Grinding Aquafeed With Jacobson

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 consists of a double radius cutting plate with staggered slot[ed] rows and offset rotor with 3/16" hammer to cutting plate clearance. The cutting plates offer significant size reduction prior to the product's 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.

Commander Hammermill

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 on 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 rotor 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.

ASP Mill

The industries move toward this increasing complex diets and fine particle sizes 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.

Pulverizer

The industries move toward this increasing complex diets and fine particle sizes include the need to maintain water quality and improved digestibility. The ADP mill is the worldwide standard for all shrimp, and fin fish applications. This arrangement fine grinds well on the most demanding aquafeed applications.

LAB TESTING

100hp Pulverizer and Pneumatic Testing System

Products Ground and Growing

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

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**Jacobson Air Swept Pulverizers**

**Benefits of Jacobson Air Swept Pulverizers**

- **Particle Size** - Optimum reduction in the medium to microfine range, producing powders from -0 to -12 mesh.
- **Product Feed** - Continuous three-way milling and recycle grinding plus pneumatic conveyors ensure steady output. PM specifications vary in PP documents of materials.
- **Ease 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.
- **Compactness** - Machines are designed for versatility and space savings from fixed blade 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 recirculating remove non-recovered fines and ensure uniformity of output.
- **Scarcity of Optimization** - The basic efficiency of the Air Swept design guarantees an extraordinarily favorable ratio of product yield to power consumption, processing time and related production costs.
- **Flexibility in Grinding** - To vary grinding fineness or rolling requirements for different materials, the Air Swept design allows fast changeover of grinding and classifying elements.
- **Dust-Free Operation** - Negative air or pressure design keeps dust out of the mill for interior and unexcelled simplicity for change of grinding elements or clean-up.

**How It Works**

The Jacobson Air Swept Pulverizer features a straightforward, efficient design. Its operation is as follows: The hammers (H) connected to the beater plate (2) impact and reduce the largest particles (1), and dislodge the material to the periphery of the grinding area. The hammers, which are mounted on the edges of the beater plate, rotate between 4,000 and 7,000 rpm with tip travel velocity ranging from 15,000 to 19,000 fpm (240,000 fpm per minute to grind the material against the liner (3). The classifier plate (5) reseizes the finely ground product for exit through the discharge outlet (6), while recirculating oversize material (7) to the mill for further processing.

**Built-In Classification**

The Jacobson ASP with internal classification, our internal classification system uses practical design principles which offer important cost advantages over external classifiers. These advantages are as follows:

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

In addition, recent design modifications now give the user the flexibility to control, allowing or to produce a finer range of particle-size control, allowing you to produce a finer range of particle-size control.

**Direct Drive Designs**

Our direct drive designs are an extremely low vibration. Our rigid base is constructed of thick wall tubing providing minimal vibration and twisting. While our Belt Drive design constructed of the same rigid base providing

**Belt Drive Designs**

Our belt drive design of our 16H, 22H, 28H and 48H is an 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 keyless bearing housing design and protected shaft to seal contact areas provide a highly durable system.

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

**Cartridge and Hard Faced Beater Plates**

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

When carbide is used the tungsten carbide is silver soldered to the tips and tested with oil penetrant. The beater plate is then rechecked for tight tolerances. We also spin test each carbide tipped beater plate to test carbide welds.

When also can provide hard faced beater tips when carbide will not meet your application circumstances.

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.

**Matching 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 styles depending on the application.