

SM 2000 HEAVY-DUTY CUTTING MILL



CRUSHING

RETSCH SM 2000 cutting mills are especially heavy-duty and user-friendly machines for crushing tough, medium-hard, soft, elastic and fibrous materials. Running slowly or quickly with different rotors and hoppers, they crush a wide range of materials: waste samples, plastic parts, biological substances, food and animal feed and beverage cans. The SM 2000 mills are therefore ideal for research, testing and operational laboratories, for technical training facilities or for creating samples in production. Other outstanding features are the fold-back housing, the patented central locking system (DBP 4110239) for quick access and simple cleaning, and the ergonomic operating panel with integrated safety check.

ADVANTAGES

- powerful crushing even of heterogeneous mixtures
- defined final fineness
- low temperature rise
- universal use thanks to extensive accessories
- central locking
- fold-back housing
- simple cleaning
- robust, safe design to CE standard
- 2-year warranty

PERFORMANCE FEATURES

Application	Cutting/crushing
Feed material	Soft, medium-hard, tough, elastic, fibrous
Feed size	60 x 80 mm max.
Final fineness	0.25 – 20 mm
Vessel capacity/throughput	5 and 30 litres resp./ 0.2 – 50 kg/h

SM 2000 HEAVY-DUTY CUTTING MILL

The RETSCH heavy-duty cutting mills are designed to be suitable for both experimental and routine sample preparation using soft, medium-hard, tough, elastic, fibrous and temperature-sensitive materials. This includes organic and inorganic waste and wide-ranging mixtures of materials, sorted domestic waste, plastic products, medicines (with packaging), computer and electronic scrap, cables, light

shredders, film materials, corn, parts of plants, polyurethane, rubber, caoutchouc, wood, foil, foodstuffs, leather (acc. to DIN 53 303), bones, nonferrous metals, cardboard, paper, textile, carpet and hide residues, feed pellets and much more.



SM 2000 Heavy-duty cutting mill

The SM 2000 cutting mills are available in two speed versions. The version working at 750 min⁻¹ is especially advisable for large-piece, tough and temperature-sensitive materials, and that working at 1430 min⁻¹ for easier to crush materials in small pieces.

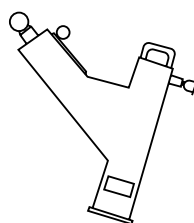
Thanks to the fold-back housing, the grinding compartment is easy to clean and the bottom sieves are simple to replace.

With the unique central locking system it is possible to lock and unlock the upper housing and door quickly and safely with a single operation. The SM 2000 is especially comfortable and safe to switch on and monitor because of an ergonomically arranged operating panel with membrane keyboard.

POWERFUL – USER-FRIENDLY – SAFE

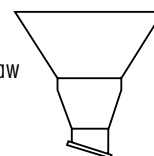
SELECTION OF ACCESSORIES

The accessories supplied as standard are the 6-disc rotor, the underframe, a 5-litre collecting vessel with filter hose. Instead of this cloth filter, a ring filter of rust-proof Conidur plate can be used (perforation 63 µm) with or without dust filter insert. The hopper should be selected in accordance with the feed material (see below), the bottom sieve according to feed material and desired fineness.



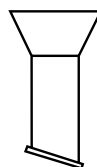
Standard hopper

universal use
for bulk and lumpy material
max. opening:
80 x 80 mm



Long material hopper

for long materials: e.g. straw
max. opening:
30 x 130 mm



Cascade hopper

for bulk material
with rebound guard
max. opening:
20 x 84 mm

6-disc rotor

- ① with 18 replaceable reversible cutting plates of hard metal universal use

Parallel-cut rotor

- ② for machines with 1430 min⁻¹ specially suitable for soft, elastic and fibrous materials

Cutting roller rotor

- ③ with 18 replaceable reversible cutting plates of hard metal for machines with 750 min⁻¹, specially suitable for thick-walled parts, e.g. of wood, leather or plastic



PERFORMANCE EXAMPLES

Material	Feed piece size	Rotor speed (min ⁻¹)	Bottom sieve (mm)	End fineness in %
Audio cassettes	approx. 70 x 110 mm	750	4	70 % = < 2 mm
Leather	length approx. 130 mm	750	4	85 % = < 3 mm
Tree boughs	pieces up to 130 mm diam. 30 mm	750	4	75 % = < 2 mm
Tin cans	length approx. 120 mm diam. 60 mm	750	4	60 % = < 2 mm
Computer scrap	circuit boards approx. 60 x 130 mm	750	4	75 % = < 2 mm
Dogs' chewing straps (buff leather)	pieces approx. 100 x 30 mm	750	4	99 % = < 2 mm
Batteries max. length	50 mm, diam. 25 mm	750	4	98 % = < 2 mm
Nonferrous metal chips	spirals, approx. 30 x 10 mm	1430	1	99 % = < 1 mm
Drugs dried husks	spirals, approx. 80 x 20 mm	1430	4	99 % = < 3 mm

ORDER DATA

Heavy-Duty Cutting Mill, Type SM 2000			Article No.
<i>*with underframe (696 mm), without filling hopper and bottom sieve (if required with underframe, overall height 569 mm)</i>			
Type SM 2000 for 3 x N 400 V,	50 Hz	Rotor speed 750 min ⁻¹	20.721.0002
Type SM 2000 for 3 x 230 V,	60 Hz	Rotor speed 835 min ⁻¹	20.721.0003
Type SM 2000 for 3 x N 400 V,	50 Hz	Rotor speed 1430 min ⁻¹	20.721.0009
Type SM 2000 for 230 V,	50 Hz	Rotor speed 1430 min ⁻¹	20.721.0016
<i>other versions upon request</i>			

EXTRA ACCESSORIES AND SPARE PARTS	Article No.
Cutting roller for versions 750 – 835 min ⁻¹ , incl. slide with metal base	22.722.0001
Parallel-cut rotor for versions 1430 – 1690 min ⁻¹ *	22.608.0007
Vessel for bottom sieves or tools	22.905.0001
Cutting disc rotor for versions 750 – 835 min ⁻¹	22.608.0005
Cutting disc rotor for versions 1430 – 1690 min ⁻¹	22.608.0006
Cutting strips of stainless steel, 1 set (of 4)	22.152.0001
Turning cutting plate, set of 10	22.908.0001

CHOICE OF HOPPERS			
Standard hopper	01.747.0040	Long material hopper	22.408.0001
Cascade hopper	22.730.0001		

BOTTOM SIEVES OF STAINLESS STEEL					
Article No.	Standard design		Article No.	High version*	
03.647.0013	Conidur perforation	0.25 mm	03.647.0015	Conidur perforation	0.75 mm
03.647.0014	Conidur perforation	0.50 mm	03.647.0016	Conidur perforation	1.00 mm
03.647.0017	Conidur perforation	1.50 mm			
03.647.0025	Conidur perforation	2.00 mm			
03.647.0167	Square perforation	2.00 mm	03.647.0168	Conidur perforation	0.25 mm
03.647.0020	Square perforation	4.00 mm	03.647.0169	Conidur perforation	0.50 mm
03.647.0022	Square perforation	6.00 mm	03.647.0170	Conidur perforation	0.75 mm
03.647.0023	Square perforation	8.00 mm	03.647.0171	Conidur perforation	1.00 mm
03.647.0024	Square perforation	10.00 mm	03.647.0172	Conidur perforation	1.50 mm
03.647.0062	Square perforation	20.00 mm	03.647.0173	Conidur perforation	2.00 mm

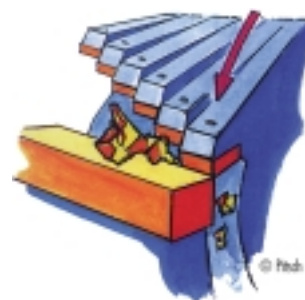
**for higher grinding discharge when fine grinding*

ACCESSORIES			
22.725.0002	Slide of plastic for standard hopper	22.748.0001	Dust filter with clamping ring for ring filter
22.003.0001	30 l collecting vessel	22.524.0002	Dust filter for ring filter, 25 units
01.186.0013	Filter hose for 30 l collecting vessel	22.704.0001	Dirt trap of plastic
22.187.0001	Ring filter with Conidur plate for 5 l collecting vessel		

NOISE CHARACTERISTICS (Noise measurement to DIN 45635-31-01 Class 3)			
Workplace-related emission value	L _{pA eq} = 79 dB (A)	Feed material:	shredded bark <100 mm
Sound power level	L _{WA} = 87 dB (A)		

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RetSch®



SM 2000 TECHNOLOGY

The SM 2000 cutting mill crushes by cutting and shearing. The feed material is taken up by the rotor mounted on both sides and is crushed by the stainless steel cutting strips inserted in the housing. With the disc and cutting roller rotor, helically arranged reversible cutting plates (DBGM G 9200997.2) of hard metal operate by successive cutting. It is thanks to an additional flywheel mass on the motor shaft that the unusual driving power typical of the SM 2000 is obtained, although it is otherwise only achieved in motors with double the drive power. The SM 2000 is available with 1.5 KW three-phase or alternating current motor.

The mill casing is of aluminium. Hopper, rotor, motor flange, door insert, 5 l collecting vessel and bottom sieve are of stainless steel. A safety switch prevents the mill from being switched on when the door is open. The SM 2000 has an electronic safety check with diagnosis system.

DIMENSIONS AND WEIGHTS

W x H x D approx. 550 x 1805 x 600 mm
(incl. hopper and underframe)
 Weight approx. 130 kg
(incl. hopper and underframe)

RETSCH offers a comprehensive programme of equipment for sample preparation of solids. Just ask for information on our crushers, mills, sample dividers, sieve shakers, feeders and cleaning and drying units. You will receive complete literature free of charge and without obligation.

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