

WITH A TRADITION AND COMMITMENT FOR OVER 130 YEARS, **BRADLEY PULVERIZER** PRODUCES RELIABLE, LOW MAINTENANCE, ENERGY-EFFICIENT GRINDING AND CLASSIFYING SOLUTIONS.

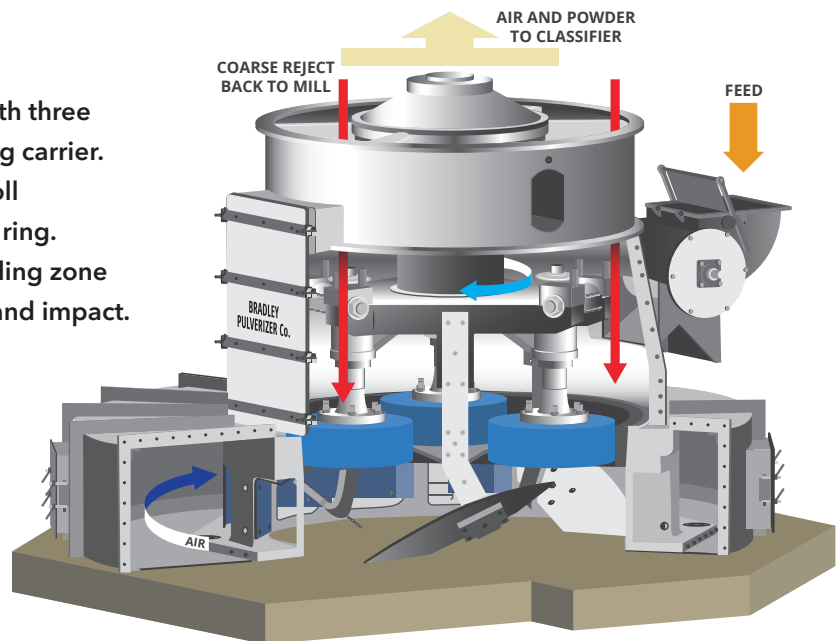


Bradley Airswept Mills combine the fine grinding action of a pendulum roller mill with air stream classifying and fluid bed drying capabilities to produce precisely sized particles for a variety of applications.

## PRINCIPLE OF OPERATION

Our flagship pendulum roller mills are equipped with three pendulum roll assemblies suspended from a rotating carrier. As the carrier rotates, centrifugal force causes the roll assemblies to swing outward against the stationary ring. Plows direct material from the mill floor to the grinding zone where it is ground using a combination of attrition and impact.

A continuous air stream carries pulverized material from the grinding zone up to a separator. Product sized material is collected while oversized particles are rejected and recycled for further grinding. The conveying air stream can also be heated to fluidize and dry material being ground.



# AIRSWEPT PENDULUM MILL SYSTEM

## GRIND, CLASSIFY & DRY IN ONE OPERATION

### PERFORMANCE FEATURES

- ❑ UNIQUE OVER-DRIVEN DESIGN MEANS LOW INVESTMENT
- ❑ GROUND LEVEL ACCESS TO WEAR PARTS AND LOW FEED
- ❑ LESS VIBRATION AND NOISE REDUCING MAINTENANCE COSTS
- ❑ SIMPLE SOLID BLOCK FOUNDATION
- ❑ GEARBOX OIL DOES NOT NEED COOLING
- ❑ FLUID BED DRYING SAVES 25% ON FUEL COSTS
- ❑ BELT DRIVE ALLOWS OPTIMUM SPEED SELECTION
- ❑ NEGATIVE PRESSURE AIR SYSTEM ENSURES DUSTLESS OPERATION

### OVER-DRIVEN DESIGN

All Bradley Mills, including our largest mills, are driven by an overhead integral gearbox which offers several advantages over competitor mills.

THE UNIQUE OVER-DRIVEN DESIGN OF THE BRADLEY PULVERIZER AIR SWEPT MILL IS MORE EFFICIENT THAN OTHER MILLS RESULTING IN:

- Lower per ton operating cost
- Lower maintenance costs
- Lower installation costs
- Superior power-to-weight ratio

BRADLEY MILL DESIGN		PERFORMANCE ADVANTAGES	COST SAVINGS
<b>GEARBOX</b>			
TYPE	INTEGRAL		
LOCATION	ABOVE THE MILL	30% EXTRA LIVE MASS RESULTS IN LESS VIBRATION	LESS MAINTENANCE
GEARS	SPIRAL BEVEL GEARS	10% MORE EFFICIENT WITH NO WASTE HEAT	NO OIL COOLER REQUIRED, LESS POWER USAGE
<b>DRIVE</b>			
TYPE	V-BELT	ABSORBS MORE SHOCK	LESS MAINTENANCE
		NO INVERTER REQUIRED	NO POWER LOSS
		MAXIMUM OUTPUT OF POWER & SPEED	LOWER COST PER TON
		SAFETY	
<b>GRINDING ZONE</b>			
LOCATION	GROUND LEVEL	NO PLATFORMS REQUIRED, LESS NOISE	REDUCED CONSTRUCTION MATERIAL COSTS
<b>FOUNDATION</b>			
TYPE	SIMPLE BLOCK CONCRETE	LESS CONCRETE	REDUCED CAPITAL COSTS
<b>FEED INLET</b>			
LOCATION	LOW-LEVEL FEEDER	LOW INTAKE SYSTEM & SHORTER BELT	LESS POWER REQUIRED
	LOW-LEVEL HOPPER & CONVEYOR		REDUCED CAPITAL COSTS

### RECYCLED vs. SINGLE PASS AIR SYSTEM

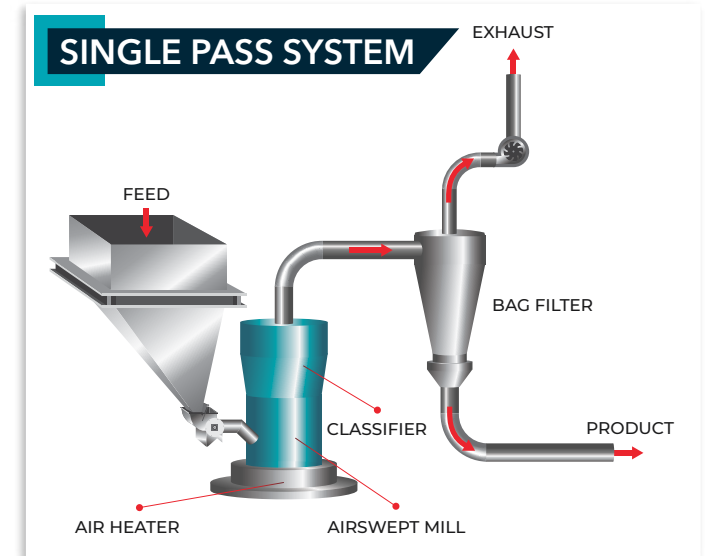
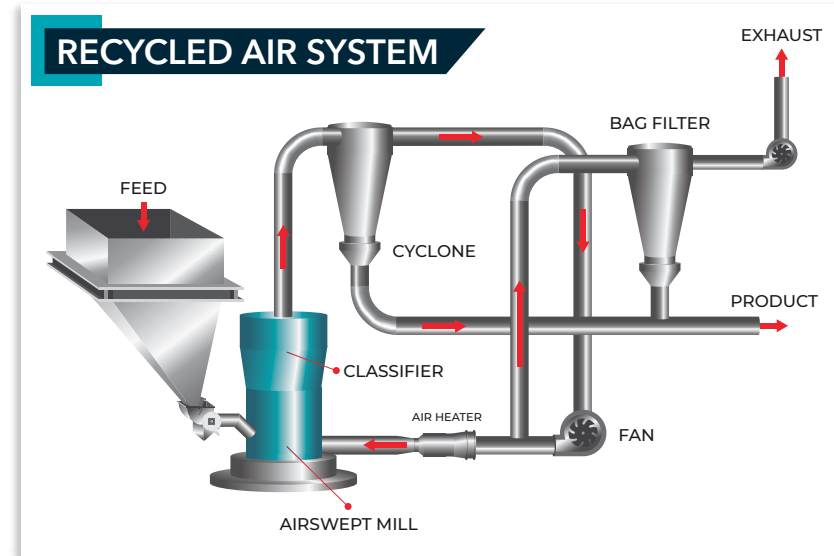
Bradley Air Swept Mill systems grind, classify, and dry material simultaneously utilizing continuous airflow to maintain material movement through the system.

#### RECYCLED AIR SYSTEM

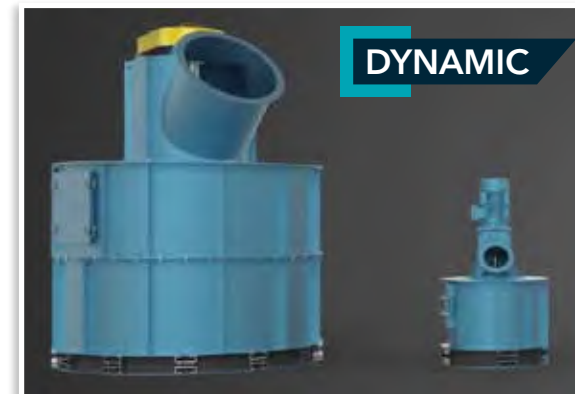
The conveying air stream is recycled, with only a minimum amount being exhausted through the dust collector system, which is designed to remove the excess air and water vapor. This allows the system to operate under constant negative pressure, ensuring dust-free operation.

#### SINGLE PASS SYSTEM

Air is drawn into the mill base, travels through the classifier, bag filter and fan and is then vented out to atmosphere.



### CLASSIFICATION



**DYNAMIC**

#### DYNAMIC CLASSIFIERS

Dynamic classifiers allow instant adjustment to provide wide flexibility of operation. They produce cleaner top size cuts for finer grinding applications. The Bradley VBC classifier can produce extremely fine powders direct from the mill.



**STATIC**

#### STATIC CLASSIFIERS

Static classifiers design is rugged and simple, without rotating parts and power consumption. The inverted cone type is used for coarse grinding, while the double cone type for fine.

# AIRWEPT PENDULUM MILL SYSTEM

## CONTINUOUS HEAVY TONNAGE PRODUCTION

### CAPACITY

AVAILABLE IN A RANGE OF SIZES TO MEET YOUR APPLICATION REQUIREMENTS, BRADLEY AIRWEPT MILL SYSTEMS CAN ACHIEVE:

- Outputs of 1 to 150 tons per hour
- Product fineness from 50% passing 150 microns to 99.9% passing 30 microns
- Final products with less than 0.1% moisture from high moisture feeds containing up to 15%

CAPACITY OF A GIVEN MILL SIZE IS DEPENDENT ON A VARIETY OF FACTORS, INCLUDING:

- Material being ground
- Fineness of the finished product
- Amount of moisture in the feed to the mill

### APPLICATIONS

- FERTILIZER INDUSTRY
- LIMESTONE & DOLOMITE QUARRIES
- MINING INDUSTRIES
- DESULPHURIZATION PROCESS
- CEMENT INDUSTRY
- PELLET PLANTS
- OIL INDUSTRY
- MARBLE PROCESSING
- COAL & COKE GRINDING
- GLASS & CERAMICS
- PAINT MANUFACTURE
- MISCELLANEOUS

### SPECIFICATIONS (U.S.)

STANDARD MILL SPECIFICATIONS			
MILL SIZE	MILL MOTOR (HP)	FAN MOTOR (HP)	MAXIMUM FEED SIZE (in)
BM2	25	40	0.5
BM3	50	40-50	0.6
BM6	75	60-75	0.8
BM10	100-120	75-100	1.0
BM14	180-200	120-180	1.2
BM20	270-425	200-270	1.6
BM30	425-535	335-425	2.0
BM50	535-670	500-600	2.4
BM60	670-1000	500-800	3.1



FOR OVER  
**130**  
YEARS

Airswept Mills | Screen Mills | Air Classifiers | Process Units  
Project & Design | Testing, Development & Consultancy



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