

VIBRATORY DISC MILL RS 300

Analytical fineness for large sample volumes

No grinder can beat the speed of a Vibratory Disc Mill when it comes to preparing samples for spectral analyses. RETSCH's Vibratory Disc Mill RS 300 is suitable for rapid, loss-free and reproducible grinding of medium-hard, brittle and fibrous materials.

Thanks to the robust universal drive shaft, which sets the grinding jar into a 3D motion, the RS 300 accepts grinding set weights of up to 30 kg. The closed grinding system guarantees complete processing of the sample.

Grinding sets are available in a variety of sizes and materials, allowing for easy adaptation to application requirements.



[Click to view video](#)

Product Video

REPRODUCIBLE & SAFE

- | Reproducible results and homogeneous samples thanks to universal drive shaft
(3D vibration of grinding sets)
- | Auto-reverse function (left/right rotation)
- | Programmable interval function (start/ stop automatic)
- | Grinding jar volumes from 100 ml up to 2,000 ml
- | Pneumatic grinding-jar clamping (with air-pressure) for convenient and safe handling
- | Additional safety feature: Mill only starts when the pneumatic pressure is correct
- | Optional AutoLifter for ergonomic lifting of heavy grinding sets



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ERGONOMIC HANDLING AND EASY OPERATION

Operation and handling of the RS 300 and its grinding sets is convenient and ergonomic. The **AutoLifter** is an optional accessory which greatly facilitates ergonomic lowering and lifting of the high-capacity grinding sets. It is simply placed around the grinding set and activated by pushing a button.

The **pneumatic clamping device** allows for convenient and safe fastening of the jar. The mill only starts if the pneumatic pressure is correct and the device lifts automatically when the grinding process stops.

The grinding parameters are entered using a keypad. While the programmable interval function helps to improve grinding results, the autoreverse function reduces caking effects inside the grinding jar.



Thanks to a variety of sizes and materials of the grinding sets, the RS 300 is suitable for a wide range of applications. The mill accommodates batch sizes from 35 ml to 2000 ml and material feed sizes up to 20 mm.

A grinding set for the vibratory disc mill consists of a grinding jar with cover and a grinding disc. The 400 ml grinding set also contains a grinding ring, the 300 ml grinding sets has two additional grinding rings.

The grinding sets are characterized by the following features:

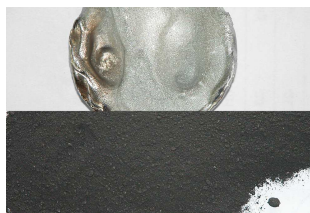
- | Safe, non-slip attachment with anti-twist lock on cover and base
- | Gap between dish and cover edge for easy opening
- | Optimum sealing with O-ring (ideal for wet grinding)
- | Clear grinding set identification (article number, material and volume)
- | The disc of the 800 ml, 1000 ml and 2000 ml grinding sets has an opening which supports perfect mixing of large sample quantities



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TYPICAL SAMPLE MATERIALS

RETSCH's Vibratory Disc Mills rapidly pulverize materials such as cement, cement clinker, ceramics, coal, coke, concrete, corundum, glass, metal oxides, minerals, ores, silicate, slag, soil, etc.



slag

electronic scrap

iridium

dolomite



slag



electronic scrap



iridium



dolomite

To find the best solution for your sample preparation task, visit our application database.

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FUNCTIONAL PRINCIPLE

The vibratory disc mill comminutes by impact and friction. The grinding set is firmly attached to the vibration plate with a pneumatic quick clamping device. The plate with the grinding set is subjected to 3-D vibrations.

The sample is crushed by extreme pressure, impact and friction generated by centrifugal forces acting on the grinding rings in the dish. The vibrations are produced by a frequency controlled 2.2 kW 3-phase motor.

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TECHNICAL DATA

Applications	size reduction, mixing, trituration
Field of application	construction materials, environment / recycling, geology / metallurgy, glass / ceramics
Feed material	medium-hard, hard, brittle, fibrous
Size reduction principle	pressure, friction
Material feed size*	< 20 mm
Final fineness*	< 20 µm
Batch size / feed quantity*	35 - 2,000 ml
Speed at 50 Hz (60 Hz)	912 min ⁻¹
Material of grinding tools	chrome steel (hardened steel), tungsten carbide, steel 1.1740 (for heavy-metal free grinding)
Grinding jar sizes	50 ml / 100 ml / 300 ml / 400 ml / 800 ml / 1,000 ml / 2,000 ml
Setting of grinding time	digital, 00:00 to 59:59
Drive	3-phase motor
Drive power	2.2 kW
Electrical supply data	different voltages
Power connection	3-phase
Protection code	IP 40
W x H x D closed	1150 x 1400 x 810 mm
Net weight	~ 415 kg (without grinding set)
Standards	CE

*depending on feed material and instrument configuration/settings

www.retsch.com/rs300

ORDER DATA

VIBRATORY DISC MILL RS 300

Vibratory Disc Mill RS 300 for grinding sets 100 ml - 2000 ml
(please order grinding sets separately)

21.101.0001	RS 300	3/N~ 400 V, 50 Hz, without AutoLifter
21.101.0005	RS 300	3/N~ 220 V, 60 Hz, without AutoLifter

other electrical versions available for the same price

ACCESSORIES / SPARE PARTS RS 300

23.225.0003	AutoLifter for ergonomical outlifting of grinding sets 800, 1000 and 2000 ml
03.143.0071	Platform Insert
03.225.0093	Disc hook
23.701.0007	Air compressor 200/240 V, 50 Hz
03.381.0010	Airbag clamp
23.181.0001	Spring (set of 6 pieces)
23.043.0001	Spring spigot bush (set of 12 pieces)

2000 ML GRINDING SETS

Complete set, incl. grinding jar, lid with gasket and disc
(no spacer ring needed)

23.462.0002	Grinding set complete, chrome steel
23.462.0020	Grinding set complete, standard steel
23.462.0003	Grinding set complete, stainless steel 1.4401 polished

ACCESSORIES / SPARE PARTS

03.462.0378	Grinding jar, chrome steel
03.470.0041	Disc, chrome steel
03.107.0589	Lid, chrome steel
03.107.0592	Aeration lid, chrome steel

03.462.0376	Grinding jar, standard steel
03.470.0042	Disc, standard steel
03.107.0588	Lid, standard steel
03.111.0364	Gasket for lid

1000 ML GRINDING SETS

**Complete set, incl. grinding jar, lid with gasket and disc
(please order spacer ring separately)**

23.462.0016	Grinding set complete, chrome steel
23.462.0014	Grinding set complete, standard steel

ACCESSORIES / SPARE PARTS

23.025.0109	Spacer ring for chrome steel, standard steel and silicon nitride grinding set
03.462.0377	Grinding jar, chrome steel
03.470.0039	Disc, chrome steel
03.107.0587	Lid, chrome steel
03.462.0372	Grinding jar, standard steel
03.470.0040	Disc, standard steel
03.107.0586	Lid, standard steel
03.111.0363	Gasket for lid

800 ML GRINDING SETS

**Complete set, incl. grinding jar, lid with gasket and disc
(please order spacer ring separately)**

23.462.0024	Grinding set complete, chrome steel
23.462.0018	Grinding set complete, standard steel

ACCESSORIES / SPARE PARTS

23.025.0109	Spacer ring for chrome steel and standard steel grinding set
03.462.0379	Grinding jar, chrome steel
03.470.0037	Disc, chrome steel

03.107.0585	Lid, chrome steel
03.462.0371	Grinding jar, standard steel
03.470.0038	Disc, standard steel
03.107.0584	Lid, standard steel
03.111.0360	Gasket for lid

400 ML GRINDING SETS

**Complete set, incl. grinding jar, lid with gasket and disc
(please order spacer ring separately)**

23.462.0029	Grinding set complete, chrome steel
23.462.0030	Grinding set complete, Standardstahl

ACCESSORIES / SPARE PARTS

23.025.0108	Spacer ring for chrome steel and standard steel grinding set
03.462.0369	Grinding jar, chrome steel
03.470.0035	Disc, chrome steel
03.604.0255	Grinding ring, chrome steel
03.107.0583	Lid, chrome steel
03.462.0370	Grinding jar, standard steel
03.470.0036	Disc, standard steel
03.604.0256	Grinding ring, standard steel
03.107.0582	Lid, standard steel
03.111.0362	Gasket for lid

100 ML GRINDING SETS

**Complete set, incl. grinding jar, lid with gasket and disc
(please order spacer ring separately)**

23.462.0008	Grinding set complete, chrome steel
23.462.0017	Grinding set complete, standard steel
23.462.0006	Grinding set complete, tungsten carbide, light
23.462.0007	Grinding set complete, tungsten carbide, with protective steel jacket

ACCESSORIES / SPARE PARTS

23.025.0104	Spacer ring for chrome steel and standard steel grinding set
23.025.0105	Spacer ring for tungsten carbide grinding set
23.025.0106	Spacer ring for tungsten carbide light grinding set
23.025.0117	Adapter plate for 4 x 100 ml chrome steel, standard steel and tungsten carbide light grinding sets
05.114.0070	O-ring for lid



50 ML GRINDING SETS

Complete set, incl. grinding jar, lid with gasket and disc

23.462.0055	Grinding set complete, chrome steel for adapter plate
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ACCESSORIES / SPARE PARTS

23.025.0118	Adapter plate for 4 x 50 ml chrome steel grinding sets
05.114.0122	O-ring for lid

