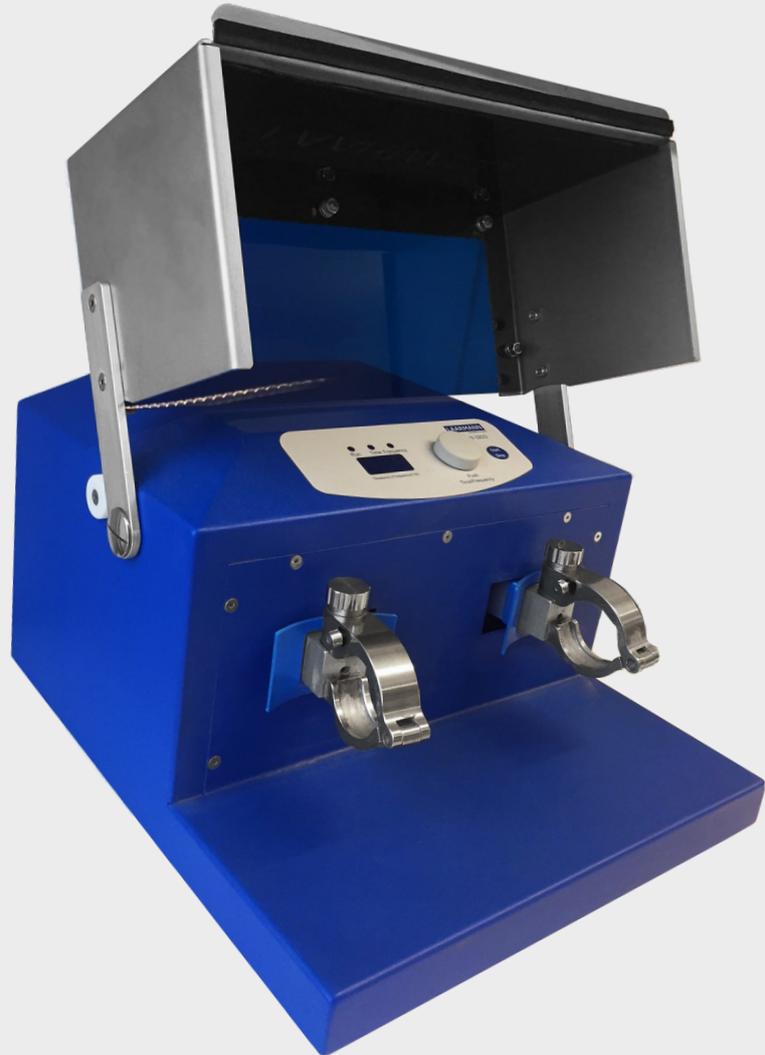


LAB WIZZ 320

Micro Ball Mill

Superior Ball Mill
engineered for rapid
sample preparation
procedures

- Dry Grinding / Wet Grinding / Ultra Fine Grinding / Cryogenic Grinding
- Turbulent Blending / Laminar Blending / Liquid-Liquid Dispersion / Gas- Liquid Dispersion
- Mechanical Alloying
- Cell disruption for DNA / RNA extraction
- The Lab Wizz can handle simultaneously two or more samples from 0.2 ml up to 160 ml.
- CE-certified



Grinding, Blending, Cell Disruption of samples

The LAARMANN® LAB WIZZ is designed for “1001 laboratory applications”. Typical Processing times are at 30 seconds. The LAB WIZZ can prepare 2 or more samples from 0,2ml of up to 160 ml. It is designed as well for high-sample throughput.

High operator convenience and maximum safety

Maximum Grinding performance and maximum safety is important for Laarmann Mills. Due to an integrated motor break the machine can only be started when the “Easy Cover” is closed. The unique “Easy Clamp system” allows the simple and safe clamping of all grinding jars up to 160ml.

The grinding chamber, easy clamp system as well as the swinging arm is made from high precision stainless steel to meet all food and pharmaceutical requirements.

Due to the new motor concept and a motor drive, the Laarmann LAB WIZZ is maintenance free.

Advantages of the Lab Wizz

Due to the unique combination of a wide range of grinding jars of various materials the LAB WIZZ is capable to practically meet all demands of today’s laboratory needs.

Features and benefits

- Universal and highly efficient grinding, blending and disruption
- Large range of grinding jars and accessories
- Extremely short processing times
- Designed for high sample throughput
- Reproducible results by digital presetting of all working parameters

Applications

- Grinding (wet and dry)
- Cell disruption
- Mixing XRF Prep
- Turbulent blending (Static Mixer)
- Cold grinding

Due to the combination of high energy vibration and the punch of the grinding balls the LAB WIZZ cannot only grind hard and brittle materials but as well all medium soft, soft materials and elastic materials.



Lab wizz micro ball mill front view with vial holders



Lab wizz micro ball mill front view with easy clamp and jar



Lab wizz micro ball mill front view with easy clamp closed

Fast clamping jars for grinding applications

- Dry grinding
- Wet grinding
- Ultra fine grinding
- Mechanical alloying

Grinding jars for Static Mixing applications

- Turbulent blending
- Laminar blending
- Liquid dispersion
- Gas liquid dispersion

All LAB WIZZ Static Mixers, have some helical mixing element which directs the flow of material radial toward the pipe walls and back to the centre. Additional velocity reversal and flow division results from combining alternating right- and left-hand elements, thus increasing mixing efficiency. All material is continuously and completely mixed, eliminating radial gradients in temperature, velocity and material composition.

Micro vial holder for cell disruption

- Micro vial adapter plate for 10 micro vials
- Micro vial adapter for 4 micro vials

Designed for high analytical screening, the LAB WIZZ efficiently and safely disrupts samples of spores, micro organisms, plant and animal tissue or soil samples at a time. The samples along with extraction media and small metallic or ceramic balls are placed in micro vials. After 2 minutes of preparation in the lab wizz more than 95% of the cells are disrupted. Because balls and vials plates are disposable the method is ideal for PCR, PAGE, and probe applications where cross contamination between samples cannot be tolerated.

Stainless steel micro vials

Stainless steel Micro vials are used for cryogenic grinding of small sample amounts or for standard grinding applications of small samples such as soil or grain using a steel or tungsten carbide bead. Steel vials ensure a much higher heat transformation in order to optimize the heating and cooling. The stainless steel micro vials are available with a grinding ball pre-filling optional.

Ice bath for cryogenic grinding

For heat sensitive materials such as plastics and rubber it is possible to embrittle the material with liquid nitrogen and perform an additional external freezing of the fast clamping jars. Those jars are either made from Teflon or from stainless steel and are suitable for cryogenic grinding applications.

- Insulated Ice bath 4 Liter with cover
- Tongue for frozen grinding jars
- Safety glass



Grinding jar clamp



160 ml jar with helical static mixer for turbulent blending



Stainless steel micro vial



Stainless steel micro vials



Insulated Ice bath 4 Liter with cover

Sample	detail	Sample	detail
	<p>Leaves:</p> <p>Micro vial adapter plate</p> <p>Micro vials</p> <p>3mm tungsten carbide bead per vial.</p> <p>Completely homogenized</p>		<p>Honey / water:</p> <p>160ml steel jar</p> <p>Static Mixer</p> <p>Homogeneous mixture</p>
	<p>Rubber:</p> <p>50ml steel jar</p> <p>20 mm steel ball after cryogenic grinding</p>		<p>Soil sample:</p> <p>100ml steel jar</p> <p>25 mm steel ball</p> <p>40 Micron after 45 seconds</p>
	<p>Paper:</p> <p>100ml jar</p> <p>25mm steel ball</p> <p>200µm after 90 seconds</p>		<p>Glas:</p> <p>50ml steel jar</p> <p>25mm steel ball</p> <p>100µm after 45 seconds</p>

Recommended ball filling

Grinding jar volume	Feed size	2 mm	3 mm	12 mm	15 mm	20 mm	25 mm
2.00 ml	1 mm	3-4 pcs	2-3 pcs				
25.00 ml	6 mm	to be calculated in ml		2-4 pcs	1-2 pcs	1 pcs	1 pcs
50.00 ml	8 mm			4-7 pcs	2-3 pcs	1 pcs	-
60.00 ml	9 mm			5-8 pcs	3-4 pcs	1 pcs	1 pcs
80.00 ml	9 mm			5-8 pcs	3-4 pcs	1 pcs	1 pcs
100.00 ml	10 mm			10-16 pcs	6-8 pcs	1-2 pcs	1 pcs
160.00 ml	12 mm	only helical mixing element					

Technical data	
Power supply	230V ± 10% – 50/60Hz
Rated power	200W
Fuses	2 x T2A 250V
Max. volume of milling cups	2 x 50 ml
Dimensions W x D x H	385 x 420 x 240 mm
Weight	42 kg
Vibrational frequency regulation	Digital, from 3 to 30 Hz (180 – 1800 min-1), in 0.1 Hz steps
Motor Power	750 Watt