

10T Manual Hot Press 15T Micro Thermal Press Platform

Programmable Touchscreen Control

Item Number: XP18



Introduction

Discover the 10T manual hot press from KINTEK—a 15T micro thermal press platform with 7-inch programmable touchscreen, ultra-narrow 260mm footprint, dual-zone heating up to 300°C, and scriptable multi-step curing profiles. Ideal for polymer labs and battery research. Get a quote.

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Application	Description	Key Benefit
Polymer Composite Molding	Precision hot pressing of fiber-reinforced or particle-filled thermoplastic sheets for mechanical testing specimens.	Ensures uniform thickness and void-free consolidation under controlled 4.0 mm molds.
Solid-State Electrolyte Films	Processing of thin-film solid electrolytes for next-generation Li-ion and Na-ion batteries under inert atmospheres.	Glovebox compatibility and integrated programming maintain material purity and film integrity.
Polyimide (PI) Curing	High-temperature curing of polyimide films used in flexible electronics and aerospace composites.	Rapid ramp to 300°C with 2800W Turbo module shortens cure cycles and improves throughput.
Polymer Characterization Sample Preparation	Preparation of flawlessly flat disks or plates for rheological, mechanical, and thermal analysis (DMA, DSC).	15T force and precise $\pm 1^\circ\text{C}$ control guarantee reproducible specimen geometry.
Carbon Fiber Reinforced Polymer (CFRP)	Production of CFRP laminates for aerospace and automotive lightweighting research.	Uniform 200×200 mm platen and high rigidity prevent warpage during high-pressure laminating.
Battery Electrode Calendering	Densification of coated electrode sheets (cathode/anode) for enhanced energy density and cycle life.	Scriptable multi-step profiles allow gradual compaction without damaging active material coatings.
Biopolymer Shape Memory Study	Thermo-mechanical programming of shape memory polymers for biomedical device prototypes.	Touchscreen profile storage enables exact replication of multi-stage thermal cycles.
Advanced Ceramic Tape Lamination	Pre-lamination of ceramic green tapes prior to sintering for multilayer capacitor or SOFC manufacturing.	Uniform pressure distribution and heated platens improve interlayer adhesion without binder burnout.

Parameter	Value
Model	XP18
Max Force	0 – 15.0 Tons (0 – 150 kN)
Platen Size	200 × 200 mm
Maximum Open Distance	50 mm
Control Panel	7-inch Programmable Touchscreen (Aura-Touch™)
Footprint (W × D × H)	260 × 347 × 422 mm
Net Weight	Approx. 130 kg

Specification	 CORE Configuration	 TURBO Configuration
Temperature Range	RT to 250 °C	RT to 300 °C

Specification	☐ CORE Configuration	☐ TURBO Configuration
Maximum Heating Power	1600 W (2 × 800 W)	2800 W (2 × 1400 W)
Power Requirement	AC 220V / 50Hz (single-phase)	AC 220V / 60Hz (custom)
Cooling Method	Built-in water cooling channels (connect to external chiller)	Built-in cooling channels with recommended rapid-cool chiller kit
Recommended Applications	Routine polymer testing, standard composites	Solid-state electrolytes, PI curing, high-throughput prototyping