

# SWECO<sup>®</sup> SONO-ENERGY<sup>™</sup> SYSTEM

## THE CLEAR CHOICE FOR FINE PARTICLE SEPARATION

**A**n accessory to SWECO's round Separator Line, the Sono-Energy<sup>™</sup> System enables separators to perform fine mesh screening (60-635 mesh) on applications previously thought impossible. The System enhances screening by creating a low-amplitude, (4-6  $\mu$ m) high frequency (36 KHz) secondary vibration on screen surfaces, improving performance of fine mesh screening of both light and heavy density powders, and even particles carrying an electrostatic charge.



SONO-ENERGY'S ANTI-BLINDING ACTION COULD INCREASE THROUGH-PUT BY 50-100% COMPARED TO NON-ULTRASONIC SYSTEMS. IN SOME APPLICATIONS, THE INCREASE IS AS MUCH AS 400%!



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# SONO-ENERGY™ System

## WHEN TO APPLY ULTRASONIC SCREENING

For light density powders (epoxy, toner, powdered paint), the System's ultrasonic vibration prevents the "pancaking" or "glazing" effect characteristic of gravity screening.

For heavy density powders (Pb-Sn solder, nickel, chromium), the ultrasonic vibration makes screen wires "live," significantly reducing lodging or wedging of near-size particles that can lead to long-term, gradual blinding of screen mesh.

For particles carrying an electrostatic charge, Sono-Energy minimizes the clinging effect of small (6-20 microns), non-metallic particles.

Available in standard screen sizes from 18" to 72." Additionally, the Sono-Energy System can be retrofit to most existing SWECO and non-SWECO round separators.

## DESIGN FEATURES

### Generator Box

- Small and lightweight (320mm x 280mm x 170mm; 3.4 kg; 12.5 in x 11 in x 6.7 in; 7.5 lbs)
- Fully microprocessor-controlled circuitry constantly monitors vibration of screen cloth, assuring that the system remains "at resonance" even as loading conditions change

### Electrical Specifications

- Operates on 220 volt +/- 10% single phase power, 50 or 60 Hz
- 0-200 watts effective power to screen

### 97% Energy Efficient

- No heat generation
- Internal ring is a "tuned" structure made of 316 s.s.
- Support spokes attach to internal ring at node points. Therefore spokes will not dampen the ring vibration
- Ultrasonic vibration evenly distributed throughout entire screen area

### Transducer Designs

- Standard 316 stainless steel
- Explosion proof rating available
- Welded type - transducer permanently attached to screen ring
- Threaded type - easily removable; transducer can be transferred from one ring to another

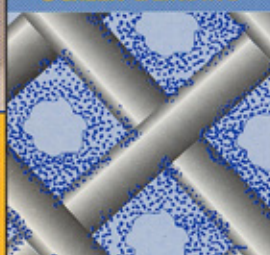
### Strength and Long Life

- Re-screenable frame can be used again and again

### Reliable, Durable Feedback Circuit

- Self-tuning, self-monitoring feedback circuit results in consistent vibration transmission even at 72" screen diameters

### CONVENTIONAL SCREEN BLINDING



Certain fine powders will invariably clog or blind nearly any conventional separating solution.

### ULTRA-SONIC ANTI-BLINDING



Continuous ultrasonic vibration virtually eliminates blinding resulting in increased screen life and dramatically reduced downtime.

## AVAILABLE ADJUSTMENTS

**Slow pulse** - ultrasonics cycle on and off at a rate of 1X per second; useful when screening light density powders in dedusting applications

**Fast pulse** - ultrasonics cycle on and off at a rate of 10X per second; useful in applications where ultrasonic vibration causes particles to bounce too high even at low intensity levels

**Continuous duty operations** - ultrasonics are always on; used for the vast majority of screening applications

Intensity of vibration - from 45-100%



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