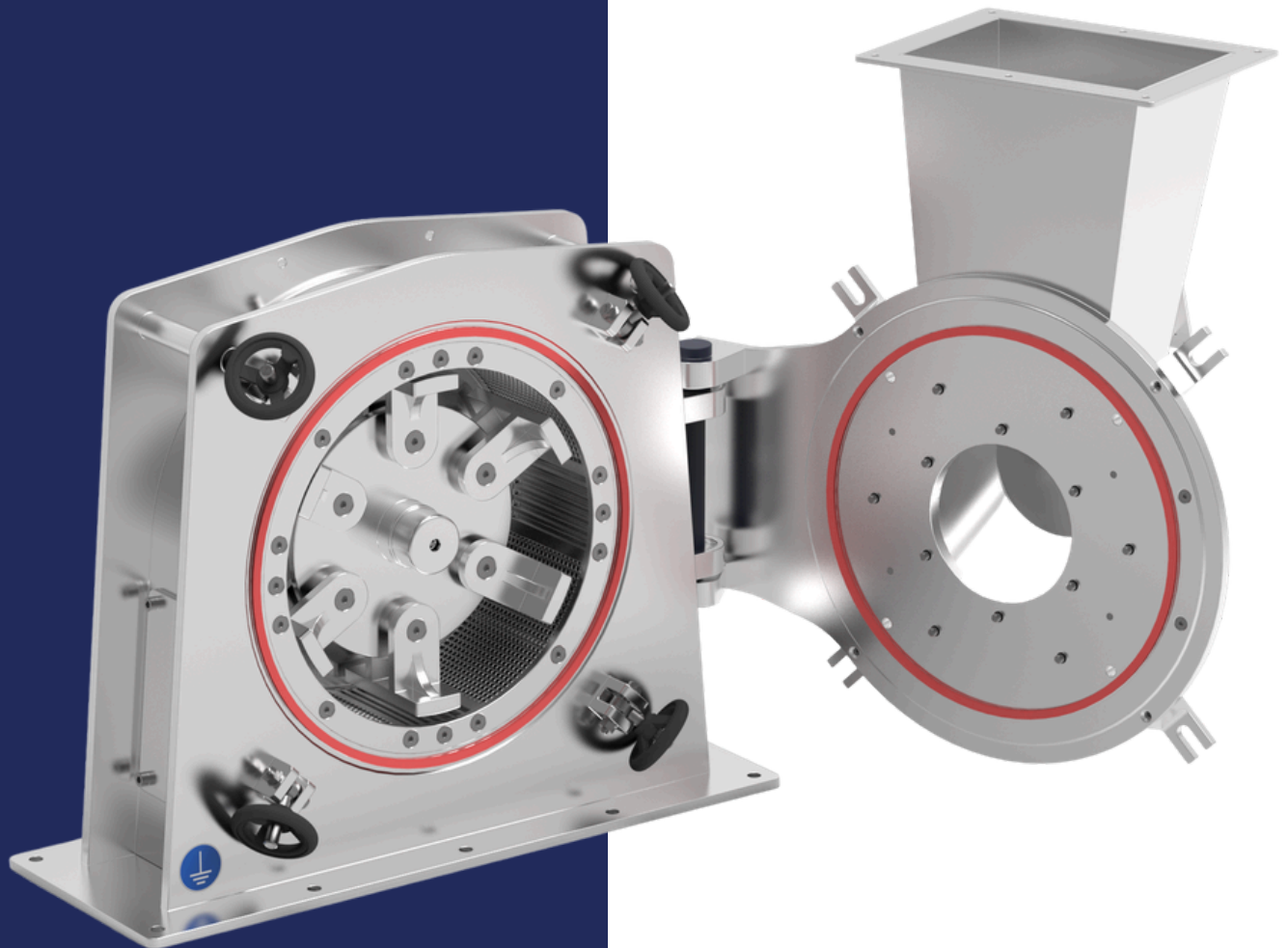




DP Pulveriser[®]
since 1962



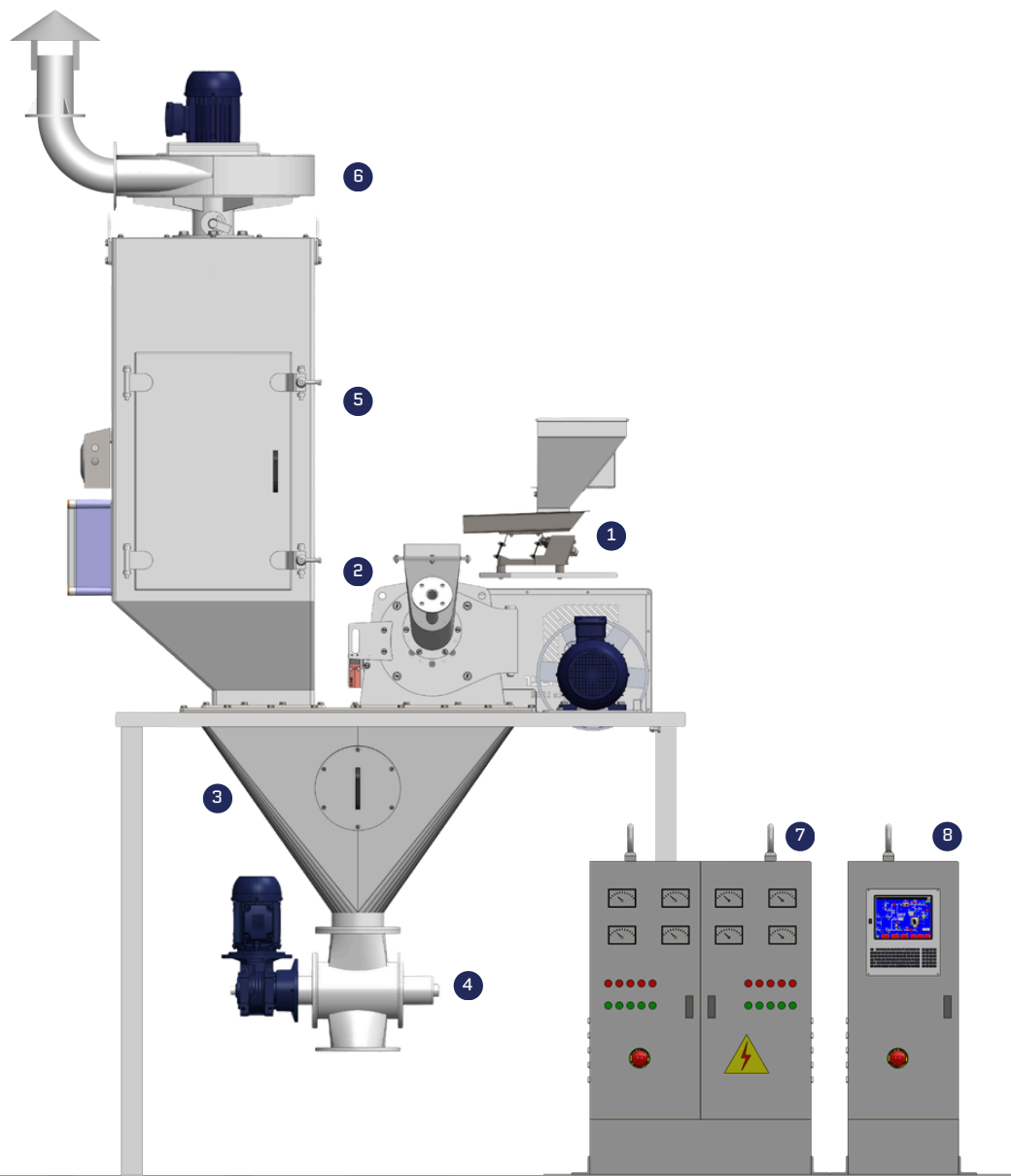
DP@ UNIVA Series Swing Beater Mill

Universal Mill

Introduction

The DP® Swing Beater Mill is designed for efficient size reduction using high-speed swinging beaters with screen baskets and liners. Grinding occurs through impact and shearing action, making it suitable for coarse to medium-fine grinding of fibrous, tough, and heat-sensitive materials. It delivers reliable particle size control with high throughput for a wide range of industrial applications.

- 1 Feed Hopper With Vibratory Feeder
- 2 DP® Swing Beater Mill
- 3 Material Discharge
- 4 Rotary Air Valve
- 5 Dust Collector
- 6 Blower
- 7 Control Panel
- 8 PLC Panel



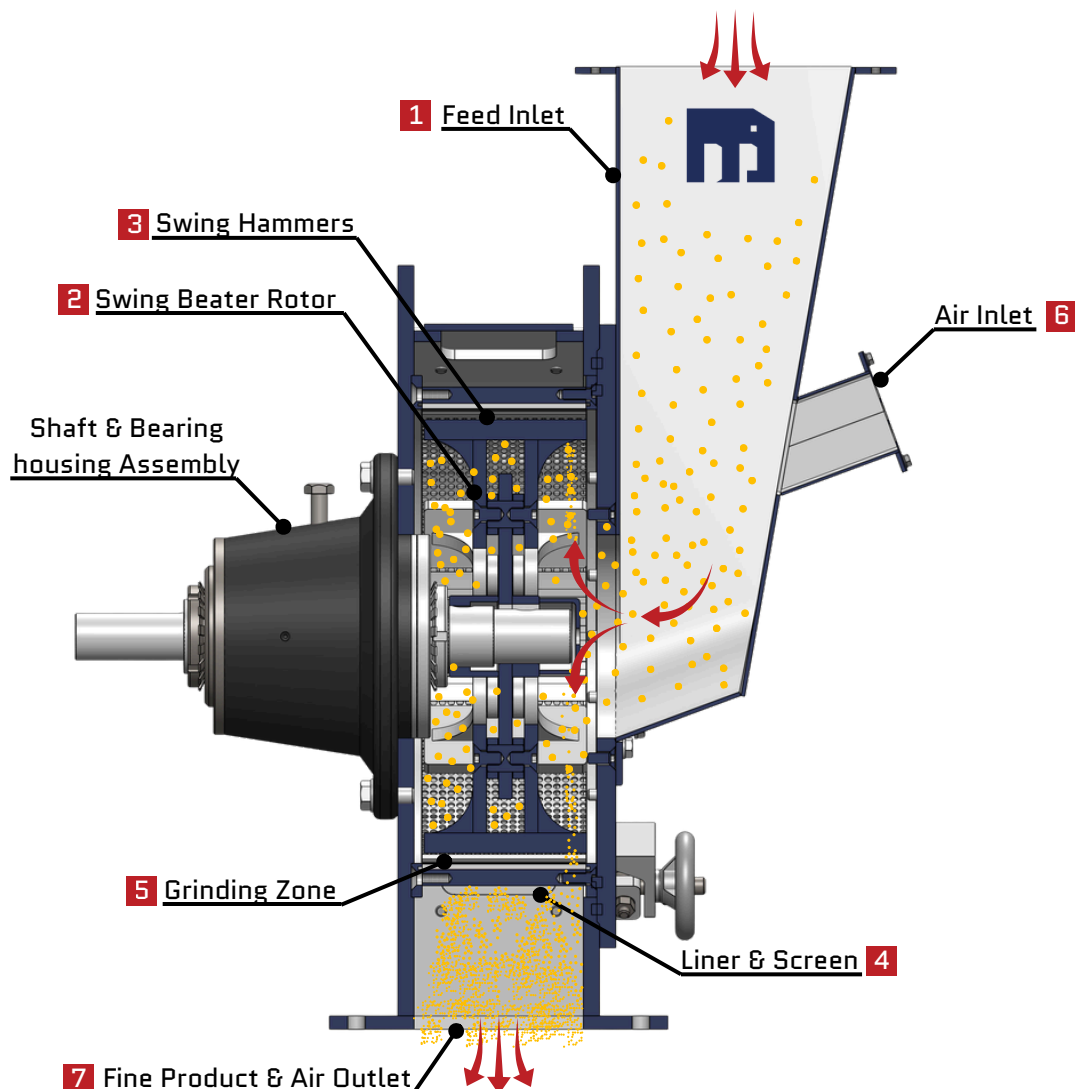
► Typical process flow diagram of a standard Swing Beater Mill

Working Principle

The DP® Swing Beater Mill operates on the principle of high-speed impact and shearing using swinging beaters and a liner & screen assembly. Material enters through the **feed inlet (1)** and is directed into the **grinding zone (5)** by gravity or controlled feeding systems. Air can be introduced through the **air inlet (6)** to assist in cooling, material transport, and efficient product discharge during the grinding process.

Inside the grinding chamber, the **swing beater rotor (2)** rotates at high speed while the **swing hammers (3)** freely pivot to generate strong impact forces on the material. The particles are repeatedly impacted against the **liner & screen (4)**, where further size reduction occurs through impact and shearing action. The grinding fineness can be controlled by selecting the appropriate screen size and adjusting the rotor speed.

This configuration is ideal for coarse to medium-fine grinding of fibrous, tough, and heat-sensitive materials. The finely ground product, along with process air, exits through the **fine product & air outlet (7)** for collection or pneumatic conveying.



► A cross-sectional view of the Swing Beater Mill

Features & Benefits

- ▶ Efficient impact grinding using high-speed swing beaters for coarse to medium-fine size reduction.
- ▶ Suitable for fibrous, tough, elastic, and heat-sensitive materials across diverse industrial applications.
- ▶ Liner & screen configurations for flexible control of particle size and throughput.
- ▶ Swing hammer design reduces overload impact and improves handling of difficult-to-grind materials.



▶ Gravity bunker discharge arrangement



▶ Pneumatic conveying discharge arrangement

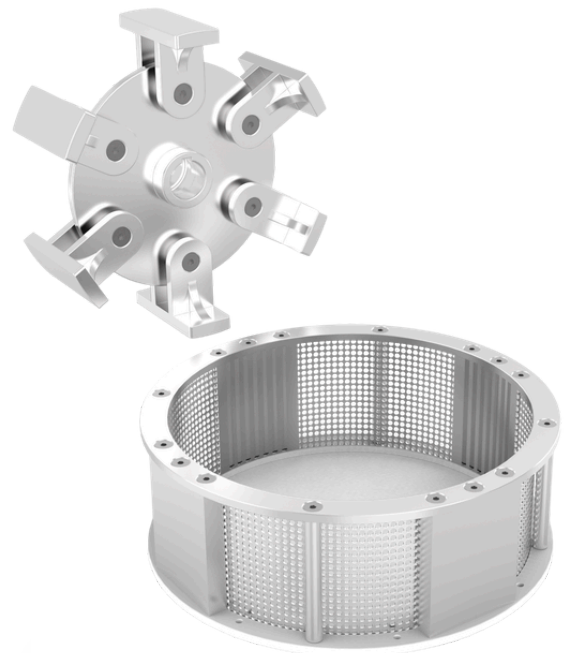
- ▶ Delivers high throughput with consistent grinding performance and uniform product quality.
- ▶ Grinding chamber and beater assemblies designed for easy access, quick cleaning, and reduced maintenance downtime.
- ▶ Compatible with cryogenic and ambient grinding applications for temperature-sensitive products.

Options and Accessories

- ▶ **Explosion Protection:** Can be engineered with pressure shock-resistant housing to comply with dust explosion safety standards, supporting overpressure resistance up to 10 bar.
- ▶ **Metal Separation:** Can be fitted with inline magnetic separators or metal detectors to maintain product purity and protect equipment.
- ▶ **Wear-Resistant Beaters & Liners:** Swing beaters, liners, and screen assemblies can be supplied in hardened, wear-resistant, or special material constructions for abrasive applications and extended service life.
- ▶ **Feeding & Discharge Systems:** Compatible with screw feeders, vibratory feeders, gravity feed hoppers, pneumatic conveying, and gravity discharge systems..
- ▶ **Instrumentation & Monitoring:** Can be equipped with temperature probes, vibration sensors, and safety interlocks for process control and equipment protection.
- ▶ **Variable Speed Drive:** Optional frequency-controlled drive system for precise adjustment of rotor speed and particle size.



▶ DP® UNV-320PD-EX in Explosion Resistant design upto PSR 11 bar



▶ Swing Beater Rotor and Screen Basket

Machine size

Model	Rotor drive	Mill speed [Max.]	Max. air flow rate	Scale-up factor
UNV	kW	rpm	m ³ /h	-
105	1.5	8500	-	0.06
180	5.5	7500	-	0.25
255	11	6400	1050	0.5
320	18.5	5000	1500	1
510	37	3100	3200	2
640	75	2400	5200	3.6
805	90	2000	7500	4.5
1020	110	1400	10000	6.3
1280	250	1300	12500	9



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. 60+ years, 7500 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 60+ 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:

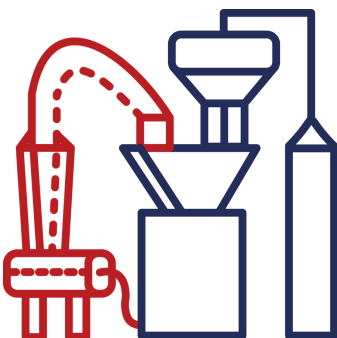


Powder Processing Equipment

Built for durability and low maintenance even after years of service, Our core strength lies in Size Reduction and Air Classification. We offer a wide range of machines to meet 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
- Germany
- Mexico
- New Zealand
- South Africa
- Qatar
- Canada
- United Arab Emirates
- Bangladesh
- Ghana
- Hongkong
- Iran
- Nepal
- Singapore
- Nigeria
- Bhutan
- China
- Tanzania
- Oman
- Philippines
- Switzerland
- Uruguay
- Zambia
- Kenya
- Estonia
- Egypt
- Mauritius
- Madagascar
- Guatemala
- Indonesia
- Sri Lanka
- Bremen

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