Manual Hot Press With 7 Inch Touchscreen And Narrow Footprint

Item Number: XP20

Introduction

This compact manual hot press delivers 10-ton force on 150 mm platens with a space-saving 290 mm width and intuitive 7-inch touchscreen programming. Ideal for battery research, polymer films, and solid-state electrolyte pressing with precise temperature and pressure control.

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Application	Description	Key Benefit
Battery Electrode Calendering	Pressing cathode and anode active materials onto metal current collectors for coin and pouch cells.	Uniform thickness and density with precise pressure control for reproducible cell performance.
Solid-State Electrolyte Pelletizing	Compacting ceramic or polymer electrolyte powders into dense pellets under controlled heat and pressure.	Achieves high ionic conductivity and mechanical integrity for next-generation solid-state batteries.
Polymer Film Molding	Producing sub-100 µm films using the dedicated square mold kit for thermoplastic barrier or membrane research.	Consistent thickness down to 100 microns with minimal variation across the entire platen area.
Composite Material Lamination	Consolidating multi-layer stacks of fiber-reinforced polymers, hybrid laminates, or flexible electronics.	Even pressure distribution prevents delamination and void formation in layered structures.
High-Temperature Sintering of Ceramics	Sintering ceramic or metal powder compacts using the optional 300 °C heating module with multi-step profiles.	Accelerates diffusion bonding while maintaining precise temperature gradients for high-density parts.
Glovebox Integration for Air-Sensitive Materials	Processing lithium metal, sulfide electrolytes, or oxygen-sensitive compounds entirely within an inert atmosphere.	Narrow 290 mm width allows passage through standard 12-inch antechamber ports without disassembly.
Quality Control Sample Preparation	Fabricating standardized test specimens for tensile, flexural, or impact testing per ASTM/ISO methods.	Delivers consistent specimen dimensions and properties, supporting reliable and repeatable test results.

Parameter	Value
Max Force	0 – 10.0 Tons (0 – 100 kN)
Platen Size	150 × 150 mm
Control Panel	7-inch Programmable Touchscreen
Heating Style	Embedded Heater Dual-Platen Independent Heat
Cooling Loop	Built-in Water-Cooling Channels
Certifications	CE Certified
Chassis Dimensions (Standard)	290 × 280 × 390 mm
Net Weight	75 kg

Module	Standard (XP20)	Performance (XP20-P)	Engineering Notes
Force Limit	0 – 10.0 Tons (0-100 kN)	0 – 5.0 Tons (0-50 kN) with enhanced heater array for rapid heating	5T variant optimized for high-temperature, fast-ramping special materials.

Module	Standard (XP20)	Performance (XP20-P)	Engineering Notes
Platen Daylight	50 mm	60 mm or 65 mm	Upgraded opening accommodates thicker stainless steel or high-pressure molds.
Chassis Options	290 × 280 × 390 mm, 75 kg	280 × 240 × 380 mm, 80 kg (classic 2024 layout)	2025 narrow design excels in glovebox use; 2024 version suits traditional benchtop setups.
Electrical Standard	AC 220V-230V / 50Hz	AC 110V/60Hz (North America), AC 220V/60Hz (Korea)	All variants work with standard single-phase laboratory power.