

VB-3650S



Vibratory Conveyors & Screeners

Single Mass, Two Mass, Heavy Duty, Mechanical and Electromagnetic Drives



Eriez offers a number of vibratory conveyor and screener models designed with different amplitude, frequency and angle of deflection in order to move different materials at specific rates. Specifying the correct model is based on many factors including the material being processed, flow rate of the process, head load, nature of the environment, need to start and stop (cycle) the process and material product temperature.

FEATURES

- Models fit light-duty sanitary to heavy-duty aggregate applications
- Electromagnetic or mechanical drives with fiberglass or rubber springs
- Single or two-mass designs
- Endless options for screening, dust control, dewatering and more



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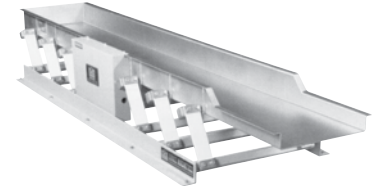
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Vibratory Conveyors

All vibratory equipment share common components... a drive system to generate the vibration, a trough to carry the product and springs to give the vibration amplitude creating motion. Every system will require an AC or DC power source and must be mounted either from above or below in order to produce a consistent force.

DRIVE SYSTEMS

Mechanical Drives

Eriez offers Eccentric Shaft or Brute Force mechanical vibratory drives to create the back and forth motion of the trough.

Eccentric shaft mechanical drives use a standard off-the-shelf motor driving an out-of-balance "eccentric" shaft. The eccentric shaft creates a small vibration in the base that is amplified through a spring system into the tray. These units are considered two-mass systems that work to increase amplitude under the head load.

Brute Force mechanical drives use two rotary electric motors with eccentric weights on each end of a shaft that creates the out-of-balance vibration and motion into the tray. These are simple designs needing larger motors to overcome the head load (weight of material) resting in the tray and generate the desired tray displacement.

Electromagnetic Drives

Eriez electromagnetic drive systems use AC power to energize the vibratory motion. A spring setup is mounted to a mass within or on the drive and attached to the conveyor trough. Electromagnetic Drives using "alternating opposing and attracting magnetic forces" are extremely accurate, reliable and energy efficient. They have no sliding or rotating parts to wear out and require very little power to operate.

SPRING SYSTEMS

Springs convert the vibration from the drive to tray thus causing product to move. Springs come in a variety of materials, sizes and configurations. From thin sheets of fiberglass to dense rubber compounds to thick steel coils... each material is designed for specific applications. In some applications, a combination of spring materials may be used.



Fiberglass springs attach the base to the trough



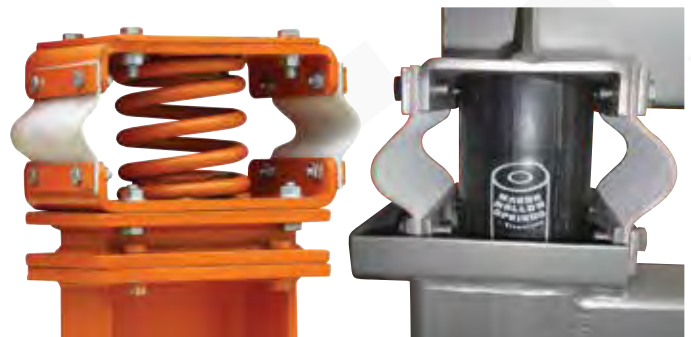
Eccentric Shaft Mechanical Drive



External Mechanical Rotary Motors



Electromagnetic Drive



Rubber or steel springs attach the frame to ground to isolate the vibration of the conveyor

SINGLE-MASS & TWO-MASS DESIGNS

Feeders and conveyors transfer their drive's natural vibration to the tray either through a single mass or two mass system.

Single-mass units are anchored in position (usually to the floor) and transfer the drive's vibration directly to the tray through its springs.

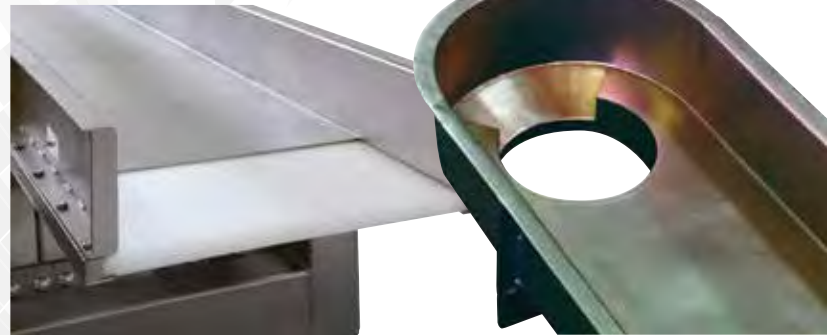
Two-Mass units have the "moving mass" (base) connected to the "reaction mass" (tray) by springs which drive the vibration in the tray. Eriez TM Conveyors are tuned near operating frequency to take advantage of the natural magnification of vibratory amplitude that occurs when a vibrating system is operating near its resonant condition. Thus, a relatively small force is amplified to generate the required vibratory motion.

In order to move the same head load, a single-mass conveyor may require a 10 horsepower motor, where as a two-mass system would need only a two horsepower motor.



TROUGH DESIGNS

Trough selection depends on the material being moved, distance traveled and the equipment's application. Stainless steel troughs are used in food and pharmaceuticals, while mild steel is for general-purpose use. Troughs can be lined with abrasion resistant steel, stainless, polyethylene, epoxy, rubber, as well as other coatings. The shape, length and width of the trough are almost limitless. Every configuration of flat, curved, v-channel, tubular design is available.



Features	SM		TM		TMR		HVC		VMC	
	in	mm	in	mm	in	mm	in	mm	in	mm
Tray Thickness	1/8 - 3/16	3 - 5	1/8 - 1/4	3 - 6	1/8 - 3/16	3 - 4.8	1/8 - 1/4	3 - 6	1/8 - 3/16	3 - 4.8
Widths Available	6 - 48	150 - 1220	6 - 48	150 - 1220	6 - 30	152 - 762	6 - 48	150 - 1220	12 - 48	152 - 762
Maximum Length	40 ft	12 m	35 ft	11 m	12 ft	3.7 m	30 ft	9 m	20 ft	6 m
Tray Amplitude	1/2	13	7/16	11	7/16	11	7/16	11	3/16	4.76
Liners Available	No		Yes		Yes		Yes		Yes	
Tray Frequency - CPM	750		950		900		950		1800	
Base Mounting	Yes		Yes		Yes		Yes		Yes	
Suspension Mounting	No		Yes		Yes		Yes		Yes	
Vibration Isolation	No		Yes		Yes		Yes		Yes	
Stainless Trays Available	Yes		Yes		Yes		Yes		Yes	
Sanitary Construction Available	Yes		Yes		Yes		Yes		Yes	
Explosion-Proof Motors Available	Yes		Yes		Yes		Yes		No	
Headload Compensation	No		No		No		Available		Yes	
Duty Type	Light		Medium		Medium		Medium to Heavy		Medium	
Screens Available	Yes		Yes		Yes		Yes		Yes	

High-Volume

MODEL HVC MECHANICAL CONVEYORS

Eriez' Model HVC Mechanical Conveyors are simple, rugged vibrating machines that move high volumes of bulk materials over long distances, reliably and economically.

PRINCIPLE OF OPERATION

The conveyor is a two-mass vibrating system, spring coupled, excited by a motor-driven eccentric shaft. Adjustable-angle rubber springs – each one of which can be removed and replaced in minutes if required – transmit the exciting force and can “fine tune” the motion of the trough to optimize the flow rate for a specific application.

The compact design of the Model HVC conveyor presents an extremely low profile; minimum headroom is required for installation. A standard three-phase, 230/460 volt TEFC motor. Explosion-proof motors are also available. The ability of the specially designed rubber springs to amplify the motor input results in low horsepower requirements.

FLOW RATE CONTROL

Accurate flow rate control is achieved by simply varying the motor speed. A variable frequency controller is optional. If it is not necessary to vary flow rates, no control is required.

TROUGH OPTIONS

A variety of trough sizes and types are available to match the specific applications. Included are mild steel and stainless steel troughs, abrasion-resistant steel, stainless steel, polyethylene, rubber or other material liners; plus enclosed and screening troughs. Conveyors up to 30ft (9.1m) in length are available, and lengths in excess of this can be provided.



Heavy Duty

Mechanical motor driven Eccentric shaft
High Volume (HV) conveyors are rugged, heavy-duty units designed to take punishment. They use a unique rubber spring that can be adjusted for the optimum drive angle. HV conveyors use optional replaceable AR liners in the trough and have outboard rubber springs for easy maintenance.

- Durable rubber springs
- Ideal for: Mining, aggregate, power generation, foundry and mineral processing

Capacity:

- 50 – 200,000 cu ft/hr • 5,000 lbs – 100 tons/hr

Troughs:

- Widths 8 to 36 inches, Lengths from 5 to 30 feet

Application Examples:

- Aggregates • Borax • Glass Cullet • Dry Clay
- Aluminum • Brick • Cast Iron Chips • Coal
- Foundry Sand • Gravel • Limestone • Concrete
- Ash • Coke • Gypsum • Cement • Asphalt
- Iron Ore • Bauxite • Cinders

Conveyor Model Selection Guide

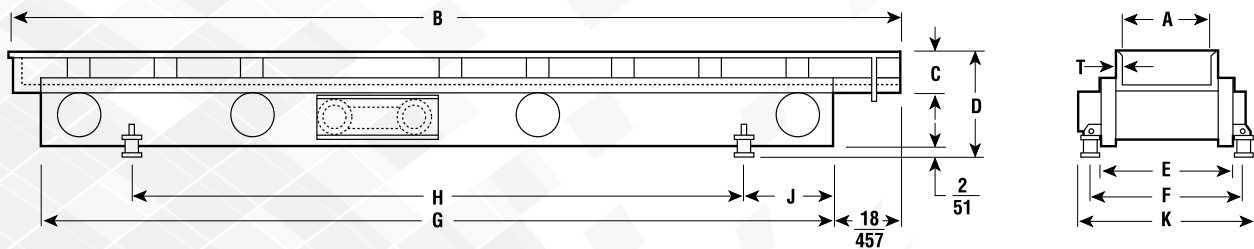
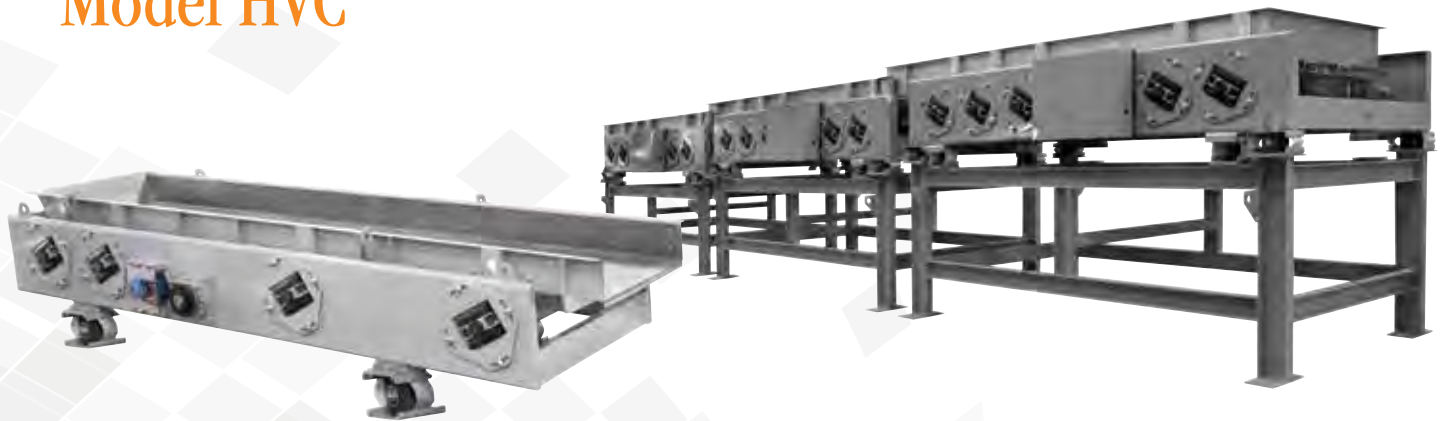
Model Number	Capacity*		Width	Additional Trough Sizes (Length)				
				10 ft (3m)	15 ft (4.6m)	20 ft (6.1m)	25 ft (7.6m)	30 ft (9.1m)
	Sand	Coal		Horsepower/Kilowatts Required				
HVC-8	50 tph	30 tph	8 in	.75 hp	1 hp	1.5 hp	2 hp	2 hp
	45 mtph	25 mtph	203 mm	.56 kw	.75 kw	1.1 kw	1.5 kw	1.5 kw
HVC-12	75 tph	45 tph	12 in	.75 hp	1 hp	1.5 hp	2 hp	2 hp
	70 mtph	40 mtph	305 mm	.56 kw	.75 kw	1.1 kw	1.5 kw	1.5 kw
HVC-18	125 tph	75 tph	18 in	1 hp	1.5 hp	2 hp	3 hp	3 hp
	115 mtph	70 mtph	457 mm	.75 kw	1.1 kw	1.5 kw	2.2 kw	2.2 kw
HVC-24	175 tph	105 tph	24 in	2 hp	3 hp	5 hp	5 hp	5 hp
	160 mtph	95 mtph	610 mm	1.5 kw	2.2 kw	3.7 kw	3.7 kw	3.7 kw
HVC-30	225 tph	135 tph	30 in	2 hp	5 hp	5 hp	7.5 hp	7.5 hp
	205 mtph	120 mtph	762 mm	1.5 kw	3.7 kw	3.7 kw	5.6 kw	5.6 kw
HVC-36	275 tph	165 tph	36 in	3 hp	5 hp	5 hp	7.5 hp	7.5 hp
	250 mtph	150 mtph	914 mm	2.2 kw	3.7 kw	3.7 kw	5.6 kw	5.6 kw

* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m) and coal weighing 50 lb/cu ft (800 kg/cu m) with the trough horizontal.

Capacity for other materials may be weight or volume limited. Consult Eriez.

Note: Power subject to change depending on trough thickness, liners, etc. Trough lengths and widths other than those shown here are available.

Model HVC



Specifications*

Model	A		B		C		D		E		F		G		H		J		K		T		Weight		Drive	
	in	mm	ft	m	in	mm	in	mm	in	mm	in	mm	ft	m	ft	m	in	mm	in	mm	in	mm	lb	kg	hp	kw
HVC-8	8	203	10	3	6	152	17-1/2	445	18	457	23	584	8	2.4	5	1.5	18	457	28	711	1/8	3	700	272	1	.75
			15	4.6	6	152	17-1/2	445	18	457	23	584	13	3.9	9	2.7	24	610	28	711	1/8	3	800	363	1	.75
			20	6.1	6	152	19-1/2	495	18	457	23	584	18	5.4	14	4.3	24	610	28	711	1/8	3	1000	454	1-1/2	1.12
			25	7.6	6	152	23	584	18	457	23	584	23	6.9	18	5.4	30	762	28	711	1/8	3	1300	590	2	1.49
			30	9.1	6	152	33	838	18	457	23	584	27	8.1	21	6.3	36	914	28	711	1/8	3	1500	680	2	1.49
HVC-12	12	305	10	3	6	152	17-1/2	445	22	559	27	686	8	2.4	5	1.5	18	457	32	813	1/8	3	700	318	1	.75
			15	4.6	6	152	17-1/2	445	22	559	27	686	13	3.9	9	2.7	24	610	32	813	1/8	3	900	408	1	.75
			20	6.1	6	152	19-1/2	495	22	559	27	686	18	5.4	14	4.3	24	610	32	813	1/8	3	1100	499	1-1/2	1.12
			25	7.6	6	152	23	584	22	559	27	686	23	6.9	18	5.4	30	762	65	813	1/8	3	1400	635	2	1.49
			30	9.1	6	152	33	838	22	559	27	686	27	8.1	21	6.3	36	914	32	813	1/8	3	1600	454	1-1/2	1.49
HVC-18	18	457	10	3	9	229	23	584	30-1/2	775	35-1/2	902	8	2.4	5	1.5	18	457	40-1/2	1029	3/16	5	1000	454	1-1/2	1.12
			15	4.6	9	229	23	584	30-1/2	775	35-1/2	902	13	3.9	9	2.7	24	610	40-1/2	1029	3/16	5	1300	590	2	1.49
			20	6.1	9	229	24	610	30-1/2	775	35-1/2	902	18	5.4	14	4.3	24	610	40-1/2	1029	3/16	5	1600	726	2	1.49
			25	7.6	9	229	24	610	30-1/2	775	35-1/2	902	23	6.9	18	5.4	30	762	41-1/2	1054	3/16	5	2200	998	3	2.24
			30	9.1	9	229	33	838	30-1/2	775	35-1/2	902	27	8.1	21	6.3	36	914	41-1/2	1054	3/16	5	2600	1179	3	2.24
HVC-24	24	610	10	3	9	229	24	610	36-1/2	927	41-1/2	1029	8	2.4	5	1.5	18	457	46-1/2	1181	3/16	5	1100	499	2	1.49
			15	4.6	9	229	24	610	36-1/2	927	41-1/2	1029	13	3.9	9	2.7	24	610	47-1/2	1207	3/16	5	1500	680	3	2.24
			20	6.1	9	229	25	635	36-1/2	927	41-1/2	1029	18	5.4	14	4.3	24	610	48	1219	3/16	5	2000	907	5	3.73
			25	7.6	9	229	25	635	36-1/2	927	41-1/2	1029	23	6.9	18	5.4	30	762	48	1219	3/16	5	2500	1134	5	3.73
			30	9.1	9	229	33	838	36-1/2	927	41-1/2	1029	27	8.1	21	6.3	36	914	48	1219	3/16	5	3100	1406	5	3.73
HVC-30	30	762	10	3	10	254	25	635	42-1/2	1080	47-1/2	1207	8	2.4	5	1.5	18	457	52-1/2	1334	3/16	5	1400	635	2	1.49
			15	4.6	10	254	25	635	42-1/2	1080	47-1/2	1207	13	3.9	9	2.7	24	610	53-1/2	1359	3/16	5	1900	862	3	2.24
			20	6.1	10	254	26	660	42-1/2	1080	47-1/2	1207	18	5.4	14	4.3	24	610	54	1372	3/16	5	2600	1179	5	3.73
			25	7.6	10	254	26	660	42-1/2	1080	47-1/2	1207	23	6.9	18	5.4	30	762	56	1422	3/16	5	3300	1497	7-1/2	5.59
			30	9.1	10	254	33	838	42-1/2	1080	47-1/2	1207	27	8.1	21	6.3	36	914	56	1422	3/16	5	3900	1769	7-1/2	5.59
HVC-36	36	914	10	3	10	254	25	635	51	1295	56	1422	8	2.4	5	1.5	18	457	62	1575	3/16	5	1500	680	3	2.24
			15	4.6	10	254	25	635	51	1295	56	1422	13	3.9	9	2.7	24	610	63	1600	3/16	5	2200	998	5	3.73
			20	6.1	10	254	26	660	51	1295	56	1422	18	5.4	14	4.3	24	610	63	1600	3/16	5	3000	1361	5	3.73
			25	7.6	10	254	26	660	51	1295	56	1422	23	6.9	18	5.4	30	762	65	1651	3/16	5	3700	1678	7-1/2	5.59
			30	9.1	10	254	33	838	51	1295	56	1422	27	8.1	21	6.3	36	914	65	1651	3/16	5	4400	1996	7-1/2	5.59

* Conveyor dimensions and horsepower may vary. Consult Eriez for specific details

Medium-Duty

MODEL TM/TMR MECHANICAL CONVEYORS

The Eriez Model TM Mechanical Conveyors are powerful vibrating machines designed for moving bulk materials over long distances. These units will convey large volumes of material with simple, dependable efficiency.

PRINCIPLE OF OPERATION

The Model TM conveyor is a spring-coupled, two-mass vibrating system using a motor-driven eccentric weighted shaft to provide the exciting force. Corrosion-resistant fiberglass springs transmit exciting force to the trough, and trough motion can be “fine tuned” for specific applications.

The low profile and compact design of the Model TM conveyor requires minimum headroom for installation.

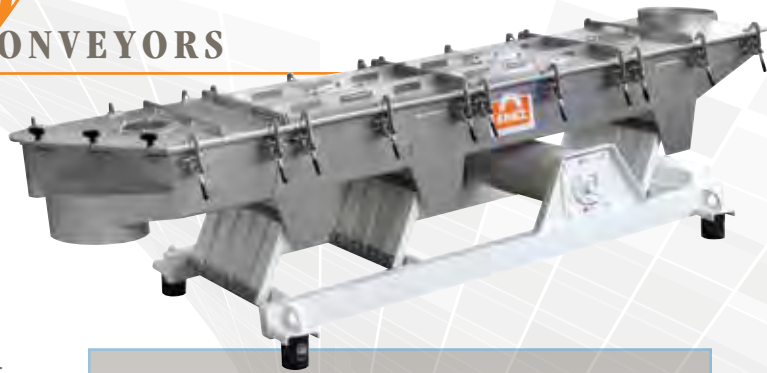
Power is provided by a standard three-phase 230/460 volt TEFC 60 Hz or optional 50 Hz 380 volt motor. Explosion-proof motors are also available.

FLOW RATE CONTROL

Flow rate can be precisely controlled by a manually adjustable variable-sheave control or a variable-frequency control, both available as options. In applications where a single flow rate is used, a control is not required.

TROUGH OPTIONS

Specific conveyor application requirements are easily addressed with a wide variety of trough sizes and types. The selection includes mild steel and stainless steel troughs, abrasion-resistant steel, stainless steel, polyethylene, rubber or other material liners. Also available are enclosed, V-shaped and screening troughs. Standard conveyors are available up to 35 ft. (9.1 m) in length. Consult with factory representatives for longer lengths.



Two-Mass

Mechanical motor driven eccentric shaft

Two-Mass (TM & TMR) conveyors are low-horsepower, high-capacity units for the controlled transfer of bulk materials in rugged duty environments. Its tubular base and wide-open design make it ideal for food and pharmaceutical applications.

- 2 variable rate models for light and heavy duty
- Compact low profile design requires minimum headroom
- Flow rates up to 60 fpm (18 mpm)
- Easy maintenance and access to components

Capacity:

- 50 – 1,500 cu ft/hr • 5,000 – 150,000 lbs./hr

Troughs:

- Widths 8 to 36 inches, Lengths 5 to 35 feet, custom size available

Typical Applications:

- Granular Products • Coffee Beans • Seafood
- Cereals • Raisins • Potato Chips • Candy
- Dried Meats • Pasta • Nuts • Pretzels
- Wood Products • Powders • Frozen Vegetables
- Chemicals



Model TM/TMR

TM Conveyor Model Selection Guide

Model Number	Sand Capacity*	Width	Additional Trough Sizes (Length)				
			5 ft (1.5m)	10 ft (3m)	15 ft (4.57m)	20 ft (6.1m)	25 ft (7.62m)
			Horsepower/Kilowatts Required				
TM-8	50 tph	8"	3/4 hp	1 hp	1-1/2 hp	2 hp	2 hp
	45 mtph	203 mm	.56 kw	.75 kw	1.1 kw	1.5 kw	1.5 kw
TM-12	75 tph	12"	3/4 hp	1 hp	1-1/2 hp	2 hp	2 hp
	70 mtph	305 mm	.56 kw	.75 kw	1.1 kw	1.5 kw	1.5 kw
TM-18	125 tph	18"	1 hp	1-1/2 hp	2 hp	3 hp	3 hp
	115 mtph	457 mm	.75 kw	1.1 kw	1.5 kw	2.2 kw	2.2 kw
TM-24	175 tph	24"	2 hp	3 hp	5 hp	5 hp	5 hp
	160 mtph	610 mm	1.5 kw	2.2 kw	3.7 kw	3.7 kw	3.7 kw
TM-30	225 tph	30"	3 hp	5 hp	5 hp	7-1/2 hp	7-1/2 hp
	205 mtph	762 mm	1.5 kw	3.7 kw	3.7 kw	5.6 kw	5.6 kw
TM-36	275 tph	36"	3 hp	5 hp	5 hp	7-1/2 hp	7-1/2 hp
	250 mtph	914 mm	2.2 kw	3.7 kw	3.7 kw	5.6 kw	5.6 kw

* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m) with the trough horizontal. Capacity for other materials may be weight or volume limited. Consult Eriez.

Note: Horsepower subject to change depending on trough thickness, liners, etc. Trough lengths and widths other than those shown here are available. Dimensions subject to change without notice.

TMR Conveyor Model Selection Guide

Model Number	Capacity*	Width	Feeder Tray Length				
			5 ft (1.5m)	8 ft (2.4m)	10 ft (3m)	12 ft (3.66m)	15 ft (4.57m)
			Horsepower/Kilowatts Required**				
TMR-8	58 tph	8"	1.2	1.2	1.2	1.2	1.6
	53 mtph	203 mm	.89 kw	.89 kw	.89 kw	.89 kw	1.2 kw
TMR-12	87 tph	12"	1.2	1.2	1.2	1.6	1.6
	79 mtph	305 mm	.89 kw	.89 kw	.89 kw	1.2 kw	1.2 kw
TMR-18	130 tph	18"	1.02	1.2	1.2	1.6	1.6
	118 mtph	457 mm	.89 kw	.89 kw	.89 kw	1.2 kw	1.2 kw
TMR-24	175 tph	24"	1.2	1.2	1.6	2.1	2.1
	159 mtph	610 mm	.89 kw	.89 kw	1.2 kw	1.6 kw	1.6 kw
TMR-30	218 tph	30"	1.6	1.6	1.6	2.1	2.96
	198 mtph	762 mm	1.2 kw	1.2 kw	1.2 kw	1.6 kw	2.2 kw
TMR-36	262 tph	36"	1.6	1.6	2.1	2.96	2.96
	238 mtph	914 mm	1.2 kw	1.2 kw	1.6 kw	2.2 kw	2.2 kw

* Capacity estimates are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m) with trough horizontal. Capacity for other materials will vary.

** Horsepower subject to change depending upon tray thickness, liners, etc. Additional tray lengths and widths are available.

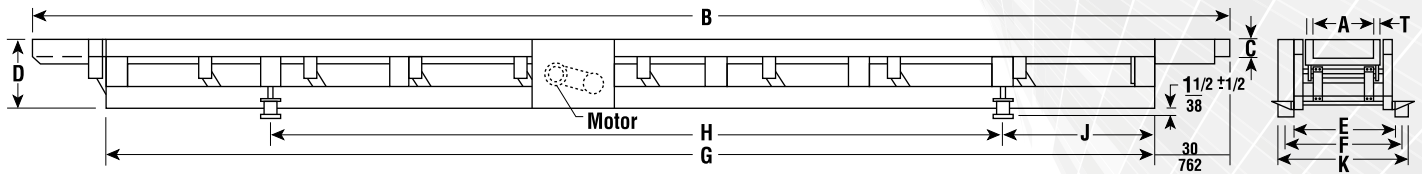
Model TM/TMR



TM Conveyor



TM Conveyor
(shown with screen)



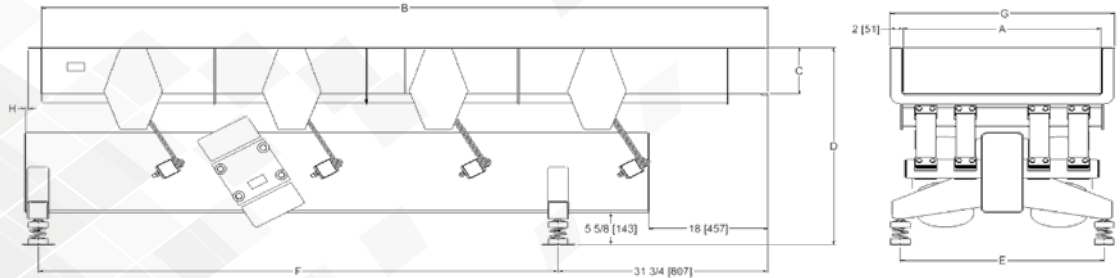
Specifications

Model	A		B		C		D		E		F		G		H		J		K		T		Weight		Drive	
	in	mm	ft	m	in	mm	in	mm	in	mm	in	mm	ft	m	ft	m	in	mm	in	mm	in	mm	lb	kg	hp	kw
TM-8	8	203	10	3	6	152	18	457	14	355	19	483	8	2.4	5	1.5	18	457	26	660	1/8	3	700	318	1	.75
			15	4.6	6	152	18	457	14	355	19	483	13	3.9	9	2.7	24	610	26	660	1/8	3	900	409	1	.75
			20	6.1	9	229	20	508	14	355	19	483	18	5.4	14	4.3	24	610	26	660	1/8	3	1100	500	1-1/2	1.1
			25	7.6	9	229	23	589	14	355	19	483	23	6.9	18	5.4	30	762	28	711	1/8	3	1500	682	2	1.5
			30	9.1	9	229	33	838	14	355	19	483	27	8.1	21	6.3	36	914	28	711	1/8	3	1700	772	2	1.5
TM-12	12	305	10	3	6	152	18	457	18	457	23	584	8	2.4	5	1.5	18	457	30	762	1/8	3	800	364	1	.75
			15	4.6	6	152	18	457	18	457	23	584	13	3.9	9	2.7	24	610	30	762	1/8	3	1000	455	1	.75
			20	6.1	9	229	20	508	18	457	23	584	18	5.4	14	4.3	24	610	30	762	1/8	3	1300	591	1-1/2	1.1
			25	7.6	9	229	23	589	18	457	23	584	23	6.9	18	5.4	30	762	32	813	1/8	3	1600	727	2	1.5
			30	9.1	9	229	33	838	18	457	23	584	27	8.1	21	6.3	36	914	32	813	1/8	3	1900	864	2	1.5
TM-18	18	457	10	3	6	152	18	457	24	610	29	734	8	2.4	5	1.5	18	457	36	914	1/8	3	1200	545	1-1/2	1.1
			15	4.6	6	152	18	457	24	610	29	734	13	3.9	9	2.7	24	610	36	914	3/16	5	1700	772	2	1.5
			20	6.1	9	229	20	508	29	734	34	864	18	5.4	14	4.3	24	610	41	1041	3/16	5	2000	909	3	2.2
			25	7.6	9	229	23	589	29	734	34	864	23	6.9	18	5.4	30	762	43	1092	3/16	5	2800	1273	3	2.2
			30	9.1	9	229	33	838	29	734	34	864	27	8.1	21	6.3	36	914	43	1092	3/16	5	3200	1455	5	3.7
TM-24	24	610	10	3	6	152	18	457	30	762	35	889	8	2.4	5	1.5	18	457	42	1067	1/8	3	1300	591	2	1.5
			15	4.6	6	152	18	457	30	762	35	889	13	3.9	9	2.7	24	610	42	1067	3/16	5	2000	909	3	2.2
			20	6.1	9	229	20	508	35	889	39	991	18	5.4	14	4.3	24	610	47	1194	3/16	5	2500	1136	5	3.7
			25	7.6	9	229	23	589	35	889	39	991	23	6.9	18	5.4	30	762	49	1245	3/16	5	3000	1364	5	3.7
			30	9.1	9	229	33	838	35	889	39	991	27	8.1	21	6.3	36	914	49	1245	1/4	6	3600	1636	5	3.7
TM-30	30	762	10	3	6	152	18	457	36	915	41	1041	8	2.4	5	1.5	18	457	48	1219	3/16	5	1900	864	3	2.2
			15	4.6	6	152	18	457	36	915	41	1041	13	3.9	9	2.7	24	610	48	1219	3/16	5	2500	1136	5	3.7
			20	6.1	9	229	20	508	41	1041	46	1168	18	5.4	14	4.3	24	610	53	1325	3/16	5	3200	1455	5	3.7
			25	7.6	9	229	23	584	41	1041	46	1168	23	6.9	18	5.4	30	762	55	1397	1/4	6	4000	1818	7-1/2	5.6
			30	9.1	9	229	33	838	41	1041	46	1168	27	8.1	21	6.3	36	914	55	1397	1/4	6	4700	2136	7-1/2	5.6
TM-36	36	914	10	3	6	152	18	457	42	1067	47	1194	8	2.4	5	1.5	18	457	54	1372	3/16	5	2500	1136	5	3.7
			15	4.6	6	152	18	457	42	1067	47	1194	13	3.9	9	2.7	24	610	54	1372	3/16	5	3300	1500	5	3.7
			20	6.1	9	229	20	508	47	1194	52	1321	18	5.4	14	4.3	24	610	59	1499	1/4	6	4100	2000	7-1/2	5.6
			25	7.6	9	229	23	584	47	1194	52	1321	23	6.9	18	5.4	30	762	61	1550	1/4	6	4900	2227	7-1/2	5.6
			30	9.1	9	229	33	838	47	1194	52	1321	27	8.1	21	6.3	36	914	61	1550	1/4	6	5500	2500	10	7.5

Model TM/TMR



TMR Conveyor
(shown with screen)



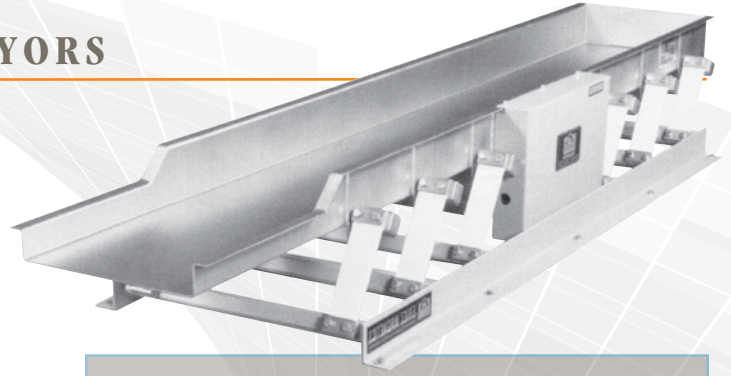
Specifications

Model	A		B		C		D		E		F		G		H		Weight	
	in	mm	ft	m	in	mm	in	mm	in	mm	in	mm	ft	m	ft	m	lb	kg
TMR-8	8	203	5	1.5	7	178	34.5	876	20	508	42	1067	12	305	8	203	530	241
			8	2.4	7	178	34.5	876	20	508	52	1321	12	305	6	152	605	275
			10	3.0	7	178	34.5	876	20	508	60	1524	12	305	0	0	650	295
			12	3.7	7	178	36	914	20	508	78	1981	12	305	0	0	730	331
			15	4.6	7	178	37.5	953	20	508	102	2591	12	305	0	0	920	418
TMR-12	12	305	5	1.5	7	178	34.5	876	20	508	42	1067	16	406	8	203	550	250
			8	2.4	7	178	34.5	876	20	508	52	1321	16	406	6	152	650	295
			10	3.0	7	178	34.5	876	20	508	60	1524	16	406	0	0	700	318
			12	3.7	7	178	37.5	953	20	508	78	1981	16	406	0	0	880	400
			15	4.6	7	178	37.5	953	20	508	102	2591	16	406	0	0	970	440
TMR-18	18	457	5	1.5	7	178	34.5	876	25	635	42	1067	22	559	8	203	575	261
			8	2.4	7	178	34.5	876	25	635	52	1321	22	559	6	152	695	316
			10	3.0	7	178	36.5	927	25	635	60	1524	22	559	0	0	740	336
			12	3.7	7	178	37.5	953	25	635	78	1981	22	559	0	0	930	422
			15	4.6	7	178	37.5	953	25	635	102	2591	22	559	0	0	1100	499
TMR-24	24	610	5	1.5	7	178	34.5	876	25	635	42	1067	28	711	8	203	600	272
			8	2.4	7	178	36	914	25	635	52	1321	28	711	6	152	630	286
			10	3.0	7	178	36	914	25	635	60	1524	28	711	0	0	750	341
			12	3.7	7	178	37.5	953	25	635	78	1981	28	711	0	0	950	431
			15	4.6	7	178	37.5	953	25	635	102	2591	28	711	0	0	1200	545
TMR-30	30	762	5	1.5	7	178	36	914	31	787.4	42	1067	34	864	8	203	620	281
			8	2.4	7	178	36	914	31	787.4	52	1321	34	864	6	152	850	386
			10	3.0	7	178	37.5	953	31	787.4	60	1524	34	864	0	0	1560	708
			12	3.7	7	178	37.5	953	31	787.4	78	1981	34	864	0	0	1600	726
			15	4.6	7	178	37.5	953	31	787.4	102	2591	34	864	0	0	1800	817
TMR-36	36	914	5	1.5	7	178	36	914	37	939.8	42	1067	40	1016	8	203	700	318
			8	2.4	7	178	36	914	37	939.8	52	1321	40	1016	6	152	900	409
			10	3.0	7	178	37.5	953	37	939.8	60	1524	40	1016	0	0	1300	590
			12	3.7	7	178	37.5	953	37	939.8	78	1981	40	1016	0	0	1700	772
			15	4.6	7	178	37.5	953	37	939.8	102	2591	40	1016	0	0	2100	953

Light-Duty

MODEL SM MECHANICAL CONVEYORS

The light-duty Model SM mechanical conveyor utilizes a gentle, efficient, oscillating motion to move light loads of free-flowing materials. The conveyor is designed to provide years of dependable service to food, chemical and other industries. Simple and compact in design, it is powered by a standard foot-mounted motor, driving an eccentric shaft which excites fiberglass springs attached to the tray.



EFFICIENT OPERATION

Energy savings are realized through the conveyor design which utilizes a motor-driven eccentric shaft connected to the pan, causing it to move back and forth on pivot arms. Springs store energy on one half of the stroke and release it on the return stroke. With the conveyor operating at a frequency close to the natural frequency of the springs, very little energy is consumed in conveyor operation.

The conveyor may be tuned by changing speed of the eccentric shaft, changing the amount of eccentric weight, or both.

DURABILITY

The conveyor's framework of base assembly and conveying pan is constructed of heavy-duty steel for necessary rigidity and durability. The base is designed for solid attachment at grade level to a rigid concrete foundation or structure rather than suspension mounting.

Single Mass

Mechanical motor driven eccentric shaft

Single-Mass (SM) units are Eriez' most economical mechanical conveyors, because they use the floor or base as their reaction mass. This allows for a low profile and efficient system to convey materials and parts. Highly efficient single mass conveyors are designed to move bulk material reliably and economically.

- Moves light loads of bulk materials
- Flow rates up to 18 tph (16 mtph)
- Economical price
- Gates, covers and perforated decks

Capacity:

- 50 – 500 cu ft/hr • 5,000 – 50,000 lbs./hr

Troughs:

- Widths 8 to 48 inches, Lengths 5 to 40 feet, custom size available

Applications:

- Cereals • Pretzels • Potato Chips • Candy • Pasta
- Seafood • Metal Parts • Powders • Wood Products
- Fasteners • Frozen Vegetables

Conveyor Model Selection Guide

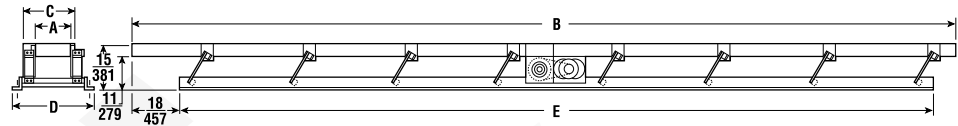
Model Number	Sand Capacity*	Width	Additional Trough Sizes (Length)				
			5 ft (1.5m)	10 ft (3m)	15 ft (4.57m)	20 ft (6.1m)	25 ft (7.62m)
			Horsepower/Kilowatts Required				
SM-8	4 tph	8"	1/4 hp	1/4 hp	1/2 hp	3/4 hp	1 hp
	3-1/2 mtph	203 mm	.2 kw	.2 kw	.4 kw	.6 kw	.8 kw
SM-12	6 tph	12"	1/4 hp	1/4 hp	3/4 hp	1 hp	1-1/2 hp
	5-1/2 mtph	305 mm	.2 kw	.2 kw	.6 kw	.8 kw	1.2 kw
SM-18	9 tph	18"	1/4 hp	1/4 hp	3/4 hp	1 hp	1-1/2 hp
	8 mtph	457 mm	.2 kw	.4 kw	.6 kw	.8 kw	1.2 kw
SM-24	12 tph	24"	—	3/4 hp	1 hp	1 hp	2 hp
	11 mtph	610 mm	—	.6 kw	.8 kw	.8 kw	1.6 kw
SM-30	15 tph	30"	—	3/4 hp	1 hp	1 hp	2 hp
	13-1/2 mtph	762 mm	—	.6 kw	.6 kw	.8 kw	1.6 kw
SM-36	18 tph	36"	—	1 hp	1-1/2 hp	2 hp	3 hp
	16 mtph	914 mm	—	.8 kw	1.2 kw	1.6 kw	2.4 kw

* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m) with the trough horizontal. Capacity for other materials may be weight or volume limited. Consult Eriez.

Note: Horsepower subject to change depending on trough thickness, liners, etc. Trough lengths and widths other than those shown here are available. Dimensions subject to change without notice.

Model SM

Specifications



Conveyor Selection Guide

Model	A		B		C		D		E		Weight		hp	kw	Cap	
	in	mm	ft	m	in	mm	in	mm	ft	m	lb	kg			tph	mtph
SM-8	8	203	5	1.5	14	355	24	610	3.5	1	200	91	1/4	.2	4	3.5
			10	3.0	14	355	24	610	8.5	2.5	370	168	1/4	.2		
			15	4.4	14	355	24	610	13.5	4.1	540	245	1/2	.4		
			20	6.1	14	355	24	610	18.5	5.6	710	322	1/2	.4		
			25	7.6	14	355	24	610	23.5	7.2	880	400	3/4	.6		
			30	9.1	14	355	24	610	28.5	8.7	1050	477	3/4	.6		
			35	10.6	14	355	24	610	33.5	10.2	1220	554	1	.8		
			40	12.2	14	355	24	610	38.5	11.7	1390	631	1	.8		
SM-12	12	305	5	1.5	18	451	28	710	3.5	1	220	100	1/4	.2	6	5.5
			10	3.0	18	451	28	710	8.5	2.5	400	182	1/2	.4		
			15	4.4	18	451	28	710	13.5	4.1	580	263	3/4	.6		
			20	6.1	18	451	28	710	18.5	5.6	760	341	3/4	.6		
			25	7.6	18	451	28	710	23.5	7.2	940	427	1	.8		
			30	9.1	18	451	28	710	28.5	8.7	1120	508	1	.8		
			35	10.6	18	451	28	710	33.5	10.2	1300	590	1-1/2	1.2		
			40	12.2	18	451	28	710	38.5	11.7	1480	672	1-1/2	1.2		
SM-18	18	457	5	1.5	24	610	34	860	3.5	1	250	114	1/4	.2	9	8
			10	3.0	24	610	34	860	8.5	2.5	425	193	1/2	.4		
			15	4.4	24	610	34	860	13.5	4.1	675	306	3/4	.6		
			20	6.1	24	610	34	860	18.5	5.6	825	375	3/4	.6		
			25	7.6	24	610	34	860	23.5	7.2	1025	465	1	.8		
			30	9.1	24	610	34	860	28.5	8.7	1225	556	1	.8		
			35	10.6	24	610	34	860	33.5	10.2	1425	647	1-1/2	1.2		
			40	12.2	24	610	34	860	38.5	11.7	1625	738	1-1/2	1.2		
SM-24	24	610	10	3.0	30	762	40	1020	8.5	2.5	500	227	3/4	.6	12	11
			15	4.4	30	762	40	1020	13.5	4.1	715	325	1	.8		
			20	6.1	30	762	40	1020	18.5	5.6	930	422	1	.8		
			25	7.6	30	762	40	1020	23.5	7.2	1145	520	1	.8		
			30	9.1	30	762	40	1020	28.5	8.7	1360	617	1	.8		
			35	10.6	30	762	40	1020	33.5	10.2	1575	715	1-1/2	1.2		
			40	12.2	30	762	40	1020	38.5	11.7	1790	813	2	1.6		
SM-30	30	762	10	3.0	36	914	46	1170	8.5	2.5	575	261	3/4	.6	15	13.5
			15	4.4	36	914	46	1170	13.5	4.1	815	370	1	.8		
			20	6.1	36	914	46	1170	18.5	5.6	1055	479	1	.8		
			25	7.6	32	914	46	1170	23.5	7.2	1295	588	1	.8		
			30	9.1	36	914	46	1170	28.5	8.7	1535	697	1	.8		
			35	10.6	36	914	46	1170	33.5	10.2	1775	806	1-1/2	1.2		
			40	12.2	36	914	46	1170	38.5	11.7	2015	915	2	1.6		
SM-36	36	914	10	3.0	42	1066	52	1320	8.5	2.5	700	318	1	.8	18	16
			15	4.4	42	1066	52	1320	13.5	4.1	975	443	1-1/2	1.2		
			20	6.1	42	1066	52	1320	18.5	5.6	1250	568	1-1/2	1.2		
			25	7.6	42	1066	52	1320	23.5	7.2	1525	692	2	1.6		
			30	9.1	42	1066	52	1320	28.5	8.7	1800	817	2	1.6		
			35	10.6	42	1066	52	1320	33.5	10.2	2075	942	3	2.4		
			40	12.2	42	1066	52	1320	38.5	11.7	2350	1067	3	2.4		

Dimensions and specifications are subject to change without notice.

Vibratory

MECHANICAL SCREENERS

HVC MECHANICAL SCREENERS & OPTIONS

For large scale, heavy-duty applications, Eriez builds screeners using the TM and HV drives covered under the “conveyor” heading. These rugged units incorporate wire mesh, perforated plate, grizzly and wedge wire screen types.

- Food to heavy-duty mining
- Scalping overs from good product
- Sizing products into 2 or 3
- Dedusting or removing unwanted fines
- Dewatering separates solids from liquids

Applications:

All screen rates are application dependent

- Powders • Plastic • Abrasives • Chemicals • Spices • Aggregates
- Coal • Steel • Pellets

Troughs:

- Widths 24 to 48 inches, Lengths 60 to 120 inches
- Custom sizes and special applications include open or enclosed units



TROUGH FEATURES:

- Special Tray Sizes • Bias Discharge • Enclosed Trays
- Tool-less Screen and Cover Removal • Base or Suspension Mounting • Tube Trays • Inspection Parts/Windows • Sanitary Construction • Hazardous Environment Class II, Div. I, Grp F, G Acceptable

TMS/TMRS MECHANICAL ROTARY ELECTRIC MOTOR OR MOTOR DRIVEN ECCENTRIC SHAFT

Designed with light to medium duty applications in mind. These high amplitude machines offer excellent screening capability, sanitary design and are available with tool-less screen format.

- Food to light duty applications
- Scalping overs from good product
- Dedusting or removing unwanted fines
- Separations of 2, 3 fractions

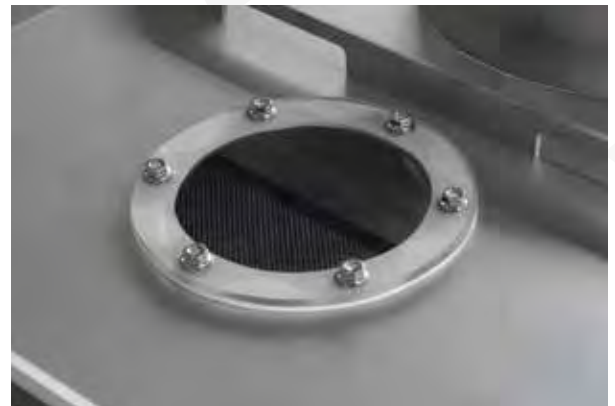
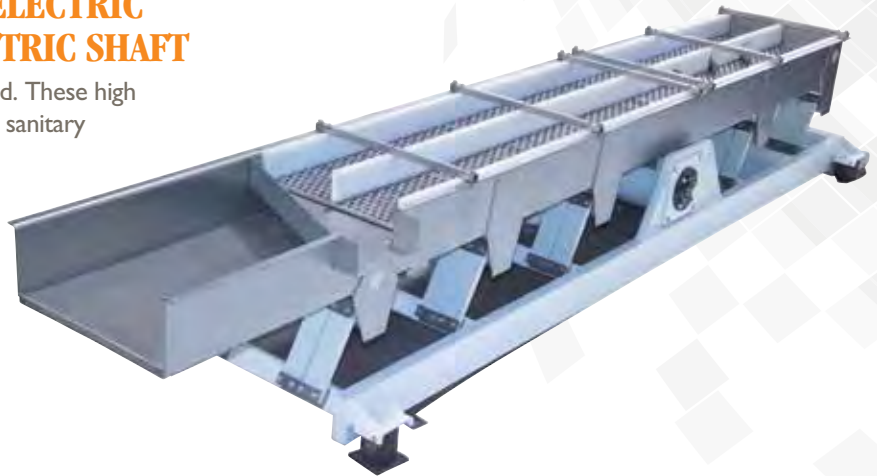
Applications:

All screen rates are application dependent

- Pet food • Food • Powders • Plastics

Troughs:

- Widths 12 to 36 inches, Lengths 48 to 300 inches
- Customized for your application - enclosed trays available
- Two-mass isolated design



Electromagnetic

SCREENERS



ELECTROMAGNETIC SCREENERS & OPTIONS

Eriez' screeners use standard electromagnetic drives and are well suited for restricted space locations using either overhead or base mounted drives. These linear screeners offer similar features as Eriez' electromagnetic feeders

- From food handling to coin sorting
- Scalping overs from good product such as clay or cereals
- Sizing up to 3 screen decks or 4 separations
- Dedusting or removing unwanted fines from a product flow

Troughs:

- Widths 4 to 48 inches • Lengths 20 to 72 inches

Applications:

All screen rates are application dependent

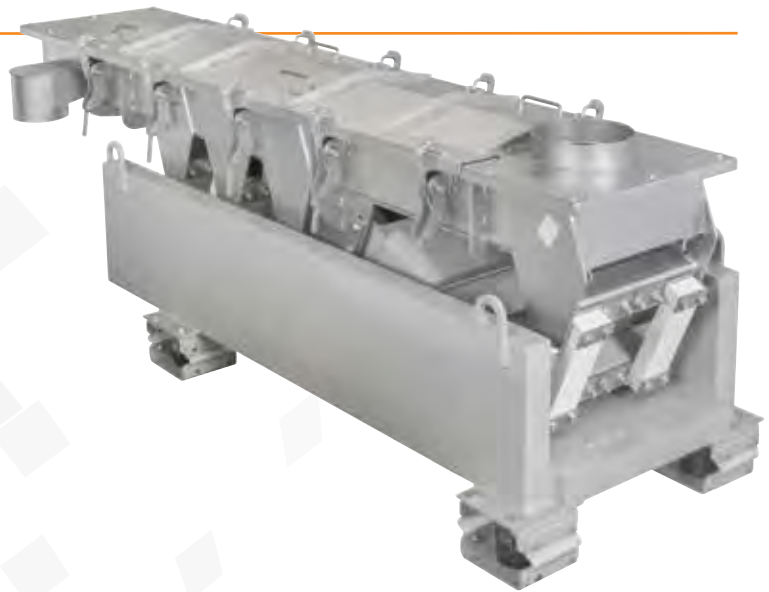
- Powder • Flour • Plastic • Abrasives • Chemicals
- Spices • Beans • Salt • Pellets

Screen mesh:

- 100 mesh to 2 inch space cloth

TRAY FEATURES:

- Special Tray Sizes • Bias Discharge • Enclosed Trays • Tool-Less Screen and Cover Removal • Base or Suspension Mounting
- Inspection Ports/Windows • Sanitary Construction • Hazardous Environment Class II, Div. I, Grp F, G Acceptable



Electromagnetic

MODEL VMC CONVEYOR

Eriez' VMC Series Electromagnetic Conveyor is a simple, two-mass conveyor combining Eriez years of experience as a world leader in magnetics with the latest in solid-state control technology. VMC Series electromagnetic conveyors come standard with a variable-rate control. They can also be provided with 4-20 mA signal following or closed-loop design for precise and efficient conveying of bulk materials.

PRINCIPLE OF OPERATION

Eriez VMC Series Electromagnetic Conveyor is a two-mass vibrating system, spring-coupled, powered by one or more unique electromagnetic drive circuits. Specially designed fiberglass springs amplify the trough stroke and are adjustable to provide easy fine tuning of conveyor motion. A variable voltage controller allows "watch-like" precision in the control of conveyor amplitude.

VMC Series conveyors are easily and accurately tuned to specific materials and applications for optimum performance.

A wide variety of trough sizes and types are available to match the conveyor to specific application requirements. Included are mild steel and stainless steel troughs. Liners constructed from abrasion-resistant steel, stainless steel, polyethylene, rubber or other materials are available.

OPTIONS

- Side or bottom discharge gates
- Rigidized stainless steel trays for reduced product sticking
- Stainless steel bases
- White epoxy or Steel-it painted bases
- Over deflection monitor to protect equipment
- Quick-release covers
- Drop-in basket-type screens and perforated plates



Electromagnetic VMC Models

VMC offers the performance of a mechanical conveyor with the reliability of an electromagnet unit... no belts or bearings. Units cycle on and off without stressing components or going through wild vibrations from resonance.

- 30Hz Pulsed AC electromagnetic drive
- Extremely efficient, accurate Two-Mass conveyors
- Available with covers, perforated decks and signal following controls

Capacity:

- 100 – 1,000 cu ft/hr

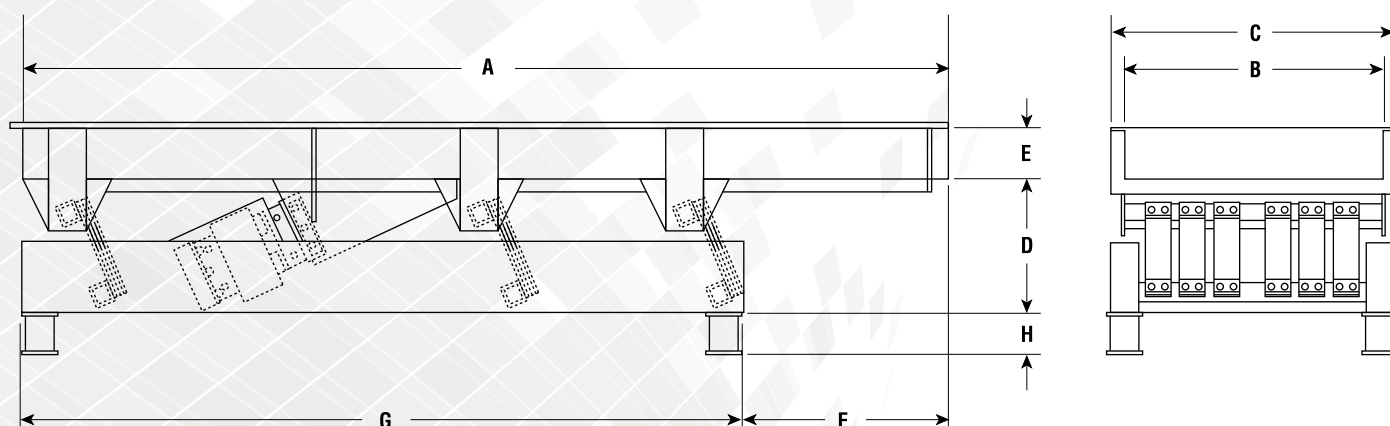
Troughs:

- Widths 18 to 60 inches, Lengths 60" to 10 feet, Max 40 sq. ft of tray area

Applications:

- Cereals • Fruit • Seafoods • Pretzels • Spices
- Vegetables • Pasta • Potato • Wood Products
- Chips • Powders • Candy





Specifications

Size		A		B		C		D		E		F		G		H		Voltage	Amps
in x ft	mm x m	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		
18 x 5	457 x 1.5	60	1524	18	457	21	533	16	406	6	152	12	305	48	1219	5	127	240	12
18 x 10	457 x 3	120	3048	18	457	21	533	20	508	6	152	24	610	96	2438	5	38	240	12
18 x 15	457 x 4.5	180	4572	18	457	21	533	22.5	572	6	152	24	610	144	3658	5	38	240	24
18 x 20	457 x 6	240	6096	18	457	21	533	24	610	6	152	24	610	204	5182	5	38	240	24
24 x 5	610 x 1.5	60	1520	24	610	27	686	16	406	6	152	12	305	48	1219	5	127	240	12
24 x 10	610 x 3	120	3048	24	610	27	686	20	508	6	152	24	610	96	2438	5	38	240	12
24 x 15	610 x 4.5	180	4572	24	610	27	686	22.5	572	6	152	24	610	144	3658	5	38	240	24
24 x 20	610 x 6	240	6096	24	610	27	686	24	610	6	152	24	610	204	5182	5	38	240	24
30 x 5	762 x 1.5	60	1524	30	762	33	838	16	406	6	152	12	305	48	1219	5	127	240	12
30 x 10	762 x 3	120	3048	30	762	33	838	20	508	6	152	24	610	96	2438	5	38	240	24
30 x 15	762 x 4.5	180	4572	30	762	33	838	22.5	572	6	152	24	610	144	3658	5	38	240	24
36 x 5	814 x 1.5	60	1524	36	914	39	990	16	406	6	152	12	305	48	1219	5	127	240	12
36 x 10	814 x 3	120	3048	36	914	39	990	20	508	6	152	24	610	96	2438	5	38	240	24
36 x 15	814 x 4.5	180	4572	36	914	39	990	22.5	572	6	152	24	610	144	3658	5	38	240	24
42 x 5	1067 x 1.5	60	1524	42	1067	45	1143	16	406	6	152	12	305	48	1219	5	127	240	12
42 x 10	1067 x 3	120	3048	42	1067	45	1143	20	508	6	152	24	610	96	2438	5	38	240	24
48 x 5	1219 x 1.5	60	1524	48	1219	51	1295	16	406	6	152	12	305	48	1219	5	38	240	12
48 x 10	1219 x 3	120	3048	48	1219	51	1295	20	508	6	152	24	610	96	2438	5	38	240	24

Dimensions and specifications are subject to change without notice.

Over-Deflection MONITOR

Protect the integrity of your vibratory feeder by monitoring tray deflection.

FEATURES

- **Circuitry pre-set at factory to correspond with feeder amplitude**
- **Comparator can be integrated with safety or signaling circuits**
- **Sensor cable length available for “at site” and remote locations**
- **Nema 12 enclosure standard; Nema 4 enclosure available**
- **Adjustable time integration**

Eriez' Series SL Over-Deflection Monitor detects changes in tray deflection due to material accumulation on the tray surface. As material accumulates on the tray surface, it adds weight to the tray, affecting performance and possibly damaging the feeder or conveyor.

The Over-Deflection Monitor senses changes in deflection from a factory predetermined level and alerts, warns or shuts down the feeder or conveyor before damage to the unit can occur. The feeder or conveyor tray can then be cleaned to improve performance and reduce costly maintenance downtime.



Over-Deflection Monitor

Installation And Operation

The Over-Deflection Monitor employs a vibration transducer, which mounts to the tray, as well as a comparator amplifier, which monitors changes in the tray deflection.

The vibration transducer sends a signal continuously to the comparator amplifier. If an upset occurs and the tray becomes overloaded, the comparator amplifier senses this and trips a relay to shut down the feeder or conveyor.

The Over-Deflection Monitor can be used to monitor feeders or conveyors for broken drive belts or springs, under deflection (low feed), or over deflection (broken springs or over frequency).

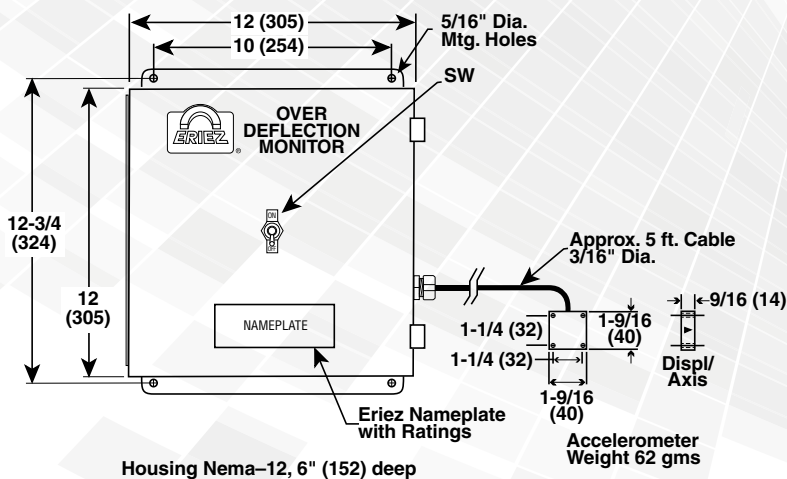
The Over-Deflection Monitor is suitable for:

- Vibratory feeders and conveyors
- Vibratory screening equipment
- Applications when material loads very significantly
- Applications where tacky material may adhere to the tray

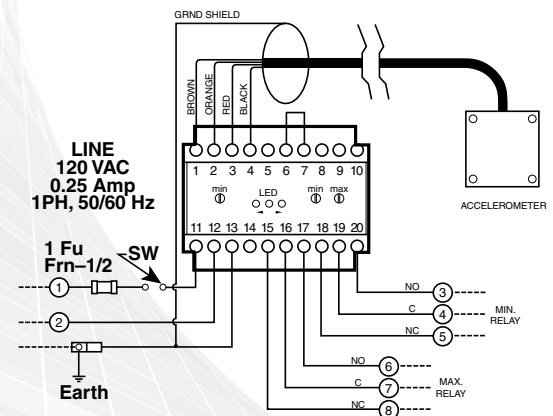
Specifications

COMPARATOR TECHNICAL DATA

Time Delay = 0.5–15.0 sec.
Amplitude Range = 0.5–10g
Relay Contacts = 2.0 Amp @ 250 VAC
Supply for Sensor = 15.0 VDC
Sensor Input = 0+/-10V Pulse PR AC Voltage
Operating Temp. = 0-45°C



Vibration transducer



Dimensions and specifications are subject to change without notice.



WORLD AUTHORITY IN SEPARATION TECHNOLOGIES

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Note: Some safety warning labels or guarding may have been removed before photographing this equipment.
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