

Sealed Laboratory Sample Preparation Pulverizer High Speed Vibratory Grinding Mill

Item Number: PS4B



Introduction

Achieve rapid analytical sample preparation with this high speed sealed vibratory sample pulverizer mill. Engineered to process brittle minerals into 80 to 300 mesh fine powder within minutes with total dust containment maximum safety and zero sample cross contamination.

[Learn More](#)

Application	Description	Key Benefit
Mining & Geological Prospecting	Rapid size reduction of rock cores, ores, and mineral samples prior to fire assay or spectrographic analysis.	Ensures uniform representative sampling and rapid turnarounds for field assaying.
Metallurgy & Foundry Control	Pulverization of slag, sinter, iron ore, and ferroalloys for quality assurance chemical testing.	Hard-wearing bowl options withstand abrasive metallic materials without premature wear.
Coal & Power Plant Analysis	Grinding raw coal, coke, and ash samples to fine powders for calorific value and volatile matter determination.	Fully sealed enclosure prevents volatile moisture loss and dust dispersion in test labs.
Cement & Building Materials	Preparation of raw meal, clinker, limestone, and gypsum for routine quality control testing.	Fast 1-3 minute grinding cycles maintain continuous throughput for automated lab lines.
Environmental & Soil Testing	Processing dry soil, sediment, and solid waste samples into fine powders for heavy metal detection.	Ultra-pure agate or ceramic bowls eliminate trace element cross-contamination.
Ceramic & Refractory Research	Fine milling of raw refractory materials, silica, and advanced ceramic powders for laboratory synthesis.	Controllable 80-300 mesh fineness delivers consistent powder reactivity and densification.

Model Identifier	Maximum Feed Size (mm)	Adjustable Output Fineness (Mesh)	Processing Capacity per Batch (g/run)	Drive Motor Power (kW)
PS4B	≤ 13	80 - 300	4 × 100	1.5
PS4B-400X1	≤ 26	80 - 300	400 × 1	1.5
PS4B-4X200	≤ 20	80 - 300	4 × 200	1.5
PS4B-4X300	≤ 22	80 - 300	4 × 300	2.2
PS4B-4X400	≤ 26	80 - 300	4 × 400	2.2

Material Option	Hardness / Abrasion Resistance	Recommended Sample Types	Key Advantage
High Manganese Steel (Standard)	High Impact Wear Resistance	General ores, rocks, coal, and minerals	Cost-effective, high durability for standard lab grinding
Standard Carbon Steel	Medium Wear Resistance	Non-abrasive brittle materials, soft minerals	Economical option for basic analytical preparations
Wear-Resistant Alloy	High Hardness & Toughness	Hard ores, sintered materials, slags	Extended service life under high-impact conditions
High Chromium Steel	Very High Hardness	Abrasive geological samples, hard minerals	Excellent abrasion resistance and minimal iron pickup

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Alumina Ceramic	Metal-Free Material	Sensitive chemical compounds, electronic materials	Completely eliminates metallic ion contamination
Tungsten Carbide	Ultra-High Hardness	Extremely hard minerals, hard alloys, quartz	Maximum wear resistance for ultra-hard sample sets
Natural Agate	Metal-Free & Non-Contaminating	High-purity trace element analysis, soil samples	Zero metallic interference for sensitive spectrographic assays

Component Description	Quantity Included
Main Equipment Base & Drive Unit	1 Set
Hermetic Sealing Ring Assembly	1 Piece
Heavy-Duty Vibration Reduction Pad	1 Piece
Comprehensive Instruction Manual	1 Copy
Factory Quality Qualification Certificate	1 Copy