

Mikro-Samplmill®

For Coarse to Fine Grinding of Analytical Samples

The Mikro-Samplmill® is a mechanical impact mill for processing analytical samples up to one quart in size. The mill produces granular to fine grinds that are uniform in particle size, making it ideal for sample and small batch production.

We based the design of the Mikro-Samplmill® on recommendations from experts at the Bureau of Plant Industry, Soils and Agricultural Engineering, U.S. Department of Agriculture. Their recommendations were outlined for an effective and economical mill in "Grinding of Fertilizer Samples for Analysis," which guided the engineering of the Mikro-Samplmill®.

Applications

Although originally designed for grinding small fertilizer samples, today's Mikro-Samplmill® expertly processes food, pharmaceuticals, chemicals, industrial minerals, resins, pigments and other materials.

Samples are efficiently produced for the analysis of color, protein, oil and moisture, as well as chemical content.

Operating Principle

Feed material, typically up to ½" in size, enters the grinding chamber where a one piece rotor, or optional swinging hammers, reduces the particle size. Properly sized material will pass through a screen to a one quart collection container.

The feed rate is controlled by a manual hand crank. Throughput is approximately one pound per minute. The ¾ HP motor achieves rotor speeds up to 12,000 RPM, a range that minimizes changes in material moisture.



▲ The footprint of the mobile Mikro-Samplmill® is less than three square feet.



▲ Easy access to all material contact points ensures quick clean ups.



Contamination-Free Processing

The mill housing, liner, screens and one piece rotor are constructed of 304 stainless steel. Their smooth surfaces minimize buildup and allow for complete cleaning.

Quick Cleaning

Application experience shows that complete and thorough cleaning between batches averages less than two minutes. All material contact points are easily accessed, cleaned and replaced.

Maximum Product Recovery

The manually operated inclined feed screw ensures complete feeding of material into the grinding chamber. All product contact areas are easily accessed for maximum product recovery. This enables processing samples as small as 10 grams.

Designed to Last

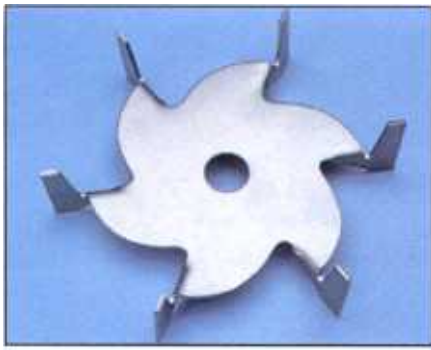
The Mikro-Samplmill® is an industrial quality mill designed to last a lifetime. The housing is cast and the liners and grinding media are heavy duty. The shaft and bearings are designed to keep out dust and prevent lubrication contamination.



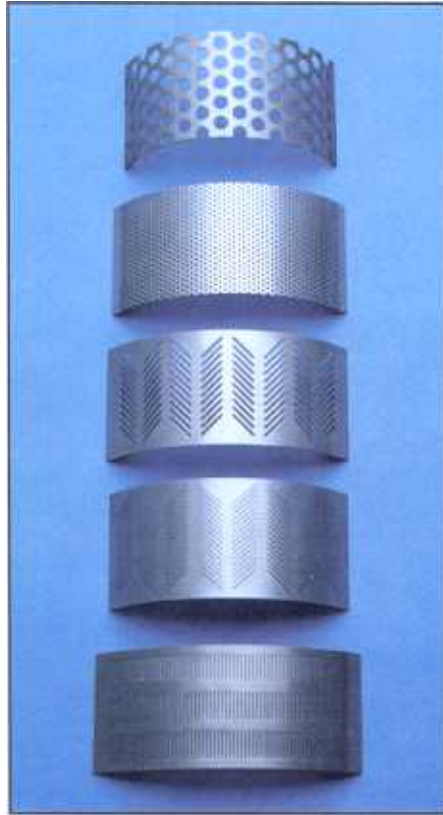
HOSOKAWA MICRON POWDER SYSTEMS

Combining the resources of

ALPINE • MIKRO • MAJAC • MICRON • VRIECO-NAUTA



▲
The stamped rotor is one solid, easy-to-clean piece.



▲
A wide variety of retaining screens is available for a full range of processing requirements.

- Efficient and Compact
- Quick, Easy Cleaning
- Long Production Life
- Dry or Wet Milling
- Safety Features
- Protein Analysis

MIKRO-SAMPLMILL® SPECIFICATIONS

Drive Motor HP	3/4 HP
Maximum RPM	12000
Number of Hammers	6 swinging hammers or one rigid rotor
Rotor Diameter	5"
Feed Screw Diameter	7/8"
Maximum Feed Size Hard Material Soft Friable Material	3/8" 1/2"
CFM with Outlet Relief Bag	N/A
Electrical Requirements	110V, 220V, 1PH, 50/60 Hz
Control Panel	NEMA 4 or 7 & 9
Materials of Construction	Bronze/Stainless Steel
Hopper Capacity	0.025 cu. ft.
Weight (Lbs/Kg)	300/136
Height (in/mm)	57/1448
Width (in/mm)	24/609
Length (in/mm)	32/813

MIKRO-SAMPLMILL® APPLICATIONS

Material	d97 Feed	d97End	Material	d97 Feed	d97End
Bituminous Coal	150µm	75µm	Plastic Scrap (PVC)	1/4"	850µm
Calcium Tungstate	12 mesh	30µm	Polystyrene, Brominated	10 mesh	64µm
Carbon Black	90µm	45µm	Polystyrene, Reclaimed	1/8"	2000µm
Chrome Yellow	150µm	75µm	Sea Shells	1/8"	1700µm
Corn Starch	150µm	75µm	Silica	30 mesh	45µm
Fertilizer	10 mesh	75µm	Soap Surfactants	20 mesh	250µm
Glass Frit	1/8"	105µm	Soda Ash	510µm	80µm
Gypsum	320µm	70µm	Sodium Borate	1/2"	850µm
Gypsum, Raw	350µm	150µm	Spices	1/4"	150µm
Herbicide	20 mesh	75µm	Stearic Acid	177µm	150µm
Ion Exchange Resin	800µm	268µm	Sugar	14 mesh	850µm
Iron Blue	75µm	45µm	Sugar	850µm	150µm
Lactose	350µm	177µm	Talc	deagglomeration	45µm
Limestone	600µm	75µm	Teflon	1/16"	850µm
Melamine	40 mesh	250µm	Titanium	297µm	150µm
Oat Fiber	590µm	150µm	Toner	1/8"	1180µm
Pasta Regrind	1/8"	300µm	Welding Flux	710µm	388µm
Petroleum Coke	1/4"	75µm	Zinc Oxide	300µm	45µm
Phenolic Resin	590µm	345µm			

Note on mesh equivalents 100 mesh = 150µm; 200 mesh = 75µm; 325 mesh = 45µm; 1µm = 1 x 10⁻⁶ meter.
Application data is based on field installations. These values are estimates and not performance guarantees.



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