

40 Ton Split Type Automatic Hot Press With 400X400Mm Dual Heated Platens And Pid Control

Item Number: XP36



Introduction

40 ton split-type automatic laboratory hot press with 400x400mm dual independently heated platens. PID temperature control up to 300°C, precision automatic pressure control, safety split design. Ideal for polymer composites battery electrode research and more. CE certified. Request a quote.

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Application	Description	Key Benefit
Polymer & Plastic Compression Molding	Precise hot pressing of thermoplastics, thermosets, and elastomers for sample coupons, film preparation, and rheological testing.	Uniform heat across 400×400 mm area ensures consistent material properties and flatness.
Composite Lamination & Curing	Lay-up and curing of carbon fiber, glass fiber, and prepreg composites for aerospace and automotive research.	Independent platen temperature control eliminates hotspots, enhancing interlaminar strength.
Battery Electrode & Electrolyte Processing	Hot pressing of battery electrodes, solid-state electrolytes, and separator films for next-generation energy storage devices.	High force up to 40 T compacts materials to target density without damaging sensitive layers.
Thin Film & Membrane Embossing	Hot embossing of micro/nano-patterns on polymer films, membranes, and functional coatings.	PID-controlled incremental pressure and temperature enable replication fidelity at micron scale.
Ceramic Powder Compaction	Uniaxial pressing of ceramic powders to create sputtering targets, ferrite cores, or pre-sintered preforms.	Even pressure distribution prevents density gradients that lead to warping or cracking.
Research & Teaching Laboratories	Hands-on demonstration of compression molding principles, material behavior under heat and pressure, and process parameter studies.	Manual model's simplicity and durability make it accessible for educational settings with limited budgets.
Adhesive Bonding & Lamination	Controlled heat and pressure curing of adhesive films, bonding of multi-layer structures, and vacuum-free lamination.	Customizable pressure holding times and precise temperature avoid over-cure and degradation.

Parameter	XP36-A (Automatic)	XP36-M (Manual)	Notes
Max. Pressure	≤ 40 T	0 - 40 T	Automatic: program-controlled; Manual: manual pump
Platen Size	400 × 400 mm	400 × 400 mm	-
Working Temperature	Room temp - 300 °C	Room temp - 300 °C	-
Heating Method	Dual platen independent electric heating	Dual platen independent electric heating	-
Temperature Control	PID programmable controller	Intelligent dual digital display controller	Automatic provides programmable multi-step profiles
Pressure Control	PID automatic closed-loop control	Manual hydraulic valve + mechanical pressure gauge	-
Heating Power	7,200 W (2 × 3,600 W)	6,000 W (2 × 3,000 W)	-
Max. Daylight	180 mm	60 mm (customizable)	Manual's smaller daylight due to manual hydraulic ram; customization available
Piston Stroke	60 mm	50 mm	-

Parameter	XP36-A (Automatic)	XP36-M (Manual)	Notes
Cooling Method	Circulating water cooling (chiller optional)	Circulating water cooling (chiller optional)	External chiller accelerates cooling and improves throughput
Control Interface	7" HD industrial touchscreen	Physical buttons and instrument panel	Automatic: programmable multi-stage control; Manual: simple setpoints
Power Supply	AC 220 V, 50 Hz, single phase	AC 380 V, 50 Hz, three phase	Ensure correct voltage is selected at ordering
Dimensions (L×W×H)	850 × 480 × 650 mm	850 × 480 × 650 mm	-
Net Weight	Approx. 480 kg	Approx. 550 kg	Weight may vary based on configuration
Certification	CE certified	CE (optional)	Standard for automatic, optional for manual to meet export needs