



Mortar Grinder MG100



Mortar Grinder MG200



Planetary Ball Mill BM 40



Planetary ball Mill Bm 6 Pro



Micro Ball Mill GT 300



Twister TW100



Multi-functional Mill CM100



Cutting Mill CM200



Ultra Centrifugal Mill FM200



Knife Mill HM 100



Knife Mill HM300



Jaw Crusher JC5



Jaw Crusher JC6



Vibratory Disc Mill VM



Disc Mill DP100



Vibratory Feeder VF200



Rotary Sample Divider RSD200



Vibratory Sieve Shaker SS2000



Smart Graphite Digester



3D Mixer M10



For more perfect sample preparation

— Mortar Grinder MG100/MG200



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Mortar Grinder MG100/MG200

Mortar Grinder MG series are used to grind, homogenize and mix a wide range of samples with dry/wet or cryogenic condition, which can grind hard, soft, brittle and pasty samples. They have extraordinary performance on the processing capacity, as well as easy and safe to operating.



NH211



NH311

Application Examples

Before grinding	After grinding	Parameter	
		Sample	rice
		Configuration	mortar & pestle stainless steel
		Sample Characteristic	mid-hard
		Attention	feed size is below 8mm
		Time	10min
		Sample	pill
		Configuration	mortar & pestle stainless steel
		Sample Characteristic	brittle
		Attention	feed size is below 8mm, dry sample
		Time	3min
		Sample	soil
		Configuration	mortar & pestle of agate
		Sample Characteristic	soft, powder
		Attention	remove the hard materials, like stone, metal, feed size is below 8mm
		Time	5min

Applications

Mortar Grinders are suitable for grinding hard, soft, brittle and pasty samples.

Typical application Soils, chemical products, medicinal herbs, yeast cell, cocoa, food, grain, oil, fruit, salt, slag, silicate, glass, ceramic and cement clinker

Working Principle

The sample enters the grinding area between the pestle and mortar via hopper and is crushed by pressure and friction. The function of the scraper is to feed the material into the area between the mortar and pestle. This forced feed ensures that the whole sample is continuously subjected to the grinding and is also intensively mixed.



Mortar Grinder—sample preparation, mixing and homogenizing

The mortar grinder MG series occupy an important post on sample preparation in laboratory. The gap between mortar and pestle, mill's pressure and the angle of scraper are all adjustable. This mill is suitable for the fine grinding of any dry samples, as well as for suspensions with different consistencies. It is perfectly suitable for the homogenization of mortar and pestle.



Features and advantages

Easy to clean

Easy exchange of mortar and pestle without tools after grinding and it's easy to clean the mill.



Easy and safe to operate

The machine case and lid are made of hard alloy. It is easy to operate and ergonomically designed. The grinder is equipped with magnetic switch to judge whether the lid is closed or not, and the grinder only starts when lid is closed. The mechanical device parameter can be set and adjusted quickly and easily.

With high sensitivity touch control panel display



Digital time and speed setting, the grinding results are representative.

Grinding set of MG100/MG200---Meet different applications due to a wide selection of grinding mortar and the pestle

Recommendation-mortar and pestle (with seven kinds of grinding materials for choice)

Grinding set materials	Hardness	Abrasion resistance	Sample type	Dry grinding	Wet grinding	Cryogenic grinding
Stainless steel	48-52HRC	Good	Medium-hard,brittle	YES	YES	YES
Hardened steel	60HRC	Good	Medium-hard,brittle	YES	NO	NO
Tungsten carbide	1180-1280HV30	Very good	Medium-hard, fibrous	YES	YES	YES
Agate	6.5-7.0Mohs	Good	Medium-hard,soft	YES	YES	NO
Sinter aluminum oxide	1750HV	Normal	Medium-hard,soft	YES	YES	NO
Hard porcelain	--	Normal	Medium-hard,soft	YES	YES	NO
Zirconium oxide	1200HV	Good	Medium-hard,soft	YES	YES	NO

In order to get better grinding results, we recommend that the material of mortar and pestle must be the same.



Features and advantages

- ❖ A variety of scraper materials are available (polyurethane, PTFE, beech wood) to meet all application requirements
- ❖ Suitable for dry, wet & cryogenic grinding
- ❖ Pretreatment for some rough samples
- ❖ Adding samples through the filling opening during the



Mortar Grinder MG100

Sample: yeast cells

Property: hard,elastic

batch quantity: 100g

Feed size: <math><5\mu\text{m}</math>

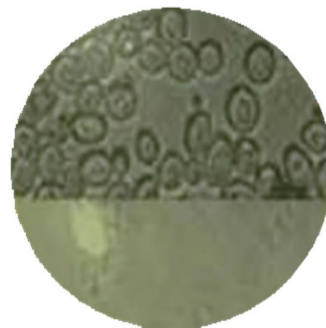
Subsequent analysis: DNA extraction

Grinding time: 10 min

Grinding material: mortar and pestle of stainless steel

Grinding condition: Adding the Liquid Nitrogen during the grinding

Final fineness: <math><5\mu\text{m}</math>, homogenized powder



Mortar Grinder MG200

The Mortar Grinder MG100 and MG200 with same application field, working principle, operating method and grinding set materials. Comparing with MG100, MG200 has made great innovations in appearance design, display screen and locking device.



Mortar Grinder MG200

Progressiveness

- 5 inch LED display and touch control panel with high sensitivity
- Energy input diagnosis can guarantee safe and reasonable operation



Skills to achieve the best grinding effect

- ❖ Before preparing the paste samples, firstly you can put the mortar and sample (eg cocoa) into the drying oven and heat to 40°C.
- ❖ In the preparation of chemicals and pharmaceuticals, please add grinding aid to prevent caking phenomenon.
- ❖ It is difficult to process some samples such as yeast cells. You' d better freeze the sample with liquid nitrogen to make them more brittle and easy to mill.

Adjust the pestle vertically by rotating pestle head

The final fineness of sample depend on the position of the mortar and pestle

Adjust the pestle horizontally by rotary knob

Viewing window

Filling opening

Mortar and pestle



Position of the scrapper is adjustable

Position of scraper between mortar and pestle is adjustable to ensure the sample fully and evenly mixed in the grinding process

Technical Data

	MG100	MG200
Feed size	<10mm, depending on the sample property	
Final fineness	<5µm(depending on the sample property)	
Speed	50-130rpm, speed is adjustable	
Batch quantity	10-200ml	
Time setting	00: 01~99: 59 (hr/min)	
Setting pestle pressure/position	Vertical by adjusting knob + scale	Horizontal by adjusting knob + visual/acoustic control
Setting scraper pressure/position	By adjusting knob	Horizontal by adjusting knob + visual/acoustic control
Display	Digital tube display	LED 5 inch control panel
Lock device	External helix-screw device	Internal helix-screw device
Appearance design	Normal	German Red Dot Design Awards medalists masterpiece
Rated power/Power supply	200W/220V,50Hz	230W/220V,50Hz
Instrument size (W*D*H)	400*456*502mm	400*480*500mm
Package size (W*D*H)	590*590*630mm	600*600*610mm
Net weight	33kg	41kg

Order Information — Mortar Grinder

Item No.	Weight(Kg)		
Mortar Grinder MG100/MG200 (Please order mortar and pestle separately)			
24.861.0001	33.00	MG100	220 V, 50 Hz
	41.00	MG200	220V, 50 Hz

Mortar and Pestle

01.861.0001	4.00	Mortar	hardened steel
01.861.0002	1.50	Pestle	hardened steel
01.861.0003	4.15	Mortar	stainless steel
01.861.0004	1.50	Pestle	stainless steel
01.861.0005	7.60	Mortar	tungsten carbide
01.861.0006	2.30	Pestle	tungsten carbide
01.861.0007	1.50	Mortar	agate
01.861.0008	0.60	Pestle	agate
01.861.0009	1.80	Mortar	sintered aluminum oxide
01.861.0010	0.80	Pestle	sintered aluminum oxide
01.861.0011	4.00	Mortar	zirconium oxide
01.861.0012	1.10	Pestle	zirconium oxide

Scraper

01.861.0015	0.02	Scraper	beech wood
01.861.0016	0.02	Scraper	PU
01.861.0017	0.02	Scraper	PTFE, for frozen grinding

