



CUTTING MILL SM 100

The budget-priced basic model

Cutting mills are the first choice for the size reduction of soft, medium-hard, tough, elastic, fibrous, and heterogeneous mixes of products.

The SM 100 is the budget-priced basic model among the RETSCH cutting mills. It is suitable for the size reduction of samples which don't require extremely high forces. The mill has been specially designed for routine applications. It is easy to operate and can be mounted on a solid table or on the optional base frame.



[Click to view video](#)

FOR ROUTINE APPLICATIONS

- | Feed size < 60 x 80 mm
- | Defined final fineness due to bottom sieves with aperture sizes from 0.25 - 20 mm
- | Quick and easy cleaning due to smooth surfaces and push-fit rotor
- | Gravity outlet for collection vessels of different sizes
- | Wide range of accessories including various hoppers, collection systems, rotors and sieves
- | Highest safety standards



CUTTING MILL SM 100

ACCESSORIES FOR SAFE AND EFFECTIVE GRINDING PROCESSES

The SM 100 can be equipped with different rotors, hoppers and bottom sieves. The mill and accessories, including cutting bars and cutting plates, are also available in versions for heavy-metal-free size reduction.



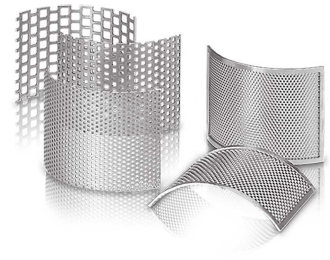
ROTOR TYPES

A parallel section rotor and a 6-disc rotor are available in stainless and heavy-metal-free steel for optimum adaptation to sample properties.



HOPPER TYPES

The SM 100 can be equipped either with the universal hopper, which is suitable for most samples, or the long-stock hopper which is specially designed for long samples.



BOTTOM SIEVES

The bottom sieves with trapezoid or square holes are made of stainless steel or heavy-metal-free steel.

CUTTING MILL SM 100

TYPICAL SAMPLE MATERIALS

RETSCH cutting mills are suitable for a vast range of applications. Typical materials include PET preforms, aluminium slag, animal feed, bones, cables, cardboard, electronic components, feed pellets, foils, food, leather, lignite, material mixtures, non-ferrous metals, paper, pharmaceutical products, plant materials, plastic toys, plastics, polymers, refuse derived fuels, resins, rubber, spices, straw, textiles, waste, wood, etc.



fish



wood



nuts

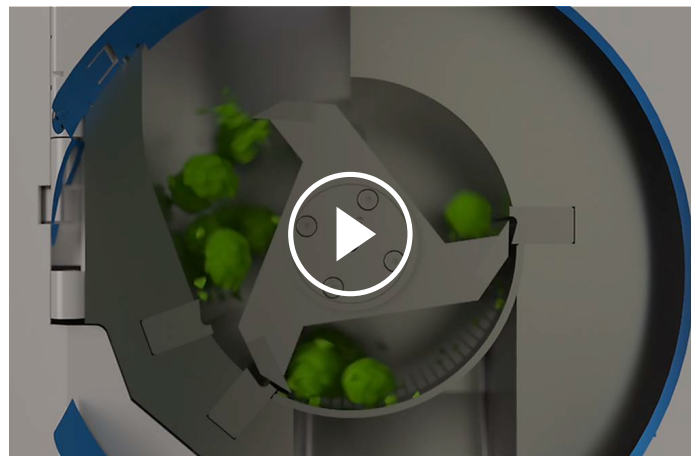


animal feed

CUTTING MILL SM 100

FUNCTIONAL 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 through the gravity outlet and collected in the receptacle. The rotor speed of 1.500 min⁻¹ ensures gentle and rapid size reduction.



[Click to view video](#)

CUTTING MILL SM 100

TECHNICAL DATA

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 / 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

*depending on feed material and instrument configuration/settings

www.retsch.com/sm100

ORDER DATA

CUTTING MILL SM 100

Cutting Mill SM 100 complete 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
22.824.0005		Base frame with wheels for SM 100	

other electrical versions available

ROTORS SM 100, SM 200, SM 300

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	
22.608.0021		Parallel section rotor, stainless steel	
22.608.0018		Parallel section rotor, steel 1.0580, for grinding without heavy-metal contamination	

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 SM 100, SM 200, SM 300

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
03.647.0317		Trapezoid holes	2.00 mm
03.647.0318		Square holes	2.00 mm
03.647.0319		Square holes	3.00 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

03.647.0062



Square holes 20.00 mm

BOTTOM SIEVES OF STEEL 1.0353 FOR GRINDING WITHOUT HEAVY-METAL CONTAMINATION

03.647.0325



Trapezoid holes 0.25 mm

03.647.0326



Trapezoid holes 0.50 mm

03.647.0327



Trapezoid holes 0.75 mm

03.647.0328



Trapezoid holes 1.00 mm

03.647.0329

Trapezoid holes 1.50 mm

03.647.0331

Square holes 2.00 mm

03.647.0332

Square holes 3.00 mm

03.647.0333



Square holes 4.00 mm

03.647.0334

Square holes 6.00 mm

03.647.0335



Square holes 8.00 mm

03.647.0359



Square holes 10.00 mm

ACCESSORIES SM 100, SM 200, SM 300

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

05.045.0528		Collecting receptacle, 30 litres
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 pcs.
22.187.0007		Filter hose for collecting receptacle, 5 litres, incl. holder

ACCESSORIES FOR ROTORS

22.908.0001		Reversible cutting tip incl. screws, tungsten carbide, for 6-disc rotor (10 pcs.)
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 for grinding without heavy-metal contamination
22.608.0035		Adjustment aid for cutting bars

ADDITIONAL ITEMS SM 100, SM 200, SM 300

22.225.0002		Replacement extraction tool for rotor
22.111.0003		Gasket for door SM 100 / SM 200 / SM 300, 1 piece
99.200.0032		IQ/OQ Documentation for SM 100