



GRINDOMIX GM 100 / GM 200 LABORATORY KNIFE MILLS



For professional grinding and homogenisation:
the GRINDOMIX GM 200 laboratory knife mill
(shown with glass vessel as accessory)

THE NEW DIMENSION IN FOODSTUFFS PREPARATION

In foodstuffs laboratories, in chemical or biological research institutions – suitable analysis material is required everywhere for precise examination of foodstuffs. With the GRINDOMIX laboratory knife mill, RETSCH now produces a grinding and homogenising machine that fulfils professional laboratory and analysis requirements. It processes foodstuffs with high water, oil or fat contents just as rapidly and reliably as dry, soft and medium-hard products. For the first time, RETSCH provides a professional alternative to standard household mixers.

ADVANTAGES

- Complete homogeneity of the entire ground material ensures representative individual samples
- Standard deviation of analysis results 10 times smaller than with samples from household mixers
- Reproducible analysis results with digital time and speed setting, quartz precision sequence and memory function
- Variable grinding chamber volume by moving gravity lid for bulky products
- Powerful industrial motor with long life
- Push-fit knife and vessel for easy cleaning, no cross-contamination
- professional design
- 2 year guarantee

PERFORMANCE FEATURES

Applications	Grinding, homogenising and mixing
Input material	Material containing water, fat or oil, dry material
Input grain size	10 – 40 mm
Final fineness	< 300 µm
Batch size	up to 700/ 1000 ml

GRINDOMIX – A PERFECT MIXTURE

The Grindomix GM 100 and GM 200 laboratory knife mills are specially designed for the preparation of foodstuffs samples. They process dry and soft materials, and substances containing liquids, of all kinds. The GRINDOMIX is ideal for processing fruit, vegetable, food as well as feed pellets, grass, foliage, seeds and seedlings and many more.

With the special cutting knife system and the variable grinding chamber of the Grindomix, these materials can be processed into a homogeneous analysis sample, quick and easy. Two straight knives at different heights, arranged at right angles to the direction of rotation, turn at a speed between 2,000 and 10,000 rpm in the centre of the mill vessel.

The sharp, slim steel blades comminute and homogenise reliably. They have a cutting edge chamber to protect them from damage by hard sample material.

The powerful industrial motor with 750 watts continuous and 1,200 watts short time peak power drives the knives direct. Preselectable speeds, held constant by the electronics, ensure granulation even of difficult samples ready for analysis in only 10 to 30 seconds.

HOMOGENEITY WITH THE GRAVITY LID

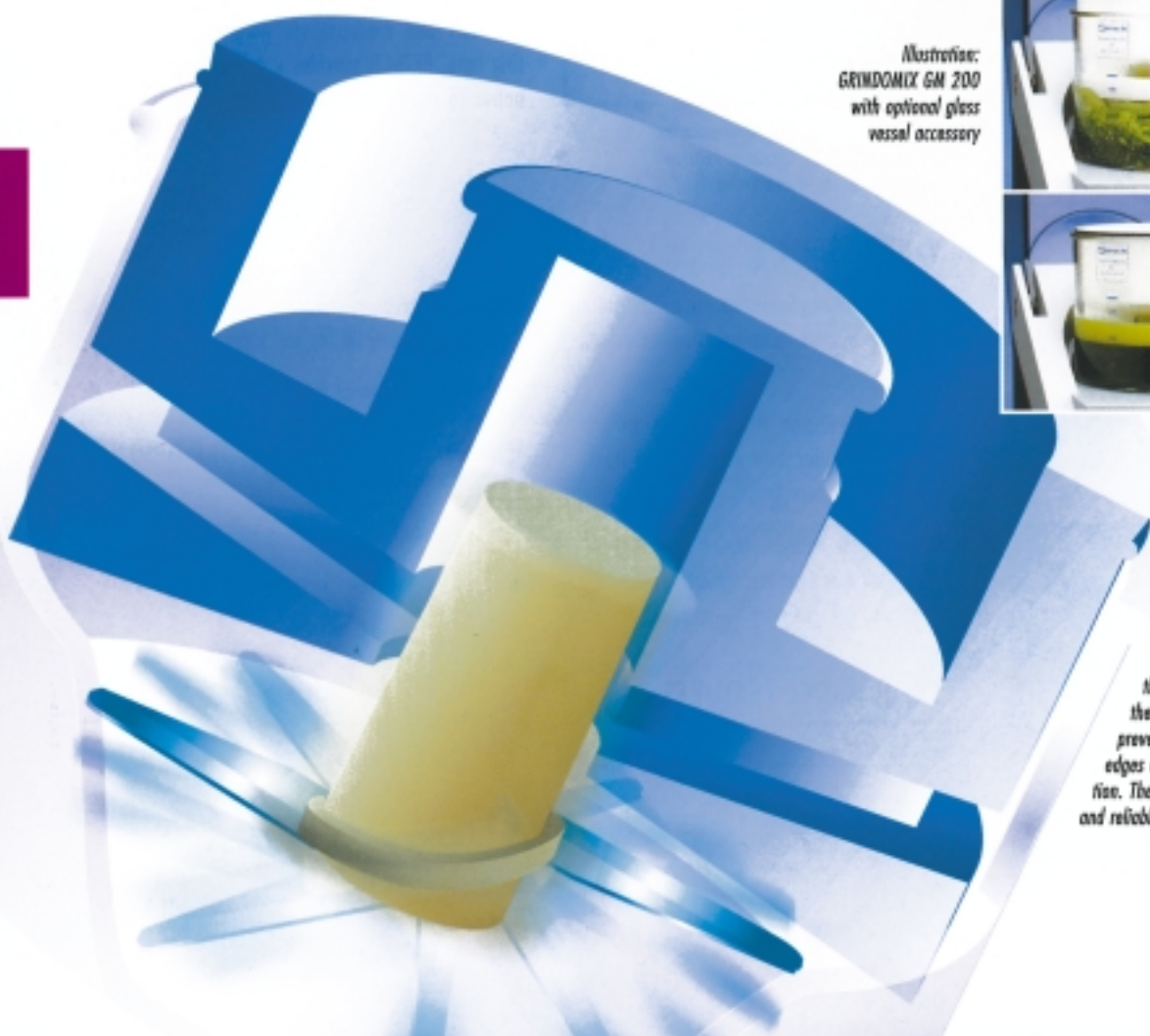
In order to prevent the sample material from being slung against the vessel walls by the rotating knives and thus escaping from the milling action, the gravity lid developed by

RETSCH reduces the vessel volume. This piston-like lid is free-floating and drops under its own weight during the milling process to rest directly on the sample material at all times. In this way, the GRINDOMIX knife mills always achieve a degree of comminution suitable for modern analysis techniques in a very short time.



Illustration:
GRINDOMIX GM 200
with optional glass
vessel accessory

Unique – the variable milling chamber: The gravity lid adjusts the volume of the chamber to suit the quantity of process material. It thus prevents material from collecting at the edges of the vessel and escaping granulation. The special beater knives ensure perfect and reliable homogenization.



FAST, PRECISE AND FLEXIBLE SAMPLE PREPARATION

EASY HANDLING, HIGH SAFETY LEVEL

Working with the GRINDOMIX knife mills from RETSCH is extremely easy. The milling vessels and knives are simply plugged in. On completion of the milling process, the mill switches off automatically and the hinged protective cover enables access to the mill vessel. The vessel with the fitted knives and the sample material can be simply removed, emptied and cleaned. Crosscontamination from sample residues is precluded.

Samples prepared in the GRINDOMIX are so homogeneous that they permit random but nevertheless representative splitting. That even applies to difficult substances like porridge, paste and highly viscous suspensions.

A short milling time and a wide selection of vessels, lids and knife sets make single and series processing quick, reliable and easy. GRINDOMIX knife mills thus create the best conditions for representative sampling and analysis results.

GM 100/GM 200: Step by step a plus

The performance:

- Rapid and gentle comminution and homogenisation of foodstuff
- Processing of products with high water, oil, fat or fibre content, and grains, breads and pastries
- Convenient, reproducible adaptation to various milling applications
- Interval mode for pre-granulation and raising
- Automatic switch-off at the end of the milling period

The features:

- Convenience in handling by simple replacement and cleaning of the mill vessels
- Controlled speed powerful 750 watt industrial motor with long life
- Variable milling chamber up to 700/1000 ml
- Gravity lid for automatic adjustment of the milling chamber
- 2 speeds, 5000 and 10000 rpm
- Speed adjustable from 2000 to 10000 rpm in steps of 500
- Preselection and digital display of speed and milling duration
- Three memory slots for retrieval of frequently used speed/time combinations

The safety:

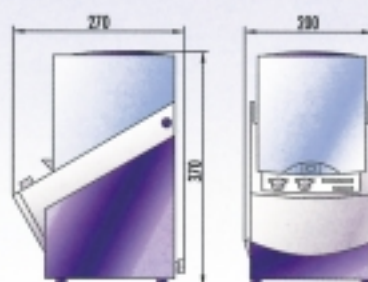
- Easy handling reduces setting-up and cleaning times to a minimum
- CE compliant design, protection IP 54 in the area of the milling chamber
- 2 year guarantee

	GM 100	GM 200
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• Processing of products with high water, oil, fat or fibre content, and grains, breads and pastries	•	•
• Convenient, reproducible adaptation to various milling applications	•	•
• Interval mode for pre-granulation and raising	•	•
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The features:		
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• Controlled speed powerful 750 watt industrial motor with long life	•	•
• Variable milling chamber up to 700/1000 ml	◦	◦
• Gravity lid for automatic adjustment of the milling chamber	◦	◦
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• Preselection and digital display of speed and milling duration	-	•
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The safety:		
• Easy handling reduces setting-up and cleaning times to a minimum	•	•
• CE compliant design, protection IP 54 in the area of the milling chamber	•	•
• 2 year guarantee	•	•

• Standard ◦ accessories - not available

The right size:

On a small footprint, RETSCH provides a high degree of professionalism. The GRINDOMIX will find room on every bench top.



GM 200 – exact and reproducible settings of essential milling parameters

FACTS AND FIGURES



VOLTAGE VARIANTS OF THE GM 100 AND GM 200

	Article-No.
GM 100, 230 V, 50 Hz	20.250.0001
GM 100, 100-110 V, 50/60 Hz	20.250.0002
GM 100, 100-110 V 50/60 Hz (USA and Japan)	20.250.0003
GM 200, 230 V, 50 Hz	20.251.0001
GM 200, 100-110 V, 50/60 Hz	20.251.0002
GM 200, 100-110 V, 50/60 Hz (USA and Japan)	20.251.0003

complete with 1 litre plastic vessel with lid and knife in stainless steel

OPTIONAL ACCESSORIES

	Article-No.
Glass vessel, 1 litre	03.045.0046
Gravity lid for glass vessel, 1 litre	02.107.0308
Gravity lid for plastic vessel, 1 litre	02.107.0323
Plastic lid, 0.5 litre, for plastic vessel	03.107.0310
Scraper	05.723.0001

SPARE PARTS

	Article-No.
Plastic vessel, 1 litre	03.045.0047
Plastic lid, 1 litre, for glass and plastic vessels	03.107.0309
Knife in stainless steel	02.444.0014

PERFORMANCE DATA

Series wound motor	
Motor power	750 watts, rated current 3.8 A
Controlled speed drive motor for GM 100 and GM 200, control accuracy +5% (under no load)	
Torque at knife	short time 1.4 Nm continuous 0.5 Nm
Knife speeds	
GM	fixed 5000 and 10000 rpm
GM 200	from 2000 to 10000 rpm in steps of 500 rpm

NOISE CHARACTERISTICS (DIN 45635-31-01-02.3)

No load at 10000 rpm:	L _p eq = 71,1 dB (A)
Milling tomatoes at 10000 rpm:	L _p eq = 82,4 dB (A)

DIMENSIONS AND WEIGHTS

W x H x D	200 x 370 x 270 mm
Weight (without accessories)	approx 7.5 kg

PRECISION IN SERIES

The standard versions of the GRINDOMIX GM 100 and GM 200 are equipped with a plug-in 1 litre plastic vessel and lid in polypropylene (PP) and a push-fit two bladed knife in stainless steel. A cover in Lexan protects the milling chamber and vessel. The standard model GM 100 is simply controlled by four buttons: speed settings 5000 or 10000 rpm, start/stop and interval mode.

The GM 200 model is designed for additional operator convenience. The speed can be freely selected between 2000 and 10000 rpm in steps of 500 rpm. The running time can be set between 1 second and 3 minutes. Three memory keys save frequently used time and speed combinations. The speed and running time are shown on a digital display.

ACCESSORIES AND EXTRAS

Various vessels and lids are available for the RETSCH knife mills. These adapt the GRINDOMIX optimally to suit the individual application.



The casings are fully recyclable.



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