



**ELECTROMECHANICAL FEEDERS • ELECTROMAGNETIC FEEDERS • BRUTE FORCE FEEDERS**



# Heavy Duty Vibratory Feeders

**HOPPER DESIGN & CONSIDERATIONS • TRAY LINERS • SCREENERS & SPECIAL TRAYS**

*Eriez offers three styles of heavy-duty vibratory feeders designed specifically for high volume rugged environments. Whether you are presenting conveyed material to process separation equipment or you need to accurately feed tons of rock under a high headload, Eriez has a feeder solution to match your application.*

*Our heavy-duty feeders can be found in harsh environments like mining operations, rock quarries, steel mills, glass plants, aggregate and cement plants, slag mills, mineral processing facilities to general high-volume bulk material handling applications needing precise metering of materials.*

*This literature provides a guide to selecting the right drive system based on your specifications. You'll find a description of the drives options, capacities of each, tray options, hopper design suggestions, controls, and auxiliary equipment to complete your project.*

FOR ADDITIONAL INFORMATION, CONTACT  
ERIEZ SALES AT 888.300.3742 OR VISIT [ERIEZ.COM](http://ERIEZ.COM)  
TO FIND A SALES REPRESENTATIVE IN YOUR AREA.



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## Mechanical VIBRATORY FEEDERS



## Electromagnetic VIBRATORY FEEDERS



## Brute Force VIBRATORY FEEDERS



### Features

- Low Profile Design requires Minimum Headroom
- Conveyor or Under Hopper Applications
- Feed Rates to 60 ft/minute (18mpm)
- Simple, Stable, Variable Control
- Low Horsepower
- Heavy-Duty Construction
- Suspended or Base Mounting Configurations
- Adjustable-Angle Rubber Springs

- No Wear Parts – Electromagnetic Drive
- Mounts under a Hopper
- Energy Efficient AC Operation
- Solid-State Controls offer Variable Speed & Easy Integration
- Long-Life Encapsulated Coils
- Protective Enclosed Drive Elements
- Variety of Tray Designs
- Suspended or Base Mounted Configurations
- 3-Year Warranty on Feeder Drive

- Simple Design with External Motors
- Distributes Conveyed Materials
- Powerful Dual Motor Vibrator Design
- Range of Pan Designs and Liner Options
- Suspended or Base Mounted Configurations

### Applications

Harsh environments like mining operations, rock quarries, aggregate and cement plants, slag mills, mineral processing facilities are typical applications for Eriez Mechanical feeders. Their extreme low profile and easy access to components make them well suited to tight spaces.

Electromagnetic feeders are often mounted below a hopper for high-volume bulk material handling and processing applications where greater precision and accurate metering of material is required.

Ideally suited to transit material from a belt conveyor to spread the material and present it evenly across the width of tray. Typically, Brute Force feeders are positioned before processing equipment like eddy current separators or sorters.

### Note

All vibratory equipment share common components... a drive system to generate the vibration, a tray or 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.



# Vibratory

## DRIVES & CAPACITIES

Eriez heavy-duty vibratory feeders are capable of accurately moving up to 2,000 tons per hour (sand). Selecting the correct vibratory feeder is based on a number of factors including the type of material to be handled, operating environment, head load demands, base mount or suspension configuration and desired throughput or feed rate.

Eriez **High Volume Mechanical Feeders** are 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 transmit the exciting force which can “fine tune” the motion of the trough to optimize the feed rate for a specific application. The remarkably compact design creates an extremely low profile for minimum headroom for installation.

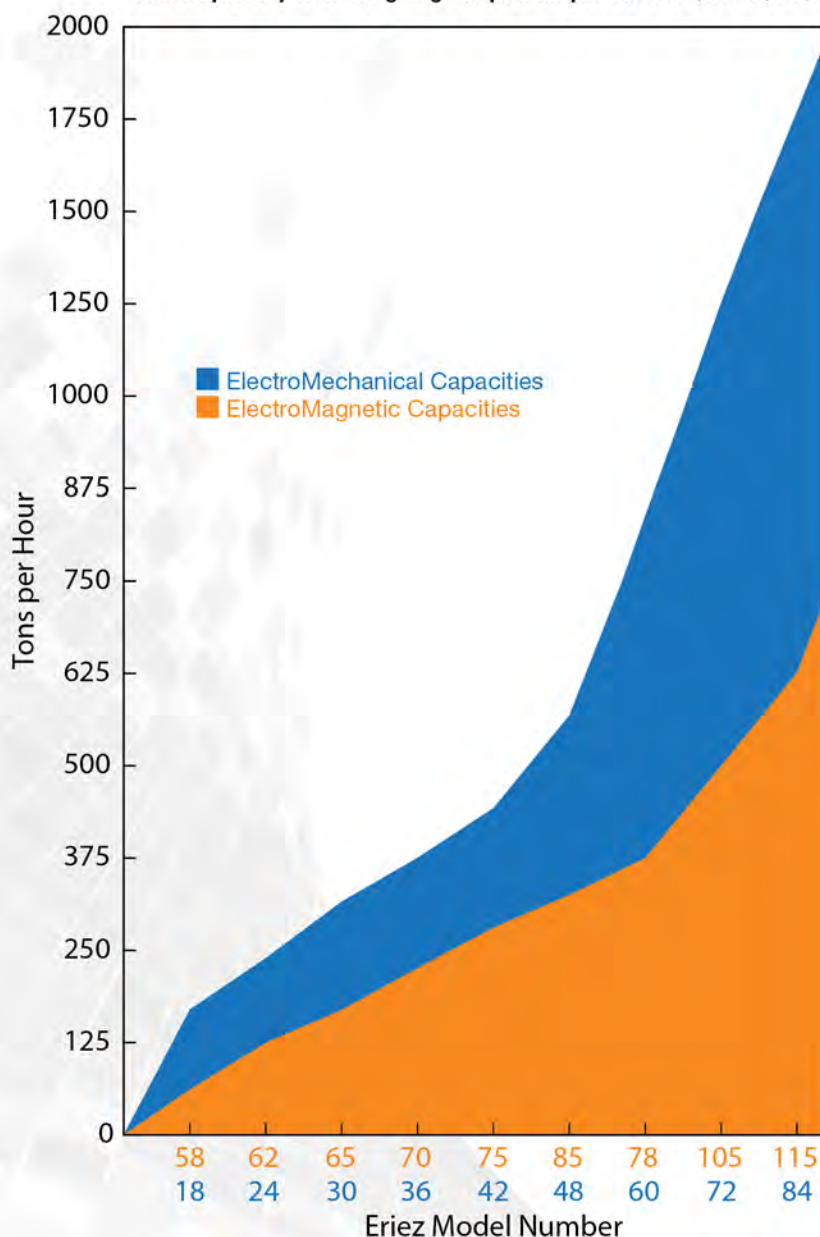
Eriez Heavy-Duty **Electromagnetic Vibratory Feeders** are designed for high volume, controlled feeding applications like coal, ore, aggregates, slag and others. These feeders feature our energy-saving intermeshed AC operated, electro magnet drives. Powerful, accurate and highly efficient, this line of vibratory feeders is available in models with capacities to 660 tons (594 MT) per hour\*. (\*Capacity is based on sand weighing 100 pounds per cubic ft. (1.6 metric tons per cubic meter)

The **Brute Force Vibratory Feeder** is ideal to evenly spread conveyed materials for presentation to any sort of processing equipment. These feeders use twin eccentric motors mounted to the rear of the pan or tray to create a powerful vibratory motion. The pan or tray is spring mounted to a heavy structural steel frame. All components motors and springs are readily accessible for service or replacement.

These feeders are available in a range of sizes to suite specific applications. For severe environments, pan liners are available to increase durability and longevity.

### FEEDING CAPACITIES - (Tons/Hour)

Based upon dry sand weighing 100 pounds per cubic ft. (1.6 mt/cm)



The chart above shows the capacity range of both Eriez mechanical and electromagnetic feeders. The Brute Force feeder is not designed to maintain consistent tray deflection under varying material loads so it is not shown on this chart.



*High capacity mechanical feeders are critical in the operation of large aggregate facilities.*



*The low profile design of the HVF is ideal for underground installations.*



# HVF Mechanical

## VIBRATORY FEEDERS

Eriez HVF mechanical feeders are straight-forward, 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 transmit the exciting force which can “fine tune” the motion of the trough to optimize the feed rate for a specific application.

### FEATURES

- Adjustable-angle polyisoprene rubber springs
- Low profile design requires minimum headroom
- Suitable for high material load applications such as below hoppers
- Feed rates to 60 ft/minute (18mpm)
- Adjustable with variable frequency drive
- Low horsepower requirements
- Heavy-duty construction for rugged applications
- Easily replaced standard motors

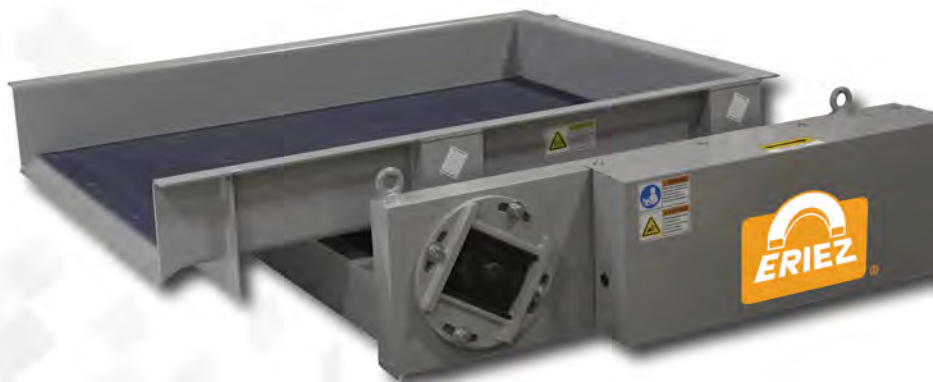
The remarkably compact, design of the Model HVF feeder presents an extremely low profile requiring minimum headroom for easier installation.

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

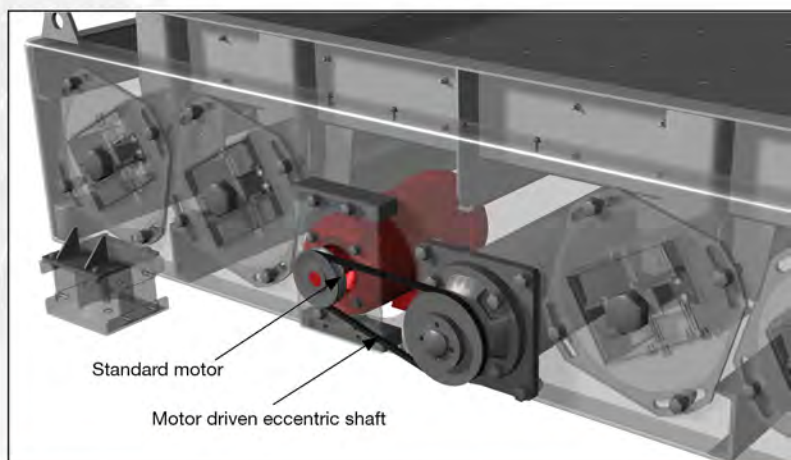
Adjustable, variable-speed sheaves or variable frequency controls are available to provide feed rate adjustability within acceptable operating frequencies.

Eriez offers a wide variety of trough (tray) sizes and types for specific applications. Flat, open trays are common but tubular trays, grizzly and screening trays, as well as trays as long as 30-feet or more are available. Typical materials of construction used are mild or stainless steel. For harsh applications such as glass cullet, limestone or other abrasive products, replaceable tray liners like UHMW, AR steel, chrome carbide or other materials can be provided.

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



*Low Profile Designs as low as 18".*



*Base mounted (as shown) or suspension mount available.*

# HVF Mechanical Feeders



The standard drive motor is conveniently positioned for easy access.

## Feeder Model Selection Guide

Model Number	Capacity*		Rated Trough W x L	Width	Length							
					36" 914mm	48" 1219mm	60" 1524mm	72" 1829mm	84" 2134mm	96" 2438mm	108" 2743mm	120" 3048mm
	Sand	Coal	Horsepower/Kilowatts Required									
HVF-18	130tph	65tph	18" x 36"	18"	1/3 hp	1/2 hp	1/2 hp	3/4 hp	1 hp			
	117mtph	50mtph	457mm x 914mm	457mm	.25 kw	.37 kw	.37 kw	.56 kw	.75 kw			
HVF-24	230tph	115tph	24" x 48"	24"	1 hp	1 hp	1-1/2 hp	1-1/2 hp	2 hp			
	207mtph	105mtph	610mm x 1219mm	610mm	.75 kw	.75 kw	1.1 kw	1.1 kw	1.5 kw			
HVF-30	370tph	185tph	30" x 60"	30"	1-1/2 hp	1-1/2 hp	1-1/2 hp	2 hp	2 hp	3 hp		
	330mtph	170mtph	762mm x 1524mm	762mm	1.1 kw	1.1 kw	1.1 kw	1.5 kw	1.5 kw	2.2 kw		
HVF-36	540tph	270tph	36" x 60"	36"	1-1/2 hp	2 hp	2 hp	2 hp	3 hp	5 hp	5 hp	
	430mtph	220mtph	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	700tph	350tph	42" x 72"	42"			3 hp	3 hp	3 hp	5 hp	5 hp	
	630mtph	315mtph	1067mm x 1829mm	1067mm			2.2 kw	2.2 kw	2.2 kw	3.7 kw	3.7 kw	
HVF-48	900tph	450tph	48" x 72"	48"			3 hp	3 hp	5 hp	5 hp	5 hp	
	810mtph	405mtph	1219mm x 1829mm	1219mm			2.2 kw	2.2 kw	3.7 kw	3.7 kw	3.7 kw	
HVF-60	1000tph	500tph	60" x 84"	60"					5 hp	5 hp	7-1/2 hp	7-1/2 hp
	900mtph	450mtph	1524mm x 2134mm	1524mm					3.7 kw	3.7 kw	5.6 kw	5.6 kw
HVF-72	1450tph	725tph	72" x 108"	72"						7-1/2 hp	7-1/2 hp	10 hp
	1320mtph	660mtph	1829mm x 2743mm	1829mm						5.6 kw	5.6 kw	7.5 kw
HVF-84	1800tph	900tph	84" x 120"	84"							10 hp	10 hp
	1630mtph	820mtph	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° downslope, and skirt boards included on hopper for maximum material depth in tray. Material angle of repose 40°.

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 capacity varies due to installation factors such as downslope and hopper arrangement and/or material properties such as weight and moisture content. Consult Eriez for your specific application.



## Dimensions \*\*\*

Model HVF-	W	L	D	BW	B	E	F	G	H	K	M	N	OH	R	T	Approx. WT*	Approx. HP**
18	18	36	7	28	36	11-3/4	26	11	31-3/4	9	4-1/2	2-1/2	11	26	1/8	600	1/3
24	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	1000	1
30	30	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	1500	1-1/2
36	36	72	9	51-1/8	54	8	48	9	57-1/4	14	5-1/2	3	27	60	1/4	2000	2
42	42	72	9	57	54	5	54	6	57-1/4	14	6	3-1/2	24	66	1/4	3000	3
48	48	84	9	66	69	18	62	9	45-1/2	16	6-1/2	3-1/2	24	62	5/16	4000	5
60	60	96	9	78	69	22-1/2	74	9	62	16	6-1/2	3-1/2	36	74	3/8	4000	5
72	72	96	9	90	87	22-1/2	86	15	82	16	8	4	24	86	3/8	4500	7-1/2
84	84	120	9	102	104	15-1/2	98	7	81-1/2	16	8	4	23	98	3/8	6000	10

\* Weight of feeders can vary significantly depending on final feeder design and liner requirements.

\*\* Motor requirements may vary depending on feeder design.

\*\*\* Dimensions of feeders are approximate and may vary based on final design.

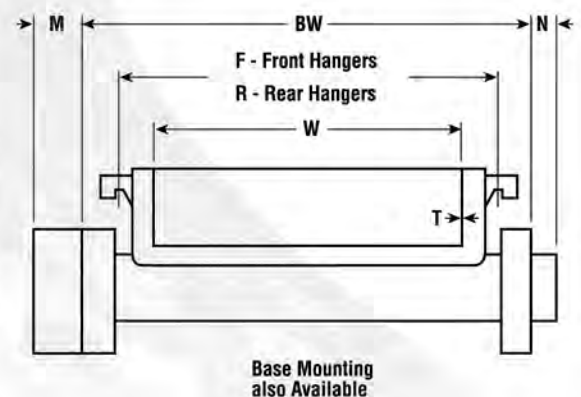
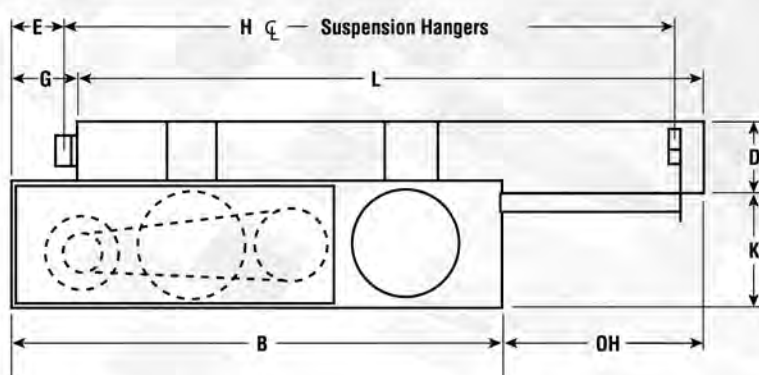
## Metric (millimeters, kilograms, kilowatts)

Model HVF-	W	L	D	BW	B	E	F	G	H	K	M	N	OH	R	T	Approx. WT**	Approx. KW**
18	457	914	178	762	914	298	660	279	806	228	114	64	279	660	3	272	0.25
24	610	1219	178	937	1156	279	810	279	1143	268	114	64	343	975	6.4	453	0.75
30	762	1524	178	1080	1156	127	953	127	1448	268	127	76	495	1118	6.4	680	1.12
36	914	1829	229	1299	1372	203	1219	229	1454	356	140	76	686	1524	6.4	907	1.49
42	1067	1829	229	1448	1372	127	1372	152	1454	356	152	89	610	1676	6.4	1360	2.24
48	1219	2438	229	1676	1753	457	1575	229	1156	406	165	89	914	1575	8	1814	3.73
60	1524	2134	229	1981	1753	572	1880	533	1575	406	165	89	610	1880	9.5	1814	3.73
72	1829	2438	229	2286	2210	572	2184	381	2083	406	203	102	610	2184	9.5	2041	5.60
84	2134	3048	229	2591	2642	394	2489	178	2070	406	203	102	584	2489	9.5	2721	7.46

\* Weight of feeders can vary significantly depending on final feeder design and liner requirements.

\*\* Motor requirements may vary depending on feeder design.

\*\*\* Dimensions of feeders are approximate and may vary based on final design.





*Eriez B-Feeders provide precise control in operations requiring cycling such as a ladle additives system in a steel mill.*



*Eriez electromagnetic feeder paired with our state-of-the-art solid-state controls offer the precise metering required for foundry glass & steel applications.*



# Electromagnetic

## VIBRATORY FEEDERS

Eriez Heavy-Duty Electromagnetic Vibratory Feeders are designed for high volume, controlled feeding applications like glass cullet, ore, aggregates, slag and most any dry bulk solid. These feeders feature our patented energy-saving intermeshed AC operated, permanent magnet drives. Powerful, accurate and highly efficient, this line of vibratory feeders is available in models with capacities to 660 tons (594 MT) per hour\*. (\*Capacity is based on sand weighing 100 pounds per cubic ft. (1.6 metric tons per cubic meter))

### FEATURES

- No wear parts – electromagnetic drive
- No rotating or sliding parts
- Ideal for head-load applications below hoopers
- Suspended or base mounted configurations
- Energy efficient AC operation
- Solid-State controls offer variable speed
- Long-life encapsulated coils
- Protective enclosed drive elements

Eriez' unique and patented magnetic drive circuit provides a simple yet powerful solution to difficult material feeding applications.

Eriez Heavy Duty Vibratory Feeders means greater productivity at lower cost. In addition, you get all the features that for years have made Eriez Feeders the leaders in quality and dependability.

### ELECTRO-PERMANENT MAGNETIC DRIVE

The basic simplicity of a drive powered by alternately opposing and attracting magnetic forces assures low maintenance. There are no sliding or rotating parts. Power consumption is low, installation easy. The positive driving force of Eriez units provides stability, control, and unexcelled accuracy.

### AC OPERATION

Since no rectification is required, feeders can simply be wired into single phase AC lines.

### SOLID-STATE CONTROLS

Compact AC controls regulate feeder speed by varying applied voltage. Controls are available for automated operation. Single feeders or groups of feeders can be remotely controlled from one station.

### ENCAPSULATION

The coil and magnet in Eriez' drive unit are encapsulated in epoxy, eliminating coil movement and thus extending trouble-free coil life.

### ENCLOSED DRIVE ELEMENT

The completely enclosed drive assembly is dust and moisture resistant which extends coil life and makes external cleaning easier. Special drive enclosures are available for locations where dust resistance is required.



*An order for 30 Heavy-Duty Electromagnetic feeders is readied for shipping to a slag mill.*

# Electromagnetic Feeders

## DRIVE LINEARITY

Eriez unique AC drive applies power on both the forward and reverse direction of the feeder tray, giving superior linearity and control. Competitors use an inefficient attract-release design in which an electromagnet pulls the tray in one direction and the feeder springs cause the tray to snap back in the opposite direction.

## HIGH TEMPERATURE UNITS

Standard units operate at temperatures up to 130°F (54°C). High-temperature units are available for temperatures up to 300°F (150°C).

## VARIETY OF TRAYS

In addition to a wide variety of standard trays, special trays with screens, grizzlies, dust covers, abrasive liners, heated liners, etc., are available.

## The Eriez Difference...

Old-style electromagnetic vibratory equipment operates with an inefficient attract-release system: a spring-mounted moving mass is alternately attracted by a rectified pulsating DC electromagnet and returned to its original position solely by the springs. Eriez design incorporates a lifetime permanent magnet (part of a spring mounted moving mass) whose poles are intermeshed with those of an electromagnet powered directly by an AC line. This results in the spring-mounted moving mass being both attracted and repelled by the AC electromagnet equally on each half of the AC cycle.

In the diagram to the right, the poles of the permanent magnet (yellow) are shown intermeshed in the air gaps of the AC electromagnet (orange). The polarity of the permanent magnet is fixed, while the polarity of the electromagnet alternates at line frequency. The electromagnet polarity is shown as it exists on one side of the AC sine wave; note that both poles of the permanent magnet are attracted toward the unlike electromagnet poles while being repelled in the same direction by the like poles.

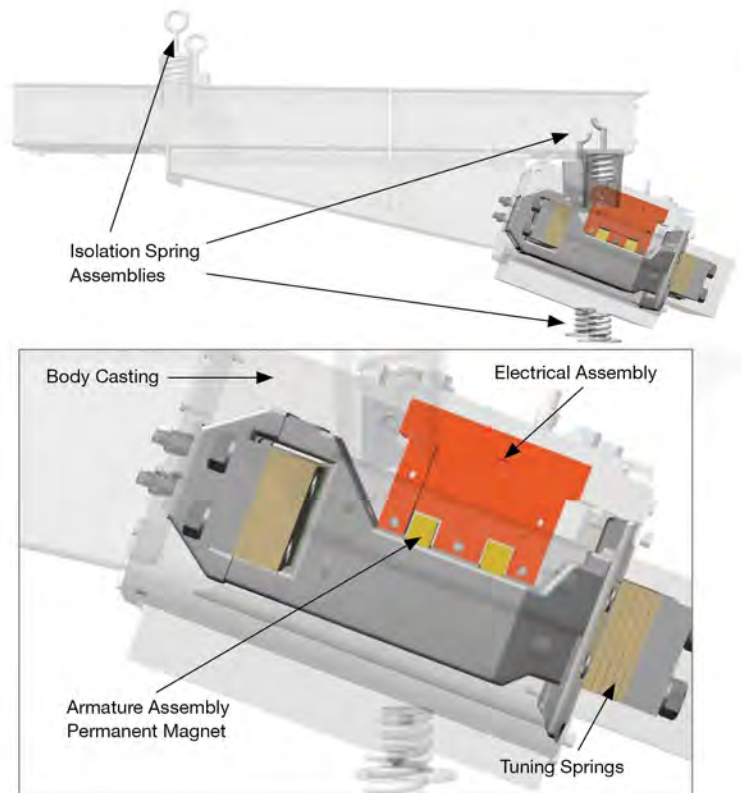
The action described has the effect of progressively closing the magnetizing circuit through the electromagnet core, providing a progressively increasing magnetizing force upon the permanent magnet. The demagnetizing force is very minor, since the action described also has the effect of progressively opening the demagnetizing circuit.

On the opposite side of the sine wave the polarities of the electromagnet are reversed, the armature is driven in the opposite direction, and again there is a net magnetizing force on the permanent magnet. There is always a predominant magnetizing force impressed upon the permanent magnet that prevents it from ever losing its strength.

Since the amplitude of vibration depends directly upon the forces applied at the poles, and since these forces depend directly upon the applied AC voltage, simple variation of the AC voltage from zero to maximum results in similar amplitude variation from zero to maximum.

### NOTES:

1. All feeding capacities are based on dry sand weighing 100 lb./ft<sup>3</sup> (1.6 g/cu cm) with the tray at a 10° downslope. More precise repeatability and less over feed will be achieved with less downslope.
2. Dimensions shown are approximate and should not be read to be exact.
3. Dimensions and specifications are subject to change without notice.





# Model 58B FEEDS UP TO 70 TONS (63 MT) PER HOUR\*

The trim, lightweight Model 58B, either base mounted or suspended (please specify), can easily handle up to 70 tons (63 mt) per hour of any bulk free-flowing material weighing 100 lb/ft<sup>3</sup> (1.6 g/cu cm). Simple variable transformer type controls give 100% range of capacity, with linearity. Capacity is based on 14 x 36 inch (356 x 914 mm) tray properly installed with skirtboards.

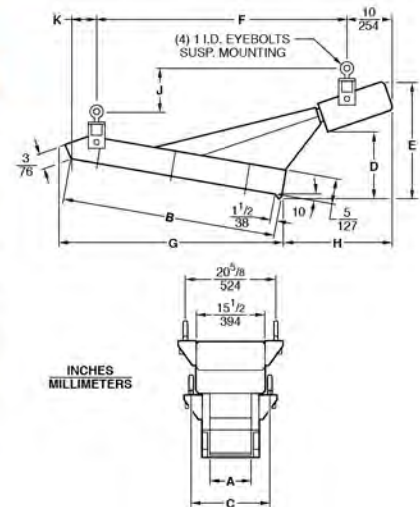


Power Supply	115V, 230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	7 Amp at 115V
Approximate Weight	410 lb. (186 kg)

## Dimensions

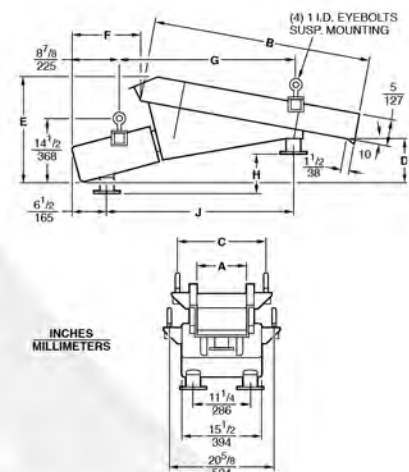
### 58B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
8 x 54	in	8	54	15-3/8	14-7/8	24-1/8	54-5/8	55-1/8	23	8	13-3/4
	mm	203	1372	391	379	613	1388	1402	585	203	350
10 x 48	in	10	48	17-5/8	14-5/8	26-3/8	55-5/8	49-3/8	25	9	6-1/2
	mm	254	1219	441	371	670	1413	1253	634	229	165
12 x 42	in	12	42	19-3/8	10-3/8	21-3/8	39-7/8	43-3/8	19-7/8	7	13-3/8
	mm	305	1067	492	263	543	1014	1103	505	178	341
14 x 36	in	14	36	21-3/8	9	20	41-1/8	37-1/2	25	6-1/2	9-1/8
	mm	356	914	543	229	508	1044	952	635	165	232



### 58B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
8 x 54	in	8	54	15-3/8	4-3/8	18	6-1/8	34	4-7/8	36-1/8
	mm	203	1372	391	112	457	156	864	123	917
10 x 48	in	10	48	17-3/8	5-1/8	17-3/4	8-1/8	34-3/4	5	37-5/16
	mm	254	1219	441	129	450	208	883	128	948
12 x 42	in	12	42	19-3/8	6-5/8	18-1/4	10-7/16	36-5/8	6-3/8	35-1/4
	mm	305	1067	492	168	463	265	829	163	894
14 x 36	in	14	36	21-3/8	5-3/4	16-3/8	13	32-7/8	5	35-1/2
	mm	356	914	543	147	415	330	836	127	902
16 x 30	in	16	30	23-3/8	6-3/8	15-3/4	16	28-7/8	6-1/8	31-1/8
	mm	406	762	594	163	399	405	734	155	791



\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m) 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.

# Model 62B

**FEEDS UP TO  
100 TONS (90 MT)  
PER HOUR\***

The compact 62B will conservatively feed up to 100 tons (90 mt) per hour for materials weighing 100 lb/ft<sup>3</sup> (1.6 g/cu cm). It is ideal for many medium capacity feeding applications requiring controlled feed to weigh scales, packaging and filling machines, kilns, etc. Suspended or base mounted models (please specify) can be supplied. Capacity is based on 18 x 36 inch (457 x 914 mm) tray properly installed with skirtboards.



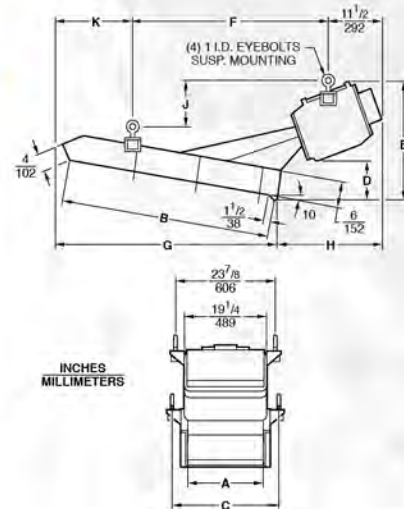
Power Supply	115V, 230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	8 Amp at 230V
	4 Amp at 460V
Approximate Weight	730 lb. (331 kg)

## Dimensions

### 62B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
8 x 60	in	8	60	15-1/4	13-7/8	30-3/4	68-7/8	61-5/8	28-3/4	12-1/8	10-3/8
	mm	203	1524	387	353	781	1749	1567	730	308	264
10 x 54	in	10	54	17-1/4	10-3/4	27-5/8	58-3/8	55-1/2	21-5/8	9-7/8	7-5/8
	mm	254	1372	438	273	702	1483	1410	549	251	194
12 x 48	in	12	48	19-1/4	10	26	52	50	31	10-1/2	14-3/4
	mm	305	1219	489	254	660	1321	1269	788	267	375
14 x 42	in	14	42	21-1/4	9-3/8	26-1/4	44-3/4	44-3/4	26-1/2	11	15-3/8
	mm	356	1067	540	238	667	1136	1137	674	280	389
18 x 36	in	18	36	25-1/4	9-1/8	25-7/8	45-1/2	37-7/8	28-1/4	10-1/2	6-5/8
	mm	457	914	641	233	657	1156	962	718	265	168

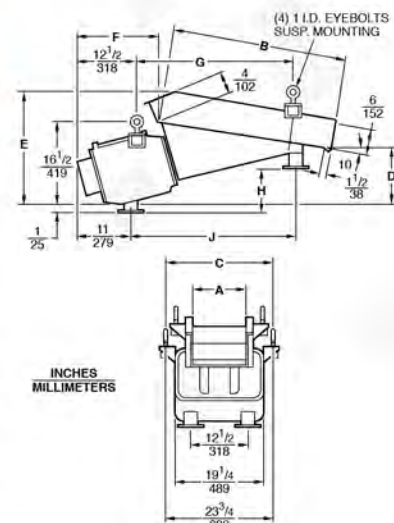
\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



### 62B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
8 x 60	in	8	60	23-3/4	7-5/8	23-3/8	12-1/4	41-5/8	6-1/2	43-3/8
	mm	203	1524	603	193	594	311	1056	164	1103
10 x 54	in	10	54	23-7/8	8-7/8	23-1/3	15	44	6-3/4	45-7/8
	mm	254	1372	606	225	598	380	1117	170	1164
12 x 48	in	12	48	23-3/4	8-3/8	22-1/8	14	35-1/2	6-1/4	36-3/8
	mm	305	1219	603	214	562	358	903	159	925
14 x 42	in	14	42	23-3/4	8	20-5/8	16-7/8	35-3/4	5-5/8	37-1/4
	mm	356	1067	603	204	525	429	908	143	946
18 x 36	in	18	36	25-1/4	8-5/8	20-1/4	19-1/4	34-5/8	5-3/4	36-1/2
	mm	457	914	614	220	514	489	880	146	927

\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.





# Model 65B

**FEEDS UP TO  
175 TONS (158 MT)  
PER HOUR\***

The 65B provides a wide capacity range to feed controlled amounts from a few pounds to 175 tons (158 mt) per hour, for materials weighing 100 lb/ft<sup>3</sup> (1.6 g/cu cm), and even more if operated with more downslope and skirtboards. All units are available with either under-drive or overhead-drives (please specify). Capacity is based on 24 x 30 inch (610 x 762 mm) tray properly installed with skirtboards.

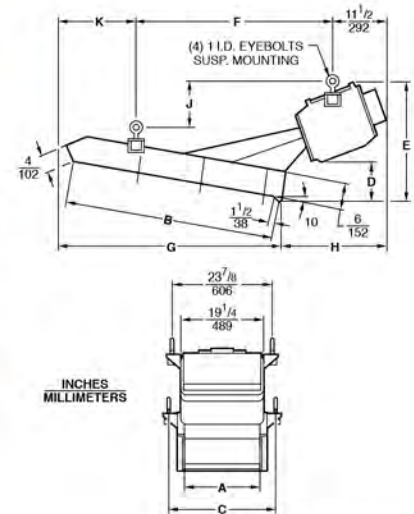


<b>Power Supply</b>	<b>115V, 230V, 460V, or 575V 50–60 Cycles, Single Phase</b>
<b>Full Load Power Input</b>	<b>8 Amp at 230V</b>
	<b>4 Amp at 460V</b>
<b>Approximate Weight</b>	<b>750 lb. (340 kg)</b>

## Dimensions

### 65B OVERHEAD-DRIVE STANDARD TRAYS

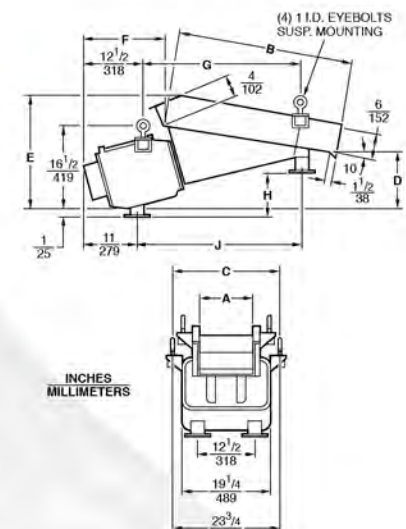
SIZE		A	B	C	D	E	F	G	H	J	K
10 x 60	in	10	60	17-1/4	15-1/2	32-3/8	65-1/4	62-1/2	34-5/8	15-1/2	20-5/8
	mm	254	1524	438	393	822	1656	1587	879	394	525
12 x 54	in	12	54	19-1/4	12-3/4	29-5/8	60-1/8	56-1/4	29-1/2	13	14-3/8
	mm	305	1372	489	325	752	1527	1429	749	330	365
16 x 48	in	16	48	23-1/4	10-3/8	27-1/4	52-3/8	50-3/8	25-3/8	11	12
	mm	406	1219	591	264	692	1332	1279	644	279	305
18 x 42	in	18	42	25-1/4	10-5/8	25-1/2	51-1/4	43-1/2	31-1/8	11	12-3/8
	mm	457	1067	641	270	648	1300	1105	791	278	314
24 x 30	in	24	30	31-1/4	9-3/4	25-7/8	32-1/2	31-7/8	22-7/8	11-7/8	10-7/8
	mm	610	762	794	247	657	827	810	580	302	276



\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.

### 65B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
10 x 60	in	10	60	23-3/4	6-3/4	22-7/8	9-1/2	41-7/8	4-1/8	43-5/8
	mm	254	1524	603	171	581	242	1065	104	1107
12 x 54	in	12	54	23-7/8	7-1/2	22-1/4	13-5/8	41-7/8	4-1/2	43-1/4
	mm	305	1372	606	189	564	346	1064	115	1097
16 x 48	in	16	48	23-1/4	7-7/8	21-1/2	13-1/2	35-3/8	4-5/8	36-1/2
	mm	406	1219	591	199	547	344	898	118	927
18 x 42	in	18	42	25-1/4	8-7/8	21-1/2	15-3/4	32-3/8	6-3/8	33-5/8
	mm	457	1067	641	226	546	400	823	162	853
24 x 30	in	24	30	31-1/4	9-3/8	19-7/8	19-3/16	28-5/8	6	29
	mm	610	762	794	237	505	487	728	152	737



\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.

# Model 70B FEEDS UP TO 225 TONS (203 MT) PER HOUR\*

This rugged 70B will pour out up to 225 tons (203 mt) of bulk materials per hour. Use it for feeding to central belt lines, screens, pulverizers and elevators. Special trays are available for all models with screens, grizzlies, dust covers, abrasive liners, etc. Capacity is based on 30 x 42 inch (762 x 1067 mm) tray properly installed with skirtboards.



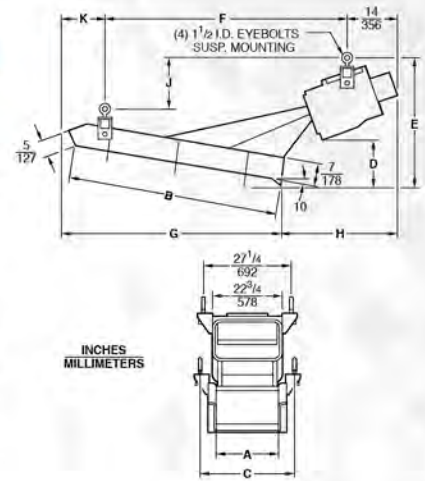
Power Supply	115V, 230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	13.7 Amp at 230V
	7.3 Amp at 460V
Approximate Weight	1550 lb. (703 kg)

## Dimensions

### 70B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
12 x 72	in	12	72	20-1/2	17-7/8	35-5/8	88-1/8	74-1/2	36-7/8	13-3/8	9-3/8
	mm	305	1829	521	454	905	2238	1893	936	341	238
14 x 66	in	14	66	22-1/2	15-1/2	33-1/4	79-1/8	68-5/8	33-1/2	11-5/8	9-1/8
	mm	356	1676	572	394	845	2010	1743	851	295	231
18 x 60	in	18	60	26-1/2	13	31-5/8	60-5/8	62-1/4	30-1/4	11-5/8	18-1/4
	mm	457	1524	673	330	803	1538	1581	768	296	463
24 x 42	in	24	42	32-1/2	10-7/8	29-3/8	57-1/2	44-3/4	35-7/8	12	9-3/8
	mm	610	1067	826	279	746	1461	1137	911	305	240
30 x 36	in	30	36	38-1/2	12	29-3/4	54-1/8	39-1/8	36-3/8	13	7-3/8
	mm	762	914	978	304	756	1374	993	923	330	188

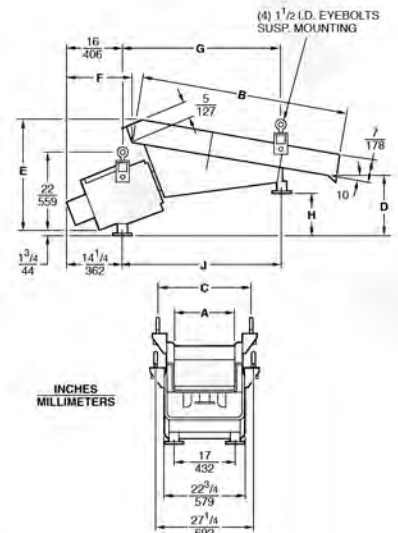
\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



### 70B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
12 x 72	in	12	72	20-1/2	9-1/2	26-1/2	9-7/8	51-3/4	5-9/16	53-3/4
	mm	305	1829	521	241	673	253	1315	141	1364
14 x 66	in	14	66	22-1/2	12-1/8	27-3/8	20	55-7/8	8-1/8	58
	mm	356	1676	571	307	696	509	1420	208	1475
18 x 60	in	18	60	26-1/2	9-7/8	26-5/8	18-3/8	49-3/4	7-1/8	51-1/2
	mm	457	1524	763	250	676	466	1264	181	1308
24 x 42	in	24	42	32-1/2	11	24-3/4	25	38-3/8	7-1/4	40
	mm	610	1067	826	279	629	634	975	184	1016
30 x 36	in	30	36	38-1/2	12-1/8	22-7/8	24-3/4	37-7/8	7-1/8	39-7/8
	mm	762	914	978	308	582	629	963	181	1013

\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.







# Model 75B FEEDS UP TO 265 TONS (238 MT) PER HOUR

The popular 75B has a feeding capacity of 265 tons (238 mt) per hour. With its precise control of this feed rate it is ideal for use in proportioning aggregates and other materials. Fine or coarse, large or small bulk materials are fed equally well. Capacity is based on 36 x 42 inch (914 x 1066 mm) tray properly installed with skirtboards.



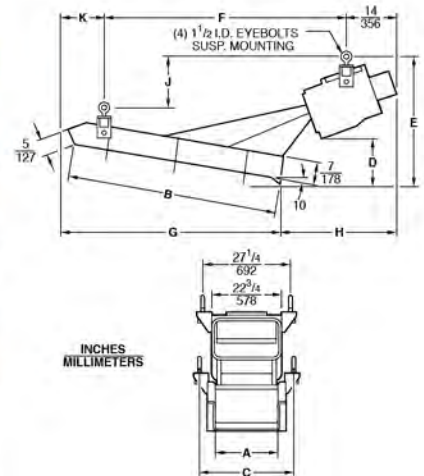
Power Supply	115V, 230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	13.7 Amp at 230V
	7.3 Amp at 460V
Approximate Weight	1575 lb. (714 kg)

## Dimensions

### 75B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
14 x 78	in	14	78	22-1/2	20-1/8	37-3/4	85-3/8	80-1/4	39	16-1/4	19-7/8
	mm	355	1981	570	512	959	2169	2038	990	412	506
18 x 72	in	18	72	27	15-3/8	34	73-7/8	74-1/4	30-1/2	12-7/8	15-5/8
	mm	457	1829	636	391	864	1877	1887	776	327	396
24 x 60	in	24	60	31-3/4	14-1/8	32-3/8	66	62-3/8	35-1/2	14	17-7/8
	mm	610	1524	806	357	822	1678	1584	901	355	455
30 x 48	in	30	48	39	10	30	57-7/8	50-7/8	36-3/8	13-1/8	15-3/8
	mm	762	1219	991	254	762	1470	1292	924	334	391
36 x 42	in	36	42	45	10	30	57-1/8	45	36-3/8	13-1/8	9-1/2
	mm	914	1067	1143	254	762	1470	1143	924	334	241

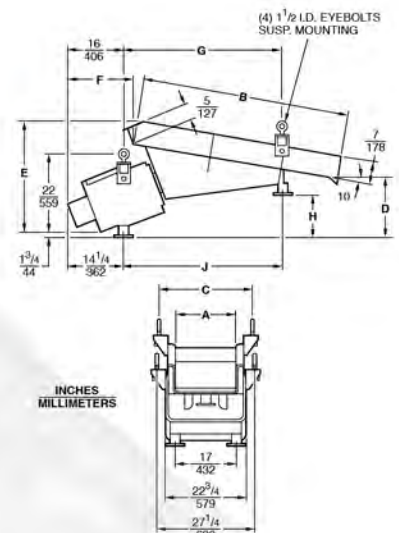
\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



### 75B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
14 x 78	in	14	78	22-1/2	12-3/4	32-3/4	9-5/8	54-1/4	11-3/8	55-5/8
	mm	356	1981	572	323	833	245	1377	288	1414
18 x 72	in	18	72	27	8-15/16	27-23/32	12-15/32	55-1/4	6-9/16	57-13/32
	mm	457	1829	686	227	704	317	1403	167	1458
24 x 60	in	24	60	33	10-3/8	27-1/4	18-1/2	41-1/4	8-1/8	43-1/8
	mm	610	1524	838	265	693	471	1049	206	1094
30 x 48	in	30	48	38-1/2	13	27-3/4	24	39-1/2	9-7/8	41-1/4
	mm	762	1219	978	329	705	611	1005	250	1049
36 x 42	in	36	42	44-1/2	6-3/4	20-5/8	26-1/8	37-5/8	9	39-7/8
	mm	914	1067	1130	173	525	663	957	229	1012

\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



# Model 85B

**FEEDS UP TO  
420 TONS (378 MT)  
PER HOUR\***

The 85B, with a feed rate of 420 tons (378 mt) per hour provides high capacity in a compact size. With its wide flat tray it can easily handle big bulky chunks such as rocks, coal and other mined materials. Capacity is based on 36 x 54 inch (914 x 1371 mm) tray properly installed with skirtboards.



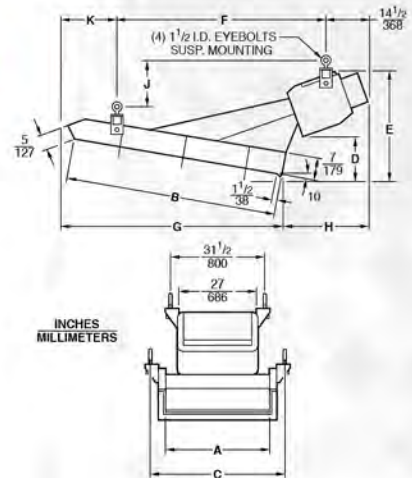
Power Supply	230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	27.5 Amp at 230V
	12.5 Amp at 460V
Approximate Weight	2400 lb. (1090 kg)

## Dimensions

### 85B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
18 x 84	in	18	84	27-5/8	19-3/4	40-1/8	87-1/8	86-1/8	38-1/8	17-1/2	23-1/4
	mm	457	2134	702	500	1019	2213	2189	968	444	589
24 x 72	in	24	72	32-1/2	15-3/4	34	81-7/16	74-5/16	35-3/4	12-15/16	15-1/4
	mm	610	1829	826	400	864	2069	1888	908	328	387
30 x 60	in	30	60	39-1/2	14-7/8	34-3/4	71-7/8	62-5/8	37-3/4	15-1/8	14-3/8
	mm	762	1524	1003	377	883	1827	1590	958	384	365
36 x 48	in	36	48	45	12-3/4	32-3/4	60	50-3/4	40-1/4	15-7/8	17
	mm	914	1219	1142	324	832	1524	1289	1023	403	431

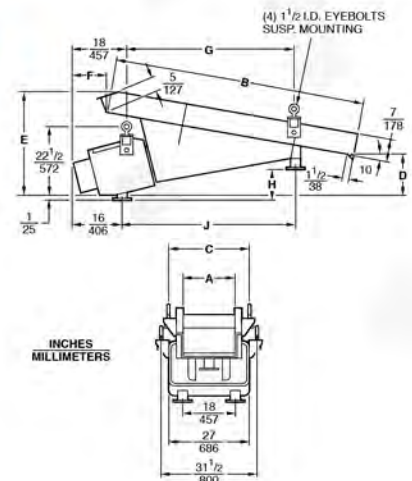
\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



### 85B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
18 x 84	in	18	84	27-5/8	10-1/8	31	17-3/8	62-7/8	7	65-3/4
	mm	457	2134	702	257	786	442	1596	177	1659
24 x 72	in	24	72	33-1/2	12-1/2	31-3/8	16-7/8	50-3/4	8	53
	mm	610	1829	851	317	797	429	1288	203	1346
30 x 60	in	30	60	39-5/8	10-5/8	27-3/8	20-3/4	39-7/8	8-1/2	42-7/8
	mm	763	1524	1008	271	695	528	1013	217	1088
36 x 48	in	36	48	45-5/8	11	25-7/8	24-1/4	39-3/8	7	42-1/4
	mm	914	1219	1159	280	657	616	999	179	1072

\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.





# Model 98B

**FEEDS UP TO  
550 TONS (495 MT)  
PER HOUR\***

You can move up to 550 tons (495 mt) per hour with the 98B. Standard tray sizes go up to 7 feet (2134 mm) long. Multiple drives are available on all heavy duty models where more than standard length is required. The drive unit is completely enclosed. Capacity is based on 42 x 54 inch (1067 x 1372 mm) tray properly installed with skirtboards.



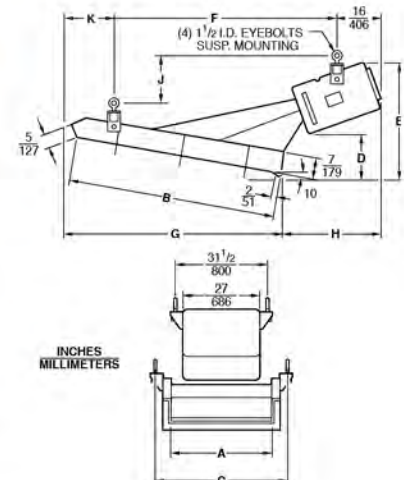
Power Supply	230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	35 Amp at 230V
	18.2 Amp at 460V
Approximate Weight	2900 lb. (1318 kg)

## Dimensions

### 98B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
18 x 96	in	18	96	27-5/8	20-3/4	43-5/8	96-5/8	98	37-3/8	17-3/4	23-1/2
	mm	456	2438	702	528	1108	2453	2490	948	451	595
24 x 84	in	24	84	33-5/8	19-3/4	44-1/8	90-5/8	86	45	19-5/8	24-5/8
	mm	610	2134	854	501	1121	2303	2186	1143	500	626
30 x 72	in	30	72	39-5/8	16-3/8	38-1/4	81-3/4	74-1/4	38-1/2	15-1/2	15-1/4
	mm	762	1829	1006	417	972	2075	1886	977	395	387
36 x 60	in	36	60	45-5/8	16-1/4	38-1/8	69-7/8	62-3/8	42	18-1/4	18-3/4
	mm	914	1524	1159	411	968	1776	1586	1066	463	476
42 x 54	in	41-7/8	54	51-5/8	13-3/8	36	65-1/2	56-5/8	41	15-1/2	16-7/8
	mm	1063	1372	1311	339	914	1663	1438	1043	393	428

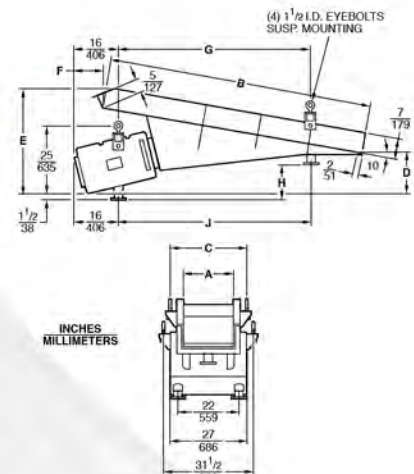
\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



### 98B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
18 x 96	in	18	96	27-5/8	11-3/8	34-5/8	18-3/8	62-5/8	12-1/8	61-1/4
	mm	457	2438	702	289	878	468	1592	309	1556
24 x 84	in	24	84	33-5/8	11-5/8	32-5/8	14	62-1/4	8-3/4	63-3/8
	mm	610	2134	854	296	829	356	1582	221	1610
30 x 72	in	30	72	39-5/8	12	30-7/8	20-1/4	56-5/8	8-1/2	57-3/4
	mm	762	1829	1006	305	785	514	1440	217	1467
36 x 60	in	36	60	45-5/8	18-1/8	35	22-1/2	43-1/2	14-5/8	44-1/2
	mm	914	1524	1159	460	889	571	1106	373	1130
42 x 54	in	42	54	51-5/8	14-1/2	30	31	57	8-3/4	57-5/8
	mm	1067	1372	1311	368	762	787	1448	222	1464

\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



# Model 105B FEEDS UP TO 570 TONS (513 MT) PER HOUR\*

The 105B has a rated capacity up to 570 tons (513 mt) per hour. Rugged construction and the Eriez patented magnetic drive make this an ideal unit for handling abrasives, slag, coal, ores, grains, or wherever controlled feeding of large tonnages is required. Capacity is based on 42 x 60 inch (1067 x 1524 mm) tray properly installed with skirtboards.



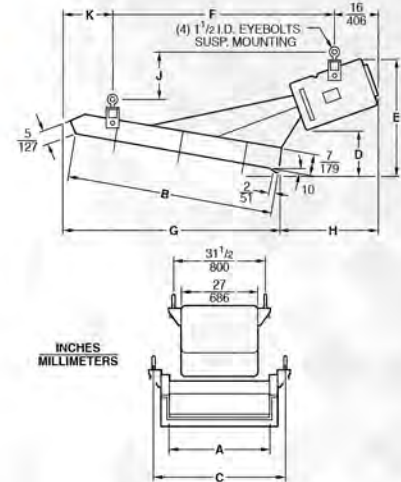
Power Supply	230V, 460V, or 575V 50-60 Cycles, Single Phase
Full Load Power Input	35 Amp at 230V
	18.2 Amp at 460V
Approximate Weight	3000 lb. (1363 kg)

## Dimensions

### 105B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
24 x 96	in	24	96	33-1/2	20-3/8	43	101-1/2	98	36	17-7/8	17-3/16
	mm	610	2438	851	518	1092	2579	2489	914	453	437
30 x 84	in	30	84	39-1/2	18-1/8	40-5/8	89-1/2	86-1/8	35-7/8	16-7/8	17-1/4
	mm	761	2134	1003	459	1032	2274	2189	911	428	438
36 x 72	in	36	72	45-1/2	14-7/8	37-1/2	76-3/4	74-3/8	35-1/8	15-3/4	17-1/2
	mm	914	1829	1156	376	953	1951	1889	894	399	445
42 x 60	in	42	60	51-1/2	14-7/8	36-3/4	73	62-9/16	41-1/8	17	15-1/2
	mm	1067	1524	1308	379	933	1853	1589	1045	433	394
48 x 54	in	48	54	57-1/4	14-1/2	35-7/8	73	56-5/8	43-5/8	16-5/8	12
	mm	1219	1372	1453	369	911	1853	1439	1107	421	305

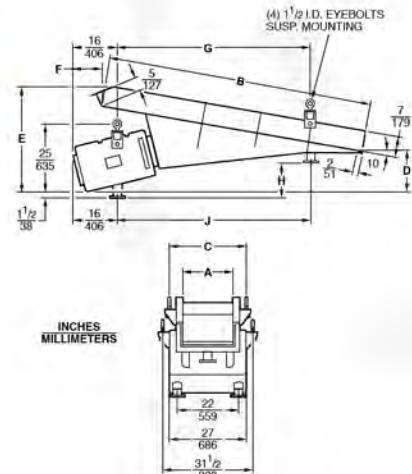
\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



### 105B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
24 x 96	in	24	96	33-1/2	10	32-7/8	9	69-1/4	6-7/8	70-1/4
	mm	610	2438	851	253	834	229	1758	176	1784
30 x 84	in	30	84	39-1/2	10-7/8	31-3/4	13-1/8	60-5/8	8-1/4	61-3/8
	mm	762	2133	1003	276	806	335	1540	209	1559
36 x 72	in	36	72	45-1/2	14-3/4	31-1/8	23-1/2	61-1/8	9-3/8	62-1/4
	mm	914	1829	1158	373	792	597	1553	238	1581
42 x 60	in	42	60	51	13-3/8	24-1/4	25-7/8	57-1/8	10-1/2	58-7/8
	mm	1067	1524	1295	340	615	658	1450	268	1495
48 x 54	in	48	54	57	13-1/8	28-3/4	27	48-1/4	12-1/8	50
	mm	1219	1372	1448	334	731	686	1227	309	1270

\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.





# Model 115B FEEDS UP TO 660 TONS (594 MT) PER HOUR\*

The 115B facilitates the smooth and dependable transfer of abrasives, slag, coal, ores and grain at up to 660 tons (594 mt) per hour. The unit represents an excellent choice whenever controlled feeding be must accomplished in a cost-effective manner. Capacity is based on 48 x 72 inch (1215 x 1828 mm) tray properly installed with skirt boards.



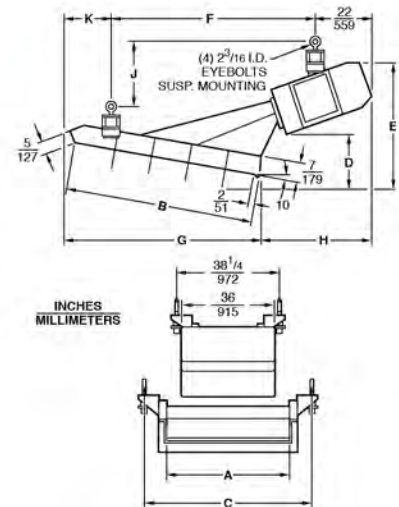
Power Supply	230V, 460V, or 575V 50-60 Cycles, Single Phase
Full Load Power Input	39 Amp at 460V
Approximate Weight	6200 lb. (2818 kg)

## Dimensions

### 115B OVERHEAD-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J	K
30 x 108	in	30	108	45-1/2	22-7/8	47-1/4	114-5/8	110	44-3/4	24	19
	mm	762	2741	1156	582	1200	2912	2793	1137	610	483
36 x 96	in	36	96	51-1/4	22-1/2	46-1/2	110-3/8	98-3/8	51-3/4	23-5/8	18-5/8
	mm	914	2439	1302	573	1181	2804	2499	1314	599	473
42 x 84	in	42	84	57-1/4	20-3/8	44-1/4	101	85-1/8	52-5/8	24-5/8	15-5/8
	mm	1067	2134	1454	517	1124	2567	2163	1336	626	397
48 x 72	in	48	72	63-1/4	20-1/4	43-1/2	87-1/2	74-1/2	53-1/2	26-5/8	19-1/2
	mm	1219	1829	1607	515	1105	2223	1893	1360	678	494
54 x 60	in	54	60	69-1/4	12-1/8	37	72-7/8	62-5/8	44-5/8	22	13-1/8
	mm	1372	1524	1757	307	940	1850	1590	1134	559	335

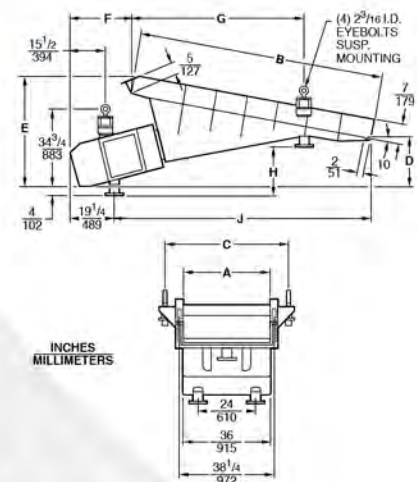
\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.



### 115B UNDER-DRIVE STANDARD TRAYS

SIZE		A	B	C	D	E	F	G	H	J
30 x 108	in	30	108	45-1/4	12-5/8	37-3/4	24-7/8	74-3/8	14-3/4	113-1/4
	mm	762	2743	1149	320	960	632	1889	375	2877
36 x 96	in	36	96	51-1/4	14	37-1/8	31-3/8	81-1/2	12	108
	mm	914	2438	1302	356	944	798	2070	304	2743
42 x 84	in	42	84	57-1/4	14-3/8	35-1/4	32-1/8	54-1/8	14-1/8	96-7/8
	mm	1067	2134	1454	367	897	817	1375	358	2462
48 x 72	in	48	72	63-3/8	18-1/2	33-1/4	35-1/2	43-3/8	14-3/8	88-3/8
	mm	1219	1829	1609	471	846	902	1101	365	2245
54 x 60	in	54	60	69-1/4	11-3/8	28-1/8	37-1/4	47-1/2	8	78-1/4
	mm	1372	1524	1759	288	713	945	1206	203	1989

\* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m), 40° angle of repose with the trough at a 10° downslope, and skirt boards included on hopper for maximum material depth of flow.





*Economical Brute Force Feeder spreads material in this stainless steel recovery operation.*



*Vibrating action feeds an Eddy Current Separator in a scrap yard.*

# Brute Force

## VIBRATING MECHANICAL FEEDERS

Our heavy duty line of Brute Force feeders provide a cost effective means to feed or screen large volumes of bulk material for applications where limited feed rate adjustability is required. Brute Force feeders are ideal for applications such as coal or stone processing, recycling and scrap recovery. Eriez BF feeders can be provided with unique tray designs for your specific application.

### FEATURES

- Rugged, heavy duty construction
- Twin rotary motors for stability
- Unique tray designs available
- Quiet operation
- Easy access to rotary motors
- Available for hazardous environment applications
- Available for screening applications

Feeder tray motion is provided by eccentric weights mounted on synchronized, counter-rotation, twin motors. The motors counteract each other to minimize the isolation problems associated with single rotary vibrator drive systems. Feed rate can be varied by adjusting the weights. The twin motor drives operate on standard AC power.

Dust-tight construction and splash-proof design make the motors suitable for dusty, dirty environments, as well as outdoors in rain or snow. Heavy-duty construction and long-lift bearings ensure peak, long-term performance.

The heavy-duty trays are designed for trouble-free, high-capacity feeding. A variety of sizes and styles can be ordered to match specific application requirements. Tray options include spreading humps, screens, liners, covers and grizzlies.



*Diversers and liners can improve the spread of material and extend the life of the bed.*



# Hopper Design

## FOR OPTIMUM PERFORMANCE

The capacity of a vibratory feeder is given by:

$$Q = \frac{W \times d \times D \times v}{K}$$

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

### HOPPER DESIGN

If you plan to build a new hopper or modify an existing one for installation with an Eriez vibratory feeder or screen, its design should adhere to certain guidelines. Following these guidelines will help to obtain the rated capacity of the feeder, achieve the required discharge or delivery rate, prevent bridging, arching or ratholing.

Along with the hopper design, flow velocity (v) is dependent on material characteristics such as particle size, size distribution and moisture content. Rated capacities require ideal conditions. Refer to Figure 1 for the factors utilized in estimating feeder capacity.

### IMPORTANCE OF THE TRANSITION SECTION

A hopper's transition section - the part of the structure between the main bin and the feeder - plays a very significant role in obtaining the rated capacity of a feeder. An improperly designed hopper or transition section can reduce feeder capacities by as much as 30%.

The bottom of the hopper, for example, should be almost as wide as the feeder tray to provide full-width feeding. Clearance of 1" (25 mm) between hopper and tray is recommended.

### Throat Opening

For random sized material, the hopper throat opening (T) should be 2-1/2 - 3 times the largest particle size. For near-sized material, the hopper throat opening (T) should be 3 to 4 times the particle size. The throat opening should not exceed 30% of the tray length, however, or "headloading" may overpower the ability of the feeder to move the material. In some cases, head load deflectors (i.e., angle iron) will be required to obtain satisfactory operation.

### Gate Height

The gate height (H) should increase proportionally to the particle size and to the depth of flow (measured at the end of the trough) required to deliver the desired discharge rate. Generally speaking, the gate height should be at least twice the size of the largest particle size, adjustable by means of a slide gate. During operation, the gate height should be 1.2 - 1.5 times the depth of material (d) needed to meet capacity requirements.

Uniform flow patterns also require that the gate height (H) be 1 - 2 times (2 is preferable) the throat dimension (T). When (H) becomes less than (T), material flow patterns are not uniform and usually result in dead zones where little or no flow occurs.

### ACHIEVING UNIFORM FLOW

There is a natural tendency of feeders to draw material from the front portion of the hopper. However, a properly designed hopper will cause material to also flow onto the rear of the feeder trough, creating a uniform flow pattern (Figure 2).

The rear wall of the hopper's transition section should be quite steep - at a slope of 60° or more - to assure flow of material along the rear wall surface. In contrast, the slope of the front wall may be more shallow; an angle 5 - 10° less than the rear wall is acceptable.

Figure 3 illustrates a properly designed hopper which promotes good material flow while minimizing material load on the feeder.

### INSTALLATION OF SKIRTBOARDS

To obtain the rated capacity of larger Eriez feeders, a burden depth higher than the tray sides must be carried by the feeder. To contain the material and prevent spillover, skirtboards should be installed on both sides of the gate opening, extending to the end of the trough.

To prevent any hang-ups or restrictions of material flow, the skirt boards should flare slightly, becoming wider at the discharge end, and also should taper away from the bottom of the feeder along the length of the trough. The flare and taper rate should be at least 1/2" per foot (40 mm per m) of feeder length.

Skirt boards are nearly always required in installations where the feeder pan is given downslope in order to use gravity to boost delivery rate. Some installations have increased capacity by more than 50% with a 10° downslope. As a rule of thumb, each degree of downslope increases delivery by 2%.

A minimum of 1" (25 mm) clearance must be maintained between the skirtboards and the feeder tray. Movement of the tray must not be restricted by rigid attachment to nearby structures.

Figure 1. Proper Throat Opening

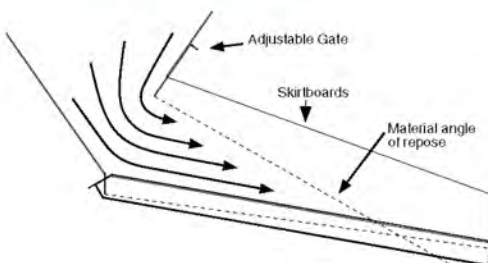


Figure 2. Determining Gate Height

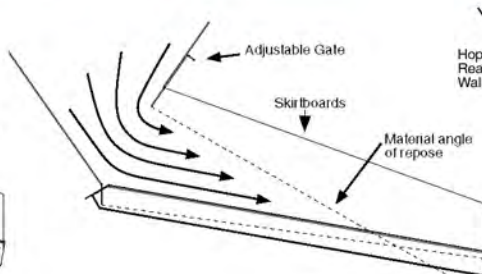
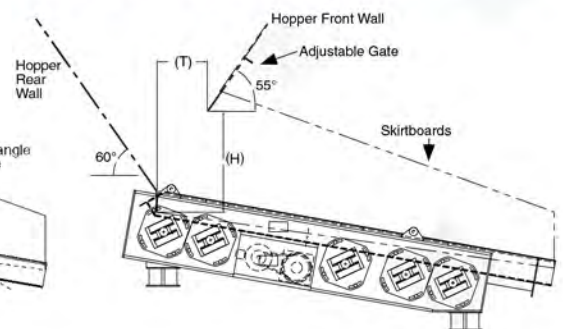


Figure 3. Typical Hopper and Skirtboard Installation





# ELECTROMAGNETIC *Feeder Controls*

Eriez vibratory feeder controls have many standard options:

- Nema 4 enclosure
- Variable speed potentiometer
- Push button On/Off
- Disconnect switch
- Auto/manual selector switch
- Available chassis mount
- Accelerometer feedback option to maintain tray deflection

## STANDARD FEATURES

- Accepts 4-20 ma signal
- Remote On/Off
- CE, UL and CUS tagged
- 115, 230, 380, 460 and 575 Volt options



*Vibration Sensor*

# Tray Liner Options

Selecting the appropriate feeder tray liner is critical...

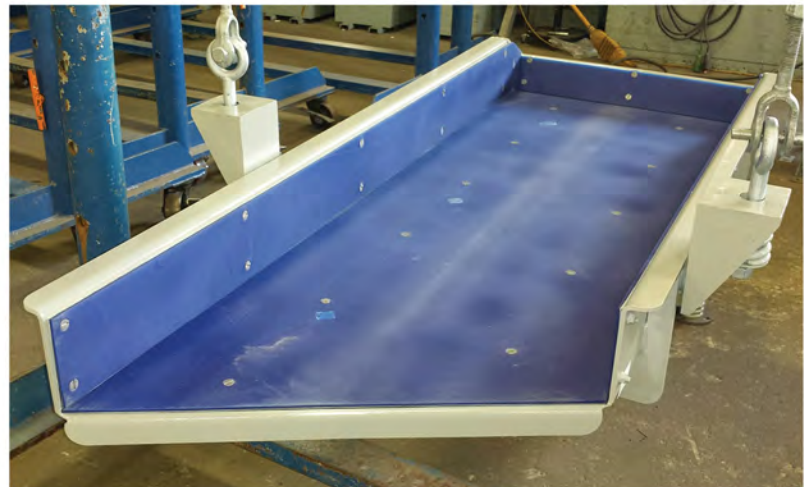
Abrasion Resistant Steel (ARS) liner is well suited for most abrasive material applications such as stone and hard rock.



UHMW liners are a good choice for materials that may build-up or stick to the tray.



Chrome Carbide overlay liners are selected for the most abrasive applications such as glass cullet or hard rock.



Urethane liners are well suited for metal part handling to address noise and help protect material in the tray.

# Screeners

## & SPECIAL TRAYS

Vibratory feeders with grizzly trays are used for a variety of scalping or coarse screening operations. Screening trays can also be designed for separation by size, dedusting or dewatering. On all types of trays, the advantages of gentle material handling and accurate control of feed rates are retained. Eriez' long experience in designing special trays for unique applications, plus finite element analysis of feeder designs, means that unusual requirements can be met quickly and economically.



Vibratory drives can be produced in the overhead position.



Feeder with heavy duty bolt-in bar deck screen is a good choice for separating large materials from fines.



The over-head drive design screener incorporates vanes at the infeed to help spread material across the entire screen width of maximum screening efficiency.



75B feeder with Eriez hopper transition and skirtboards. Dust boots and covers included. The transition is then bolted to customer hopper.



Vibratory sand classifier is used in conjunction with wood fired boiler, to reclaim unburned wood for recirculation through boiler. Screens are used to sift out ash and sand.



Grizzly deck allows fine materials to flow through screen quickly and large pieces to discharge off end of tray.

Totally enclosed trays are used to protect the product, or in some cases, the environment, by containing dust within the system.



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