

Furnace Tracker[®]

for Aluminum Vacuum Brazing

This innovative thermal barrier is designed specifically for use in aluminum vacuum brazing furnaces by eliminating any out-gassing caused by traditional barriers.

DATAPAQ[®] has been manufacturing in-process temperature profiling systems for more than 30 years; the systems are used in many different types of furnaces in diverse applications worldwide. We have combined our unrivaled experience with the latest innovative technologies to create a thermal barrier solution for use exclusively in vacuum furnaces. The VB1150 makes use of reflective plate technology to protect a TP3 data logger from the high temperatures used in the process hence eliminating the insulation and ensuring there is no possibility of out-gassing from the system.



DATAPAQ TP3 data logger



Thermal barrier VB1150 with TP3 data logger



DATAPAQ TP3 data logger with battery pack

THERMAL BARRIER FEATURES AND BENEFITS

- Unique reflective plate system – eliminates need for insulation and ensures absolutely minimal out-gassing
- Plasma spray ceramic coated metal work eliminates oxidation of the steel – ensures long life performance
- Insulation free – no out-gassing for maximized production load even when profiling
- Quick cool down periods – system is always ready when needed
- Pressure resistant heat sink design tested to 20 bar – ensures consistent performance for years to come

SYSTEM FEATURES AND BENEFITS

- Ten thermocouple inputs – ensure products in all areas of the furnace achieve brazing specifications
- Identifies hot and cold spots within the product load for quick and accurate troubleshooting
- Fast response mineral insulated thermocouples – measure profiles from different parts of the product and ensure that all meet thermal specifications
- Real time radio telemetry – enables users to minimize processing time and maximize throughput with guaranteed braze quality
- Advanced Furnace Insight™ software generates CQI-9 and AMS2750E reports automatically – speeding up the documentation process for records that satisfy your customer's requirements and international standards

TECHNICAL SPECIFICATIONS



Thermal barrier VB1150 with TM21



DATAPAQ TP3 10 channel data logger



Insight Furnace Tracker analysis software

VB1150D REFLECTIVE PLATE VACUUM THERMAL BARRIER

- Designed for use in aluminum vacuum brazing processes
- Recommended data logger: TP3016, TP3019

All metal construction eliminates out-gassing. Thermal protection is provided by nine stainless steel and aluminum reflective plates, combined with a central phase-change heat sink. Two stage protection ensures it will work in long duration vacuum brazing processes with extended cooling periods in air of up to 45 minutes. Outer surface ceramic coated to ensure no oxidation occurs on exiting.

Thermal duration 3.5 hours in vacuum at 600 °C (1112 °F) followed by 45 min forced air cooling*.

Max operating temperature	700 °C (1292 °F)
Suitable heatsink	TB9841A
Dimensions (L×W×H)	545 × 258 × 175 mm (21.45 × 10.15 × 6.9 in)
Weight	27 kg (59.5 lb)

* For processes of longer duration or those with extended periods of N2 injection, please contact your DATAPAQ representative to confirm suitability.

FTI-327-160 the full solution for real time monitoring of the vacuum brazing process

With the brazing process window being so small, frequent real time profiling is required if the production quality and throughput are to be optimized. The DATAPAQ FTI-327-160 brings together all the elements to provide the user with a full solution from the thermocouple through to the analysis software.

Thermal barrier	VB1150D	1 off	Ceramic coated reflective plate thermal barrier with pressure tested heat-sink
Data logger	TP3016	1 off	10 channel type K data logger with radio telemetry
Insight Furnace Tracker analysis software			Fully featured windows compatible data analysis package
Mineral insulated thermocouples	PA0710 family	10 off	Mineral insulated, type K, length 1.0 m, 1.6 mm diameter, Microbell™ sheath; operating range: 0 – 1250 °C (32 – 2282 °F)

SOFTWARE

Fully certified software package for CQI-9 and AMS2750E requirements:

- Powerful analysis; brazing times, maximum / minimum temperatures and cooling slopes
- Statistical analysis for furnace historical trending
- Change software language within Insight
- Logger diagnostics – send diagnostic information from data logger to DATAPAQ service department for quicker response on issues in the field
- Download calibration information from your logger – apply correction factors and print calibration certificates directly from logger memory

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Worldwide Service
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