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PLANETARY MILLING.

Equipment and application knowledge. By TENCAN.



■ PRODUCT CATALOG / Grinding Jars

vacuum planetary mill jar

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A sealed milling jar configured for evacuation and, where specified, inert-gas backfilling.

Overview

A sealed milling jar configured for evacuation and, where specified, inert-gas backfilling. The jar body, lid, valves and seals need to be specified as one compatible assembly.

How it works

The jar working surface forms part of the contact system between sample, media and mill. Material selection should balance the required mechanical action with chemical compatibility and the acceptable contribution from wear.

Vacuum capability does not establish a positive-pressure rating or approval for every reactive sample. Verify materials, seals and permitted operating conditions.

Key features

- The published chart includes flange dimensions, internal depth and lid-inclusive height.
- The complete envelope matters because a vacuum lid or flange can exceed a standard jar's height.
- The workbook includes a procedure using a stainless-steel vacuum jar, but does not supply a pressure-rating certificate.

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.

Published dimensions and configurations — 1

Model / nominal volume	Internal diameter (mm)	External diameter (mm)	Flange diameter (mm)	Internal depth (mm)	Height without lid (mm)
50mL	39	49	78	45	50
100mL	48	62	88	57	65
250mL	73	88	108	65	73
500mL	90	107	132	93	100
1L	106	121	131	117	123
1.5L	115	131	151	143	150
2L	141	153	177	133	140
3L	141	157	178	198	205
4L	168	178	220	200	205
5L	182	192	234	200	205

Published dimensions and configurations — 2

Model / nominal volume	Height with lid (mm)	Reference mass (kg)
50mL	58	0.7
100mL	72	1.3
250mL	80	2.1
500mL	107	3.5
1L	130	4.2
1.5L	158	5.8
2L	149	6.3
3L	213	9.2
4L	213	9.2
5L	213	10.2

Applications

Materials-development procedures requiring a separately assessed sealed or controlled-atmosphere jar arrangement.

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

Accessories and options

Specify body material, nominal volume, flange and lid geometry, valve arrangement, required operating pressure and the intended gas/liquid.

State the required grade, quantities, drawings and destination when requesting a quotation. Confirm what is included, the document requirements, packing and commercial terms; no generic delivery time or universal custom capability is assumed.

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

Selection guidance

Match vacuum-capable jar assembly to the sample chemistry and the elements or residues that matter to the analysis. Then confirm the dimensions, complete loaded mass and operating arrangement against the selected mill.

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

Trials and comparisons

Material/application reference

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

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 a vacuum-capable jar assembly comparison, use matched sample portions and the same measurement/dispersion method. State the jar, media, mass/volume loading basis, processing schedule and contamination measurements. A change in material grade alone is not established as the cause of a result.

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/milling-accessories/jars/vacuum-planetary-mill-jar.html>

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