Ashizawa

Dry Bead Mill with a built-in Classifier

SIGMA DRY

PAT.P

History

Ashizawa Finetech Ltd. has been produced several machines so far, such as a dry bead mill called "*DRYSTAR SDA*" in 2008, a classifier called "*SEPA ALPHA*" in 2010. To meet various customers needs, Ashizawa has combined these two machines and has proposed Closed-circuit system called "*SDA-L system*".

In addition, combining these technologies, "*SIGMA DRY*" has been developed with its compact and simple design. *SIGMA DRY* makes it possible to dry-grind efficiently than ever. Ideal *free grinding*※ is possible by this one machine!

Strong Grinding

Adopting special type of pins, strong grinding is available.

Adopting Dispersing Device

Collect fine particle efficiently by dispersing agglomerated particles.

CUT Coarse Particles

Adopting a high precision classifier,
Not required to fine-tune of the shaft seal.
Easy to maintenance.
CUT Point dMAX=7～10μm

MINIMUM Setting Space

REDUCE Grinding Aid Amount

SHARP Particle Distribution

EASY Particle Control

SGD12.5

※**Free Grinding**… Be ground in a state that allows transmission of force sufficient by removing fine powder. Sometimes fines increases in the process of grinding, and it becomes the buffer that reduces the speed of grinding and grinding energy.

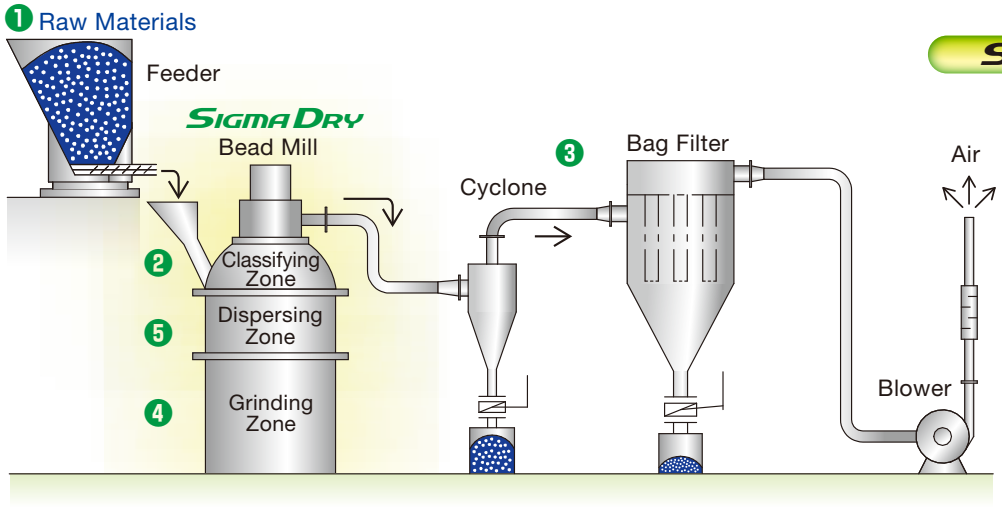
Your Partner for Fine Particle Technologies

Ashizawa Ashizawa Finetech Ltd.

Dry Bead Mill with a built-in Classifier

SIGMA DRY

SIGMA DRY Unit

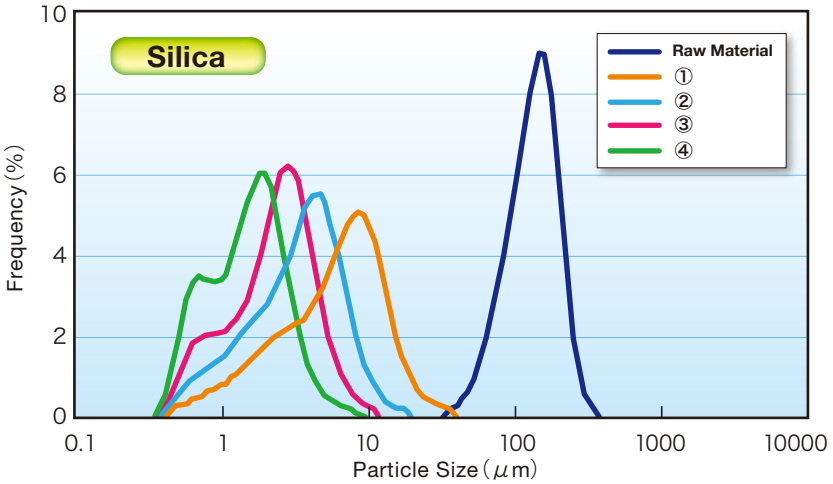


SGD Processing Flow

1. Raw materials are fed into the mill by feeder.
2. In classifying zone, the raw materials are separated from fine and coarse particles.
3. The fine particles are discharged from SIGMA DRY, collected by the bag filter and cyclone.
4. The coarse particles are send to the grinding zone, and ground by beads.
5. Ground particles are being de-agglomerated in Dispersing Zone, it is sent to Classifying Zone.
6. 1 and 2～5 are repeated, it is processed continuously.

Grinding Data by SIGMA DRY

Differences in particle size distribution by adjusting the amount of air flow and classifier rotational speed of SGD12.5



	Operating Conditions		Particle Size (μm)	
	Classifier Speed Range (rpm)	Air Flow (m^3/min)	d50	dMAX
Raw Material	–	–	130.1	352.0
①	3,000	4	6.07	37.0
②	5,000	4	3.34	18.5
③	7,000	4	2.28	11.0
④	7,000	3	1.48	10.1

Specifications

Model	SGD 12.5	SGD 25	SGD 50	SGD 125
Drive Power Mill (kW)	5.5	11	22	45
Drive Power Classifier (kW)	3.7	3.7	5.5	7.5
Air Flow (m^3/min)	2～4	4～8	8～20	20～50
Dimensions W×D×H (mm)	800×1300×1900	1000×1600×2400	1300×2000×3000	1400×2300×3500
Nominal Scale up	1	2	4	10
Chamber Material	Ceramics, Metal (Metal Only in SGD125)			

Specifications are subject to change without notice.

Applications

LiB (anode, cathode), Materials for electric component, Ferrite, Various glass, Various Ceramics, Carbon, Cement, Slag, Fly ash, Abrasive, Silica, Food, etc

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