

25T Manual Hot Press 300 Degree 300X300Mm Dual Heated Platens Lab Press

Item Number: XP12



Introduction

Discover the 25T manual hot press with dual 300x300mm heated platens up to 300°C, built-in water cooling, and a 250kg anti-deflection frame. Delivers precise, uniform heat pressing for polymers, composites, and solid-state batteries.

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Application	Description	Key Benefit
Polymer Sheet Fabrication	Press large-area polymer films with tight thickness tolerance.	Achieves consistent mechanical and optical properties across the sheet.
Rubber Vulcanization	Cure rubber compounds under controlled temperature and pressure.	Optimizes cross-linking density for superior elasticity and durability.
Composite Material Consolidation	Fabricate high-performance composite boards by consolidating layered reinforcements.	Minimizes voids and delamination, yielding high structural integrity.
Solid-State Electrolyte Compaction	Press sensitive electrolyte layers for next-generation batteries under precise force.	Maintains ionic conductivity and interfacial stability without cracking.
Laminate Pressing	Bond multi-layer materials for electronic, aerospace, or structural applications.	Delivers uniform adhesion and flatness, eliminating warpage.
Advanced Battery Research	Compact cathode, anode, or separator materials for testing and production.	Reproducible electrode density and porosity for consistent cell performance.
Powder Metallurgy & Ceramic Hot Pressing	Densify metal or ceramic powders into near-net-shape compacts.	Enhanced densification at lower pressure with reduced porosity.
Quality Control & Material Testing	Prepare standardized specimens for mechanical, thermal, or analytical tests.	Guarantees repeatable sample preparation for reliable QA data.

Parameter	Specification
Model	XP12
Force Capacity	0.0 – 25.0 Metric Tons (0 – 250 kN)
Hydraulic System	Dual-stage manual pump
Platen Daylight (Max Opening)	60 mm
Pressure Accuracy	Standard digital gauge; Optional 0.2% FS high-precision sensor upgrade
Temperature Range	Up to 300.0 °C, dual-platen independent control
Platen Dimensions	300 × 300 mm
Heating Power	3600 W (2 × 1800 W embedded heating elements)
Cooling Configuration	Integrated copper cooling channels with quick-connect ports; Optional CW-5000 industrial chiller
Power Supply	AC 220V – 230V / 50Hz, single-phase

Parameter	Specification
Electrical Connection	Dedicated 16A wall outlet required
Net Weight	~250 kg
Outer Dimensions (W × D × H)	~452 × 470 × 500 mm
Certification	CE Certified
Optional Chiller	CW-5000 Industrial Recirculating Chiller (adds active cooling)
Optional Sensor	0.2% FS Pressure Sensor with digital interface