

Fine Mesh Vibratory Screeners

HK Technologies, Inc.

AN AFFILIATE OF  CLEVELAND
VIBRATOR COMPANY



Effective Tools for Your Toughest Powder Batches

Cleveland Vibrator's affiliate, HK Technologies, provides production and laboratory sized vibratory sieves and ultrasonic vibratory sieves, sifters and screeners for fine particle sizes, typically from 5 micron to #10 mesh. Handling both wet and dry applications, HK's vibratory sieves can be used for sizing, fines removal and liquid/solid separation.

BENEFITS INCLUDE

- Flexibility in design options ensure a seamless fit into your existing production processes for your specific vibratory screening, sieving or sifting applications
- Use of low-maintenance, continuous duty rated vibrators ensure long and low-cost life
- Ultrasonics significantly reduces blinding to improve throughput rates
- Unique ultrasonic vibration transducer design utilizes 100% screen surface area also eliminating screen wear issues experienced with competitive units
- High quality construction, warranty and service

Product Overview

HK Technologies, Inc.

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We specialize in:
ULTRASONIC DEBLINDING SYSTEM
ULTRASONIC SCREENERS
FINE MESH SCREENING
LABORATORY SIEVES
SCREEN REPLACEMENT SERVICE

FIELD PHOTO FROM CLEVELANDVIBRATOR.COM

HKC24 Twin Motor Sifter screening powder metal fed by a volumetric feeder. Screener is fit with HK Technologies Ultrasonic Deblinding System



Used for sizing, fines removal or liquid/solid separation, HK Technologies' Fine Mesh Screening Equipment can handle screening dry or wet materials from 5 micron to #10 mesh. Add Ultrasonics to achieve maximum throughput of materials and increase sieving rates while utilizing 100% of the screen surface.



The **HK Ultrasonic Deblinding System** eliminates the clogging or blinding of wire mesh when screening powder products such as ceramics, powder metals, pharmaceuticals and other powder products.


It also provides a proprietary ultrasonic vibration that is transmitted to the wire mesh allowing for finer particles to pass freely through the screening surface.


Our **HK Ultrasonic Conversion System** allows you to easily convert any gyratory screener to a high throughput ultrasonic screener, no matter who manufactured it.


Simply replace your existing screen frame with the HK Ultrasonic Screen Frame and you now have a highly efficient ultrasonic screening system capable of increasing your throughputs up to ten times!


BENEFITS INCLUDE

- Increased screening rates up to 10 times
- Eliminates screen blinding or clogging
- Greatly increase production yields
- Finer mesh screening down to 20 Microns (635 Mesh)
- Multiple deck screening with one ultrasonic generator
- 100% utilization of the screen surface

 Follow us on **Instagram** to see what we are up to in our Vibratory Equipment Department
@Cleveland_Vibrator_Co

 Visit The **Cleveland Vibrator Company's YouTube Channel** to see videos of Fine Mesh Screening Models in action.

 Check in weekly for new editions of Cleveland Vibrator's Solutions In Motion Blog at solutionsinmotion.clevelandvibrator.com

 Sign up today to receive 10 minutes of Vibration Education delivered to your inbox monthly. Visit clevelandvibrator.com for details

The Cleveland Vibrator Difference

DESIGNED FOR YOU, YOUR MATERIAL AND YOUR PROCESS

DESIGN EXPERIENCE

The Cleveland Vibrator Team has over 60 years of collective experience sizing and designing vibratory screeners for 100's of materials and applications. So, you know you will get the right force, frequency, amplitude and custom options to make your project successful.

IN-HOUSE TESTING

Cleveland Vibrator and HK Technologies offer in-house testing including sieve analysis equipment and test sieves to determine production rates of your sample materials.

HIGH QUALITY, LOW MAINTENANCE

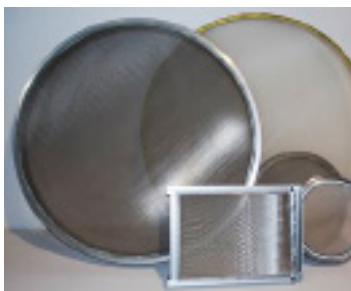
QUALITY COMPONENTS

We use Uras or Cleveland Vibrator Motors, Yaskawa Controls, Firestone isolation mounts and Bopp Wire Cloth to name a few. We use only the best brands of components, recognized for quality and continuous duty.

IMPROVE YOUR SCREENING OPERATIONS WITH OUR TURN-KEY SERVICES FOR MANAGING SCREEN REPLACEMENT

QUICK, EASY, COST EFFICIENT

We will ensure fast turnaround, quality work and competitive prices for replacing your worn out screens, lowering your overall cost of maintenance and reducing production downtime. All major screener brands are supported, even if using their ultrasonic de-blinding systems.



Common Brands We Can Convert Include:
Russell Finex, Kason, Sweco, Midwestern, Vorti-siv

Advantages of the HK Screen Replacement Services Include:

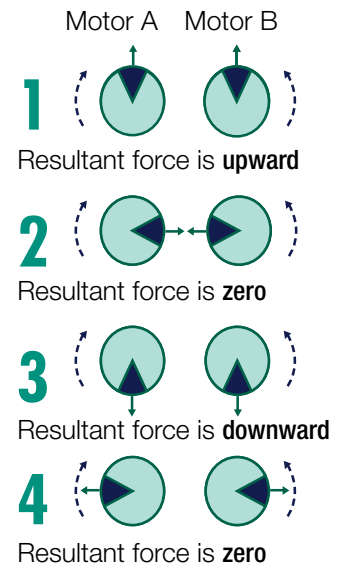
- Lower cost of maintenance
- Reduced production downtime
- Allow your staff to focus more time on production
- High quality work by experienced craftsmen

LINEAR VIBRATION

Sure, using one motor would cost less. But, most screening applications perform best with linear vibration, that are easily achieved with two synchronized vibrator motors, using the **Dual Motor Principle**, which allows the most control of contact time with the screen.
(Refer to the diagram on right)

DESIGN FOR UNIQUE APPLICATIONS

Our Vibratory Screeners are used to separate materials by particle size, remove small amounts of oversized or fine material, or remove excess liquid from finished products. Our selection includes pneumatic & electromagnetically powered units available with single, double or triple decks for materials between 20 microns and 2000 micron.



Particle Size Conversion Table

MESH COUNT	WIRE DIAMETER	MESH OPENING		OPEN AREA
/INCH	INCH	INCH	MICRON	PERCENT
2	0.063	0.437	11,112	76.4
3	0.054	0.279	7078	70.1
4	0.0475	0.2023	5660	65.9
4	0.063	0.187	4760	56
5	0.041	0.159	4000	63.2
6	0.0348	0.1318	3360	62.7
7	0.035	0.108	2830	57.2
8	0.0286	0.0964	2380	60.2
10	0.0258	0.0742	2000	56.3
11	0.018	0.073	1854	64.5
12	0.023	0.0603	1680	51.8
14	0.0204	0.0510	1410	51
16	0.0181	0.0445	1190	5.7
18	0.0173	0.0386	1000	48.3
20	0.0162	0.0340	841	46.2
24	0.014	0.0277	707	44.2
30	0.0128	0.0203	541	37.1
35	0.0118	0.0176	437	37.9
40	0.0104	0.0150	389	36
50	0.009	0.011	282	30.3
60	0.0075	0.0092	231	30.5
80	0.0055	0.0070	177	31.4
100	0.0045	0.0055	149	30.3
120	0.0037	0.0046	125	30.5
150	0.0026	0.0041	105	37.9
180	0.0023	0.0033	88	34.7
200	0.0021	0.0029	74	33.6
250	0.0016	0.0024	63	36
270	0.0016	0.0021	53	32.2
325	0.0014	0.0017	44	30.5
400	0.0010	0.0015	37	36
500	0.0010	0.0010	25	25
625	0.0008	0.0008	20	25

Laboratory Systems

HK Technologies, Inc.

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Model
HK12



Model
HK8
Fit With
Ultrasonics

HK Technologies' HK8 and HK12 line of laboratory sieving and screening units are powered by high speed, Rotary Electric Drives to generate a unique vibratory motion that will effectively handle any powder or liquid laboratory or small batch applications. They can run as a single deck unit or a multiple deck system.

- 8" or 12" sieve diameters available
- Ideal for single deck screening dry or liquid batches
- Add the **HK Ultrasonic Deblinding System** for difficult fine mesh screening application down to 20 micron



HK Dual Drive
Laboratory Shaker
Fit With
Ultrasonics



HK Dual Drive
Laboratory
Shaker

HK Technologies' Dual Drive Laboratory Shaker provides advanced sieving technology utilizing electromagnetic vibration for multiple deck sieve analysis. This Lab Shaker can be coupled with ultrasonics sieving technology for unmatched quality and precision sieving testing.

- 3", 8", 12" and 17" sieve diameters available
- Two high-speed Rotary Electric Drives provides a very rugged 3 dimensional vibratory action
- Drives can handle 8 full size test frames or up to 16 half frames

HK Quik Siv

The **HK Quik Siv** is an effective tool for lab powder batches. Powered by Cleveland Vibrator's high-speed, stainless steel Turbomite model CVT-S-10 to produce over 20,000 vibrations per minute (VPM) while using only 1.4 cfm. This high-frequency vibration is ideal for rapid and consistent throughput even on fine mesh.

- Available in 3", 8", 10", 12" and 17" diameter frames
- Adjustable clamping ring easily attaches to existing test sieves
- Hand held and easy to use with quick clamping and button activated air valve
- High frequency Turbine Vibrator enables fast screening and reduces screen blinding
- Ensure greater consistency and faster throughput than traditional hand sieving
- Highly affordable with minimal compressed air consumption needed for operation



Quik Siv product does not include sieve frame or pan as pictured

HK Twin Motor Sifter

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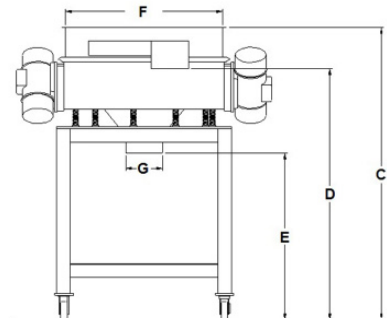
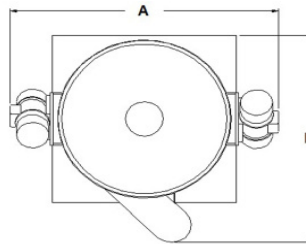
HK Technologies' Twin Motor Sifter ultra-low-profile design allows minimum space consumption making it possible to fit in tight spots between storage and process equipment. By mounting the Rotary Electric Vibratory Motors on the exterior as opposed to beneath the screening chamber, the overall height is reduced significantly.

Intended install above or below bulk storage vessels, bulk bag or drum unloaders, blenders, mixers, and other process equipment. The unit also can be utilized with bag dump stations. The Twin Motor Sifter is designed with a Quick Screen Change System making it easy to clean in a timely manner.

The HK Twin Motor Sifter provides a three dimensional motion thus allowing for greater throughput of difficult to screen products. Utilizing the optional **Ultrasonic Deblinding System** can additionally increase throughput and product yield by virtually eliminating screen blinding.



▲
HK Twin Motor Sifter



MODEL	A	B	C	D	E	F	G
HK24 Twin Drive	42.5"	33"	53.5"	47"	36.5"	24"	8"
HK30 Twin Drive	49"	42"	62"	55"	36.5"	30"	8"
HK36 Twin Drive	55.5"	47"	64"	55"	36.5"	36"	8"
HK48 Twin Drive	67"	60.5"	64"	55"	36.5"	47.5"	8"

RECOMMENDED APPLICATIONS:

- Chemicals
- Powder Coatings
- Pharmaceuticals
- Dental Powder
- Life Science
- Abrasives
- Powdered Metals

HKC Series



▲
Model HKC17

The **HKC Series** offers affordable and efficient high capacity check screening where portability or limited space is important. Perfect for check screening and quality control of your small powder batches.

The HKC Series has been designed with a low profile and vertical discharge of fines, allowing for screening where space is limited. It can easily be rolled over a box or fiber drum for checking the screening of your powdered materials. Its unique vibratory action allows for easy removal of all oversized materials or debris from your product stream.

- All units are constructed of 10 gauge 316 stainless steel for quick and easy screen changeover
- 12", 17", 24", 36" and 48" screen diameters are available
- Power options include (RE) Rotary Electric Drives or Pneumatic powered vibratory units

HK Incline Screener

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The **HK Incline** is a complete self-contained ultrasonic screening system designed for extremely high yield screening applications. The HK Incline system transmits high frequency, low amplitude vibration directly to the screening surface. By virtually eliminating screen blinding or clogging, the HK Incline provides an extremely reliable method for screening dry materials that require high yields.

- Multiple deck sieving
- Screens down to 20 micron - 10 micron with electro-formed sieves
- Quiet, continuous batch operation
- Eliminates the need for second pass screening



HyBrute Screeners



HyBrute
Screener

The Cleveland Vibrator Company's **HyBrute™ Screener** is unique to the material handling industry. This hybrid unit combines the high volume capacity of a brute force screener with the Fine Mesh Screening capabilities of an ultrasonic screener.

HyBrute Screeners process materials at faster rates and with efficiency previously unattainable in the industry.

These screeners are available in three sizes, with screen areas of 4½, 8 or 18 square feet.

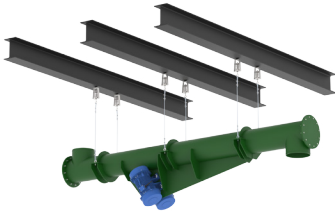
The HyBrute Series of Vibratory Screeners uses **HK Technologies' Ultrasonic Deblinding System** to effectively screen materials through a very fine mesh using screen excitation. These units offer many benefits to the manufacturers and material processors with increased capacity and screening efficiency.

BENEFITS INCLUDE

- Higher sieving efficiency
- Faster production rates
- Finer mesh screening down to 20 Microns (635 Mesh)
- Consistency with less screen blinding
- Increased volume

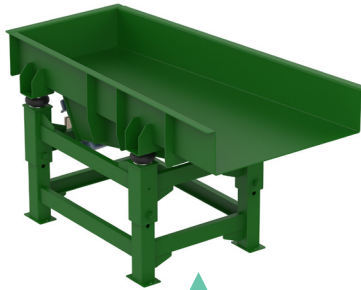
Other Vibratory Equipment

THE CLEVELAND VIBRATOR COMPANY OFFERS A FULL RANGE OF FABRICATED VIBRATORY EQUIPMENT SUITABLE FOR ANY SIZE JOB. All equipment is fully customizable and can be incorporated into automated or semi-automated production lines. Vibratory Equipment can ensure less waste of space and materials, faster production times, and more thorough feeding and screening.



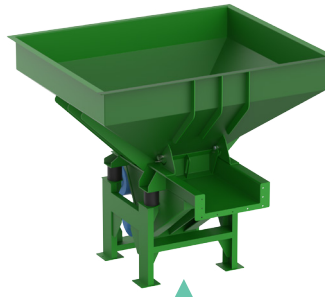
**Model EMF-T
Tube Feeder**

This model provides an enclosed tubular shaped feed tray that allows for materials to feed consistently and effectively without being exposed to external environmental factors.



**Model EMF
Electromechanical Feeder**

Utilizing twin (RE) Rotary Electric Vibrator Drives rated for continuous duty, feed your materials using the linear motion that provides smooth, uniform, volumetric flow that is fully adjustable. RE Models available in four speeds for medium to heavy-duty applications.



**Model RFM
Volumetric Feeder**

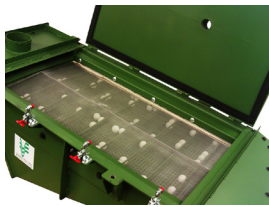
Compact and self-contained units that incorporate a vibratory bulk supply hopper and vibratory feeder enables controlled and reliable flow of bulk materials and parts ensuring efficient and low-cost dumping and feeding into production processes.

VIBRATORY FEEDERS

Typically used to feed raw materials or finished products into mixers, furnaces, production processes or final containers, Cleveland Vibrator's Vibratory Feeders are available in a wide variety of styles and finishes. Fully adjustable volumetric flow allows for automated or semi-automated production process or fill stations.

- Air Powered Feeders
- Electromechanical Feeders
- Volumetric Feeders
- Tube Feeders

Vibratory Screening



**Model EMBS
Electromechanical
Screener with Ball Tray
Deck**

Relieve screen deck plugging and clogging while saving costs of maintenance and provides high efficiency in your screening process.



**Model PSC-E
Portable Slope Deck
Screener**

Offers a customizable screening option with lightweight portability for use across multiple applications dealing with fine bulk materials.



**Model SF-A Air Powered
Screener**

Primarily used in applications where simple, economical control of the feed rate is desirable. Also, these screeners are recommended for hazardous-duty areas.



**Model RSM Volumetric
Screener**

The all in one unit enables production efficiencies for easily dumping material from an inexact process and getting a controlled and uniform product outcome.

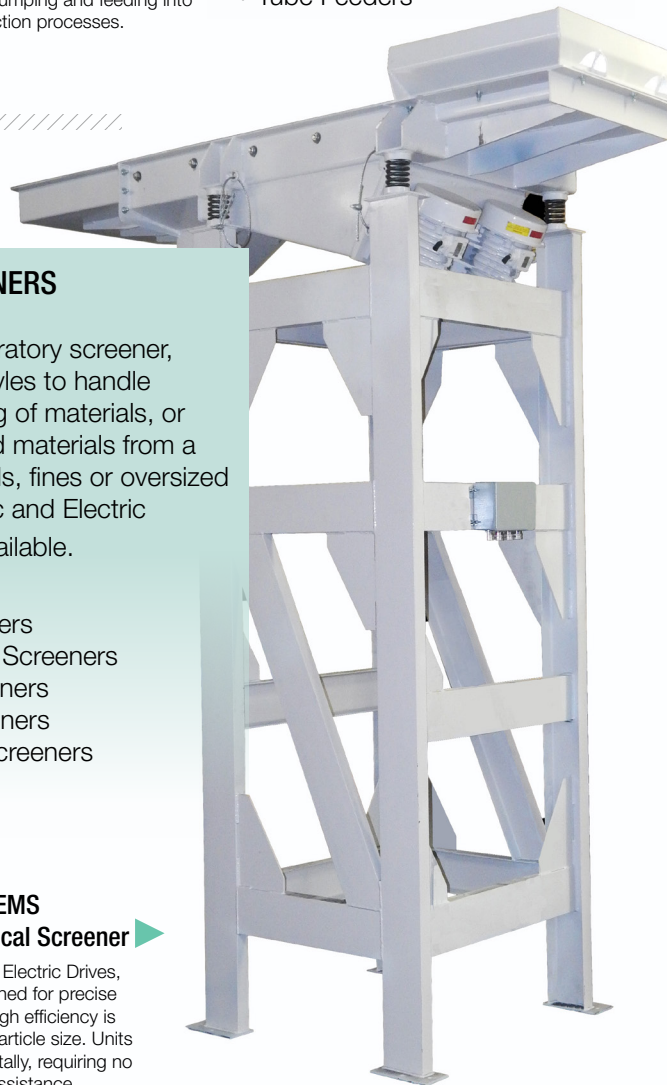
VIBRATORY SCREENERS

We offer multiple vibratory screener, scalper and sieve styles to handle separation and sizing of materials, or removal of unwanted materials from a batch, such as liquids, fines or oversized products. Pneumatic and Electric Powered Models Available.

- Volumetric Screeners
- Electromechanical Screeners
- Air Powered Screeners
- Gravity Flow Screeners
- Portable Sloped Screeners

**Model EMS
Electromechanical Screener**

Fit with dual Rotary Electric Drives, this model is designed for precise screening where high efficiency is required in the end particle size. Units are mounted horizontally, requiring no gravitational assistance.



Other Vibratory Equipment

VIBRATORY TABLES

Handle tough material challenges of condensing, settling, densifying, de-airing and packing and built to fit your needs in production, filling and packing or weighing.

- Light-Duty Packers
- Jogger Tables
- Shake-Out Tables
- Specialty Systems
- Flat Deck Tables
- Grid Top Tables
- Weigh-Scale Packers
- Vibratory Conveyor Systems



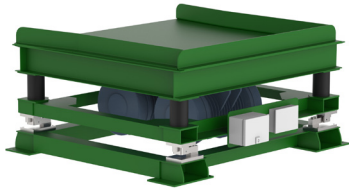
**Model FA
Flat Deck**

Our most popular Vibratory Table option, Model FA is typically used to settle material in cartons, drums, kegs, boxes and bags or for removing air from poured concrete and refractories.



**Model VP
Light Duty Tables**

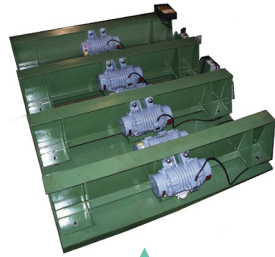
Commonly used for compacting coffee, pharmaceuticals, or other powdered products in small containers such as bottle, cans or bags. Force and frequency of Air Powered Models are adjustable by air pressure regulation, while electric tables are adjustable by mechanical means or an optional (VFC) Variable Frequency Controller.



**Model WFT
Weigh Scale Flat Deck**

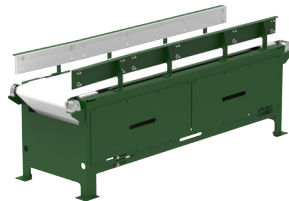
Weigh Scale Packers allow for filling, weighing, and vibration of bulk containers. Tables can be fitted with digital scale instruments that incorporate set points to control the start and stop of the fill device, as well as the vibration sequence.

**Weigh Scales are available in a variety of deck options to meet any requirements.*



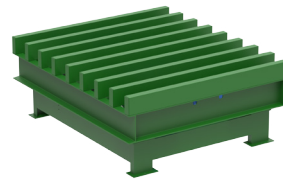
**Live Beam Vibratory Table
Model**

Built primarily for the consolidation of concrete or castable materials in large forms and moulds. Ideally suited for pre-stressed concrete forms, the beams can be spaced apart as much as 10 to 15 feet for handling long and narrow, yet extremely heavy loads.



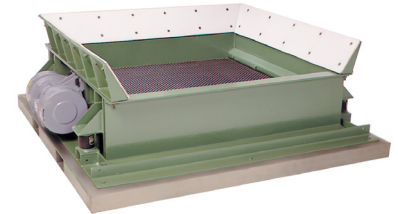
**Model BT
Belt Conveyor**

The Belt Table Conveyor is designed to simultaneously settle product within its container while transporting the container to a closing and sealing machine. Linear vibration aids in settling the material in its container before the container is closed.



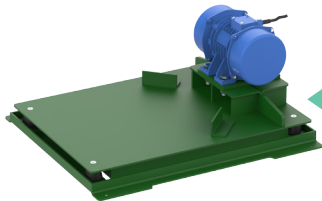
**Model GT
Grip Top**

Ideal for automatic and semi-automatic packaging and filling lines that use roller conveyor systems. The table is installed at the filling or compaction station of an in-line conveyor system. GT Grid Top Tables are available in standard, low profile or custom configurations.



**Foundry
Shake-Out**

Shake-Out Tables feature a low profile design and quiet operation, with no noise generated from the steel isolation springs, belts, pulleys, or vibrating crank arms of other designs. Units with UHMW coated side deflectors are available. Able to handle loads up to 12,000 lbs. depending on deck size.



**Drum Packer
Model**

Eliminate dead space in large drums before shipping, reducing container costs. Common applications include compacting granules, powders, pellets, molded or stamped rubber, plastics and steel parts. It's rugged yet compact design takes up less than 6 square feet of floor space and is rated for continuous duty. Air Powered and Electric Powered options available. Meets OSHA Noise Requirements.



**Model VJ
Electromagnetic Vibratory Jogger**

Ideal for filling small moulds in the plastic and fuse industries, it has also been used in the chocolate and candy industry. This rugged unit comes with a HDPE (High Density Polyethylene) deck and built-in controls. The unit is designed for 115/1/60 operation and the frequency is fixed at 3600 VPM.

FOR MORE INFORMATION

Call: HK Technologies at 330-337-9710 clevelandvibrator.com
Email: jhochadel@clevelandvibrator.com 600 Cherry Fork Ave.
Buy Online: www.clevelandvibrator.com Leetonia, OH 44431

330-337-9710
 800-221-3298
 Fax 330-332-6045

