Automatic Laboratory Hot Press Dual Plate Heating Sintering Compaction System 120X120Mm

Item Number: KT-AHQ

Introduction

This automatic laboratory hot press combines high-precision hydraulic compaction with independent dual-plate heating up to 300°C, offering programmable multi-stage control and rapid water cooling to maximize efficiency and sample consistency in demanding research and industrial laboratory environments.

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Application	Description	Key Benefit
Battery Energy Research	Fabricating solid-state electrolyte discs and lithium battery pouch cell components under controlled temperature and pressure.	Maximizes electrochemical density and conductivity, ensuring optimal battery cell testing results.
Pharmaceutical Testing	Compacting pharmaceutical powders, excipients, and active ingredients into precise tablets or test specimens.	Ensures exact dose formulation and excellent structural consistency for dissolution testing.
Advanced Ceramics	Sintering and consolidating electro-ceramics, oxide powders, and structural ceramic materials under high thermal pressure.	Eliminates porosity and internal voids, delivering high-density parts with superior mechanical strength.
Catalyst Engineering	Pressing catalyst powder mixtures into highly active, durable catalytic pellets or substrates.	Optimizes active surface area while ensuring long-term mechanical stability in reactor environments.
Spectroscopic Sample Prep	Preparing highly uniform, ultra-thin polymer films or optical discs for FTIR and fluorescence spectrophotometry.	Eliminates thickness variations, improving the accuracy and repeatability of analytical results.
Semiconductor Packaging	Laminating electronic substrates, thermal interface materials, and semiconductor mold compounds under precise force.	Prevents delamination and ensures uniform thermal dissipation pathways across components.

Specification Parameter	Technical Data (Model: KT-AHQ)
Pressing Plate Dimensions	120 mm x 120 mm
Maximum Temperature	300°C (Independent Upper & Lower Plate Control)
Temperature Control Method	Dual-Zone PID Intelligent Closed-Loop Control
Temperature Accuracy	±1°C
Maximum Pressing Force	20 Tons (Customizable options available)
Cooling Mechanism	Integrated Rapid Water-Cooling System
Operating Modes	Standard Mode (Single-stage) & Advanced Mode (Multi-stage)
Programmable Steps	Up to 18-step program scheduling
Display & User Interface	7-inch Color Touchscreen with Graphic Curve Visualization
Data Interface	USB Port for data logging and export (CSV Format)
Safety Shield	Transparent Acrylic / Polycarbonate Protection Hood
Power Supply	220V AC, 50/60 Hz, Single Phase (110V optional)