



Cutting Mill SM 100

General Information

Cutting mills are suitable for the grinding of soft, medium-hard, elastic, fibrous, and heterogeneous mixes of products. The SM 100 is the budget-priced basic model among the RETSCH cutting mills. With its strong 1.5 kW drive and 1,500 rpm rotor speed the mill is particularly suitable for routine applications. Cleaning is made particularly easy. In combination with the wide choice of bottom sieves, hoppers and collecting vessels, the mill can be easily adapted to varying application requirements. The SM 100 can be bench-mounted; alternatively a convenient base frame on wheels is available.



Application Examples

animal feed, bones, cardboard, drugs, electronic scrap, food, leather, lignite, paper, plant materials, plastics, resins, rubber, spices, straw, textiles, wood, ...

Product Advantages

- for routine applications
- optimum cutting effects
- quick and easy cleaning due to smooth surfaces and push-fit rotor
- defined final fineness due to bottom sieves with aperture sizes from 0.25 - 20 mm
- feed size
- wide range of accessories including various hoppers, collection systems, rotors and sieves
- highest safety standards

Features

Applications	size reduction by cutting
Field of application	agriculture, biology, chemistry / plastics, engineering / electronics, environment / recycling, food, medicine / pharmaceuticals
Feed material	soft, medium-hard, elastic, fibrous
Size reduction principle	shearing, cutting
Material feed size*	< 60 x 80 mm
Final fineness*	0.25 - 20 mm
Speed at 50 Hz (60 Hz)	1,500 min ⁻¹
Rotor peripheral speed	9.4 - 11.4 m/s
Rotor diameter	129.5 mm
Types of rotors	parallel section rotor / 6-disc rotor
Types of hoppers	standard, long stock
Material of grinding tools	stainless steel, steel for heavy-metal free grinding, tungsten carbide
Sieve sizes	trapezoid holes 0.25 / 0.50 / 0.75 /



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	1.00 / 1.50 mm square holes 2.00 / 4.00 / 6.00 / 8.00 / 10.00 / 20.00 mm
Collector systems / capacities	collecting receptacle 5 l / optional: 30 l collecting unit 0.25 / 0.5 l
Drive	3-phase motor
Drive power	1,5 kW
Electrical supply data	different voltages
Power connection	3-phase
Protection code	IP 54
W x H x D closed	582 x 1675 x 700 mm (with base frame and standard hopper)
Net weight	~ 73 kg without hopper, rotor and base frame
Standards	CE

Please note:

*depending on feed material and instrument configuration/settings

Videolink



<http://www.retsch.com/sm100>

Function Principle

Size reduction in the Cutting Mill SM 100 takes place by cutting and shearing forces. The sample comes into contact with the rotor, and is comminuted between the blades and the stationary standard cutting bars inserted in the housing. In the 6-disc rotor, spirally arranged reversible hard metal plates operate by cutting in sequence.

The knives of the parallel section rotor carry out comminution with a powerful cutting action.

The dwelling time of the sample in the chamber is short; as soon as it is small enough to pass through the openings of the bottom sieve it is discharged and collected in the receptacle. The rotor speed of 1.500 min⁻¹ ensures gentle and rapid size reduction.

Order data



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with collecting receptacle, 5 litres (please order rotor, hopper, bottom sieve and optional base frame separately)

20.727.0001	SM 100, 3~ 400 V, 50 Hz
20.727.0009	SM 100, 220-230 V, 50/60 Hz, with frequency converter
20.727.0002	SM 100, 3~ 400 V, 50 Hz, , for grinding without heavy-metal contamination
20.727.0010	SM 100, 220-230 V, 50/60 Hz, with frequency converter, , for grinding without heavy-metal contamination

other electrical versions available

Base frame

22.824.0005	Base frame with wheels for SM 100
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Accessories SM 100 / SM 200 / SM 300

Rotors

22.608.0022	6-disc rotor, stainless steel, with reversible cutting tips of tungsten carbide
22.608.0028	6-disc rotor, steel 1.0580, with reversible cutting tips of tungsten carbide, , for grinding without heavy-metal contamination
22.608.0018	Parallel section rotor, steel 1.0580, for grinding without heavy-metal contamination
22.608.0034	V-rotor, stainless steel, for SM 300

Hoppers

22.785.0007	Universal hopper with plastic plunger, for SM 100
22.408.0004	Long stock hopper with wooden plunger, for SM 100

Additional plungers for universal hopper

22.725.0010	Plastic plunger
22.725.0011	Wooden plunger
22.725.0012	Aluminum plunger

Bottom sieves of stainless steel

03.647.0312	Trapezoid holes, 0.25 mm
03.647.0313	Trapezoid holes, 0.50 mm
03.647.0314	Trapezoid holes, 0.75 mm
03.647.0315	Trapezoid holes, 1.00 mm
03.647.0316	Trapezoid holes, 1.50 mm
03.647.0318	Square holes, 2.00 mm
03.647.0320	Square holes, 4.00 mm
03.647.0321	Square holes, 6.00 mm
03.647.0322	Square holes, 8.00 mm
03.647.0024	Square holes, 10.00 mm



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03.647.0062

Square holes, 20.00 mm

Bottom sieves of steel 1.0353 for grinding without heavy-metal contamination

03.647.0326

Trapezoid holes, 0.50 mm

03.647.0327

Trapezoid holes, 0.75 mm

03.647.0328

Trapezoid holes, 1.00 mm

03.647.0333

Square holes, 4.00 mm

03.647.0335

Square holes, 8.00 mm

03.647.0359

Square holes, 10.00 mm

Collecting receptacles

22.003.0008

Collecting unit 250 / 500 ml, incl. 2 sample bottles

22.523.0001

Sample bottles, 250 ml, 10 pieces

22.003.0007

Collecting receptacle, 5 litres, stainless steel

22.003.0010

Collecting receptacle, 30 litres, plastic, incl. adapter and filter hose

22.187.0006

Ring-type filter for collecting receptacle, 5 litres

22.748.0001

Dust filter clamping rings for ring-type filter, incl. 5 dust filters

22.524.0002

Dust filters for ring-type filter, 25 pieces

22.187.0007

Filter hose for collecting receptacle, 5 litres, incl. holder

Accessories for Rotors

22.908.0001

Reversible cutting tips, tungsten carbide, for 6-disc rotor, 10 pieces

22.151.0004

Cutting plates, stainless steel, for parallel section rotor, 1 set (3 pieces)

22.151.0006

Cutting plates, steel 1.1740, for parallel section rotor, 1 set (3 pieces) , for grinding without heavy-metal contamination

Stationary cutting bars

22.152.0007

Cutting bars, stainless steel,, 1 set (3 pieces), for SM 100

22.152.0009

Cutting bars, steel 1.1740,, 1 set (3 pieces), for SM 100

Additional items

22.225.0002

Replacement extraction tool for rotor