

Heavy-Duty 40-Ton Split-Type Automatic Hot Press With 300X300Mm Heated Platens And Programmable Pid Control

Item Number: XP39



Introduction

Heavy-duty 40-ton split-type automatic hot press with 300x300mm platens, independent dual PID temperature control, multi-stage pressing cycles, 40-ton hydraulic pressure, CE-certified for laboratory pressing, powder metallurgy, battery research, and ceramic sintering

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Application	Description	Key Benefit
Advanced Ceramic Hot-Press Sintering	Densification of alumina, zirconia, silicon nitride, and boron carbide powders into high-performance components. Uniform temperature field prevents differential densification and grain growth.	Near-theoretical density with homogeneous microstructure and minimal internal stresses.
Powder Metallurgy Compaction	Pre-sintering compaction of iron, stainless steel, tungsten carbide, and titanium alloy powders into green billets with high green strength.	Maximizes green density, reducing sintering shrinkage and enabling tighter dimensional tolerances.
Solid-State Battery Electrode Lamination	Hot pressing of solid electrolyte sheets and composite electrodes to minimize interfacial resistance and prevent delamination in multi-layer cells.	Creates high-quality, defect-free interfaces for high ionic conductivity and long cycle life.
High-Performance Polymer Molding and Film Lamination	Compression molding and lamination of PTFE, PEEK, PVDF, and multi-layer films for fuel cell components or flexible electronics.	Eliminates voids and ensures dimensional stability and consistent layer adhesion.
Composite Material Consolidation	Hot pressing of fiber-reinforced thermoplastic or thermoset prepregs for aerospace panels and automotive parts. Programmable pressure profile prevents fiber washout and laminates voids.	Produces low-porosity, high-strength laminates with predictable mechanical properties.
Electronic Packaging and Encapsulation	Lamination of encapsulant films onto printed circuit boards or semiconductor substrates under precise temperature and pressure.	Achieves void-free encapsulation with excellent adhesion, improving device reliability.
Metal Matrix Composite (MMC) Processing	Hot compaction of aluminum, copper, or magnesium matrix composites reinforced with ceramic particles or fibers.	Enhances homogeneity and mechanical properties for weight-critical applications.
Tire and Rubber Specimen Preparation	Compression vulcanization of rubber compounds into test sheets or small molded items for mechanical property evaluation.	Produces consistent, defect-free samples meeting ASTM and ISO testing standards.

Specification	Value
Model	XP39
Type	Split-type Automatic Hot Press
Pressure Range	0 - 40 tons
Platen Size	300 × 300 mm
Max. Working Temperature	0 - 300 °C
Heating Power	4,800 W (2 × 2,400 W)
Temperature Control	PID intelligent programmable, independent dual-channel
Pressure Control	PID automatic program hold/constant pressure, multi-stage with timed auto-release

Specification	Value
Piston Stroke	50 mm
Max. Daylight Opening	150 mm
Cooling Method	Circulating water cooling (external chiller optional); quick-connect couplings provided
Control Interface	7-inch high-resolution industrial touchscreen
Power Supply	AC 220V / 50Hz, single phase (21.8A max, requires air circuit breaker)
Dimensions (approx.)	800 × 440 × 620 mm (to be confirmed)
Net Weight (approx.)	420 kg (to be confirmed)
Certification	CE