



KNIFE MILL GRINDOMIX GM 200

Professional Food Sample Preparation

The knife mill GRINDOMIX GM 200 is the ideal instrument for grinding and homogenizing foods and feeds. With two sharp, robust blades and a powerful 1000 W motor, it allows to process sample volumes up to 0.7 liters quickly and effectively.

The GM 200 is not only ideal for homogenizing substances with a high water, oil or fat content but is also perfectly suited for grinding dry, soft and medium-hard products. The quick homogenization process without noteworthy temperature rise ensures preservation of volatile sample components.

Thanks to reproducible setting of parameters, programs and sequences, this mill ensures analytical results with minimum standard deviation. These features plus the wide selection of lids and containers, allowing for adaptation of the mill to individual application requirements, make the GRINDOMIX GM 200 a professional device superior to any commercial household mixer.



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THE STANDARD IN THE FOOD INDUSTRY

- | Thorough size reduction and homogenization of the entire sample material in seconds
- | Pre- and fine grinding in one mill
- | Variable speed up to 10,000 min⁻¹ including Boost function with 14,000 min⁻¹ for improved homogenization of tough and sticky samples
- | Suitable for sample volumes up to 700 ml
- | Cryokit for cold grinding with dry ice available
- | 8 SOPs and 4 program cycles can be stored
- | Optional gravity lids or volume reduction lids for automatic reduction of the grinding chamber volume
- | All parts in contact with the sample material are autoclavable



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CRYOGENIC GRINDING WITH DRY ICE

To process tough or elastic materials which cannot be homogenized at room temperature, a Cryokit is available to ensure safe and efficient grinding with dry ice. It consists of three components:

| **Cryo lid**

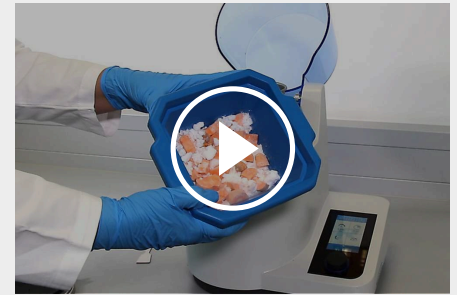
The lower part is made of stainless steel, the side openings allow for evaporation of CO₂ during cryogenic grinding; the upper part is the standard PP lid.

| **Stainless steel container with baffles**

The baffles contribute to a thorough mixing of the sample.

| **Full metal knife**

This knife has 2 blades and is a must for cryogenic grinding. It is also well-suited for cutting hard samples.



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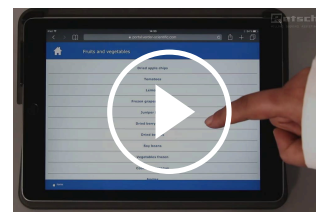
EASY AND SAFE OPERATION

The GM 200 is equipped with a 4.3" touch display offering easy parameter setting, SOP storage and direct access to the MyRETSCH web portal via QR code. 8 Standard Operating Procedures and 4 program cycles can be stored for routine operations. Before and after the grinding process, the container with its lid, inserted knife and sample, can be installed and removed as a complete unit.

CONVENIENT 4.3" TOUCH DISPLAY



ACCESS TO MYRETSCH WEB PORTAL

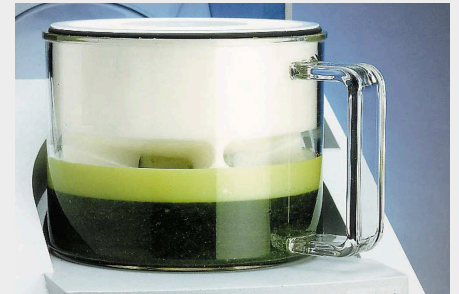


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GRAVITY LID ENABLES VARIABLE VOLUME OF THE GRINDING CHAMBER

RETSCH has developed a gravity lid for the GRINDOMIX knife mills which reduces the volume of the grinding container, preventing the sample from escaping the homogenization process by clinging to the container walls. The lid drops under its own weight during grinding and always rests directly on the sample. The result is thorough homogenization of the complete sample material. The gravity lid is also available with overflow channels. It ensures that the cell liquid released by the sample during grinding is returned through these channels to the center of the container, allowing for perfect homogenization.



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ACCESSORIES & OPTIONS

A range of different containers, lids and knives makes the GRINDOMIX GM 200 a truly universal device, suitable not only for processing food and feed samples but a wide range of materials.

| Patented gravity lid

Automatically adjusts the grinding chamber volume to the changing sample volume.

| Gravity lid with overflow channels

Ideally suited to homogenize samples with a high water content.

| Stainless steel container

Minimum wear when hard sample materials are processed.

| Stainless steel container with baffles

The baffles contribute to a thorough mixing of the sample.

| Reduction lid

Reduces the chamber volume to 0.5 or 0.3 liter for optimum homogenization of small sample volumes.

| Serrated blade knife

Used for particularly tough samples such as fatty, streaky meat.

| Full metal knife

With 2 blades, it is suitable for cold grinding and cutting hard samples.

| Cryokit

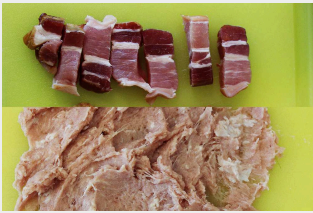
For homogenizing sticky samples with dry ice



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TYPICAL SAMPLE MATERIALS

RETSCH knife mills are suitable for a vast range of applications. Typical materials include candy, cereals, cheese, coated tablets, cocoa nibs, dietary supplements, dried and fresh fruit, feed pellets, fish, frozen products, ham, lettuce, meat, nuts, oil seeds, pharmaceutical products, plant materials, sausages, soap, spices, vegetables etc.



bacon



candy



tomatoes



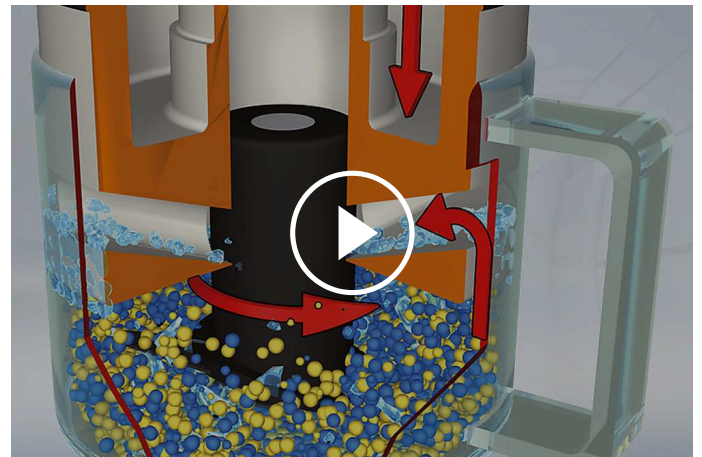
raisins

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FUNCTIONAL PRINCIPLE

Two sharp, robust blades rotate in the center of the grinding container. Depending on the rotational direction, size reduction is effected with the blunt side (preliminary size reduction) or the sharp side (fine grinding).

The knife is directly driven by a powerful motor of 1000 W. A pre-selectable speed which is maintained electronically ensures optimum adaptation to individual application requirements as well as reproducible grinding results.



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KNIFE MILL GRINDOMIX GM 200 - TECHNICAL DATA

Applications	size reduction, homogenization and mixing
Field of application	agriculture, biology, food, medicine / pharmaceuticals
Feed material	soft, medium-hard, elastic, containing water / fat / oil, dry, fibrous
Size reduction principle	cutting
Material feed size*	40 mm
Final fineness*	< 300 µm
Batch size / feed quantity*	with standard lid 700 ml with reduction lid 150-300 ml with gravity lid 300 - 600 ml
Grinding chamber volume	with standard lid 1000 ml with reduction lid 250 ml/500 ml with gravity lid 400 - 800 ml
Speed setting	digital, 2,000 - 10,000 min ⁻¹ (14,000 min ⁻¹ BOOST)
Material of grinding tools	blade: stainless steel / titanium fixation of blade: PVDF / stainless steel container: autoclavable plastic / plastic PP / stainless steel
Setting of grinding time	digital, 1 s - 3 min
Interval operation	yes
Storable SOPs	8 programmes / 4 sequences
Drive	series-characteristic motor
Drive power	~ 1000 W
Electrical supply data	different voltages
Power connection	1-phase
Protection code	grinding chamber and keypad IP 42
Power consumption	~ 1000 W
W x H x D closed	350 x 275 x 392 mm (opened: 350 x 410 x 553)
Net weight	~ 10 kg
Standards	CE

*depending on feed material and instrument configuration/settings


www.retsch.com/gm200

ORDER DATA

KNIFE MILL GRINDOMIX GM 200


Knife Mill GRINDOMIX GM 200 complete with 1 litre grinding container of autoclavable plastic, standard lid and knife of stainless steel

20.254.0001  GM 200 220–240 V, 50/60 Hz

20.254.0002  GM 200 100–120 V, 50/60 Hz

ACCESSORIES GM 200

GRINDING CONTAINERS, 1 LITRE

03.045.0057  Grinding container
autoclavable plastic (transparent and scratch-resistant)


03.045.0047  Grinding container
PP


03.045.0050  Grinding container
stainless steel


03.045.0072 Grinding container stainless steel with baffles for cryogenic grinding

LIDS FOR GRINDING CONTAINERS OF AUTOCLAVABLE PLASTIC OR PP


03.107.0562  Standard lid
PP

22.107.0022  Standard lid
PP
100 pieces

03.107.0606  Reduction lid
PP
for chamber reduction to 0.25 litres


03.107.0310  Reduction lid
PP
for chamber reduction to 0.5 litres

02.107.0327  Gravity lid
PP

02.107.0323  Gravity lid
PP
with overflow channels

LIDS FOR GRINDING CONTAINERS OF GLASS OR STAINLESS STEEL

03.107.0562  Standard lid
PP

22.107.0022  Standard lid
PP
100 pieces


02.107.0328  Gravity lid
PP


02.107.0308  Gravity lid
PP
with overflow channels


02.107.0743 Cryo lid
stainless steel/PP

KNIVES


02.446.0047  Knife of stainless steel

02.446.0057  Knife of stainless steel with serrated blades

02.446.0048  Knife of pure titanium for grinding without heavy-metal contamination

22.446.0004  Full metal knife, for cryogenic grinding, 2 blades

CRYO KIT FOR CRYOGENIC GRINDING WITH DRY ICE

22.354.0005  Cryo kit, (incl. grinding container, stainless steel with beads, full metal knife with 2 blades, cryo lid)

ADDITIONAL ITEMS GM 200

05.723.0001



Scraper

05.114.0117

O-ring 23 x 2

05.111.0239

Gasket V-ring

03.018.0038

Holder for grinding container

99.200.0031

IQ/OQ Documentation for GM 200