

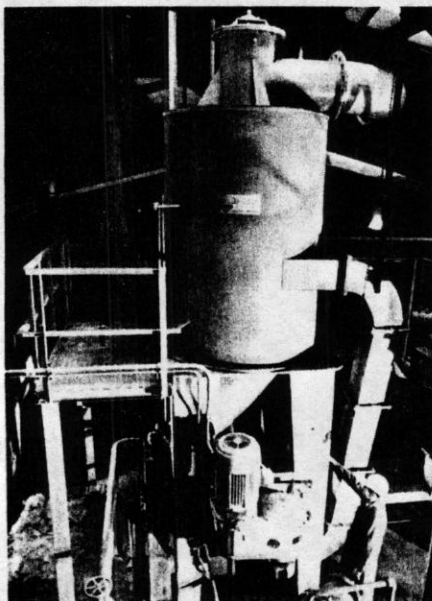
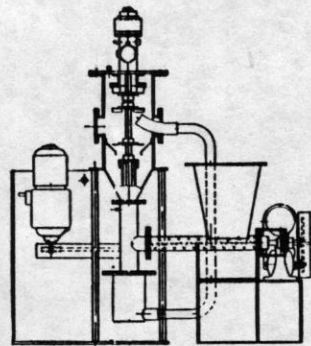
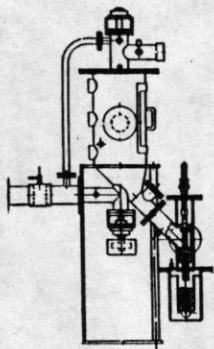
Bid on Equipment

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Pilot Plant Model

Pilot plant model functions as jet pulverizer or as separate air classifier.



For Laboratory, Pilot Plant, and Production Facilities

Majac Jet Pulverizers are available in a variety of sizes and capacities for pilot plants, laboratories, and production facilities. The units are designed to deliver maximum efficiency with a minimum number of moving parts. They provide precise control of particle size distribution. Majac Jet Pulverization usually fits economically in the production of particle sizes ranging from 200 mesh down to particle size distributions in the low and sub-micron range. Hard and abrasive materials and low-melting-point compounds are pulverized equally well. The units are capable of handling materials with low melting points which cannot be handled by other means and of maintaining lowest possible temperatures when processing materials with temperature sensitivities.

Majac for high purity pulverizing of products varying from low melting point compounds to extremely hard and abrasive materials

Materials illustrated in this chart are shown because of their wide range and type. Alumina represents a very hard and abrasive material, whereas diphenylphthalate represents a material with a melting point of approximately 140°F. While the Jet Pulverizer is normally used for quite fine grinds, feldspar, silica, and coal indicate common materials which are ordinarily processed to fairly coarse particle sizes. Mica demonstrates a material which is difficult to handle because of its very flaky structure. Graphite and rare earth ores illustrate fairly fine pulverization. Toners represent narrow distributions and tough, temperature-sensitive materials.

Typical Capacities

MATERIAL	FINISHED PARTICLE SIZE	MILL SIZE	LBS/HR	GRINDING FLUID USED (compressed air SCFM) or (steam—Lbs/hr)
Alumina	—325 mesh, 3 micron average	15	12,000	6300 lbs/hr steam @ 100 psig, 750°F.
Coal, Bituminous	90%—325 mesh —325 mesh, 20-30	20	8,000	3000 SCFM @ 100 psig, 70°F.
Diphenylphthalate	micron max. 4.2 micron average	2-6	435	300 SCFM @ 100 psig, 70°F.
Feldspar & Silica	99%—200 mesh	15	8,500	1350 SCFM @ 100 psig, 800°F.
Graphite	90%—10 microns	5.5-2.5	50	75 SCFM @ 100 psig, 70°F.
Mica	95%—325 mesh	8	1,600	720 SCFM @ 100 psig, 800°F.
Rare Earth Ore	60%—1 micron	8-15	400	720 SCFM @ 100 psig, 800°F.
Toner	Largely between 5 and 15 microns	7-10	150- 350	1050 SCFM @ 100 psig, 70°F.

Operation—The Majac Jet Pulverizer consists of a pulverizing zone and a classifier connected by properly sized ducts. The pulverizing zone contains two opposing nozzles from which gas or vapor is discharged at high velocity into larger cylindrical sections where particles are accelerated. The opposing streams impact head-on at a high kinetic energy level. The collision is particle against particle. Therefore, grinding is accomplished with very little mill wear and with consequent high purity of product. By selecting the vapor or gas and the conditions used, it is possible to promote or inhibit chemical reactions. Humidity control, blending and other functions also can be accomplished while the unit is performing its pulverizing operation.

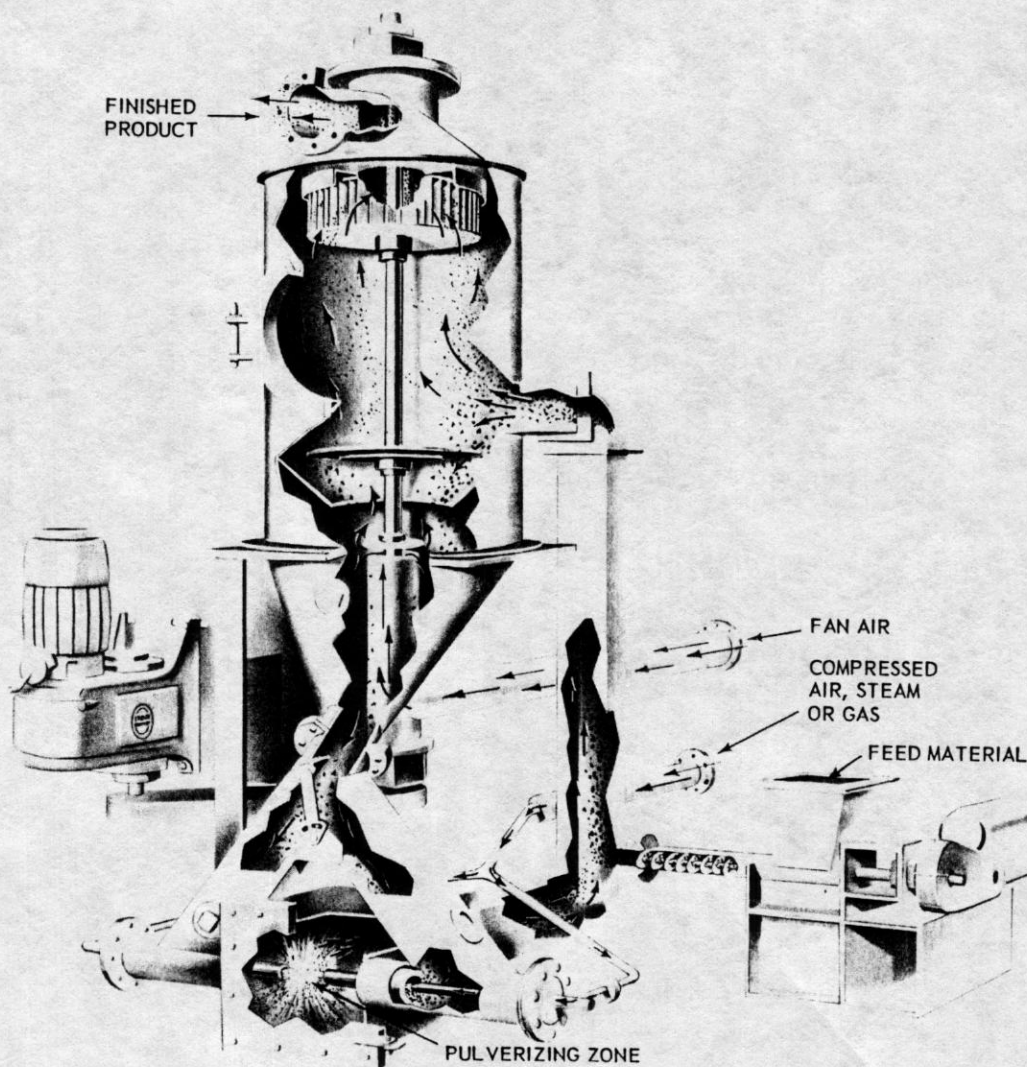
● For Maximum Efficiency in Pulverizing, Classifying, Drying, Blending and Coating

Majac's combination Jet Pulverizer and Air Classifier provides maximum system efficiency with a minimum of space requirements.

Now you get greater pulverization power PLUS controllable air classification in one compact space-saving package.

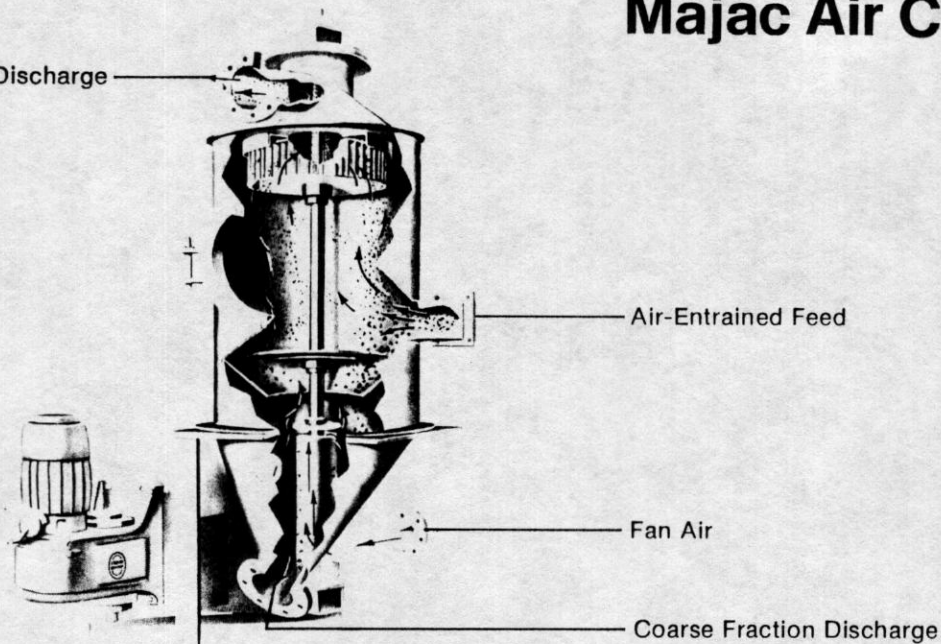
The jet pulverizer uses an exclusive action to pulverize materials with a minimum of contamination from machine surface or cutting media by impacting particles against themselves in two opposing streams of compressed air or steam.

The Integral Majac Air Classifier separates fractions controllably and precisely to a wide range of fine cut points. Whatever your materials or particle size requirements — ranging from silica to very low melting point substances — Majac stands ready to pulverize and classify to sizes from 200 mesh to the sub-micron range.



Majac Air Classifier

Fine Fraction Discharge



The type of air classifier which is an integral part of the Majac Jet Pulverizer is also used separately, either to produce two desired sharply cut fractions, or in conjunction with other processes or methods of particle size reduction. The first classification control is the fluid velocity through the classifier. This depends on the amount of low-pressure fluid (normally fan air) delivered to the inlet at the bottom of the classifier. At the selected velocity, only the finer particles can be carried upward. These particles enter the top rotor, which is essentially an air centrifuge. The second operating control is the speed of the rotor which is driven by a variable speed drive.

Particles must flow radially inward through the top rotor to be discharged from the mill as acceptable product. Opposing forces are the centrifugal force outward on the particle, fixed by the speed of the rotor, and the inward drag on the particle, which is controlled by the amount of fluid flowing through the rotor and out of the mill.

Only particles of sufficient fineness will be accepted. These will flow from the mill to a dust collector for recovery as fine fraction. The coarse fraction is discharged as underflow.

Majac Superheaters

Majac designs and manufactures separately fired air and steam superheaters for use in conjunction with the pulverizing machinery. The units are designed to minimize pressure drop.

The standard range of temperatures and capacities of superheaters is shown below. However, all superheater equipment is designed to conform to customer requirements.

Steam

300 to 9,000 pounds per hour of steam up to 150 psig and outlet temperatures of 800°F.

Air

90 to 2,700 standard CFM at pressures up to 150 psig and outlet temperatures of 800°F.

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