



A Fluke Company

Furnace Tracker[®]

TB4500 Series...tough barriers for tough conditions

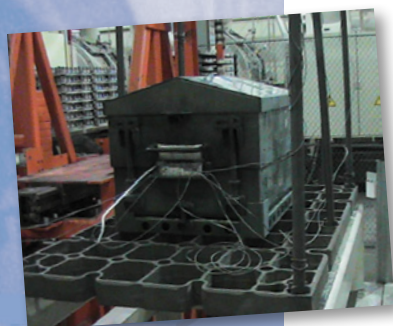
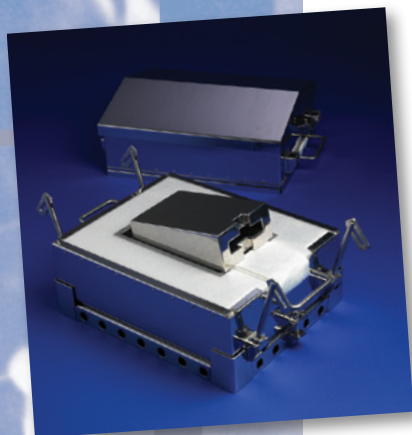
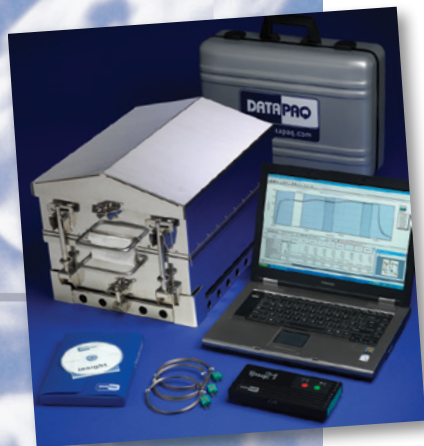
Built with furnace survey operations in mind, the Datapaq[®] 4500 Series thermal barriers have been designed to operate at high temperature, through repeated heating and cooling cycles, giving maximum protection to the data logger.

The design uses a balanced combination of microporous insulation and a phase-change heat sink, to ensure the data logger can operate below a safe temperature (70°C/158°F), even though the external conditions may reach 1000°C (1832°F) or above.

The TB4500 series barrier incorporates several new design features, including additional strengthening at critical points, removable gas quench deflector shields and taper lock catches.

Internally, the thermal barrier incorporates gas flow vents that allows fast pressure equalization as conditions change from vacuum to high pressure within a matter of seconds. The heat sink surrounding the data logger also has re-designed filler seals to resist the 20 bar pressure which is experienced during a gas quench.

Constructed from high grade stainless steel to give maximum protection from carburizing atmospheres, the TB4500 range of barriers is designed to give long term protection to the data logger, even in the toughest of conditions.



SYSTEM FEATURES AND BENEFITS

Taper lock catches ensure easy locking and unlocking of the barrier lid to the base; eliminating the need for threaded catches, which may be prone to high temperature seizure.

Barrier strengthening at 8 points on both lid and base minimizes barrier distortion at critical points, ensuring a tight barrier seal for maximum protection of the data logger.

High quality stainless steel casing for maximum protection in carburizing atmospheres.

Removable **Quench Deflector Shields** to minimize barrier distortion during rapid cooling periods.

Gas flow venting through insulation layers and heat sink holders to instantly equalize pressure during a gas quench to prevent internal barrier damage.

Heat sink pressure lock filler points to prevent damage through pressurizing.

TECHNICAL SPECIFICATIONS

TB4500 SERIES THERMAL BARRIERS

	TB4533	TB4526	TB4538
Height:	304 mm (12 in)	254 mm (10 in)	217 mm (8.5 in)
Width:	410 mm (16 in)	363 mm (14.3 in)	290 mm (11.5 in)
Length:	613 mm (24 in)	570 mm (22.5 in)	522 mm (20.5 in)
Weight including heat sink:	44 kg (97 lbs)	40.5 kg (90 lbs)	30 kg (67 lbs)
Height over quench deflector:	390 mm (15.4 in)	340 mm (13.4 in)	303 mm (12 in)
Width over quench deflector:	422 mm (16.6 in)	370 mm (14.6 in)	303 mm (12 in)
Length over quench deflector:	613 mm (24 in)	571 mm (22.5 in)	522 mm (20.5 in)
Weight including heat sink and quench deflector:	52 kg (115 lbs)	48 kg (106 lbs)	37 kg (82 lbs)

Thermal duration in hours at:

	TB4533	TB4526	TB4538
		(In still air)	
200°C (392°F)	24	22	15
400°C (752°F)	16	11	7.5
600°C (1112°F)	9.5	7.6	4.5
800°C (1472°F)	7.5	5	3.1
1000°C (1832°F)	6.25	4.1	2.1
		(In vacuum)	
200°C (392°F)	48	44	29
400°C (752°F)	32	22	15
600°C (1112°F)	19	15.8	9
800°C (1472°F)	15	11	6.2
1000°C (1832°F)	11	7	3.3

TB9840D heat sink supplied as standard for all high pressure gas quench applications. Features special filler seal to resist pressures up to 20 bar.

Please note: If the barrier is intended to be used for high vacuum levels of 10^{-3} to 10^{-7} Torr, ($1,3 \times 10^{-3}$ to $1,3 \times 10^{-7}$ mbar) contact Datapaq for advice.

The Worldwide Leader in Temperature Profiling



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