

Airflow-driven Pulverizer

# Super Jet Mill

Narrow particle size distribution achieved without coarse particles

<https://www.nisshineng.co.jp>

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SJ-10K

# “Super Jet Mill” achieved very narrow particle size distribution.

## Important role of Super Jet Mill

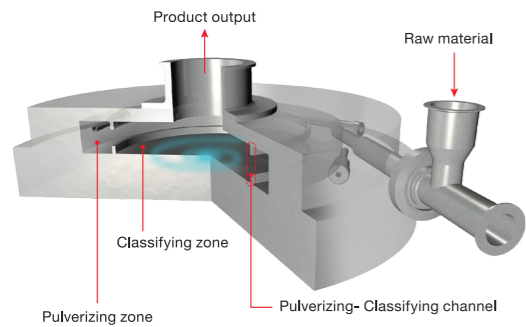
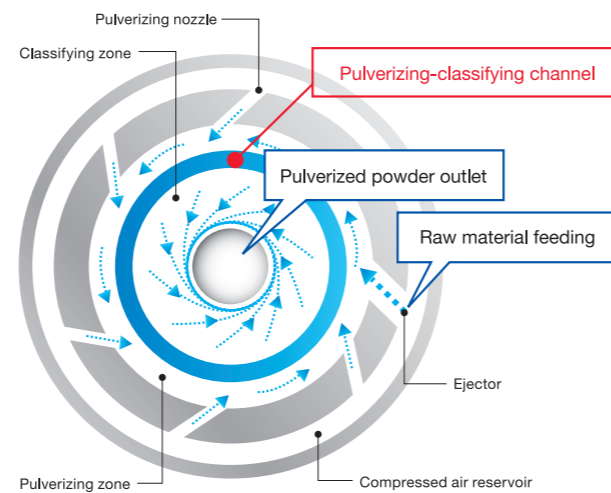
- Pulverization of products that require not only median diameter but also the uniform particle size distribution
- Pulverization of products such as battery materials to eliminate metal contamination (with ceramic lining for main powder contact area)
- Dispersion and pulverization of metal powder
- Pulverization of heat-sensitive materials such as pharmaceuticals and resins
- Low-volume pulverization of highly valuable powder
- Pulverization of products to prevent moisture absorption and oxidation

### Overview

“Super Jet Mill” pulverizes powders only by compressed air with no moving parts. Fine powders are produced by mutual collision and friction with the wall using the high speed compressed air injected from the multiple nozzles arranged on the circumference. The regulated air flow prepared through analysis of cyclone air turbulence inside the machine produces particles having narrow particle size distribution with only a limited amount of coarse powder mingled.

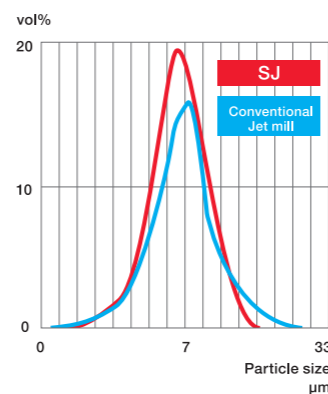
## Structure and features

Narrow particle size distribution and fine pulverization have been realized by equipping the pulverizer with a “pulverizing zone”, “classifying zone”, and “pulverizing-classifying channel”. Moreover, the pulverization is based on the use of only compressed air and generates no heat, making it suitable for the pulverization of heat-sensitive materials. Material can be pulverized efficiently, making it difficult for residual pulverized product to accumulate inside the machine. This makes it the perfect solution for pulverizing low volumes of highly valuable powder. In addition, there is no drive mechanism inside the pulverizer, making disassembly and cleaning easy.

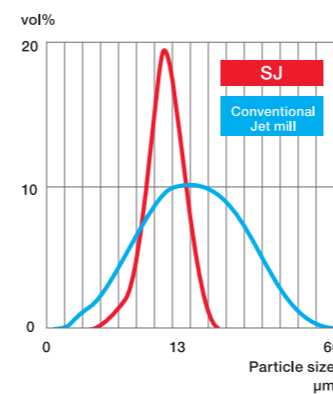


Uniform product, narrow particle size distribution	No heat generation
Easy disassembly and cleaning	Pulverization system using inert gas
Rotorless	Good Manufacturing Practice (GMP)/ pharmaceutical compatible
Abrasion resistance achieved with ceramics (without metal contamination)	Low-volume pulverization

### e.g. Color toner

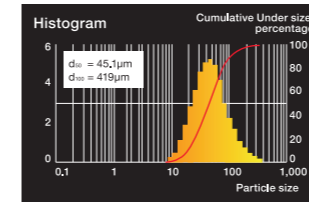


### e.g. Silk

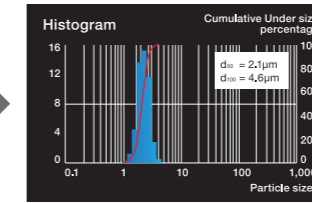


## Examples of pulverization

### Macromolecule

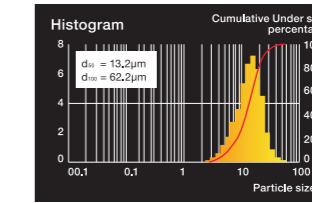


Raw material

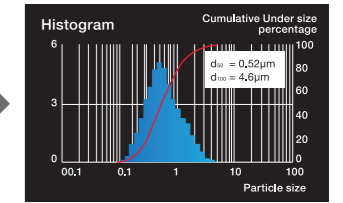


Product

### Lithium iron phosphate

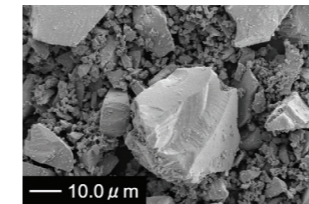


Raw material

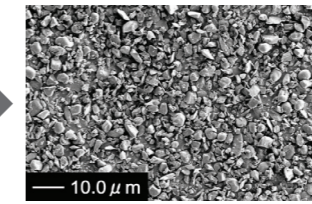


Product

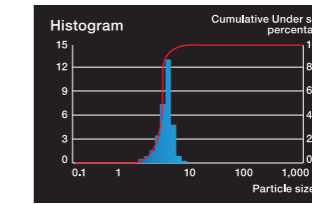
### Glass powder



Raw material



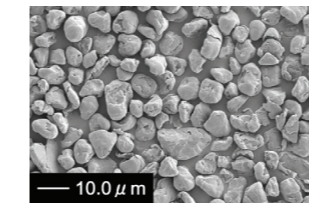
Product



Product

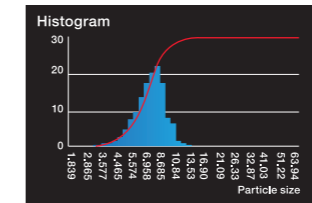
Capable of grinding highly abrasive ceramic powders used in electronic materials, etc., which are resistant to metal contamination (metal contamination-free).

### Color toner



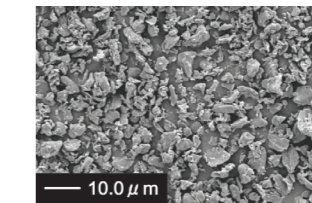
Raw material

Capable of pulverizing heat-sensitive powders (resins).



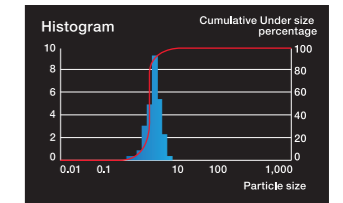
Product

### Green tea



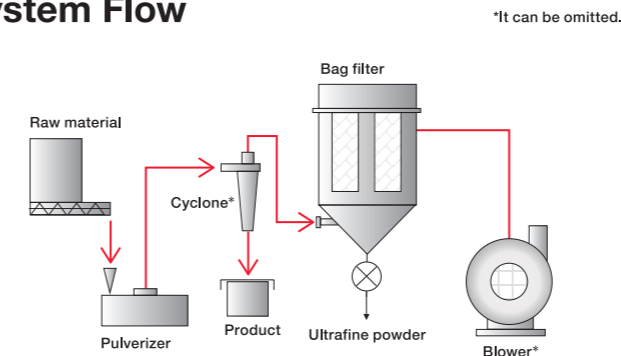
Raw material

Also used as pulverizer for beverages and health foods, for which aroma and color are important.

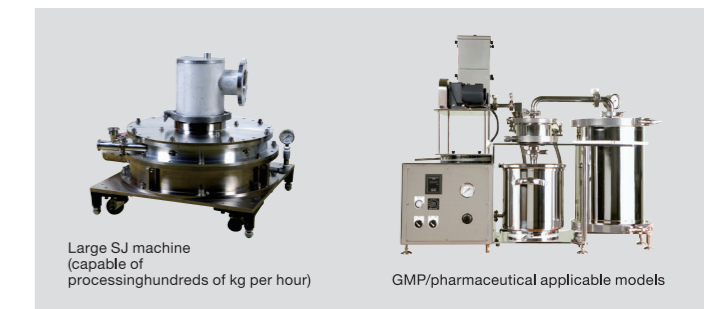


Product

## System Flow



## Equipment Photos



## Lineup

Models	Air consumption[m <sup>3</sup> /min]	Feed rate[kg/h]	Dimensions[mm]	Weight[kg]	Compressor[kW]
SJ-100	0.2~ 0.3	0.05~ 0.3	Φ160 × 140	5	2.2~ 3.7
SJ-100GMP	0.2~ 0.3	0.05~ 0.3	L720 × W370 × H600(System size)	50(System weight)	2.2~ 3.7
SJ-500	0.8~ 1.2	0.5~ 10	Φ320 × 180	27	7.5~ 15
SJ-1500GMP	0.8~ 1.2	0.5~ 10	L2,000 × W1,000 × H2,000(System size)	250(System weight)	7.5~ 15
SJ-1500	2.0~ 3.0	2.0~ 30	Φ400 × 180	45	15~ 30
SJ-1500GMP	2.0~ 3.0	2.0~ 30	L2,500 × W2,000 × H2,500(System size)	400(System weight)	15~ 30
SJ-2500	3.0~ 4.5	3.0~ 50	Φ500 × 180	65	22~ 37
SJ-5000	6.0~ 9.0	5.0~150	Φ600 × 350	120	45~ 75
SJ-10K	12.0~18.0	10~300	Φ700 × 350	180	75~110