DP Pulveriser
since 1962

DP® Cone Mill

Low Energy Size Reduction Mill

Description

Cone mills are commonly used for size reduction in the pharmaceutical, food, and chemical industries. They work by reducing the size of particles through a combination of shear forces and compression between the impeller and screen surface.

Cone mills is a low energy size reduction mill due to gentler milling action that minimizes the amount of energy required to reduce the particle size. Cone mills are known for their ability to produce uniform particle sizes due to gentle grinding. Cone mills are also known for their versatility in processing a wide range of materials, including heat-sensitive, sticky, moist and friable materials.

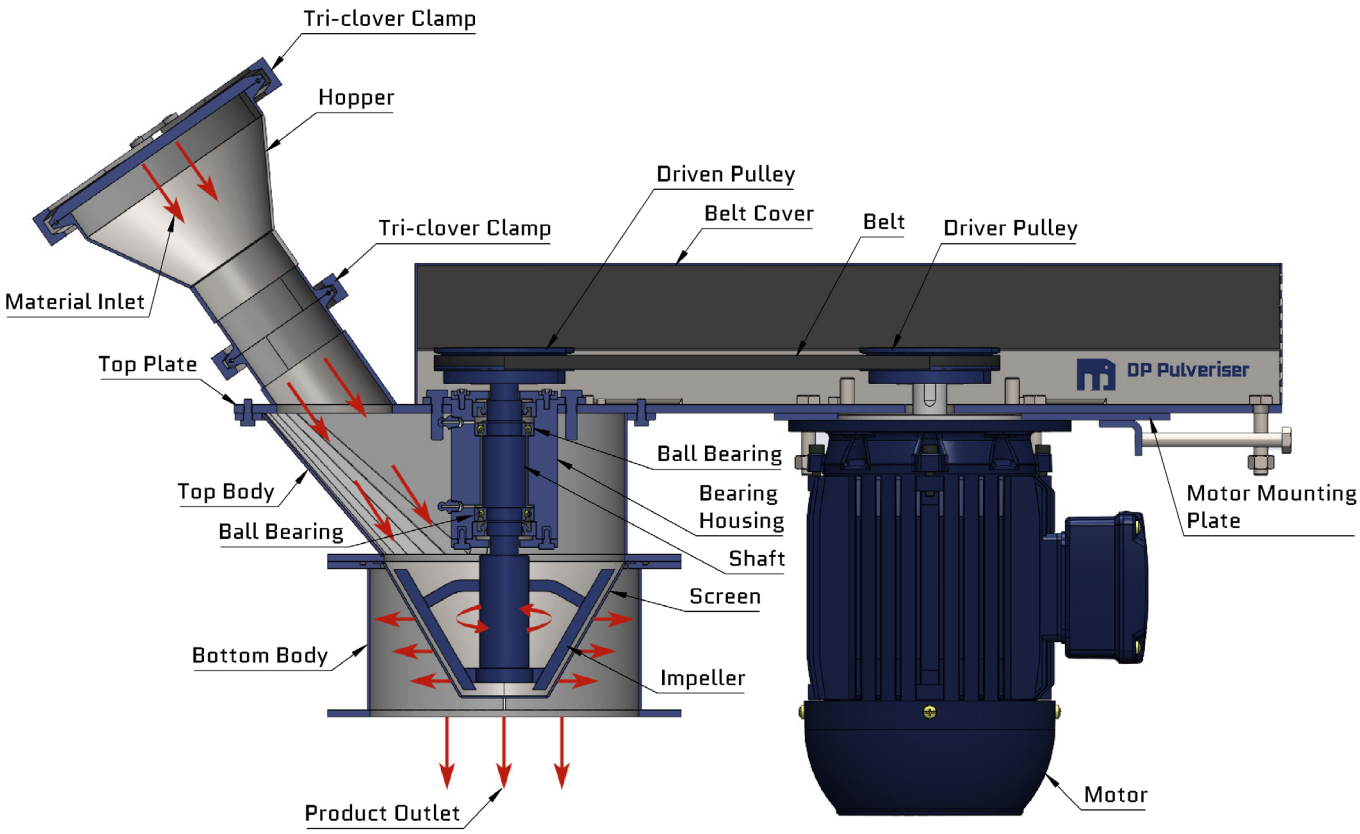
They are also highly effective at reducing the size of particles without causing excessive heat generation. This makes them ideal for size reduction of heat-sensitive products. Cone mills are typically easy to clean and maintain, making them a popular choice in applications where frequent cleaning is required. hence they are suitable for moist and sticky products.

Principle of Operation

Cone mill consists of conical hoppper by which material is drawn into a rotating cone-shaped impeller. The impeller is mounted on a shaft that rotates within a surface wall of the stationary screen forming a grinding chamber.

The size reduction operation in a cone mill is achieved by the repeated impacts and attrition between the rotating impeller and the wall of the conical screen. The material is reduced in size and passes through the screen, eventually exiting the mill as a fine powder. The size reduction process continues until the desired particle size is achieved.

The size of the particle size reduction can be controlled by adjusting the speed of the impeller, the gap between the impeller and the screen surface, and the size of the mesh screen used to sieve the milled material. The gap between the impeller and the screen surface can be adjusted by adding or removing the spacer used in mounting the impeller. Smaller particle sizes are produced with smaller gaps.



Features & Benefits

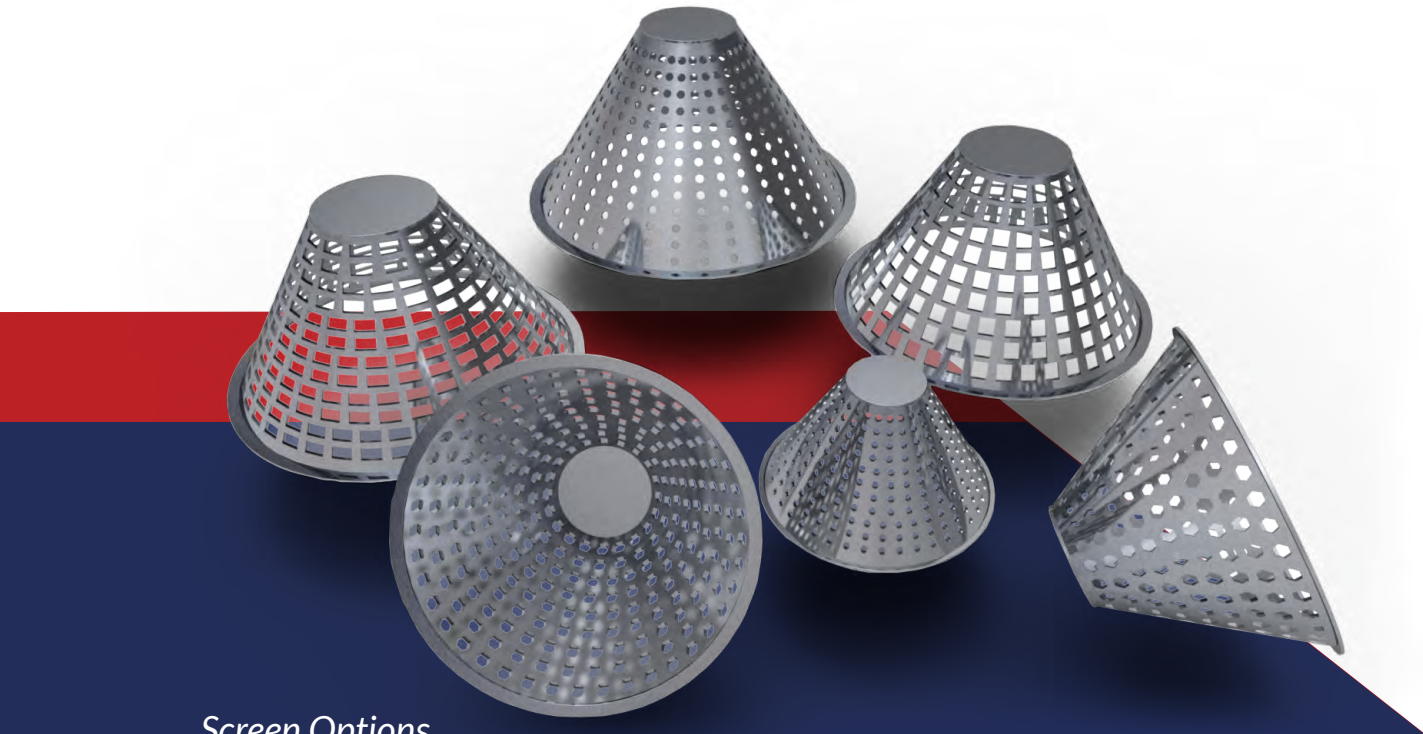
- Minimum Heat generation due to gentle grinding action hence, preservation of the original color and flavor of the product, particularly in the food, pharmaceutical industries.
- Capable for small and large scale production in short time.
- Better control of particle size by changing the screen or the impeller and also by changing the gap between the impeller and screen.
- Designed for easy access and cleaning.
- Minimum heat, dust and noise generation.

Screens

- Round hole
- Square hole
- Rectangular hole

Material of Construction

Cone mills 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.
Other option for material of contruction is carbon steel, when processing materials that are not corrosive or hygienic requirements are not as stringent.



Screen Options

- *Different size of screens are available based on the particle size of the final product.*

DP Cone Mill - Sizes

Model	Cone Mill	150	200	300	400
Motor [kW]	kW [HP]	1.5	4	7.5	15
Rotor Speed [rpm]	RPM	6000	-	-	-
Throughput	kg/hr	20-200	100-1000	500-4000	1000-8000

Grinding Data

Product	Product Size	Feed Rate	Mill Size
	kg/hr	[lb/hr]	Mill Size
Acetanilide	5 microns avg.	1/2	2"
Aluminium Oxide	100% - 3 microns	30	8"
Ammonium Perchlorate	3.2 microns avg	500	15"
Barium Ferrite	100% - 6 microns	6	4"
Barium Titanate	100% - 325 mesh	1	2"
Barytes	3-4 microns avg.	1800	30"
Bentonite	100% - 400 mesh	5	4"
Bismuth Trioxide	2.1 microns avg.	80	8"
Carbon Black	75% - 15 microns	45	8"
Chrome Oxides	6.5 microns avg.	30	8"
Chromium Carbide	100% - 325 mesh	3	4"
Cobalt	1.5 microns avg.	60	8"
Copper Chromate	1 microns avg.	6	4"
Copper Oxide	1.25 microns avg.	90	8"
Cryolite	3 microns avg.	1000	30"
Cupric Sulfate	10 microns avg.	4	4"
Dolomite	100% - 325 mesh	2400	36"
Ferrite	100% - 10 microns	5	4"

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?

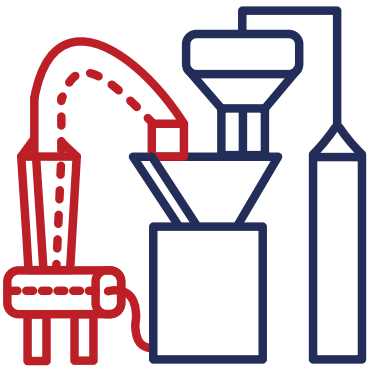
DP Pulveriser Industries' offerings are broadly classified under 3 segments:

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.

Our Global Footprint

Australia Bahrain Bangladesh Bhutan Canada China Estonia Bremen Ghana

Hongkong Iran Indonesia Kenya Mauritius Mexico Malaysia Newzealand Nepal

Nigeria Oman Philippines Qatar Saudi Arabia South Africa Singapore Sri Lanka Tanzania

Uruguay U.A.E Zambia

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