

# **Equipment for Dry Solids Processing**

- STORING
- **DISCHARGING**
- METERING
- WEIGHING
- CONVEYING
- SIZING
- **BLENDING**



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# The Most Trusted Name in Dry **Solids Processing**

Vibra Screw Incorporated was founded in 1955 by Eugene A. Wahl, whose experience in solving problems in the process industries led to revolutionary ways to discharge and meter dry solids.

Today, with a staff of experienced and talented engineers, technicians and craftspeople, Vibra Screw is the leader in solids processing, with high quality equipment to store, discharge, meter, convey, size and blend.

Vibra Screw serves its markets through a world-wide network of sales representatives, licensees and subsidiaries.



## **Engineering the Right Solutions;** Manufacturing to the Highest Standards

Vibra Screw is staffed with experienced, professional engineers who solve problems. From initial study, through testing and design, our goal is to satisfy your unique requirements efficiently and cost effectively.

Our modern facility in Totowa, New Jersey, handles every aspect of equipment manufacture, from sand blasting, fabrication and assembly to full electronic control production.

We design to your requirements including USDA, FDA, ASME, AWS, BISSC and NRC, among others.

## **Testing to Provide Confidence**

A specialized test lab that provides Vibra Screw engineers with the hard data they need to make the right decision for your application. Our lab operates in conditions that simulate your plant environment, yielding results that support our recommendations. The Vibra Screw test library, which holds the records of over 15,000 tests performed on a broad range of materials, is also available to our engineers as an additional research source.

### **Our Absolute Guarantee of Satisfaction**

No other industry source stands behind its products with the confidence and assurance of Vibra Screw, because no other company engineers and manufactures to our uncompromising standards. This is our commitment to you:

**VIBRA SCREW EQUIPMENT IS UNCONDITIONALLY GUARANTEED** TO PERFORM IN THE SERVICE FOR WHICH IT IS SOLD OR WE **REFUND YOUR MONEY. PERIOD.** 

### **Storage and Hoppering**

Moving materials from storage without clogging, bridging, ratholing and other flow problems has always been an industry challenge. Vibra Screw meets the challenge with an innovative line of storage and hoppering equipment. With more than 100,000 successful hoppering equipment installations, worldwide, Vibra Screw has the experience and equipment to handle virtually any application.

#### **Bulk Bag Unloaders and Fillers.**

The Bulk Bag Unloader provides a safe, dust-free and convenient way to handle and discharge bulk bags. It is available in eight models to accommodate all styles of bags and discharge requirements. These range from a receiving hopper and frame for customer supported bags to a complete bag unloading station with integral bag hoist and trolley, conveyor, load cells and controls.



#### Vibra Screw Bulk Bag Fillers

Vibra Screw Bulk Bag Fillers ensure fast, dust free and precise filling of IBC's. Available in a variety of configurations, this ruggedly constructed filler allows its operators to easily insert, fill and remove bags. From simple volumetric filling to calibrated weighing, the Vibra Screw Bulk Bag Filler is the unit that is custom built for your application.

#### **Our Patented Bin Activator**

For positive, continuous flow of almost any material, our original Bin Activator is unmatched. It mounts under any existing round or square silo, whether concrete or steel. An available oil-lubricated gyrator is maintenance-free and guaranteed for 20,000 hours of continuous use. Available in sizes from 2 ft to 18 ft.





#### Multi-Use Live Bottom Bin.

This unique, self-emptying bulk storage system combines a static cylindrical bin with the patented Vibra Screw Bin Activator in capacities from 3 to 1,200 cubic feet. Self-contained, pre-assembled and ready to install, the unit is extremely useful as a batching, portable or weigh bin, or where particle segregation is a problem.

#### The Live Bin

Forget flow problems. With Vibra Screw's Live Bin, controlled vibration of the entire bin and contents conditions material to a uniform bulk density for positive discharge in capabilities from 3 to 100 cubic feet. A flexible sleeve in not required, making the Live Bin especially suitable for sanitary applications.



### **Flexible Conveyors**

Vibra Screw's Flexifeeder line of flexible screw conveyors offers an expanded capacity with less frequent maintenance.

As with all Vibra Screw products, each Flexifeeder is matched to the individual customer requirement using both the company's extensive installation database and complimentary lab testing.



The use of controlled vibration at the inlet hopper eliminates material packing and tunneling and encourages more even loading of the conveying screw. This, along with a simple robust drive system, results in a more uniform repeatable conveying rate and dramatically reduces maintenance.

Flexifeeder are available in capacities up to 900 ft<sup>3</sup>/hr and single conveying lengths of 50 ft. Flexifeeders can be teamed with Vibra Screw's Bulk Bag Unloaders, Vibrating Bins, and Bag Dump Stations to provide integrated solid handling systems.



### Blenders, Bag Dump Stations, Water Treatment Systems, Environmental Additive Systems, and System Integration

#### **Bag Dump Station**

Vibra Screw's Bag Unloading Station is the best choice for introducing small additive materials into your processing system. These cost-effective solutions can be customized and equipped with various additions/options to meet your process requirements.











#### Water Treatment Chemical Dosing Systems

Vibra Screw's preparation and dosing systems for polymers are suitable for both small and large dosing quantities of polymer solution. Complete systems available using Bulk Bag Unloading Systems, Paper Bag Unloading System, both volumetric and gravimetric systems available. Typical applications water treatment, mining & ore processing, chemicals and paper.

### **Volumetric Feeders**

Consistency and accuracy are mandatory in any dry material processing system, and Vibra Screw volumetric screw and belt feeders deliver both. They employ controlled vibration to control density variations and ensure smooth movement throughout the feed process. The result is  $\pm$  1-2% accuracy -- consistently. Sanitary construction and variety of control options are available in all models.

### Low Rate Screw Feeders

#### **VERSIFEEDER & Mini VERSIFEEDER**

Our Versifeeder is the first volumetric feeder with a modular design, allowing one unit to adapt to the broadest range of feeding applications, including:

- Standard feeder with static hopper, trough and screw.
- Agitator conditioner feeder with secondary screw for semi-free flowing materials.
- Controlled vibration feeder for non-free-flowing materials.
- All stainless steel sanitary design to meet the stringent sanitary requirements.



### ACCUFEED

Accufeed combines all the performance benefits of the VersiFeeder at lower cost and with off-the-shelf availability. Composite materials of construction are extremely durable and meet FDA and USDA requirements.

These feeders offer rates to 600 cubic feet per hour, batch or continuous operation and feed accuracy of  $\pm 1-2\%$  accuracy.







Vibra Screw.inc.

#### **High Rate Screw Feeders Heavy-Duty Feeder**

Vibra Screw's Heavy-Duty Feeders available in 15 sizes, expand your volumetric metering capability to a maximum of 9,800 cubic feet per hour. Controlled vibration of the trough, screw and tube ensures accuracies of  $\pm$  1-2% accuracy for hundreds of dry materials. Rugged construction allows operation 24 hours a day.



### **Volumetric Belt Feeders**

The HD belt feeder operates in continuous service and handles large volumes of materials such as sawdust, ores, sand, lime and cement as well as chemicals and foods. These feeders work with any size of Vibra Screw Bin Activator, Live Bin, or Live Bottom Bin. Five Models provide feed rates of 70, 400, 1,200, 2,400 and 4,800 cubic feet per hour.



#### **Specialized Screw Feeders**

Materials such as diatomaceous earth, lime, certain pigments, etc, spell trouble for even the toughest standard metering feeders. Our specialized screw feeders get the lumps out and let you meter materials that tend to pack and clump, especially when moist. Available in six sizes to handle rates from .28 to 600 cubic feet per hour.

#### **Type BF-75 Belt Feeder**

This integrated unit consists of a live bottom bin, integral vibrating nozzle with adjustable gate, and a variable speed continuous belt.. Providing a maximum feed rate of 75 cubic feet per hour, the BF-75 is designed to handle waxy and pressure sensitive materials such as soaps, chemicals and many foods, without material degradation.





### Weigh Feeders and Batchers

Vibra Screw weighing equipment is designed and engineered to provide the most accurate dry material feeding and batching available in the industry today. Advanced microprocessor controls and a wide range of feeder types allow you to handle most materials at any rate you select, for maximum accuracy and flexibility.

#### **Continuous Loss-In-Weight Feeders**

The Vibra Screw Continuous Loss-In-Weight Feeder provides unparalleled versatility in handling a broad range of feeding requirements. Feed rates from 20 pounds to 24,000 pounds per

hour can be accomplished with accuracies of  $\pm$  1/4 to 1% on a minute-to-minute basis at 2 sigma. Control of the feeder is through a microprocessorbased controller equipped with one million counts of resolution and exclusive disturbance elimination = technology. Feeding devices can include vibrating pan or tube, screw feeders and belt feeders.

#### **Batch Loss-In-Weight Feeders**

Similar in design to the continuous weigh feeders, Vibra Screw's line of batch feeders are capable of batches from ounces to tons, feeding materials from liquids and fine

powders to fibrous and flaky materials. Control of batch size and feed time is provided through a unique control package that eliminates the effects of plant noise and the need for traditional vibration dampening devices. Batch accuracy of  $\pm 1/4$  to 1/2% or better can be achieved.



#### **Gain-In-Weight Batching**

This is a cost effective method of weighing since it requires only one or two scales for a number of ingredients. Batch sizes range from grams to several hundred pounds. Sophisticated control packages weigh up to 64 ingredients with up to 235 stored recipes or formulas.

### Vibrating Feeders, Conveyors, Incline Spiral and Screeners

Whatever you need to feed, convey, screen or blend materials, the Vibra Screw product line is at your service. The principle of controlled vibration is applied to our screeners and conveyors. Simplicity, reliability and economy are our bywords, and your assurance of unparalleled performance.

#### Pan and Tube Feeder / Conveyors

Challenge these feeders with nearly any material, regardless of size, density, moisture content or temperature. They can be used as constant speed or variable speed conveyors. The key to the line's success is low cost and simplicity of design. No moving parts ever touch the material. There are no augers, bearings, seals, or other items which can degrade material or require replacement or maintenance. Select the size up to 100 feet long and rates up to 1,800 tons per hour.



#### Vibrating Screens

Vibra Screw provides a wide variety of highly efficient vibrating screens for applications that require coerce scalping, multi-deck separation, or dewatering.

Our screening units can be fitted with standard market grade or tensile bolting cloth, stainless steel mesh, nylon, or synthetic monofilament cloth, or bar screens. Your requests for special meshes and configurations can also be accomplished.





#### Weigh Belt Feeders

The Vibra Screw Weightotaler provides industrial processors with a simple, economical way to feed, totalize or monitor material throughput by weight. It can be used for most feeding applications that call for the high accuracy and process control of weigh feeding, without the high cost and complexity of other weigh feeders. The Weightotaler is available in two models. The basic model WT as constant speed and permits totalizing and monitoring of material throughput supplied by upstream equipment such as a Bin Activator, conveyor or feeder. The optional model WTF is a variable self regulating gravimetric feeder.



#### **Control Packages**

Vibra Screw equips its continuous and batch weigh feeders with state-of-the-art controllers. All controllers incorporate user-friendly, menu driven software. Membrane keypads and easy-to-read displays support a revolutionary concept of deciphering actual weight from plant vibration and electrical noise. Complete control packages are available to meet most applications regardless of environment or complexity.





#### **Continuous Vibra Blender**

This unique device employs the principle of controlled vibration to "fluidize" dry materials for rapid dispersion and continuous, high-speed blending of solids. With extremely low power requirements and minimal particle degradation, the Vibra-Blender approaches the efficiency of a batch blender. Choose from three modes with rates of up to 1,200 cubic feet per hour.



#### **System Integration**

Vibra Screw's over half century of materials handling experience provides a unique ability to design and fully integrate a complete material handling system. We manufacture our own equipment from storage hopper to process feeders, conveyors and blenders. Add our complete control packages and you can count on one source and one responsibility from start to finish



### Keeping Dry Materials Moving

With a wealth of knowledge and experience in the use of controlled vibration to process dry bulk materials, Vibra Screw engineers have devised systems to handle most materials -- probably your material included.

As the leader in dry solids processing, our name is recognized and trusted worldwide in such diverse industries as:

#### FOODS

Flour, Soy, Meal, Sugar, Vitamin Supplements

*MINING* Aggregate, Kiln Feed, Crushed Ores, Coal, Lime

**CHEMICAL** Pigments, Additives, Starch, Carbon Black

#### **STEEL**

Foundry Sand, Ores, Binders, Ferrous & Non-Ferrous Additives

FOREST PRODUCTS Chips, Sawdust, Waste-byproducts

**PLASTICS** Regrind, Virgin, Colorant, Talc, Calcium Carbonate

#### ENVIRONMENTAL CONTROL

Filter Aids, Resource Recovery, Lime, Soda Ash, Activated Carbon, Fly Ash, Solid Wastes, Scrap

#### **ORDNANCE**

Ammonium Nitrate, Oxidizing Salts, Solid Base Propellants, Ammonium Perchlorate, HMX, RDX

#### AGRICULTURE

Cattle Feed, Soy Bean Meal, Nutritional Supplements, Mill Feed, Spent Grain

#### PHARMACEUTICALS

Calcium Carbonate, Aspirin, Sodium Bicarbonate, Ascorbic Acid



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