

# Kiln Tracker® Specialty Systems

Monitoring system reveals what is happening to your product during the firing cycle

**Your kiln is the heart of your operation and production. Monitoring the kiln lets you know what is happening to your product during the firing cycle, as this can be critical to the profitability of your business. Gaining a true knowledge of your kiln cannot be obtained by inspection of the finished product alone. Knowing the precise temperature of the ware at any position around the kiln car – at any time during the firing cycle, is essential to the management and control of your process and product quality.**

**DATAPAQ® solutions for kiln profiling are specialized systems based on the kiln type. Tunnel kilns, clayblock firing, roller hearth kilns and hydro kiln solutions powered by Insight™ software for ease-of-use analysis have been the preferred method of profiling for leading manufacturers for many years.**



Kiln Tracker system beneath kiln car monitoring clay blocks



Kiln car equipped with high temperature antenna for RF telemetry



Kiln Tracker system in roller hearth sanitaryware kiln

## SYSTEM FEATURES

- New DATAPAQ TP3 data logger featuring 3.6 Million data points with extended battery life
- High accuracy 10 and 20 channel data loggers  $\pm 0.3^{\circ}\text{C}$  ( $\pm 0.5^{\circ}\text{F}$ )
- Multiple thermocouple types on one logger gives you flexibility on the type of thermocouples to be used
- Multiple systems specifically designed based on kiln and product type
- Easy to use software packages for the operator and advanced analysis for engineers and scientists
- Reliable TM21 radio telemetry provides you with live data from within the process to make changes in real time if necessary
- Specialty hydro kiln solutions for operation under water, dryers and firing zones
- Robust thermocouples for repeatability supplied for specific processes up to  $1600^{\circ}\text{C}$  ( $2912^{\circ}\text{F}$ )

## SYSTEM BENEFITS

- Detects and solves firing problems quickly, reducing rejects/fuel consumption and maximizing profit
- Quickly establishes the correct firing profile for new products, cutting development time
- Builds a database of optimum firing profiles for reference if the process suddenly goes out of specification
- Detects hot /cold spots on the kiln car or “hearth analysis software” pin points the location of the issues
- Instant read-out of heating and cooling rates across the quartz inversion zone for fast analysis heat cycles
- Remove diagnostics for data loggers, reducing service/support time to a minimum

## TECHNICAL SPECIFICATIONS



TB3049 thermal barrier

### CLAY BLOCK FIRING SYSTEM SOLUTIONS – THERMAL BARRIER TB3049

<b>Model number</b>	<b>TB3049</b>
<b>Dimensions H×W×L</b>	100 × 204 × 415 mm (3.9 × 8.0 × 16.3 in)
<b>Weight empty</b>	7.2 kg (15.8 lb)
<b>Weight full</b>	10 kg (22 lb)
<b>Water capacity</b>	2.8 l (0.7 gal)
<b>Temperature duration</b>	@ 150 °C (302 °F) 45 hours @ 200 °C (392 °F) 30 hours @ 250 °C (482 °F) 18 hours



Thermal barrier with “in kiln” antenna

### HYDRO KILN BARRIER TB3043

<b>Model number</b>	<b>TB3043</b>
<b>Dimensions H×W×L</b>	177 × 224 × 269 mm (7 × 8.9 × 10.6 in)
<b>Thermocouple types available</b>	K
<b>Maximum water temperature</b>	<b>65 °C (149 °F)</b>

Note: Not to be used where process has pre-heat/drying section immediately before kiln.  
Contact DATAPAQ for thermal barriers to use where pre-heat/dryers precede the kiln.

### SOLUTIONS FOR ROLLER HEARTH KILN – THERMAL BARRIER



<b>Model number</b>	<b>TB3020</b>	<b>TB3031</b>	<b>TB3036</b>	<b>TB3038</b>
<b>Typical product</b>	<b>Wall tile</b>	<b>Roof tile</b>	<b>Tableware</b>	<b>Sanitaryware</b>
<b>Dimensions</b>				
Height	67 mm (2.6 in)	150 mm (2.6 in)	200 mm (7.9 in)	300 mm (11.8 in)
Height including fiber board batt	77 mm (3 in)	—		
Width	360 mm (14.2 in)	382 mm (15 in)	432 mm (17 in)	512 mm (20.2 in)
Length	638 mm (25.2 in)	610 mm (24 in)	660 mm (26 in)	735 mm (29 in)
<b>Weight</b>				
Empty	10.5 kg (23 lb)	20 kg (44 lb)	24 kg (53 lb)	36.5 kg (80.5 lb)
Full	15 kg (33 lb)	28 kg (62 lb)	32 kg (70.5 lb)	51 kg (112.5 lb)
<b>Water capacity</b>	4.5 l (1.2 US gal)	8 l (2.1 US gal)	8 l (2.1 US gal)	14.5 l (3.8 US gal)
<b>Duration @ max. 1200 °C (2190 °F)</b>				
Average 700 °C (1290 °F)	1 hour	5 hours	7 hours	16 hours
Average 900 °C (1650 °F)	30 min	3.5 hours	5 hours	10 hours

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