

SIZE REDUCTION

SM 100 LABORATORY CUTTING MILL



PULVERIZING

RETSCH cutting mills reduce soft, medium-hard, elastic and fibrous materials fast and with minimum damage to the substance. They are particularly suitable for preliminary pulverization of dry materials such as plant parts, plastics, fodder, spices and drugs, lignite, paper, cardboard, etc.

Long-fiber goods such as straw and large-volume items such as plastic cups can be prepared in a single step, without preliminary chopping. Maximum feed item size for thin-walled plastic containers, for example, is 60 x 80 mm when using the standard hopper. Ultimate fineness is dependent in each case on the bottom screen used and the nature of the product. When handling plastics, for example, this may be between 2 and 4 mm whereas dry spices can be pulverized to as small as 0.25 to 1 mm.

ADVANTAGES

- Fast pulverization with minimum damage to the product
- Final fineness closely defined by the choice of bottom screen
- Three hopper models for a variety of materials
- Low thermal loading for the product
- Low-dust pulverization
- Cutting elements easily replaced
- Design complies with CE requirements for superior safety
- two-year-warranty

PERFORMANCE FEATURES

application:	Pulverization by cutting
feed stock:	Soft, medium-hard, elastic, fibrous
feed size:	max. 60 x 80 mm
final fineness:	0.25 to 20 mm
container volume/throughput:	5 or 30 liters / 0.2 to 50 kg/h

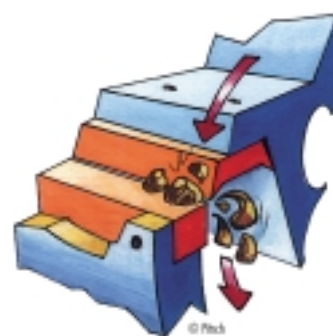
SIZE REDUCTION

REFERENCES

LABORATORY CUTTING MILL, MODEL SM 100

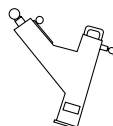
	Item No.
Model SM 100 for 230 V, 50 Hz	20.734.0001
Model SM 100 for 3 x 400 V, 50 Hz	20.734.0003
Model SM 100 for 110 V, 60 Hz	20.734.0004

(With parallel section rotor, 5-liter container and filter bag, but without hopper, base frame and bottom screen)



CHOICE OF HOPPERS

Standard hopper 01.747.0040



Universal use for bulk and piece goods
Max. throat size 80 x 80 mm

Long-stock hopper 22.408.0001



For long product such as straw, with a plunger to support feed
Max. throat size 30 x 130 mm

Cascade hopper 22.730.0001



With finger guard and throw-back protection; for pourable goods
Max. throat size 20 x 84 mm

BOTTOM SCREENS MADE OF STAINLESS STEEL

Item No.	Standard version	Item No.	High version
03.647.0013	Conidur perforations 0.25 mm	03.647.0015	Conidur perforations 0.75 mm
03.647.0014	Conidur perforations 0.50 mm	03.647.0016	Conidur perforations 1.00 mm
03.647.0017	Conidur perforations 1.50 mm		
03.647.0025	Conidur perforations 2.00 mm		
03.647.0167	Square perforations 2.00 mm	03.647.0168	Conidur perforations 0.25 mm
03.647.0020	Square perforations 4.00 mm	03.647.0169	Conidur perforations 0.50 mm
03.647.0022	Square perforations 6.00 mm	03.647.0170	Conidur perforations 0.75 mm
03.647.0023	Square perforations 8.00 mm	03.647.0171	Conidur perforations 1.00 mm
03.647.0024	Square perforations 10.00 mm	03.647.0172	Conidur perforations 1.50 mm
03.647.0062	Square perforations 20.00 mm	03.647.0173	Conidur perforations 2.00 mm

OPTIONAL ACCESSORIES

01.824.0028	Base frame		
22.187.0001	Ring filter with Conidur plate (for 5-liter receiver container)		
22.748.0001	Dust filter with clamping rings for ring filter	22.524.0002	Replacement filters for ring filter, 25 pcs.
22.003.0001	Receiver container, 30 liters	01.186.0013	Filter bag for 30-liter receiver container
22.704.0001	Grime catch basin made of plastic	22.725.0002	Plastic plunger for standard hopper

REPLACEMENT PARTS

22.608.0008	Rotor made of stainless steel with blades made of special-alloy steel
22.152.0001	Cutting bars made of stainless steel, 1 set (4 pcs.)
22.151.0001	Knives made of special-alloy steel, 1 set (3 pcs.)
01.011.0023	Collecting receptacle made of stainless steel, 5 liters
02.186.0017	Filter bag for 5-liter receptacle, 240 mm long

NOISE EMISSION VALUES (DIN 45635-31-01, Class 3)

Emission value for worksite $L_p E_{equiv} = 81 \text{ dB(A)}$ Product being ground: Rye
Acoustic pressure level $L_{WA} = 87 \text{ dB (A)}$

SM 100 TECHNOLOGY

Size reduction inside the cutting mill is effected with cutting and shear action. The feed product passes through the hopper and into the grinding chamber. There it is engaged by a rotor fitted with 3 knives and is reduced between these blades and the cutting strips inserted in the housing. The dwell period inside the grinding chamber is short; as soon as the product is reduced to a size smaller than the perforations in the bottom screen it is discharged for collection in the container. Rotor speed at 1430 r.p.m. at 50 Hz ensures fast and gentle pulverization with a minimum of dust. The motor is rated at 1500 watts.

The fine product is quickly discharged thanks to the use of a filter bag or ring-type filter. The housing for the mill is made of aluminum. The hopper, rotor, motor flange, door insert, 5-liter receiver and the bottom screen are made of stainless steel. The 30-liter receptacle is made of plastic. The knives are made of a special-alloy steel (12 % Cr), the cutting bars of stainless steel (14.5 % Cr). The door for the mill housing is opened with a key; a safety switch shuts off the motor before the door is opened.

DIMENSIONS AND WEIGHTS

W x H x D	560 x 1810 x 700 mm (with base frame and standard hopper)
Weight:	approx. 64 kg (with base frame and standard hopper)

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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