

NEW

Retsch[®]
MILLING SIEVING ASSISTING

The new MM 500 nano – Best in class for sample mixing and pulverization

The new Mixer Mill MM 500 nano is a versatile bench-top unit which has been developed specially for high sample throughput in dry, wet and cryogenic grinding of small sample amounts. This powerful mill mixes and pulverizes powders and suspensions efficiently and quickly down to the nanometer range in shortest time.

Benefits at a glance:

- Powerful grinding with up to 35 Hz
- Grinding jar volumes 50 ml, 80 ml, 125 ml, pressure-tight up to 5 bar
- New jar design allows full use of volume, also for wet grinding
- 3 different grinding modes (dry, wet or cryogenic)
- Memory for 12 SOPs and 4 program cycles
- Can be controlled via the optional RETSCH App

High
Performance:
90 nm in 2 h
TiO₂



The robust high-performance drive makes the MM 500 nano suitable for applications like **mechanical alloying** and **mechanochemistry**. The user-friendly clamping system facilitates safe operation. For periodic sample extraction, the jars remain conveniently clamped.

At a glance

Application	Mechanochemistry, mechanical alloying, size reduction, mixing, homogenization, cell disruption, cryogenic grinding
Fields of application	Agriculture, biology, chemistry / plastics, construction materials, engineering / electronics, environment / recycling, food, geology / metallurgy, glass / ceramics, medicine / pharmaceuticals, material science
Feed material	hard, medium-hard, soft, brittle, elastic, fibrous

Performance data

Size reduction principle	impact, friction
Material feed size*	≤ 10 mm
Final fineness*	~ 0.1 μm
Batch size / feed quantity*	max. 2 x 45 ml
No. of grinding stations	max. 2
Setting of vibrational frequency	digital, 3 – 35 Hz (180 – 2100 min ⁻¹)
Grinding modes	dry, wet, cryogenic
Grinding under inert gas	yes
Grinding down to nanometer range	yes
Material of grinding tools	hardened steel, stainless steel, tungsten carbide, zirconium oxide
Grinding jar sizes	50 ml / 80 ml / 125 ml
Grinding time	10 s – 99 h, digital setting
Storable SOPs	12
No. of storable program cycles	4 (with 99 repeats)
Control via RETSCH App	optional

Technical data

Power connection	1-phase
Protection code	IP 30
Power drive	750 W
W x H x D closed	690 x 375 x 585 mm
Net weight	~ 60 kg
Standards	CE

*depending on feed material and instrument configuration

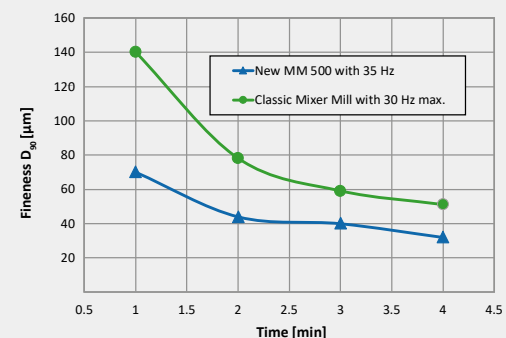
The new RETSCH App

As the leading solution provider for sample preparation equipment, RETSCH has taken operating convenience to the next level and created the new RETSCH App. This tool makes working with your RETSCH mill easy and convenient:

- Operate your devices via your smart phone or tablet
- Control your devices based on your own application routines
- Access information from the RETSCH database
- Get in touch with the RETSCH service team via the app



Grinding of basalt



Dry grinding of basalt

Grinding of basalt in the MM 500 nano results in better fineness compared to classic Mixer Mills thanks to the increased frequency of 35 Hz instead of 30 Hz (50 ml jar + 12 x 12 mm grinding balls).

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