



DP Pulveriser

since 1962



DP[®] Spiral Jet Mill

Ultrafine Jet Mill

Description

We manufacture four mill models in eleven sizes, from a 1" Laboratory Mill to our 42" Production Mill. Sanitary mills are available with IQ/OQ protocol documentation for Qualification Test Planning. But beyond our standard options, we can also engineer and produce mills to meet custom configurations using our in-house CAD / CAM capabilities. Constructed from steel or stainless steel, Spiral Jet mills can be equipped with a wide selection of liners to meet specific processing needs, ranging from soft rubber to diamond-hard ceramics.

Spiral Jet Mills provide leading-edge performance in jet pulverizing and fluid energy grinding. These advanced systems are capable of producing an average particle size of 1/3 to 15 microns. Because the jet pulverization process creates no internal temperature increase, our mills can easily handle heat-sensitive materials that cannot be safely processed in conventional grinders.



➤ This setup is for grinding of Titanium dioxide. Material is fed to the hopper via screw feeder



Applications

- Abrasives
- Heat & moisture sensitive
- Pharmaceuticals
- Cosmetics
- Nutraceuticals
- Orals & topicals
- Pigments
- Food additives

Liner Options

- 304 Stainless Steel
- 316 Stainless Steel
- Polyethylene
- PTFE
- Polyurethane
- Alumina
- Silicon Carbide
- Alloy Steel

Features & Benefits

- Can process heat sensitive materials
- Minimal product contamination as there are no moving parts
- Produces uniform and spherical particle shape
- Designed for easy access and cleaning
- No lubrication required
- Can grind materials upto Mohs hardness 10



➤ Ceramic contact parts for minimal contamination

Grinding Data

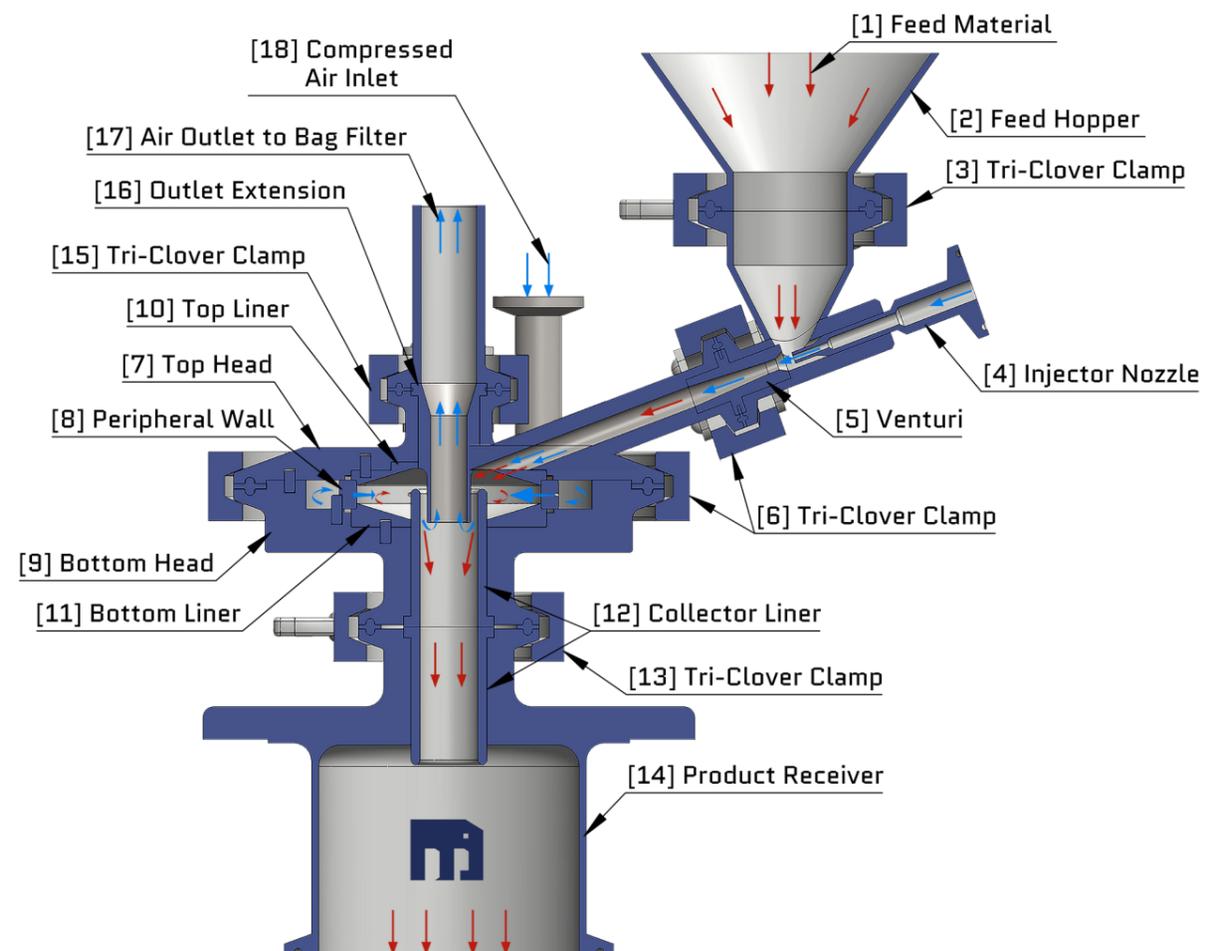
| Product | Product Size | Feed Rate | Mill Size |
|----------------------|-------------------|-----------|-----------|
| | kg/hr | [lb/hr] | Mill Size |
| Acetanilide | 5 microns avg. | 1/2 | 2" |
| Aluminium Oxide | 100% - 3 microns | 30 | 8" |
| Ammonium Perchlorate | 3.2 microns avg | 500 | 15" |
| 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" |

Principle of Operation

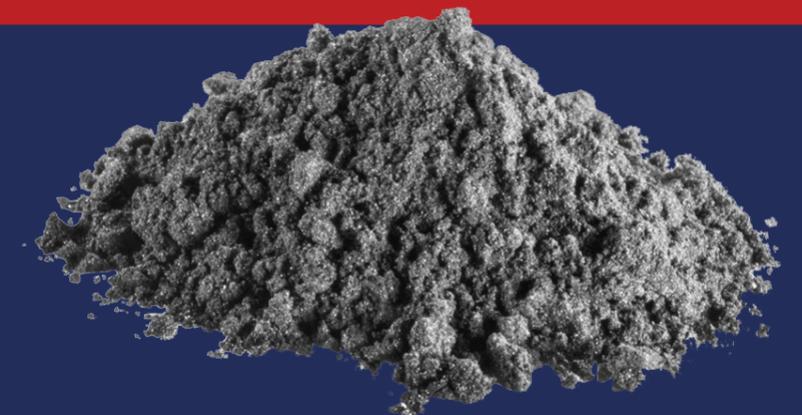
Pulverizing in the Spiral Jet Mill is accomplished by the impact of millions of particles, driven at near sonic velocity by jets of air or steam, against millions of other particles of the same material. The Micron-Master® contains no moving parts or screens, but the construction of the mill is engineered to enhance both the number and velocity of the collisions. Our designs allow highly predictable and repeatable particle size distribution of the finished material.

Micron-Master® mills are engineered and built for easy installation and continuous, trouble-free operation. Processing results are consistently uniform and repeatable, and parts wear is minimal. Clean out is not required for most materials, but, when necessary, disassembly for cleaning or sterilizing is easily accomplished. All points of wear are designed to be easily and directly replaced.

The output produced by the Micron-Master® shows a marked improvement over conventional mills, exhibiting a very narrow spread of particle sizes – classification is extremely sharp, and there are no large particles. The final product is similar to the uniformity obtained by passing a material through a conventional micronizer mill twice.



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DP[®] Spiral Jet Mill - Sizes

| Model | Steam Required @150°PSIG, 550 F [1030kPa, 280°C] | Air Required Free Air Compressed to 100 PSIG [690 kPa] | Typical Feed Rate Range Pounds Per Hour |
|-----------|--|--|--|
| Mill Size | kg/hr | m3/hr | kg/hr |
| 1" | - | 12 | 0.09-0.90 |
| 2" | - | 34 | 0.45-7 |
| 4" | 60 | 85 | 0.9-22 |
| 8" | 110 | 170 | 7-45 |
| 12" | 270 | 380 | 11-115 |
| 15" | 410 | 595 | 22-180 |
| 20" | 680 | 935 | 45-360 |
| 24" | 1180 | 2040 | 90-680 |
| 30" | 1900 | 2720 | 180-1800 |
| 36" | 2700 | 3740 | 360-2700 |
| 42" | 3400 | 4930 | 680-4500 |



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:

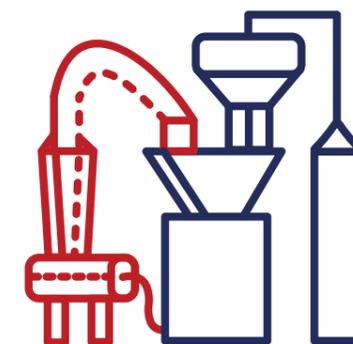


Powder Processing Equipment

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

 www.dppulveriser.com

