



### KNIFE MILL GRINDOMIX GM 200

## PERFECT HOMOGENIZATION WITH HIGH REPRODUCIBILITY

The GRINDOMIX GM 200 is the perfect mill to homogenize dry, oily, fatty, soft and tough sample materials – for analysis results with minimum standard deviation.

## KNIFE MILL GRINDOMIX GM 200

# DON'T COMPROMISE YOUR QUALITY CONTROL

The GRINDOMIX Knife Mills GM 200 and GM 300 set standards in food sample preparation. The cutting effect produced by the steel blades results in the perfect homogenization of samples with high water or oil content. The model GM 200 for sample volumes up to 700 ml is now suitable for pulverizing samples with dry ice.

Thanks to new features like the powerful 1000 W drive and the innovative Boost function, the mill is able to homogenize even difficult samples like tough meat with skin or fibrous plants quickly and efficiently. The new GM 200 is operated via a user-friendly 4.3" touch display with direct access to the MyRETSCH web portal and allows storage of 8 SOPs and 4 program sequences.

The program sequences allow for storage of combined grinding steps to obtain optimum homogenization results.

### BENEFITS

- | 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<sup>-1</sup> including Boost function with 14,000 min<sup>-1</sup>
- | For sample volumes up to 700 ml
- | Cryokit for cold grinding with dry ice
- | 8 SOPs and 4 program cycles can be stored
- | Convenient operation via 4,3" touch display



## CRYOKIT FOR COLD GRINDING



The Cryokit consists of a full metal knife with 4 blades, a stainless steel container with baffles and a special lid.

## APPLICATION EXAMPLES

# TYPICAL SAMPLE MATERIALS – FOOD IN ALL ITS VARIETIES

The GRINDOMIX Knife Mill GM 200 provides perfect homogenization of samples such as bread, fish, meat, feed pellets, cookies, vegetables, spices, cocoa nibs, seafood, cereal bars, fruit, seeds, deep-frozen food, sausages, etc.

Sample	Accessories/parameters	Feed quantity	Initial feed size	Final fineness
Bacon	Standard grinding container, standard lid, gravity lid, knife with serrated blades; pre-cutting at a revolution speed of 7000 min <sup>-1</sup> for 10 seconds followed by fine-grinding at a revolution speed of 10,000 min <sup>-1</sup> for 20 seconds	450 g	50 mm	Homogeneous mass < 300 µm
Dried berries	Standard grinding container, reduction lid to 0.5 l, knife with serrated blades; revolution speed of 10,000 min <sup>-1</sup> for 1 min	30 g	10 mm	< 1 mm
Dry noodles	Standard grinding container, standard lid, standard knife; revolution speed at 10,000 min <sup>-1</sup> impact mode for 20 seconds	100 g	10 mm	< 1 mm
Frozen vegetables	Grinding container stainless steel, standard lid, standard knife; pre-cutting at revolution speed of 2000 min <sup>-1</sup> in impact mode for 10 seconds with interval, fine-grinding at revolution speed of 10,000 min <sup>-1</sup> in cutting mode for 40 seconds	150 g	45 mm	Homogeneous mass < 300 µm
Fresh raisins	Cryokit; revolution speed of 10,000 min <sup>-1</sup> for 20 seconds; dry ice	200 g	10 mm	Homogeneous mass < 300 µm



More test reports can be found in the MyRETSCH web portal or in RETSCH's application database at [www.retsch.com/applicationdatabase](http://www.retsch.com/applicationdatabase)

## ACCESSORIES AND OPTIONS

A range of different containers and lids makes the GRINDOMIX GM 200 a truly universal device:

### 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.

### 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.

### Cryokit

For homogenizing sticky samples with dry ice.



For more information please visit our [www.retsch.com/gm200](http://www.retsch.com/gm200)

## AT A GLANCE

Application	size reduction, homogenization and mixing
Fields of application	agriculture, biology, food, medicine / pharmaceuticals
Feed material	soft, medium-hard, elastic, fibrous, containing water / fat / oil, dry

### PERFORMANCE DATA

Feed size*	< 40 mm
Final fineness*	$d_{90} < 300 \mu\text{m}$
Batch size / sample volume*	< 700 ml
Speed setting	digital, 2,000 – 10,000 $\text{min}^{-1}$ (14,000 $\text{min}^{-1}$ with Boost)
Knife diameter	118 mm
Knife peripheral speed	12,4 – 62 m/s
Number of blades	2 – 4
Grinding time setting	digital, 1 s – 3 min
Interval and reverse mode	yes
Quick start	yes
Boost function	yes
Cryogenic grinding	yes
Program cycles	4
Standard Operating Procedures (SOPs)	8
Control via RETSCH App	optional

### TECHNICAL DATA

Drive power	1000 W
W x H x D	approx. 350 x 275 x 392 mm
Net weight	approx. 10 kg

\*depending on feed material and instrument configuration

## THE NEW TOUCH DISPLAY

To enhance operating convenience the new 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.

## THE NEW RETSCH APP

As the leading solution provider for sample preparation equipment, RETSCH has taken operating convenience to the next level and created the new Retsch App. This tool makes working with your RETSCH mill easy and convenient:

- Control of your devices via remote function
- Create, store & access application information and transfer application data to/from your LIMS

The Retsch App offers a wealth of information on the product itself, like operating manual or available accessories, but also application-specific documents. These include a large number of grinding protocols from the RETSCH application lab which cover a wide range of industries, containing grinding parameters, accessories used and sample images, as well as handling videos which demonstrate use of the mill step by step or "tips & tricks" documents. It is also possible to create your own application database.



**Retsch**<sup>®</sup>  
MILLING SIEVING ASSISTING

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