



Great Western Manufacturing

Product Protection and
Production Sifters Since 1858!

Why our
sifters are
exceptional



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Sifting basics

Sifting or screening is a mechanical process that separates material according to particle size. This occurs as material moves over screens of various apertures to separate coarse and fine material.

Sifting can be divided into three categories:

- Scalping – removes a small amount of oversized material from the product.
- Grading – separates material by particle size using appropriate screen sizes.
- Fines Removal – removes a small amount of undersized material.

There are several different motions for sifting equipment, including reciprocal, gyratory, and vibratory. All motions are the result of a given amplitude and speed in a particular alignment or plane.

What sets our sifters apart?

Superior sifting occurs when material is evenly distributed over the full surface of a screen with minimal agitation. Particles naturally stratify with finer particles migrating to the bottom of the material bed. This allows maximum exposure to screen openings, ensuring the accuracy and efficiency of separation are greatest.

Our horizontal gyratory motion offers optimal performance.

- Vibratory sifters bounce materials vertically, which shortens the time they are in contact with the screen and reduces efficiency. If upended, oversized, elongated particles can pass through the screen.
- Our gyratory motion keeps fine material on the screen longer because there is little or no screen slope, a slower action, and a lack of vertical agitation. Separation of similarly sized particles is more precise and the risk of oversized impurities being fractured and forced through screens diminishes because our gyratory sifting action is not as severe as centrifugal sifters.
- The horizontal gyratory motion of our sifters imparts intense action on screen cleaners to keep most products from blinding or plugging screens.



Material Flow

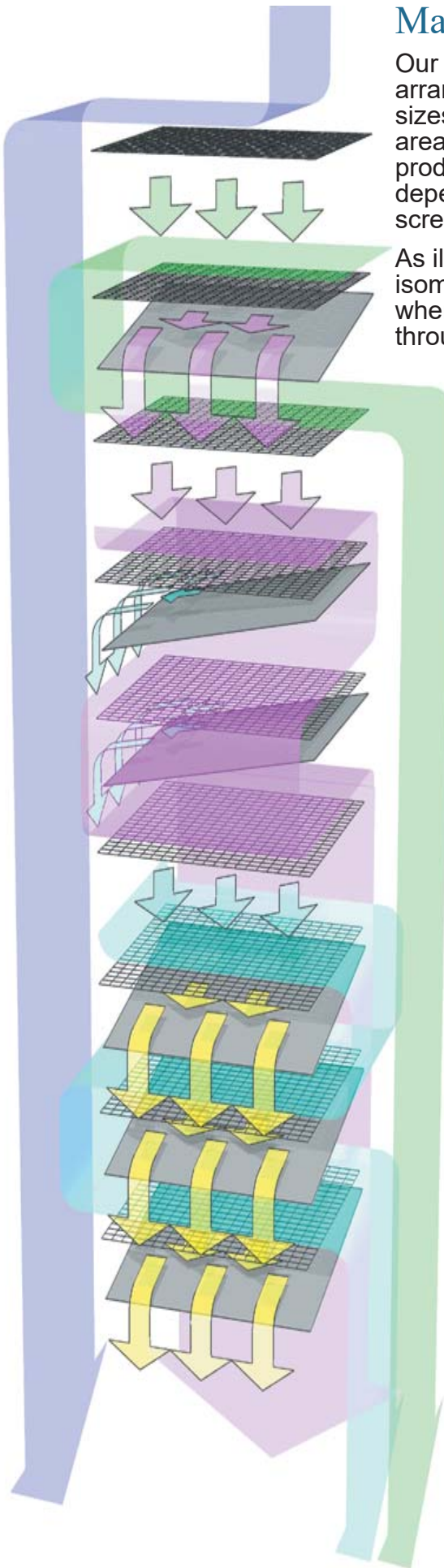
Our sifters use multiple sieves usually arranged in a series of like screen mesh sizes to create the required screen area for efficient sifting of a given product. The screen area is dependent on the product, screen mesh, and capacity.

As illustrated in the isometric image to the left, when material enters the sifter through the inlet, it immediately begins to separate by particle size. Fines (triple arrows) pass through the screen while the displaced overs (large, thick arrows) flow to the next sieve for screening. Materials pass through a given screen only once.

If a machine is sized correctly for the product and flow rate, then only the desired oversize product will carry over the last sieve in the series of like mesh sieves and discharge from the machine. Fines are directed to a common channel to flow out of the sifter.

Stacked Screen Advantages

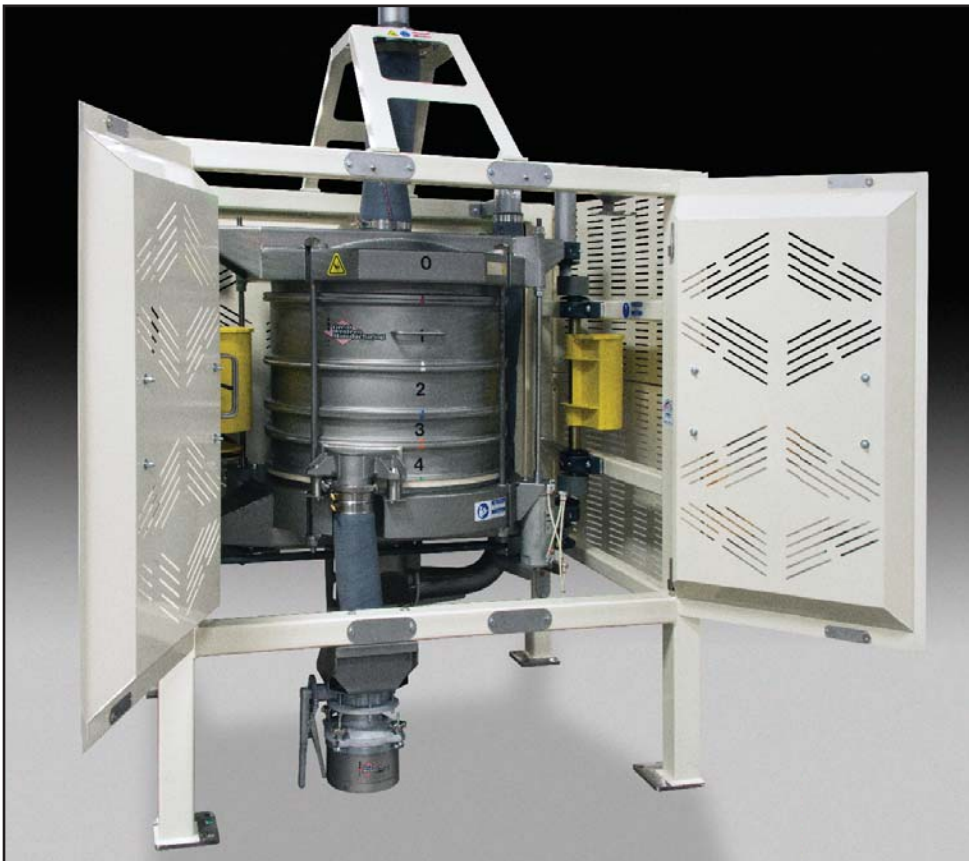
- Vertically stacked frames conserve floor space and offer maximum grading flexibility.
- Multiple screen frames allow you to proportion the sifting surface of each specific screen mesh for highly efficient grading of materials and effective use of the entire sifter.
- Smaller frames and screens are easier to handle, change, and store than large, unwieldy single deck screens.
- Smaller screens are less likely to sag or form pockets that collect material.



Our innovative
pneumatic sieve
compression
system is available
on most models



- Sifters can be opened, sieves completely removed, maintained, and reassembled in minutes without special tools, minimizing downtime.
- Pneumatic sieve clamping system allows fast disassembly. The sieves and screen trays simply interlock with one another.
- The pneumatics maintain constant compression while the machine is in operation, minimizing sieve and gasket wear.



Quality Assurance Sifters

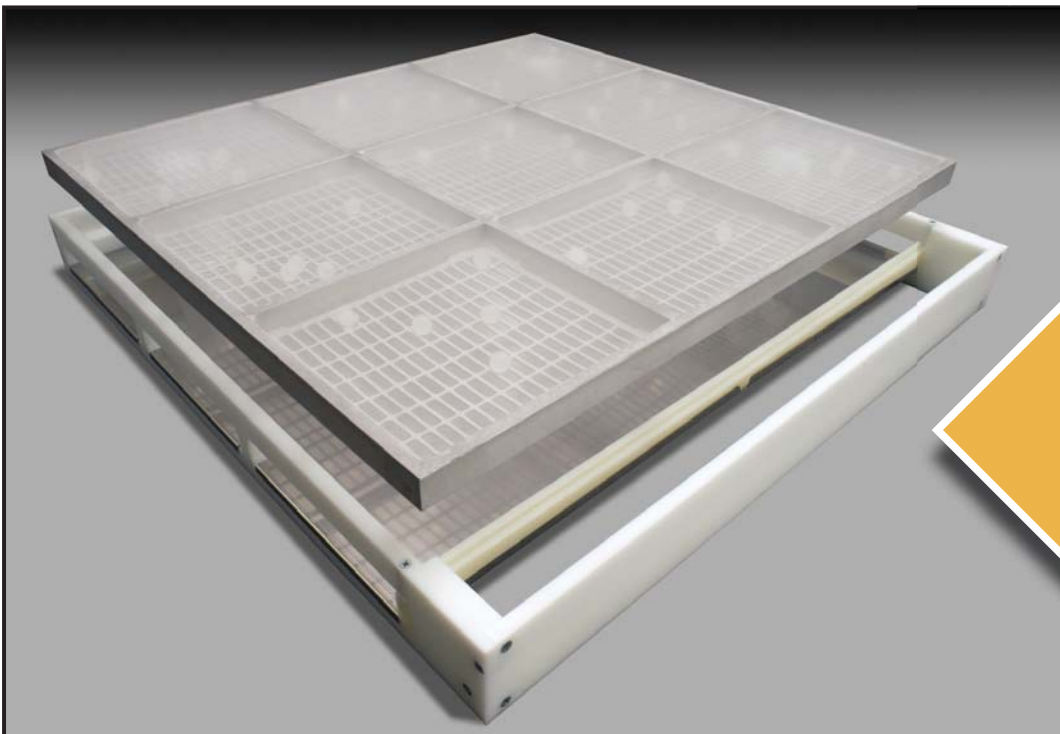
- Heavier drive components are raised or lowered to compress the sieve stack and provide easy access for cleaning and maintenance.
- Stainless steel sieve and product contact zone construction allows cleaning to be accomplished with dry brushing, air cleaning, water wash down, or steam cleaning.
- Smooth, crack, and crevice free sieves, trays, and sifter components.

Tru-Balance Drive

- The drive straddles the sifter's center of gravity and keeps the sifting motion in the machine.
- The Tru-Balance drive transfers the gyratory motion to both the top and bottom driver components simultaneously.
- This drive system has proven reliable in all of our Tru-Balance sifters since its inception in 1960.

Sieve Frames

- Available for all Great Western sifters, as well as most stack type sifters in North American and European sizes.
- Full range of construction materials including natural wood, laminated wood, food grade plastic, and stainless steel.
- Available in a range of construction styles from Fixed tray to removable screen inserts such as Demountable, Lift-out, or Nova.
- Wide variety of screen cleaners.



“HS” Free Swinging Sifter

A high-capacity machine manufactured in two, four, six, or eight sections utilizing from 10 to 30 sieves in three different sieve sizes. Machines are suspended with a set of flexible reeds.

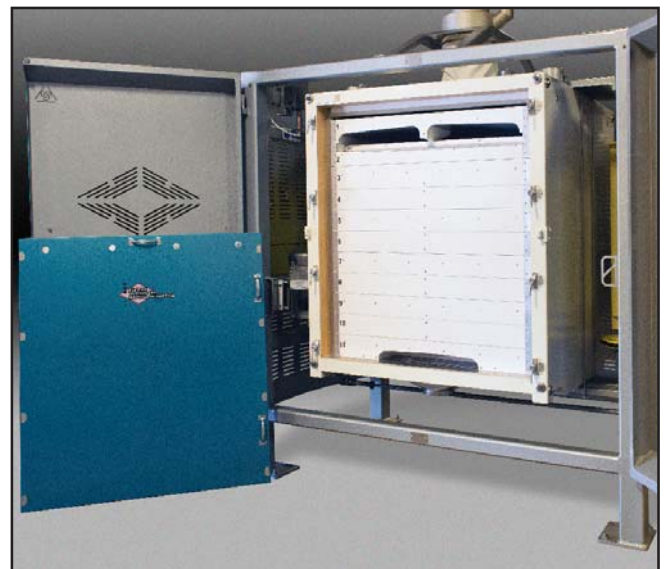
Dust-tight doors and crevice free joints assure sanitary operation.



Tru-Balance Sifters

Box Type Tru-Balance The Original

Up to 14 sieves in four sizes provide 10 to 127 sq ft of sieving area and up to six separations. The sifter's versatility offers easy maintenance, simple to exchange lift-out trays, and many sieve construction options. Available with pneumatic sieve compression or the original rack and pinion press top operators.



Modular Tru-Balance

An economical box-less design with nest-together sieve frames uses a pneumatic sieve clamping system or reliable cable clamping system.

Stainless Steel Quality Assurance Sifters

In-Line Pneumatic

Directly insert these sifters in pneumatic conveying lines for removal of oversized impurities. In quality assurance applications, these machines greatly simplify system requirements. All product contact surfaces are fabricated of stainless steel, which ensures compliance with the most stringent sanitation standards



Gravity Flow

Two standard models use up to nine sieves providing a screen area of up to 45 sq ft or 80 sq ft. Gravity Flow machines allow for accurate separation and sizing of a single product stream into two or more particle sizes.



GyroSift Sifters

Offer same benefits of our gyratory motion in a smaller size. Two models with one to four sieves.



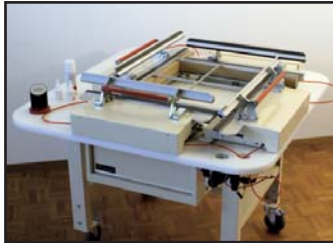


Agitator/Blenders

Used for efficient flour bleaching or enrichment addition in flour mills or blending facilities. Three rotor sizes and a multitude of arrangements give you the option to tailor a machine to your requirements.

Stream Dividers

Divide a single gravity-flow product stream into two to twelve separate streams. The housing and internal turnhead are built from stainless steel and mounted in a tubular steel frame for floor or ceiling installation.



Screen Stretchers

Machines designed to stretch screens for consistent tensions on sieve frames. Choose from two screen stretchers, the Great Western Tension Quick and Sefar's Pneumapp 2 Fabric Stretching System.

Sampl-Sifters

A sample sized sifter used to determine and monitor sifting and grinding performance. The Sampl-Sifter is available as a tabletop unit or installed in a work table. It includes a single phase motor and adjustable built-in electronic timer.



Free Testing Service

Great Western maintains a complete testing laboratory to evaluate product samples based on how the product handles and what difficulties might be encountered. Test results state area requirements and serve as a guide in determining the best size and specifications for equipment. Services are free of charge and with no obligation.



We offer customization of our standard equipment to suit your installation and process requirements.

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