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Product Brochure


PLANETARY BALL MILL SERIES

# Liquid Nitrogen Planetary Ball Mill

## XQM

Cryogenic planetary ball mill with liquid nitrogen cooling for heat-sensitive materials. Low-temperature grinding prevents thermal degradation. Ideal for mixing, fine grinding, sample preparation, R&D, and small batch production.

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https://www.planetaryballmills.com/products/grinding-series/planetary-ball-mill/liquid-nitrogen-planetary-ball-mill.html

# Product Overview

Cryogenic planetary ball mill with liquid nitrogen cooling for heat-sensitive materials. Low-temperature grinding prevents thermal degradation. Ideal for mixing, fine grinding, sample preparation, R&D, and small batch production.


## Product Introduction

The liquid nitrogen planetary ball mill is a ball mill in which the grinding jar is placed in a heat shield environment, and liquid nitrogen gas is continuously input into the environment. Liquid nitrogen can promptly absorb the heat generated by the high-speed rotation of the grinding ball, so that the grinding space inside the grinding jar always maintains a low-temperature environment. It is ideal and necessary equipment for mixing, fine grinding, small batch sample preparation, small batch production and new product development. Tianchuang planetary ball mill is an ideal laboratory powder grinding equipment for scientific research institutes, universities, and corporate laboratories due to its small size, full functions, low noise, high efficiency, and easy operation. The equipment is usually equipped with 4 grinding jars, which can obtain four different samples each time. Tianchuang planetary ball mill can also be equipped with a vacuum grinding jar for grinding samples in a vacuum atmosphere.

Liquid nitrogen planetary ball mills are widely used in geology, mining, metallurgy, electronics, building materials, ceramics, chemical industry, light industry, medicine, environmental protection and other departments. Suitable for electronic ceramics, structural ceramics, magnetic materials, lithium cobalt oxide, lithium manganese acid, catalysts, phosphors, long afterglow luminescent powder, rare earth polishing powder, glass powder, fuel cells, zinc oxide varistors, piezoelectric ceramics, nanomaterials, capacitors, M LCC, thermistor (PTC, NTC), ZnO varistors, dielectric ceramics, alumina ceramics, zirconia ceramics, phosphor powder, zinc oxide powder, cobalt oxide powder, Ni-Zn ferrite, Mn-Zn ferrite and other production fields.

## Technical parameters

Working temperature control range: -40℃~20℃
Gas consumption (0-10℃): 4-5 liters/hour

Machine size: 460×660×720mm
Machine net weight: about 80 kg
Compatible liquid nitrogen tanks: 30 liters/50 liters (see attached liquid nitrogen tank parameters)
Other parameters are the same as XQM- (2- 6) series

| model | total volume | Voltage | power | Speed | net weight | net size |
|---|---|---|---|---|---|---|
| XQM-1C | 1L | 220V or 110V | 0.75KW | 70-670 rpm | 83kgs | 750*470*590mm |
| XQM-2C | 2L | 220V or 110V | 0.75KW | 70-670 rpm | 85kgs | 750*470*590mm |
| XQM-4C | 4L | 220V or 110V | 0.75KW | 70-670 rpm | 88kgs | 750*470*590mm |
| XQM-6C | 6L | 220V or 110V | 0.75KW | 70-670 rpm | 93kgs | 750*470*590mm |
| XQM-8C | 8L | 220V or 110V | 1.5KW | 70-580 rpm | 150kgs | 880*560*670mm |
| XQM-10C | 10L | 220V or 110V | 1.5KW | 70-580 rpm | 150kgs | 880*560*670mm |
| XQM-12C | 12L | 220V or 110V | 1.5KW | 70-580 rpm | 150kgs | 880*560*670mm |

## 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.