J&B Hot Tack Tester

5000MB

The J&B Hot Tack Tester 5000MB is a laboratory instrument for controlled hot tack testing of heat-sealable flexible packaging materials. It is intended for use in research and development, quality control, and process optimization environments to support comparative material evaluation and optimization of heat-sealing conditions.

Measurements can be performed within the scope of recognised hot tack test methods, including ASTM F1921 /F1921M and ISO 11339 (DIN EN ISO 11339), subject to appropriate sample preparation and test configuration.

Scope & Limitations
The instrument is intended as a material testing and evaluation tool. Test results are comparative and indicative in nature and depend on sample preparation, test settings, and calibration status.

The instrument is not intended to replace full-scale production validation or conformity assessment of finished packaging.

Operating Environment & User Profile
The instrument is designed for use in controlled laboratory or technical environments by trained personnel familiar with material testing and heat-sealing processes.

Measurement Parameters & Operating Ranges
The J&B Hot Tack Tester provides controlled and repeatable adjustment of all key parameters influencing hot tack and seal strength measurements.

Measurement Results & Reporting
During each test cycle, the instrument records hot tack force during controlled peeling of the heat seal. Measurement results are displayed graphically and stored digitally for analysis, comparison, and reporting.

Data can be exported for further evaluation and documentation in accordance with applicable test standards such as ASTM F1921 and ISO 11339.

Interpretation of results remains the responsibility of the user and should be performed within the context of applicable standards and internal quality procedures.

Calibration, Verification & Repeatability
Reliable hot tack measurements depend on appropriate calibration and verification of force measurement, temperature control, and motion parameters.

When operated within specified ranges and supported by consistent sample preparation and laboratory practices, the instrument enables repeatable and reproducible comparative measurements.

The instrument can be integrated into laboratory quality systems such as ISO 9001 or ISO/IEC 17025, in accordance with the user's internal procedures.

SPECIFICATIONS

Applicable Test Standards	ASTM F1921 / F1921M; ISO 11339 / DIN EN ISO 11339
Data Export & Reporting	Force versus time curves; tabular results; export to common data formats (e.g. spreadsheet software); reporting aligned with ASTM F1921 and ISO 11339 methodologies
Quality System Integration	Suitable for use within laboratory quality systems such as ISO 9001 and ISO/IEC 17025; supports calibration, verification, traceability, and documented procedures
Sealing Temperature Range	Ambient temperature up to 260°C (500°F)
Sealing Time Range	0.1 s to 20 s
Sealing Pressure Range	0.1 to 2.0 N/mm² (electronically controlled)
Cooling Time Range	0.1 s to 999 s
Peeling Speed Range	4 to 600 mm/s (optional up to 1,000 mm/s)
Force Measurement Range	0 – 45 N (optional up to 225 N)
Sampling Speed	Up to 20 kHz (depending on peeling speed)
Sample Width	Maximum 40 mm (1.6")
Sample Thickness	Maximum 1 mm (0.04")
Minimum Sample Length	Approximately 250 mm (9.8")
Applicable Materials	Heat sealable flexible packaging materials such as PE (LDPE, LLDPE, HDPE), PP, multilayer and laminated structures with heat sealable inner layers, coated flexible paper
Typical Applications	R&D material evaluation, QC/SPC monitoring, optimization of heat sealing parameters, supplier comparison, investigation of seal failures
Operating Environment	Controlled laboratory or technical environments; trained personnel
Utilities	Power supply 90–264 VAC, max. 150 VA; dry air supply 6–8 bar (ISO 8573-1 class 7.4.4)
Physical Characteristics	220 × 287 × 556 mm (W × D × H); weight approx. 14 kg (31 lb)
Options	Infinity sample cutter, infinity sample feeder, PC, extended peel speed, higher force range, alternative sealing bars, rigid samples testing