

# Furnace Tracker<sup>®</sup>

## Low Height Quench System for Aluminum Solution Treatment and Age Hardening

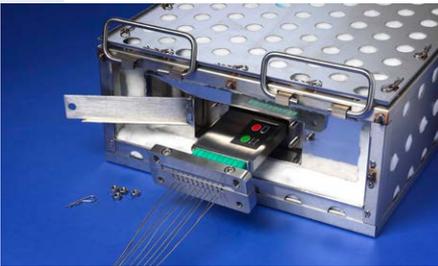
The DATAPAQ<sup>®</sup> line of low height quench systems brings you the latest technology in obtaining accurate and comprehensive temperature profiles of your solution treatment and age hardening furnaces. The DATAPAQ system travels through all three production stages (solution treatment, quench and age hardening), creating a temperature profile for the complete process without any interruptions. Results are downloaded and analyzed at the end of the process. Survey capability for CQI-9 temperature uniformity surveys is included and radio telemetry can be added as an option.

Solution heat treatment is applied to many aluminum products to impart certain properties to the product, such as corrosion resistance and hardness. This is followed by rapid water quenching to maintain the physical properties obtained in the solution treatment. The final stage is hardening the product at a lower temperature.

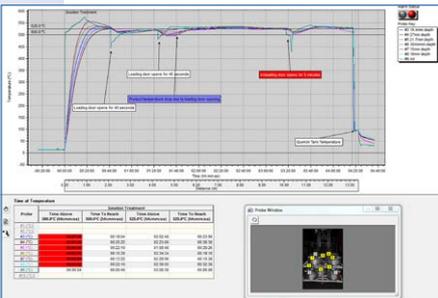
Note: These thermal protection systems can only be used for water quenches and some polymers but must NEVER be used in oil quenches.



Product basket with DPQ system



TB4160 thermal barrier



Insight<sup>™</sup> Software

### SYSTEM FEATURES

- Uses a unique DATAPAQ design to reduce setup time by 75%
- Low height thermal barrier to maximize number of products on the test basket
- Smart logger design for faster sampling in the quench phase, giving clearer cooling slopes
- Instant re-use after trial, if more than one furnace needs profiling
- Available in high temperature versions up to 1200 °C (2192 °F), contact DATAPAQ for more information
- Made of rugged, high grade stainless steel for longevity and to resist distortion
- Up to 20 thermocouples as standard can be extended to 40+ channels

### SYSTEM BENEFITS

- Ensures products achieve solution treatment, quench and age hardening heat treatment specifications
- Detect any hot or cold spots within the product basket and furnace, so corrective action can be taken
- Monitor the cooling slopes in the quench phase for optimum product quality
- CQI-9 and ISO9000 reports generated for your records and to satisfy customer requirements
- Full certification for AMS2750E specifications with a dedicated software package

## TECHNICAL SPECIFICATIONS



DATAPAQ TP3116 data logger



DATAPAQ TP3136 data logger



LHQ thermal barrier



TB4160 thermal barrier

### DATA LOGGER

Model number	TP3116	TP3136
Temperature range	-100 °C to 1370 °C (-148 °F to 2498 °F)	
Connectivity	USB or Bluetooth®	
Max. operating temperature	110 °C (230 °F)	
Memory capacity	3.2 million data points*	3.6 million data points*
Number of channels	10	20
Sampling interval	0.3 sec – 50 min no telemetry 1 sec – 50 min RF telemetry	
Logger accuracy	±0.3 °C (±0.5 °F)	
Battery	Lithium AA replaceable	
Battery life	1 min sample interval 100°C (212 °F) = 500 hours	1 min sample interval 100°C (212 °F) = 450 hours
Thermocouple type	K (other types available)	

\* Note that memory may be limited by battery life restrictions.

### THERMAL BARRIERS

Barrier Model	TB4160	TB4161
Number of channels	10	20
Duration @ 550 °C (1020 °F)	13 hours	
Height	210 mm (8.3 in)	
Width	450 mm (17.7 in)	
Length	590 mm (23.3 in)	
Suitable thermocouples	PA0711 different lengths	
Software	Furnace Tracker Insight	

50 barrier variants are available in different sizes and thermal durations. Contact DATAPAQ for details.

The unique DATAPAQ front plate design reduces setup and removal time by up to 75%.

### TM21 RF TELEMETRY

Immediate feedback for setup and problem solving telemetry profiling affords instant access to live data vital for problem solving, which allows you to assess the effects of changing furnace settings as the process progresses. The user can compare real time product temperatures to process specifications.

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### Worldwide Service

Fluke Process Instruments offers services, including repair and calibration. For more information, contact your local office.

[www.flukeprocessinstruments.com](http://www.flukeprocessinstruments.com)

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