40 Ton Automatic Hydraulic Hot Press With Dual Programmable Temperature Control

Item Number: XP68

Introduction

High-performance automatic hydraulic hot press with 40-ton force, 500x500mm dual heated platens, independent programmable temperature control up to 300°C, CE certified. Ideal for material research, lamination, and molding applications. Request a quote for your custom solution.

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Application	Description	Key Benefit
XRF Pellet Preparation	Presses powdered samples into cohesive pellets for X-ray fluorescence analysis under controlled pressure and temperature.	Eliminates binder variability; produces flat, crack-free pellets for accurate elemental quantification.
Battery Electrode Lamination	Bonds electrode films to current collectors using precise heat and pressure cycles, replicating production-line conditions at lab scale.	Uniform adhesion and reduced interfacial resistance for consistent battery performance testing.
Thermoplastic Molding	Melts and forms thermoplastic sheets or granules into thin films or test specimens using programmed temperature and force.	Achieves reproducible thickness and mechanical properties without material degradation.
Composite Material Fabrication	Consolidates fiber-reinforced polymer prepregs into cured laminates under vacuum or ambient conditions.	Ensures void-free structure and tailored fiber volume fractions for mechanical testing.
Hot Embossing	Transfers micro- or nano-scale patterns from a mold to a polymer substrate via controlled heat and pressure.	High-fidelity replication for microfluidics, optical components, and MEMS prototyping.
Quality Control Test Plates	Produces standardized test plaques from raw materials to evaluate color, hardness, or tensile strength per ASTM/ISO methods.	Reliable sample geometry and surface finish for consistent QC data.
Powder Compaction for Ceramics	Compacts ceramic powders into green bodies prior to sintering, using programmable pressure dwells to minimize density gradients.	Higher green strength and reduced warpage during subsequent firing.
Polymer Film Melting	Quickly melts polymer films between heated platens to create uniform thickness films for barrier or optical testing.	Rapid cycle times and precise thickness control, ideal for formulation screening.

Parameter	Specification
Model	XP68
Max. Pressure	≤ 40 T (400 KN) — Programmable pressure/dwell control
Platen Size	500 × 500 mm (Dual heated platens)
Daylight (Platen Distance)	60 mm (Please confirm mold thickness compatibility)
Working Temperature Range	RT to 300℃ (≤ 300℃)
Heating Control	Dual platens, independent programmable — supports temperature ramp and slope setting
Rated Heating Power	≤ 12 kW
Pressure Source	Hydraulic top-down press (Hydraulic oil not included; must be added before use)
Controller	7" color touchscreen — Real-time data display and program storage
Safety Protection	Safety gate with auto-stop interlock (CE compliant)

Parameter	Specification
Power Supply	3-phase AC 380V-415V, 50Hz (Compatible with German/European industrial grids)
Certifications	CE Certified (Certificate and English manual included)