

Automatic Belt Conveyor Sampler Cross Belt Mechanical Bulk Material Sampling System

Item Number: KT-CY



Introduction

Engineered for representative bulk material extraction this automated belt sampler features precision programmable logic control full cross section cut accuracy and automated cleaning cycles to eliminate material accumulation and cross contamination across continuous industrial conveying operations with maximum operational reliability.

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Application	Description	Key Benefit
Coal-Fired Power Plant Fuel Intake	Automated sampling of incoming thermal coal and pulverized fuel streams routed to boiler silos along main intake conveyors.	Delivers unbiased composite samples to verify calorific value, moisture, ash content, and volatile matter for boiler efficiency balancing.
Steel Mill Sinter and Pellet Quality Control	Continuous cross-belt cutting of iron ore sinter, iron ore pellets, and raw concentrate feed on high-speed transfer belts.	Guarantees precise physical and metallurgical monitoring of blast furnace burden materials to ensure consistent slag chemistry and iron yields.
Coking Plant Feed and Coke Product Auditing	Mechanical collection of metallurgical coking blends, pulverization charges, and finished screening coke at terminal transfer stations.	Prevents moisture and particle size segregation errors, ensuring metallurgical coke meets rigorous cold crushing and reactivity indices.
Mineral Processing and Beneficiation Circuits	In-line dynamic stream extraction of crushed copper, gold, bauxite, and polymetallic ores prior to flotation or leaching circuits.	Provides accurate metallurgical balance data and head-grade determinations without interrupting heavy production line throughput.
Bulk Marine Terminal Import and Export Verification	High-throughput mechanical sampling on shiploader and stacker conveyors handling bulk raw materials during custody transfer.	Establishes certified, dispute-free commercial composite samples that reflect exact shipment quality between buyers, shippers, and terminals.
Aggregates and Cement Clinker Manufacturing	Systematic sampling of crushed limestone, clay, raw meal mixtures, and clinker discharges along heavy-duty overland belt lines.	Ensures strict chemical composition control across raw grinding and kiln burnability metrics while eliminating manual sampling hazards.

Parameter Category	Specification Attribute	Value / Characteristic
Equipment Identifier	Primary Base Model Series	KT-CY
Mechanism Variants	Standard Mechanism Configurations	KT-CY-R (Rotary Sweep Type) / KT-CY-L (Linear Reciprocating Type)
Material Compatibility	Supported Bulk Materials	Raw coal, clean coal, metallurgical coke, iron ore powder, pellets, sinter, and mixed mineral bulk solids
Applicable Standards	Sampling Method Standard	GB475-1996 (Standard cross-sectional stream cut)
Extraction Cross-Section	Geometry	Full dynamic material cross-section
Belt Conveyor Compatibility	Belt Width Adaptation	Adjustable mounting design suitable for multiple standard industrial conveyor belt widths
Cycle Timing Range	Sampling Interval Setting	Programmable from 1 to 999 minutes per extraction
Operating Control Modes	Control Architecture	Automatic Mode, Manual Maintenance Mode, Remote Centralized DCS Mode

Parameter Category	Specification Attribute	Value / Characteristic
System Automation	Automation Core	Integrated Industrial PLC with parameter memory and auto-logging
Diagnostic Systems	Status and Fault Alerting	Auto self-check routine, graphic/text screen display, audible-visual alarm tower, automatic anti-jam shutdown
Material Clearing	Contamination Safeguard	Automatic start-up purging program preventing material buildup and cross-batch contamination
Structural Execution	Frame and Sweep Assembly	Heavy-duty carbon steel structural framing with abrasion-resistant cutter skirts and contact liners