



## 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.



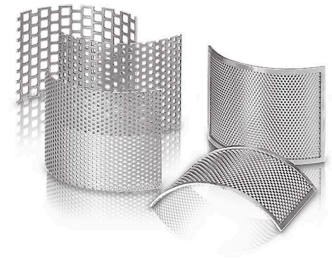
#### ROTOR TYPES

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

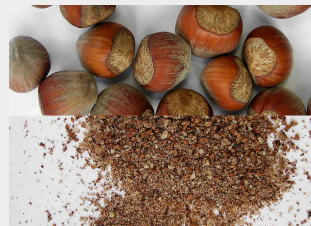
RETSCH cutting mills are suitable for a vast range of applications. Typical materials include PET preforms, aluminium slag, animal feed, bones, cables, cardboard, electronic components, feed pellets, foils, food, leather, lignite, material mixtures, non-ferrous metals, paper, pharmaceutical products,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



fish



wood



nuts

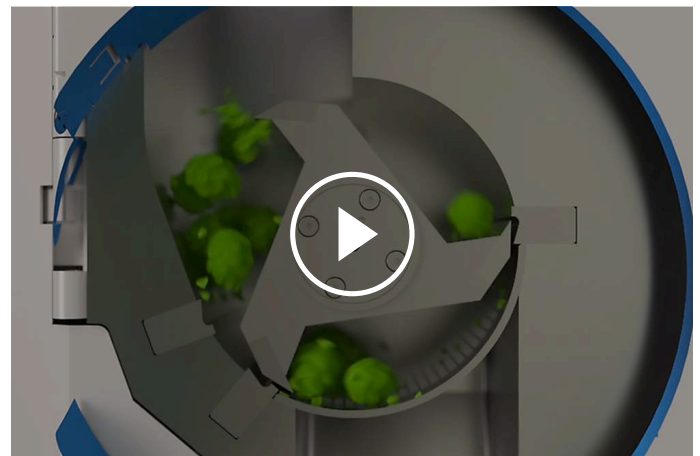


animal feed

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<sup>-1</sup> ensures gentle and rapid size reduction.



[Click to view video](#)

CUTTING MILL SM 100

## TECHNICAL DATA

<b>Applications</b>	size reduction by cutting
<b>Field of application</b>	agriculture, biology, chemistry / plastics, engineering / electronics, environment / recycling, food, medicine / pharmaceuticals
<b>Feed material</b>	soft, medium-hard, elastic, fibrous
<b>Size reduction principle</b>	shearing, cutting
<b>Material feed size*</b>	< 60 x 80 mm
<b>Final fineness*</b>	0.25 - 20 mm
<b>Speed at 50 Hz (60 Hz)</b>	1,500 min <sup>-1</sup>
<b>Rotor peripheral speed</b>	9.4 - 11.4 m/s
<b>Rotor diameter</b>	129.5 mm
<b>Types of rotors</b>	parallel section rotor / 6-disc rotor
<b>Types of hoppers</b>	standard, long stock
<b>Material of grinding tools</b>	stainless steel, steel for heavy-metal free grinding, tungsten carbide
<b>Sieve sizes</b>	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
<b>Collector systems / capacities</b>	collecting receptacle 5 l / optional: 30 l collecting unit 0.25 / 0.5 l
<b>Drive</b>	3-phase motor
<b>Drive power</b>	1,5 kW
<b>Electrical supply data</b>	different voltages
<b>Power connection</b>	3-phase
<b>Protection code</b>	IP 54
<b>W x H x D closed</b>	582 x 1675 x 700 mm (with base frame and standard hopper)
<b>Net weight</b>	~ 73 kg without hopper, rotor and base frame
<b>Standards</b>	CE







\*depending on feed material and instrument configuration/settings

[www.retsch.com/sm100](http://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	 <b>i</b>	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	 <b>i</b>	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	 <b>i</b>	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	 <b>i</b>	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