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Vertical production planetary ball mill

XQM production series

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A production-scale vertical planetary mill range for batch powder processing.

Overview

A production-scale vertical planetary mill range for batch powder processing. The published table covers XQM-20 to XQM-200, with model-specific jar volumes, drive power and installation dimensions.

How it works

The production range scales the revolving-disc and rotating-jar arrangement. Larger jars change the loaded mass, handling requirements and process behaviour, so scale-up needs more than a capacity ratio.

Key features

- Four jar positions with standard and vacuum-jar options listed by model.
- Published three-phase 380 V, 50 Hz references and touchscreen controls vary with model.
- The supplied workbook contains an explicitly labelled XQM-40L trial with a 10 L jar and measured particle-size results.

Specifications

Published catalog references are reproduced below. Nominal volume is not a sample-mass rating. Confirm the selected model, material grade, electrical supply and complete supplied configuration in the quotation.

Model specifications — 1

Model	Nominal capacity	Configuration class	Compatible jar volume	Jar positions	Compatible vacuum jar volume
XQM-20	20L	Production	2-5L	4	2-4L vacuum jar
XQM-40	40L	Production	5-10L	4	5L vacuum jar
XQM-60	60L	Production	10-15L	4	10L vacuum jar
XQM-80	80L	Production	15-20L	4	15L vacuum jar
XQM-100	100L	Production	20-25L	4	20L vacuum jar
XQM-200	200L	Production	50L	4	25L vacuum jar

Model specifications — 2

Model	Machine mass (kg)	Dimensions (mm)
XQM-20	392kg	1200×790×930
XQM-40	656kg	1400×880×1070
XQM-60	950kg	1600×1070×1250
XQM-80	1300kg	1750×1140×1330
XQM-100	1300kg	1800×1150×1140
XQM-200	2725kg	2670×1600×2804

Model specifications — 3

Model	Electrical supply	Supply phase	Motor power (kW)	Speed control	Programmable run time (min)
XQM-20	380V 50Hz	Three phase	4kW	Touchscreen	1-9999
XQM-40	380V 50Hz	Three phase	5.5kW	Touchscreen	1-9999
XQM-60	380V 50Hz	Three phase	7.5kW	Touchscreen	1-9999
XQM-80	380V 50Hz	Three phase	11kW	Touchscreen	1-9999
XQM-100	380V 50Hz	Three phase	11kW	Touchscreen	1-9999
XQM-200	380V 50Hz	Three phase	22kW	Touchscreen	1-9999

Model specifications — 4

Model	Reversing interval (min)	Planetary disc speed (rpm)	Jar rotation speed (rpm)	Revolution : rotation ratio	Published noise level (dB)
XQM-20	1-999	0-215	0-430	1:2	65±5

Model	Reversing interval (min)	Planetary disc speed (rpm)	Jar rotation speed (rpm)	Revolution : rotation ratio	Published noise level (dB)
XQM-40	1-999	0-195	0-390	1:2	68±5
XQM-60	1-999	0-174	0-260	1:1.5	68±5
XQM-80	1-999	0-161	0-242	1:1.5	68±5
XQM-100	1-999	0-161	0-242	1:1.5	68±5
XQM-200	1-999	0-143	0-215	1:1.5	68±5

Applications

Batch process development, pilot-to-production transfer and production powder grinding.

Suitability depends on the actual sample, process and analytical requirements; a listed application is not a guaranteed final-particle-size result.

Accessories and options

Discuss jar and media materials, vacuum/inert-gas arrangements, loading and unloading needs, cooling requirements and the required control interface. The scope of each item belongs in the quotation.

- Jar and media: confirm material, volume, holder fit and the complete working load.
- Vacuum or gas requirements: specify the complete jar, lid and seal arrangement; no pressure rating is assumed.
- Utilities and supply scope: state voltage, frequency, phase, destination and required documents; confirm included versus optional items.

[Compare milling jars](#) · [Compare grinding media](#) · [Low temperature planetary grinding machines](#) · [Ultrasonic planetary ball mills](#)

Selection guidance

Define mass per batch, cycle requirements, jar handling and the electrical/installation conditions. Use trial data to assess the process rather than assigning a guaranteed hourly output from jar capacity.

[Work through the selection guide](#) · [Request a configuration quotation](#)

Trials and comparisons

Explicit model record

Glass powder

XQM-40L · Wet milling

- Sample: 2400 g
- Jar: 10 L black nylon jar
- Recorded sampling / duration: 8 h

Recorded observations

Observation	D50 (μm)	D90 (μm)	D97 (μm)
Recorded sample	0.95	6.73	66.61

The product information labels XQM-40L or XQM-200L. Records are individual procedures, not a production-output guarantee. This is an explicitly labelled XQM-40L record. The nylon formulation and media grade are unspecified. D97 66.61 μm does not support the requested condition that every particle be below 10 μm. No production-throughput or coating-quality conclusion follows.

Explicit model record

Stainless-steel powder

XQM-200L · Vacuum / argon procedure recorded

- Sample: 7500 g
- Jar: 50 L stainless-steel vacuum jar
- Recorded sampling / duration: 80 h recorded

Recorded observations

Recorded item	Value
Sample mass	7.5 kg
Media charge	75 kg steel media
Recorded media : sample mass ratio	10 : 1
Recorded processing duration	80 h

The product information labels XQM-40L or XQM-200L. Records are individual procedures, not a production-output guarantee. No particle-size, oxygen, pressure or purity result is reported. The specific steel designation in the product information is ambiguous and is not repeated as a verified alloy grade. This large-jar procedure does not identify a current catalog jar part number or pressure rating.

How to plan a fair comparison

For scale-up, document jar and media loading, sample properties, processing schedule and the same particle-size measurement method. The workbook's XQM-40L glass result is an individual batch observation, not a production guarantee.

These anonymous records are not operating instructions. Measurement and dispersion methods are not fully specified in the test summaries; results apply to the reported samples and conditions.

Discuss a matched sample evaluation

Plan your milling configuration.

TENCAN develops and manufactures planetary milling equipment, with application support in Changsha and a production base in Wushi, Hunan.

Share your material, batch size, target particle size and contamination limits. Our team can help confirm the mill, jars, media and electrical requirements, or arrange a sample grinding evaluation.

Reference information applies to the described models and conditions. Confirm the final specification and supplied accessories with TENCAN before ordering.

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Product page

<https://www.planetaryballmill.com/planetary-ball-mills/vertical-production-planetary-ball-mill.html>

Sample grinding www.planetaryballmill.com/sample-testing/