

# Cryogenic Mill "IQ MILL-2070"

~ Intelligent Quick-Mill ~

## Perfect for pretreatment of hard-to-grind polymers

- Specifically designed for grinding, agitating and dispersing various samples -

In sample pretreatment, grinding samples into fine powders is a time-consuming and labor-intensive task. The newly developed IQ MILL-2070 is a device that makes grinding a simple process. Especially in microanalysis, pulverizing samples is a required pretreatment for sample uniformity, homogeneity, and reproducibility.

Various methods have been devised, but they have problems such as a large amount of liquid nitrogen consumption, grinding time of more than ten minutes and a noise level of 90 dB during that time. The "IQ MILL-2070" is a benchtop grinding, agitating, and dispersing device that uses a special high elastic belt to achieve a high-speed three-dimensional figure-eight motion to solve these problems\*.

\*Japanese Patent: 7064786

#### Features of IQ MILL-2070

#### 1. Easy to use and simple to operate

Grinding samples by simple operation

Required settings are only: grinding speed, grinding time, number of cycles, and waiting time. The settings can be easily done with the rotary knob and touch panel.

#### 2. Fast and efficient grinding

- Milling 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.
- Powerful impact and shear crushing capabilities bring significant reduction in grinding time

High-speed 3-D figure-8 grinding method enables sample grinding in a short period of time.

#### 3. Liquid nitrogen cooling kit for cryo-milling

• A compact design in which only the sample container can be precooled with liquid nitrogen before grinding.

The minimum liquid nitrogen consumption is only about 300 mL for energy saving. The kit contains a cooling container and cooling holder.

Grinding at room temperature for most materials.

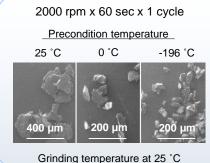


**IQ MILL-2070** 

### **Specifications**

Main specifications of IQ MILL-2070		
Grinding temperatures	Room temperature or below using a refrigerant (liquid nitrogen, etc.)	
Setting parameters	Rotation speed (rpm)	50 up to 3000 (stepless)
	Rotation time (sec)	10 up to 60 (10 second step)
	Pause time between cycles (sec)	10 up to 600 (10 second step)
	Rotation cycle	1 up to 10 (1 cycle step)
Safety function	Combination of double micro switch and manual lock	
Main unit dimension and weight	Width 270 x Depth 340 x Height 300 (mm), 12 kg	
Power (50/60 Hz)	100/120 VAC or 200/240 VAC (450 VA)	

#### Polystyrene (20 pellets)





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