



DP Pulveriser[®]
since 1962



DP® Lump Breaker
Crushers & Lump Breakers

Introduction

The DP® Lump Breaker offers continuous, trouble-free performance for preliminary size reduction of tough or irregular materials. Its staggered breaking elements and low-speed design enable smooth operation under fluctuating feed rates—delivering high throughput with minimal wear.

1 Feed Hopper

2 DP® Lump Breaker

3 Cyclonic Separator

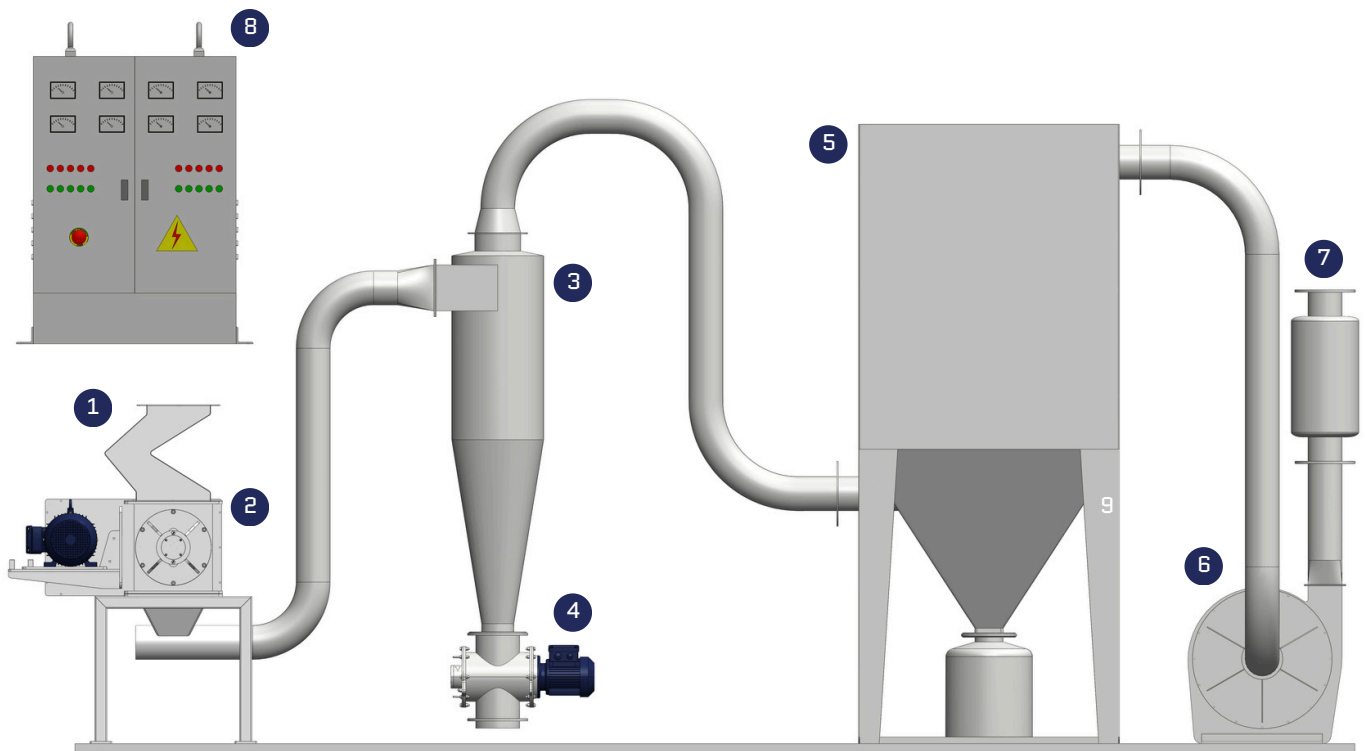
4 Rotary Air Valve

5 Pulse Jet Dust Collector

6 External Conveying Fan

7 Silencer

8 Control Panel



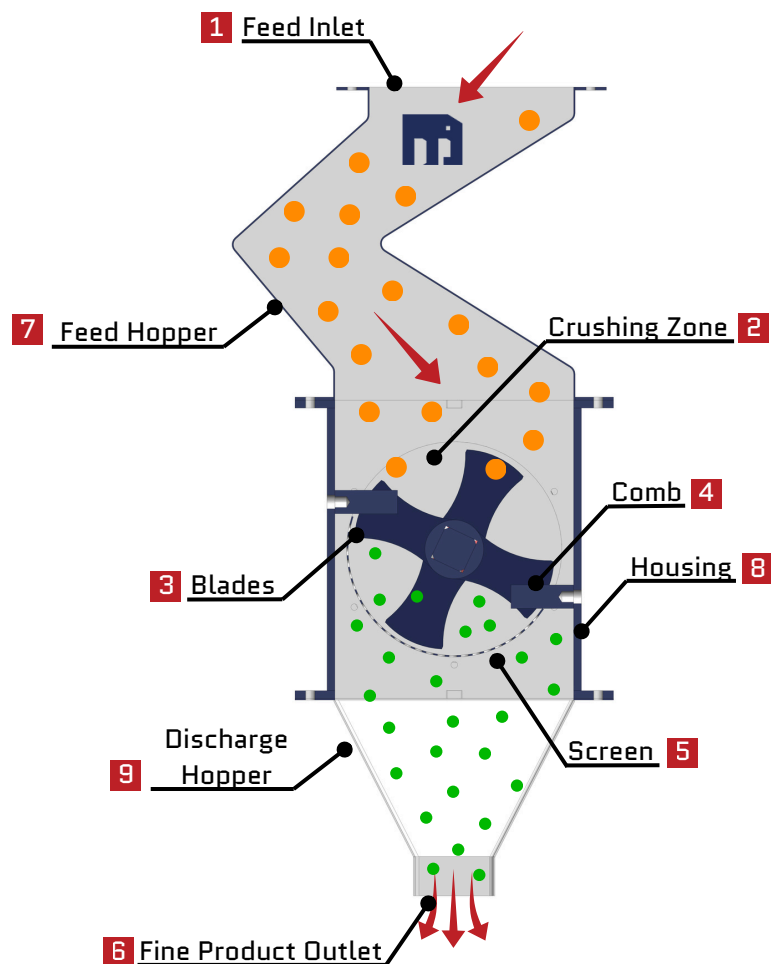
► Typical schematic diagram of a standard Lump Breaker

Working Principle

The DP® Lump Breaker is engineered for efficient deagglomeration and size reduction of compacted, lumpy, or hygroscopic materials. Material enters through the **feed Inlet (1)** and is directed into the **crushing zone (2)** via the inclined feed hopper, allowing gravity to guide the bulk solids into the processing chamber smoothly.

Within the crushing zone, slow-speed **blades (3)** mounted on a heavy-duty shaft rotate and intermesh with fixed **combs (4)**. This configuration applies a combination of cutting, crushing, and shearing forces to break down hard lumps or solidified masses without generating excessive heat or fines. The result is a controlled and uniform reduction in particle size.

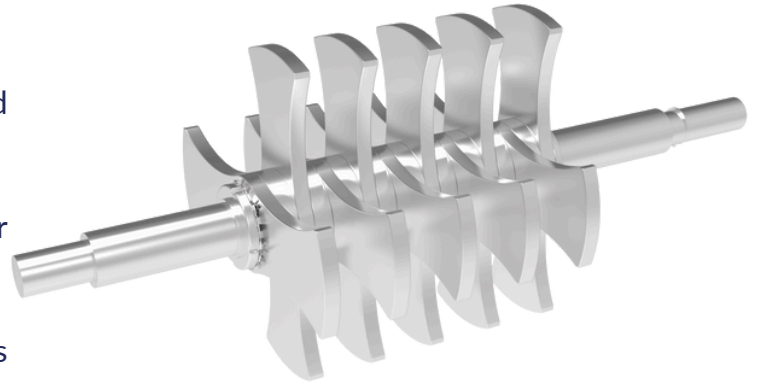
Once the material is processed, it passes through the **screen (5)**, which ensures consistent output sizing. Oversize particles are retained for further reduction, while the desired fine product is collected in the Discharge Hopper and exits through the **fine product outlet (6)**. This mechanism makes the DP® Lump Breaker ideal for pre-processing in bulk handling systems across industries such as food, chemicals, and pharmaceuticals.



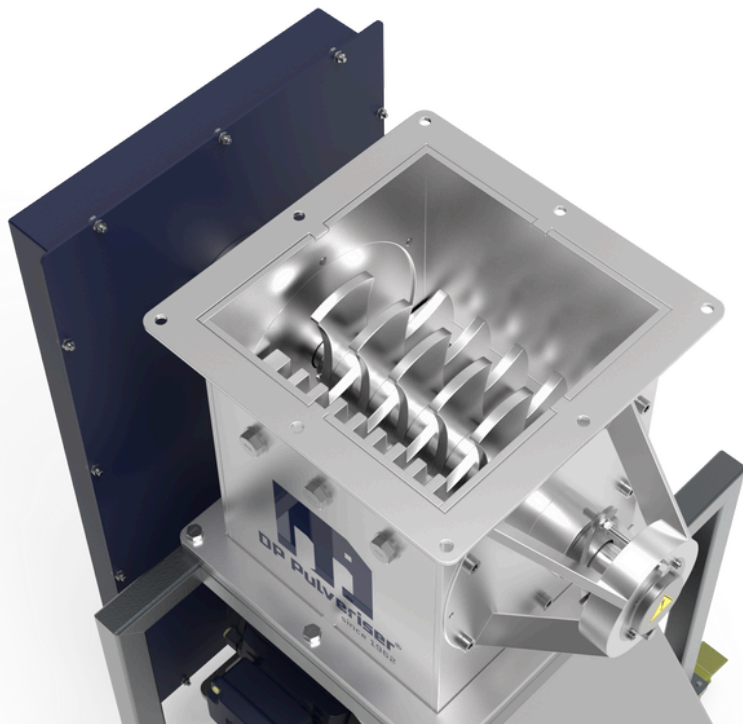
► A cross-sectional view of the Lump Breaker

Features & Benefits

- ▶ Heavy-duty rotor with replaceable blades for extended service life
- ▶ Modular screen options for controlled and uniform particle size
- ▶ Ideal for compacted, fibrous, fatty, or hygroscopic materials
- ▶ Intermeshing comb design ensures consistent crushing and smooth flow



▶ *Shaft & Blades assembly*



▶ *Internal view of Lump Breaker*

- ▶ Minimal fines generation, preserving product integrity
- ▶ Low-speed, high-torque operation for gentle yet efficient deagglomeration
- ▶ Easy access of internal components for cleaning and maintenance

Options and Accessories

- ▶ **Construction Materials:** Available in carbon steel, stainless steel (SS304, SS316, SS316L), or custom-engineered configurations to meet specific product or regulatory requirements.
- ▶ **Screen Configurations:** Interchangeable screen designs with customizable openings to suit various material types and desired output sizes.
- ▶ **Safety Mechanisms:** Can be equipped with vibration sensors, temperature sensors, and safety interlocks to ensure operational safety and equipment protection.
- ▶ **Inline and Standalone Configurations:** The DP® Lump Breaker is offered in two configuration options to suit different processing needs:
 - **Standalone Configuration** – Designed as a self-contained unit that operates independently of the processing line. Ideal for facilities requiring only pre-crushing or where integration with an existing system is not feasible.
 - **Inline Configuration** – Compact and easily integrated into existing processing lines, typically placed just before fine grinding or milling equipment. This space-saving solution ensures seamless material flow within continuous operations.



▶ Standalone Lump Breaker



▶ Inline Lump Breaker

Machine size

Model	Motor	Rotor Speed
LBK	HP	RPM
8 x 8	1 - 5	600 - 1200
10 x 10	2 - 10	600 - 1200
12 x 12	3 - 15	600 - 1200
14 x 14	5 - 20	500 - 800
16 x 16	10 - 25	500 - 800
20 x 20	15 - 30	400 - 600
24 x 24	20 - 40	400 - 600



► DP® LBK-8X8 Lump Breaker ready for dispatch

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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