T21521275	 Clamp Air Probe 3m Part Number T21521276	 Clamp Air Probe 6m Part Number T21521277	 Magnetic Air Probe 1.5m Part Number T21521287
 Magnetic Air Probe 3m Part Number T21521288	 Magnetic Air Probe 6m Part Number T21521569	 Clamp Surface Probe 1.5m Part Number T21521278	 Clamp Surface Probe 3m Part Number T21521279
 Clamp Surface Probe 6m Part Number T21521280	 Magnetic Surface Probe 1.5m Part Number T99921281	 Magnetic Surface Probe 3m Part Number T99921282	 Magnetic Surface Probe 6m Part Number T99921283
 Combined Magnetic Clamp Air & Surface Probe 1.5m Part Number T21521284	 Combined Magnetic Clamp Air & Surface Probe 3m Part Number T21521285	 Combined Magnetic Clamp Air & Surface Probe 6m Part Number T21521286	 Standard Thermal Barrier Part Number T21533250