

Laboratory Vibrating Sample Mill High Speed Grinding  
Pulverizer Cup Mill Machine For Sample Preparation

Item Number: PSZM



Introduction

High-efficiency laboratory vibrating sample mill designed for rapid sample pulverization. Features automatic hydraulic clamping options, durable steel or ceramic grinding vessels, integrated precision timers, sound-insulated construction, and ultrafine discharge capability down to 300 mesh for advanced analytical testing.

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| Application                         | Description                                                                                                                      | Key Benefit                                                                             |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Geology & Mining Exploration        | Pulverizes core samples, minerals, ores, and rocks for X-ray fluorescence (XRF) and ICP-MS analysis.                             | Rapidly reduces ultra-hard rock samples to fine powder without sample loss.             |
| Metallurgy & Slag Testing           | Grinds ferroalloys, steel slags, sinter materials, and metallic concentrates prior to elemental chemical testing.                | Heavy-duty grinding kinetics handle highly abrasive metallurgical byproducts.           |
| Cement & Building Materials         | Prepares cement clinker, limestone, gypsum, clay, and ceramic raw powders for quality assurance.                                 | Delivers uniform output fineness to ensure precise setting and strength assay results.  |
| Glass & Ceramics Engineering        | Reduces raw quartz, frits, silicates, and technical ceramics into fine fractions without heavy metal contamination.              | Available technical ceramic bowls preserve sample purity for trace chemistry.           |
| Environmental & Soil Analysis       | Comminutes dried soil specimens, sludge, sediment samples, and environmental waste matrices for environmental compliance assays. | Multi-vessel parallel options process large batch volumes efficiently.                  |
| Power Plants & Coal Quality Control | Prepares coal, coke, ash, and secondary fuels for proximate analysis and calorific value determination.                          | Rapid grinding prevents volatile component degradation from excessive thermal build-up. |
| Secondary Raw Materials & Recycling | Pulverizes electronic scrap, incineration slag, and recycled mineral aggregates for secondary resource recovery assays.          | Highly versatile processing capability across diverse material hardness levels.         |

| Specification Parameter | PSZM-100        | PSZM-200        | PSZM-100x2      | PSZM-100x3      | PSZM-100x4      | PSZM-100x6      |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Product Item Base       | PSZM-100        | PSZM-200        | PSZM-100x2      | PSZM-100x3      | PSZM-100x4      | PSZM-100x6      |
| Maximum Feed Size       | ≤ 13 mm         | ≤ 20 mm         | ≤ 13 mm         | ≤ 13 mm         | ≤ 13 mm         | ≤ 13 mm         |
| Discharge Particle Size | 80-300 mesh     | 80-300 mesh     | 80-300 mesh     | 80-300 mesh     | 80-300 mesh     | 80-300 mesh     |
| Sample Capacity / Yield | 100 g           | 200 g           | 100 × 2 g       | 100 × 3 g       | 100 × 4 g       | 100 × 6 g       |
| Motor Power             | 1.1 kW          | 1.1 kW          | 1.1 kW          | 1.5 kW          | 1.5 kW          | 2.2 kW          |
| Model Sub-Types         | Type B / Type Y | Type B / Type Y | Type B / Type Y | Type B / Type Y | Type B / Type Y | Type B / Type Y |

| Specification Parameter        | PSZM-100                                                        | PSZM-200                                                        | PSZM-100x2                                                      | PSZM-100x3                                                      | PSZM-100x4                                                      | PSZM-100x6                                                      |
|--------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
| <b>Clamping Mechanism</b>      | Built-in Timer (Type B) / Automatic Hydraulic Clamping (Type Y) | Built-in Timer (Type B) / Automatic Hydraulic Clamping (Type Y) | Built-in Timer (Type B) / Automatic Hydraulic Clamping (Type Y) | Built-in Timer (Type B) / Automatic Hydraulic Clamping (Type Y) | Built-in Timer (Type B) / Automatic Hydraulic Clamping (Type Y) | Built-in Timer (Type B) / Automatic Hydraulic Clamping (Type Y) |
| <b>Vessel Material Options</b> | Hardened Steel / High-Purity Technical Ceramics                 | Hardened Steel / High-Purity Technical Ceramics                 | Hardened Steel / High-Purity Technical Ceramics                 | Hardened Steel / High-Purity Technical Ceramics                 | Hardened Steel / High-Purity Technical Ceramics                 | Hardened Steel / High-Purity Technical Ceramics                 |
| <b>Sound Insulation</b>        | Enclosed Cabin                                                  | Enclosed Cabin                                                  | Enclosed Cabin                                                  | Enclosed Cabin                                                  | Enclosed Cabin                                                  | Enclosed Cabin                                                  |