

Hydraulic Sample Pulverizer Grinding Machine Automatic Laboratory Sample Preparation System

Item Number: PSY



Introduction

This hydraulic sample pulverizer grinding system delivers ultra-fine sample preparation down to 80-300 mesh. Featuring automatic hydraulic clamping, programmable timing, and heavy-gauge construction, it ensures fast, consistent, and reliable material reduction for XRF and metallurgical quality control testing.

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Application	Description	Key Benefit
Mining & Geological Exploration	Crushing and fine-milling raw ores, rock cores, minerals, and geological survey samples prior to elemental assaying.	Achieves complete sample homogenization quickly without introducing metallic contamination when using tungsten carbide tooling.
Metallurgical & Steel Quality Control	Processing iron ore, slag, ferroalloys, sinter, and refractory material samples for quality assurance in metal refining.	Heavy-duty hydraulic clamping securely holds heavy bowls under high-energy pulverizing forces required for dense metallurgical samples.
Cement & Building Materials	Grinding cement clinker, limestone, gypsum, clay, and gravel to fine powders for XRF and wet chemical testing.	Delivers highly repeatable 80-300 mesh fineness essential for accurate XRF elemental analysis and raw meal quality monitoring.
Coal & Power Generation	Preparing coal, coke, and biomass samples for calorific value determination, proximate analysis, and ash content measurement.	Rapid batch processing prevents moisture loss during milling, yielding accurate sample metrics for thermal efficiency testing.
Environmental & Soil Science	Homogenizing soil, sediment, sludge, and industrial waste samples for environmental monitoring and heavy metal detection.	Multi-bowl options enable simultaneous preparation of multiple samples, accelerating environmental laboratory workflows.
Ceramics & Glass Research	Pulverizing quartz, glass fragments, frits, and advanced ceramic powders for raw material formulation and research.	High-hardness alloy and tungsten carbide media prevent contamination, ensuring chemical purity of ceramic formulations.

Parameter	Specification Details
Clamping Mechanism	Automatic Hydraulic Pressure System
Working Principle	Eccentric Rotational Impact & Friction Pulverization
Output Grain Size	80 - 300 Mesh (0.175 mm - 0.05 mm)
Timing Function	Integrated Automatic Timer
Available Bowl Materials	High Manganese Steel (Standard), Wear-Resistant Alloy, Tungsten Carbide, Carbon Steel
Housing Construction	Reinforced Heavy-Gauge Sheet Steel

Model Identifier	Maximum Feed Size (mm)	Output Fineness (mesh / mm)	Power Rating (Main + Hydraulic kW)	Processing Capacity (g)
PSY-1Y	\$\le 13\$	80 - 300 mesh (0.175 - 0.05 mm)	1.1 + 1.5	100
PSY-2Y	\$\le 13\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	2 x 100
PSY-2DY	\$\le 20\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	200
PSY-2x200Y	\$\le 20\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	2 x 200
PSY-2x300Y	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	2 x 300

Model Identifier	Maximum Feed Size (mm)	Output Fineness (mesh / mm)	Power Rating (Main + Hydraulic kW)	Processing Capacity (g)
PSY-2x400Y	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	2 x 400
PSY-3Y	\$\le 13\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	3 x 100
PSY-3DY	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	300
PSY-3x200Y	\$\le 20\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	3 x 200
PSY-3x300Y	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	2.2 + 1.5	3 x 300
PSY-3x400Y	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	2.2 + 1.5	3 x 400
PSY-4Y	\$\le 13\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	4 x 100
PSY-4DY	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	400
PSY-4x200Y	\$\le 20\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	4 x 200
PSY-4x300Y	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	2.2 + 1.5	4 x 300
PSY-4x400Y	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	2.2 + 1.5	4 x 400
PSY-5DY	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	500
PSY-6Y	\$\le 13\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	6 x 100
PSY-6DY	\$\le 26\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	600
PSY-6x200Y	\$\le 20\$	80 - 300 mesh (0.175 - 0.05 mm)	2.2 + 1.5	6 x 200
PSY-1000Y	\$\le 28\$	80 - 300 mesh (0.175 - 0.05 mm)	1.5 + 1.5	1000