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MILLING SIEVING ASSISTING

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## 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.

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# 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

## FLEXIBILITY

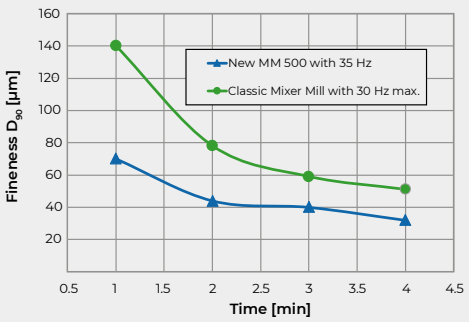
The robust high-performance drive makes the MM 500 nano suitable for applications like mechanical alloying and mechanochemistry. The user-friendly clamping system facilitates safe operation. For periodic sample extraction, the jars remain conveniently clamped.

## 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

## 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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Certifications
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