

CRYOGENIC MILL "IQ MILL-2075"

Perfect for pretreatment of hard-to-grind polymers

Specifically designed for grinding, agitating, and dispersing various samples

In instrumental analysis of trace samples, fine grinding and thorough homogenization are critical to achieving high measurement reproducibility. Conventional grinding methods, however, often require long processing times of 10 minutes or longer, consume a large amount of liquid nitrogen, and generate substantial operating noise. The Cryogenic Mill "IQMILL- 2075" addresses these challenges with a compact, benchtop design that combines high speed, quiet operation and ease of use. In addition, its unique rapid reciprocating torsional motion* - enabled by a highly durable, high elasticity belt - delivers fast, quiet, and highly efficient grinding performance. Compared with its predecessor, the "IQMILL-2075" features a snap-lock mechanism for quick mounting and removal of sample containers, significantly enhancing workflow efficiency



FEATURES OF IQ MILL-2075

1. Easy to use and simple to operate

• Snap-lock operation

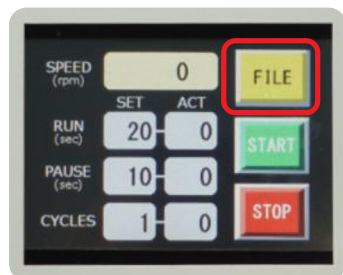
Tool-free, snap-lock operation allows for smooth mounting and removal of sample containers, significantly improving workflow efficiency.



Sample grinding section
Snap-lock mounting and removal of sample containers

• Snap-lock operation

Tool-free, snap-lock operation allows for smooth mounting and removal of sample containers, significantly improving workflow efficiency.



Maximum 10 sets of settings can be saved simply by entering in "FILE LIST".



2. Fast and efficient grinding

• Powerful impact and shear grinding capabilities bring significant reduction of grinding time

Rapid reciprocating torsional motion enables sample grinding in a short period of time.

• Grinding up to three samples at a time in the same program

Equipped with a holder that holds up to three sample containers for efficient grinding.

• Quiet operation

Noise level during grinding is only around 55 dB and will not interfere with conversation.

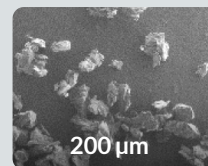
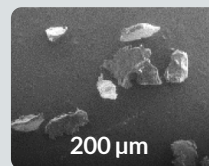
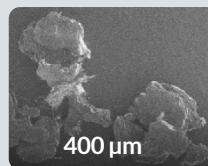
Polystyrene (20 pellets)

2000 rpm x 60 sec x 1 cycle
Pretreatment temperature

25 °C

0 °C

-196 °C

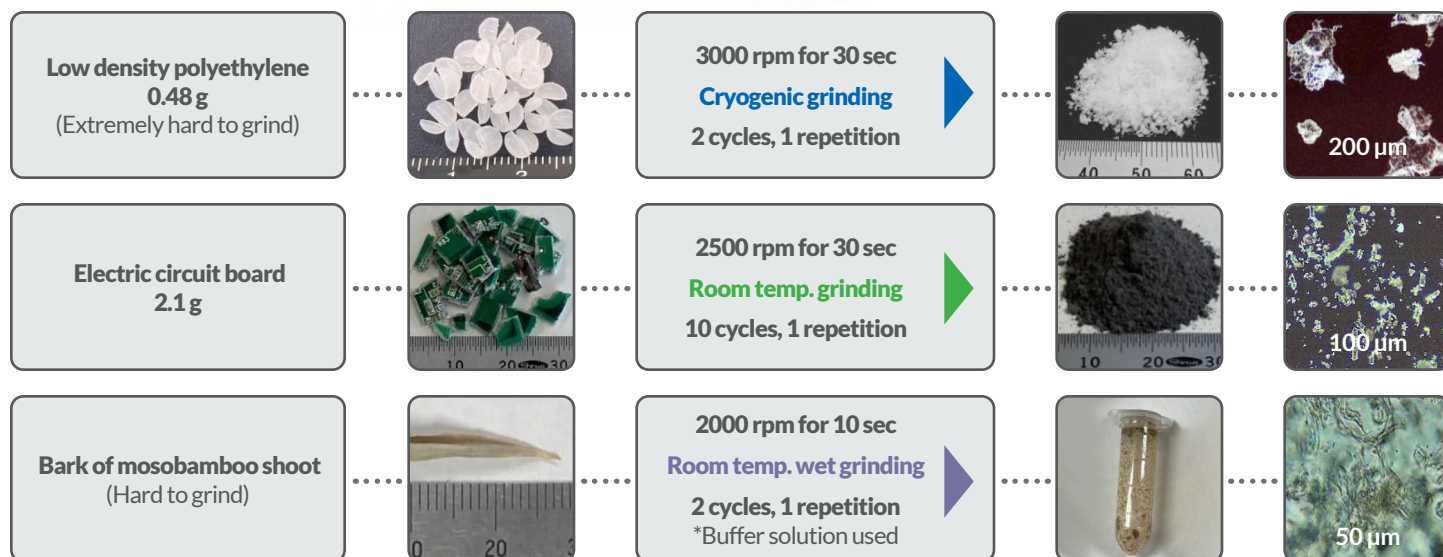


3. Titanium sample containers are standard

• Titanium sample containers offering high chemical inertness are now standard

SYNTHETIC/BIOPOLYMER GRINDING APPLICATIONS

Some of the grinding applications and a list of application examples are shown below.



SPECIFICATIONS

Grinding methods	Cryogenic grinding, Room temperature dry grinding, Room temperature wet grinding	
Grinding setting	Rotation speed (rpm)	50 to max. 3000 (stepless)
	Rotation time (sec)	10 to 60 (10 sec step)
	Pause time between cycles (sec)	0 to 600 (10 sec step)
	Number of cycles (repetitions)	1 to 20 (1 cycle step)
	Programmable parameters	Up to 10 sets of rotation time, inter-cycle pause time, and cycle count (number of repetitions) can be stored.
Safety feature	Hazardous operation prevention by magnetic microswitch.	
Dimension, weight	W 270 x D 340 x H 300 (mm), 12 kg	
Power (50/60 Hz)	AC 100 -120 V or 200 -240 V (450 VA)	
Standard accessory	Sample container, Insulation container, Pre-cooling kit (Cooling container, Tongs, Cooling holder), Sieve set, Grinding balls (tungsten carbide, zirconia), etc.	

Noise level during grinding: 55 dB* (1 g of PS pellets ground with a $\Phi 12$ mm Zr grinding ball at 3,000 rpm) *Level comparable to normal conversation.

For more information, visit our website here or scan the QR.

