

Laboratory Hydraulic Hot Press For Solid State Battery And Mea Fabrication

Item Number: MY05



Introduction

Compact laboratory hydraulic hot press with independent dual platen heating up to 300°C and programmable 50 ton pressure for solid state battery electrolyte compaction and membrane electrode assembly fabrication, featuring water cooling and safety shields, suitable for advanced material research.

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Technical Parameter	Specification Value
Model	MY05
Platen Dimensions (Pressing Area)	400 × 400 mm
Dual Platen Total Power	5000 W
Working Temperature Range	Ambient to 300°C
Temperature Control Method	Dual-platen independent programmable PID control (includes adjustable ramp rates and multi-step heating programs)
Working Pressure Range	0 to 50 Tons (T)
Pressure Control Method	Programmable automated pressure cycles and digital regulation
Pressure Control Precision	±1.0% of Full Scale
Pressure Maintenance Mode	Automated real-time pressure replenishment and compensation
Platen Daylight (Opening Height)	100 mm
Cooling Method	Circulating water cooling
Power Supply Requirements	Three-Phase, 380 V, 50 Hz
Overall Dimensions (L × W × H)	500 × 550 × 720 mm
System Weight	580 kg

Experimental Module	Targeted Application	Key Research Benefit
Solid-State Electrolyte Compaction	Inorganic/polymer solid-state batteries	High-pressure consolidation to reduce interfacial resistance between electrodes and solid electrolytes.
MEA Lamination	Proton exchange membrane fuel cells	Even temperature and pressure distribution to bond gas diffusion layers to catalyst-coated membranes without damaging the delicate polymer structures.
Thermoset Composite Curing	Fiber-reinforced structural polymers	Precise multi-stage temperature-pressure profiling to control resin flow and minimize voids during polymerization.
Powder Metallurgical Pressing	Advanced ceramics and metallurgy	Controlled thermal pressing for solid-phase sintering trials.