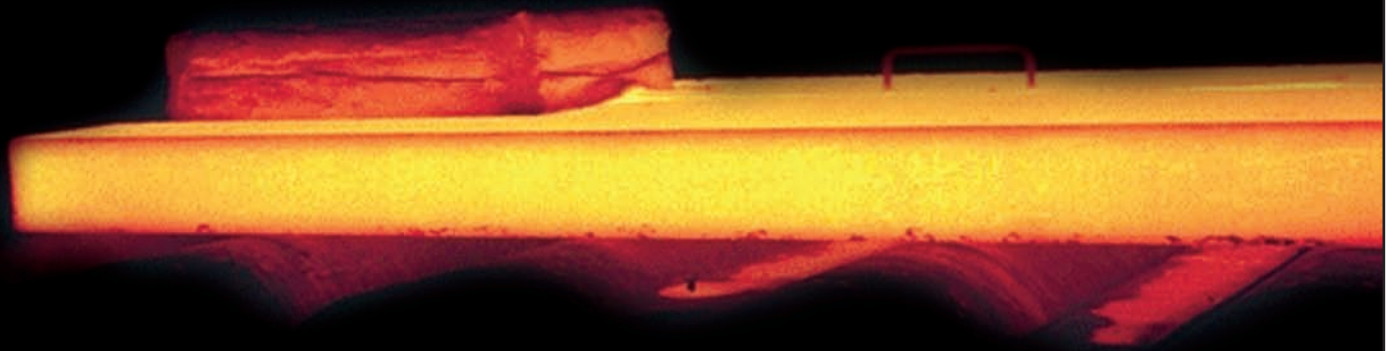


DATAPAQ

for complete
**temperature
surveying**



Furnace Tracker

DATAPAQ *for complete* temperature surveying

Controlling your furnace is critical to the product quality your customers demand. For over twenty years Datapaq has been the product of choice for temperature surveying equipment and analysis software. Known for exceptional quality, it's no surprise that the most recent Datapaq products meet and exceed the highest expectations for ease-of-use, ruggedness and accuracy.

Our latest innovations – Tpaq 21 and Q18 loggers, Survey Software, Floating Plate Technology, and RF Telemetry – enhance the basic Datapaq Furnace Tracker to make the industry's easiest, most cost effective solution for monitoring your heat treating process.



Datapaq Furnace Tracker

The Industry's Most Durable Survey Equipment

With up to 130,000 readings and unsurpassed accuracy, Datapaq data loggers perform without equal: programmable triggers, measurements up to 2500°F, machined casings, and up to 20 channels. Add one of our wide range of rugged stainless steel thermal barriers, and you have a system to withstand the harshest environments. And with Insight Software to interpret the data, the combination is unbeatable. Real-time data acquisition for uniformity surveying is also an option!

Insight™ Software: Easy ... Intuitive ... Powerful The Standard for Profiling Software

Datapaq's Insight takes the data gathered by the data logger, quickly interprets the information, and instantly provides the analysis you need. Wizards guarantee all the profiling steps are completed, reducing training and set-up time.

Use the alarm feature to alert you to potential faults. Simple tables let you 'drill down' for in-depth analysis of any parameter. Compatible with older Datapaq files and most hardware, Insight provides seamless transition to the latest profiling technology.



Data Loggers

Tpaq21

High accuracy AND telemetry available

Featuring 8 or 10 channels, a huge memory capacity, exceptional accuracy and excellent resistance to electrical noise, this data logger is the most stable, durable and flexible logger available. You can even program the logger to change the sampling interval for different segments of your process to get more precise data when you need it.

- 130,000 data readings
- Accuracy to $\pm .5^\circ\text{F}/.3^\circ\text{C}$
- Sampling intervals to 0.1 sec.
- Able to program variable time intervals.

Thermal Barriers

Ultimate Protection and Versatility

Datapaq offers the widest range of thermal barriers for use in a variety of furnaces and harsh environments. From a 1.6 inch high barrier to a heavyweight barrier that can withstand 1475°F for 20 hours, all barriers have high quality stainless steel casings. Most have 'black box' phase-change heat sinks for extra protection, while others rely on phased evaporation combined with ceramic insulation.



The 4000 Series

Rugged Quality and Economical

Two stage protection combines heat sink and microporous insulation.

The 4900 Series

Can Withstand 2000°F

310 stainless steel and Floating Plate Technology™ minimize barrier distortion in harsh environments.

The Slab and Billet Reheat Barriers

Tolerate High Temperatures for Long Durations

A unique evaporative water jacket, surrounded by composite insulation and contained in a high grade alloy steel frame, can protect a data logger up to 2280°F for 8 hours!

Thermal Protection Systems

for Quench and Age Hardening Applications

An internal water tight barrier allows the complete system to pass through a full quench, which renews its protection capability for the ensuing ageing process.

Custom Designed Thermal Barriers

Datapaq designs and manufactures specialty barriers for specific applications including vacuum carburizing, long duration bright annealing and even circular rotating barriers for tube and pipe heat treatment.

Q18 NEW

Twice the datapoints, twice the accuracy and still less than one-half inch high.

- 6 channels
- USB connection
- 108,000 datapoints
- Telemetry ready



System Enhancements

Telemetry

Immediate Feedback for Setup and Problem Solving

Telemetry Profiling affords instant access to data vital for problem solving, and lets you assess the effects of changing furnace settings as the process progresses. The user can compare actual product temperatures to specifications during the process.



NEW Furnace Survey Software Confirms Regulatory Compliance

The newest version of Insight proves compliance to required aerospace and automotive specifications and includes additional features to make conformity easy. Wizards help set up correction factors and save them for easy application to future surveys. The software also confirms both data logger and thermocouple factors have been applied. Calculated Stability feature includes over-shoot alarm and three selectable alerts. Complete documentation is assembled and printed with one click. Password protection, as required, provides added security.

This software also compares controlling specification tolerances with survey results to determine furnace class, easily imports data from clipboard and combines it with an existing paqfile, and automatically calculates the time between the first and last thermocouple entering the lower tolerance band.

Additionally, Insight Software's Uniformity Survey package lets you efficiently survey furnaces quickly, inexpensively, without interrupting production – with complete documentation.



Technical Specifications

Data Logger	TPaq21 - Normal Operating Temp		TPaq21 - High Operating Temp		Datapaq Q18
Part Number	TP2086	TP2016	TP2186	TP2116	DQ1860 / DQ1862
Number of Channels	8	10	8	10	6
Thermocouple Type*	K				K
Temperature Range	-310°F — 2498°F (-190°C — 1370°C)				-328°-2498°F (-200°C—1370°C)
Memory	130,000 datapoints				18,000 readings per channel
Sampling Interval**	0.1 sec — 50 min				0.05 sec to 10 min
Accuracy	± 0.5°F (0.3°C)				± 0.9°F (± 0.5°C)
Resolution	0.2°F — (0.1°C)				0.1°F (0.1°C)
Data collection start	Start button, time, rising or falling temperature				Start/stop buttons, time or temperature trigger
Battery Type	NiMH Rechargeable		VHT Lithium (BP0021)		NiMH Rechargeable
Battery Life***	340 hours (between charges)		250 hours		75 hours
Max Ambient Operating Temperature	158°F (70°C)		230°F (110°C)		185°F (85°C)
Number of LED's	4				4
Dimensions (HxWxL)	0.8" x 3.9" x 7.9" (20mm x 98mm x 200mm)				0.5 x 4.2 x 5.9 / 0.8 x 2.2 x 5.9 inches
Weight	1.1 lbs (0.5 Kg)				0.8 oz (0.3 Kg) / 0.6 oz (0.3 Kg)

* Model number shown is for type K thermocouples only, other types (R,S,N,J) have different model numbers.

** Sampling interval dependant on number of channels selected, and use of telemetry

*** Max. battery life depends on sampling interval, operating temperature and use of RF telemetry

Thermal Barriers*	Datapaq Loggers			Q18	Height (")	Width (")	Length (")	Weight (lb.)	Time at Temperature			
	Low Temp Tpaq21	High Temp Tpaq21							@925°F	@1100°F	@1475°F	@1800°F
TB 2005	—	—	DQ1860		2.7	7.4	14.5	8.8	18 min	15 min	10 min	—
TB 4005 / 4905	X	X	DQ1860	4900 series may be slightly larger	4.9	9.8	19.8	23.2	1.5 hrs	—	1.0 hrs	48 min
TB 4012 / 4912	X	X	DQ1860		6.7	11.7	20.1	44.1	5.0 hrs	4.0 hrs	2.1 hrs	1.75 hrs
TB 4015 / 4915	—	—	DQ1860		3.9	9.7	20	19.8	1.4 hrs	70 min	50 min	40 min
TB 4021	—	—	DQ1860		1.6	6.8	9.0	3.5	8 min	7 min	—	—
TB 4026 / 4926	X	X	DQ1860		9.8	14.1	21.4	68.2	—	8.5 hrs	6.0 hrs	4.5 hrs
TB 4033 / 4933	X	X	DQ1860		11.8	16	23	94.8	—	10.5 hrs	8.5 hrs	7.5 hrs
TB 4056 / 4956	X	X	DQ1860		5.9	10.8	19.8	33	—	2.75 hrs	2 hrs	1.25 hrs
TB 4938	X	X	DQ1860		8.5	11.5	20.6	57.3	—	5.5 hrs	3.75 hrs	2.5 hrs
TB 4975	X	—	DQ1860		15.6	19.7	28.3	169.8	—	13 hrs	11 hrs	9.5 hrs

Aluminum Heat Treat /Quench

TB 4065	—	X	—	12.6	20.2	25.9	86	20 hrs @ 1022°F	—	—	—
TB 4101	—	X	—	8.3	17.7	24	68.4	10 hrs @ 1022°F	—	—	—

Cylindrical /Pipe

								@925°F	@1100°F	@1475°F	@1650°F
TB 4014	X	—	DQ1862	7.9 (dia)	—	14.8	22.1	130 min	110 min	70 min	—
TB 4068	—	—	DQ1862	4.72 (dia)	—	31.3	26.5	3.0 hrs	2.5 hrs	1.7 hrs	1.5 hrs
TB 4083	—	—	DQ1862	5.7 (dia)	—	30.3	32.1	3.3 hrs	2.6 hrs	1.8 hrs	1.5 hrs

Slab /Billet Reheat

TB 4051	—	X	—	11.6	22.6	27	90.4	8 hrs total duration. 3 hr ramp to 2280°F then 5 hrs to 2280°F - 2370°F			
TB 4066	—	X	—	9.8	9.8	21.7	46.3	3.5 hrs total duration at constant 2280°F			

Over 30 standard thermal barriers available. Datapaq has produced over 200 different styles of barriers. Special barriers can be ordered.

*4900 series is 310 stainless steel with floating plate technology.

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 port for logger communication
- CD-ROM drive

Uncompromising Service. Guaranteed.

Trust Datapaq to provide you with the best service possible. No excuses. No unreturned phone calls. Just complete dedication to customer needs. Each system is supported with a full one-year warranty.

An enhanced service agreement is also available, offering you annual inspection and calibration of the complete system, priority repair, overnight logger replacement if needed, telephone support, and free software updates.



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