

Star Burst™

Super fine particles, minimal contamination.

Star Burst™ is a wet-type pulverizing - or wet jet milling - device to disperse, emulsify, pulverize, and reform surfaces of raw materials by obliquely colliding the particles pressurized up to 245 MPa at the relative velocity of Mach 4 .

Top Features



Minimal Contamination

Star Burst does not use any grinding media, resulting in a minimum amount of contamination.



Scalability

From R&D projects to full production, you can scale up easily with common settings across all models.



Shorter Processing Time

Star Burst boasts a shorter processing time than other available technologies, meaning you can get more done, faster.

MORE FEATURES

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Processing Videos

Star Burst vs. Other Methods

For Battery Materials

For Pigments

For Cosmetic Applications

For Electronics Materials

Chamber Types

Learning Series

The solution for super fine particles.

The "Star Burst" is a wet-type pulverizing - or wet jet milling - device to disperse, emulsify, pulverize, and

reform surfaces of raw materials by obliquely colliding the particles pressurized up to 245 MPa at the relative velocity of Mach 4 .

Features

Minimum Contamination

Star Burst does not use any grinding media, resulting in a minimum amount of contamination.

Homogenized Particle Size

Uniform particle with narrow particle size distribution can be achieved by controlling the injection speed of raw material slurry.

High Pulverizing Capability

Nano-level pulverizing or dispersing is effectively achieved in a short period of time without short path of raw materials.

Various Applications

This device is capable of pulverizing raw material slurry with a viscosity of up to 5,000 MPas or up to 50 wt%. Slurry with hard particles is also applicable, by using our original sealing structure and nozzle made of single crystal diamonds.

Get the full details.



Download Product Information

Download Now



Request a call or email.

Request Call or Email

Explore the Star Burst Lineup

All models offer the same minimal contamination, ease of maintenance, and scale-up flexibility.

Star Burst Minimo



FOR R&D

Throughput: Max. 1-2 L/h

Star Burst Mini



FOR R&D

Throughput: Max. 6 L/h

Star Burst Labo



FOR R&D

Throughput: Max. 23-50 L/h

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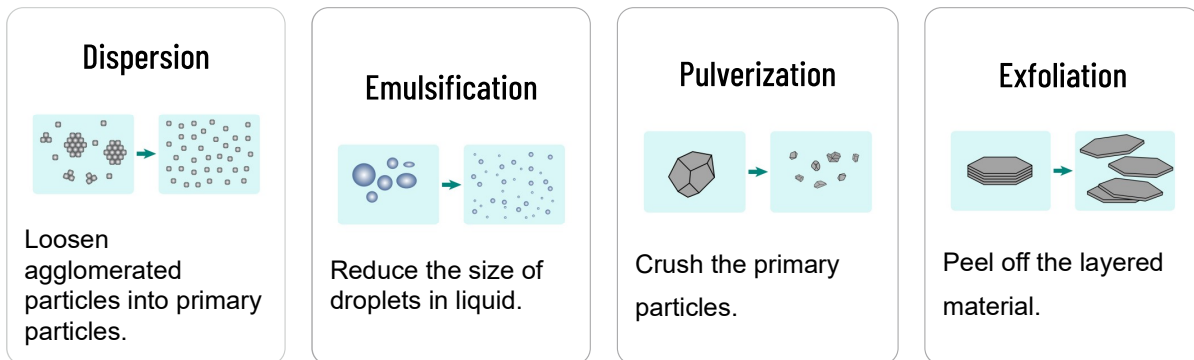
Specifications

Model	Motor kW	Max. Throughput L/hr	Pressure MPa	Diam. of Chamber Nozzle (mm)	Explosion Proof Application	External Dimensions (W x D x H mm)	Weight kg
Star Burst Minimo HJP- 25001SE	0.75	1-2	1 - 245	φ0.06 to 0.15	N/A	504 x 280 x 300	25
Star Burst Mini HJP- 25001	2.2	6	100-245	φ0.1	N/A	600 × 500 × 1,145	180
Star Burst Labo HJP- 25005	5.5	32	100 - 245	φ0.1	N/A	925×590×1,169	450
HJP- 17007		50	70-170	φ0.13			
HJP- 25003		23	100 - 245	φ0.1			
HJP- 17004		36	70 - 170	φ0.13			
Star Burst 10 HJP- 25008	7.5	52	100 - 245	φ0.12	Option	1,215×826×1,250	780

<i>HJP-</i> <i>17011</i>		67	70 - 170	φ0.15			
Star Burst 100							
<i>HJP-</i> <i>25080</i>		441	100-245				
<i>HJP-</i> <i>16140</i>	75	727	70-160	φ0.35	Option	1,330 × 2,500 × 1,900	5,500
<i>HJP-</i> <i>10180</i>		1,056	50 - 100	φ0.50			
				φ0.48 (Dual chamber)			

Solves problems that commonly occur when homogenizing particles.

Processing or homogenizing particles to nano-level size can improve their efficacy. Homogenization of particles refers to the process of reducing the average diameter of a material's particles uniformly.



Want to know more? Sample testing is available in our Chicago-area lab.
Or, talk to an expert about Star Burst's full capabilities.

Request Call or Email

Watch to learn how Star Burst works.

See how Star Burst processes raw materials with minimal contamination. This video walks you through a diagram of the mechanism and gives you a look at what happens during the process.

APPLICATIONS

Electronics

Battery materials, ceramics, metals, magnetic materials, capacitors, CMP slurry

Cosmetics

Emulsion, skin lotions, UV protection, perfumes

Pharmaceuticals

Injections, liposomes, cream, sterilizers

Pigments

Toner, color filters for liquid crystals, printing inks, paint

Chemicals

Resins, plastics, polymers, waxes, fats, and oils

Food

Aroma chemicals, calcium, antioxidants, food additives, functional beverages

Example: Carbon Nanotube 0.1 wt%

Carbon nanotube can be exfoliated by high shear force of high-speed water jetting.



Number of passes: 20

Before:

17 μm

Always precipitated

Pressure: 200 MPa

After:

0.15 μm

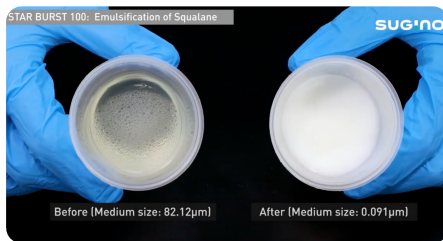
Always dispersed



You can get full details on Star Burst™ models and options with our product guide.

[Download Now](#)

More to Explore



See it in action.

Watch processing videos for squalane, graphite, CNTs, and more.

[Watch now >](#)



Battery materials

Minimal contamination is a crucial feature in battery materials.

[Learn More >](#)



**New Technology Center/
Assembly Plant for Star
Burst**

New production facility for
the production of Star
Burst.

Read >



See it in person

Find out where we'll be
with our event schedule.

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