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PRODUCT CATALOG / Planetary Mills

Heavy-duty Full-directional Planetary Ball Mill

QXQM production series

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TENCAN / PRODUCT INFORMATION

Heavy-duty Full-directional Planetary Ball Mill

QXQM production series | Generated 2026-10-22 13:03:20 CST (UTC+08:00)



A production-oriented full-directional planetary mill range combining larger jar configurations with assembly tumbling.

Overview

A production-oriented full-directional planetary mill range combining larger jar configurations with assembly tumbling. The published production QXQM chart covers 16–100 L nominal capacities.

How it works

Jar rotation and disc revolution continue while the assembly tumbles through different orientations. This can be evaluated where settling or caking affects a batch, without assuming the same response for every material.

Key features

- Four jar positions and model-specific jar compatibility are listed.
- The product information identifies separate control, cooling, ultrasonic and sieving proposals as

optional configuration items.

- Laboratory QXQM sample records must be distinguished from production-scale validation.

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	Compatible jar volume	Jar positions	Compatible vacuum jar volume
QXQM-16	16L	2-4L	4	1-3L
QXQM-20	20L	2-5L	4	1-4L
QXQM-40	40L	4-10L	4	2-5L
QXQM-60	60L	10-15L	4	5-10L
QXQM-80	80L	15-20L	4	15L
QXQM-100	100L	15-25L	4	15-20L

Model specifications — 2

Model / nominal volume	Electrical supply	Motor power (kW)	Programmable run time (min)	Reversing interval (min)	Adjustable speed / Revolution speed (rpm)
QXQM-16	380V-50Hz	3	1-9999	1-999	—
QXQM-20	380V-50Hz	4	1-9999	1-999	0-215
QXQM-40	380V-50Hz	5.5	1-9999	1-999	0-195
QXQM-60	380V-50Hz	—	1-9999	1-999	—
QXQM-80	380V-50Hz	11	1-9999	1-999	—
QXQM-100	380V-50Hz	11	1-9999	1-999	—

Model specifications — 3

Model / nominal volume	Adjustable speed / Jar rotation speed (rpm)	Published noise level (dB)
QXQM-16	0-510	60±5
QXQM-20	0-430	65±5

Model / nominal volume	Adjustable speed / Jar rotation speed (rpm)	Published noise level (dB)
QXQM-40	0-390	70±5
QXQM-60	—	—
QXQM-80	0-240	—
QXQM-100	0-240	—

Model specifications — 4

Model / nominal volume	Motor power (kW)	Speed control	Revolution : rotation ratio	Machine mass (kg)	Dimensions (mm)
QXQM-16	3	Variable-frequency control	1:2	580	1530*1018*1100
QXQM-20	4	Variable-frequency control	1:2	1180	1700*1210*1300
QXQM-40	5.5	Variable-frequency control	1:2	1430	1900*1450*1480
QXQM-60	—	Variable-frequency control	1:1.5	—	—
QXQM-80	11	Variable-frequency control	1:1.5	3900	2939*1680*2450
QXQM-100	11	Variable-frequency control	1:1.5	3900	2939*1680*2450

Model specifications — 5

Parameter	Published reference
Drive	Gear drive
Jar arrangement	Two or four jars simultaneously
Published combined sample + media limit	Up to two-thirds of jar volume, sample and media combined
Tumbling angle	360°
Speed control	Stepless variable-frequency control

Applications

Batch powder processing and scale-up studies involving material movement, settling and wall adhesion.

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 air or liquid-nitrogen cooling, heating, ultrasonic assistance, sieving and the control panel where compatible. Each proposed option needs an agreed mechanical, utility and process scope.

- 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

Check the loaded jar assembly, installation access, utilities and operating cycle. A 500 mL laboratory QXQM trial cannot validate the output of a larger production machine.

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

Trials and comparisons

Equipment-family reference

Lithium iron phosphate

QXQM; exact capacity not recorded · Dry milling; horizontal configuration recorded

- Sample: 120 g
- Jar: 500 mL
- Recorded sampling / duration: 150 min

Recorded observations

Observation	Sampling time	D50 (μm)	D90 (μm)
Recorded sample	150 min	1.33	2.74

This is a laboratory QXQM-family record with a 500 mL jar, not a production-scale result. The record identifies QXQM, not WXQM or a production QXQM capacity. D99 was requested but not reported. Atmosphere, contamination and measurement methods need confirmation.

How to plan a fair comparison

Plan scale-up with matched measurement methods and documented sample/media loading. Record temperature and material movement so that a laboratory result is not extrapolated solely from nominal volume.

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/heavy-duty-full-directional-planetary-ball-mill.html>

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