

SM 100, SM 200, SM 300 & SM 400 – The Perfect Cutting Mill for Every Requirement

The RETSCH cutting mills provide highly efficient primary size reduction of heterogeneous material mixes but are also suitable for grinding soft, medium-hard, elastic or fibrous samples. With the SM 100, SM 200, SM 300 and SM 400 RETSCH offers four models for different requirements.

SM 100 – The Budget-Priced Basic Model

The Cutting Mill SM 100 with a strong 1.5 kW motor and a speed of 1,500 min⁻¹ reliably comminutes products which do not require extremely high forces. It is particularly suitable for routine applications.

The budget-priced basic model can be equipped with two different push-fit rotors, push-fit bottom sieves with apertures from 0.25 to 20 mm and two different hoppers to adapt the mill to varying application requirements.

The SM 100 is easy to operate and clean. It can be mounted on a stable bench or on the optional base frame.

Benefits

- For routine applications at 1,500 min⁻¹
- Optimum cutting effects
- Quick and easy cleaning due to smooth surfaces and push-fit rotor and push-fit bottom sieves
- Defined final fineness due to bottom sieves with aperture sizes from 0.25 - 20 mm
- Highest safety standards

Video on www.retsch.com/sm



Cutting Mill SM 100
with optional base frame

Accessories and Options

A comprehensive range of accessories allows for quick adaptation to individual application requirements. All three models (SM 100, SM 200 and SM 300) are available in a special version for heavy-metal-free grinding (mill, rotor, sieves).

Rotors

- The parallel section rotor is equipped with 3 cutting plates and suitable for universal use
- The 6-disc rotor with its 18 replaceable and reversible hard metal cutting tips is mostly used for medium-hard and brittle materials and for preliminary cutting of coarse goods (SM 100, SM 200 & SM 300)
- The V rotor (only SM 300) very effectively cuts through fibrous and tough materials and promotes rapid sample discharge.

Cyclone-suction-combination (SM 200, SM 300 & SM 400)

- Efficient cooling of sample and cutting tools
- Beneficial for low-density materials and small sample amounts
- Especially suitable for large sample volume
- The cyclone accommodates sample bottles of 0.5 – 1 – 2 – 5 and 30 liters

Other accessories

- Universal or long stock hopper (SM 200, SM 300)
- Sieves from 0.25 to 20 mm, also for heavy-metal-free grinding (SM 200, SM 300) respectively 1–20 mm (SM 400)
- Collecting vessels from 0.25 l sample bottle to 30 liter plastic receptacle
- Stainless steel ring-type filter or textile filter hose help to remove dust
- Sieves with slotted holes available (SM 400)



Cutting Mills at a Glance



Application	size reduction by cutting		
Fields of application	agriculture, biology, chemicals / plastics, food, engineering / electronics, medicine / pharmaceuticals, environment / recycling		
Feed material	soft, medium-hard, elastic, fibrous	soft, medium-hard, tough, elastic, fibrous	

Performance data

Feed size*	max. 60 x 80 mm	max. 60 x 80 mm	max. 60 x 80 mm	max. 170 x 220 mm
Final fineness*	$d_{90} < 250 \mu\text{m}$	$d_{90} < 250 \mu\text{m}$	$d_{90} < 250 \mu\text{m}$	$d_{90} < 1,000 \mu\text{m}$
Rotor speed at 50 Hz	1,500 min ⁻¹	1,500 min ⁻¹	100–3,000 min ⁻¹	280 min ⁻¹
Cutting bars	standard	double acting	double acting	standard
Rotors	6-disc rotor and parallel section rotor	6-disc rotor and parallel section rotor	6-disc rotor, parallel section rotor and V rotor	parallel section rotor
Hoppers	fixed	foldback	foldback	foldback
Collecting receptacle				
Standard	5 l	5 l	5 l	5 l
Options	0.25 / 0.5 / 30 l	0.25 / 0.5 / 30 l	0.25 / 0.5 / 30 l	0.25 / 0.5 / 30 l
Cyclone (option)	-	0.5 / 1 / 2 / 5 l / 30 l	0.5 / 1 / 2 / 5 l / 30 l	0.5 / 1 / 2 / 5 l / 30 l

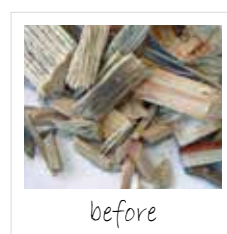
Technical data

Drive	3-phase-motor	3-phase-motor	frequency-controlled 3-phase-motor	3-phase motor
Drive power	1,500 W	2,200 W	3,000 W with flywheel mass (approx. 28.5 kg)	3,000 W
Motor brake	✓	✓	✓	✓
W x H x D (with base frame and universal hopper)	582 x 1,675 x 700 mm	576 x 1,675 x 760 mm	576 x 1,677 x 750 mm	695 x 1,399 x 719 mm
Net weight	approx. 73 kg without base frame, hopper and rotor	approx. 90 kg without hopper and rotor	approx. 160 kg without hopper and rotor	approx. 180 kg without hopper
More information on	www.retsch.com/sm100	www.retsch.com/sm200	www.retsch.com/sm300	www.retsch.com/sm400

*depending on feed material and instrument configuration

Typical Sample Materials

RETSCH cutting mills are suitable for a vast range of applications. Typical samples 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.



Application example: wood