

30 Ton Manual Hot Press With Water Cooling For Laboratory Applications

Item Number: XP52



Introduction

KINTEK's manual hot press offers 30 tons pressure, heating to 300°C, and water cooling. Designed for battery research, thermoplastics, and composite molding. Precise PID control, 100x100 mm heated platens, and adjustable 0-150 mm gap ensure quality sample preparation.

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Application	Description	Key Benefit
Battery Electrode Pressing	Calendering or laminating electrode films for lithium-ion and solid-state batteries under controlled heat and pressure.	Achieves uniform density and thickness for improved battery performance.
Polymer Film Molding	Compression molding of thermoplastic films, plaques, and sheets for tensile testing or optical analysis.	Precise temperature control prevents material degradation.
Composite Lamination	Fabrication of carbon fiber or glass fiber reinforced polymer laminates for structural testing.	Uniform pressure distribution ensures void-free laminates.
Sample Preparation for Spectroscopy	Producing KBr pellets or fused beads for XRF analysis with consistent thickness and surface finish.	Reliable sample consistency for accurate analytical results.
Ceramic Powder Compaction	Cold or warm pressing of ceramic green bodies for sintering trials in materials research.	High compaction force yields dense, handleable green parts.
Pharmaceutical Tablet Development	Small-batch compression of powder blends into tablets for formulation studies using special dies.	Adjustable pressure enables optimization of tablet hardness and dissolution.
Plastic Welding Research	Joining thermoplastic components through heat and pressure for studying weld strength and process parameters.	Consistent heating and pressure ensure reproducible weld quality.
Rubber Vulcanization	Curing rubber compounds in molds to evaluate material properties and optimize crosslinking conditions.	Even temperature distribution prevents under-cure or over-cure.

Parameter	Value
Model	XP52
Working Temperature Range	0-300 °C
Heating Power	600 W
Platen Size	100 × 100 mm
Platen Gap Adjustment	0-150 mm
Working Pressure	0-30 Tons
Cooling Method	Circulating Water Cooling
Power Supply	AC 220 V, 50 Hz
Dimensions (L × W × H)	245 × 175 × 500 mm
Weight	60 kg