KINTEK SOLUTION

Manual Lab Press Catalog

Contact us for more catalogs of Laboratory Press Machine, Battery Lab Consumables & Materials, Battery Testing & Electrochemical Equipment, Electrode Fabrication Equipment, Cell Assembly & Filling Equipment, etc.

KINTEK SOLUTION

COMPANY PROFILE

>>> About Us

KINTEK Solution is a technology-driven innovator specializing in comprehensive laboratory equipment for battery R&D and advanced materials research. Our portfolio spans the entire cell fabrication workflow—from mixing, coating, and precision pressing (automatic, heated, isostatic) to cell assembly and testing. Also essential in ceramics and powder metallurgy, our systems prioritize precision, safety, and repeatability, empowering researchers and industrial labs to achieve groundbreaking results.

Laboratory Hydraulic Press 2T Lab Pellet Press For Kbr Ftir

Item Number: KT-KBP

Introduction

KINTEK 2T Lab Hydraulic Press for precise FTIR sample prep, durable KBr pellet creation, and versatile material testing. Ideal for research labs.

Learn More

Model	PCKBR-2T
Working Pressure (T)	0-2 (30Mpa)
Piston Diameter	Φ45mm
Pressure Stability	≤1MPa/10min
Workbench Diameter	Φ45mm
Number of Columns	Two
Working Space (W×D)	54×55 mm
Dimensions (W×L×H)	100×220×220 mm
Weight (kg)	4.8 kg

Manual Laboratory Hydraulic Press Lab Pellet Press

Item Number: PCF

Introduction

KINTEK's Protective Manual Lab Hydraulic Press ensures safe, precise sample preparation with durable construction, versatile applications, and advanced safety features. Ideal for labs.

Learn More

Instrument model	PCF-15T	PCF-24T	PCF-30T	PCF-40T	PCF-60T
Pressure range	0-15T(0-30MPa)	0-24T(0-34MPa)	0-30T(0-31.5MPa)	0-40T(0-30MPa)	0-60T(0-34MPa)
Piston diameter	Φ80mm (d)	Φ95mm (d)	Φ110mm (d)	Φ130mm (d)	Φ150mm (d)
Pressure gauge	Pressure and pressure intensity display	Pressure and pressure intensity display	Pressure and pressure intensity display	Pressure and pressure intensity display	Pressure and pressure intensity display
Maximum Piston Stroke (Typo in original: "Maximum pressure (T)")	30mm	30mm	40mm	50mm	50mm
Protective cover	Plexiglass (Polymethyl methacrylate)	Plexiglass (Polymethyl methacrylate)	Plexiglass (Polymethyl methacrylate)	Plexiglass (Polymethyl methacrylate)	Plexiglass (Polymethyl methacrylate)
Pressure stability	≤1MPa/10min	≤1MPa/10min	≤1MPa/10min	≤1MPa/10min	≤1MPa/10min
Workbench diameter	Φ90mm (D)	Φ105mm (D)	Φ120mm (D)	Φ140mm (D)	Φ160mm (D)
Number of columns	Four	Four	Four	Four	Four
Working space	80××130mm(M×N)	112×160mm(M×N)	112×160mm(M×N)	126×185mm(M×N)	185×250mm(M×N)
Dimensions	260×175×395mm(L×W×H)	305×195×425mm(L×W×H)	305×195×425mm(L×W×H)	355×215×505mm(L×W×H)	405×240×565mm(L×W×H)
Weight	42Kg	65Kg	65Kg	90Kg	120Kg

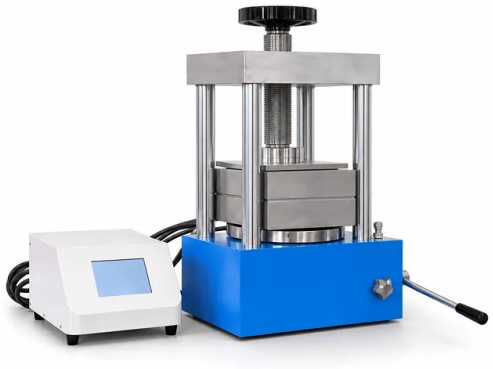
Force (Tons)	Pressure (MPa)
1	0.75
3	2.2
5	3.7
10	7.5
12	9
15	11.3
20	15
30	22.5

40	30

Important: Do not exceed 35 MPa system pressure to prolong equipment life.

24 Ton 200X200Mm Integrated Heating Press For Laboratory Sample Preparation

Item Number: XP55



Introduction

Professional integrated heating press with 24 ton clamping force and 200x200mm heated platens, ideal for battery research, material testing, and sample preparation. Precision temperature control up to 300°C ensures reliable, consistent results.

Learn More

Application	Description	Key Benefit
Battery Electrode & Electrolyte Pressing	Consolidation of cathode/anode powders and formation of solid-state electrolyte pellets for lithium-ion and next-gen battery cells.	Uniform density distribution prevents hot spots and ensures consistent ionic conductivity across the pellet.
Polymer Film Embossing & Lamination	Thermal bonding of multi-layer polymer films, microfluidic chip sealing, and surface texturing for lab-on-a-chip devices.	Precise temperature and pressure control preserves delicate nanostructures without thermal degradation.
FTIR & XRF Pellet Preparation	Production of transparent KBr pellets for infrared spectroscopy and fused beads for X-ray fluorescence analysis.	Eliminates air inclusions and thickness variations, delivering reproducible spectral baselines.
Composite Material Development	Hot pressing of metal-matrix composites, ceramic-reinforced polymers, and carbon fiber pre-preg consolidation.	Maximizes fiber wet-out and void elimination under controlled heat and pressure profiles.
Pharmaceutical Tablet Pilot Production	Small-batch compression of powder blends into tablets for formulation trials and stability studies.	Full data logging of pressing parameters aids FDA/EMA documentation and scale-up studies.
Powder Metallurgy Sintering	Pre-compaction of metal and ceramic powders at elevated temperatures prior to final sintering.	Increases green density and reduces sintering shrinkage, improving net-shape accuracy.
Semiconductor Wafer Bonding	Thermal compression bonding of silicon wafers or chip-on-flex assemblies using controlled force and temperature.	Achieves uniform bond lines without voiding, critical for micro-electromechanical systems (MEMS) fabrication.

Parameter	XP55
Model	XP55
Press Capacity	0 – 24 tons
Platen Working Temperature	Ambient – 300 °C
Heating Power (Total)	1200 W (2 × 600 W)
Platen Dimensions	200 × 200 mm
Platen Cooling	Integrated water circulation
Temperature Control	Dual-zone PID with ±2 °C stability
Display & Control	4.3-inch touchscreen, programmable
Power Supply	220 V, 50 Hz, single-phase
Overall Dimensions (W × D × H)	950 × 260 × 525 mm
Net Weight	180 kg

Lab Manual Microtome Slicer For Tissue Sectioning

Item Number: PT10

Introduction

Precision Manual Slicer for labs: Achieve accurate, consistent sample preparation with adjustable high-precision cutting. Ideal for research, food, and industry.

Learn More

Instrument model	PT10
Mold material	3Cr13 (quenched stainless steel)
Slice size	Φ10, Φ12, Φ14, Φ15, Φ16, Φ18, Φ19(d)
Overall dimensions	120*200*280mm (L*W*H)
Equipment weight	10kg
Machine size diagram	

Button Battery Sealing Machine For Button Batteries

Item Number: PC2NS

Introduction

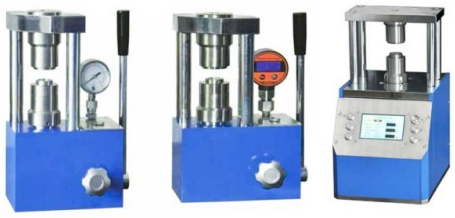
KINTEK's Manual Button Battery Sealer ensures precise, airtight sealing for CR2032, LR44 batteries. Ideal for labs, R&D, and small production. Boost efficiency now!

Learn More

Instrument model	PC2NS
Pressure range	0-2T (0-25MPa)
Piston diameter	32mm(d) in chrome-plated oil cylinder
Pressure gauge	Digital display 0.00-40.00MPa
Standard mold	Standard CR20 series package mold
Sealing mold	Optional CR16, CR20, CR24, CR30, etc.
Sealing pressure	Generally between 0.8-1.2 tons
Shell removal mold	Optional CR16, CR20, CR24, CR30, etc.
Shell removal pressure	Generally within 0.4 tons
Overall dimensions	210*165*290mm(LX*W*H)
Equipment weight	12Kg
Machine size diagram	

Laboratory Hydraulic Press Lab Pellet Press Button Battery Press

Item Number: PCBP



Introduction

KINTEK Lab Press Machines: Precision hydraulic presses for material research, pharmacy, and electronics. Compact, durable, and low maintenance. Get expert advice today!

Learn More

Instrument model	PCBP-2T (Manual)	Instrument model	PCBP-1.5T(Automatic)
Pressure range	0-2T (0-25MPa)	Pressure Range	50-1500kg
Piston diameter	Φ32mm (d)	Pressurization process	Program pressurization-program pressure-timed pressure relief
Integral structure	No sealing connection, oil leakage reduced	Pressure retention time	0-999 seconds
Pressure gauge	Pressure and pressure intensity display	Pressure conversion	The program automatically converts the mold to withstand pressure
Standard die	CR20 series packaging die	LCD display	4.3-inch LCD screen
Sealing die	CR16,CR20,CR24,CR30optional	Sealing mold	Optional CR16,CR20,CR24,CR30,etc
Sealing pressure	0.8-1.2Ton	Shell removal mold	Optional CR16,CR20,CR24,CR30,etc
Disassembly die	CR16,CR20,CR24 optional	Standard mold	Standard CR20 series packaging mold
Disassembly pressure		External dimensions	220x240x380(LXWXH)
Dimensions	210×165×290mm(L×W×H)	Equipment power supply	220V(50Hz/60Hz)
Weight	12Kg	Equipment weight	35kg
Dimensional diagram	Dimensional diagram of manual button battery crimping machine		Dimensional diagram of automatic button battery crimping machine

Manual Button Battery Sealing Machine For Battery Sealing

Item Number: PC2N

Introduction

Manual Button Battery Sealer for precise, affordable lab sealing. Ideal for CR2032, LR44 batteries. Enhances safety & extends battery life. Get yours now!

Learn More

Instrument model	PC-2N
Pressure range	0-2T (0-25MPa)
Piston diameter	32mm(d) in chrome-plated oil cylinder
Pressure gauge	Dual scale display of pressure and pressure
Standard mold	Standard CR20 series package mold
Sealing mold	Optional CR16, CR20, CR24, CR30, etc.
Sealing pressure	Generally between 0.8-1.2 tons
Shell removal mold	Optional CR16, CR20, CR24, CR30, etc.
Shell removal pressure	Generally within 0.4 tons
Overall dimensions	210*165*290mm(LX*W*H)
Equipment weight	12Kg
Machine size diagram	

Manual Laboratory Hydraulic Pellet Press Lab Hydraulic Press

Item Number: PCMP

Introduction

Boost lab efficiency with KINTEK's precision hydraulic presses—compact, leak-proof, and ideal for spectroscopy. Custom solutions available.

Learn More

Instrument model	PCMP-2T	PCMP-5T	PCMP-12T	PCMP-15T	PCMP-24T	PCMP-30T
Pressure range	0-2T (25MPa)	0-5T(0-31.4MPa)	0-12T(0-30MPa)	0-15T(0-30MPa)	0-24T(0-34MPa)	0-30T(0-31.5MPa)
Piston diameter	Φ32mm (d)	Φ45mm (d)	Φ70mm (d)	Φ80mm (d)	Φ95mm (d)	Φ110mm (d)
Integral structure	No sealing connection, oil leakage reduced	No sealing connection, oil leakage reduced	No sealing connection, oil leakage reduced	No sealing connection, oil leakage reduced	No sealing connection, oil leakage reduced	No sealing connection, leakage reduced
Pressure gauge	Pressure and pressure intensity display	Pressure and pressure intensity display	Pressure and pressure intensity display	Pressure and pressure intensity display	Pressure and pressure intensity display	Pressure and pressure intensity display
Maximum pressure (T)	30mm	30mm	30mm	30mm	30mm	40mm
Pressure stability	≤1MPa/10min	≤1MPa/10min	≤1MPa/10min	≤1MPa/10min	≤1MPa/10min	≤1MPa/10min
Workbench diameter	Φ50mm (D)	Φ80mm (D)	Φ80mm (D)	Φ90mm (D)	Φ105mm (D)	Φ120mm (D)
Number of columns	Two	Two	Two	Two	Four	Four
Working space	85×120mm(M×N)	96×130mm(M×N)	96×130mm(M×N)	140×150mm(M×N)	80×150mm(M×N)	92×160mm(M×N)
Dimensions	210×150×350mm(L×W×H)	225×155×380mm(L×W×H)	225×155×380mm(L×W×H)	245×175×390mm(L×W×H)	245×175×415mm(L×W×H)	275×195×420mm(L×W
Weight	12 Kg	28Kg	28Kg	38Kg	42Kg	56Kg

25 Ton Manual Hot Press 600°C For Laboratory Material Processing

Item Number: XP13

Introduction

Designed for high-temperature compression in material science labs, this 25-ton manual hot press reaches 600°C with a 180x180mm heated platen area. Perfect for ceramic sintering, polymer composite molding, and solid-state battery electrolyte compaction. Exceptionally durable, precise, and CE certified.

Learn More

Application	Description	Key Benefit
Advanced Ceramic Sintering	Densification of ceramic powders (alumina, zirconia, silicon carbide) into fully dense components for structural and electronic applications. The press's uniform temperature and high force achieve near-theoretical density with controlled grain growth, producing high-strength, fine-grained ceramics for electronic substrates, cutting tools, and biomedical implants.	Superior mechanical properties and dimensional accuracy, reducing post-sintering grinding and finishing.
Solid-State Battery Electrolyte Compaction	Hot pressing of sulfide or oxide solid electrolyte powders into dense, crack-free sheets is critical for all-solid-state batteries. Controlled pressure and temperature eliminate voids and enhance interfacial contact between electrolyte and electrode materials, improving ionic conductivity.	High-quality electrolyte membranes with consistent thickness and reduced interfacial resistance, accelerating battery R&D.
Polymer Composite Consolidation	Thermal compression molding of carbon-fiber or glass-fiber reinforced thermoplastics and thermosets. The large platen and uniform heating ensure complete resin flow and fiber wet-out without void formation, producing lightweight, durable composite panels.	Consistent mechanical properties and high strength-to-weight ratios for aerospace and automotive prototyping.
Hot Embossing & Microstructuring	Transfer of micro- and nanostructures onto polymer films using heated molds. Precise force modulation allows embossing of delicate features without substrate damage, suitable for lab-on-chip, optical, and microfluidic devices.	High-fidelity replication of intricate patterns for prototyping and small-batch production.
Metal Matrix Composite Fabrication	Consolidation of metal powders (aluminum, titanium) reinforced with ceramic whiskers or particles. The manual force ramp prevents particle segregation, ensuring homogeneous dispersion of reinforcement phases.	Enhanced wear resistance and elevated-temperature strength in niche aerospace and automotive components.
Diffusion Bonding	Solid-state joining of dissimilar materials such as metals to ceramics or glass to metals under controlled temperature and pressure. The press's stable pressure hold and clean hydraulic actuation avoid contamination, producing hermetic bonds.	Strong, void-free bonds without melting, preserving parent microstructures for multi-material assemblies.
R&D Material Screening	Rapid, reproducible hot-pressing of small powder batches to evaluate compaction behavior, sintering kinetics, and phase evolution. The programmable controller ensures identical thermal-pressure profiles for every run.	Faster material discovery cycles with reliable data for scaling to production.

Parameter	Specification
Model	XP13
Force Capacity	0.0 – 25.0 metric tons (0 – 250 kN)
Actuation	Manual hydraulic pump
Platen Daylight	50 mm
Temperature Range	0.0°C – 600.0°C
Temperature Control Accuracy	≤ ±5°C
Platen Dimensions	180 × 180 mm

Parameter	Specification
Heating Power	4000 W (embedded heating elements)
Thermal Barrier	Multi-layer high-density industrial ceramic insulation
Cooling Circuit	Integrated copper channels with quick-connect ports
Optional Chiller	Recirculating Fluid Chiller (950 AUD upgrade)
Power Supply	220V / 50Hz, Single-Phase
Electrical Connection	Dedicated 20A / 32A outlet or hardwired via air switch
Net Weight	Approx. 95 kg
Outer Dimensions (W×D×H)	260 × 340 × 442 mm
Certification	CE Certified

Kintek Solution
Head Quarter: No.89 Science Avenue, High-Tech Zone,
Zhengzhou, China

info@kindle-tech.com | https://kinteksolution.com