

CUTTING MILL SM 400

For Large Sample Pieces and Volumes



Cutting mills are used for the grinding of soft, medium-hard, tough, elastic, fibrous, and heterogeneous mixes of products. The Cutting Mill SM 400 is suitable for primary cutting of large sample pieces measuring up to 170 x 220 mm but can also achieve the required final fineness in one step, depending on the application.

- | Powerful size reduction thanks to 3 kW drive
- | Suitable for heat-sensitive materials
- | Quick and easy cleaning due to fold-back hopper and smooth surfaces
- | Defined final fineness due to bottom sieves with aperture sizes from 1 to 20 mm



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Product Video

CUTTING MILL SM 400

MAXIMIZE YOUR THROUGHPUT

With a grinding chamber volume of 7.5 L, the mill is suitable for initial feed sizes of up to 170 mm x 220 mm. Where smaller models require several processing steps, the SM 400 accepts large volumes for thorough homogenization in one working run. Manual pre-cutting of samples is usually not required.



The large open surface of the 240 mm x 240 mm bottom sieve and the wide opening of the hopper are further features allowing for high throughput. If the optional continuous outlet is used, further time savings can be achieved. The use of slotted hole sieves can also lead to increased throughput. Typically, the throughput is doubled compared to using round hole sieves with the same aperture size; sample residues are reduced to neglectable amounts. The final fineness of the samples tend to be slightly higher than with round hole sieves of the same aperture size.

CYCLONE-SUCTION-COMBINATION

IDEAL FOR LIGHT & HEAT-

SENSITIVE MATERIALS

When operated with the optional cyclone-suction-combination, the SM 400 is also suitable for grinding low-density or heat-sensitive sample materials.

- | Efficient cooling of sample and cutting tools
- | Increased sample discharge from the grinding chamber
- | Less remainder in the grinding chamber
- | Particularly suitable for large volumes
- | The cyclone accommodates sample bottles of 0.5 – 1 – 2 – 5 and 30 liters



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TYPICAL SAMPLE MATERIALS

RETSCH cutting mills are suitable for a vast range of applications. Typical materials include lignite, non-ferrous metals, electronic scrap, drugs, foils, feedstuff, spices, rubber, wood, cables, bones, plastics, leather, organic and inorganic waste, paper, cardboard, plants, refuse derived fuels, straw, etc.



hemp umble



wood



feed pellets

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

CUTTING MILL SM 400

TECHNICAL DATA

Applications	size reduction by cutting
Field of application	agriculture, biology, chemistry / plastics, engineering / environment / recycling, food, medicine / pharmaceuticals
Feed material	soft, medium-hard, tough, elastic, fibrous
Size reduction principle	shearing, cutting
Material feed size*	< 170 x 220 mm
Final fineness*	1 - 20 mm
Grinding chamber volume	~7.45L
Speed at 50 Hz (60 Hz)	280 min ⁻¹
Rotor peripheral speed	2.25 m/s
Rotor diameter	152 mm
Types of rotors	parallel section rotor
Types of hoppers	long stock
Material of grinding tools	hardened steel, tungsten carbide
Sieve sizes	trapezoid holes 1.00 / 2.00 mm round holes 4.00 / 6.00 / 8.00 / 10.00 / 20.00 mm
Collector systems / capacities	collecting receptacle 5 l optional: cyclone-suction combination
Drive	3-phase motor
Drive power	3 kW
Electrical supply data	different voltages
Power connection	3-phase
Engine brake	no
Protection code	IP 54
W x H x D closed	695 x 1399 x 719 mm
Net weight	~ 180 kg
Standards	CE

*depending on feed material and instrument configuration/settings

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FUNCTIONAL PRINCIPLE

Size reduction in the Cutting Mill SM 400 takes place by cutting and shearing forces. The sample hits the rotor and is comminuted between the blades and the stationary cutting bars inserted in the housing.

Thanks to the wide range of accessories, the SM 400 can be easily adapted to different application requirements



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