

Automatic Large Format Laboratory Heated Hydraulic Press 400X400Mm Plate Capacity

Item Number: PZD5



Introduction

Professional 50-ton automatic heated press with 400x400mm plates, dual-zone temperature control to 500°C, and 18-step programmable cycles. Precision-engineered for battery research, advanced polymer molding, and industrial material testing applications.

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Application	Description	Key Benefit
Battery Energy	Fabricating solid-state electrolyte layers and electrode laminates under high pressure and heat.	Enhances ionic conductivity through superior material density control.
Advanced Ceramics	Sintering and compacting technical ceramic powders into large-format structural components.	Prevents cracking by ensuring uniform pressure distribution across 400mm plates.
Semiconductor Testing	Bonding of multi-layer substrates and thermal interface material (TIM) characterization.	Precise 0.01T control prevents damage to sensitive micro-electronic structures.
Polymer Processing	Molding and curing of high-performance thermoplastics and composite laminates.	Independent plate heating ensures perfect resin flow and void-free parts.
Pharmaceutical	Production of large-diameter tablets and sample preparation for infrared or fluorescence spectroscopy.	Eliminates cross-contamination and ensures dosage consistency via automated cycles.
Materials Science	High-throughput testing of metallurgical samples and ore briquetting for analysis.	Significant 50-ton capacity allows for the processing of exceptionally hard materials.
Aerospace Composites	Small-scale production of reinforced polymer components requiring specific thermal profiles.	18-step programming allows for complex ramp/soak/cool sequences.

Parameter Category	Specification Detail (Model PZD5)	PZD5-300 Variant	PZD5-500 Variant
Pressure Range	0.01 - 50 T (Tons)	0.01 - 50 T	0.01 - 50 T
Pressure Accuracy	0.01 T	0.01 T	0.01 T
Heating Temperature	Temperature Range	RT - 300°C	RT - 500°C
Heating Power	Power Consumption	4.0 kW	6.0 kW
Plate Dimensions	Surface Area (m x n)	400 x 400 mm	400 x 400 mm
Working Space	Vertical/Horizontal Clearance	420 x 90 mm	420 x 90 mm
Control Interface	Display & Input	7-inch Touch Screen	7-inch Touch Screen
Cycle Programming	Process Control	Up to 18 program segments	Up to 18 program segments
Data Export	Connectivity	USB (Excel format graphs/data)	USB (Excel format graphs/data)
Cooling Method	Temperature Reduction	Integrated Water Cooling	Integrated Water Cooling
Safety Features	Protection Systems	Acrylic door with auto-stop	Acrylic door with auto-stop

Parameter Category	Specification Detail (Model PZD5)	PZD5-300 Variant	PZD5-500 Variant
Power Supply	Electrical Requirement	220V / 110V Customizable	220V / 110V Customizable
Equipment Dimensions	L x W x H	680 x 680 x 1280 mm	680 x 680 x 1280 mm
Net Weight	Unit Weight	1130 kg	1130 kg
Shipping Dimensions	Packed L x W x H	900 x 800 x 1400 mm	900 x 800 x 1400 mm
Gross Weight	Total Shipping Weight	1200 kg	1200 kg