

Fully Automatic Heated Hydraulic Lab Press For Materials Sintering And Sample Preparation

Item Number: KT-ZD2



Introduction

This fully automatic heated hydraulic lab press provides precise temperature and pressure control up to 25 tons. Engineered for material science, sintering, and sample preparation, it features programmable multi-stage profiles, advanced dual-layer safety guards, and rapid water-cooling systems.

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Application	Description	Key Benefit
Advanced Battery Research	Compacting solid-state electrolyte powders and pressing active materials onto current collectors.	Ensures uniform density and optimized contact interfaces for electrochemical testing.
Sintered Ceramic Materials	Subjecting advanced technical ceramics to high-pressure thermal compaction to reduce porosity.	Yields high-hardness, low-defect specimens suitable for structural and aerospace components.
Polymer Thin Film Synthesis	Hot embossing, laminating, and melting polymers between flat platens under controlled force.	Delivers uniform thickness and optical clarity in polymer sheets for chemical analysis.
Spectroscopy Sample Prep	Pressing high-transparency pellets for FTIR and XRF diagnostic systems using specialized dies.	Eliminates manual pressing variation, providing highly consistent pellet transmission.
Diamond Tools & Metallurgy	Consolidating ultra-hard metal matrix powders and diamond grit under intense heat and pressure.	Maximizes mechanical bonding and abrasive longevity of diamond cutting tools.
Pharmaceutical Formulation	Compressing active pharmaceutical ingredients (APIs) and binders for tablet dissolution testing.	Replicates industrial tablet manufacturing scales with high precision and low material waste.

Parameter	KT-ZD2-300	KT-ZD2-500	KT-ZD2-800
Heating Temperature Range	Room Temperature (RT) to 300°C	Room Temperature (RT) to 500°C	Room Temperature (RT) to 800°C
Heating Power Rating	2.2 kW	3.4 kW	6.0 kW
Maximum Pressure Capacity	25 Tons	25 Tons	25 Tons
Pressure Range Range	0.01 to 25 T	0.01 to 25 T	0.01 to 25 T
Pressure Control Accuracy	0.01 T	0.01 T	0.01 T
Heated Plate Dimensions	180 x 180 mm	180 x 180 mm	180 x 180 mm
Working Space Height	210 x 65 mm	210 x 65 mm	210 x 65 mm
Control Interface Type	7-Inch Color Touch Screen	7-Inch Color Touch Screen	7-Inch Color Touch Screen
Control Buttons Life	> 100,000 cycles	> 100,000 cycles	> 100,000 cycles
Safety Protection System	Acrylic door interlock + E-stop	Acrylic door interlock + E-stop	Acrylic door interlock + E-stop
Data Visualization	Real-time curve graph (USB export)	Real-time curve graph (USB export)	Real-time curve graph (USB export)
Process Control Capacity	18 programmable segments	18 programmable segments	18 programmable segments
Cooling Method	Rapid water cooling loop	Rapid water cooling loop	Rapid water cooling loop

Parameter	KT-ZD2-300	KT-ZD2-500	KT-ZD2-800
Power Configuration	220V/110V Customizable	220V/110V Customizable	220V/110V Customizable
Physical Dimensions (WxDxH)	480 x 480 x 750 mm	480 x 480 x 750 mm	480 x 480 x 750 mm
System Net Weight	200 kg	200 kg	200 kg
Shipping Weight (Gross)	230 kg	230 kg	230 kg