LAARMANN®

Innovators in Solids

MG 100 MORTAR GRINDER

High Performance Mortar Grinder

Universal, high performance Mortar Grinder for processing of solid materials in dry, wet or cryogenic condition

- Dry Grinding / Wet Grinding /Ultra Fine Grinding / Cryogenic Grinding
- Mixing
- Cell disruption for DNA / RNA extraction
- The MG100 can handle samples from 10 up to 200 ml

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Superior Mortar Grinder engineered to reproducibly grind and mix sample volumes from 10 of up to 200ml.

Method of operation

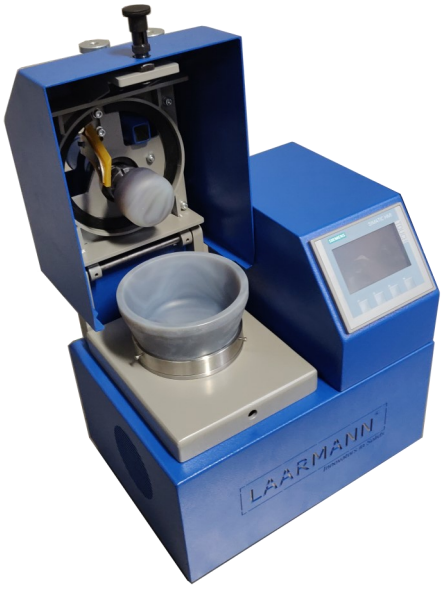
The Mortar Grinder Model MG100 is used to reproducibly grind, homogenize and mix a wide range of solid materials in dry / wet or cryogenic condition. The material to be processed falls into the Pulverizing area between Mortar and Pestle by top feeding via the opening which is at the inlet cover. The material is then pulverized and mixed between the Mortar inner surface area and the bottom of the pestle. In order to match the necessary top pressure with the requested end fineness and the breaking behaviour of the sample to be prepared the MG100 is equipped with and adjustable Top Pressure Mechanism with scale and a variable speed setting 50-130 rpm and a flexible scraper setting.

Only due to the combination of this 3 key adjustment features a wide range of sample preparation tasks can be reached.

No other grinding system is more easy to clean then the MG100 Mortar Grinder. When the grinding process is finished the Mortar and Pestle can be taken out with a bayonet lock in order to perform a quick cleaning of the grinding tools.

Grinding, homogenizing, triturating

The Mortar Grinder is the central machine in a sample preparation Laboratory of today. This system is suitable for the fine grinding of any dry substance, as well as for suspensions with different viscosities for analysis, quality control and material testing. It is perfectly suitable for the homogenization of crèmes and pastes.
Typically samples with a feed size of up to 8-10mm and a total batch of up to 200 ml (volume depending on the characteristic of the samples) can be ground down to 10-20µm.



Mortar grinder with agate mortar and pestle

Mortar grinder open

Material grinding set	Feed size	Wear behaviour	Type of sample characteristics	Dry	Wet	Cyrogeneic
Stainless steel	10mm	good	middle hard, brittle samples	yes	yes	yes
Hardened steel	10mm	good	middle hard, brittle samples	yes	no	no
Tungsten carbide	10mm	very good	middle hard, brittle samples	yes	yes	yes
Agate	8mm	good	soft to medium hard samples	yes	no	no
Sintered alumina	8mm	normal	soft to medium hard samples	yes	no	no

We recommend always to use the same material composition for Mortar and Pestle.

Performance features MG 100

- Extremely easy cleaning
- Suitable for dry, wet & cryogenic grinding depending on grinding material
- Possible to add and to remove sample material during the milling process via cover inlet
- Representative results due to digital time and speed setting
- Precise and optimized results due to variable speed 50-130 rpm
- CE conform
- Meet all application tasks due to a wide selection of grinding tools for the mortar and the pestle.
- Meet all application tasks due to a wide selection of scraper materials (Vulkollan, Teflon, Beachwood)
- no tool required
- Precise and reproducible pestle setting due to scale adjustment
- Solid steel housing
- Option of pre-crushing for coarser materials

Mortar grinder closed

Zirconium

Stainless steel

Agate

Grinding and Mixing examples before / after

Soil samples

Brittle materials such as glass

Different food stuff such as maize, grain etc.

Different table and pharmaceutical raw materials

Technical Data	
Electrical requirements	200-240 Volt 50/60 Hz
Motor power	200 Watt
Speed	50-130 rpm adjustable
Working principle	Friction
Feed size maximum	8-10 mm depending on sample
Quantity maximum	200 ml
Quantity minimum	10 ml
End fineness maximum	10 - 20 µm
Grinding time setting	1 - 99 min. / cont.
Pressure setting	by scale adjustable
Pestle adjustment	by adjustment wheel
Scraper adjustment	by adjustment wheel
Net dimensions w x d x h	app. 700 x 750 x 700 mm
Net weight	52 kgs for transport (with steel mortar and pestle)