

DATAPAQ

EasyTrack²

profile your oven the Easy way



A Fluke Company

DATAPAQ

Since 1984, the name Datapaq® has become synonymous with temperature profiling in the paint and powder coatings industry worldwide. With a reputation for accuracy, ease of use and reliability, Datapaq continues to set the industry standard for excellence. Datapaq is the preferred choice in temperature profiling and continues to provide systems that exceed the demands of the harshest of thermal processes.

EasyTrack® 2 is the latest generation of Oven Tracker systems designed specifically for paint and powder coaters who need to gather reliable process information quickly and easily. The new improved system features a choice of loggers providing a rapid sampling interval of 0.5 seconds, greater accuracy of $\pm 0.5^{\circ}\text{C}$ ($\pm 0.9^{\circ}\text{F}$), and USB communications.



EasyTrack² Bringing Benefits to Your Business

- Check that your process meets the coating suppliers cure specification to guarantee product quality.
- Identify immediately when problems occur in your oven. Use the profile data to isolate the cause and suggest action needed to correct it.
- Eliminate costly rejects or rework.
- Optimize process parameters to maximize throughput and minimize energy costs.
- Validate new products and coatings accurately with ease and efficiency.

Insight™ Software

Easy to use, Intuitive, Accurate

Designed with the operator in mind, Datapaq's EasyTrack Insight analysis software converts raw data into meaningful information quickly and easily. Insight will allow you to confirm cure against your paint suppliers' specifications, make comparisons probe to probe, identify that the Datapaq Values fall within an acceptable tolerance range, and evaluate process parameter changes.

With a simple click of the mouse, you can print out a profile report used to satisfy all necessary regulatory requirements. Protect existing contracts and win new customers.



Analysis Tools – to benefit your process:

- Oven start and exit correction
- Maximum temperature and time recorded
- Time at and time to reach temperature
- Datapaq Value – Index of Cure
- View data – raw data measurement by measurement
- Mouse operated zoom
- Graph overlay
- Logger reset options (sample interval, start button or temperature trigger)
- Onboard battery charge indicator
- Data import/export and auto Paqfile email
- Concise single page validation report
- Paqfile viewer software – download from www.datapaq.com



EasyTrack2 Data Logger...

Choice and Flexibility

Measuring the exact temperature of your product as it passes through the cure oven gives you the power to understand, control and maximize your coating process.

Giving you choice and flexibility, the EasyTrack2 is now available with 4 or 6 channels. Designed to withstand the harshest of thermal processes, the EasyTrack2 data logger has an internal operating temperature of up to 85°C (185°F) without any deterioration in accuracy, guaranteeing a reliable process run. Intelligent power management, non-volatile memory and auto power-down after use ensures you get the most out of your logger. The EasyTrack2 data logger also has hot data protection preventing the accidental deletion of valuable data.

2 hours
protection at
200°C (400°F) and
weighs less than
3 kg (6 lbs).

Thermal Barrier...

Optimal Thermal Protection

Getting the EasyTrack2 data logger through a powder coating oven safely requires a thermal barrier you can trust run after run. The EasyTrack2 standard thermal barrier provides optimal thermal protection with high performance ceramic insulation and back up heat sink. This barrier allows 2 hours of protection at 200°C (400°F) - keeping the data logger at a safe working temperature as it travels through the process. With a variety of barriers to choose from, we can easily customize a system to meet your specific needs.



Thermocouples

Profiling your oven requires you to attach thermocouples to your work piece reliably and accurately. Our exceptionally durable, quad wrapped, 10 strand PTFE and metal braid coated type K thermocouples are made for just that.* Each thermocouple is designed with a circular cross section to reduce kinking and twisting, and comes with a strong crimped plug/cable attachment. Specified to ANSI MC96.1 Special Limits of Error ($\pm 0.4\%$ or 2.0°F which ever is greater), you can guarantee a high accuracy reading. (Various cable lengths available.)

** Does not apply to PA0182 and PA0060*

Clamp Probe Attaches to any nonferrous surface 1.5m (5ft) PTFE cable; 0 - 265°C (32 - 509°F)

PA0021 – Air
PA0011 – Surface



MicroMag Probe Attaches to ferrous surface - where space is limited, 1.5m (5ft) PTFE cable; 0 - 265°C (32 - 509°F)

PA0995 – Air
PA0973 – Surface



Exposed Junction Probe Spot welded, soldered or taped to product or test piece, 1.5m (5ft)

PA0063
PTFE Cable: 0 - 265°C (32 - 509°F)
PA0182
Fiberglass Cable: 0 - 500°C (32 - 932°F)



Patch Probe - Used for low mass small products, plastics or IR processes, 1.5m (5ft) 0 - 265°C (32 - 509°F)

PA0060 - PTFE Cable



Technical Specifications

Data Logger	ET404 I	ET606 I
Number of Channels	4	6
Thermocouple Type	K	K
Sample Interval	0.5 seconds to 60 minutes	
Accuracy	±0.5°C (±0.9°F)	
Accuracy Protection	Cold junction compensation- accuracy guaranteed up to 85°C (185°F) logger temperature	
Resolution	0.1°C (0.2°F)	
Maximum Internal Operating Temperature	85°C (185°F)	
Safety Features	Over temperature protection prevents use of logger if too hot. Auto shut down at an internal temperature of 85°C (185°F)	
Measurement Range	-150 to 500°C (-238 to 932°F)	
Memory	Non-volatile with hot data protection	
Memory (readings per channel)	4000	6000
Data Collection Start	Start button/temperature trigger	
Battery	Good quality 9V PP3 Alkaline (replaceable)	
Battery Life	At 5 second intervals – 120 hours continuous measurement At 1.0 second intervals – 74 hours continuous measurement At 0.5 second intervals – 43 hours continuous measurement	
Hardwired Telemetry Capability	No	Yes
LED Indicators	Always informed of status	
Battery Compartment	Magnetic catch - access without the need for tools	

EasyTrack2 Thermal Barrier - TB0250

Aluminum construction, ceramic insulation. Includes plastic molded heatsink. Suitable data loggers EasyTrack and EasyTrack2 (ET404I, ET505I, ET606I).

Weight	2.6 kg (5.7 lbs)
Dimensions (H x W x L)	111 x 185 x 260 mm (4.4 x 7.3 x 10.2 in)
Heatsink	TB9550 58°C (135°F)

Thermal Duration Temperature	100°C	150°C	200°C	250°C	300°C
	200°F	300°F	400°F	475°F	575°F
Time (Mins)*	360	180	120	75	40

* Protection quoted at constant environmental temperature

THE DATAPAQ GUARANTEE

Each Datapaq system is supported with a full one year warranty. Complementing the warranty, we offer a yearly service and re-calibration contract, which includes free software updates and loan equipment for guaranteed peace of mind.*

* Dependent on country.



Minimum computer specifications

- Microsoft Windows® 2000 or above recommended
- 500 MHz processor
- 128 MB RAM
- Monitor resolution 1024 x 768, 256 colors
- 50 MB free hard disk space
- USB communication
- CD-ROM drive

The Worldwide Leader in Temperature Profiling

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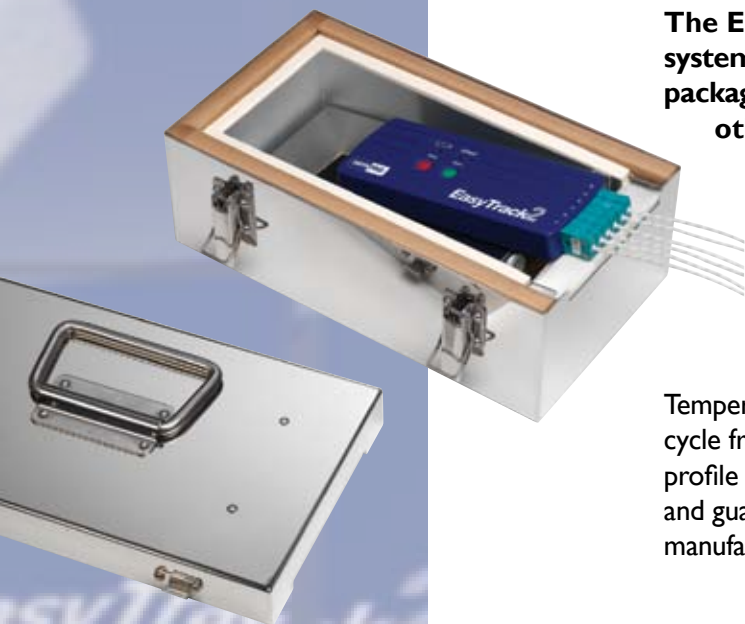
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EasyTrack® 2 HITEMP

...the value *PTFE* and high temperature coating profiling solution



The EasyTrack®2 HITEMP system is a customized profile system based on the very successful original EasyTrack system, packaged specifically for polytetrafluoroethylene (PTFE) and other high temperature cure processes.

Combining the simplicity of the EasyTrack2 data logger, EasyTrack Insight™ software and the high thermal performance characteristics of the TB5000-HT barrier, the EasyTrack2 HITEMP system provides an ideal profiling tool for OEM manufacturers and coating suppliers alike.

Temperature measurements can be made throughout the entire heating cycle from either product or oven environment. Such temperature profile information permits the optimization and control of the process and guarantees both the quality of the end product and efficiency of the manufacturing process.

SYSTEM BENEFITS

Improve quality by confirming cure to prevent:

- **Undercuring** – Brittle PTFE with poor adhesion characteristics
- **Overcuring** – Low gloss PTFE or chalkie cosmetic appearance of black or darker PTFE surface coatings
- **Excessive Heat** – Degradation of PTFE coating with release of gaseous toxic by-products
- **Poor Temperature Uniformity** – Poor color and surface finish consistency
- **Rapid Fault Finding**
Identify problems within the oven, such as cold spots, quickly and efficiently. Identify the potential cause of problems, such as blocked ducting, leaky burner box, faulty fan, etc., allowing for rapid corrective action.
- **Process Optimization**
Optimize operating characteristics to maximize productivity (line speed) and fuel economy.
- **Validation**
Create documentary proof of process control for use with customers or quality audits (ISO9001 etc.)



SYSTEM FEATURES

- Simple, quick and easy-to-use
- 6 channels measuring up to 500°C (932°F)
- Rugged enough to handle 300°C (572°F) for 3 hours
- Light enough to travel with ease
- Shared profile data with Paqfile Viewer or print to PDF functionality

EasyTrack[®] 2 Accessories List

DATA LOGGER



ET6061 EasyTrack2 Data Logger (6 Channel)

Measurement Range -150 to 500°C (-238°F to 932°F)
Accuracy $\pm 0.5^{\circ}\text{C}$ (0.9°F). Type K thermocouple. 6000 readings per channel.
Programmable sampling interval (0.5 seconds to 60 minutes). Start/stop buttons.
Hard wired, real-time telemetry ready. Operating temperature 85°C (185°F).
USB communication protocol (cable CII033). Supersedes obsolete ET5051. Compatible with v5.0 EasyTrack Insight™ software, only. Supplied with replaceable 9V PP3 battery (x2) and calibration certificate.

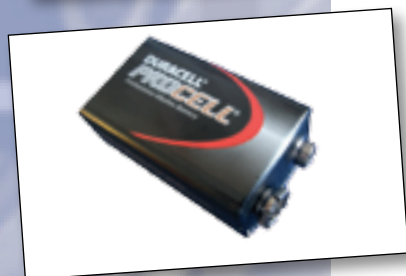


ET4041 EasyTrack2 Data Logger (4 Channel)

Measurement Range -150 to 500°C (-238°F to 932°F)
Accuracy $\pm 0.5^{\circ}\text{C}$ (0.9°F). Type K thermocouple. 4000 readings per channel.
Programmable sampling interval (0.5 seconds to 60 minutes). Start/stop buttons.
Operating temperature 85°C (185°F). USB communication protocol (cable CII033).
Supersedes obsolete ET5051. Compatible with v5.0 EasyTrack Insight, software only.
Supplied with replaceable 9V PP3 battery (x2) and calibration certificate.



CII033 USB Communication Cable for use with Tpaq21 and EasyTrack2 Data Loggers



BP0003 Replaceable PP3 9V Alkaline Battery (pack of 2)

SOFTWARE

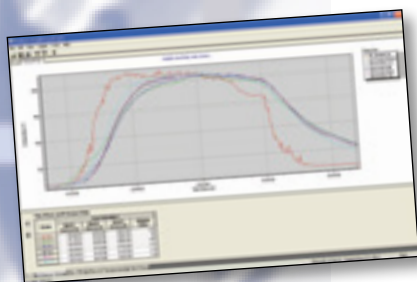
SW5210 Insight Software for EasyTrack (English)

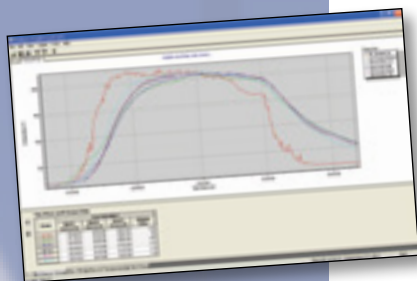
Includes quick reference guide*, communication interface and operator manual.
*Specific to logger being used (ET4041, ET5051, ET6061 or other).

SW5210+ Insight Software for EasyTrack (LanguageVariant)

Includes quick reference guide*, communication interface and operator manual.
French SW5211; German SW5212; Spanish SW5213; Portuguese SW5214;
Japanese SW5215; Simplified Chinese SW5216; Italian SW5217; Korean SW5218;
Slovak SW5219; Czech SW52110; Traditional Chinese SW52111;
Russian SW52112; Polish SW52113

*Specific to logger being used (ET4041, ET5051, ET6061 or other).





**UG5210 Software upgrade from earlier version
to EasyTrack Insight (English)**

Includes quick reference guide and operator manual.

**UG5210+ Software upgrade from earlier version
to EasyTrack Insight (Other languages)**

Includes quick reference guide and operator manual.

French UG5211; German UG5212; Spanish UG5213; Portuguese UG5214;
Japanese UG5215; Simplified Chinese UG5216; Italian UG5217; Korean UG5218;
Slovak UG5219; Czech UG52110; Traditional Chinese UG52111; Russian UG52112;
Polish UG52113

THERMAL BARRIERS



TB0250 EasyTrack2 Thermal Barrier

Aluminum construction, ceramic insulation. Includes plastic moulded heat sink (TB9550).

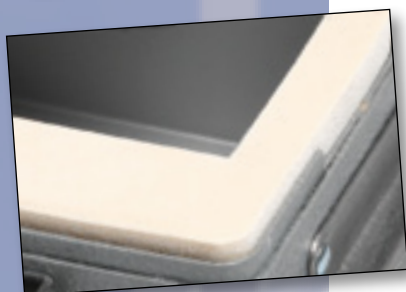
Suitable data loggers: EasyTrack and EasyTrack2 (ET4041; ET6061).

Duration: 50 minutes @ 300°C (572°F); 75 minutes @ 250°C (482°F);

120 minutes @ 200°C (392°F); 180 minutes @ 150°C (302°F)

Dimensions (HxWxL): 111mm x 185mm x 260mm (4.4in x 7.3in x 10.2in)

Weight: 2.6kg (5.7lbs)

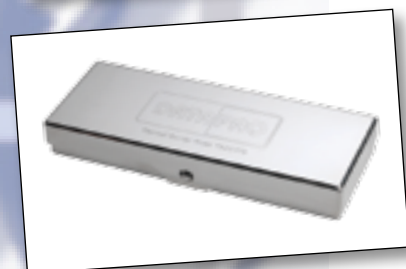


**TB1413 Replacement Silicone Foam Gasket for EasyTrack2
Thermal Barrier TB0250**



TB9550 Replacement Heat sink

Use in either the EasyTrack standard barrier (TB0225) or EasyTrack2 barrier (TB0250). Plastic moulding filled with phase change material C58 – phase change at 58°C (136°F).



**TB2037 EasyTrack2 Low Height Thermal Barrier
(Flat Bed Low Clearance Ovens)**

Stainless steel construction, ceramic insulation.

Suitable data loggers: EasyTrack and EasyTrack2 (ET4041; ET6061).

Duration: 9 minutes @ 300°C (572°F); 13 minutes @ 200°C (392°F);

18 minutes @ 150°C (302°F); 30 minutes @ 100°C (212°F)

Dimensions (HxWxL): 31mm x 90mm x 229mm (1.2in x 3.5in x 9in)

Weight: 0.6kg (1.3lbs)

THERMAL BARRIERS

TB5000-HT EasyTrack2 High Temperature Thermal Barrier (PTFE and Dacromet Processes)

Stainless steel construction, ceramic insulation. Includes stainless steel heat sinks (2 x TB1001). Fitted with high temperature fabric gasket.

Suitable data loggers: EasyTrack and EasyTrack2 (ET4041; ET6061).

Duration: 20 minutes @ 400°C (752°F); 3 hours @ 300°C (572°F); 3 hours, 30 minutes @ 250°C (482°F); 4 hours, 30 minutes @ 200°C (392°F); 6 hours, 30 minutes @ 150°C (302°F); 14 hours, 30 minutes @ 100°C (212°F)

Dimensions (HxWxL): 130mm x 190mm x 292mm (5.1in x 7.5in x 11.5in)

Weight: 6.2kg (13.7lbs)

TB1001 Heat sink

Used in the EasyTrack TB5000-HT thermal barrier.

Stainless steel case filled with phase change material – phase change at 58°C (136°F).

Two required per barrier.

THERMOCOUPLES

CS2091 4 Channel Probe Clamp Kit

Used with 4 channel EasyTrack2 (ET4041) data logger.

Enables user to connect thermocouples together for easy insertion into logger.

Comprises 2 support rods and 12 end caps.

CS2092 6 Channel Probe Clamp Kit

Used with 6 channel EasyTrack2 (ET6061) data logger.

Enables user to connect thermocouples together for easy insertion into logger.

Comprises 2 support rods and 12 end caps.

Exposed Junction Thermocouple

Taped, spot-welded or soldered directly to components for measuring substrate temperature. Can also be used to measure environmental temperatures.

PA0063 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0065 2.0m (6ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0064 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0071 8.0m (26ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0180 3.0m (10ft) glass fiber cable. Maximum temperature 500°C (932°F)

PA0182 1.5m (5ft) glass fiber cable. Maximum temperature 500°C (932°F)

PA0181 2.0m (6ft) glass fiber cable. Maximum temperature 500°C (932°F)

High Temperature Adhesive Tape

Used to secure exposed junction thermocouples. Supply restricted in certain geographical locations. Contact Datapaq for clarification.

CS1030 33m (36 yards) long reel. Maximum temperature 400°C (752°F).
(Available in the United States of America ONLY)



Clip Surface Thermocouple

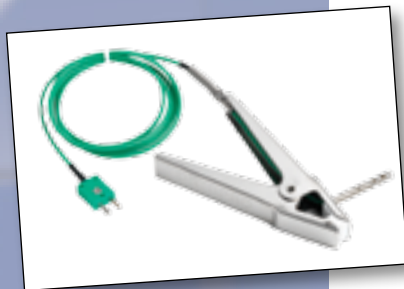
Clips to non ferrous components for measuring substrate temperature.

PA0011 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0012 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0016 6.0m (20ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA1710 1.5m (5ft) glass fiber insulated with stainless steel outer braid



Clip Air Thermocouple

Clips to non ferrous components for measuring air/environmental temperature.

PA0021 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0022 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0025 6.0m (20ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA1720 1.5m (5ft) glass fiber insulated with stainless steel outer braid



Micro Mag Magnetic Surface Thermocouple

Attaches directly to ferrous substrates using a strong SmCo magnet with a diameter of only 17mm (0.7in). Ideal for measuring substrate temperatures in the tightest of recesses.

PA0973 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0974 3.0m (10ft) insulated cable. Maximum temperature 265°C (509°F)

PA0975 6.0m (20ft) PTFE insulated cable. Maximum temperature 265°C (509°F)



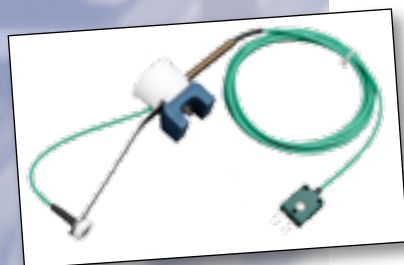
Micro Mag Magnetic Air Thermocouple

Attaches directly to ferrous substrates using a strong SmCo magnet with a diameter of only 17mm (0.7in). Ideal for measuring air temperatures in the tightest of recesses.

PA0995 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0996 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0999 6.0m(20ft) PTFE insulated cable. Maximum temperature 265°C (509°F)



Surface Off-set Magnetic Thermocouple

Attaches directly to flat ferrous substrates to measure substrate temperatures.

PA0053 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0054 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0050 6.0m (20ft) PTFE insulated cable. Maximum temperature 265°C (509°F)



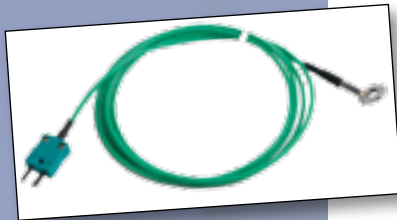
Air Magnetic Thermocouple

Attaches directly to ferrous substrates to measure air/environmental temperatures.

PA0055 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0056 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0059 6.0m (20ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

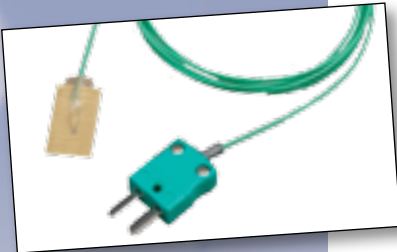


Washer Thermocouple

Screwed directly to large heavy metal substrates.

PA0081 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0082 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)



Adhesive Patch Probe

Attaches directly to light gauge metal or plastics with adhesive patch and/or high temperature tape (HT0090). Ideal where fast response is required or for IR processes.

PA0060 1.5m (5ft) PTFE insulated cable. Maximum temperature 265°C (509°F)

PA0062 3.0m (10ft) PTFE insulated cable. Maximum temperature 265°C (509°F)



PA0980 Micro Mag Thermocouple Mount

Designed to secure exposed junction thermocouples to ferrous substrates used for air measurement (as shown), or substrate temperatures in conjunction with high temperature tape.



ACCESSORIES

CC0049 Soft Carry Bag

Carry bag with shoulder strap designed to carry the complete EasyTrack2 system with ease and comfort.

EasyTrack2 Quick Reference Guide "QRG"

MA5630 English

MA5631 German

MA5632 French

MA5633 Spanish

MA5634 Portuguese

MA5635 Italian

MA5636 Simplified Chinese

MA5637 Japanese

MA5638 Korean

MA5639 Traditional Chinese

EasyTrack2 Operator Manual

MA5610 English

MA5611 German

MA5612 French

MA5613 Spanish

MA5614 Portuguese

MA5615 Italian

MA5616 Simplified Chinese

MA5617 Japanese

MA5618 Korean

MA5619 Traditional Chinese

SERVICE

RC0001 Recalibration of Data Logger

Electronic calibration and adjustment of data logger, issue of calibration certificate traceable to national standards and full functional test of data logger, including battery testing, 14 hour thermal stress testing and temperature stability testing.

RC0003 UKAS Certified Recalibration of Data Logger

Electronic calibration and adjustment of data logger. Issue of UKAS (United Kingdom Accreditation Service) calibration certificate from the Datapaq UKAS ISO 17025 accredited laboratory. Full functional test of data logger, including: battery testing; 14 hour thermal stress testing and temperature stability testing.

SC0002 Datapaq 12 Month Service Contract for EasyTrack2

Use of loan equipment in case of any failure or damage. Electronic calibration and adjustment of data logger. Issue of UKAS (United Kingdom Accreditation Service) calibration certificate from the Datapaq UKAS ISO 17025 accredited laboratory, if applicable. Full functional test of data logger, including: battery testing; 14 hour thermal stress testing and temperature stability testing, annual full service of equipment, free logger firmware and software updates, and minor logger repairs.

The Worldwide Leader in Temperature Profiling



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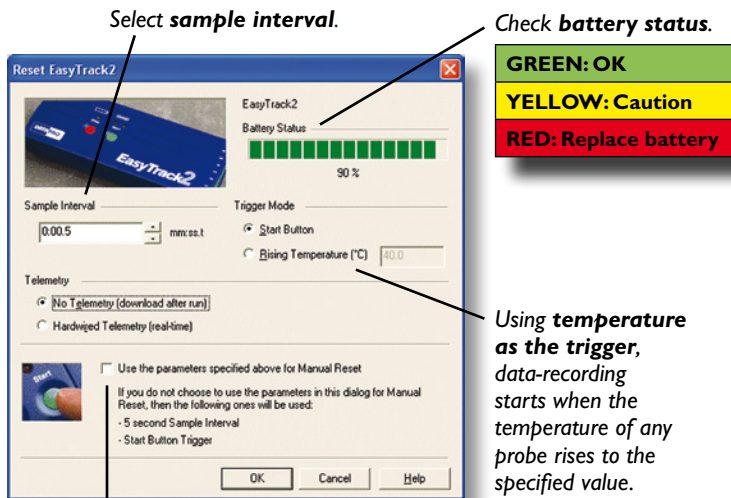
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Quick Reference Guide

Running a temperature profile

If... EITHER you are making the first profile run with a new EasyTrack[®]2, **OR** you want to change the reset conditions (sample interval or start trigger), first connect the logger to the PC and **reset the logger with Insight**.



Check this option to ensure that future **manual resets** (i.e. using only the Start button) will use the conditions specified in this dialogue.

Next... Press green Start button to start data-recording.



To use the same reset conditions as in the previous run, there is no need to connect to the PC: simply press the Start button.

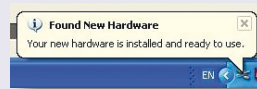
2

Place logger in thermal barrier and attach thermocouples to product or test piece.



Installing the software

1. Ensure you are logged into Windows in Administrator mode.
2. Place the Insight CD in the drive and follow the on-screen instructions.
3. Remove the CD, and use the communications lead to connect the logger to a USB port on the PC; the red LED on the logger should flash five times. Drivers will then install automatically.



3

- Send through oven.
- Collect at exit.
- Remove logger from thermal barrier.



CAUTION

Wear heat-resistant gloves.

4

Press **red stop button**, connect communications lead and...



...download to PC.

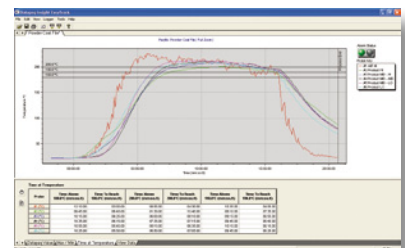
After download, disconnect communications lead to conserve logger battery.

5

View the temperature profile and save the data.



Print a report.



Key functions of Insight™ EasyTrack software

Threshold temperatures
User-selectable.

User-corrected oven start
To make data consistent between runs, set the zero time as the point where the system enters the oven.

Color-coded probe buttons
Click to select which probe results are viewed and reported.

Quick-access tool bar buttons
Use in sequence to perform a quick test from scratch (see below).

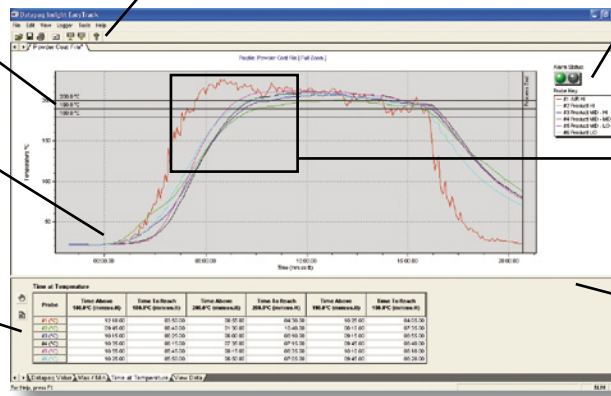
Run alarms



Pass
Fail

Mouse-operated zooming
Drag out an area to zoom into. The data grid and analysis then apply to that section of the data alone.

Movable splitter bar
Choose how much of the screen to devote to the graph or to the data.



Program the logger

Check **battery status**: **green** battery OK, **yellow** caution, **red** replace battery. Select **sample interval**: manual (green start button) or temperature trigger.



Download data

Transfer collected temperature data from the run to the PC for reporting.



Make notes on your process

Write notes to describe where the thermocouples are attached to the product. Add useful details relating to the test and the process (product, operator, process, etc.).



Save results

Save the results of your profile run as a **paqfile** for future use.



Auto setup for new process

When a paqfile is saved, the process details for that application (e.g. oven used, probe locations, product, target cure schedule) are retained as the default, ready for data from the next run to be downloaded. This saves setup and analysis time when repeating a run for the same application.

To change the process details when about to perform a run for a different application, simply **open a paqfile for an appropriate application saved previously**. If necessary, you can edit the process details before the new profile run data is downloaded.



Email the results

Send the profile results as an email. In case the email recipient does not have Insight, the email contains a link to download free **Paqfile Viewer** software with which to view the temperature profile.



Print report

Print a single-page report, providing all the above graphical and numerical analysis information.



Mouse right-click

Right-click on the graph to show a menu of commonly used options:

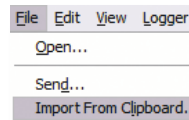
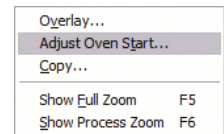
Overlay Overlay two temperature profiles on the same graph to compare graph shapes and analysis results (e.g. Datapaq Value). Ideal for process optimization.

Adjust Oven Start Allows you to position the markers for oven start and process end in a paqfile.

Copy Exports a paqfile's data to the Windows clipboard – as text or as spreadsheet data.

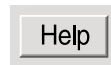
Show Full Zoom Sets the graph zoom to show all the data in the paqfile.

Show Process Zoom Sets the graph zoom to show all the data between oven start and process end.



Import non-Datapaq files

Opens the **Clipboard Paste Wizard**, which guides you through the process of selecting data in a spreadsheet application and importing it to a new or existing paqfile.



Help

On any dialogue, press the **Help button** for information specific to the operation you are performing.

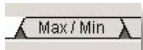


Options

Select options for system operation, including Units, Run Alarms and Calibration Alarm.

The analysis options

Max/Min Temperature

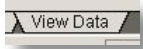


Calculate the maximum temperature and time achieved for each probe location on the product measured.

- Use Max/Min information to calculate temperature slopes over a selected zoom.

View raw data

Display the product or air temperature at any point in the process.



- Click the left-hand mouse button on the trace of interest.
- Using the mouse, move cursor bar to the appropriate position and read time and temperature information.

Time at Temperature calculation

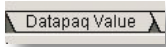
Calculate the time at which a product reached a specified temperature, and the dwell time the product was held at, or above, that temperature.



- Click on the Options button to select up to three threshold temperatures.



Datapaq Value



Calculate the index of cure value against coating supplier cure specifications using all temperature data from the profile graph that contributes to the cure process.

- Click on the Options button and input the cure schedule information obtained from your coating supplier.



Three coating cure schedules (low, mid and high Time at Temperature settings).

	LOW		MID		HIGH		Min Temp (°C)	Max Temp (°C)
	Temp	Time	Temp	Time	Temp	Time		
1	190.0	12:00.00	200.0	10:00.00	210.0	09:00.00	160.0	220.0

Temperature at which curing (cross-linking) starts.

Temperature above which coating damage is possible.

Find the acceptable range of Datapaq Values (e.g. 90–140), which give you the coating cure quality you require from physical QA tests:

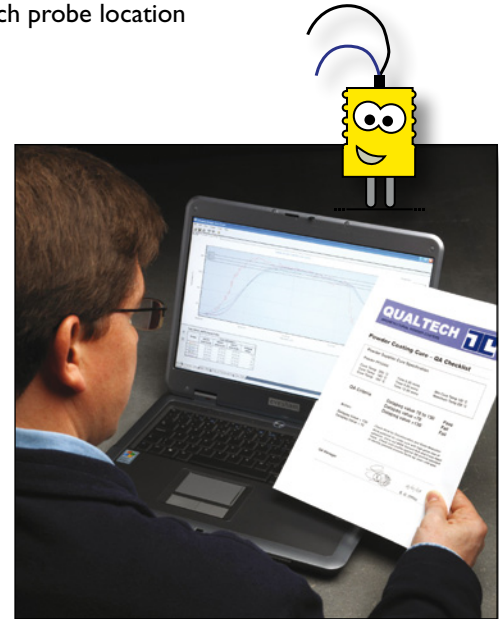
- Generally **near 100** indicates **cure OK**
- Significantly **less than 100** indicates **under-cure**
- Significantly **greater than 100** indicates **over-cure**

Use Datapaq Value as an ideal process control or optimization indicator. If Datapaq Value falls within your specified range (e.g. 90–140), the process is in control – continue production with confidence.

Alarms



See when a FAIL alarm condition is triggered and what was the cause of the alarm, e.g. logger over temperature, low battery, invalid measurements.



The logger's battery

The EasyTrack2 logger requires a 9V PP3 alkaline battery.

It is important to use only good-quality, branded batteries, e.g. Duracell Plus or Procell.

Do not use zinc-carbon or zinc-chloride batteries, rechargeable batteries, batteries that may have been used previously, or batteries outside their shelf life.

The EasyTrack2 employs nonvolatile memory, so – even when the battery is replaced – data stored in the logger will not be lost.

Fitting batteries

1. Open the battery compartment by releasing the magnetic catch on the battery compartment.
2. Remove the old battery by gently pulling the white connector block.
3. Replace with a new alkaline 9V PP3 battery.
4. Replace the battery compartment lid.



For the first profile run after replacing the battery, you must reset the logger using Insight (see first page).

Battery status LEDs

During a profile run, or immediately after the communications lead is inserted, battery status is as shown below.

Battery Status LED – Yellow	Logger Status LEDs Red/Green	Meaning
Flashing	Flashing or off	Battery low: replace
Off	Off	Battery dead: replace
Off	Flashing (red or green)	Battery OK



Battery Status LED

Yellow

Logger Status LEDs

Red

Green

Saving Battery Life

To limit power consumption and maximize battery life, the logger will power itself down (all LEDs off) at the following times.

- When the communications lead is removed from the logger after a download.
- Five minutes after the red Stop button has been pressed if the data is not downloaded.
- When the communications lead is plugged into the logger, and the logger detects no activity for 5 minutes.

To **power down the logger manually**, press the green and red buttons simultaneously and hold them for 3 sec.

To **power up the logger**, either plug in the communications lead or (to start a profile run) press the green Start button. If the logger has data in memory that has not yet been downloaded, pressing the Start button will not start a new run or delete data but will simply power the logger up; the red LED will then flash every 5 sec. to indicate that data needs to be downloaded.

Logger status LEDs

Red	Green	Meaning	Action
5 flashes, alternating with green LED	5 flashes, alternating with red LED	Logger successfully reset	None
Flashing, alternating with green LED, at sample interval	Flashing, alternating with red LED, at sample interval	Logger awaiting trigger (either Start button or temperature)	None
Flashing together with green LED	Flashing together with red LED	All probes are above trigger temperature, and thus data-recording cannot be triggered by rising temperature	Reset Temperature Trigger from PC
Off	Flashing at sample interval	Logger acquiring data	None
Flashes 5 times (once per second)	Off	Connection between communications lead and logger has been made	None
Flashing every second	Off	Serious internal error	Contact Datapaq
Flashing every 5 seconds	Off	Logger has data in memory which has not been downloaded	Download to PC, or perform a PC reset to delete data
2 quick flashes every second	Off	Logger too hot to start logging (after pressing Start button)	Allow logger to cool

The Worldwide Leader in Temperature Profiling



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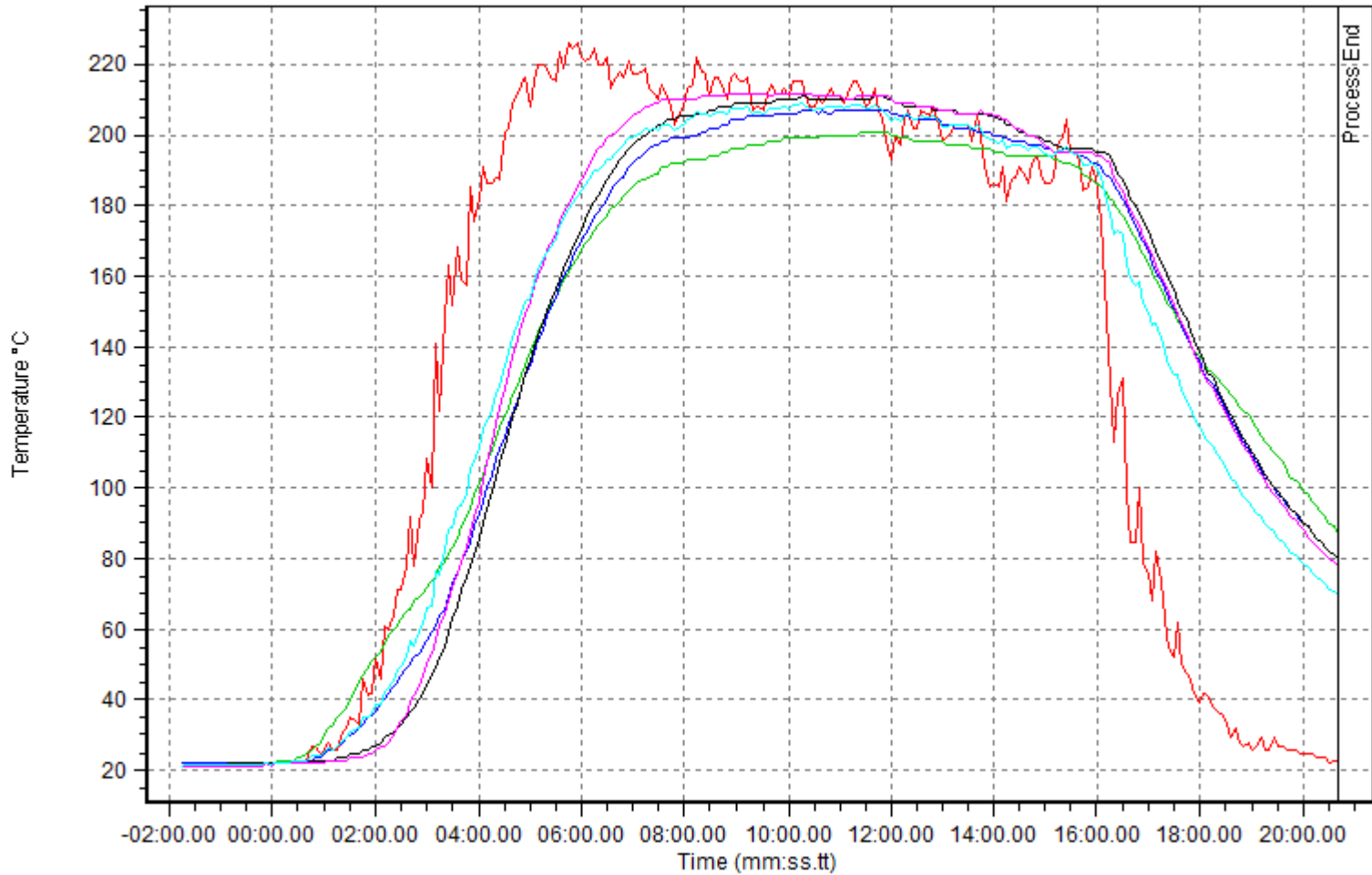
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Datapaq Insight for EasyTrack Report	File: Powder Coat File.paq	Company: Datapaq	
Site: Cambridge	Process: Powder Coating	Product: Garden Chair	Data Collection Details:



Created By	Download
Number of Probes	6
Sample Interval	0:05.00 (mm:ss.tt)
Data Loaded	27/02/2000 14:00:00
Collection Started	23/12/1999 14:04:05
Max. Internal Temp.	27.0 °C
Logger ID	#1000
Operator	Steve Offley
Time Printed	05/05/2011 10:36:04

Notes:

Temperature Profile produced using the Datapaq EasyTrack2 System using the simple to use EasyTrack Software. All analysis test details automatically set-up from the previous run. So simple... Download data, Correct Oven Start, Zoom into Profile data, Print



Probe	Datapaq Value				Maximum / Minimum			
	Min Temp 160.0 Max Temp 220.0°C				Maximum (°C)	Max. Reached (mm:ss.tt)	Minimum (°C)	Min. Reached (mm:ss.tt)
	190.0°C 12:00.00 (mm:ss.tt)	200.0°C 10:00.00 (mm:ss.tt)	210.0°C 09:00.00 (mm:ss.tt)	Datapaq Value				
#1 (°C) AIR HI	10:25.00	08:55.00	05:50.00	131	226.0	05:45.00	21.0	-01:45.00
#2 (°C) Product HI	08:10.00	01:30.00	00:00.00	99	201.0	11:25.00	21.0	-01:45.00
#3 (°C) Product MID - HI	09:15.00	06:00.00	00:00.00	108	207.0	10:15.00	22.0	-01:45.00
#4 (°C) Product MID - MID	09:45.00	07:35.00	02:20.00	115	211.0	10:15.00	21.0	-01:45.00
#5 (°C) Product MID - LO	10:10.00	08:15.00	04:30.00	121	212.0	08:50.00	21.0	-01:45.00
#6 (°C) Product LO	09:45.00	06:50.00	00:00.00	111	208.8	10:15.00	21.2	-01:45.00