

Solid-State Battery Laboratory Hydraulic Hot Press

Item Number: ZY16



Introduction

The benchtop hydraulic hot press for solid-state battery labs delivers independent dual-platen heating up to 300°C, 10-ton force, and rapid water cooling for precise material consolidation, thermal laminating, and sample preparation. Ideal for solid-state electrolyte pressing and composite laminating.

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Parameter	Specification
Model	ZY16
Operating Temperature Range	0 to 300°C
Heating Method	Embedded heaters, independent dual-platen heating
Heating Power	1400 W
Platen Dimensions	180 × 180 mm
Platen Daylight / Opening	50 mm
Working Pressure Range	0 to 10 T
Force Control Precision	±0.1 T
Force Maintenance	Automatic pressure holding and compensation
Cooling Method	Circulating water chiller rapid cooling
Controller	Programmable touchscreen PLC (temperature and pressure)
Power Supply	AC 220V / 50Hz
Dimensions	260 × 347 × 422 mm
Weight	120 kg

Experimental Module	Process Details	Material Target
Solid-State Electrolyte Pressing	High-pressure, elevated-temperature consolidation of pelletized or sheet-form electrolytes	Sulfide, oxide, or polymer-based solid electrolytes
Membrane Electrode Assembly (MEA)	Thermal lamination of catalyst-coated membranes and gas diffusion layers	Proton exchange membrane fuel cell (PEMFC) components
Thermoplastic Composite Laminating	Compacting layer-by-layer composite structures under heat and uniform pressure	Carbon fiber reinforced polymers, functional polymer sheets
Powder Compaction & Sintering	Compacting particulate matrices under uniform heat to evaluate binder-free sintering	Ceramic powders, pharmaceutical drug-carrier matrices