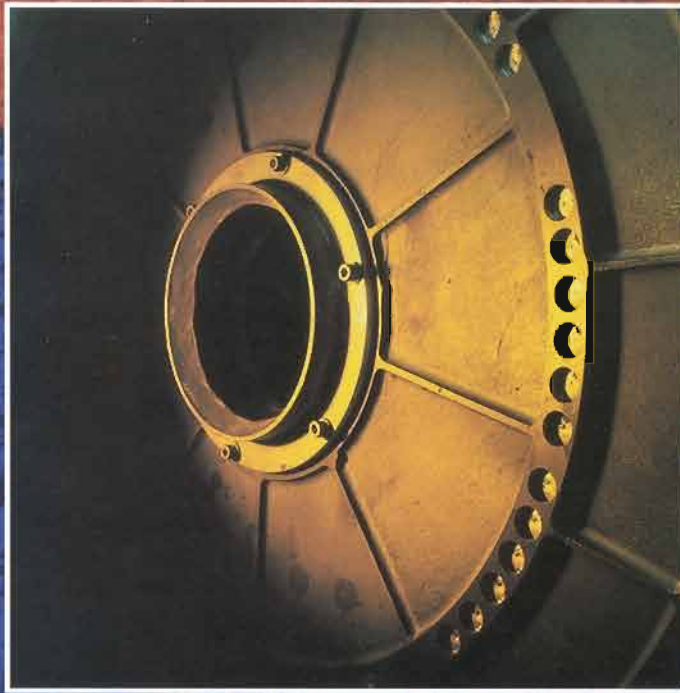


MICRON POWDER SYSTEMS



**ACUCUT™ ULTRAFINE
AIR CLASSIFIERS**

**MICRON POWDER SYSTEMS
SUMMIT, NEW JERSEY**

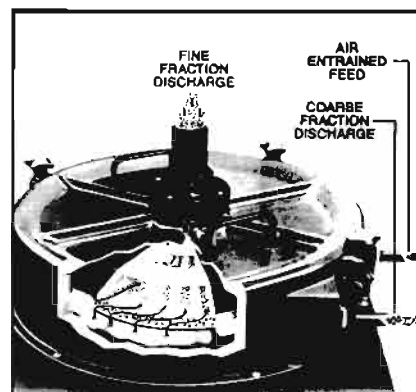
Acucut™ Air Classifiers

Set The Standard For Ultrafine Particle Separation



Acucut™ classifiers use a high-speed, high-energy air classification principle to disperse and separate ultrafine powders. The Acucut line processes 0.5 to 50 micron powder fractions at feed rates up to 3500 pounds per hour, accurately, reproducibly, and efficiently.

Cutaway illustrates basic design principle of an Acucut classifier in operation.



Accurate Classification For Improved Product Quality

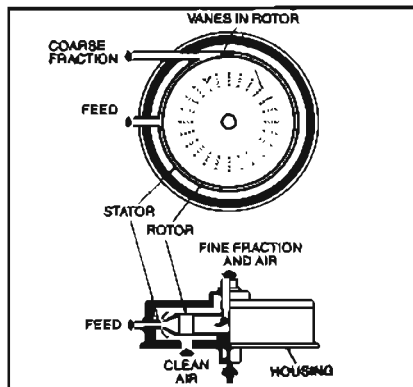
The Acucut classifier utilizes dual-stage operating controls to ensure sharp cuts and narrow band particle size distributions. This permits control of maximum and minimum particle size diameters with unparalleled accuracy.

Reproducible Results For Better Production

Precise control of rotor speed and air flow means that Acucut classifiers will produce the same sharp cuts and narrow band particle size distributions every time.

Excellent Separation Efficiency

Through the Acucut classifier's high energy dispersion zone, uniform separation sharpness is maintained at all selected cut points. The high energy dispersion also ensures that the maximum percentage of fines is reclaimed.



Schematic shows overhead and side views of material flow in classifier.

Simple To Operate And Maintain

Easily cleaned, operated and maintained, the Acucut classifier keeps downtime to a minimum. Options are available for effective control of product contamination, protection against corrosion, handling abrasive materials, and classifying adhesive powders.

Design Principle

The Acucut classifier is a forced vortex classifier designed to disperse, then classify, fine particles into coarse and fine fractions.

High-energy dispersing air enters the rotor radially around the entire outer edge at the dispersion tips, while feed particles enter this 360-degree dispersing air zone through an inlet in the rotor ring.

In the classification zone, particles are acted upon by an outwardly directed centrifugal force and an inwardly directed drag force. Air carries the dispersed fine particles spirally inward to the central fine fraction outlet. Coarse particles move outward around the rotor periphery to the coarse fraction outlet. Entrained fines are recycled from the coarse cyclone collector back to the classifier. The desired cut point is selected by adjustment of airflow rate, rotor speed or both.

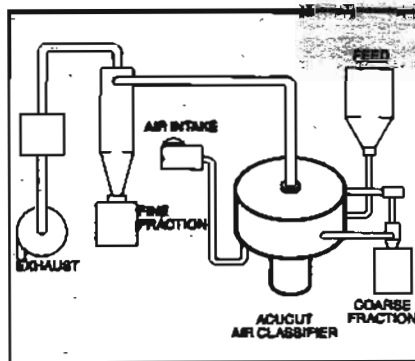


Acucut air classifiers are designed for easy cleaning and maintenance.

Acucut classifiers work continuously in dry materials separation systems.

Acucut Ultrafine Classifiers Are Designed To Meet Your Needs

- The A12 Acucut classifier is a self-contained lab scale classifier. It is ready to run, needing only power and compressed air connections. The A12 maintains high accuracy even with low feed rates.
- The B18 Acucut classifier is ideal for pilot-scale or small-scale production rates. It is capable of running batch-wise or continuously. This energy-efficient model offers accuracy comparable with the A12.
- The C24 Acucut classifier is suitable for full scale production and continuous operation. The C24 offers corrosion and abrasion resistant features, or may be designed to resist buildup of adhesive powders. It is also energy efficient and offers accuracy only met by the A12 and B18.



Typical Applications For Acucut Classifiers

The Acucut Classifier has been applied successfully with many difficult-to-classify products:

Toners

- 4-5 micron fine fraction removal
- High recovery on coarse fraction

Ceramics

- Ultrafine maximum particle size capability
- Abrasion protection option: solid alumina ceramic and tungsten carbide plasma coating
- Tight band widths/distribution

Metal Powders

- Fine and ultrafine separations
- Ability to fluidize high density materials
- System can be inerted with nitrogen, carbon dioxide or argon
- Abrasion protection option: solid alumina ceramic and tungsten carbide plasma coating

Pharmaceuticals

- Stainless steel construction
- Easy access for cleaning
- Efficient recovery
- Compact design
- Results are reproducible with batch to batch control

Plastics

- High energy dispersion
- Ideal for temperature sensitive products

Technical Specifications

	MODEL A12		MODEL B18		MODEL C24	
	English	Metric	English	Metric	English	Metric
PERFORMANCE						
Cut Size Range	0.5 to 35 microns		0.5 to 50 microns		0.5 to 50 microns	
Feed Rate	1-20 lbs/hr	0.5-9 kg/hr	20-400 lbs/hr	9-180 kg/hr	200-3500 lbs/hr	90-1600 kg/hr
Sharpness Index = D75%/D25%	1.3 to 1.7		1.3 to 1.7		1.3 to 1.7	
OPERATION						
Rotor drive power	1 HP	.75 kw	5 HP	3.75 kw	15 HP	11.25 kw
Primary air blower power	7.5 HP	5.5 kw	15 HP	11.25 kw	100 HP	75 kw
Airflow	To 90 cfm @ 10" Hg max.	150m ³ /hr @ 250mm Hg	To 150 cfm @ 10" Hg Max.	250m ³ /hr @ 250mm Hg	To 1200 cfm @ 15" Hg Max.	2000 m ³ /hr @ 380 mm Hg
Rotor speed	500 to 5500 rpm		440 to 4400 rpm		420 to 4200 rpm	
Height	8 ft.	1830 mm	6 ft.	1830 mm	15 ft.	4572 mm
Floor space	4 ft. x 6 ft.	1220 mm x 1830 mm	12 ft. x 6 ft.	3660 mm x 1830 mm	25 ft. x 15 ft.	7620 mm x 4572 mm
UTILITIES REQUIRED						
Electrical	230/460 VAC/3 Ph, 60 Hz, 40/20 amps		230/460 VAC/3 Ph, 60 Hz, 60/30 amps		230/460 VAC/3 Ph, 60 Hz, 260/130 amps	
Compressed air	12 cfm @ 40-80 psi	20m ³ /hr 2.8-5.6 bar	12 cfm @ 60-100 psi	20 m ³ /hr 4.2-7 bar	25 cfm @ 60-100 psi	40 m ³ /hr 4.2-7 bar

Put Our Systems to the Test

Micron Powder Systems is a member of the Hosokawa Micron Group, a global supplier of technologies relating to materials science and engineering. We bring you the most complete base of knowledge about powder processing technology in the world. We expand our database of test and performance information every day. And we provide user-friendly technical liaison, engineering knowhow, and customer service for all of our customers.

Micron Powder Systems operates the most comprehensive Technical Center in North America devoted exclusively to powder processing technology. We conduct trials for customers on more than 40 different systems for size reduction, air classification, mixing, drying, and related unit operations.

If you are interested in scheduling a test, attending a seminar, or taking a tour, contact our marketing department today.



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MICRON POWDER SYSTEMS

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The Hosokawa Micron Group responds to global needs through emphasis on materials science and engineering. The Group is an international provider of equipment and systems for powder processing, environmental protection, industrial filtration, and plastics processing. The Group maintains facilities for research, engineering, manufacturing, and service in each of the world's major industrial markets.