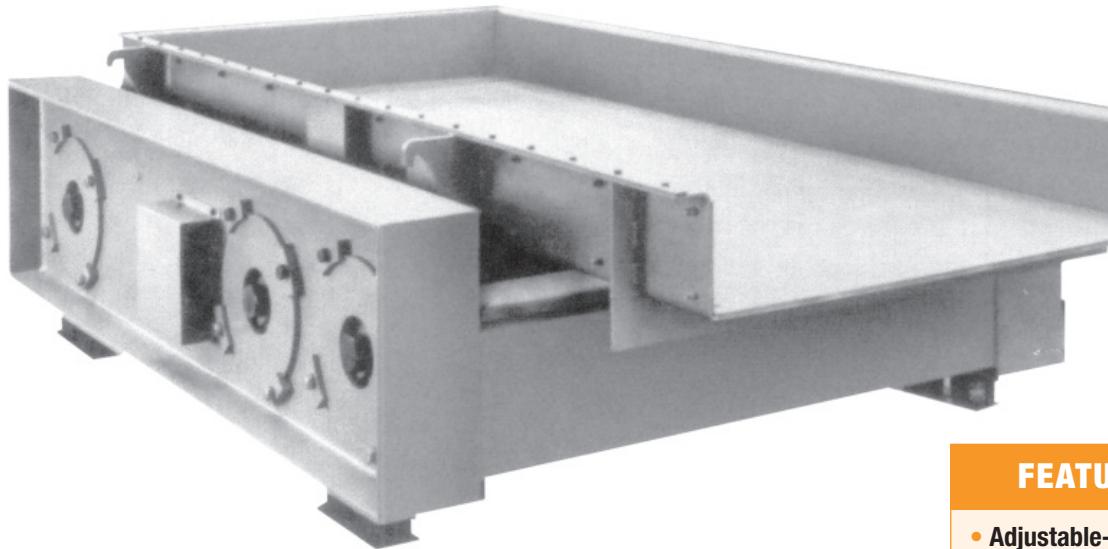




# VIBRATORY FEEDERS AND CONVEYORS

MODELS HVF, TM, HVC, SM, AND VMC



## FEATURES & BENEFITS

- Adjustable-angle rubber springs
- Low profile—minimum headroom
- Flow rates to 60 ft/minute (18mpm)
- Simple, stable, variable controller

The new Eriez Model HVF mechanical feeders are simple, rugged, vibrating machines that move high volumes of bulk materials reliably and economically.

The feeder 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 less than two 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.

ONLY FROM ERIEZ

# INTRODUCTION/ OVERVIEW

## AT LAST—THE SIMPLE, HIGH-VOLUME VIBRATING FEEDER

The remarkably compact, straight-line design of the Model HVF feeder presents an extremely low profile; minimum headroom is required for installation.

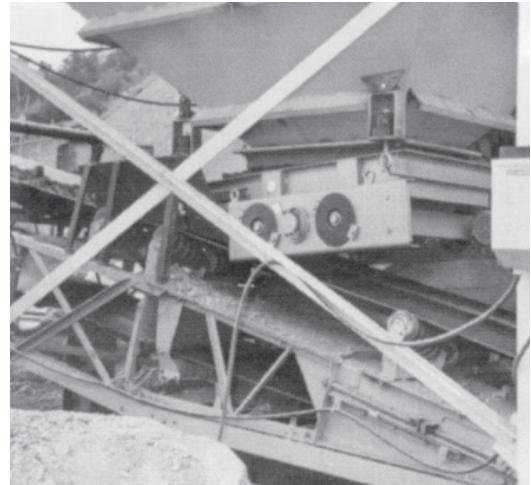
The ability of the specially designed rubber springs to amplify the trough stroke results in low horsepower requirements. Power is provided by a standard three-phase, 230/460 volt TEFC 60 Hz motor. Explosion-proof motors are also available.

Accurate control of flowrate is achieved by the standard control, i.e. hand-wheel adjustable, variable-speed sheaves. A variable voltage controller and a variable frequency controller, each supplied as a separate item, are available as options.

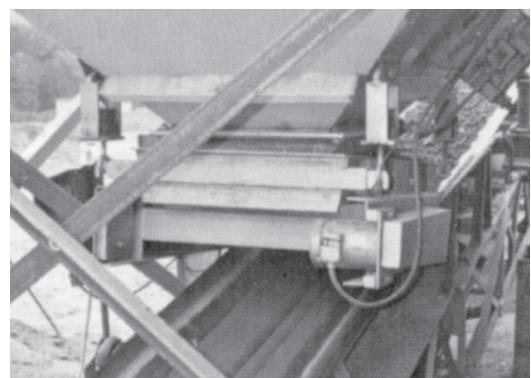
A wide variety of trough sizes and types is available to match the feeder to specific application requirement. Included are troughs of mild steel and stainless steel; liners of abrasion-resistant steel, stainless steel, polyethylene, rubber or other materials; and tubular troughs, as well as grizzly and screening troughs. Conveyors up to 30' (9.1 m) or more in length are also available.

An in-construction view (below) of an Eriez HVF feeder as the trough is being lowered into position shows the rugged, yet simple, design. A standard three-phase motor, mounted behind the base frame at left, is belt-connected to a variable-pitch sheave factory set to drive the eccentric shaft at approximately 1100 rpm. The vibratory motion created by the shaft is amplified and transmitted to the trough by the polyisoprene springs, to which the trough is bolted. Heavy-duty construction throughout assures long life under the most difficult operating conditions.

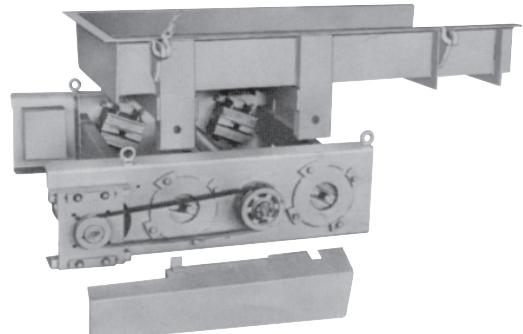
Feeders are available with grizzly troughs for a variety of scalping applications and with screened troughs for even greater control in separation by size.



This Model HVF-30 feeder with a 30" wide by 60" long (762 x 1524 mm) trough operating in a stone quarry easily handles 400 tons per hour (363 mtph). It is suspended by special vibration isolator assemblies, one end attached to trough-hanger brackets and the other to mounting brackets welded to the hopper wall.



A rear view of the Model HVF feeder illustrates the minimal amount of head-room required for installation and the easy accessibility of the motor and drive components.



# MODEL HVF – HIGH-VOLUME FEEDER

## AT LAST—THE SIMPLE, HIGH-VOLUME VIBRATING FEEDER

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## FEEDER MODEL SELECTION GUIDE

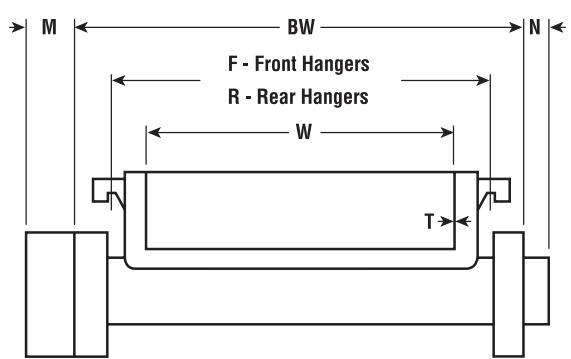
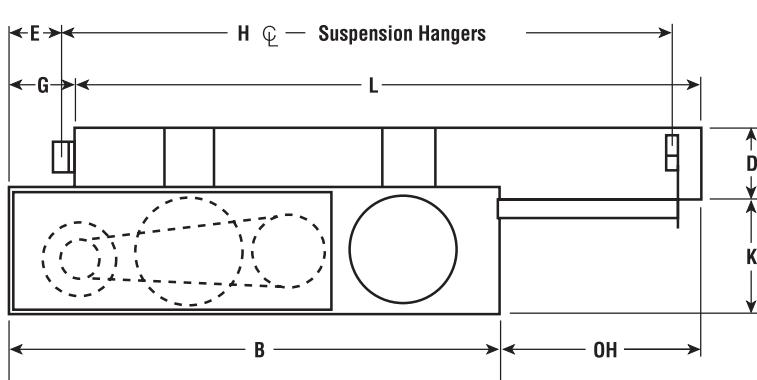
Model Number	Capacity*		Rated Trough	Width	Length							
	Sand	Coal			Horsepower/Kilowatts Required							
					36" 914mm	48" 1219mm	60" 1524mm	72" 1829mm	84" 2134mm	96" 2438mm	108" 2743mm	120" 3048 mm
HVF-18	190tph	110tph	18" x 36"	18"	1/3 hp	1/2 hp	1/2 hp	3/4 hp	1 hp			
	170mtph	100mtph	457mm x 914mm	457mm	.25 kw	.37 kw	.37 kw	.56 kw	.75 kw			
HVF-24	325tph	200tph	24" x 48"	24"	1 hp	1 hp	1-1/2 hp	1-1/2 hp	2 hp			
	295mtph	180mtph	610mm x 1219mm	610mm	.75 kw	.75 kw	1.1 kw	1.1 kw	1.5 kw			
HVF-30	500tph	300tph	30" x 60"	30"	1-1/2 hp	1-1/2 hp	1-1/2 hp	2 hp	2 hp	3 hp		
	455mtph	270mtph	762mm x 1524mm	762mm	1.1 kw	1.1 kw	1.1 kw	1.5 kw	1.5 kw	2.2 kw		
HVF-36	750tph	450tph	36" x 60"	36"	1-1/2 hp	2 hp	2 hp	2 hp	3 hp	5 hp	5 hp	
	680mtph	410mtph	914mm x 1524mm	914mm	1.1 kw	1.5 kw	1.5 kw	1.5 kw	2.2 kw	3.7 kw	3.7 kw	
HVF-42	1100tph	660tph	42" x 72"	42"				3 hp	3 hp	3 hp	5 hp	5 hp
	1000mtph	600mtph	1067mm x 1829mm	1067mm				2.2 kw	2.2 kw	2.2 kw	3.7 kw	3.7 kw
HVF-48	1200tph	700tph	48" x 72"	48"				3 hp	3 hp	5 hp	5 hp	5 hp
	1090mtph	640mtph	1219mm x 1829mm	1219mm				2.2 kw	2.2 kw	3.7 kw	3.7 kw	3.7 kw
HVF-60	1500tph	900tph	60" x 84"	60"						5 hp	5 hp	7-1/2 hp
	1360mtph	820mtph	1524mm x 2134mm	1524mm						3.7 kw	3.7 kw	5.6 kw
HVF-72	1750tph	1100tph	72" x 108"	72"							7-1/2 hp	7-1/2 hp
	1590mtph	1000mtph	1829mm x 2743mm	1829mm							5.6 kw	5.6 kw
HVF-84	2000tph	1300tph	84" x 120"	84"							10 hp	10 hp
	1820mtph	1180mtph	2134mm x 3048mm	2134mm							7.5 kw	7.5 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 at a 10° down slope.

Note: Horsepower subject to change depending on trough thickness, liners, etc. Trough lengths and widths other than those shown here are available. Capacities shown are for illustration only. Actual capacities vary due to installation factors such as down slope and hopper arrangement and/or material properties such as weight and moisture content. Consult Eriez for your specific application.

# MODEL HVF – HIGH-VOLUME FEEDER

## SPECIFICATIONS



## SPECIFICATIONS

### ENGLISH (inches, pounds, horsepower)

Model HVF-	W	L	D	BW	B	E	F	G	H	K	M	N	OH	R*	T	Wght	HP
<b>18</b>	18	36	7	28	36	11-3/4	26	11	31-3/4	9	4-1/2	2-1/2	11	26	1/8	300	1/3
<b>24</b>	24	48	7	36-7/8	45-1/2	11	31-7/8	11	45	10-9/16	4-1/2	2-1/2	13	38-3/8	1/4	680	1
<b>30</b>	36	60	7	42-1/2	45-1/2	5	37-1/2	5	57	10-9/16	5	3	19-1/2	44	1/4	810	1-1/2
<b>36</b>	36	72	9	51-1/8	54	8	48	9	57-1/4	14	5-1/2	3	27	60	1/4	1230	2
<b>42</b>	42	72	9	57	54	5	54	6	57-1/4	14	6	3-1/2	24	66	1/4	1270	3
<b>48</b>	48	84	9	66	69	18	62	9	45-1/2	16	6-1/2	3-1/2	24	62	5/16	2250	5
<b>60</b>	60	96	9	78	69	22-1/2	74	9	62	16	6-1/2	3-1/2	36	74	3/8	2600	5
<b>72</b>	72	96	9	90	87	22-1/2	86	15	82	16	8	4	24	86	3/8	3550	7-1/2
<b>84</b>	84	120	9	102	104	15-1/2	98	7	81-1/2	16	8	4	23	98	3/8	4900	10

\* Can be made same as front hangers.

### METRIC (millimeters, kilograms, kilowatts)

Model HVF-	W	L	D	BW	B	E	F	G	H	K	M	N	OH	R*	T	Wght	KW
<b>18</b>	457	914	178	762	914	298	660	279	806	228	114	64	279	660	3	136	0.25
<b>24</b>	610	1219	178	937	1156	279	810	279	1143	268	114	64	343	975	6.4	308	0.75
<b>30</b>	762	1524	178	1080	1156	127	953	127	1448	268	127	76	495	1118	6.4	367	1.12
<b>36</b>	914	1829	229	1299	1372	203	1219	229	1454	356	140	76	686	1524	6.4	558	1.49
<b>42</b>	1067	1829	229	1448	1372	127	1372	152	1454	356	152	89	610	1676	6.4	576	2.24
<b>48</b>	1219	2438	229	1676	1753	457	1575	229	1156	406	165	89	914	1575	8	1021	3.73
<b>60</b>	1524	2134	229	1981	1753	572	1880	533	1575	406	165	89	610	1880	9.5	1179	3.73
<b>72</b>	1829	2438	229	2286	2210	572	2184	381	2083	406	203	102	610	2184	9.5	1610	5.60
<b>84</b>	2134	3048	229	2591	2642	394	2489	178	2070	406	203	102	584	2489	9.5	2223	7.46

\* Can be made same as front hangers.

Dimensions may vary for specific applications and may change without notice.

# MODEL HVF – HIGH-VOLUME FEEDER

The capacity of a vibratory feeder is given by:

$$Q = \frac{W_x d_x D_x v}{K}$$

Where	English	Metric
Q=Capacity	TPH	MTPH
W=Tray Width	inches	mm
d=Material Depth	inches	mm
D=Density lb/cu ft	g/cu cm	
v=Flow Velocity	ft/min	m/min
K=Constant	4,800	16,700

Along with the hopper design, flow velocity  $v$  is dependent on material characteristics such as particle size, size distribution and moisture content.

## HOPPER DESIGN and FEEDER CAPACITY

Feeders are usually suspended with a down-slope of up to 10°. At this down-slope, the Model HVF feeders can attain velocities of up to 100 feet per minute (30m per min.), depending upon material characteristics.

For vibratory feeders to perform at maximum capacities, it is important to have bins and hoppers designed to provide good material flow patterns. This is best achieved with the following guidelines:

- The hopper-throat opening  $T$  (see Fig. 1) should be a minimum of 2.5 times the largest particle size for randomly-sized material. For applications with near-sized materials,  $T$  should be 5 times the particle size.

- Best flow patterns result when the gate height  $H$  is at least twice the throat dimension  $T$  as shown in Fig. 2. Values of  $H$  equal to  $T$  are acceptable, but when  $H$  becomes less than  $T$ , material-flow patterns are not uniform and usually result in dead zones where little or no flow occurs, as shown in Fig. 3.

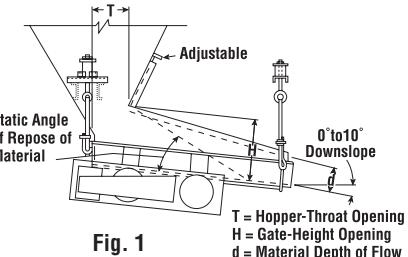


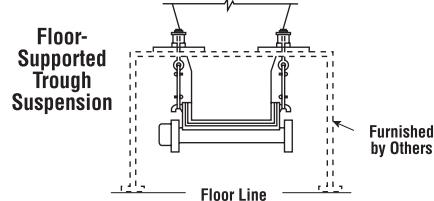
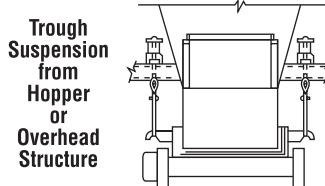
Fig. 1



Fig. 2



Fig. 3

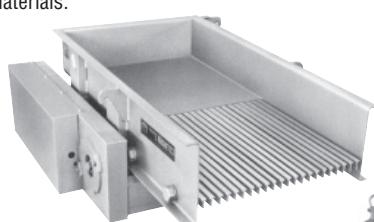


Model HVF feeders are usually suspended from an overhead structure but can also be mounted on supports placed on the floor. In either case, vibration is isolated from the support structure by a special rubber assembly which forms part of the hanger arrangement.

## STANDARD, GRIZZLY and SPECIAL FEEDERS

All part of the regular manufacturing mix at Eriez, these units offer the benefits of simplicity, reliability and economy.

The grizzly on this 30" x 60" (762 mm x 1524 mm) trough scalps glass cullet and similar materials.



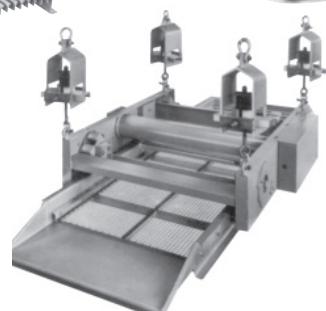
A trough 6' wide by 16' long (1829 mm x 4877 mm) with 3/8" (10 mm) thick liners on sides and bottom enables this Model HVF-72 to feed 1100 tph (1000 mtph) of coal.



The 14" diameter by 96" long (356 mm x 2438 mm) tubular trough on this unit that feeds dry cereals has see-through inspection ports at both ends so flow can be monitored.



Another Model HVS-18, this one with an 18" x 36" (457 mm x 914 mm) trough, is fitted with a coarse wire screen.



An overhead drive is utilized on this suspended Model HVS-36 with a 36" x 96" (914 mm x 2438 mm) trough.



# SIMPLE, HIGH-VOLUME VIBRATORY CONVEYORS

## RUGGED, EFFICIENT, HIGH-CAPACITY UNITS FOR THE CONTROLLED MOVEMENT OF LARGE VOLUMES OF BULK MATERIAL.

Eriez' Mechanical Conveyors are simple, rugged, vibrating machines designed to handle a variety of bulk materials.

The conveyors are available in single-mass and two-mass vibrating systems excited by a motor-driven eccentric shaft. Springs vary according to the type of application.

The remarkable compact, straight-line design of these conveyors presents an extremely low profile yet allows for ease of maintenance. Minimum headroom is required for installation.

### ERIEZ SM CONVEYOR

A single-mass design requiring anchoring to a concrete substructure or rigid structure. Capacities up to 25 cubic feet (.7 m<sup>3</sup>) per minute of materials up to 50 pounds per cubic foot (800 kg/m<sup>3</sup>).

### ERIEZ TM CONVEYOR

The best value, this two-mass conveyor is designed for light to medium duty applications. Capacities up to 35 cubic feet (1 m<sup>3</sup>) per minute of materials up to 75 pounds per cubic foot (1200 kg/m<sup>3</sup>). Steel springs for high-temperature applications are available at extra cost.

### ERIEZ HVC CONVEYOR

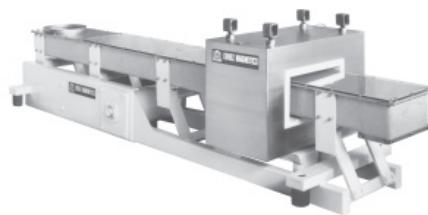
Eriez' most rugged medium- to heavy-duty conveyor. Available with liners up to 1/4 inches (6 mm) thick. Capacities up to 60 cubic feet (.8 m<sup>3</sup>) per minute of materials up to 100 pounds per cubic foot (1600 kg/m<sup>3</sup>).



## SPECIFICATIONS

FEATURES	SM		TM		HVC	
	in	mm	in	mm	in	mm
Tray Thickness	1/8 - 3/16	3 - 5	1/8 - 1/4	3 - 6	1/8 - 1/4	3 - 6
Widths Available	6 - 48	150 - 1220	6 - 48	150 - 1220	6 - 48	150 - 1220
Maximum Length	50 ft	15 m	35 ft	11 m	30 ft	9 m
Tray Amplitude	1/2	13	7/16	11	7/16	11
Liners Available	No	No	Yes - 1/4	6	Yes - 1/4	6
Tray Frequency - CPM	750		950		950	
Base Mounting	Yes		Yes		Yes	
Suspension Mounting	No		Yes		Yes	
Vibration Isolation	No		Yes		Yes	
Stainless Trays Available	Yes		Yes		Yes	
Sanitary Construction Available	Yes		Yes		Yes	
Explosion-Proof Motors	Yes		Yes		Yes	
Headload Compensation	No		No		Available	
Duty Type	Light		Medium		Medium to Heavy	
Screens Available	Yes		Yes		Yes	

# TUNED TWO-MASS MODEL TM



## FEATURES

- Separately mounted components for easy maintenance
- Corrosion-resistant fiberglass springs
- Low profile – minimum headroom
- Simple control
- Low power required
- Can be designed for suspended or base mounting

## RUGGED, EFFICIENT, HIGH-CAPACITY UNIT FOR THE CONTROLLED MOVEMENT OF LARGE VOLUMES OF BULK MATERIALS

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.

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.

Eriez Model TM Conveyor with 12 in x 10 ft (304 mm x 3 m) non-metallic tray extending through the aperture of an Eriez Metal Detector. Conveyor is handling 10 tons per hour (9 mtph) of a flaked resin with the metal detector sensing the presence of any metal in the product.

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 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.

Specific conveyor application requirements are easily addressed with a wide variety of trough sizes and types. The selection includes troughs of mild steel and stainless steel, liners of abrasion-resistant steel, stainless steel, polyethylene, rubber or other materials. Also available are enclosed, V-shaped and screening troughs. Standard conveyors are available up to 30 ft. (9.1 m) in length. Consult with factory representatives for longer lengths.

## SPECIFICATIONS

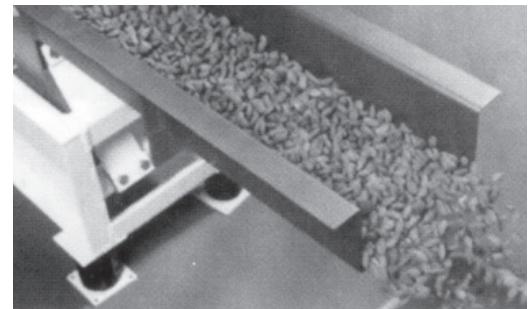
### CONVEYOR MODEL SELECTION GUIDE

Model Number	Sand Capacity*	Width	Additional Trough Sizes				
			5' 1.5 m	10' 3 m	15' 4.57 m	20' 6.1 m	25' 7.62 m
			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.

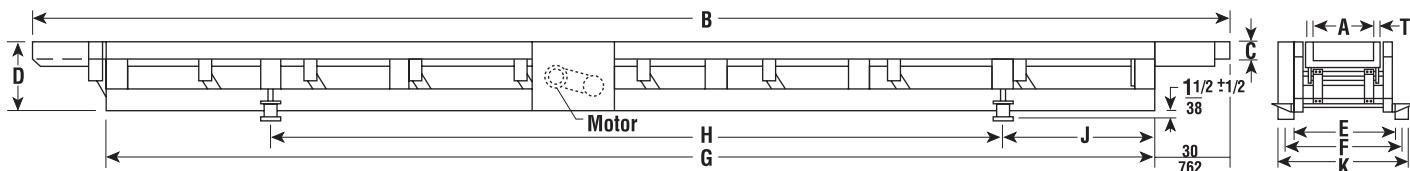
## TUNED TWO-MASS MODEL TM



Model TM-24 Conveyor with 24 in x 100 in (610 mm x 2.5 m) stainless-steel screen scalping oversize contamination from pasta at the rate of 3000-4000 lbs per hour (1360-1810 kg/hr).

Model TM-9 Conveyor with 9 in x 10 ft (230 mm x 3 m) stainless-steel tray, feeding almonds at the rate of 3 tons per hour (2.7 mtph).

### SPECIFICATIONS



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

# HIGH-VOLUME MODEL HVC

## AT LAST - A SIMPLE, HIGH-VOLUME VIBRATING CONVEYOR

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

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 less than two 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, straight-line design of the Model HVC conveyor presents an extremely low profile; minimum headroom is required for installation. Power is provided by a standard three-phase, 230/460 volt TEFC 60 Hz motor.



This 22 ft (6.7 m)-long HVC conveyor is typical of the rugged, yet simple, design. A standard three-phase motor is belt-connected to a variable-pitch sheave, factory set to drive an eccentric shaft at between 900 and 1,000 rpm, depending upon the length of the conveyor. The vibratory motion created by the shaft is amplified and transmitted to the trough by polyisoprene springs, to which the trough is bolted. Heavy-duty construction throughout assures long life under the most difficult operating conditions.



Explosion-proof motors are also available. The ability of the specially designed rubber springs to amplify the motor input results in low horsepower requirements.

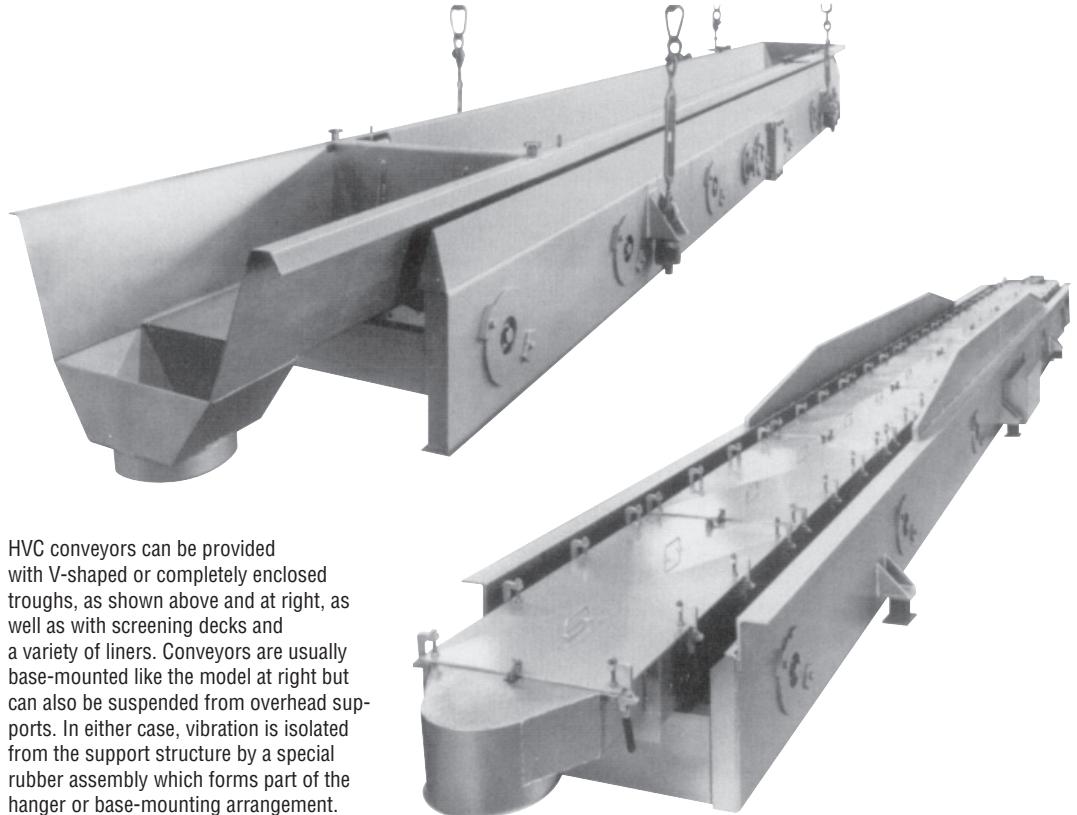
Accurate control of the flow rate is achieved by simply varying the motor speed.

The standard control unit used is a variable voltage controller; a variable frequency controller is available as an option. If it is not necessary to vary flow rates, no control is required.

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

Additional length can easily be obtained with very little loss of headroom by having one conveyor feed into another.

## HIGH-VOLUME MODEL HVC



HVC conveyors can be provided with V-shaped or completely enclosed troughs, as shown above and at right, as well as with screening decks and a variety of liners. Conveyors are usually base-mounted like the model at right but can also be suspended from overhead supports. In either case, vibration is isolated from the support structure by a special rubber assembly which forms part of the hanger or base-mounting arrangement.

### SPECIFICATIONS

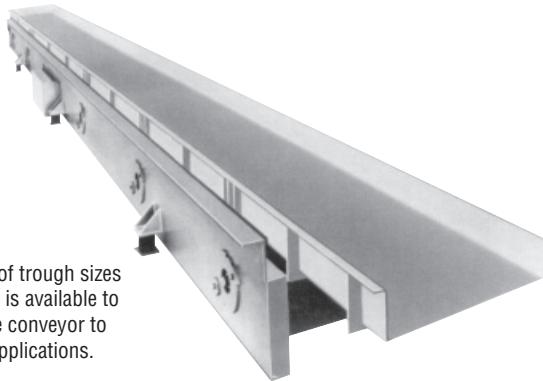
#### CONVEYOR MODEL SELECTION GUIDE

Model Number	Capacity*			Width	Additional Trough Sizes					
	Capacity*		Width		Length					
	Sand	Coal			10 ft 3 m	15 ft 4.6 m	20 ft 6.1 m	25 ft 7.6 m	30 ft 9.1 m	
<b>HVC-8</b>	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	1.5 kw	
<b>HVC-12</b>	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	1.5 kw	
<b>HVC-18</b>	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	2.2 kw	
<b>HVC-24</b>	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	3.7 kw	
<b>HVC-30</b>	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	5.6 kw	
<b>HVC-36</b>	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	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.

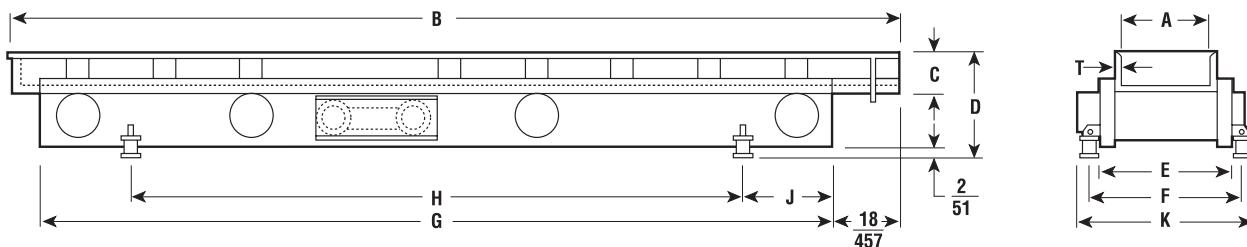
Note: Power subject to change depending on trough thickness, liners, etc. Trough lengths and widths other than those shown here are available.

# HIGH-VOLUME MODEL HVC



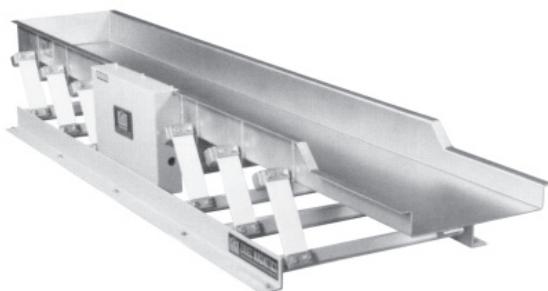
A variety of trough sizes and types is available to match the conveyor to specific applications.

## SPECIFICATIONS



Model	A		B		C		D		E		F		G		H		J		K		T		Weight		Drive	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	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
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
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
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
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
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

# ECONOMY MODEL SM



## FEATURES

- Capacity of up to 18 tons per hour (16 mtph) depending on tray width
- Low profile design with minimum headroom requirements
- Energy-saving low horsepower operation
- Separately mounted drive components for easy maintenance
- Simple, stable, variable speed control is available for special applications

## HIGHLY EFFICIENT, SINGLE-MASS CONVEYOR IS DESIGNED TO MOVE LIGHT LOADS OF BULK MATERIAL RELIABLY AND ECONOMICALLY.

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.

### 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.

### 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.

## SPECIFICATIONS

### CONVEYOR MODEL SELECTION GUIDE

Model Number	Sand Capacity*	Width	Additional Trough Sizes				
			Length				
			Horsepower/Kilowatts Required				
<b>SM-8</b>	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
<b>SM-12</b>	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
<b>SM-18</b>	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
<b>SM-24</b>	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
<b>SM-30</b>	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
<b>SM-36</b>	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.

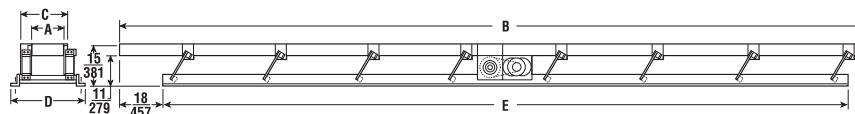
Note: Horsepower subject to change depending on trough thickness, liners, etc. Trough lengths and widths other than those shown here are available. Dimensions subject to change without notice.

# ECONOMY MODEL SM

The Model SM conveyor readily adapts itself to a wide range of production requirements. It will handle headloads up to 2 to 3 inches (50-75 mm) depending on the material. A complete line

of various-sized systems from 8 to 36 inches (200-910 mm) in width to 5 to 40 feet (1.5-12 m) in length allows exceptional latitude in conveyor utilization.

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

Dimensions and specifications are subject to change without notice.

# VMC SERIES – ELECTRO- MAGNETIC CONVEYOR

## RUGGED, HIGH-CAPACITY UNITS FOR THE CONTROLLED CONVEYING OF BULK MATERIALS.

Eriez' VMC Series Electromagnetic Conveyor is a simple, two-mass conveyor combining Eriez years of experience as a world leader in mag-

netics 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.

### FEATURES

- Flow rate to 60 ft/min
- Corrosion-resistant fiberglass springs
- Easy-to-clean design
- Available with base or suspension mounting
- No sliding or rotating parts
- No belts or bearings to fail
- Variable feed rates can be achieved manually or with remote 4-20 mA signal
- Can be provided to USDA specifications
- Gentle handling of delicate products
- Reduced noise level (below 65 dBA)



# VMC SERIES – ELECTRO- MAGNETIC CONVEYOR

## 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 fiber-glass 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 troughs of mild steel and stainless steel. Liners of 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



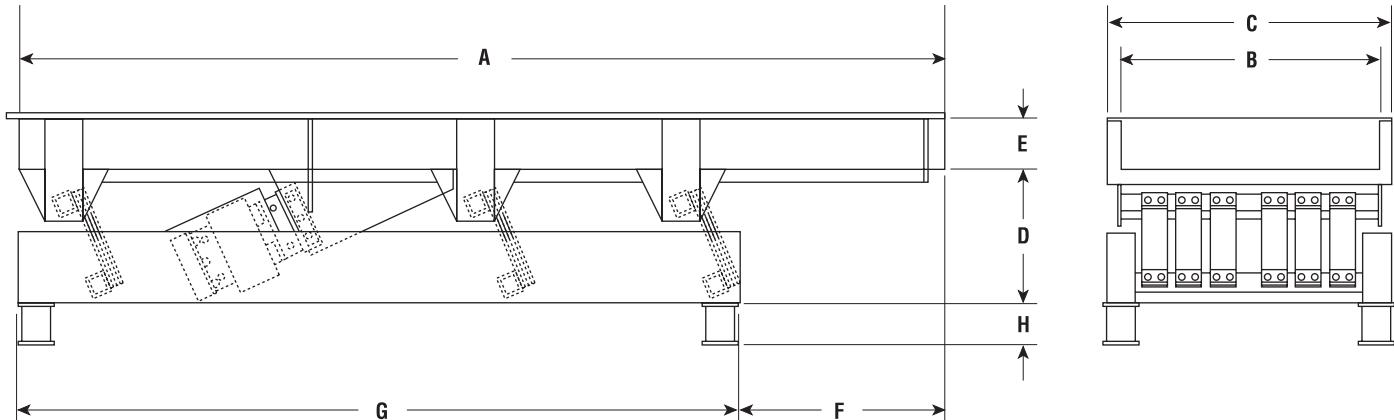
VMC Series  
Dual-Drive Conveyor



VMC Series  
Single-Drive Conveyor

# VMC SERIES – ELECTROMAGNETIC CONVEYOR

## SPECIFICATIONS



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

Dimensions and specifications are subject to change without notice.

# SERIES SL – OVER- DEFLECTION MONITOR

## PROTECT THE INTEGRITY OF YOUR VIBRATORY FEEDER BY MONITORING TRAY DEFLECTION.

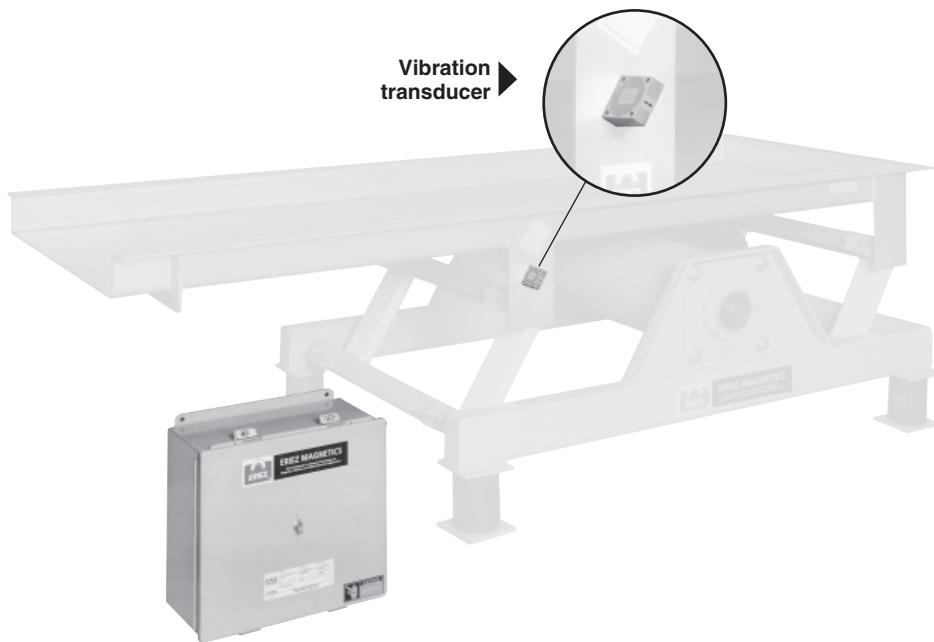
Eriez' new Series SL Over-Deflection Monitor detects changes in tray deflection due to material accumulation on the tray surface. As material accumulates on the tray surface, it adds weight

to the tray, affecting performance and possibly damaging the feeder.

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

### 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



# SERIES SL – OVER- DEFLECTION MONITOR

## INSTALLATION AND OPERATION

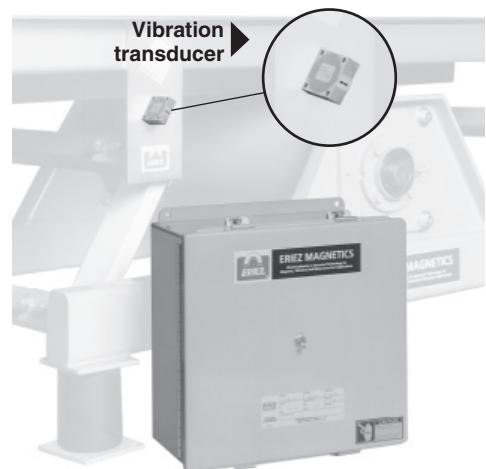
The series SL Over-Deflection Monitor employs a vibration transducer, which must be mounted to the tray, as well as a comparator amplifier, which monitors changes in the tray deflection.

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.

The Over-Deflection Monitor can be used to monitor feeders 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:

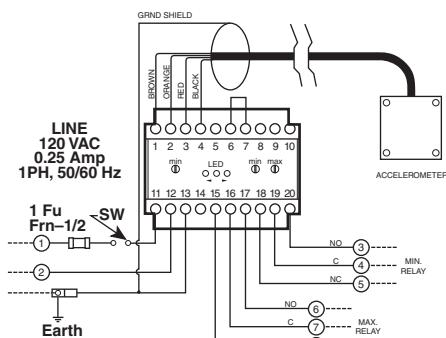
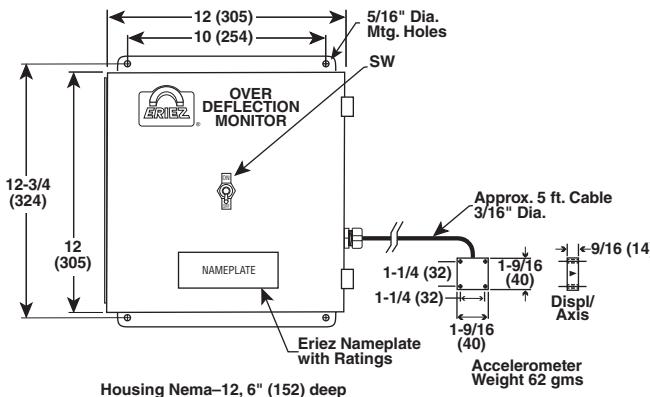
- Vibratory feeders and conveyors
- Multiple vibratory unit systems
- Vibratory screening equipment
- Process equipment where load surges are likely



## 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



Dimensions and specifications are subject to change without notice.



## ERIEZ TECHNICAL CENTER

Eriez' products represent quality, durability, and a long-standing commitment to leadership in technology. A major expression of that commitment is the Eriez Technical Center, industry's most complete magnetic and vibratory testing facility.

Located in Erie, Pennsylvania, adjacent to Eriez' world headquarters, the Technical Center is equipped with more than 100 types of permanent magnetic, electromagnetic, vibratory, screening, electronic metal detection equipment and eddy current separators.

This equipment is used to separate, purify, concentrate, move, feed, and recover a variety of materials. Testing services range from feasibility studies to complete flow-sheet development.



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

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