

Laboratory 30 Ton Manual Hot Press With 200X200Mm Heated Platens And Touchscreen Controller

Item Number: XP08



Introduction

Manual 30-ton laboratory hot press with 200x200mm heated platens, 300°C max, 2800W dual-zone heating, 7-inch programmable touchscreen, and custom low-profile die, designed for advanced materials, battery research, and polymer films, delivering precise pressure and temperature control.

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Application	Description	Key Benefit
Solid-State Battery Electrode Compaction	Hot pressing sulfide or oxide electrolyte powders into dense pellets for conductivity testing and cell assembly.	Achieves high relative density and uniform microstructure critical for ionic conductivity.
Advanced Ceramic Sintering	Compacting ceramic powders (alumina, zirconia, LTCC) under heat to produce dense substrates or structural components.	High pressure and precise temperature control eliminate porosity and enhance mechanical strength.
High-Performance Polymer Film Lamination	Laminating multi-layer films or consolidating thermoplastic composites (e.g., PVDF, PTFE) under controlled heat and pressure.	Uniform heating and pressure prevent delamination and ensure consistent film thickness.
Powder Metallurgy Research	Consolidating metal powders (Ti, Cu, Al alloys) for prototyping lightweight components or studying sintering behavior.	30-ton capacity achieves green densities suitable for subsequent sintering processes.
Glovebox-Compatible Battery Material Processing	Hot pressing moisture-sensitive battery materials inside an inert atmosphere glovebox with the press's compact design.	Low-profile die and robust construction facilitate integration with glovebox workflows.
Research & Development Labs	General-purpose hot pressing for materials science, enabling reproducible sample preparation for analysis (XRD, SEM).	Digital data logging ensures traceability and repeatability across experiments.

Parameter	Specification
Model	XP08 (Factory Model: PCY-30T2020)
Clamping Capacity	0.0 – 30.0 Metric Tons (0 – 300 kN)
Actuation	Manual Hydraulic Lever
Platen Daylight	50 mm
Included Pellet Die	Custom Low-Profile $\phi 50$ mm Tool Steel Die ($H \leq 42$ mm)

Parameter	Specification
Temperature Range	0.0°C to 300.0°C
Heated Platen Dimensions	200 × 200 mm
Thermal Power	2800 W (Dual embedded independent heating units)
Heating Method	Embedded heaters, dual-zone independent PID closed-loop control
Cooling Method	Integrated water-cooling channels with quick-connect fittings
HMI Controller	7-inch programmable temperature and pressure touchscreen

Parameter	Specification
Power Requirements	AC 220V / 50Hz (Single-phase, requires dedicated 16A outlet)

Parameter	Specification
Reference Weight	160 kg
Safety & Compliance	CE Certified
Trade Terms	EXW (Factory delivery, excluding tax and shipping)