

VORTI-SIV

Powder Metal Case Study

The application

Sieving 50 kg. batches of Titanium and Inconel 625 metal powders for a U.S. Aerospace manufacturer. The material needs to be re-sieved within 15 minutes through a US230mesh/63micron screen for reuse in their DLMS® System.

The problem

Most of the batches contain debris and powder agglomerates and are of multiple grades, which gradually blinds the screen and are hazardous. This requires a great deal of extra sieve time.

The solution

VORTI-SIV Model RVM-15E center discharge gyratory small production sieve utilizing our SFA®100 removable ultrasonic deblinding kit along with an inline Vac-U-Max® powder collection and double valve feed system.

The benefit

Minimum Clean-up and Product Changeover-

Only three (3) stainless steel product contact parts enables fast changeover. Four (4) quick release clamps secure both contact parts in the RVM-15E main housing. A vee band clamp and optional access ports enables dust-free sieving and effective powder pick-up and vacuum transfer.

SFA® Ultrasonic Deblinding Kit-

A single phase 115/230 VAC x 100watt 33-37khz auto-tuned ultrasonic generator along with an externally mounted removable transducer supplies high frequency energy into the sieve mesh via a waveguide connected to the screen's resonator frame. Screen blinding is immediately eliminated. Sweep-Frequency software is supplied with the kit to optimize the screen efficiency.

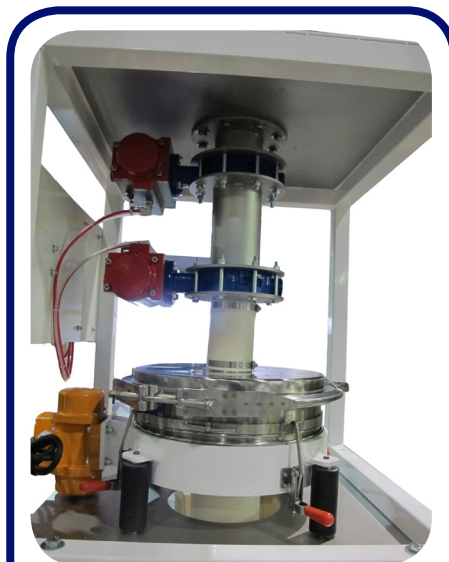


VORTI-SIV®
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Inline sieve mounted with Vac-U-Max® unit and twin valve feed.



Model RVM-15E with SFA® removable Ultrasonic deblinding transducer and generator, shown mounted to a US230 mesh stainless steel screen. Three stainless steel contact parts including: center discharge funnel, sieve & inline cover.

TECHNICAL DATA:

- Electric Vibrating Motor 1/6, 1/3 or 1/2HP, 1 or 3 Phase, continuous duty, DIV II or XP, ATEX Zone 20-22, 50/60HZ, 1800 or 3600RPM.
- Variable Frequency Drive-Optional
- Clamps: Four(4) Sanitary Heavy-Duty or Toggle/Pan. Nickel Plated Carbon Steel or all Stainless Steel.
- Contact Parts: 304/316 Stainless Steel with brush finish or 15ra/electro-polish.
- Non-Contact Parts: Carbon Steel Powder Coated Finish or all 304/316 Stainless Steel.
- Motor: All 304 Stainless Steel Enclosure or Powder Coated Safety Orange or FDA White Epoxy.
- Screens: Pre-tensioned epoxy bonded or silver solder. Removable Mesh Ring with Clip. Stainless or Nylon Mesh.
- Ultra-sonic fine mesh de-blinding kit available on all types.
- Dimensions: 20" x 20" x 2" high square tube base only, 3/8" plate base only or Four-legged portable support frame with discharge height as required. Optional telescoping legs.
- Weight: 105-200lbs. depending on options or motor size.



Sieve with waveguide and resonator.



Sieve

Funnel



Sieve unit shown internally with ultrasonic converters and resonating frame.



Model RVM-15E with Vac-U-Max® vacuum feed recovery system.



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