Automatic High Pressure Hot Press 90 Ton 300X300Mm Platens 0.2% Pressure Accuracy 200C

Item Number: XP65

Introduction

Discover the automatic high-pressure hot press delivering 90 tons of force on 300×300 mm platens with 0.2% pressure accuracy and precise PID temperature control up to 200°C, ideal for battery research, semiconductor packaging, polymer molding, and composite densification.

Learn More

Application	Description	Key Benefit
Solid-State Battery Lamination	Compacts electrode and solid electrolyte layers under high pressure to reduce interfacial resistance, improving ionic conductivity and cell performance. Multi-step pressure profiles allow optimized lamination cycles without damaging delicate materials.	Achieves defect-free interfaces with 90-ton force.
Semiconductor Packaging	Performs precision thermal compression bonding of large-format substrates, dies, or encapsulation materials at controlled temperatures up to 200°C. Uniform pressure ensures reliable, void-free bonds, critical for advanced packaging technologies.	Consistent bond integrity and planarity.
Polymer Molding	Molds and cures engineering plastics, PTFE, polyethylene, and rubber sheets under high clamp force and constant heat. Programmable cycles ensure repeatable part quality and dimensional accuracy.	High-density, dimensionally accurate parts.
Composite Densification	Consolidates fiber-reinforced composites, prepregs, and laminates using multi-stage heat and pressure profiles to eliminate voids and increase fiber volume fraction.	Enhanced mechanical strength and durability.
Ceramic Substrate Lamination	Presses multilayer ceramic green tapes for LTCC/HTCC modules, ensuring uniform thickness and adhesion. The even pressure distribution prevents cracking and delamination.	High-yield production of reliable substrates.
Fuel Cell MEA Assembly	Hot presses membrane electrode assemblies for PEM fuel cells, bonding the catalyst layers to the membrane under precise temperature and pressure to optimize the three-phase boundary.	Optimized performance and durability.
Sputtering Target Bonding	Bonds sputtering targets to backing plates using high pressure and heat, ensuring a strong, conductive interface that withstands thermal cycling.	Reliable bond without voids or hot spots.
Adhesive Lamination	Cures structural adhesives between dissimilar materials, such as metal and glass, for optical or aerospace components, using controlled force and heat.	Strong, optically clear bonds with no bubbles.

Parameter	Specification	Remarks
Model	XP65-90T3030	High-pressure automatic hot press
Max Force	0 - 90 Tons (900 kN)	PIDS closed-loop hydraulic control for stable force application
Pressure Sensor Accuracy	±0.2%	High-precision sensor ensures minimal pressure drift
Working Temperature	0 - 200 °C (Max 200°C)	Optimized for thermal symmetry and flatness up to 200°C
Temperature Control	PID programmable controller	7-inch color touchscreen interface for multi-step programming
Heating Power	3500 W	Efficient heating with low thermal loss
Platen Size	300 × 300 mm	Suitable for samples up to 300×300 mm
Max Surface Pressure	~100 Bar (10 MPa)	Achieved at 90 tons across full platen area
Power Supply	AC 220V / 50Hz (single phase)	Requires dedicated 16A circuit for safe operation

Parameter	Specification	Remarks
Dimensions (W×D×H)	600 × 520 × 650 mm	Compact benchtop footprint
Weight	350 kg	Heavy-duty construction for rigidity; ensure bench supports