



KINTEK SOLUTION

Electric 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.



Automatic Xrf Pellet Press For Laboratory Spectrometry Sample Preparation

Item Number: PYGB



Introduction

This automatic XRF pellet press features PLC touch screen control and advanced pressure slow release to ensure exceptional sample consistency and crack free preparation for high throughput analytical laboratories and demanding industrial spectroscopy testing applications with ultimate system reliability.

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Application	Description	Key Benefit
Cement Quality Control	Compaction of raw meal, finished cement clinker, gypsum, and limestone powders into highly consolidated pellets for high-throughput XRF elemental monitoring.	Delivers consistent pellet density to guarantee stable, drift-free quantitative calibration curves.
Geological and Mining Assay	Compaction of pulverized ore samples, tailing concentrates, and soil sediments using protective steel rings or boric acid backing.	Ensures even pressure distribution across complex mineral grains, eliminating surface micro-cracks during analysis.
Battery and Energy Materials	Pressing electrode powders, solid-state electrolytes, and high-purity carbon matrices to inspect density characteristics and electrical performance.	Maintains structural flatness and exact thickness controls to achieve highly reproducible electrical testing metrics.
Catalysis and Chemical Synthesis	Pelletizing heterogeneous catalysts, advanced polymers, and industrial organic chemicals for structural characterization and reactivity profiling.	Preserves fragile catalyst frameworks by allowing precise, ultra-slow pressure ramp-down speeds.
Ceramic and Refractory Engineering	Compacting advanced technical ceramics, raw clay compounds, and oxide powders into standardized pellets for high-temperature sintering tests.	Achieves optimal pre-sintering green density, minimizing defects and distortion during subsequent thermal processing.
Pharmaceutical Formulation Testing	Consolidating active pharmaceutical ingredients (APIs), excipients, and tablet formulations for mechanical strength and dissolution tests.	Permits flexible, low-pressure operation with zero oil contamination risk, maintaining pure sample environments.
Metallurgical Slag Analysis	Pressing heavy metallurgical slag, metal oxides, and dust byproducts within protective aluminum cups for rapid emission spectrometer checking.	Provides high-tonnage containment that prevents ring failure and guarantees safe, high-speed automated sample scanning.

Technical Parameter	Specification Value for Model PYGB
Model Identifier	PYGB
Control Mode	Color Touchscreen Operation, PLC Program Control
Supported Mold Configurations	Boric acid cup, aluminum cup, steel ring, plastic ring (Optional)
Maximum Pressing Force	60 Metric Tons (60 T)
Pressure Holding Time	User-Adjustable (Arbitrary / Continuous)
Piston Travel Stroke	100 mm
Vertical Clearance (Column Opening)	220 mm
Physical Dimensions (L x W x H)	650 mm x 540 mm x 1240 mm
Total Equipment Weight	Approx. 360 kg
Power Supply Requirements	AC 3-Phase 380 V ± 5%, 50 Hz
Rated Power Consumption	1.3 kW

Technical Parameter	Specification Value for Model PYGB
Power Cable Configuration	5-core (3 phases + neutral + ground), length > 2 m
Hydraulic Oil Specification	L-HM46 high-pressure wear-resistant hydraulic oil
Operating Temperature Range	5°C to 40°C

Automatic Fluorescence Sample Preparation Press 40 Ton Lab Pellet Press For Xrf Analysis

Item Number: PYGA



Introduction

Maximize your XRF analytical accuracy with this premium automatic 40-ton fluorescence sample preparation press featuring advanced PLC touchscreen controls integrated automatic demolding cycles and high-pressure hydraulic reliability to deliver consistent high-density pellets for precise industrial spectroscopic laboratory material testing.

[Learn More](#)

Application	Description	Key Benefit
Scientific Research	High-pressure preparation of powder pellets for advanced XRD, XRF, and FTIR spectroscopic analysis in university and national laboratories.	Eliminates human error, yielding highly uniform pellets for ultra-precise academic research.
Pharmaceutical & Chemical	Compacting active pharmaceutical ingredients (APIs), excipients, and raw chemical powders into high-density discs for structural analysis.	Maintains high chemical purity with easy-to-clean mold surfaces to avoid cross-contamination.
Catalytic Reaction	Compacting catalyst substrates and active metallic powder mixtures into stable pellets for high-temperature and high-pressure reactor testing.	Prevents sample crumbling under thermal stress, ensuring accurate evaluation of catalytic efficiency.
Ceramic Materials	Compaction of high-performance technical ceramics, oxides, and nitrides prior to sintering and microstructural evaluation.	Ensures high green density and uniform pore distribution, minimizing defects during downstream firing.
Electronics Industry	Processing semiconductor materials, target sputtering materials, and piezoelectric components into dense, uniform disks.	Delivers outstanding physical density and structural integrity required for precise electronic characteristic mapping.
Battery & Energy Research	Compressing solid-state electrolytes, lithium-ion battery electrode formulations, and supercapacitor powder materials for electrochemical testing.	Maximizes particle-to-particle contact, providing highly accurate electrical conductivity and ionic transport measurements.
Jewelry & Gemstones	Nondestructive analysis preparation of precious metals, minerals, and gemstone powders for rapid elemental composition verification.	Retains sample matrix integrity, enabling precise classification and grading of valuable minerals.
Cement & Ore Processing	Pressing raw meal, clinker, cement powder, iron ore, and geological slag with boric acid backing for routine XRF quality control.	Rapid, high-throughput sample prep that stands up to harsh, high-dust industrial processing environments.

Technical Parameter	Specification Value
Model Identifier	PYGA
Control Mode	PLC Program Control via Color Touchscreen (Bilingual Chinese/English support)
Maximum Compression Force	40 Metric Tons (40 T)
Dwell Time (Hold Time)	Fully Adjustable / Arbitrary Duration
Piston Maximum Stroke	100 mm
Daylight / Vertical Column Clearance	220 mm
Compatible Mold Formats	Boric Acid Cup, Aluminum Cup, Steel Sleeve, Plastic Cup / Ring
External Dimensions (L x W x H)	650 mm x 540 mm x 1240 mm
Total Net Weight	Approx. 325 kg

Technical Parameter	Specification Value
Electrical Power Supply	AC Three-Phase 380 V $\pm$ 5%, 50 Hz
Rated Power Consumption	1.3 kW
Power Cable Assembly	Five-Core (3 Phase Lines + 1 Neutral + 1 Ground), Length > 2 meters
Recommended Hydraulic Fluid	L-HM46 High Wear-Resistant Hydraulic Oil
Safe Operating Temperature Range	10 °C to 40 °C



Kintek Solution

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