

ADVANCED CLEANING, SORTING AND GRADING EQUIPMENT

for the

FOOD PROCESSING INDUSTRY



Spectrum Industries is the leading manufacturer and exporter of high quality grain processing machinery such as high resolution camera sorters, gravity separators, vibro graders, vibro cleaners, de-stoners, coffee hullers and grain handling equipment etc.

AN ISO 9001:2000 CERTIFIED



SPECTRUM INDUSTRIES
success through innovation
AN ISO 9001:2000 COMPANY



VIBRO CLEANER

The heavy duty cleaning machine

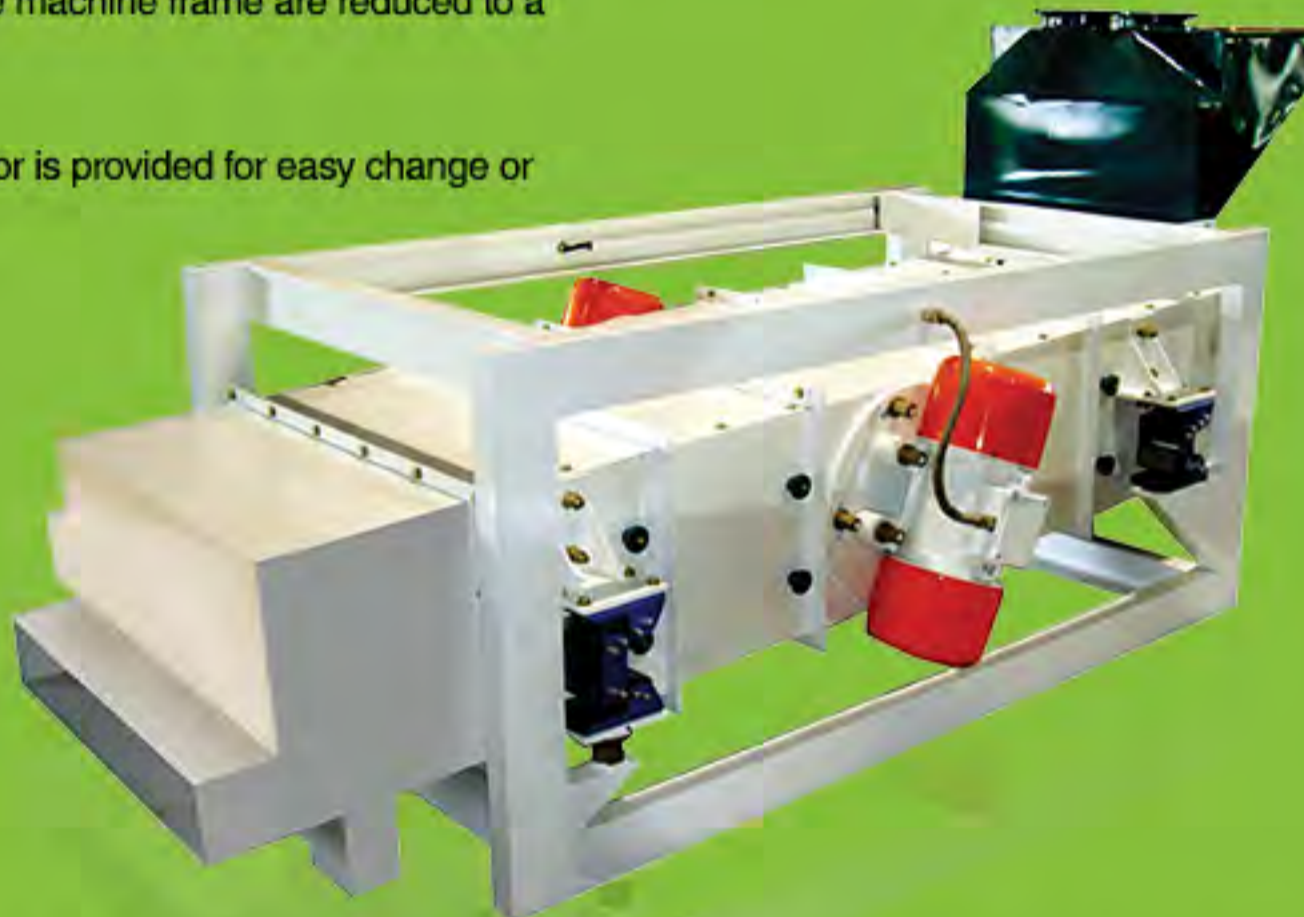
Spectrum Vibro-Cleaners are used for removing large impurities like stick, buck and leaves as well as fine dirt and sand from good product in seed cleaning and processing plants. They are provided with two vibrating screens, the top screen removes oversize material while the bottom screen eliminates fine dirt and sand. The vibration of the deck containing the screens is provided by means of vibratory motors mounted in the center of the machine.

The deck inclination, stroke and angle of throw are adjustable for optimum performance. The vibrating deck is mounted on four hollow rubber springs thus ensuring that the vibration of the machine frame are reduced to a minimum.

A swing down type door is provided for easy change or cleaning of screens.

Technical Features

- Easy access to screens for cleaning and changing.
- Deck inclination, stroke and angle of throw are easily adjustable.
- Trouble free performance due to the use of vibratory motors.
- Hollow rubber springs ensure minimum main frame vibration.



Note:

- ★ Capabilities are only indicative and have been specified for Paddy only and therefore may vary from commodity to commodity
- ★ Specifications are subject to change without prior notice

DESCRIPTION	VC-90	VC-125	VC-180	VC-240	VC-300
Power Required in HP	1.5	1.5	2	3	3
Capacity per hour in Tonnes	1-1.5	3-4	5-6	7-8	9-10
Nett Weight in Kgs.	400	600	800	1000	1200
Gross Weight in Kgs.	495	730	975	1240	1420
Shipping Volume in Cu. Mtrs.	2.5	3.5	4.5	6.75	8.75

GRAVITY SEPERATOR

The heavy duty specific gravity seperator

Spectrum Gravity Separators are used to separate products of the same size but with difference in specific weight. They can be used effectively to remove partially eaten, immature and broken seeds to ensure maximum quality of the final product. They may be used to separate and standardise coffee, peanuts, corn, peas, rice, wheat, sesame and other food grains.

These Gravity Separators have a rectangular deck so that the product travels a longer distance resulting in cleaner separation of light and heavy particles and the lowest percentage of middlings.

The product flows over the vibrating deck in which pressurised air is forced through causing the material to stratify according to its specific weight.

Technical Features

- Can easily seperate granular materials according to the weight of the product.
- Easy deck removal for cleaning.
- Multi-fan system for accurate control of air.
- Precise Control of air, feed rate and speed of deck motion
- Easy adjustment of deck inclination in both longitudinal and transverse directions

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The heavier particles travel to the higher level and the lighter particles travel to the lower level of the deck.

In order to obtain efficient separation by specific weight the pressurised air supply needs to be accurately adjusted and this is accomplished by having individually adjustable air fans to control the volume of air distribution at different areas of the vibrating deck. The table inclination, speed of eccentric motion and the feed rate can be precisely adjusted with ease and minimum of operator training.



DESCRIPTION	GS-120	GS-165	GS-210	GS-320	GS-400	GS-500
Power Required in HP	6	6	6	8.5	11.5	17
Capacity per hour in Tons	0.75-1	1.25-1.5	1.5-1.75	2.5-3	4-5	6-8
Nett Weight in Kgs.	715	820	1080	340	1675	2125
Gross Weight in Kgs.	845	970	1270	1600	1990	2525
Shipping Volume in Cu.Mtrs	3.5	4.4	5.75	8.25	10	125

DE-STONER - VACUUM TYPE

The heavy duty vacuum type de-stoning machine

Spectrum De-stoners are used for separating heavier materials like stones, glass, metal etc., from food grains and other dry granular material.

The principle used is stratification of the product into heavier and lighter fractions by forcing air through the bed of material.

The vibration of the deck is achieved by means of un-balanced vibratory motors mounted at the centre of the machine. The Vibrating deck pushes the heavier material in contact with the deck upwards towards the stone discharge spout. The lighter material flows down the inclined, vibrating deck and exits through the clean product spout.

The inclination of the vibrating deck and the stroke of eccentric motion can be finely adjusted to achieve the optimum degree of separation.

A wide variety of deck screens are available to suit specific need. All adjustments can be made with ease and minimum of operator training.

Technical Features

- Can be connected to a central aspiration system.
- Provided with clean product and stone discharge spouts.
- Windows provided for product viewing.
- Deck inclination and stroke can be adjusted finely .
- Easy control of air flow and feed rate.



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DESCRIPTION	VS-50	VS-75	VS-100	VS-150
Power Required in HP	0.66	1	1	1.5
Capacity per hour in Tonnes	0.75-1	1.5-2	3-4	5-7
Nett Weight in Tonnes	250	300	350	450
Gross Weight in Kgs.	350	425	500	625
Shipping Volume in Cu. Mtrs.	1.5	2.25	3	4.25

GRAVITY SEPERATOR

The heavy duty specific gravity seperator

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These Gravity Separators have a rectangular deck so that the product travels a longer distance resulting in cleaner separation of light and heavy particles and the lowest percentage of middlings.

The product flows over the vibrating deck in which pressurised air is forced through causing the material to stratify according to its specific weight.

Technical Features

- Can easily seperate granular materials according to the weight of the product.
- Easy deck removal for cleaning.
- Multi-fan system for accurate control of air.
- Precise Control of air, feed rate and speed of deck motion
- Easy adjustment of deck inclination in both longitudinal and transverse directions

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The heavier particles travel to the higher level and the lighter particles travel to the lower level of the deck.

In order to obtain efficient separation by specific weight the pressurised air supply needs to be accurately adjusted and this is accomplished by having individually adjustable air fans to control the volume of air distribution at different areas of the vibrating deck. The table inclination, speed of eccentric motion and the feed rate can be precisely adjusted with ease and minimum of operator training.



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VIBRO GRADER

The heavy duty grading machine

Spectrum Vibro Grader can be used for grading grains by virtue of their size. The inclination of the screens, stroke and the angle of throw are adjustable, resulting in perfect and uniform classification. It can be used for a wide variety of applications such as for coffee, peanuts, corn, fried gram, beans, peas etc.

Large screens are provided with maximum number of holes to obtain high outputs. Vibration of the screens is provided by means of vibrators mounted in the centre of the machine. The vibrating deck is mounted on four rubber springs thus ensuring that the vibrations of the machine frame are reduced to a minimum.

The screens can easily be changed by swinging down the inlet door and sliding them out.

The screen cleaning is automatic by means of rubber balls thus ensuring that maximum holes are available at any time for proper grading. A wide variety of rubber balls thus ensuring that maximum holes are available at any time for proper grading. A sighting pass is provided to enable continuous observation of the functioning at the machine. Outlet spouts are provided with individual partitions and bagging device.

Technical Features

- Easy and quick change of sieves possible.
- Automatic cleaning of screens by means of rubber balls.
- Drive by means of vibrators mounted in the centre of the machine.
- Adjustable screen inclination is provided
- The angle of throw and strokes are also adjustable.



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DESCRIPTION	VG-90S	VG-1225	VG-180S	VG-240S	VG-300S
Power Required in HP	1.5	1.5	2	3	3
Capacity per hour in Tons	1.5-2	2.5-1.3	4-5	6-7	8-10
Nett Weight in Kgs.	440	640	840	1030	1280
Gross Weight in Kgs.	535	770	1010	1250	1500
Shipping Volume in Cu.Mtrs	2.5	3.5	4.5	6.25	8.5

S-4001 CAMERA SORTER

The SPECTRUM S-4001 Camera Sorter can be used for sorting wide range of products such as food grains, rice, coffee, cereals, pulses, groundnuts etc., and dehydrated fruits and vegetables such as carrot and onion. These can also be used for sorting plastic pellets, plastic flakes, quartz, semi-precious stones etc.

Using advanced high resolution line scan cameras, the product to be sorted is scanned at up to 6000 scans per second producing a very high resolution image of the object. The resultant image is displayed on a TFT screen for online viewing of the product.

Technical Features

- High Resolution line scan Cameras.
- Upto 6000 scans per second
- Automatic cleaning of viewing area by wiper system
- Ultra fast pneumatic ejectors.
- Automatic online calibration with self check procedures.
- Fully computer controlled

The product data is compared with user preset parameters to reject the defective product using ultra fast pneumatic ejectors.

The **S-4001** is fully computer controlled with automatic calibration and self check procedures.

Instant change over from one product sort to another is possible, using pre-stored sorting Algorithms.



Air Requirement	
Pressure	7 Bar (100 PSI)
Consumption	15-50 Ltr/Sec (32-110 cfm) approximate depending on the rejection rate
Air Quality	7 Bar (100 PSI)

Air Requirement	
Voltage	230 V AC Single phase
Frequency	50 Hz
Power	2 KW

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