Automatic Large Area Laboratory Hot Press Laminator 15 Ton 500X500Mm Heated Platens Data Logging Ce Certified

Item Number: XP82

Introduction

Automatic large-area laboratory hot press laminator with 500x500mm heated platens, 15-ton force, programmable PID control, data logging and USB export, CE certified. Designed for composites, PCBs, flexible electronics. Ensure reproducibility in your lamination processes. Ideal for research and pilot production.

Learn More

Application	Description	Key Benefit
PCB Lamination	Bonding multiple layers of printed circuit boards under controlled heat and pressure.	Achieves defect-free lamination with precise alignment, essential for high-reliability electronics.
Flexible Electronics Assembly	Laminating conductive and dielectric layers for flexible displays, sensors, and wearable devices.	Low-pressure capability prevents damage to delicate substrates while ensuring uniform bonding.
Multilayer Composite Fabrication	Manufacturing fiber-reinforced composites with thermoplastic or thermoset matrices.	Programmable profiles optimize resin flow and cure cycle, improving mechanical properties.
Battery Component Lamination	Pressing battery electrodes, separators, and solid-state electrolyte layers.	Controlled pressure and temperature enhance interfacial contact and ionic conductivity.
Polymer Film Pressing & Bonding	Thermal bonding of polymer sheets or films for packaging and barrier applications.	Uniform heating prevents warping and ensures consistent seal integrity.
Research & Development of New Materials	Process development for novel composites, nanomaterials, and thin-film devices.	Data logging and programmability enable systematic process optimization and reproducibility.
Quality Control & Pilot Production	Simulating full-scale production processes on a laboratory scale.	Accurate pressure and temperature control mimic production conditions, reducing scale-up risks.
Laminating Printed Electronics	Encapsulation and bonding of printed electronic circuits on various substrates.	Gentle pressure and precise temperature protect ink structures while achieving reliable lamination.

Parameter	Specification	Notes
Model	XP82	
Platen Size	500×500 mm (19.7×19.7 inch)	Suitable for large-area sheets, panels, and multi-layer laminates
Max Pressure	15 Tons (150 KN)	Hydraulic source, adjustable 0.5 – 15T in closed-loop control
Max Specific Pressure	Approx. 0.6 MPa (6 kg/cm² / 87 psi)	Calculated over full platen area; verify suitability for your material
Temperature Range	0 – 200 ℃	Optimized for medium-low temperature thermosets and thermoplastics
Heating Power	12 kW (2×6,000 W)	Dual-zone heating for rapid, uniform temperature distribution
Temperature Control	Dual platen independent programmable PID	Anti-overshoot, heating rate adjustable; ensures precision thermal management
Daylight (Max Platen Opening)	60 mm	Designed for thin sheets, films, PCB molding, and flat laminates
Pressure Control	8-segment programmable pressure/dwell control	Closed-loop automatic pressure holding and smooth pressure release

Parameter	Specification	Notes
Controller	7-inch color touchscreen, English interface	Real-time temperature and pressure curve display; stores multiple recipes
Data Management	Built-in data logging	Records process data; USB export to CSV for easy archiving and analysis
Power Requirement	AC 3-Phase 400V / 50Hz	Typical operating current ~20A per phase; industrial power connection
Cooling Method	Integrated water cooling channels	Requires external chiller loop; optional chiller available for automated cooling
Host Dimensions	1250×750×1300 mm (W×D×H)	Floor-standing design; sturdy welded frame with leveling feet
Safety Features	Safety interlock door; automatic stop when opened	CE certified; compliant with EU laboratory safety standards
Optional Water Chiller	Price SGD 2,500 (EXW)	Compact, mobile design with casters; automatically controlled via press PLC
Chiller Dimensions	470×670×890 mm (W×D×H)	Space-saving footprint; easy to position beside the press
Chiller Control	Automatic operation during cooling phase	Integrated solenoid valve control; one-key full cycle automation