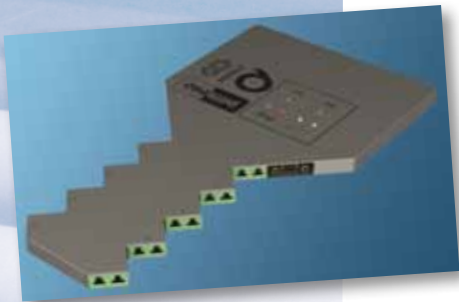# Furnace Tracker® System
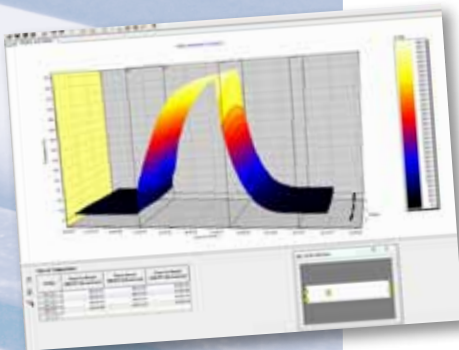## *for Glass Tempering Furnaces*

TB7528 low height thermal barrier

DQ1842 10 channel data logger

(1)

The Datapaq® Furnace Tracker® System for profiling the glass tempering process has been designed using the very latest material technology. It is optimized for use in demanding processes, providing outstanding performance in a very low height package.

For the first time ever, it is now possible to obtain accurate temperatures from up to 10 thermocouples placed on the glass sheet as it passes through the tempering furnace. Using the Datapaq system, engineers can optimize the thermal process to ensure the sheet is perfectly tempered, while avoiding any chance of overheating. The heart of the system is the DQ18 thermocouple datalogger, which is protected from the heat of the furnace by one of two low height thermal barriers. These barriers feature a unique design that includes a ceramic coating applied to all external surfaces to reflect infrared heat and ensure there is no metal contact with the furnace rollers.

SYSTEM BENEFITS

- Accurate temperature measurement for all types of glass, including hard and soft coated low-e glass
- Early identification of furnace problems allows for rapid trouble-shooting
- Optimized cycle times for reduced energy costs
- Reduced overheating ensures best optical properties in the finished sheet
- Quick furnace set-up for different glass types and thicknesses

SYSTEM FEATURES

- Unique ceramic coating minimizes heat absorption
- Easy-to-use software instantly converts raw data to valuable information
- Furnace rollers protected from metal contact by ceramic coating
- Manufactured using low heat input welding technology
- High temperature Nickel Chromium Molybdenum outer case ensures years of use

(1) Photo: Courtesy of Tamglass
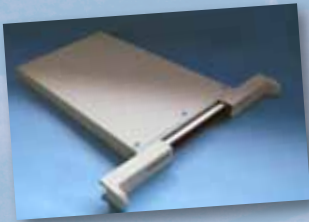
THERMAL BARRIER

Model Number	TB7528	TB7729
Overall Dimensions (L x W x H)	430 mm x 220 mm x 29 mm (17.0" x 8.7" x 1.14")	461 mm x 256 mm x 29 mm (18.15" x 10.24" x 1.14")
Operating Temperature	Maximum operating temperature 700°C (1292°F)	
Thermal Duration	8 minutes at 670°C (1238°F)	
Weight	6 kg	9 kg

DATA LOGGER

Model Number	DQ1840	DQ1842
Temperature range	-150°C to 1370°C (-238°F to 2498°F)	
Maximum operating temperature	85°C (185°F)	
Memory capacity	32,000 readings per channel	18,000 readings per channel
Number of channels	4 type K thermocouples	10 type K thermocouples
Sampling interval	0.05 seconds to 10 minutes	
Accuracy	± 0.5°C (0.9°F)	
Resolution	0.1°C (0.2°F)	
Battery	High temperature NimH rechargeable	

RECOMMENDED THERMOCOUPLES

PA038X

This range of thermocouples, available in lengths from 1 m to 6 m (39" to 236"), is constructed using special limits of error materials that are insulated in a glass fiber insulating sheath. They are each fitted with a miniature high temperature plug for direct connection to the datalogger. The welded tip is exposed to ensure fastest response time and the tip can be cemented to the surface of the glass under test.

PA092X

This range of 1.0 mm (.04") diameter mineral insulated thermocouples is available in lengths from 1 m to 6 m (39" to 236") and features an isolated hot junction and exterior sheath of Nicrobel. They are fitted with a miniature high temperature plug for direct connection to the logger.

INSIGHT™ SOFTWARE FOR FURNACE TRACKER

- Full data analysis and archiving software
- All profile results displayed graphically and numerically in one easy-to-read display
- Wizards guide infrequent users for improved usability
- In-depth analysis, including maximum temperature, time above temperature, maximum temperature ramp rates and maximum delta T across the glass
- Alarms can be set for all analysis values, simplifying the profile checking procedure.
- A customizable hard copy report of the graphical and numerical results is easy to produce
- Data can be readily exported to other Windows® compatible programs

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