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Product Brochure



MIXING BALL MILL SERIES

Lightweight stirred ball mill

JM

Lightweight stirred ball mill for fine grinding of zirconium silicate, alumina, ceramics, paints, and non-metallic minerals. Ideal for lab and industrial use in material processing.

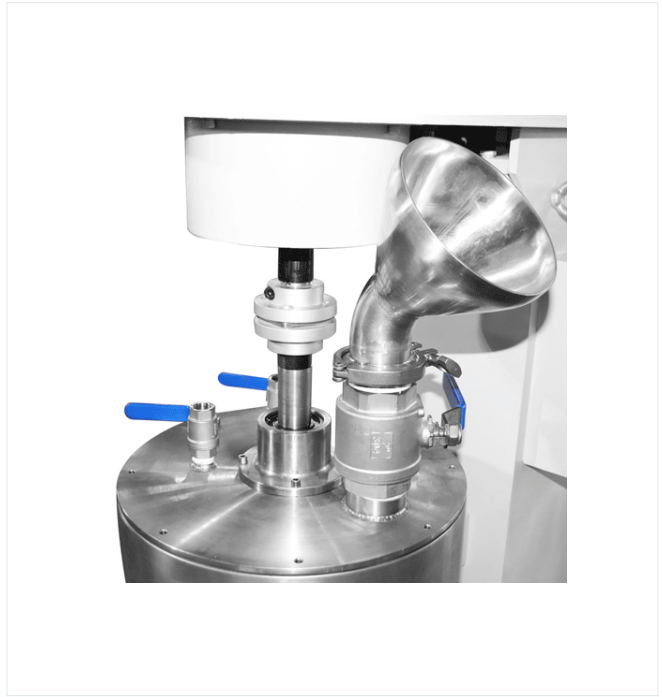
<https://www.planetaryballmills.com/products/grinding-series/stirring-ball-mill/lightweight-stirred-ball-mill.html>



Product Overview

Lightweight stirred ball mill for fine grinding of zirconium silicate, alumina, ceramics, paints, and non-metallic minerals. Ideal for lab and industrial use in material processing.





Product Introduction

The light stirring mill is mainly composed of a stationary grinding barrel filled with small-diameter grinding media, a stirring device and other auxiliary devices (such as: circulation device, cooling device, timing, speed control, etc.). It has high grinding efficiency and small crushing particle size. It can well achieve various process parameter requirements and simulate various indicators in production. At the same time, due to its advantages of small batch, low power consumption and low price, it is an optional equipment for schools, research units and companies to conduct research on crushing processes, new materials and coatings. It is widely used in the production of various fine powders such as zirconium silicate, zirconium oxide, alumina, ceramics, chemicals, electronic materials, magnetic materials, papermaking, coatings, non-metallic minerals, new materials, paints, graphite, calcium carbonate, pharmaceuticals, etc.



Technical parameters

| model | Overall dimensions (mm) | Frequency conversion speed (r/min) | Equipment weight (KG) | Loading capacity (L) | Motor power (KW) | Grinding barrel material (material thickness) | Grinding barrel size (without water jacket) | Grinding barrel size (with water jacket) | Feed particle size (mm) |
|-----------------------------|-------------------------|------------------------------------|-----------------------|----------------------|------------------|---|---|--|-------------------------|
| JM-20L electric lift | 1020X480X1220 | 0~380 | 195 | 7 | 2.2 | Stainless steel, carbon steel (about 7mm) | To be determined | Φ325*385 | ≤10 |
| | | | | | | Zirconia, corundum (about 10mm) | Φ273*440 | Φ325*432 | ≤10 |
| | | | | | | PTFE, nylon (about 10mm) | To be determined | To be determined | ≤10 |
| | | | | | | Polyurethane (about 10mm) | Φ273*410 | Φ325*410 | ≤10 |
| JM-30L electric lift | 1180X510X1370 | 0~345 | 245 | 10.5 | 3 | Stainless steel, carbon steel (about 5.5mm) | Φ323*420 | Φ372*420 | ≤10 |
| | | | | | | Zirconia, corundum (about 10mm) | Φ325*440 | Φ372*440 | ≤10 |
| | | | | | | PTFE, nylon (about 6mm) | Φ323*420 | Φ372*420 | ≤10 |
| | | | | | | Polyurethane (about 10mm) | Φ323*440 | Φ372*440 | ≤10 |
| JM-50L without lift | 1100X700X1700 | 0~145 | 340 | 17.5 | 4 | Stainless steel, carbon steel (about 6mm) | Φ406*420 | Φ464*420 | ≤20 |
| | | | | | | Zirconia, corundum (about 10mm) | To be determined | Φ476*480 | ≤20 |
| | | | | | | PTFE, nylon (about 12mm) | To be determined | To be determined | ≤20 |
| | | | | | | Polyurethane (approx. 12mm) | Φ404*485 | Φ476*485 | ≤20 |

* JM-20L/30L discharge valve 6 points; JM-50L discharge valve 1.5 inches ;

* JM-20L/30L can be equipped with an optional delivery pump (feeding particle size ≤1mm) ; JM-50L can be equipped with an optional delivery pump (feeding particle size ≤ 2.5mm).

Working Principle

The spindle drives the mixer to rotate at high speed, causing the grinding medium to move irregularly. This chaotic and disordered movement will cause collision, extrusion, friction and shearing of the grinding medium, thereby crushing and finely grinding the material. In addition, the size, shape and proportion of the grinding media are different, and the grinding effects obtained are also different. Generally speaking, the larger the size of the grinding media, the coarser the material will be crushed. On the contrary, the smaller the grinding media, the finer the material is ground. The appropriate ratio of different specifications of grinding media, coupled with the appropriate adjustment of the speed, will result in better grinding effects.

Product Features

1. The energy utilization rate is high and high power density can be obtained, so it saves energy.
2. The product particle size is easy to adjust, and the fineness can be ensured by adjusting the residence time of the material in the cylinder.
3. Small vibration and low noise.
4. Beautiful appearance, high-end atmosphere, excellent performance, simple maintenance, easy and labor-saving operation, and durable.
5. The mixing rod can be raised and lowered automatically, and the grinding barrel can be flipped freely.
6. It can well realize various process requirements and can carry out continuous or intermittent production as needed.
7. Since the ball mill barrel is equipped with a jacket, the grinding temperature can be well controlled.
8. Equipment with various special functions can be made as needed, such as: timing, speed adjustment, circulation, temperature adjustment, etc.
9. You can choose grinding barrels and stirring devices made of different materials (stainless steel, corundum ceramics, polyurethane, zirconia, etc.).

Accessories & Customization

Accessories

Grinding jars, heating elements, sample holders, control modules and other matching accessories can be selected according to the product configuration.

Customization

For voltage, capacity, chamber size, process temperature or application requirements, please contact TENCAN for a suitable configuration.