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AIR CLASSIFYING MILL

Precision Grinding with Integrated Classification for Particle Size Control

Air Classifying Mill Manufacturer & Supplier | India

ENGINEERING THE FUTURE OF PROCESSING

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PRODUCT OVERVIEW

What is an Air Classifying Mill?

A precision mill with an integrated classifier that combines impact grinding with controlled particle separation. The classifier continuously recirculates oversized particles and allows fine products to exit, helping maintain a tighter particle size distribution and reducing unnecessary overgrinding. Output behaviour depends on product properties, airflow design, and classifier settings.

How It Works

01 FEED
Material Enters the Chamber

02 IMPACT
High-speed hammer/ blades

03 CLASSIFY
Air stream carries particles

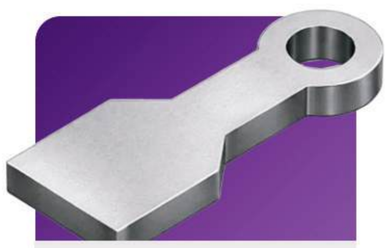
04 SEPARATE
Centrifugal force separation

05 COLLECT
Fine powder exists / oversized recirculates

Original Line Components

Recommended wear & service components (availability by model):

HAMMERS /BLADES
Impact grinding edge variants



CLASSIFIER ROTOR
Centrifugal Separation disc

BEARINGS
Heavy - duty sealed

LINERS
Wear-resistant alloy segments

Fast-moving critical spares supported

Genuine parts help maintain original performance

Particle Size Capability

STANDARD — **ULTRA-FINE**

500 µm	350 µm	250 µm	150 µm	100 µm	<50 µm
Coarse	**Controlled**	**Fine**	**Micron-level**	**Classification**	**Powder Precision**

Particle Size Range: **Application dependent (system and product specific)**
Control Levers: **Classifier speed, rotor speed, feed stability, and airflow balance**
Note: **Finer targets require higher system control and appropriate dust collection design**

SPECIFICATIONS & APPLICATIONS

Technical Specifications — MHAM Series

Model	Capacity(kg/hr)	Main Motor Power (kW)	Classifier Motor Power (kW)	Footprint L × W × H (m)
MHAM-500	100 – 500 kg/hr	5.5–37 kW	0.55–7.5 kW	2.0 × 0.64 × 1.1 m
MHAM-1000	500 – 1000 kg/hr	45–75 kW	9.3–15 kW	2.5 × 1.0 × 1.5 m
MHAM-2000	1000 – 2000 kg/hr	90–160 kW	18.5–37 kW	2.85 × 1.2 × 1.73 m
MHAM-4000	2000 – 4000 kg/hr	180–315 kW	45–75 kW	3.7 × 1.5 × 1.3 m

Note: Specifications are indicative and may vary with material characteristics, feed condition, target particle size, selected configuration, and the connected airflow/collection system where applicable. Footprints are approximate and can change with inlet–outlet orientation, drive arrangement, safety/accessories, and line integration; final sizing should be confirmed through application data or trials.

Particle Size Range:
Application dependent
(customizable through settings and system design)

Feed Options:
Gravity / Pneumatic / Screw

Classification:
Variable speed centrifugal classifier

Integrated Grinding System

RAW MATERIAL → FEEDING → AIR CLASSIFYING MILL → CYCLONE → BAG FILTER → COLLECTION

- Hopper
- Srew/ Pneumatic
- MACM Series Grind+Classify (Oversize recirculation)
- Fine Particle Separation
- Ultra Fine capture
- Finished Powder

Turnkey Solutions Available — Air handling, collection, and system integration support

Applications

 SPICES	 PHARMA	 CHEMICALS	 MINERALS
Turmeric	APIs	Pigments	Fine minerals
Chili	Excipients	Polymer powders	Talc powder
Cumin	Herbal extracts	Coating materials	Calcium carbonate
Black pepper	Drug intermediates	Paint fillers	Cement additives
Sugar processing	Nutraceuticals	Plastic additives	Mineral powders
Flour milling	Tablet formulations	Specialty chemicals	Industrial fillers

VALUE PROPOSITIONS

MillNest Originals

Refurbished Equipment Program
Select machines rebuilt under MillNest standards. Each unit is inspected, restored with genuine parts where required, and function-tested for dependable operation. Availability depends on incoming equipment and rebuild scope.

- Warranty as per rebuild scope
- Typically shorter lead times
- Spares and service support

Equipment Buy-Back / Trade-In Options

Upgrade Pathways for Existing Installations
MillNest evaluates eligible equipment and recommends retrofit, rebuild, or replacement routes based on condition, application needs, and logistics feasibility.

- Evaluation-led recommendation
- Trade-in or buy-back options (case dependent)
- End-to-end coordination support

Spare Parts & Maintenance

Spare Parts & Maintenance	Application-Led Particle Consistency Support
Recommended spares (hammers/blades, classifier rotor, bearings, liners) aligned to your installation	Particle size validation approach can be defined during trials and commissioning (method and scope application dependent)

MillNest Academy

Process Intelligence That Strengthens Processing
Structured resources and application guidance to help teams run consistent grinding outcomes: product trials, parameter baselines, sampling logic, and changeover discipline.

- academy.millnest.com

Ready to Discuss Your Requirements?

Whether establishing a new facility, expanding capacity, or optimizing an existing line — MillNest supports equipment selection, system integration, and commissioning aligned to your product and plant reality.

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Contact Us :

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Quick Decision Guide

- Need coarse to fine grinding with high throughput - **Hammer Mill (MHAM)**
- Need ultra-fine powder with tight cut control - **Air Classifying Mill (MACM)**
- Need one mill for multiple products - **Universal Mill (MUNI)**
- Need fibrous size reduction by cutting, not impact - **Cutter Mill (MCUT)**
- Need to break lumps and restore flow, not grind - **Delumper (MLUM)**
- Need uniform dry blending of free-flowing powders - **Ribbon Blender (MRBL)**
- Need fast-cycle mixing, trace ingredient distribution, or liquid addition - **Paddle Blender (MPBL)**

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Air Classifying Mills | Integrated Classification Grinding Systems | MillNest | Indi

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