Professional
Powder Equipment
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TENCAN

Powder Equipment
Milling Technology
Powder Materials

Product Brochure

PLANETARY BALL MILL SERIES

Heavy duty horizontal ball mill

WXQM

Heavy-duty horizontal planetary ball mill with dual-end support enhances stability and capacity. Best for pilot testing and grinding.

https://www.planetaryballmills.com/products/grinding-series/planetary-ball-mill/heavy-duty-horizontal-ball-mill.html

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Product Overview

Heavy-duty horizontal planetary ball mill with dual-end support enhances stability and capacity. Best for pilot testing and grinding.

Product Introduction

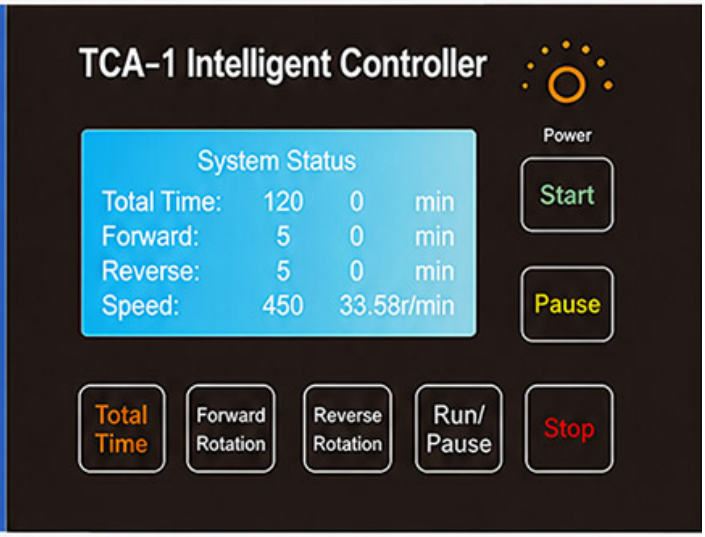
The heavy-duty horizontal planetary ball mill adopts a double-disc support bracket structure at both ends, which effectively improves the stability and load resistance of the equipment, solving the limitation of light-duty horizontal planetary ball mills being limited to light loads. Heavy-duty horizontal planetary ball mill is mainly suitable for user pilot or small batch grinding production.

Ball Mill Structure

The horizontal milling jar structure helps solve the sedimentation issue of some materials.

Microcomputer Touchscreen Control Panel

Easy to operate, with a simple and intuitive interface. Supports alternating forward and reverse rotation, timing, and power-off memory.



Visible Window

Clearly observe the internal operating status.

Lifting & Tilting for Discharging

Designed for equipment with a capacity of 60L or more. User-friendly design for easier operation and greater comfort.

The company also launched a microcomputer touch screen PLC all-in-one machine. Customers can choose a control panel according to their own needs. □

Heavy-duty horizontal planetary ball mills are widely used in geology, mining, metallurgy, electronics, building materials, ceramics, chemical industry, light industry, medicine, environmental protection and other departments. They are suitable for electronic ceramics, structural ceramics, magnetic materials, lithium cobalt oxide, lithium manganate, catalysts, phosphors, long afterglow luminescent powder, rare earth polishing powder, electronic glass powder, fuel cells, zinc oxide varistors, piezoelectric ceramics, nanomaterials, wafer ceramic capacitors, MLCC , thermistor (PTC □ NTC □□ ZnO Varistor, dielectric ceramic, alumina ceramic, zirconia ceramic, phosphor, zinc oxide powder, cobalt oxide powder, Ni-Zn ferrite, Mn-Zn The production field of ferrite and other products.

Technical parameters

model	Drag ratio (rpm)	Grinding tank rotation speed (mm)	Inner diameter of grinding pot seat (mm)	Motor power	Grinding jar revolution diameter (mm)	Overall dimensions (mm)	Net weight(kg)
WXQM-(2-6)	0.134	0~670	134	0.75KW	F234	700×560×530	96
WXQM-(2-6)(H)	0.134	0~670	134	1.5KW	F234	1220×620×810	266
WXQM-(8-12)	0.116	0~580	162	1.5KW	Φ275	1360×670×920	380
WXQM-16	0.096	0~480	182	3KW	F385	1640×840×1040	470
WXQM-20	0.086	0~430	200	4KW	F385	1640×840×1040	730
WXQM-40	0.086	0~430	250	5.5KW	Φ430	1780×860×1070	790
WXQM-60	0.062	0~310(1:1.5)	275	7.5KW	Φ490	1980×1050×1220	1070
WXQM-100	0.058	0~290(1:1.5)	328	11kW	F578	2110×1150×1370	1210

- **Capacity requirements**
  - Select the cylinder volume according to the output, 50L-500L can be selected for small production, and more than 1000L is recommended for large industrial lines (such as 5000L equipment).
- **Material properties**

  - High-hardness materials require high wear-resistant linings (such as manganese steel or zirconia) and large-sized grinding media.
  - Wet grinding requires the use of anti-corrosion material cylinders and sealing designs.

- **Energy consumption and maintenance**
  - Priority is given to rolling bearing configurations and variable frequency speed regulation models to reduce energy consumption and improve control accuracy.
  - Regularly check the lining wear and lubrication system to ensure long-term stable operation of the equipment.
- **special needs**
  - When ultrafine powder (≤1μm) is required, it is recommended to use a forced stirring system or a counter-rotating device to enhance grinding efficiency.
  - For industries with high cleanliness requirements (such as medicine and food), all stainless steel structures and pollution-free linings must be selected.

Working Principle

The heavy-duty horizontal ball mill drives the grinding media and material movement through the rotation of the horizontal cylinder:

1. **cylinder rotation** : The motor drives the cylinder to rotate around the horizontal axis through the reducer, and the medium in the cylinder (steel balls, etc.) rises to a certain height with the cylinder wall and then falls freely.
2. **grinding action** : The falling medium impacts and crushes the material, while the friction and shearing between the material and the medium further refines the particles.
3. **Grading and discharging** : The material is ground step by step through multi-silo partitions, and finally discharged through the discharge grate plate to achieve continuous production.

Product Features

The equipment shell has a professional appearance design and industrial shape, using thickened steel plate welding and forming processing technology. It has high strength, impact resistance, deformation resistance, and a stable atmosphere.; The materials of the machined parts are subject to strict heat treatment procedures and adopt CNC machining technology. The transmission gears are made of special materials and precision gears to ensure smooth, safe and low-noise operation of the equipment at high speeds. ; The equipment is designed with a brake locking function to ensure safe and reliable operations of can lifting, filling and locking. ; The supporting hoisting and dumping devices adopt an integrated design. The dumping device is integrated into the vibrating screen discharging technology, which is simple to operate, enabling rapid canning, unloading, and filling, improving production efficiency. It adopts a microcomputer touch screen, which is easy to operate and has a simple and intuitive interface. It can realize alternating control of forward and reverse rotation, and has timing and power-off memory functions.

Accessories & Customization

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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.