



A leader of powder technology

**DAEGA POWDER SYSTEMS CO., LTD.**  
since 1970

## Daega Powder Systems has been developed for many industries.

We can use the experiences and technologies which we developed for new applications.  
By combining solutions from different industries,

**We can offer you the perfect solution!!!**

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**DAEGA**  
POWDER SYSTEMS CO., LTD.



The global company that creates value

**DAEGA POWDER SYSTEMS CO., LTD.**

Our continuous challenges, change,  
and innovation embody a brilliant future.

**A LEADER OF POWDER TECHNOLOGY  
SINCE 1970**

PULVERIZER  
DRYER  
MIXER  
SEPARATOR  
SIFTER  
CONVEYOR (SCREW, BUCKET, BELT)  
PNEUMATIC CONVEYING SYSTEM

**POWDER HANDLING  
TECHNOLOGY**

# Powder Handling & Environmental Protection Technology

**ENVIRONMENTAL  
PROTECTION TECHNOLOGY**

BIO-TRICKLING FILTER  
SCRUBBER  
BIO SCRUBBER  
ACTIVATED CARBON TOWER  
BAG FILTER  
CYCLONE  
INDUSTRIAL VENTILATION

**INSTITUTE OF  
POWDER TECHNOLOGY**

WE ARE DOING OUR BEST TO REDUCE  
COST AND ENERGY.  
FOR EVERY NEED, YOU CAN ALWAYS  
DEPEND ON DAEGA TO FIND A SOLUTION  
BECAUSE OF OUR LATEST POWDER &  
ENVIRONMENTAL TECHNOLOGY.



## A small company that moves the world

Our company was established in 1970 with the aim of localizing industrial powder machines, which are the core of the national key industry.

We have produced machines that are essential for processes including drying, pulverizing, mixing, distributing, transporting, and collecting across the industry, including food, pharmaceuticals, chemicals, and petrochemicals, under the mission of "if we don't make them, we have to import them," and now exports them to 22 foreign countries.

We have become a company that can create plants to make powders that have the highest quality not only for the existing industries such as petrochemical, precision chemical, food, pharmaceutical, electronics, and cosmetics but also for the solar industry and secondary battery industries under the recent carbon-zero policy due to environmental problems.

DAEGA is doing its best every day and night at local and overseas sites to become the best partner who can also worry about and solve global environmental problems as well as the existing industries needed by mankind.

We will add a little force to move the world.

DAEGA Powder System Family Representative, **Choi Eun Seog**



### NanoSizer™ Fine Mill [FM]

Nanosizer Fine Mill is a piece of wet-type grinding equipment that uses impact force, shear force, and centrifugal force by facilitating a high-speed rotor, internal beads, and a supply device located at the top. It uses small beads to crush raw materials that are slurry-type into ultra-fine powders. Rotor, beads, and internal materials are made of Zirconia and can be applied to abrasion-resistant raw materials, and can be operated at high speed by separating the raw materials and the beads by a supply device located at the top.



### MicroSizer™ Air Jet Mill [JM]

Microsizer Air Jet Mill is a dry-type grinding device using compressed air, designed to effectively crush abrasive agents, ceramics, glass, Teflon, wax, and toner, and it can economically and efficiently crush raw materials that have low-melting points and high-intensity. The high-speed supply unit installed on the top of the grinder is a device that can circulate the residues not crushed by centrifugal force to the pulverizer and supply them to the desired particles and can be refined to 3 $\mu$ m or less.



### Air Classifying Mill [ACM]

ACM Pulverizer is a micro grinder using centrifugal force and airflow drag, and it is widely used for raw materials (powder paints, processed resins, pesticides, pigments, rubber medicines, food, etc.) that have low melting points. It uses air supplied to the special grinding room. The optional use of the structure of the grinding room prevents excessive crushing, making it more efficient, and by adjusting the rotational speed of the supply connected to the grinder, it becomes easy to control the product's particles. Also, AL type, the standard model, features low noise (less than 85 dB), low heat generation, and EC type is designed to facilitate easier cleaning and maintenance. Furthermore, the stable structure and ACM's characteristics were strengthened to realize a significant improvement in pulverization & particle control and increased throughput.



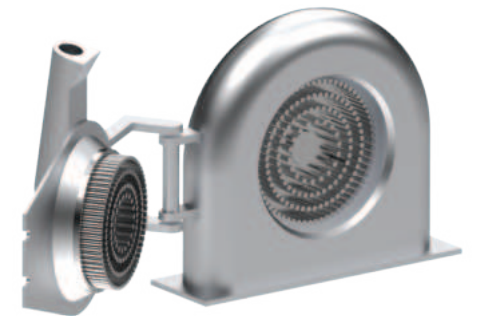
### High Speed Mill [HSM]

High Speed Mill is an impact-type grinder in which impact force, friction force, compression force, and shear force are simultaneously performed between a hammer and a liner that are rotating at high speed. The size of the particle can be adjusted and determined by the shape and size of the screen, the spacing between the hammer and the liner, and the speed of the hammer. In the process of grinding, the raw material that was input in the hopper is transferred to the grinding room by a screw feeder. The raw material is repeatedly pulverized by the hammer and liner rotating at high speed. After the raw material is pulverized until it reaches to a predetermined size, the particle is discharged through the screen.



### ROTARY PIN CRUSHER [RPC]

Rotary Pin Crusher is an impact-type grinder with a pin disc rotating at high-speed and a fixed pin disc. Particle size can be adjusted by the speed of the drive pin, the shape and size of the lower screen, and the shape of the pin. In the crushing process, the raw material injected into the hopper is sent to the crushing chamber by a screw feeder and pulverized by a pin disc rotating at a high-speed drive and a fixed pin disc. The pulverized material with a specified particle size or less is discharged through the screen.



### Ball Mill [BM]

Ball Mill is widely used in various fields to grind metal, metal oxide, glass, sand, and inorganic pigments. During the grinding process, the cylinder and the ceramic ball such as Alumina and Zirconia are rotated and crushed, the most important factor is the rotational speed. If it rotates too fast, the ball does not fall off due to strong centrifugal force and does not crush the materials effectively. Depending on the diameter of the cylinder, the material is pulverized between the balls by impact and shear forces, rotating at 4 to 20 RPM per minute. Particle size can be controlled by the size of the ball, and the smaller the ball, the finer the product can be crushed.



## Dryer Classifying Mill [DCM]

The DCM is a single piece of equipment that can perform drying, pulverization, grinding, and supplying simultaneously, and it discharges products that have a constant drying level and degree of the particle distribution. DCM uses electricity or gas as heat sources and materials with a type of cake and slurry can completely be dried out for a short stay time.



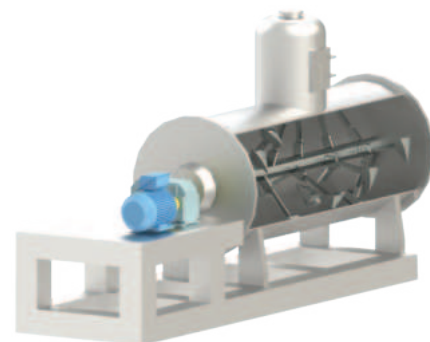
## Nauta Mixing Dryer / Cooler [NMD/NMC]

Nauta Mixing Dryer has been developed to use (activate) a heating and cooling jacket construction in a vacuum system that improves drying time. Basically, it has the same structure as Screw Type Mixer, but the dryer is designed for construction purposes, depending on the thickness of the Seal, Shaft Sealing, Support Method, and Vessel.



## Plough Share Dryer / Cooler [PSD/ PSC]

Plough Share Dryer is designed to accurately mix various raw materials that have unique characteristics. This device is a horizontal drying system with a heating and cooling jacket and a vacuum system added to the PSM's casing, shaft, and shovel-type internal structure.



## Ribbon Mixer [RM]

Ribbon Mixer has dual ribbon-type stirring wings inside the fixed drum, where the outer Ribbon transfers the powder to the center, and the inner Ribbon transfers the powder outward, to perform mixing by convection-diffusion and shearing.



## Nauta Mixer [NM]

Nauta Mixer has a composite operating function that simultaneously rotates the mixing screw in a conical container. The mixing time varies depending on the rotation of the helical screw on the axis while circulating from top to bottom to move the material upward and hovering around the centerline near the wall.



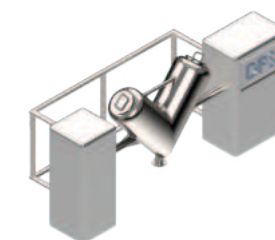
## High Speed Mixer [HM-S]

High Speed Mixer is used to uniformly disperse different types of materials at very high speeds by the fluidization of special blades through high-speed rotation. It consists of blades, scrapers, sealers, beds, bearing units, motors, drive units, and control panels. This can be applied to a wide range of powders in pigments, cosmetics, plastics (resin), and pharmaceuticals.



## V- MIXER [VM]

It is a piece of equipment that continuously subdivides and mixes materials by rotation of the chamber (gravity, centrifugal force), such as  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ , etc. It has high mixing efficiency and can mix materials uniformly regardless of the particles, so it is widely used in the pharmaceutical, chemical, and food sectors. The internal structure is simple and allows complete discharge of raw material and easy cleaning.



## Plough Share Mixer [PSM]

Plough Share Mixer is designed to meet various requirements of customers for precise mixing of raw materials that have unique characteristics. The Shovel-type blade disperses the mixture at a high rotational speed and performs mixing, and the mixing is performed very effectively, even if a small amount of additives or liquids are added. It uses a high-speed chopper and nozzle system depending on the characteristics of the raw material and the purpose of the facility.





## Micron Separator [MS]

Micron Separator is a device that uses centrifugal and centripetal forces of rotors to select powders. Powder separated by centrifugal and centripetal forces is passed through the pipe and is released through the collector and the fan, while the powder that has bigger particles is released through the outlet in the separator by gravity. This separator is highly efficient due to its large throughput. Especially, it has a cut point of 3~150um, so this kind of airflow-type separator is possible to control various particle sizes without using the screen to separate ultra-fine powder.



## Vibrating Sifter [VS] / Ultrasonic Type [US]

Vibrating Sifter is a machine suitable for screening powders for various purposes. The machine can add multiple steps to the process and selectively separates powder from different particles into the desired size. In particular, it is operated with less power and has a simple structure, and it is also easy to add and clean screens to choose the desired size of the particle. The traditional type of screen uses vibration and prevents clogging of the screen by using tapping balls and rings. Recently, ultrasonic units are applied for fine powders with severe adhesion or blockage to solve the drop in the production rate, enhance efficient screening, and solve the problem of foreign substances.



## Pneumatic Conveying System [PCS]

DAEGA's pneumatic conveying system is applicable to a variety of areas, including storing, discharging, supplying, and transporting products, especially for moving powder (fine type), granules, pellets, etc. This system is completely enclosed, so there is no loss or contamination of the product. In particular, it can be applied to places where it is difficult to install devices using pipes and places where space is small. It has the advantage of having little cost in operating and installation maintenance compared to mechanical conveying devices.

## Screw Conveyor [SC]

Screw Conveyor is applied in various forms when transferring powder, and different types of screws can be used depending on the type and characteristics of the product. It can be applied to wet-type products or quantitative supply for a variety of purposes, including petrochemicals and precision chemistry.



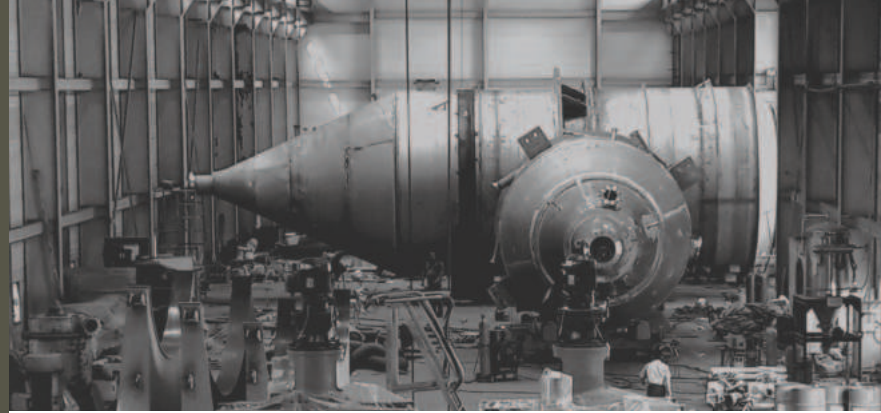
## Bucket Elevator [BE]

The Bucket Elevator is a device that moves powder from bottom to top and is suitable for high-capacity supply. In particular, it requires less floor space and can be easily applied vertically. You can also choose the Chain and Belt Type structure. And we manufacture Pivot Conveyor, which is a more reliable type of transportation because there are fewer products stacked in the casing. This conveyor has less loss of products.



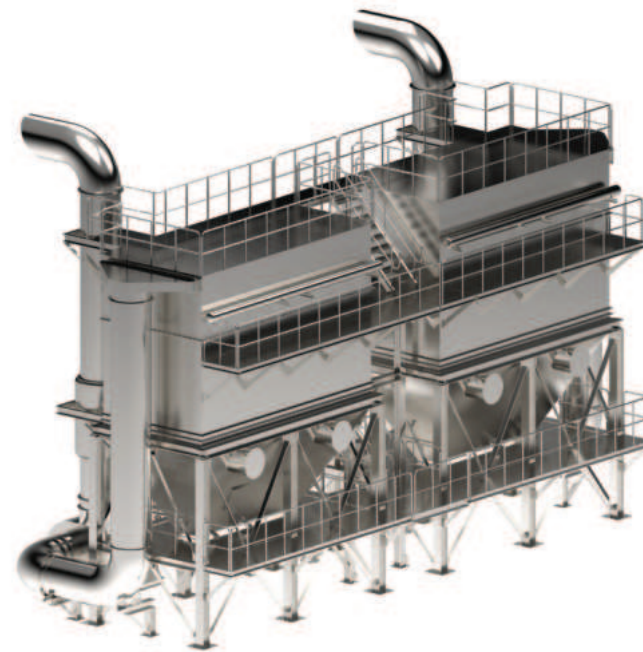
## Powder Handling Technology

# De-dusting System



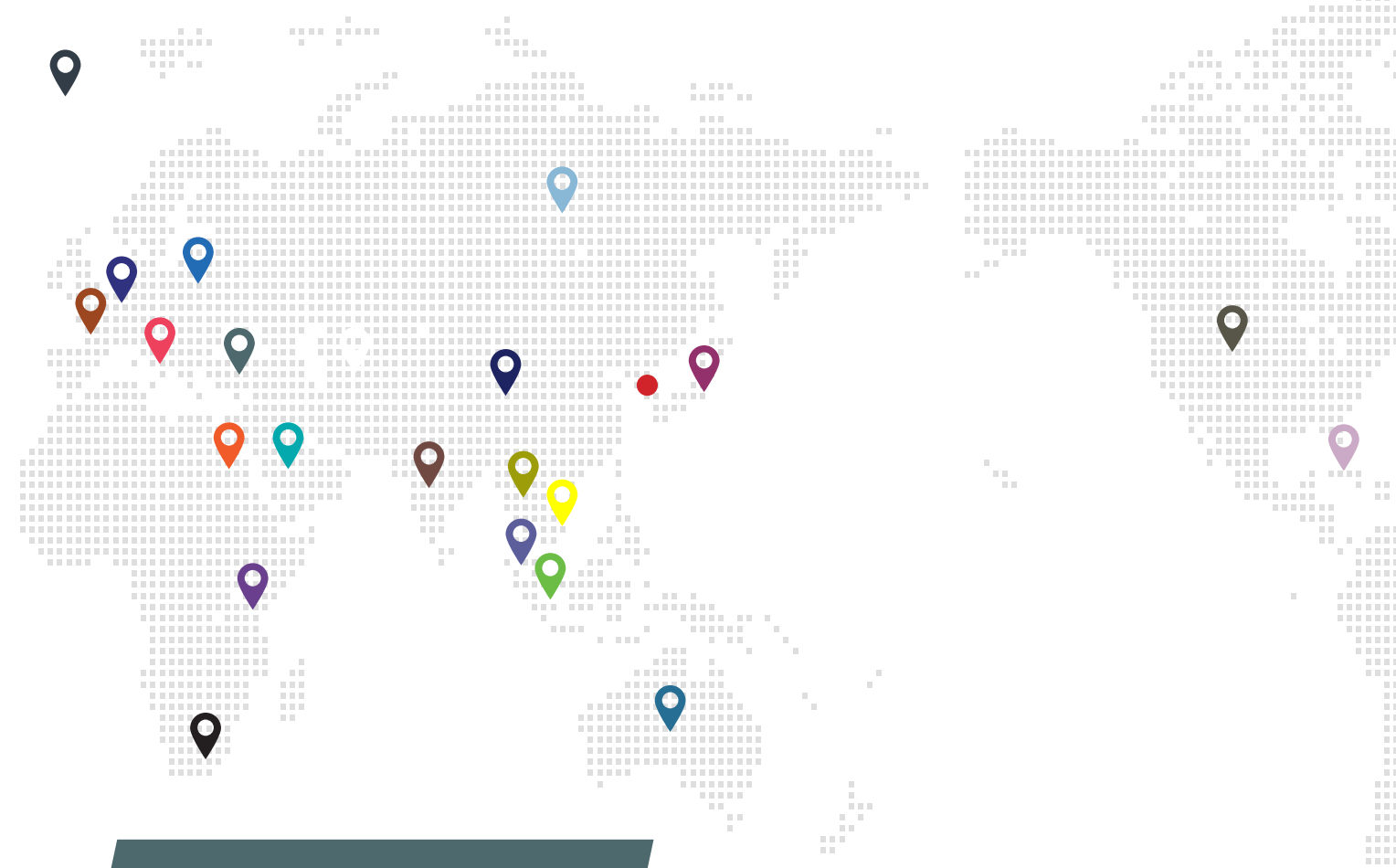
## Bag filter [BF]

Bag Filter is a facility that separates and collects particles by passing the dirty gas through the filter, which is the most widely used method to separate dust. The device passes the dirty gas through several filter bags installed side by side. Bag Filter is a medium that prevents particles from passing through holes in the filter, and the holes in the fibers block the passage of the particles. However, if the appropriate size of particles blocks the small space of the filter, the space in the strand of the filter becomes smaller, enabling the process of fine dust. Therefore, in order to increase the processing efficiency of the discharge of the dirty gas, it is necessary to take an intermittent method of shaking off the filter. However, if an appropriate size of particles blocks the small spaces in the filter, the spaces between the strand of the filter material will become narrower, making it impossible to pass through fine dust. Therefore, in order to increase the treatment efficiency of dirty gas, it is necessary to take a method of dropping the filter intermittently.



## Cyclone

Cyclone is a facility that promotes rotational motion on dirty gas and separates particles through centrifugal force applied to them. For relatively large particles, it is used alone and has clear removal efficiency. For fine particles, it is used as a pre-processing facility for dust collectors with high efficiency. Cyclone's efficiency and pressure loss are determined by the particles, characteristics, and required wind volume of dust to be processed, it is also possible to design it as a highly efficient cyclone when it is required to recover dust.



exports to 22 countries  
around the world

Australia	Japan	Singapore
Belgium	Jamaica	Thailand
China	Kenya	Turkey
Egypt	Malaysia	United States of America
France	Poland	Uzbekistan
India	Republic of South Africa	Vietnam
Italy	Russia	
Ireland	Saudi Arabia	



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