Micronizer®

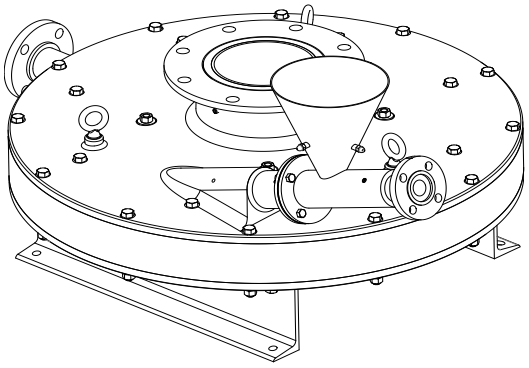
Fluid Energy Grinding Jet Mill

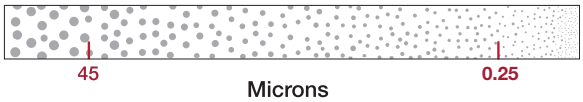
PRODUCT BULLETIN

Features & Benefits:

- Consistent tight PSD, mills to nano-particle size
- No moving parts, utilizes compressed air or gas
- Easily grinds heat sensitive materials
- Contamination free grinding, no media or lubricant required
- Engineered for simple clean-up and changeover

The Micronizer® is a fluid energy mill employing compressed air, steam or gas to produce particles less than one micron. The Micronizer® advantage is in its very low particle size and narrow PSD (particle size distribution) making it the most popular jet mill available today. The Micronizer® is used in a wide variety of applications where small particle size, increased surface area and narrow PSD are critical. Typical applications include TiO_2, cosmetics, pigments, pharmaceutical powders, carbon black, agricultural chemicals, precious metals, resins, heat sensitive materials, and high performance materials.





Product Fineness: 45 µm - 0.25 µm
Capacity Range: 1/8-10,000 lbs/hr (.05-4550 kg/hr)
Compressed Air Requirements: 8-3,300 SCFM @100 PSIG (13.6-5607 SCMH @ 100 PSIG)

How it Works:

The Micronizer® utilizes fluid energy compressed air or gas to grind and classify, in a single chamber with no moving parts. Activated by high pressure air, the particles are accelerated into a high speed rotation in a shallow grinding chamber. As the particles impact on one another their size is reduced. Centrifugal force holds larger particles in the grinding rotation area until they have achieved the desired fine particle size. Centripetal force drags the desired particles towards the static classifier where they are allowed to exit upon achieving the correct particle size. The final particle size is controlled by varying the rate of the feed and propellant pressure.

MICRONIZER®

MILL	ENERGY Requirements / [1]Compressed Air /Gas SCFM (SCMH)	[2]bHP	CAPACITY LBS/HR (KG/HR)
Qualification	8 (13.6)	2	1/8 – 1 (.05 - .5)
2”	20 (34)	5	1/2 - 2 (.2 - .9)
4”	55 (93.5)	13	2 - 40 (.9 - 18)
8”	130 (221)	31	10 - 100 (4 - 45)
12”	260 (442)	62	3 - 250 (13 - 113)
15”	350 (595)	83	50 - 300 (22 - 136)
20”	550 (934)	130	100 - 1000 (45 - 453)
24”	1000 (1699)	236	250 - 1400 (113 - 635)
30”	1500 (2549)	354	600 - 3000 (272 - 1360)
36”	2250 (3822)	531	1000 - 6000 (453 - 2721)
42”	3300 (5607)	779	2000 - 10,000 (907 - 4550)

[1]-Volume of free air at 60°F (16°C), 14.7 psi compressed to 100 PSIG. Includes air consumed by feed injector nozzle.
[2]-Approximate HP necessary to generate 100 PSIG compressed air.

Applications:

- Agricultural Chemicals
- Carbon Black
- Ceramics
- Specialty Chemicals
- Pigments & Cosmetics
- Heat Sensitive Materials
- Minerals and Metals
- Pharmaceutical
- Titanium Dioxide
- Activated Carbon
- Polymers

Liner Options:

- 304 Stainless Steel
- 316 Stainless Steel
- Polyethylene
- PTFE
- Polyurethane
- Vulcanized Rubber
- PureLine™
- ShieldOx™
- ArmorLine™
- Tungsten Carbide
- Syalon

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