Automatic Xrf Pellet Press For Laboratory Spectrometry Sample Preparation

Numéro d'article: 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