

# **DP® Proteinova** Protein Shifting System

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### Description

Protein is the building block of life and a cornerstone of our diets. The demand for high-quality protein products, whether for food, pharmaceuticals, or nutritional supplements, is steadily growing. However, traditional methods of protein extraction and refinement often fall short in achieving the desired levels of purity, quality, and efficiency.

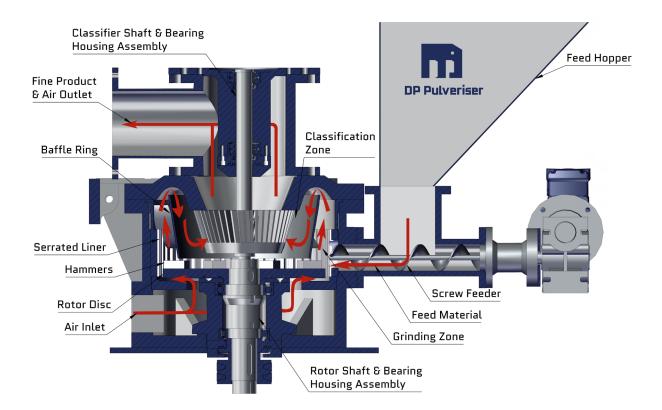
That's where Protein Shifting comes into play. DP Pulveriser utilizes advanced technology to finely grind the raw protein material with DP Air classifier mill. After fine grinding, the finely ground protein product is then subjected to high-performance classification using the DP Aerova classifier.

## Principle of Operation

An air classifier mill involves a series of steps to efficiently and effectively process materials and achieve the desired particle size distribution. The raw material is fed into the mill. This can be done through various methods such as gravity feed, pneumatic conveying, or a screw conveyor. Inside the air classifier mill, there is a rotor with hammers, that rotate at high speed and housing consists of serrated liner. These grinding elements impact and break down the incoming material into smaller particles as it passes through the mill.

As the particles are carried by the airflow, they enter the classification zone of the mill. Here, the particles are separated based on their size and weight. The larger, heavier particles are directed towards the outer perimeter of the classifier, while the finer, lighter particles are carried upward by the air.

The coarse and fine products are collected separately in different chambers or collection systems. These products can be further processed for protein shifting. The desired particle size distribution can be achieved by varying factors such as the rotor speed, air flow rate, and the size of the grinding elements.

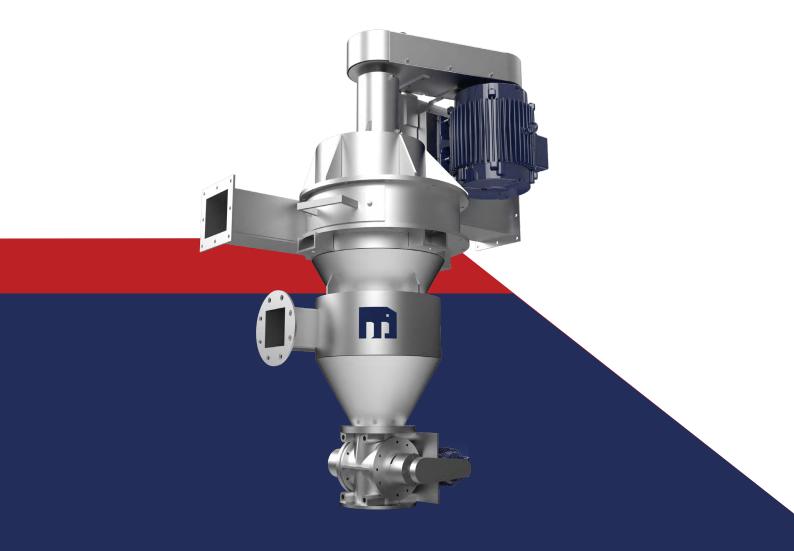


### Features & Benefits

- Effective protein-starch separation with consistent and uniform particle size distribution.
- High protein contents up to approx. 60%
- Increased efficiency maximizing yield, optimizing production processes.
- Versatility to create a wide range of protein-based products.
- Energy efficient & economical to operate
- Durable and long-lasting equipment
- Designed for ease of operation
- Compact design & dust free operation

### Material of Construction

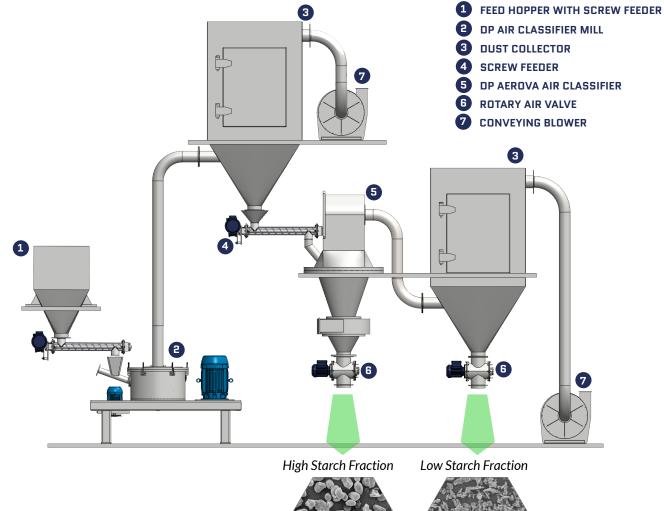
Protein shifting mills and classifiers are manufactured and available in stainless steel, as it is commonly used in the food, pharmaceutical, and chemical industries, where the material is required to be hygienic and corrosion-resistant.

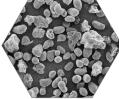


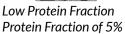


### **Protein Shifting System**

Protein material is finely ground with DP ACM Air classifier mill followed by efficient separation of the starch protein mixture with DP Aerova air classifier resulting in coarse fraction with a high starch content and fine fraction with a high protein content.







**High Protein Fraction** Protein Fraction of 5% Protein Fraction of 55%

### Who are WE?

We are DP Pulveriser Industries and have been designing and building size reduction equipment in India since 1962. We believe in using the materials of the highest grade to build our equipment because we understand your need for a machine that will perform - without breakdown - day in and day out. 58 years, 7000 installations and 32 countries later we now hold the reputation of being one of India's finest manufacturers of size reduction equipment. Regardless of the industry you operate in, DP can optimize, innovate and automate your entire process with tailor made solutions and expertise that is backed by 58+ years of experience. We are a young bunch of passionate engineers excited to work on your next challenging project.



## What do we DO?

DP Pulveriser Industries' offerings are broadly classified under 3 segments:



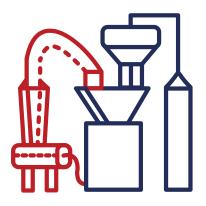
## **Powder Processing Equipment**

DP Pulveriser's machines are widely known for their rugged, tough built and low maintenance even after years of service. Our major forte is Size Reduction and Air Classification. We have a wide range of machines to cater to all your particle size requirements.

## **Testing and Other Services**

We offer various services such as material trials of our equipment, grinding and air classification of your material on a contract basis and even particle testing and analysis at a fully equipped laboratory on the campus of our partner IIT Gandhinagar.





## **Turnkey Systems & Plant Automation**

Thanks to our decades of experience, we understand what processing technologies and equipment are best suited for your application and industry. This means we can be your one stop solution for setting up complete powder processing plants carefully tailored to your needs.





#### **Head Office**

DP Pulveriser Industries 501, KL Accolade, Road No. 6, Near RK Hospital, Santacruz East Mumbai Maharastra 400055 India

#### Factory - I

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#### **R&D** Centre

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#### Factory - II

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