

15T Manual Hot Press 400Mm Dual Zone Heated Platen For Polymer Composite And Battery Electrolyte Compaction

Item Number: XP14



Introduction

15T manual hot press with 400x400mm heated platens, 5400W dual-zone heating, 300°C, integrated water cooling, 210kg. For large-area polymer films, rubber vulcanization, composite panels, battery electrolytes. Contact us.

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Application	Description	Key Benefit
Thermoplastic Polymer Films	Hot press molding of large-area films for optical, packaging, or flexible electronics applications.	400mm platen and uniform heating ensure flatness and thickness consistency, reducing scrap from edge warping and improving optical clarity.
Rubber Sheet Vulcanization	Production and testing of vulcanized rubber sheets, gaskets, and seals.	Active 300°C dual-zone control with rapid cool-down locks in mechanical properties and accelerates post-cure handling, increasing throughput.
Composite Panel Fabrication	Compression molding of fiber-reinforced polymer panels and multi-layer laminates for aerospace and automotive.	15-ton force combined with wide isothermal platen eliminates voids, achieving high structural integrity and surface finish. Water cooling enables quick demolding.
Solid-State Battery Electrolyte Compaction	Pressing sulfide, oxide, or polymer electrolyte films for next-generation battery cells.	Water cooling prevents thermal degradation of sensitive materials, while precise temperature control ensures optimal ionic conductivity and interfacial contact.
Ceramic Tape Lamination	Laminating green ceramic tapes for MLCCs, LTCC modules, and SOFC components.	Gentle manual hydraulic control avoids cracking fragile layers, and uniform heating prevents delamination, crucial for electronic ceramics.
Rubber-to-Metal Bonding	Hot pressing of rubber-metal composite parts for automotive and industrial sealing.	Consistent clamping pressure and heat distribution across large platen guarantee reliable bonding without over-cure, reducing rejects.
PTFE Sheet Sintering	Sintering and shaping of PTFE sheets and films under controlled pressure and temperature.	Accurate temperature up to 300°C and programmable profiles ensure proper sintering without material degradation.
Research & Development	General material synthesis, sample preparation, and small-batch production in academic and industrial labs.	CE-certified robustness, intuitive touchscreen, and extensive support documentation make it a safe, productive addition to any lab, with the flexibility to handle diverse materials.

Parameter	Specification
Model	XP14
Mechanical & Force	
Clamping Force	0.0 – 15.0 Metric Tons (0 – 150 kN)
Fluid Actuation	Manual Hydraulic Pump with high-torque lever
Platen Daylight (Vertical Clearance)	50 mm
Platen Dimensions	400 × 400 mm
Frame Construction	4-column deflection-resistant steel gantry
Thermal & Cooling	
Temperature Range	0.0 °C to 300.0 °C (dual-zone, independent PID control)

Parameter	Specification
Heating Power	5400 W (2 × 2700 W embedded heaters)
HMI Controller	7-inch industrial touchscreen
Platen Cooling	Integrated water channels with quick-release fittings; compatible with external chiller/tap water
Recommended External Chiller	Recirculating chiller (optional, not included)
Electrical	
Power Supply	AC 220 V – 230 V / 50 Hz, Single-Phase
Current Draw	Up to 24.5 A
Power Connection Requirement	Dedicated 32 A circuit breaker or CEE 32 A industrial socket; cable cross-section ≥ 4 mm²
Physical & Compliance	
Net Weight	210 kg
Outer Dimensions (W × D × H)	580 × 550 × 500 mm
Certification	CE Certified