

INNOVATIVE TECHNOLOGIES

Mortar Grinder

MG 200



TORONTECH



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MG 200

The MG200 Mortar Grinder is **designed for grinding, homogenizing, and mixing a wide variety of samples under dry, wet, or cryogenic conditions.**

It can effectively grind hard, soft, brittle, and even pasty samples. What sets it apart is its exceptional performance when it comes to processing capacity, along with its user-friendly and safe operation.

Feed size:
 $\geq 15\text{mm}$

Final fineness:
 $\leq 5\mu\text{m}$

Speed:
50-130rpm

APPLICATION

Sample Type

Hard, soft, brittle and pasty samples.

Typical sample

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



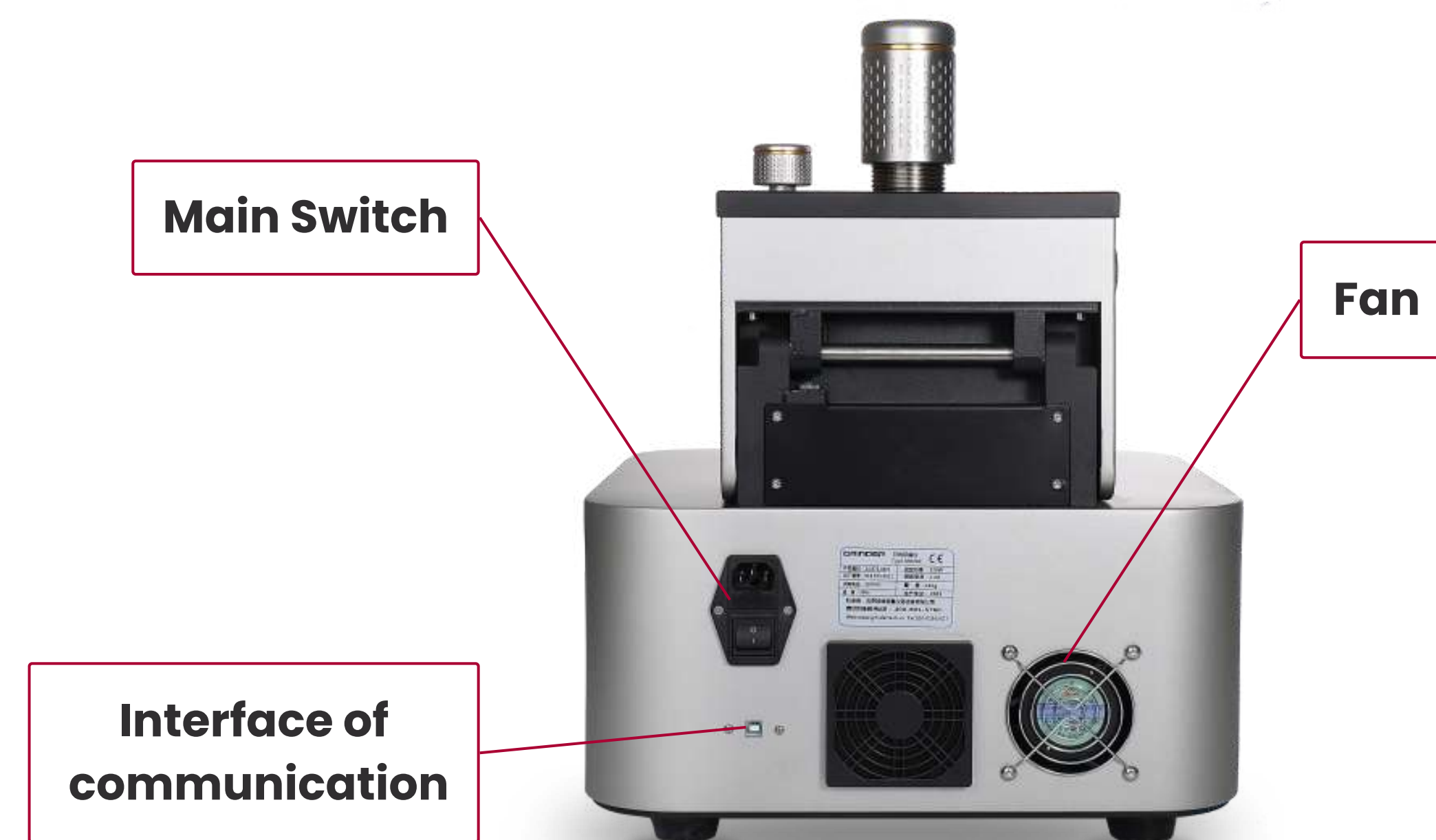
Working Principle

The sample enters the grinding space between the pestle and mortar through a hopper, where it gets crushed under pressure and friction.

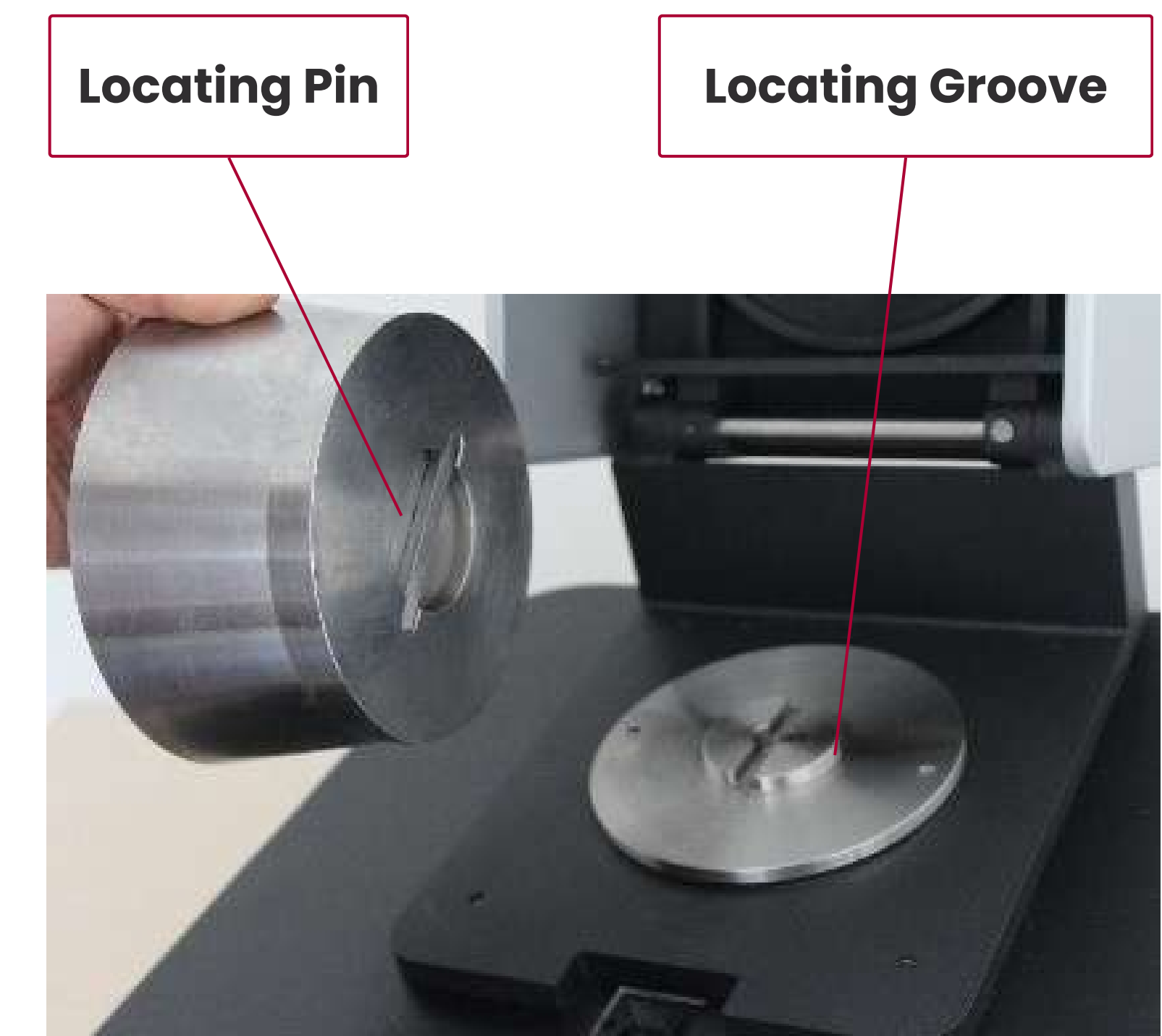
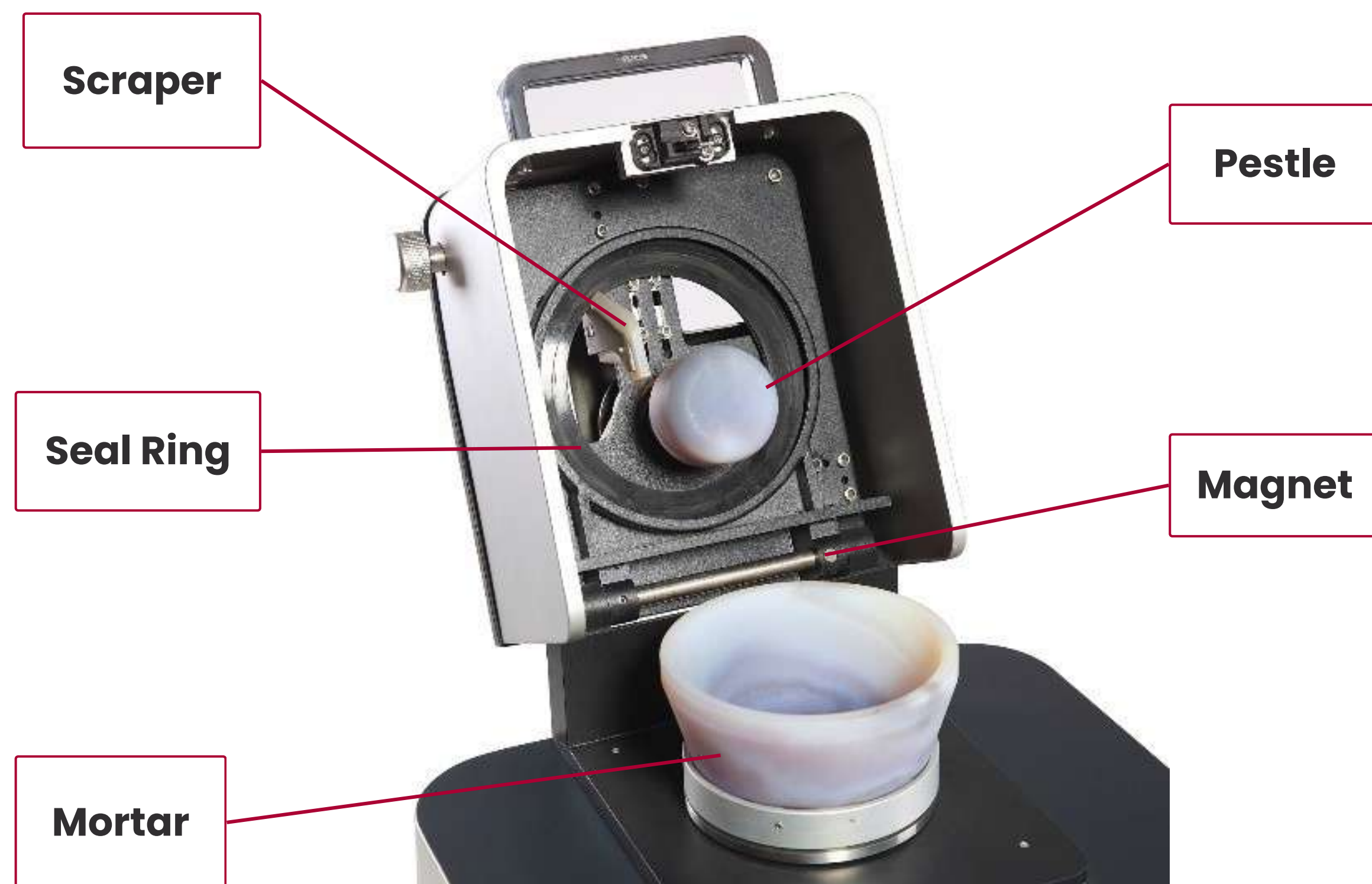
The scraper's role is to introduce the material into the region between the mortar and pestle. This deliberate feeding process guarantees that the entire sample consistently undergoes grinding and thorough mixing.



UNIT PARTS



UNIT PARTS




UNIT FUNCTION LIST

NAME	FUNCTION
Rotary knob	Adjusting the pestle contact pressure vertically
Viewing window	Observe scraper position and the status of sample grinding
Setting knob for the scraper	Setting the contact pressure or gap of scraper to the mortar
Handle	Open/close the cover
Knob for the cover lock	Lock and open the cover
Touch display	Set parameter and control operation
Adjusting knob	Setting the position of pestle horizontally
Filling opening	Feed the samples and observe the milling process

NAME	FUNCTION
Cover	Close and seal the grinding chamber
Main switch	Turn on/off MG200, fuse in it
Power socket	Power connection
Fuse holder	2 fuses in it
Switch	Turn on/off MG200, 6A/250V
Interface of communication	RS232
Fan	Ventilation and cooling
Locating Pin	On the mortar, facilitate mortar located and fixed well
Locating Groove	On the mortar base, facilitate mortar located and fixed well

APPLICATION EXAMPLE

BEFORE		AFTER		TECHNICAL PARAMATER	
				Sample	Rice
				Configuration	Mortar & Pestle Stainless Steel
				Sampe Chracteristic	Mid-Hard
				Remarks	Feed size is below 8mm
				Time	10 Min

BEFORE		AFTER		TECHNICAL PARAMATER	
				Sample	Pill
				Configuration	Mortar & Pestle Stainless Steel
				Sampe Chracteristic	Brittle
				Remarks	Feed size is below 8mm, dry sample
				Time	3 Min

BEFORE		AFTER		TECHNICAL PARAMATER	
				Sample	Soil
				Configuration	Mortar & Pestle of Agate
				Sampe Chracteristic	Soft, Powder
				Remarks	Remove the hard materials, feed size is below 8 mm
				Time	5 Min

PRODUCT ADVANTAGES

➤ Precision Performance:

Optimize your grinding process with variable speed control (50–130 rpm) and a digital display for precise results and load management.

➤ Versatile Grinding Mastery:

Unlock the potential for diverse grinding applications, from dry to wet and even cryogenic, with our versatile system.

➤ Effortless Maintenance:

Experience hassle-free maintenance with tool-free mortar and pestle exchange and easy cleaning.

➤ User-Friendly Interface:

Navigate effortlessly with the intuitive 5 inch LCD touch control panel, simplifying operation for seamless usage.

➤ Tailored Grinding Experience:

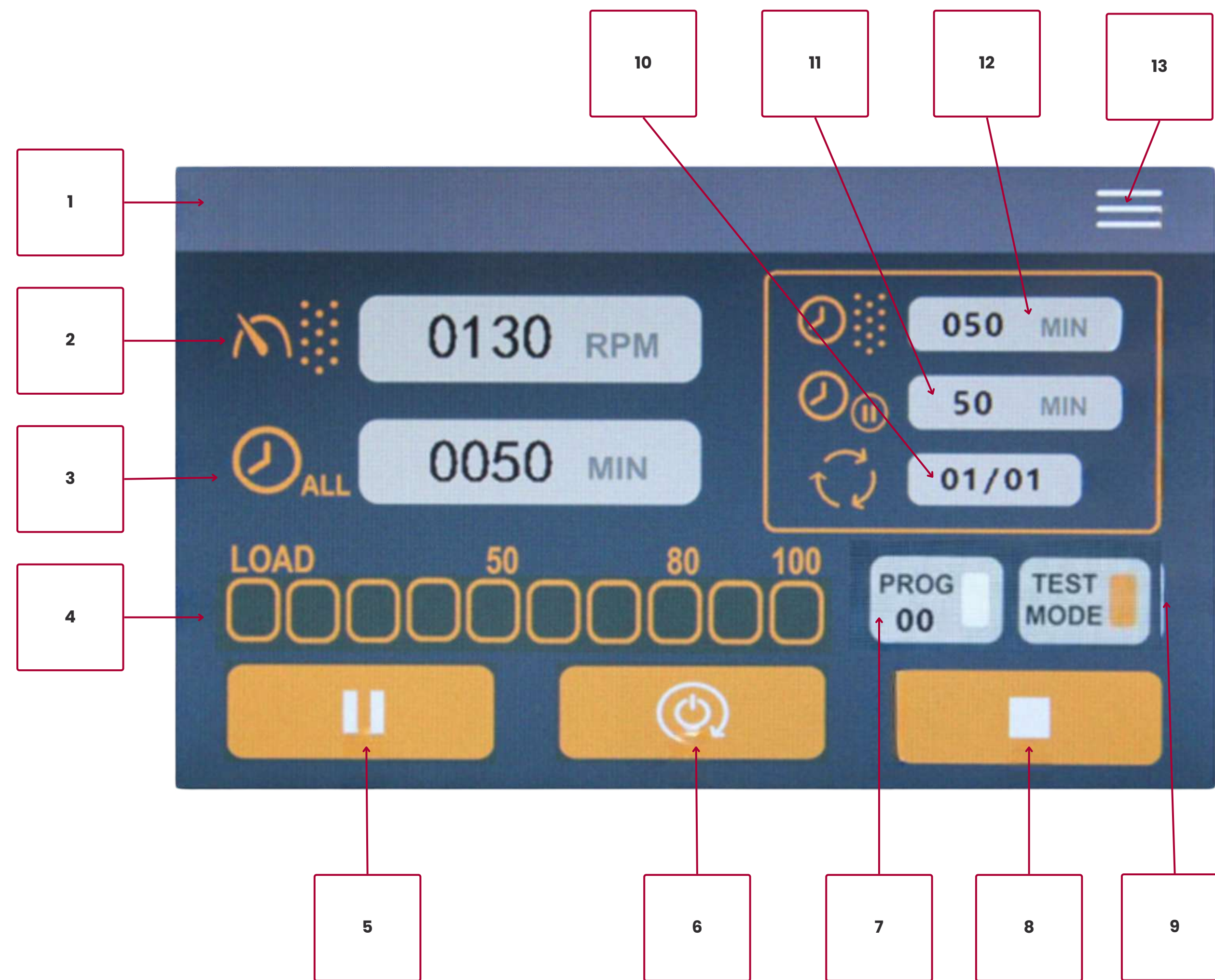
Customize your grinding experience with adjustable pestle and scraper pressure, putting you in command of the process.

➤ Enhanced Safety Features:

Rest assured with a closed, dust-tight grinding chamber featuring convenient viewing windows for peace of mind.



SCREEN DISPLAY



NO	NAME	FUNCTION
1	Home screen	Setting parameters, start/stop instrument
2	Speed display	Display speed: 50~130 rpm
3	Time display	Display total grinding time: 0~999 min
4	Load display	Display the load status
5	Pause key	Pause the instrument
6	Start key	Start the instrument
7	Program No. display	Set and display program 01~ Program09
8	Stop key	Stop the instrument
9	Test mode	Parameter can be edited during running
10	Cycle	Indicate cycle number of grinding, 1-99 times
11	Pause time display	Single pause time at interval mode: 0~99 min
12	Time display	Single grinding time at interval mode: 001~999 min
13	Menu	Press to enter parameter, program, system setting

TECHNICAL SPECIFICATION

NAME	FUNCTION
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(h/min)
Setting pestle pressure /position	Vertical by adjusting knob+scale
Setting scraper pressure/position	By adjusting knob
Display	Digital tube display
Lock device	External helix-screw device
Appearance design	Normal
Rated power	230W
Power supply	220V,50/60Hz (110V available upon request)
Instrument size (W*D*H)	400*480*500mm
Package size (W*D*H)	600*600*610mm
Weight	41kg
Feed size	<10mm, depending on the sample property

MORTAR AND PESTLE RECOMMENDATION

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
Hardness 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 Aluminium Oxide	1750HV	Normal	Medium-hard, Soft	Yes	Yes	No
Zirconium Oxide	1200HV	Good	Medium-hard, Soft	Yes	Yes	No



Sintered Aluminium Oxide

Agate

Stainless Steel

Member of
**(WORLD
of TEST)**™



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