

# **SCREENS AND FEEDERS**

**Material grading  
feeding and handling  
equipment for  
industrial installations**

**ELKAYAM**  
**INDUSTRIES**

[www.elkayam.co](http://www.elkayam.co)

# **Whatever the material or the project,**

**ELKAYAM** has been designing building and supplying screens and feeders of all types for decades. The attention to every engineering detail and advanced design concepts ensure sturdy long lasting and ultra reliable plant needing a minimum of maintenance and a giving reliable full specification output.

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**BUILT TO MATCH YOUR NEEDS**

Today **ELKAYAM** produces screens and feeders of every known type for high grade production in quarries and industrial installations - everywhere in fact where grading and conveying are part of normal production, from the smallest to the very largest of installations, under a credo of high standards and specifications which **ELKAYAM** has set itself to meet.



## Elements to Consider

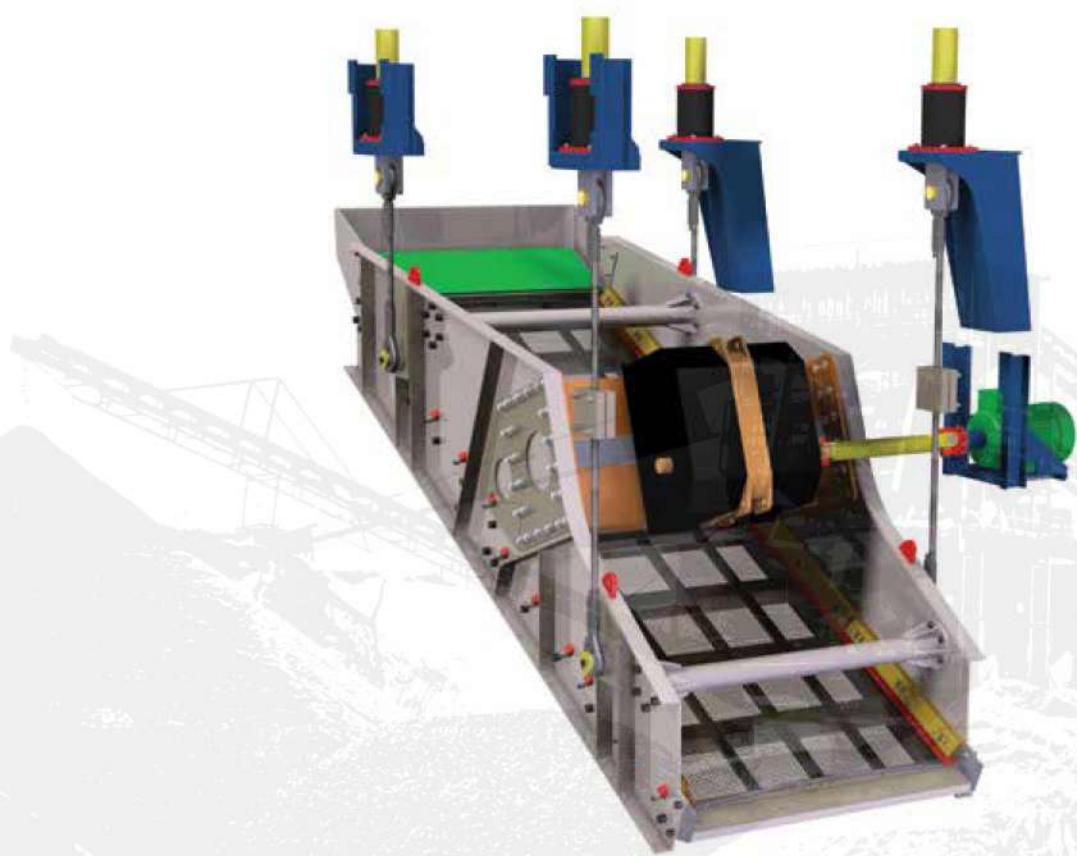
- Type of material
- Feed rate
- Feed system
- Material condition – dry /wet
- Actuation system
- Frequency
- Efficiency for the specific project
- Aggressiveness of the materials
- Water usage
- Mesh type
- Space and positioning

The **ELKAYAM** construction system enables fine tuning of each unit to the specific needs of the project – there is a huge number of configurations and combinations so that each project can be optimized for the specific feeding or screening process required without compromise or waste of power.

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# Innovative Engineering

Engineering solutions using advanced techniques and materials for efficient working and long life. Different screens and screen mountings, suspension methods and drive systems tailored to the material and the working environment.



# EL Vibrating Screens

EL vibrating screens are able to segregate a wide range of bulk materials, sizes ranging from 0-250 mm. The product range caters for all applications, i.e. material classification, working character of the material, different capacities and screening quality. The screens are produced in line with the international standard. The quality of steel, the accurate production, stress relief process and NDT inspection, ensure a product which will last for years. Elkayam Industries design and produce all the accessories which enable perfect coordination between the screen system and the components of the processing plant.

## TRANSMISSION UNIT

There are three variations:

- Universal drive shaft (direct) for the 950 r.p.m. screen.
- 'V' belt drive pulleys, which enable a wide range of speeds.
- Combination of 'V' belts with universal drive shaft.

The simplification of the transmission unit, ease of maintenance and reliable operation are the main features in guiding us to a good design. Oscillation of the screen can be adjusted by adding or removing the weights, or by rotation of the weights relative to each other.

## WASHING SYSTEM

EL screens can be supplied with a washing system built in. The system is made up of a series of pipes across the screen for each deck. Each pipe is fitted with special sprays for the best result.

## ELS SCREENS

This type of screen is specially designed for screening of sand and fine materials. The bottom deck consists of wires, which allows the screen to work in an high relative humidity. The principle of operation being based on forced oscillation with static bearings, which create the highest acceleration for giving the best cleaning process.

## ELH SCREENS

Heavy-duty type screens are able to handle a large aggregate size.

Most commonly used after primary crushing of the material.



## Dimension and Model Reference Chart

Model	6224-2	6424-2	6221-3	6221-2	6218-3	2-6218	4918-3	4918-2	EHD 4515-3	EHD 4515-4	4515-3	4515-2	3015-2	3012-2	2010-1
	6424-2	6224-2	6221-3	6221-2	6218-3	6218-2	4918-3	4918-2	EHD 4515-3	EHD 4515-4	4515-3	4515-2	3015-2	3012-2	2010-1
<b>A</b>	2430	2360	2100	2100	1800	1800	1800	1800	1500	1500	1500	1500	1500	1250	1000
<b>B</b>	5830	6000	6000	6000	6200	6200	4900	4900	4500	450	4500	4500	3000	3000	2280
<b>C</b>	4064	4800	4802	4802	4802	4802	3280	3280	3380	3380	3380	3380	1208	1208	1723
<b>D</b>	2913	2870	2570	2570	2300	2300	2300	2300	1970	1970	1970	1970	1970	1690	974
<b>E</b>	1840	1690	2006	1430	2006	1430	2006	1430	1690	1850	1690	1690	840	840	734
<b>F</b>	560		690	690	690	690	690	690	690						
<b>H</b>							2490	2490		2280	2247	2247	2247	2131	
<b>I</b>	1920	3120	1736	1736	736	736	736	736				2170			
<b>J</b>	2803	2852	2723	2723	2723	2723	2138	2138	2170	2170	2170	2170	1372	1372	771
<b>L</b>	705		705	705	705	705	705	705	705						
<b>M</b>	507	951	958	958	958	958	958	958	518	357	518		556	556	
<b>N</b>			570		570		570		650	683	650	650			
<b>O</b>									343						
<b>P</b>	200	172	44	44	44	44	62	62	41	71	30	30	41	41	15
<b>L-max.</b>	6950	7000	7248	7442	7442	7248		5938	5264	5362	5264	5208	3338	3338	2443
<b>W-max.</b>	3230	4750	2900	2900	2620	2620	2620	2620	2180	2180	2180	2180	2192	1942	1322
<b>α (°)</b>	20	20	20	20	20	20	20	20	15	15	15	15	15	15	8.3
<b>Weight Kg.</b>	8100	11000	10,020	10,020	8800	6800	5800	5200	4900	4630	3800	3660	2350	2200	500
<b>Power Kw.</b>	30	30	30	22.5	22.5	22.5	22.5	22.5	18.5	18.5	15	15	5.5	5.5	1.1 + 1.1
<b>Screen Size mm W x L</b>	2430 X 5830	2360 X 1500	2040 X 6000	2040 X 6000	1770 X 6200	1760 X 6200	1770 X 4900	1770 X 4900	1470 X 4500	1470 X 4500	1470 X 4500	1470 X 3000	1220 X 3000	1000 X 2280	

All our rotating screens are supplied with flanged replaceable sections

## Material Condition Compensation Factor

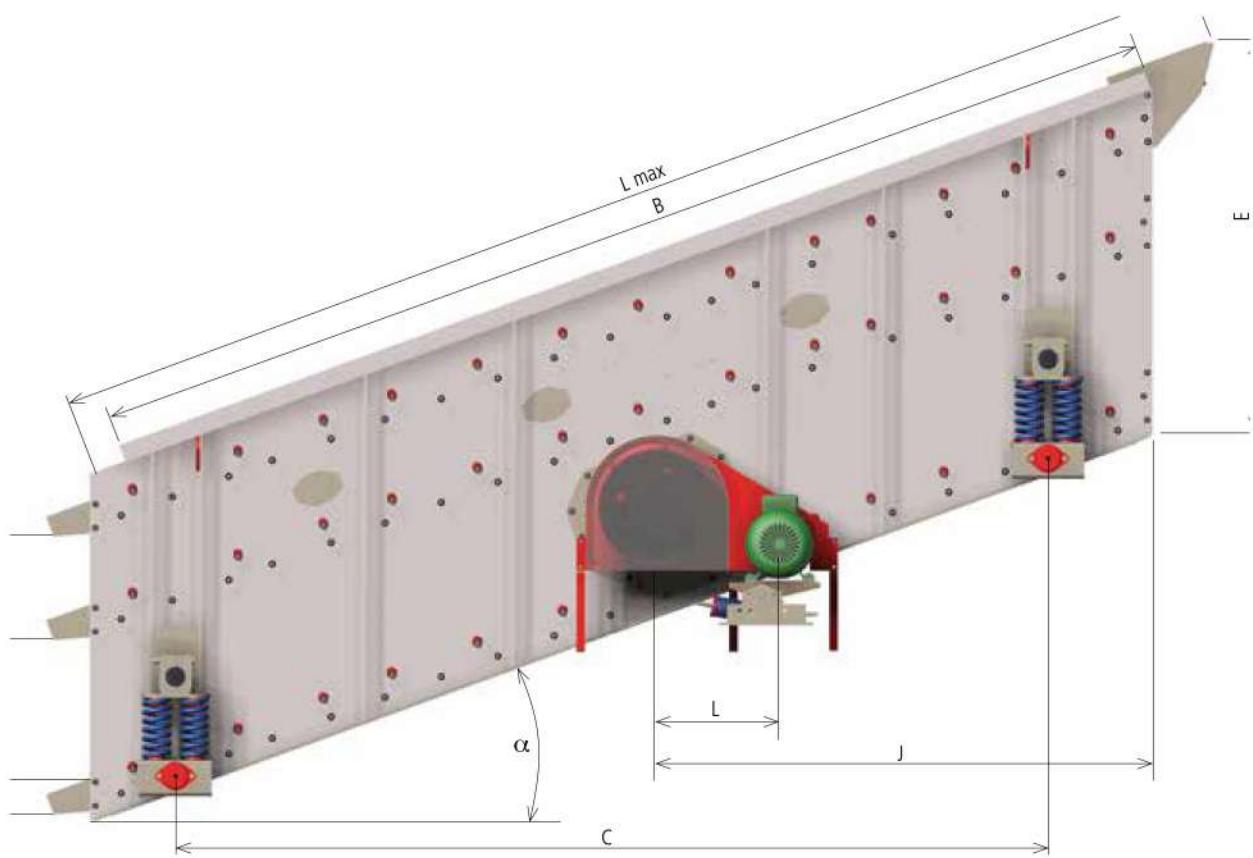
Type of Material	Factor
Dry uncrushed material below 6% moisture	1.25
Hot dry material , gravel	1.22
Dry quarried material with less than 4% moisture	1
Crushed rock and gravel	0.92
Moist ore	0.85
Moist stone	0.75

## Spray Compensation Factor

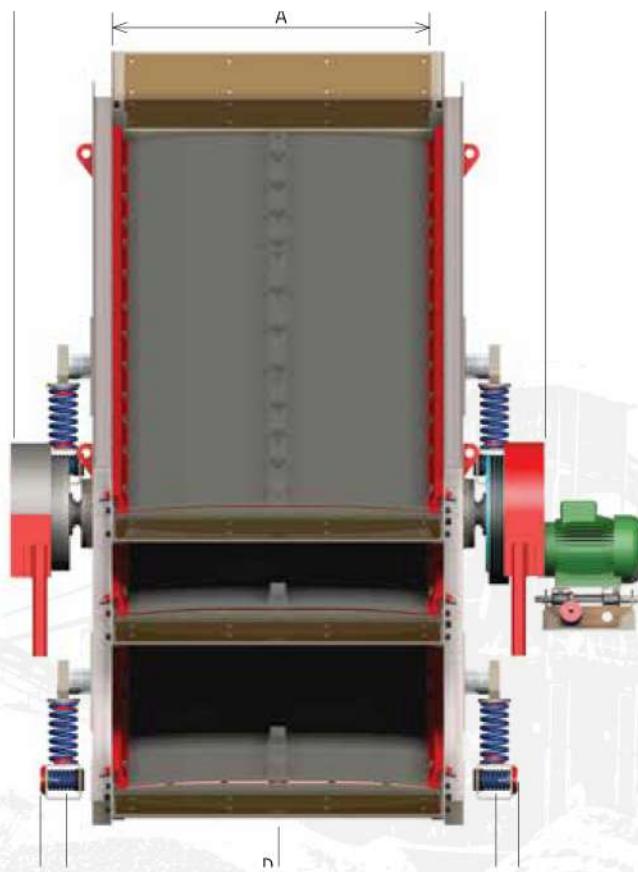
Screen aperture (mm)	1	2	3	4	5	6	8	10	12	25	50	75	100	125	150
Factor	1	1.6	2.2	2.1	1.85	1.8	1.5	1.4	1.3	1.15	1.13	1.06	1.03	1.05	1

## Slot Compensation Factor

Slot length to width ratio	50	75	100	125	150
Factor	1.13	1.06	1.03	1.05	1



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**Sealed integral vibrating shaft and drive**



**Transmission Unit**



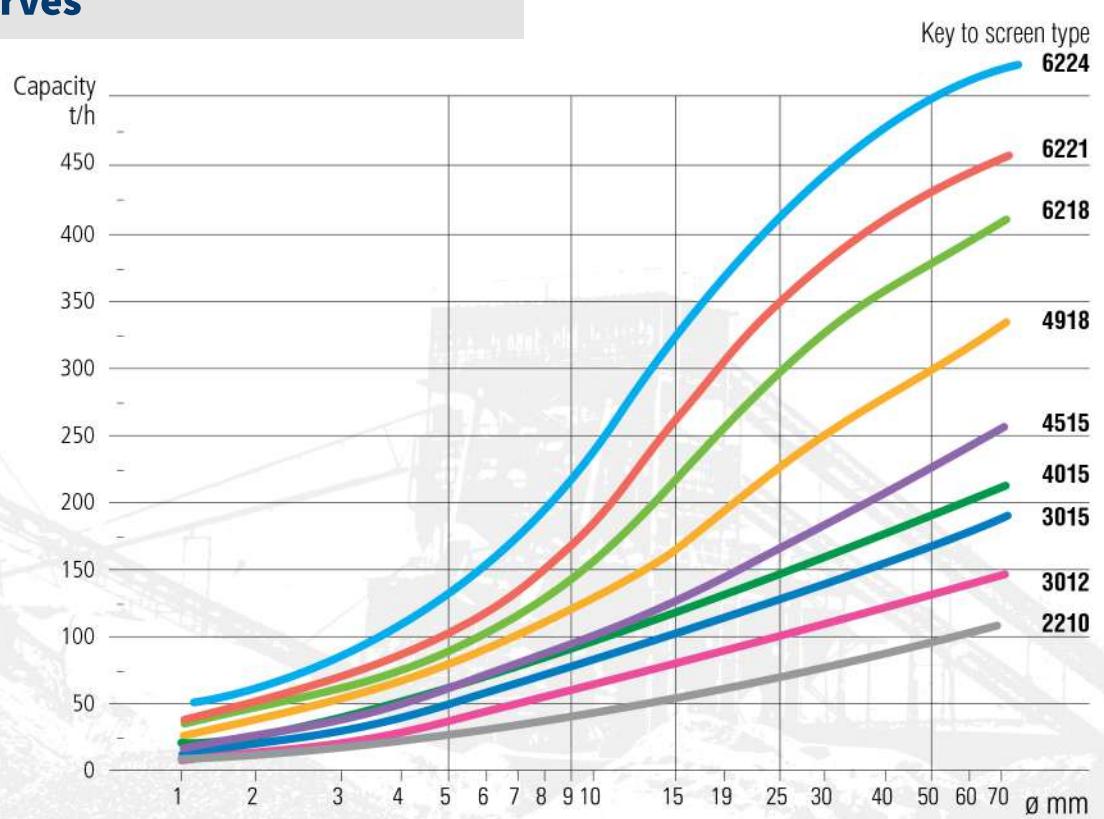
**Rubber support systems**



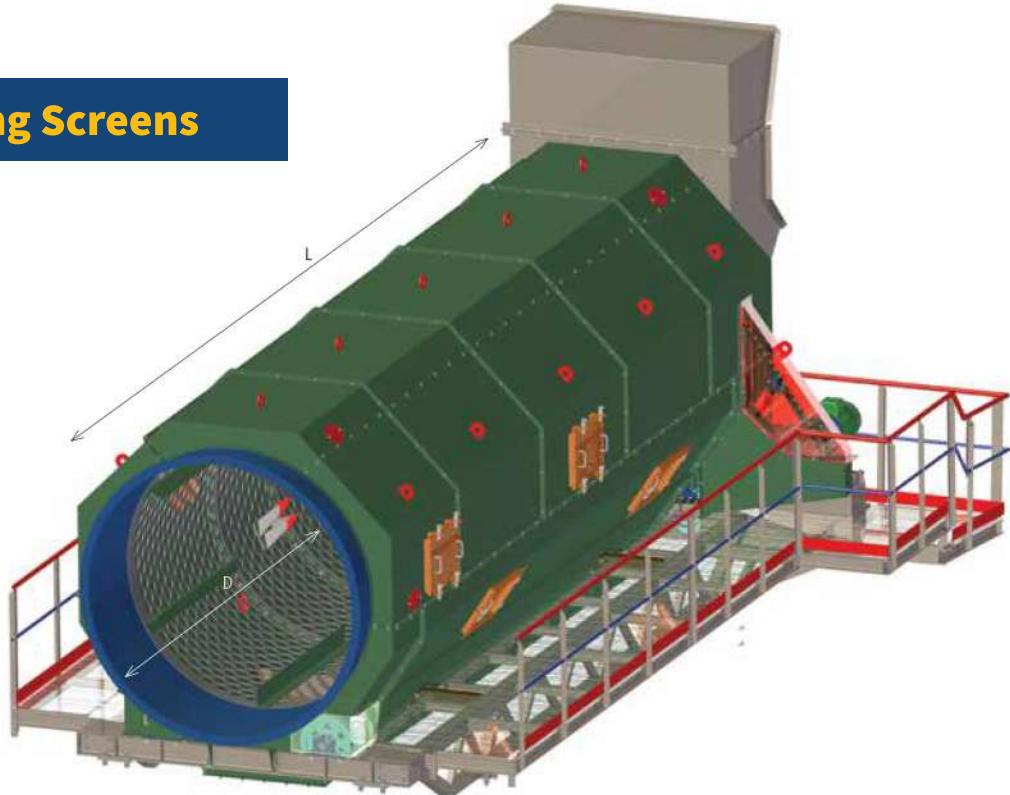
**Dampers**

## Performance curves

Amount of over size	E-Factor
10%	1.13
20%	1.02
30%	0.96
40%	0.88
50%	0.79
60%	0.7
70%	0.62
80%	0.53
90%	0.46
95%	0.35



## Rotating Screens



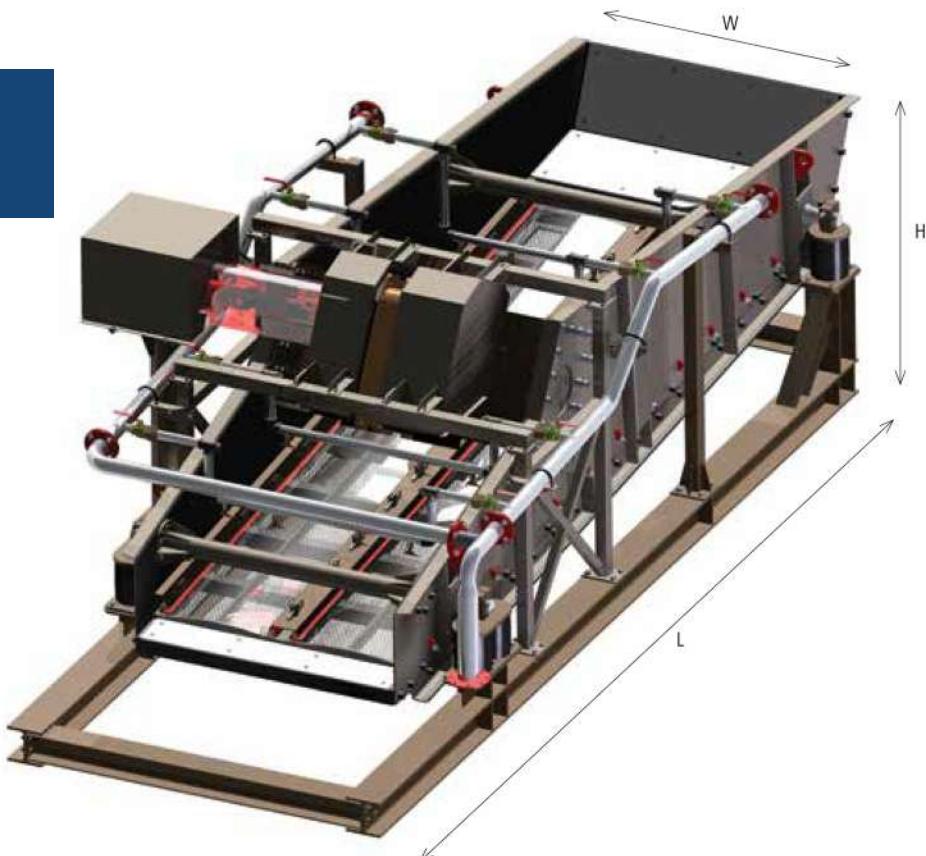
- All replaceable screen sections with minimum disruption
- Chain or direct drive systems
- Easy access for cleaning and maintenance
- Various internal drum options including bag rippers, spiral feed etc.

Model	EL 1806	EL 1908	EL 2407	EL 2410	EL 3012	E L3213
<b>Diameter D</b>	1800	1900	2450	2450	3000	3000
<b>Mesh Length L</b>	6000	8000	7000	10600	12000	13100
<b>HP</b>	20	20	30	30	40	50
<b>Capacity tons/hr</b>	10	15	28	27	32	40
<b>Drive system</b>	Drive wheels	Drive wheels	Chain	Chain	Chain	Chain
<b>Lubrication</b>	Manual	Manual	Automatic	Automatic	Automatic	Automatic
<b>RPM</b>	10 - 15	12 - 16	13 - 18	13 - 18	12 - 18	10 - 18
<b>Screen</b>	Wire Mesh	Punched Steel				

All our rotating screens are supplied with flanged replaceable sections



## De-Watering and Washing Screens



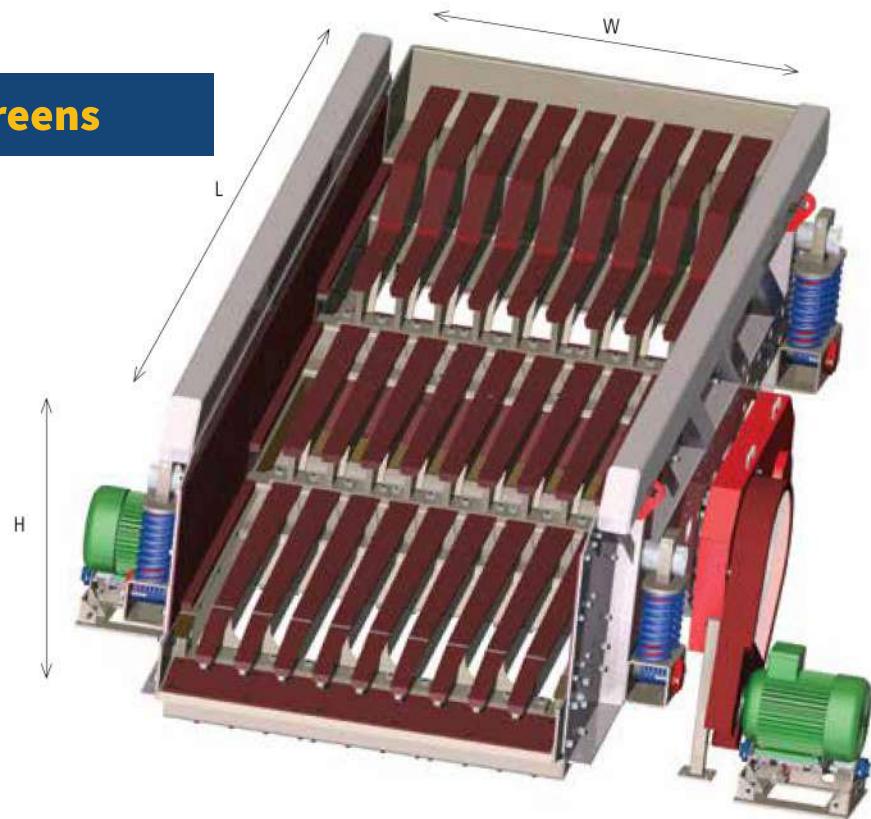
- Acceleration matched
- Integral drive and actuation system
- Unlimited inclination positioning
- Multiple mesh attachment options
- Modular assembly for ease of maintenance
- Natural damping system

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Centrifugal Force Kg.							
Model	L	W	H	max	Kw	Tons/hr	RPM
<b>VDW 160</b>	2000	700	540	4800	1.6+1.6	30	1450
<b>VDW 230</b>	2700	900	650	7600	2.2+2.2	50	1450
<b>VDW 300</b>	2500	1200	750	7600	2.2+2.2	60	1450
<b>VDW 360</b>	3000	1200	750	10000	3.6+3.6	80	1450
<b>VDW 450</b>	3000	1500	750	16400	7+7	110	1450
<b>VDW 630</b>	3500	1800	860	25200	15	150	1400-1000 (VSD)



## Grizzly Screens

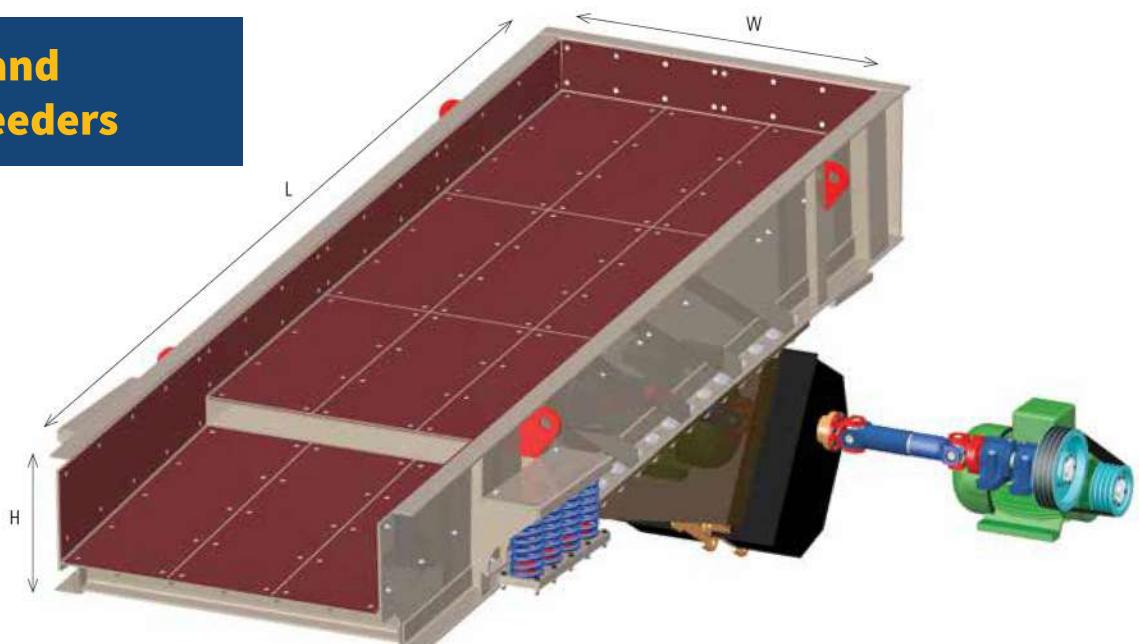


- Extremely robust construction for extreme conditions where required.
- Replaceable grizzly elements.
- Multiple drive options.
- Advanced internal shaft actuation system
- Matched damping system.

Model	L	W	H	Tons/hr	G max	Kw	Kg
<b>GRS 3214-2</b>	3200	1420	1430	400	4.2	18	3600
<b>GRS 3418-2</b>	3400	1840	1460	600	4.5	22	4800
<b>GRS 4516-1</b>	4500	1600	1660	800	4.8	18+18	8000
<b>GRS 4518-2</b>	4500	1840	1760	1200	5	22+22	9500



## Primary and Grizzly Feeders



- Replaceable wear plates
- Modular assembly for ease of maintenance
- Multiple actuator options
- Rugged extreme service construction

Model	Blind Length	Grizzly Length	Width W	Height H	VBM	Max Static Moment ton X mm	Kw	Tons/hr	Kg	RPM
<b>GRF 4512</b>	3000 - 4500	1560	1200	800	VU23	23	15	350	4700	800 - 1300
<b>GRF 4516</b>	2500 - 4500	2000	1600	880	VU33	32	18	450	6500	700 - 1200
<b>GRF 5512</b>	2500 - 5500	3000	1200	950	VU33	32	18	400	7600	700 - 1200
<b>GRF 5516</b>	2500 - 5500	3000	1600	1100	33+33	65	37	700	9700	700 - 1150
<b>GRF 6818</b>	3300 - 6500	3500	1800	1250	33+33	65	45	1000	15300	700 - 1150



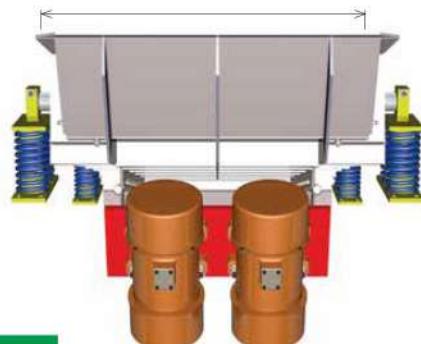
## Vibrating Feeders - EVF Range



**Note:** Output is specified for an equivalent angle of 5 to 13°

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- Feeders are designed for feeding crushers and dosing and grading materials
- Process rate controlled for integrated feeding systems
- Fully stress relieved construction
- VFH – for high output and coarse grain
- VFL – for fine products and processing



Model	Internal Length A	Internal Width B	Capacity Range t hr.	Max. centrifugal force kN	Power Kw
<b>EF 0310-07</b>	1000	350	0-50	7	0.5
<b>EF 0312 -07</b>	1200	350	0-50	7	0.5
<b>EF 0415-22</b>	1500	450	50-150	11+11	0.5+0.5
<b>EF 0615-58</b>	1500	600	150-250	14+14	0.9+0.9
<b>EF 0819-28</b>	1900	800	250-350	14+14	0.9+0.9
<b>EF 0822-28</b>	2200	800	250-350	14+14	0.9+0.9
<b>EF 1019-48</b>	1900	1000	350-500	24+24	1.6+1.6
<b>EF 1022-48</b>	2200	1000	350-500	24+24	1.6+1.6
<b>EF 1029-48</b>	3000	1000	300-450	24+24	1.6+1.6
<b>EF 1035-76</b>	3500	1000	300-450	38+38	2.2+2.2
<b>EF 1215-48</b>	1500	1200	350-500	24+24	1.6+1.6
<b>EF 1225 -48</b>	2500	1200	300-400	24+24	1.6+1.6
<b>EF 1236-76</b>	3600	1200	400-500	38+38	2.2+2.2
<b>EF 1431-76</b>	3000	1400	400-600	38+38	2.2+2.2
<b>EF 1432-100</b>	3200	1400	400-600	50+50	3.6+3.6

# EL Vibrating Screens



**Wedge Wire screen**



**Wedge Wire De-Watering Screens**



**De-Watering Phosphate Systems**

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