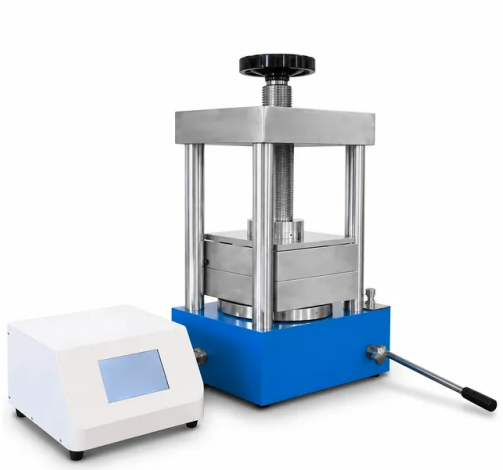
Manual Laboratory Hot Press 10 Ton 300X300Mm Water Cooling

Item Number: XP58



Introduction

KINTEK manual laboratory hot press delivers precise 10-ton pressure with 300x300mm heated platens and integrated water cooling for fast temperature cycling. Ideal for composite molding, polymer films, battery lamination, and advanced research applications. Robust construction ensures reliable performance.

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Application	Description	Key Benefit
Composite Material Molding	Pressing fiber-reinforced prepregs (e.g., glass fiber, carbon fiber) into flat panels or shapes under controlled temperature and pressure.	Uniform heating and large platen area ensure defect-free consolidation with minimal voids.
Polymer Film Production	Fabricating thin films from thermoplastic resins (PE, PP, specialty polymers) by hot pressing between platens to achieve desired thickness.	Achieves consistent thickness and surface finish across dimensions up to 300×300 mm.
Battery Component Lamination	Laminating pouch cells, fuel cell membrane electrode assemblies (MEAs), or electrode stacks with precise thermal and mechanical control.	Water cooling enables rapid quenching, preserving delicate electrochemical interfaces and layer integrity.
Paper and Textile Laminates	Bonding paper, non-woven fabrics, or textiles under heat and pressure for research on composite materials or packaging substrates.	Even pressure distribution prevents wrinkles and delamination, yielding uniform laminates.
Pharmaceutical Tablet Pressing	Compacting powders into solid dosage forms in a lab setting for small-scale R&D or quality control.	Manual hydraulic control offers direct feel for tablet hardness optimization.
Ceramic Powder Compaction	Uniaxially pressing ceramic powders into green bodies prior to sintering, requiring uniform density distribution.	Large platens and stable pressure ensure homogeneous compaction, minimizing defects.
Adhesive Bonding Research	Curing adhesive films or evaluating bond strength under controlled heat and pressure for aerospace or automotive applications.	Precise temperature and pressure profiles allow accurate simulation of industrial conditions.
Educational & Research Institutions	Serving as a versatile platform for teaching materials processing fundamentals or conducting experimental studies.	Simple, robust design and low maintenance make it ideal for shared lab environments.

Parameter	Specification
Model	XP58
Operation	Manual Hydraulic
Max Pressure	0 - 10 Tons (100 kN)
Temperature Range	0 - 300 °C
Total Heating Power	3600 W
Platen Size	300 × 300 mm
Platen Opening	100 mm
Cooling Method	Integrated water cooling channels, requires external circulating water system
Power Supply	220V / 50Hz (Single Phase, ~16.4 A, requires industrial socket)
Dimensions (W×D×H)	700 × 400 × 600 mm

Parameter	Specification
Net Weight	260 kg