

Professional  
Powder Equipment  
Manufacturer

# TENCAN

## Product Brochure



Powder  
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Milling  
Technology



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Materials



**PLANETARY BALL MILL SERIES**

# Laboratory Full-Directional Planetary Ball Mill

## QXQM

360-degree rotating lab planetary ball mill enables multi-directional grinding. Disc flipping ensures uniform nano-material preparation.

<https://www.planetaryballmills.com/products/grinding-series/planetary-ball-mill/laboratory-full-directional-planetary-ball-mill.html>



## Product Overview

360-degree rotating lab planetary ball mill enables multi-directional grinding. Disc flipping ensures uniform nano-material preparation.





## Product Introduction

The 360-degree rotating planetary ball mill is based on the vertical planetary ball mill and adds a planetary disk flip function. While the planetary disk and the ball mill tank are performing planetary motion, they can also perform planetary motion within a three-dimensional space. The 360° tipping bucket flip realizes multi-dimensional and multi-directional movement of the ball mill tank, improving the degree of disordered movement of the grinding balls and materials. The entire material is ground 360 degrees in the grinding tank, making the ground materials more even and fine, and can solve the problem of some materials sinking to the bottom and sticking to the pot.





## Horizontal Ball Mill Structure

Horizontal ball mill structure solves the sedimentation issue of some materials.

## Control Panel

Simple and convenient control panel, flexible to operate.



## Viewing Window

Clearly observe the operating condition through the window.

## Hoist-Assisted Discharge

Equipment of 60 L and above is equipped with a hoist-assisted discharge device; the user-friendly design makes operation easier and more comfortable.





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



360-degree rotating planetary ball mill is widely used in geology, minerals, metallurgy, electronics, building materials, ceramics, chemical industry, light industry, medicine, environmental protection and other departments. It is 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, disc 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	Grinding tank rotation speed (rpm)	Inner diameter of grinding pot seat (mm)	Motor power	Grinding jar revolution diameter (mm)	Overall dimensions (mm)	Net weight(kg)
QXQM-0.4	0~870	80	250W	φ140	900×570×666.5	136
QXQM-(2-6)	0~670	134	0.75KW	F234	1330×810×860	305
QXQM-(8-12)	0~580	162	1.5KW	φ275	1360×850×930	430
QXQM-16	0~510	182	3KW	φ320	1530×1018×1100	580
QXQM-20	0~430	222	4KW	F385	1700×1210×1300	1180
QXQM-40	0~390	250	5.5KW	φ430	1900×1450×1480	1430
QXQM-100	0~240	326	11KW	F578	2939×1680×2450	3900

<b>Transmission mode</b>	gear transmission
<b>working method</b>	Two or four ball mill tanks work simultaneously
<b>Maximum sample loading volume (material + grinding ball)</b>	Two-thirds of the ball mill tank volume
<b>Ball mill tank volume</b>	Each can is 0.05L-25L, total volume is 0.2L-100L
<b>Feed particle size</b>	Soil material ≤10mm, other materials ≤3mm
<b>Discharge particle size</b>	The minimum can reach 0.1μm (different materials and grinding processes will vary)
<b>Speed ratio (revolution:rotation)</b>	See main parameters of planetary ball mill for details
<b>Speed (rotation)</b>	See main parameters of planetary ball mill for details
<b>Speed regulation method</b>	Brand inverter stepless speed regulation

## Working Principle

The 360-degree rotating planetary ball mill is based on the vertical planetary ball mill and adds a planetary disk flip function. While the planetary disk and the ball mill tank are performing planetary motion, they can also perform planetary motion within a three-dimensional space. The 360° tipping bucket flip realizes multi-dimensional and multi-directional movement of the ball mill tank, improving the degree of disordered movement of the grinding balls and materials. The entire material is ground 360 degrees in the grinding tank, making the ground materials more even and fine, and can solve the problem of some materials sinking to the bottom and sticking to the pot.

## Product Features

The equipment shell has professional appearance design and industrial shape, lean manufacturing, exquisiteness and precision; The machined parts adopt CNC processing technology, and the transmission gears are made of special materials and precision gears to ensure smooth, safe and low noise when the equipment runs at high speed. ; The flipping motor has a brake lock function, which can realize turning and stopping at any angle. It is safe and reliable. It adopts a microcomputer touch screen, which is easy to operate. The interface is simple and intuitive. 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.