

CLEVELAND VIBRATOR ELECTRO-MECHANICAL SCREENERS



STANDARD DESIGNS SPECIAL DESIGNS OPTIONAL FEATURES

PRINCIPAL OF OPERATION ADJUSTING THE WEIGHTS SIZING CHART

The Cleveland Vibrator Company model EMS Electro-Mechanical Screener Feeders with twin motor drives, are designed for precise screening where high efficiency is required in the end particle size. Units are mounted horizontally, requiring no gravitational assistance for product conveyance

along the screening surface. EMS Screeners are typically equipped with 1800 RPM vibrators that provide 0.10" stroke. Force output of the drives may be varied to decrease stroke, thereby reducing final conveying speed.

STANDARD DESIGNS

Included in the standard EMS:

- Impact plate at inlet area for product loading.
- Isolators with support base included.
- Below deck mounted, twin, dust-tight 1800 RPM drives.
- Mild steel construction with factory painted finish.
- Twin motor starter for manual on-off operation.
- Replaceable screen decks.



SPECIAL DESIGNS

For difficult-to-handle, light-density, fluffy products, or where large screen openings (i.e. one inch square opening screens or larger) are being used, lower frequency, higher amplitude drives may be substituted. For these types of applications, 900 and 1200 RPM drives are available as an option. Drives can be mounted above or below the screening surface.



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Principle of Operation

Twin motor vibrator drives arranged for counter-rotation, provide a linear vibratory action, which conveys the product across the screening surface. Standard motors are 1800 RPM. 1200 and 900 RPM drives will be provided as required. All motors are TENV design.

Adjusting the Eccentric Weights

The resultant force output, amplitude and final product conveying speed is readily adjustable on all screeners. Percentage settings are marked on the shaft of each motor. Loosening one bolt on the outer eccentric weight enables the eccentric to be adjusted to the desired percentage of maximum force available. It is imperative that motors be wired for counter-rotation.

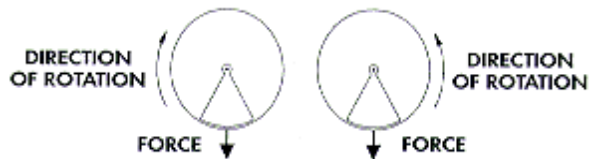


Figure 1 - Both eccentrics in down position. Resultant force is downward.



Figure 2 - both eccentrics outward and opposed, 180° apart. Resultant force is due to cancellation effect.

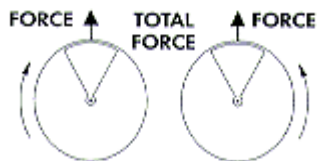


Figure 3 - Both eccentrics in up position. Resultant force is upward.

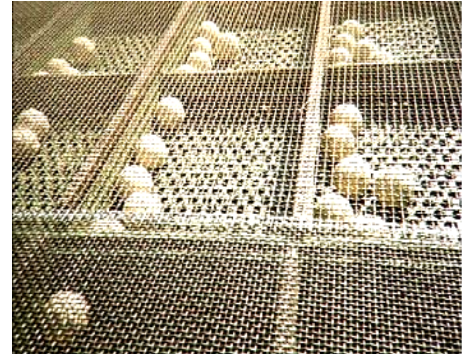


Figure 4 - Both eccentrics inward and opposed, 180° apart. Resultant force is zero due to cancellation effect.

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OPTIONAL FEATURES

- Circular inlets and outlets.
- Right or left-hand outlets.
- Above deck or side mounted drives.
- Air-spring base mounting or overhead coil spring suspension mounting.
- Dust-tight covers and sight ports.
- Booted inlets and outlets for dust containment.
- Tension wedges for quick changing of screen decks.
- Variable frequency controls to vary the feed rate.
- Ball tray decks to reduce screen "plug" blinding.



EMS ● 1848 ● 9-6 (2)			Specifications & Dimensions								
A Effective Screen Width	B Effective Screen Length	C Support Centers Length	D Support Centers Width	E O.A. Width	F O.A. Length	G Fines Disch. Height	H Overs Disch. Height	J Above Deck Height	K O.A. Height	Model Vibratory Drive (2 Each)	Approx. Shipping Weight (lbs.)
12	36	41	25	29	60	20	26	18	35	9-6	617
12	48	53	25	29	72	20	26	18	35	9-6	723
12	60	65	25	29	84	20	26	18	35	9-6	829
18	36	41	30	35	60	23	29	18	38	9-6	776
18	48	53	30	35	72	23	29	18	38	9-6	1134
18	60	65	30	35	84	23	29	18	38	9-6	1093
18	72	77	30	35	96	23	29	18	38	9-6	1251
18	96	101	30	35	120	23	29	19	38	13-6	1768
18	120	125	30	35	144	23	29	19	38	13-6	2086
24	48	53	37	42	72	23	29	19	42	13-6	1346
24	60	65	37	42	84	23	29	19	42	13-6	1557
24	72	77	37	42	96	23	29	19	42	13-6	1768
24	96	101	37	42	120	23	29	21	42	18-6	2191
24	120	125	37	42	144	23	29	23	42	24-6	2614
30	48	53	43	48	72	29	36	19	44	13-6	1346
30	60	65	43	48	84	29	36	21	44	18-6	1557
30	72	77	43	48	96	29	36	23	44	24-6	1768
30	96	101	43	48	120	29	36	23	44	24-6	2191
30	120	125	43	48	144	29	36	23	44	24-6	2614
36	60	65	49	54	84	29	36	21	44	18-6	2086
36	72	77	49	54	96	29	36	21	44	18-6	2403
36	96	101	49	54	120	29	36	23	44	24-6	3037
36	120	125	49	54	144	29	36	23	44	24-6	3872
48	60	65	61	66	84	29	36	23	45	24-6	2614
48	72	77	61	66	96	29	36	23	45	24-6	3037
48	96	101	61	66	120	29	36	26	45	34-6	4083
48	120	125	61	66	144	29	36	26	45	34-6	4929

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