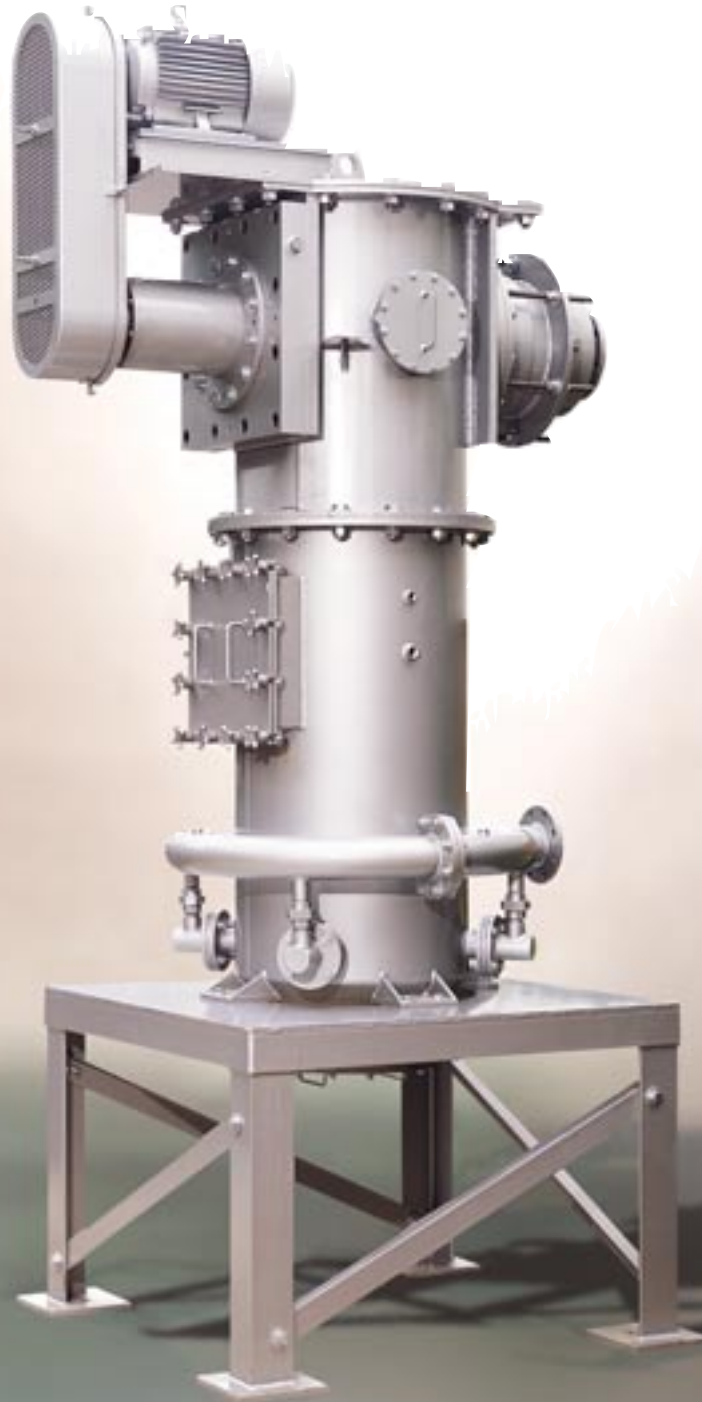


SOLUTIONS FOR GRINDING FINE POWDERS

ROTO-JET[®]

Size Reduction Systems



ROTO-JET®

Size Reduction Systems

ULTIMATE CONTROL IN FINE GRINDING (0.5–45 MICRONS) WITH ADVANCED CLASSIFICATION

The Roto-Jet produces a finely ground product and affords you the most advanced and precise control of the particle size distribution. Efficient compressed air usage and total system automation ensure that the highest quality product is manufactured.

We bring a wealth of technical and engineering expertise to our manufacturing process and closely involve the customer in every project. The result is a custom engineered and cost-effective grinding circuit operating with the most advanced technology in the size reduction industry.

APPLICATIONS

HARD-TO-GRIND MATERIALS:

lubricants • polymers • fibers • organics

ABRASIVE MATERIALS:

minerals • ores • polishing compounds

COLORING MATERIALS:

toners • pigments • dyes

AGRICULTURAL MATERIALS:

pesticides • herbicides • fungicides

HEAT-SENSITIVE MATERIALS:

waxes • plastics • resins



A Model 8 Roto-Jet displays a sanitary polished classifier wheel as well as product and non-product contact surfaces. Units can be designed for the pharmaceutical, cosmetic or food industries.

OPERATING PRINCIPLE

Air or inert gas at elevated pressure is injected through specially designed nozzles directly into the grinding chamber of the Roto-Jet, creating a sonic or supersonic grinding stream. Raw feed is automatically introduced to the Roto-Jet mill by an interlocked feed control system.

The agitation provided by the grinding chamber and nozzle design cause particles to become entrained in the air or inert gas stream. Size reduction is accomplished by high velocity collisions between particles. Small particles are then swept towards the classifier which rotates at high



A Model 16 Roto-Jet displays our standard venturi feed system and hinged access door with limit switch. All Roto-Jets are designed, fabricated and tested entirely in the USA. Spare parts are stocked in our facility to provide immediate response to your needs.

speed above the grinding chamber. The speed of the classifier is preset for the proper sized product and electronically controlled. Material which is fine enough to overcome the inertial force generated by the classifier escapes the Roto-Jet and is collected as product. Oversized particles are recycled by the classifier back into the grinding chamber for further reduction.

TYPICAL OPERATING PARAMETERS

MILL SERIES NUMBER	PRODUCTION CAPACITY (LB/HR)	SCFM AIR @70°F & 100 PSIG
4	1-25	25-50
8	3-100	60-175
16	50-400	400-800
24	200-600	1000-1600
30	400-1200	1800-2300

Variable Chamber Design: The Roto-Jet grinding chamber is a high-efficiency tapered design which maximizes particle collisions and maintains product purity. The grinding chamber features an adjustable bed and variable nozzle configurations to alter fluidized-bed levels, grinding patterns and gas flow. These unique features provide consistent and efficient grinding.

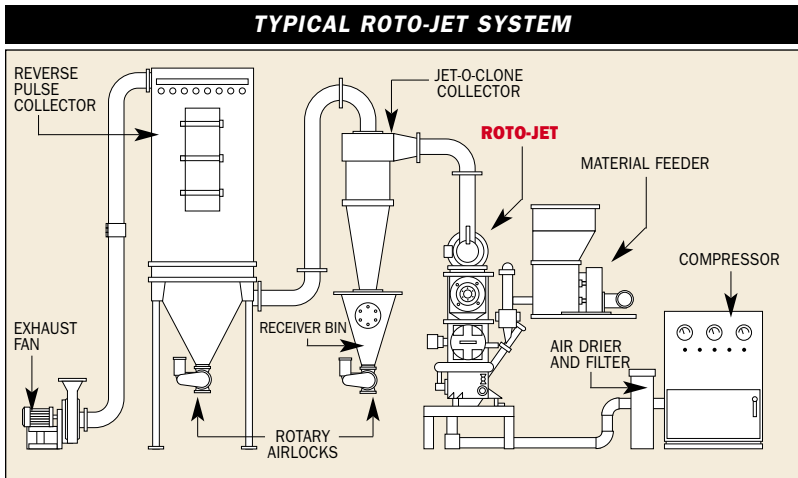
Adjustable Classifier: The classifier rotor is engineered to provide precise classification of your product. Advanced designs ensure that only specifically sized product is discharged while oversize particles are recycled for additional grinding. The classifier is adjustable within a wide range of speeds to produce the desired particle size.

No Attritional Heat: As with our other fluid energy mills, the Roto-Jet may be used to grind heat-sensitive products with critical heat limitations. The cooling effect created by the expanding gases offsets the slight heat generated during the grinding and classifying processes.

Automated System Controls: The Roto-Jet System includes the most up-to-date process control technology available. Interlocked sensors and controls work to maintain optimum milling conditions within the system. This advanced instrumentation and control package ensure that the product remains within your exact specifications.

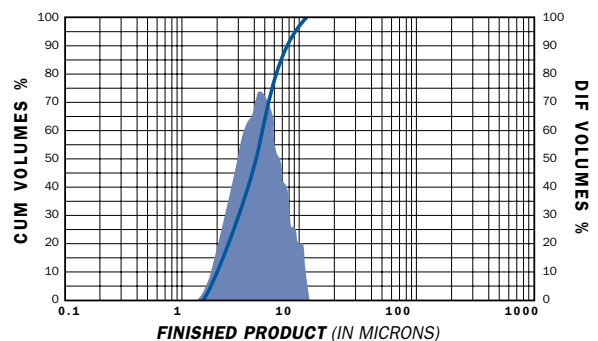
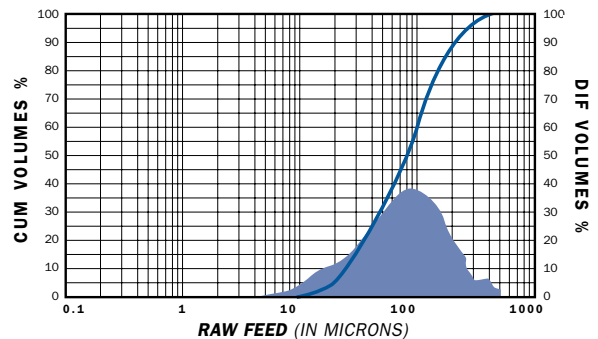
Reliable Construction: The Roto-Jet System is constructed entirely in the USA of only the highest quality components. All parts are made in the USA which guarantees rapid delivery of spare items. Comprehensive engineering and durable construction enable our systems to operate continuously 24 hours a day, 365 days a year.

Engineering Support and Service: Roto-Jet testing is done at our facility in Pennsylvania where detailed process data can be obtained for your application. Fluid Energy engineers and quality service technicians are immediately available to provide technical assistance and to guarantee that the Roto-Jet System performs to your complete satisfaction.



A typical Roto-Jet control panel. Panels can be provided with hard-wired relay logic or optional PLC or PC.

TYPICAL PARTICLE DISTRIBUTION



APPLICATION ENGINEERING

Fluid Energy Processing & Equipment Company operates a complete test facility to demonstrate the performance of our equipment using your raw feed. Complete raw feed and finished product analyses are conducted in our Quality Control Lab. Engineering and process data are accumulated to develop a total system architecture for your application.

Whether your needs involve large-scale production control or basic benchtop convenience, our expert engineering and complete project coordination ensure efficient, cost-saving solutions to your critical application challenges.

SPECIAL SERVICES

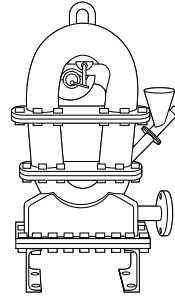
Rental Systems: Most of Fluid Energy's advanced systems are available on a rental basis to fulfill your immediate processing requirements.

Custom Processing: Fluid Energy maintains two facilities for coarse and fine grinding of your material on a contractual basis. Other services include blending, drying and packaging. The fully equipped QA laboratory in each facility is available for moisture, particle size and custom analyses of your products.



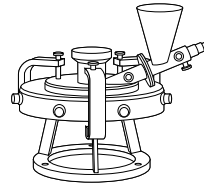
Fluid Energy is the world's largest jet mill supplier, representing over fifty years of experience in jet milling and flash drying technologies.

This strong background, combined with aggressive ongoing product development, makes Fluid Energy an innovative leader in the design of fine material processing systems and specialized equipment.



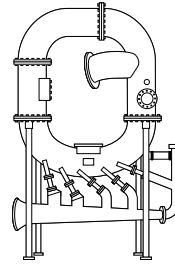
JET-O-MIZER

A unique design makes the JET-O-MIZER the most versatile of our product line, grinding dry materials to the 0.5-45 micron range. This vertical jet grinding mill ensures easy operation, consumes less power and produces a narrow particle size distribution.



MICRO-JET

The MICRO-JET is a complete line of horizontal grinding mills capable of producing ultra-fine material down to 0.5-45 micron averages. Replaceable liners and nozzles provide effective grinding of sticky and abrasive materials. An innovative design allows for rapid disassembly and cleaning.



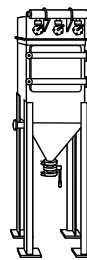
THERMAJET

The THERMAJET is an established line of compact, highly-efficient flash dryers to deagglomerate and dry any wet solid, slurry, centrifuge or filter cake. Ideal for safe processing of heat sensitive or reactive products, these dryers can also be used for flash calcining operations.



JET-O-CLONE

The JET-O-CLONE is a line of custom-designed cyclone separators that can provide primary collection of micron and sub-micron particles at 98%+ efficiency. These separators are commonly used in conjunction with our grinding and drying equipment.



DUST COLLECTORS

Fluid Energy applies its comprehensive processing experience to offer a complete line of DUST COLLECTORS. These advanced systems provide 99.99% effective particulate capture and are designed to ensure compatibility with our grinding and drying systems.

