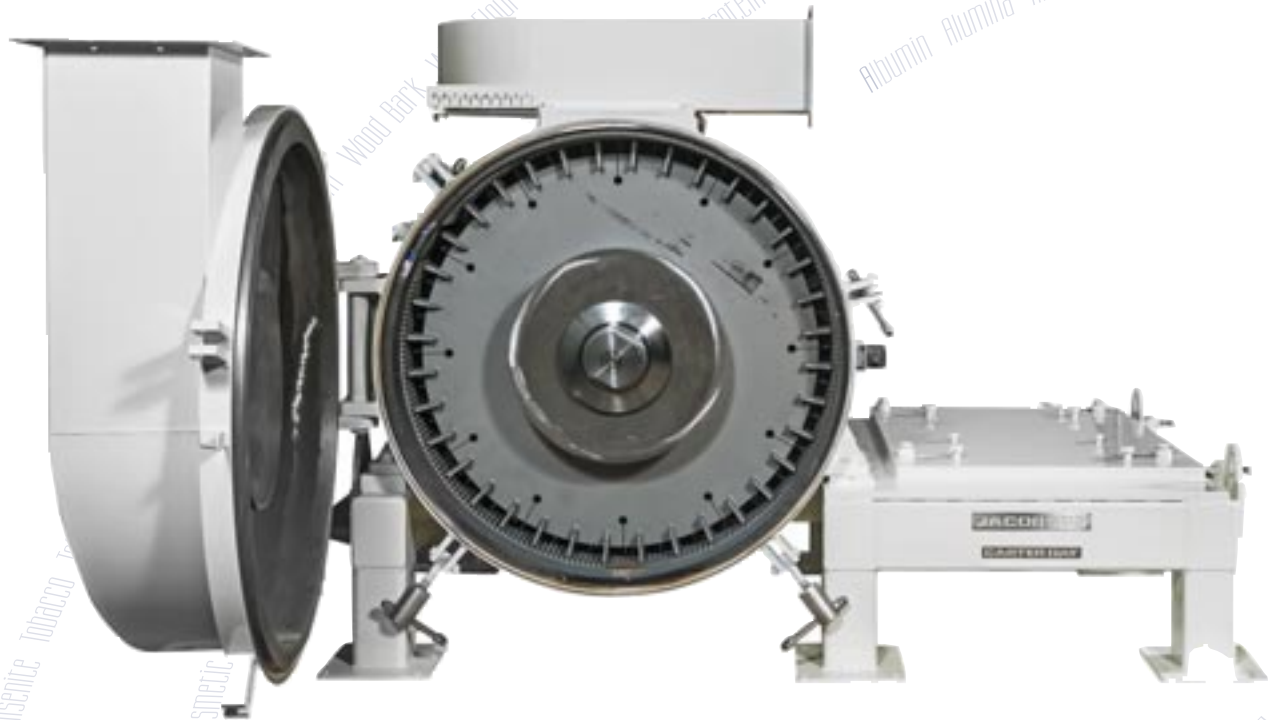


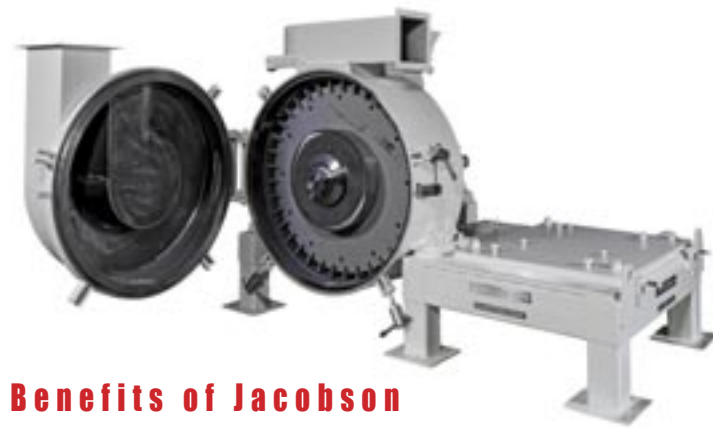
Air Swept Pulverizers



Jacobson Air Swept Pulverizers

Since producing its first machine in 1910, Jacobson has become the most complete single source of size reduction systems in the world. Offering a broad range of size reduction equipment to handle such materials as chemicals, minerals, feeds, pharmaceuticals, frozen products, foods, etc., Jacobson has built a reputation as a leader by providing top quality equipment while employing the most efficient methods of product sizing.

Jacobson's fine grinding is performed in the screenless Air Swept Pulverizer (ASP) which uses internal air flow and the largest surface grinding area of any competitive mill. Since every material has its own distinct properties, the Jacobson approach to machinery selection involves not only a close examination of the product to be reduced, but also a systems oriented look at the entire process involved. The fully equipped Jacobson Test Lab, with its team of experienced engineers, can thoroughly test a product to determine the most efficient machine or system to handle a particular application.



Benefits of Jacobson Air Swept Pulverizer

Particle Size - Optimum reduction in the medium to microfine range, producing powders from -20 to -325 mesh.

Product Yield - Continuous three-way milling and recycle grinding plus pneumatic conveyance assure steady output. Mill specifications vary to fit characteristics of materials.

Easy of Maintenance - The Jacobson ASP is undoubtedly the easiest fine grinder on the market to clean, to change out wear parts, or to service the drive and bearings.

Contamination - Machines are designed for sanitary operation and cleanliness from feed inlet to discharge.

Temperature Controlled Grinding - The use of an air stream normally cools the grinding material. When required, refrigerated air or other gases can be used for temperature control.

Product Uniformity - Internal self-classification and regrinding insures narrow distribution of particle size and uniformity of output.

Economy of Operation - The basic efficiency of the Air Swept design guarantees an exceptionally favorable ratio of product yield to power consumption, processing time and related production costs.

Flexibility in Grinds - To meet varying grind sizes or milling requirements for different materials, the Air Swept design allows fast change-over of grinding and classifying elements.

Dust-Free Operation - Negative air pressure design keeps dust out of the air to eliminate health and plant hazards while resulting in clean conditions around the machine.

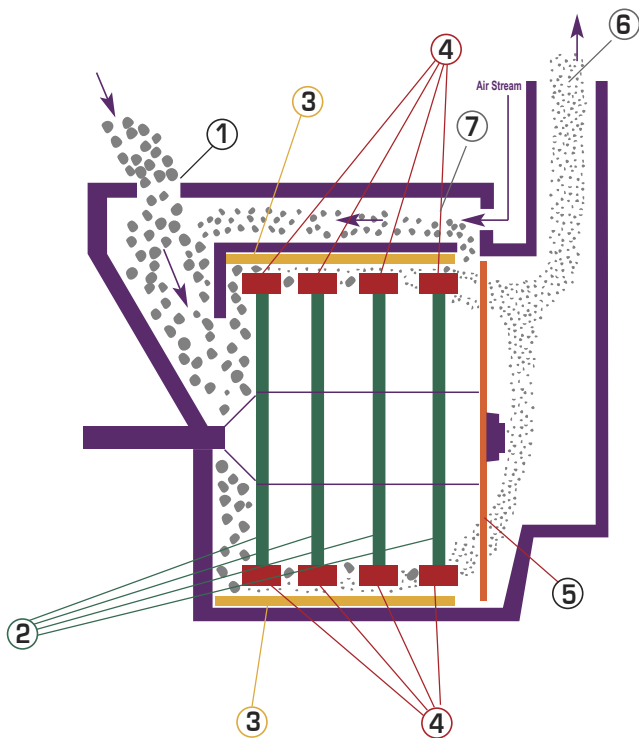
Quick Clean-Up - Hinged discharge housing allows easy access to mill interior and change elements or clean-up. unexcelled simplicity for of grinding



How It Works

The Jacobson Air Swept Pulverizer features a straight-forward, efficient design. Its operation is as follows: The hammers (4) connected to the beater plates (2) impact and reduce the largest particles (1), and distribute the material to the periphery of the grinding zone. The hammers, which are mounted on the edges of the beater plates rotate between 1,600 and 7,000 rpm with tip speed velocity ranging from 19,500 (100-175 m/sec) to 34,000 feet per minute to grind the material against the liner (3). The classifier plate (5) separates the finely ground product for exit through the discharge outlet (6), while returning oversize material (7) to the mill for further processing.

The Jacobson ASP is often the last step in size reduction for spices, aqua feeds, chemicals, foods and more—materials which need to be reduced in size from 500 microns down to fine particulates below 37 micron.



Direct Drive Designs

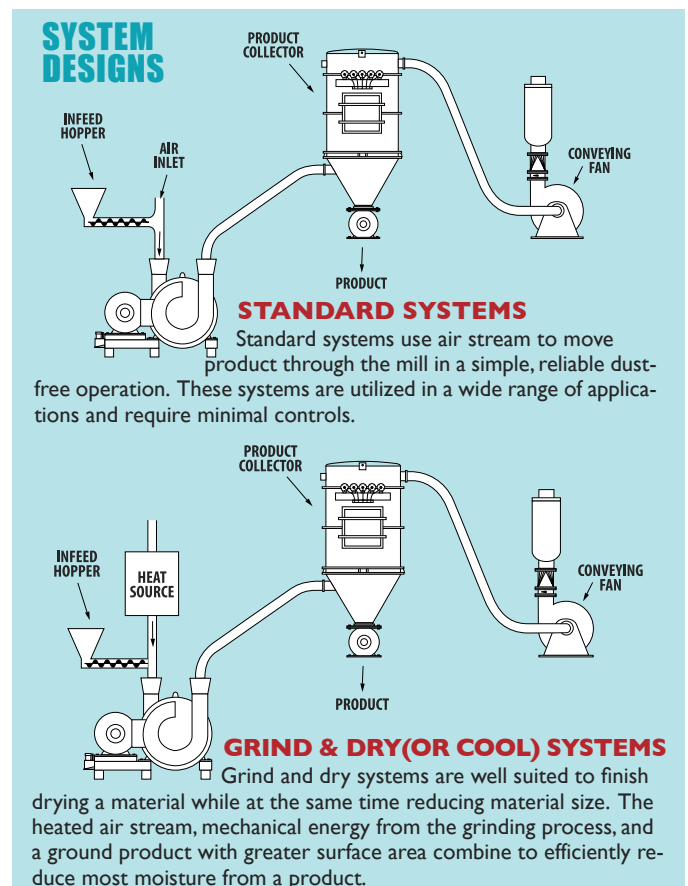
Our Direct Drive 28H and 38H Pulverizers have a rigid base constructed of thick wall and tubing that minimize vibration as do our Belt Drive models.

Built-In Classification

The world's leading ASP with internal classification, our internal classification system uses practical design principals which offer important cost advantages over external classifiers. These advantages are as follows:

- Easy to operate
- No skilled technician required
- No additional power consumption
- No costly wear components

In addition, recent design modifications now give better particle-size control, allowing you to produce a finer range of particles in your final product.



Belt Drive Designs

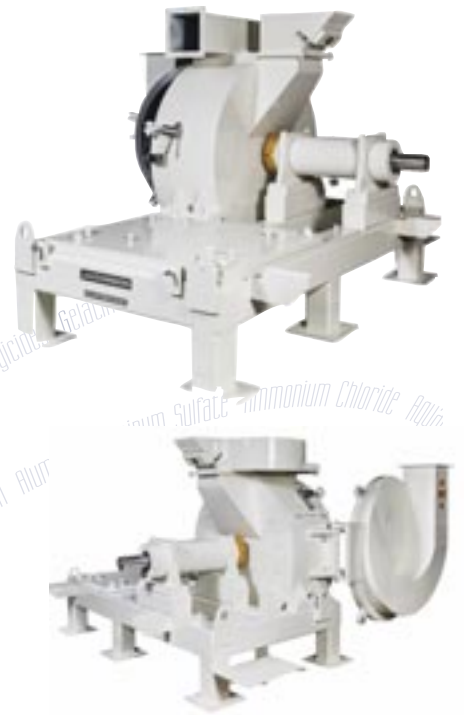
Our belt drive design of our 16H, 22H, 28H and 48H is a extremely low vibration. Our rigid base is constructed of thick wall tubing providing minimal vibration and twisting.

On both of our drive designs we use a sealed keyed bearing housing design and protected shaft to seal contact areas provide a highly durable system.

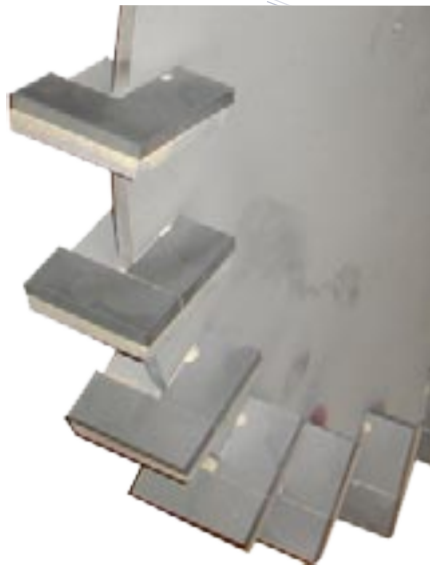
Our shaft seal to case design offers a terrific seal and we can provide additional shaft seal to case options for special applications.



We can provide our recirculating oil pump for standard applications. We can also provide special oil recirculation pumps to meet the needs of the bearing housing for extreme applications.



Carbide and Hard Faced Beater Plates



Our Beater plates are laser cut-out to give us the most precision circle and then laser cut blades are welded on. The plate is then machined for tight tolerance.

When carbide is used the tungsten carbide is silver soldered to the tips and tested with die penetrant. The beater plate is then re-checked for tight tolerance. We also spin test each carbide tipped beater plate to test carbide welds.

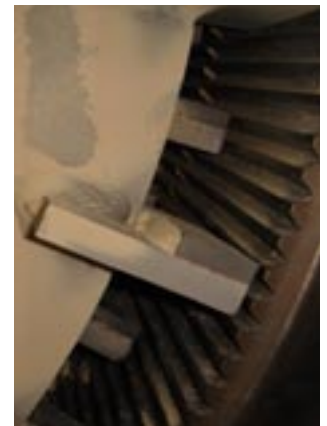
All of our beater plates are balanced per the set for minimal vibration. All plates are then loaded in the machine and test run to insure dynamic balance.

Unmatched Liner Construction & Install



Our liners are made of either hardened steel or stainless steel depending on the application. Each liners outside and inside dimension is machined for tight fit to the beater plates and housing. Our wedge design for securing the liners and installation is proven to be the best in the industry.

The liner to beater plate clearances are of the tightest tolerances possible to insure proper grind and operation. We also offer different liner tooth styles depending on the application.



Products Ground and Growing

Adhesives	Casein	Fillers	Mica	Seaweed
Albumin	Catalysts	Fish Protein	Moulding Com- pounds	Soap
Alumina	Cellulose	Food Ingredients	Non-Metallic Min- erals	Soy
Aluminum Sulfate	Ceramic Powder	Food Protein	Oat Hulls	Spices
Ammonium Chloride	Cheese Whey	Fungicides	Oat Bran	Starches
Aquafeed	Chemicals	Gelatin	Pharmaceuticals	Starter Feeds
Asbestos	Cinnamon	Glues	Pigments	Steorates
Asphalt	Clays	Graphite	Plastics	Sugars
Aspirin	Cocoa	Guar	Polyesters	Talc
Barley	Cosmetic Powders	Gums	Polypropylene	Tilsenite
Barium Carbonate	Dextrose	Gypsum	PVC	Tobacco
Bauxite	Diatomaceous	Hulls	Red Lead	Teflon
Bentonite	Earth	Inorganic Oxides	Resins	Toner
Bone Char	Dispersin PVC	Insecticides	Roots	Urea Formaldehyde
Boric Acid	Dyestuffs	Lactose	Salt	Wheat
Bulgar Wheat	Feeds	Larval Feeds		Wood Bark
Calcium Carbonate	Fertilizers	Lead Chiromate		Wood Flour
Carbon Black	Fibers	Lead Oxide		Zinc Oxide

Lab Testing

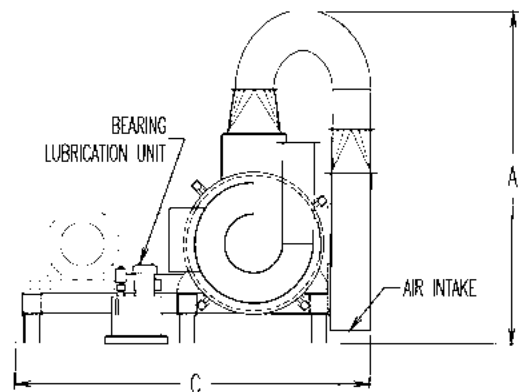
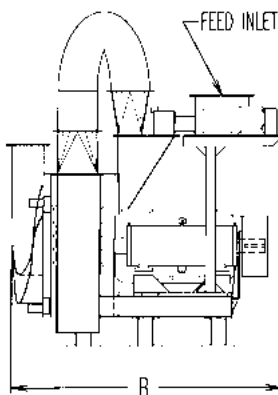


**100 hp Pulverizer and Pneumatic
Testing System Available**



MODEL	HP	A		B		C		WEIGHT	
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(lbs)	(kg)
16H	30-60	72	1830	58	1470	58 1/2	1490	2100	960
22H	50-125	84	2130	70 1/2	1790	66 1/2	1690	3600	1640
28H	60-150	94	2390	72	1830	77	1960	6400	2900
38H	100-250	100	2540	81	2060	98	2490	8500	3860
48H	200-350	110	2790	86	2180	110 1/2	2810	10,500	4770

The Above Are For Reference Only

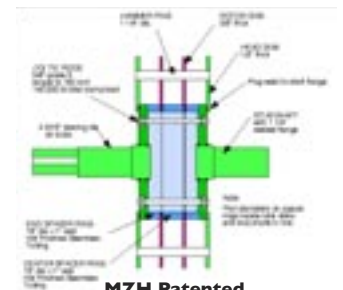
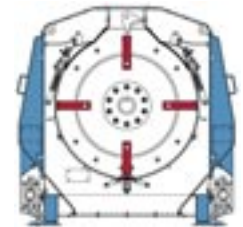


Offering complete grinding solutions to the aquafeed industry for over 50 years, Jacobson currently supplies the top aquafeed manufacturers of the world with complete size reduction solutions.

Jacobson is the worldwide leader in providing grinding system solutions to the aquafeed industry. With more aquafeed grinding installations than anyone. Jacobson has the experience to design, engineer and build the most efficient, up to date, and easy to use feed grinding systems in the world.

MZH Hammermill

The Dual Rotation Multi-Zone Hammermill consist of a double radius cutting plate with staggered slotted rows and offset rotor with 3/16" hammer to cutting plate clearance. The cutting plates offer significant size reduction prior to the products contact to the screen making size reduction more effective. The MZH is an excellent pre-grinder in demanding applications and the standard for primary grinding in traditional operations.



**MZH Patented
Rotor Design**

Commander

The fine grinding Commander Hammermill is well suited to the aquafeed industry's move toward finer ground ingredients. This mill has proven itself in the fine grinding of higher fat formulations of 2.0 mm or smaller screen sizes. The 2.5 mm tip to screen clearance is maintained around the entire grinding chamber. The staggered head plate roto provides complete hammer coverage of the screen while the manganese hardfaced cutting plate breaks up harder materials contained in most aquafeed diets. These features, along with a properly designed removal system will produce fine, clean, and steady outputs in Aquafeed applications.



**Commander
Staggered Head
Plate Design**

Pulverizer

The industries move toward this increasing complex diets and fine particle size include the need to maintain water quality and improved digestibility. The ASP mill is the worldwide standard for eel, shrimp, and fin fish applications. This screenless fine grinder works well on the most demanding aquafeed applications.

