



Time is
money

STOP
wasting it

PERFORMANCE CHAMPION AMONG BENCHTOP CUTTING MILLS

THE NEW CUTTING MILL SM 50

Retsch's SM 50 Cutting Mill elevates milling to a new level of laboratory efficiency and precision. This powerful benchtop mill features an innovative design that minimizes time losses in the process and prevents sample contamination during preparation of samples for analysis, ensuring uncompromised performance for accurate sample preparation across all applications.

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STOP TIME LOSSES

With the Total Access Concept and tool-free push-fit components, the SM 50 offers up to 30% time savings on cleaning. Its efficient design ensures quick and easy maintenance, allowing more time for the actual analysis.

- ▮ The EasyInspect hopper opens fully for easy cleaning access.
- ▮ The push-fit rotor, sieve, cyclone, and milling chamber enable tool-free disassembly for external cleaning or even uninterrupted milling with a second set.
- ▮ The integrated cyclone operates without tubes or hoses.
- ▮ The compact design minimizes surfaces and hidden corners.

STOP CONTAMINATION

- ▮ The removable milling chamber is available in different materials ensuring maximum safety during sample changes to avoid contamination through material abrasion.
- ▮ All grinding tools are easily accessible and can be thoroughly cleaned to prevent cross-contamination.

STOP COMPROMISING

▮ POWERFUL AND EFFICIENT

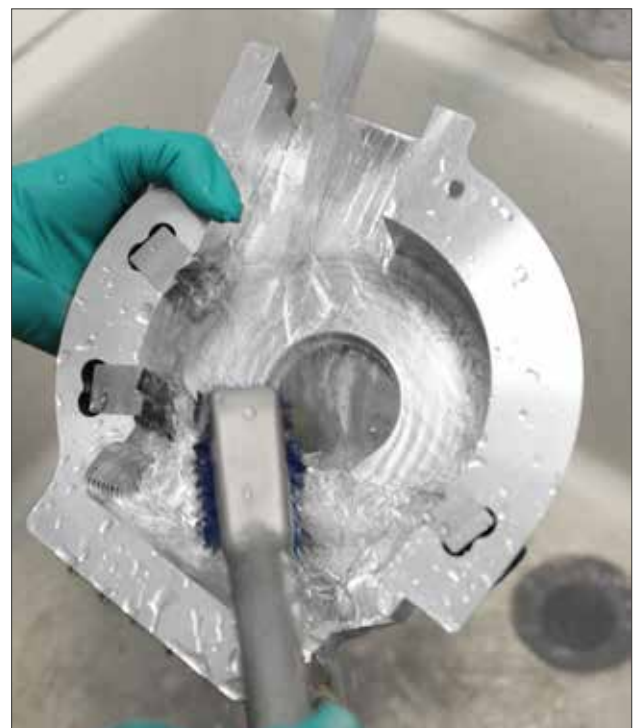
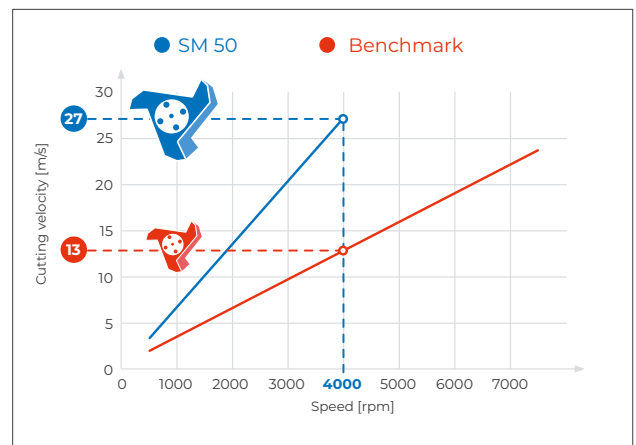
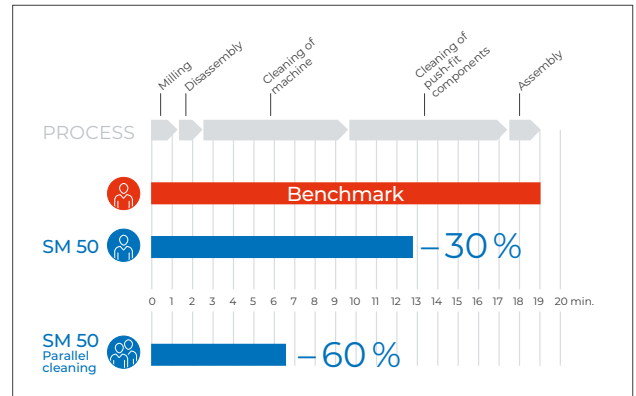
The SM 50 combines the compact design of benchtop mills with the robust performance of floor-standing models. Its large rotor and high speed ensure exceptional cutting speed of 27 m/s for powerful and precise cutting results. A versatile range of sieve sizes and collectors offers flexibility for diverse applications and materials.

▮ NO MANUAL PRE-CUTTING REQUIRED

The spacious EasyInspect hopper, along with the large milling chamber and sieve area, efficiently processes large sample pieces up to 50 mm without the need for pre-cutting. This design simplifies material handling and enhances lab efficiency by significantly reducing preparation time.

▮ MINIMUM SAMPLE LOSS

The integrated cyclone technology enables up to 100% sample recovery, depending on the application, minimizing material loss by utilizing an intelligent air stream that efficiently guides material flow from the hopper to the receptacle. Its compact design eliminates the need for connection tubes, reducing sample residues to ensure a complete sample recovery, even with challenging materials.



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INNOVATIVE DESIGN COMPONENTS: REDEFINING LABORATORY EFFICIENCY

The SM 50 significantly improves sample recovery and contamination-free results, thanks to its advanced engineering featuring the EasyInspect hopper, integrated cyclone, and push-fit milling chamber. These innovative components work together to optimize efficiency and precision in laboratory milling.

1 | PUSH-FIT MILLING CHAMBER

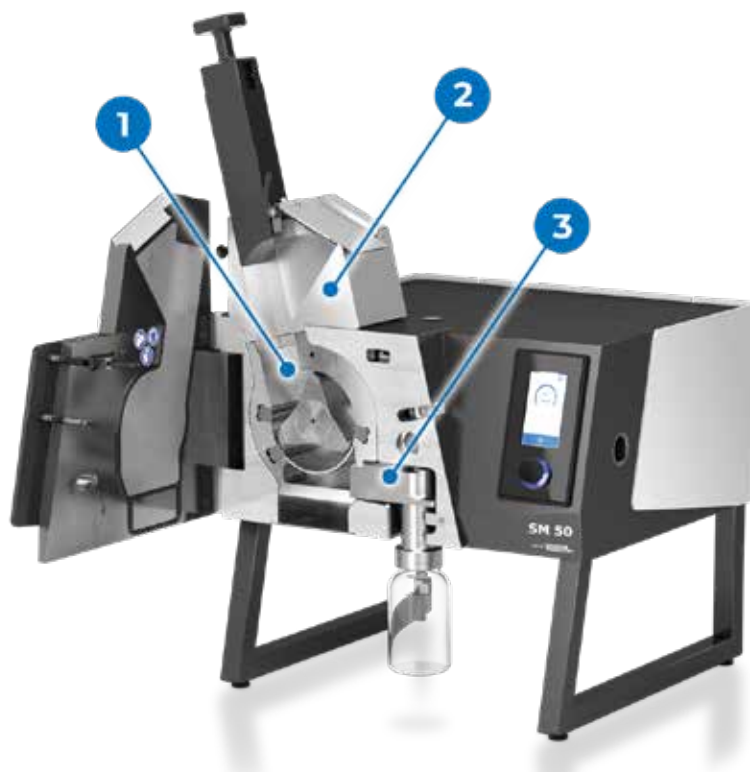
The push-fit milling chamber allows quick and tool-free removal, simplifying cleaning and preventing cross-contamination.

2 | EASYINSPECT HOPPER

The EasyInspect hopper facilitates effortless inspection and cleaning by providing full visibility and easy access to the interior.

2 | INTEGRATED CYCLONE

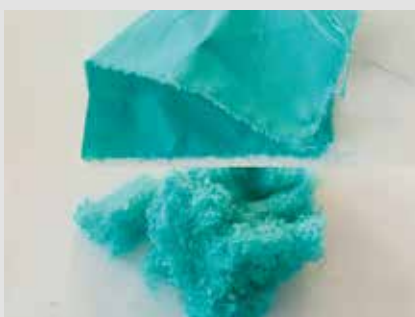
The integrated cyclone ensures efficient sample recovery and a direct transport of the sample material to the receptacle, minimizing residue and eliminating dust release.



ACHIEVING PRECISION FOR VERSATILE APPLICATIONS

The SM 50 Cutting Mill is engineered for versatility, efficiently handling diverse materials - from light and voluminous samples to hard and tough samples. With its milling power and adaptable design, the SM 50 is ideal for industries like agriculture, recycling, and pharmaceuticals, particularly where contamination-free preparation and complete sample recovery are crucial for small sample amounts.

- | Hard and tough samples: Plastics, wood chips and dry food
- | Brittle and dusty samples: Herbs, bark and dried vegetables
- | Light and voluminous samples: Feathers, textiles, paper and hay

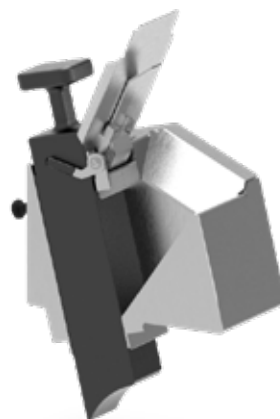


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INNOVATIVE FEATURES FOR SUPERIOR PERFORMANCE

In addition to its core features, the SM 50 incorporates numerous enhancements for optimizing laboratory processes. With detailed technical specifications and distinctive attributes, it ensures versatile and efficient performance while offering simple handling and safe operation for diverse applications.

- | Rotor shaft release: Easily activate rotor via the touch display
- | Hopper flap: Efficiently directs fluffy materials into the chamber
- | Removable plunger: Quick access with a single screw removal
- | Inspection opening: Facilitates cleaning of vacuum cleaner-connected channels
- | Touch display: Intuitive control supplemented with a rotary push button
- | Gravity chamber: For coarse pre-crushing of non-dusty materials



AT A GLANCE

Feed material	soft, medium-hard, tough, elastic, fibrous
Material feed size*	50 mm
Final fineness	250 µm
Speed at 50 Hz (60 Hz)	500 - 4,000 min ⁻¹
Rotor diameter	129.5 mm
Types of rotors	parallel section rotor / 3-disc rotor
Material of grinding tools	stainless steel, steel for heavy-metal free grinding
Sieve sizes	trapezoid holes 0.25 / 0.50 / 0.75 / 1.00 / 1.50 mm square holes 2.00 / 4.00 / 6.00 / 10.00 mm
Collector systems / capacities	collecting glass 0.25 / 0.5 l (not for gravity chamber) and collecting receptacle 3 l
Drive power	1.5 kW
Electrical supply data	100-120 V, 20 A/200-230 V, 10 A
Power connection	1-phase
W x H x D closed	565 x 750 x 530 (with base frame and hopper)
Net weight	80 kg
Standards	CE

*depending on feed material and instrument configuration/settings

