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■ PRODUCT CATALOG / Grinding Jars

304 stainless steel planetary mill jar

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A robust metal milling jar for planetary sample grinding and mixing where iron, chromium and nickel transfer can be accepted.

Overview

A robust metal milling jar for planetary sample grinding and mixing where iron, chromium and nickel transfer can be accepted. Choose the planetary jar dimensions and wall variant for the actual holder, rather than using a roller-mill jar chart.

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.

Wear can introduce Fe, Cr and Ni. Stainless steel should not be described as contamination-free, and liquid compatibility depends on the actual chemistry.

Key features

- 304 stainless steel with separate thick- and thin-wall variants.
- Compare internal diameter, external diameter, complete height and jar mass for each nominal volume.
- Vacuum versions and nonstandard dimensions can be discussed for a defined machine.

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	External diameter (mm) / Thick-wall variant	External diameter (mm) / Thin-wall variant	Internal diameter (mm) / Thick-wall variant	Internal diameter (mm) / Thin-wall variant	Height (mm) / Thick-wall variant
50mL	48	—	38	—	54
100mL	62	—	48	—	72
250mL	87	—	71	—	83
500mL	106	88	90	81	108
1L	131	107	115	100	118
1.5L	131	132	115	125	158
2L	157	132	141	125	148
2.5L	157	158	141	151	183
3L	157	158	141	151	213
4L	178	179	162	170	213
5L	192	—	182	—	209
10L	243	—	232	—	259
15L	271	—	261	—	295
20L	320	—	310	—	284
25L	320	—	310	—	347

Published dimensions and configurations — 2

Model / nominal volume	Height (mm) / Thin-wall variant
50mL	—
100mL	—
250mL	—
500mL	110
1L	140
1.5L	140
2L	181
2.5L	156

Model / nominal volume	Height (mm) / Thin-wall variant
3L	186
4L	188
5L	—
10L	—
15L	—
20L	—
25L	—

Applications

General powder preparation, mixing and materials that tolerate the relevant stainless-steel constituents.

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 the exact holder, external diameter, permitted height, wall variant, closure and any vacuum requirement.

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 304 stainless steel 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

Battery cathode powder

XQM-0.4A · Dry milling

- Sample: 10 g
- Jar: 100 mL stainless-steel jar; steel media
- Recorded sampling / duration: 60 min

Recorded observations

Observation	Sampling time	D50 (μm)	D90 (μm)
Recorded sample	60 min	20.70	36.48

Settling was reported and the requested sub-1 μm target was not demonstrated. The record does not establish that the jar or media were grade 304; it is a steel-family observation, not a grade-specific test.

How to plan a fair comparison

For a 304 stainless steel 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/304-stainless-steel-planetary-mill-jar.html>

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