

# Sweco - trusted around the world

Manufacturers worldwide rely on Sweco. We span five continents with manufacturing sites, joint ventures, service offices, and sales and service representatives. So wherever you are, be assured that Sweco – the global leader in screening technology – is there when you need us.

# Delivering more than machinery

When you choose Sweco, you get more than a piece of equipment. You get 60 years of technological innovation. Superior engineering. Problem solving. And with our extensive worldwide rep force, customer support is always close at hand. Whether you use our testing facilities in the United States, Belgium – or we bring our expertise onsite to your location – we can help you perfect your process to maximize output, efficiency and consistency while minimizing downtime and waste.

Sweco is recognized for our commitment to the highest quality management and environmental standards, earning various ISO registration standards in our manufacturing facilities around the world.

Through R&D, superior engineering and unparalleled customer support, you can feel confident turning to Sweco for solutions, not just machinery.



# **Sweco Advantages** and **Features**

Sweco designs are highly versatile and can be customized to your requirements. With over 60 years of design experience in separators, we have developed hundreds of options and components that can be used to optimize a solution for your process. Sweco's extensive database of engineering designs allows us to "plug-and-play" with these components to develop your solution.

### Widest Range of Materials Screened.

Only Sweco separators can handle such a broad range of materials... wet or dry, fine or coarse, heavy or light. Particles as fine as 400 mesh can be screened at high production rates.

## Single or Multiple Separations.

As many as four screen decks can be incorporated in one Sweco Separator, providing simultaneous separation into five fractions.

## Less Blinding.

Vibro-Energy action holds most screen blinding to an acceptable minimum. However, certain materials have inherent blinding characteristics. For unusual situations, Sweco has developed accessories to eliminate blinding.

## Greater Capacity.

In comparative tests, Sweco Separators have shown greater capacity per square foot of screening area (from 1 to 90 sq. ft.) than other types of screening devices.

#### Highest Efficiency.

Our nearly infinite (patented) no-tools force wheel adjustment coupled with our computer motion analyzer system assures more efficient processing than any other screening device. Sweco's portable motion analyzer is made available to all customers through our technical audit aftermarket service program.

#### Longer Screen Life.

Each screen cloth is held in uniform tension by drawing it taut on tension rings. The drum-tight screening surface vibrates freely without whipping against rigid supports, greatly reducing screen wear and increasing screen life.

#### Minimal Transmitted Vibration.

No special flooring or foundation is generally required. The unit may be placed (and easily moved) wherever it is needed. Many users mount their Sweco units on casters, on top of bins, on open grids, on wood, on upper floors, or on light structures not designed for rectangular vibratory screening equipment.

### Less Space Required.

For equivalent capacity, Sweco Avalanche Separators require less working floor space than other screening systems. Compact Sweco Low Profile units normally fit right into existing production lines.

## Economy—Long Life, Less Power, Low Maintenance.

Simplicity of design with few moving parts assures long life with little maintenance. Because of efficient design, Sweco Separators require less horsepower than other units of similar capacity. Remarkably long screen life and the ease with which screens may be changed result in further economies.

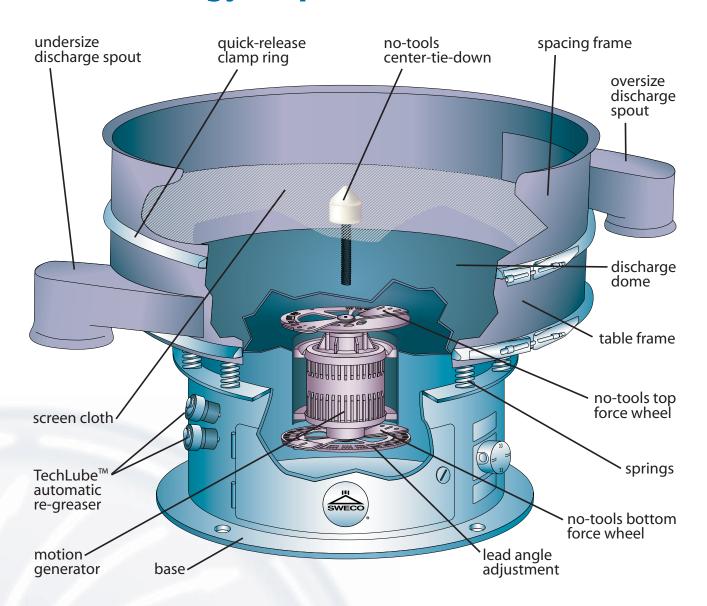








## **Vibro-Energy® Separators - Interior View**



# How Sweco® Vibro-Energy® Separators Work

Basically, the Sweco Separator is a screening device that vibrates about its center of mass. Vibration is accomplished by eccentric weights on the upper and lower ends of the motion-generator shaft. Rotation of the top weight creates vibration in the horizontal plane, which causes material to move across the screen cloth to the periphery. The lower weight acts to tilt the machine, causing vibration in the vertical and tangential planes. Speed and spiral pattern of material travel over the screen cloth can be set by the operator for maximum throughput and screening efficiency of any screenable product... wet or dry... heavy or light... coarse or fine... hot or cold.



0 Lead – Material is thrown straight and gives insufficient separation



15 Lead – Material begins to spiral



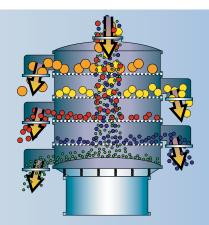
35 Lead – Gives material maximum efficient screening pattern



90 Lead – Keeps oversize material from being discharged and assists in receiving maximum throughput of minus material which tends to "ball"

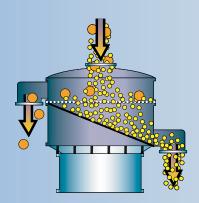
## **Separation Processes**

Sizing
Segregation of a variety of solid particles into separate groups containing comparable sizes. Up to 5 separations simultaneously.



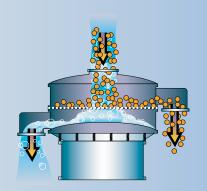
Dry Products
Sugar - spices - starch - soybeans sawdust - salt - instant potatoes animal feed - sand - abrasives grit/shot-glass beads - detergents
- rubber - polystyrene beads paint - iron oxide - lead - tungsten
carbide - ceramic and metallic
powders - milling products powdered pharmaceuticals chemical and food products

Scalping Removal of a small quantity of undesirable oversize particles in a high-throughput process.



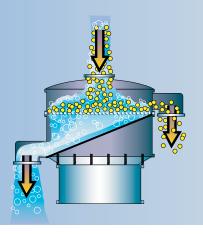
Dry Material
Powdered milk - cereals and
grains - sugar - instant coffee
granules - chocolate powder soybean flour - broth concentrate
- potato granules - borax abrasives - carbon black - metal
powders - sand - paint - casein plaster - detergents - fertilizer tobacco - bone, blood and
feather meal

Gravity Filtering / Product Recovery Filtering oversize solids from all types of slurries, or dewatering solid/liquid mixtures. Reclaiming usable solids or clarifying liquids, either of which has further economic value.



Solid/Liquid Mixtures
Fruit juices - fish - soybean oil brewer's yeast - sugar beets other food products - latex paint - catalyst - pulp and paper carpets - animal blood - tallow ceramic - kaolin - metallurgy pharmaceuticals - ice cream

Wastewater Clean-Up and Water Pollution Control Efficient recovery of usable solids, and water clean-up and re-use.



Effluent Streams
Potato peelings and waste - fruits
- other food products - latex and
other chemical products manure - sewage - fruit vegetable and pickle canneries meat - poultry and seafood
processors - brewery waste laundry waste - pulp and paper
effluent

## PharmASep<sup>™</sup> Filter/Dryer

A fully contained Vibro-Energy filter/dryer suitable for aseptic processes in the pharmaceutical, food and specialty chemicals industries. With a design that eliminates gaps, crevices and hidden areas, the PharmASep proves valuable to those processes handling potent or toxic substances. In the case of wet sieving, the PharmASep can dewater and vacuum dry the product on the screen eliminating additional handling and equipment. CIP/SIP capability is available for all PharmASep filter/dryers.

## Sanitary Separator

The Sweco Sanitary Separator meets all requirements of 3A sanitary standards and FDA requirements for food processing applications.

Constructed of 304 stainless steel and polished to a #4 finish, the sanitary separator is designed to prevent product build-up and contamination.

# Vibro-Energy® Separators for all your screening needs



## Sono-Energy<sup>™</sup> System

The Sono-Energy creates a secondary ultrasonic vibration that prevents blinding on fine meshes (60-635 mesh) as well as improving flow rates on hard-to-screen products at fine meshes. Numerous applications exist for epoxy powders, powder paints and toner powders. Sono-Energy also works well on

heavy density powdered metals including lead, nickel and chromium by preventing lodging of near-size particles.

## **Low Profile**

High capacity, wet or dry scalping in a compact, low headroom design. Dual motors mounted on opposite sides of the Low Profile allow unrestricted flow of material and create the 3-D motion that allows discharge of oversize material, keeping the screen clear for maximum product flow. Its low headroom requirement (as little as 15 inches) and straight flow design allow the Low Profile to fit easily into existing product lines.

## QuickChange<sup>™</sup> NV Separator

The patented QuickChange NV reduces screen changing to a one-person operation, greatly reducing the necessary labor and eliminating the need to involve maintenance crews. Powered by a self-contained hydraulic unit, screen changes can be made quickly, significantly reducing downtime and greatly increasing productivity.

## Vibro-Energy® Separators

PSI<sup>™</sup> Sifter

The Pneumatic Sweco In-line

(PSI) Sifter is used to sift dry

pneumatic conveying line. It

can be used to segregate

to remove foreign matter.

Typical applications include

flour, starch, salt, sugar and

flowing material in a pressurized

smaller particles from larger and

Separate solids from liquids or segregate dry materials into various sizes. Particles as fine as 400 mesh (38 microns) can be screened with up to 4 screen decks incorporated in one Sweco Separator. No special flooring or foundation is needed unless working floor space is required. Simple and efficient design requires less horsepower.

No one has more experience creating round separation solutions ... we've been 'round for more than 60 years!

## Accu-Feed<sup>™</sup> System

Sweco's Accu-Feed System combines the three functions of storage, feeding and screening of dry materials into one complete unit. The result is a substantial increase in productivity and significant savings in capital, space and energy. With its conical storage bin and adjustable feed controller, the Accu-Feed eliminates the need for stand-alone feed hoppers, hopper evacuators and feeders.

## Avalanche<sup>™</sup>

The dual screen design of the Avalanche separator effectively increases active screen area by up to 67%. The design is simple: a standard diameter frame is modified to accommodate a standard screen on the bottom with an additional, slightly smaller screen above. Material fed to the top screen either passes through the screen or discharges off the sides to be rescreened by the lower screen. The Avalanche is particularly beneficial in dry applications requiring high capacity scalping (PVC, starch, flour) as well as high efficiency dedusting (EPS beads, dry chemicals).



WWW.SWECO.COM



## **Authentic Sweco Aftermarket Products**

**Superior Screening Solutions** From spot welded screens to our patented Supertaut® Plus screens, Sweco offers the industry's widest variety of screen solutions to meet any separation challenge. In addition to our round screen offerings, Sweco also manufactures Rectangular and White Water Filter screens. And for unique screening applications, Sweco custom manufactures screens to meet any requirements. Sweco offers a full line of Market Grade, Tensile Bolting Cloth, Clear Opening and U.S. Standard Sieve Cloths. Our specialty screen products include Sanitary, 3A Sanitary, UltraSonic, Parallel Flow and 430 Magnetic offerings. Like our separation equipment, Sweco screens are made with a commitment to superior manufacturing and quality. Whatever your screening needs are, Sweco has your solution.





Motion Generators™
Sweco Motion Generators have
extra-strong, high tensile strength
castings which provide rugged vertical
mounting support for severe vibration
service. Their larger, tougher Sweco
engineered bearings provide higher
dynamic load capabilities for longer
Motion Generator life. Sweco offers
TENV, TEEP and Hostile Duty Motion
Generators. In addition, we offer the
Sweco REPAIR PLUS program, backed
by a guarantee on all repairs
and rebuilds.



Authentic Sweco Aftermarket
Covers, Springs, Spout Connectors,
Frames... All of Sweco's genuine
Aftermarket parts are built to the
same exacting standards as our
original equipment and most
products can
be modified to custom-fit your
application. We offer a wide variety of
customization options including hand
polishing, frame linings and special
fittings. And Sweco authentic
Aftermarket products are so
dependable ... they're guaranteed.



Smart-Lock™ Force Wheels
Sweco's patented all-metal weight
adjustment mechanism can be used
at up to 400 degrees Fahrenheit. The
"No Tools" Force Wheels allow you to
adjust the amplitude and screening
pattern of your separator without the
use of tools. We have also
incorporated a positive locking tab to
prevent slippage of the weight plates.
Simple, ergonomic design and
easy-to-read settings make this
weight system user friendly. Force
Wheels are available for 24"-72"
separators.













We offer screens that meet specifications from these and other industry organizations.



Self Cleaning Kits
Sweco's Self Cleaning Kits aid in
screen cleaning for increased
screening efficiency. By reducing the
amount of near-size particles lodged
in the openings of the wire mesh
(blinding), the Self Cleaning Kit
improves dry sizing and
liquid/solid separation.



#### **Rubber Goods**

To accommodate your different applications, Sweco offers a variety of rubber goods. Sweco gaskets are available in several profiles and a wide array of materials. Our flexible spout connectors are available in durable and abrasion-resistant elastomers, many of which are FDA approved for contact with food products. Whatever your application calls for, Sweco has a product to fit your needs.





No-Tools Center Tie Downs
Take the hassle out of changing
screens with Sweco's patented
"No-Tools" Center Tie Down. This
option allows you to change a screen
in a fraction of the time and gives you
the ability to tension the screen from
the top. Center Tie Downs work with or
without Sweco's Self Cleaning Kit
option. They are suited to 220 degrees
Fahrenheit and are constructed of
Food Grade Nylon.



#### TechLube™

Eliminate manual regreasing with the Sweco TechLube – an automatic grease relubricator. The TechLube is an economic solution to attaining proper grease relubrication. Made to adapt directly to existing Sweco Motion Generators, TechLube provides the right grease at the right time in just the right amount. Custom packed with Sweco premium grease, TechLube is the smart choice for your Motion Generator.

## **Authentic Sweco Instrumentation**



## SentryScan<sup>™</sup> Performance Monitoring System

Using patented microwave technology, Sweco SentryScan continuously monitors separator screens for breaks, holes or tears in the wire mesh. Early detection by SentryScan makes possible timely corrective action that can help prevent production of off-spec product, contamination of downstream equipment, costly material reprocessing or even product recalls.

## **Motion Analysis System**

Fine tune your separator motion to increase capacity, increase efficiency and reduce blinding. Sweco's Motion Analysis System perfects the motion of your Sweco Separator – and lets you apply it to every machine in the plant. Reproduce that optimum motion at other plant locations, too. Use our integrated instrumentation package to turn your Windows PC or laptop into an easy-to-use, multi-axis dynamic motion analyzer. Or, call one of our field techs to visit your plant for full diagnostic and optimization service on all your Sweco Separators.

#### **Vibration Sensor**

Stop unexpected – and undetected – separator shutdowns and prevent costly reprocessing. Sweco's Vibration Sensor constantly monitors the motion of your Sweco Separator and triggers an alarm if it stops functioning due to motion generator failure. In some cases, it can alert you of feed rate upsets, erratic product discharge, broken springs or loose anchor bolts and clamp bands. Add the Vibration Sensor's Display Unit for local digital readout of separator G-force. Operators can program two alarm set points, each with a relay contact output.

## **Bearing Temperature Sensor**

Significant increases in bearing temperature can indicate impending failure. Sweco's Bearing Temperature Sensor enables operators to continually monitor the upper bearing temperature in Sweco motion generators – preventing unexpected failures, material backups, downtime and emergency maintenance.

## Your Process Solutions Provider for Screening, Separating and Grinding Equipment



Rectangular Separators.

New technology adapts ultra-fine screen mesh for use in rectangular high-capacity separators (up to 48 ft² per deck), yielding benefits previously found only on small circular screens. Fine-mesh screen panels can be installed in five minutes without tools. Once in place, an O-ring system creates a positive seal against bypass.



Sta-Sieve® Stationary Screening Devices. Provides quick and efficient separation of solids from liquid. Ideally suited for processors that use large quantities of water. Advantages of this low-cost unit include high flow rate, long screen life and no moving parts. Can be operated independently or as a system component in conjunction with Sweco Separators or Centrifugal Screen Concentrators.



White Water Filters.

Provides high liquid flow rate (up to 4000 gpm) fine mesh centrifugal screening to remove particles larger than screen mesh. Most commonly used for White Water screening in the paper industry, it can also handle other effluent and recycle streams. Units available to remove suspended solids down to 325 mesh (44 microns).



Turbo-Screen® Air Classifiers.
Provides continuous, precise screening of dry materials, especially in the finer particle sizes. Uses screen sizes from 20-400 mesh for efficient separation of particles ranging from 850-38 microns. Handles the most difficult materials, including electrostatic materials and particles that tend to agglomerate easily.



Centrifugal Sifter.

The new Centrifugal Modular design creates a unique centrifugal force by the rotation of beater bars, which propel material through the full-length cylindrical pre-screen and screen surface. The full-length discharge chute collects screened product, while oversize materials are removed through the forward discharge chute. The CM, designed for processes where hygiene is critical, contains a patented Air Tension System which enables the unit to use fine mesh screens.



Grinding Mills.

Most versatile line of mills available today for fast, low-cost particle size reduction to sub-micron range. Vibro-Energy® grinding action achieves higher output per input horsepower; precise control of size and size distribution. Product contamination from media and lining wear is virtually eliminated.



equipment and waste management services to a variety of industries. Services include the sales and rental of equipment, one-time and ongoing cleanup services, and design and manufacture of complete turnkey systems for handling of waste streams.





GyraMax™ Rectangular Separators.

Another separation solution to further optimize your facilities' production, the GyraMax Gyratory Sifter maximizes productivity, creates a uniform sifting motion across an entire screen deck to maximize efficiency, and enables maximum recovery of clean, acceptable product.

# **AL OF OVERSIZE AND UNDERSIZE PARTICLES**



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