

VB-3301EE

ERIEZ

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 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 guidance to guarantee appropriate vibratory feeder selection, email sales@eriez.com or visit www.eriez.com to contact your local office.



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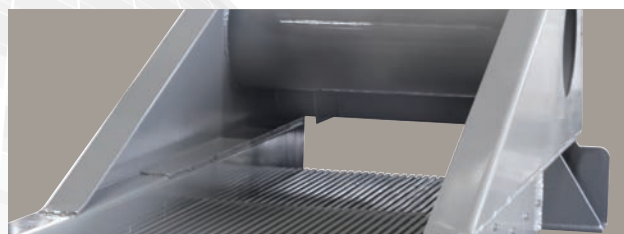
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Mechanical VIBRATORY FEEDERS



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 (18.2 m/minute)
- 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

- 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 604 tons (548 MT) per hour*.

(*Capacity is based on sand weighing 100 pounds per cubic ft. (1.6 metric tons per cubic meter)

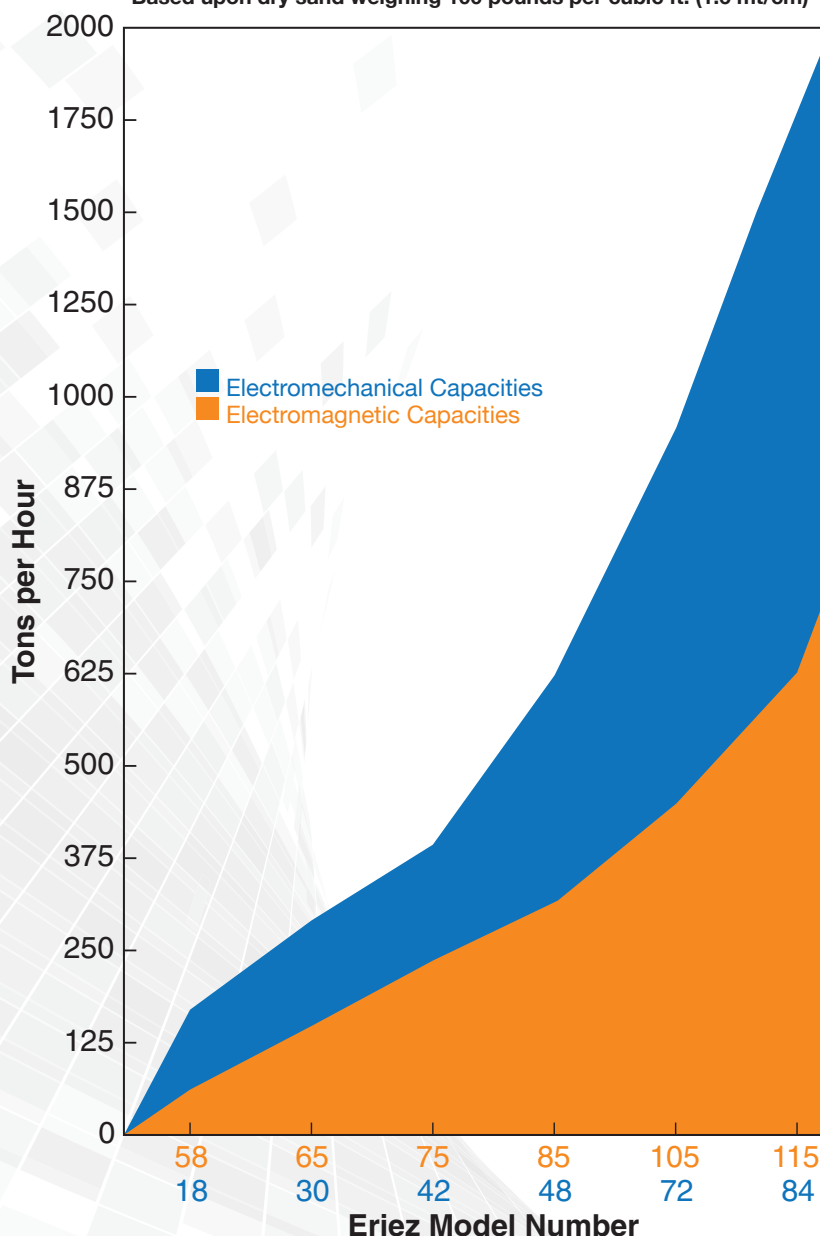
The **Brute Force Vibratory Feeder**

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 (18.2 m/minute)**
- **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.

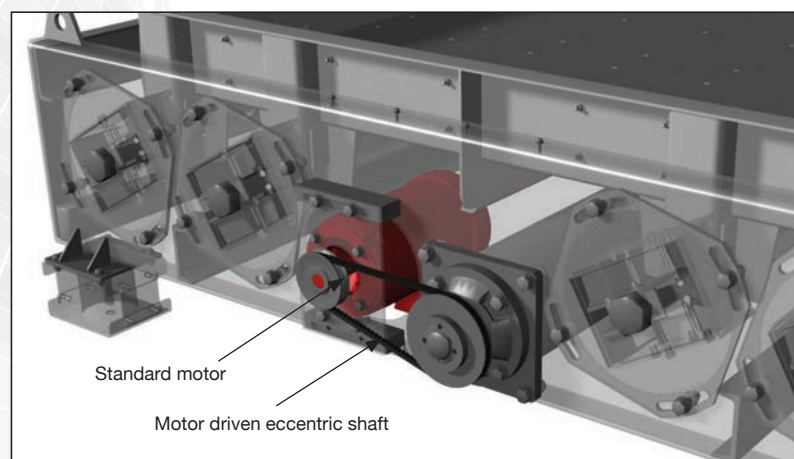
Adjustable, variable-speed sheaves or variable frequency controls are available to provide feed rate adjustability within acceptable operating frequencies.

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 (9.1 m) 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" (457 mm).



Standard motor

Motor driven eccentric shaft

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	Width	Length							
					36" 914mm	48" 1219mm	60" 1524mm	72" 1829mm	84" 2134mm	96" 2438mm	108" 2743mm	120" 3048 mm
	Sand	Coal	W x L		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			
	120mtph	60mtph	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			
	210mtph	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		
	335mtph	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	
	490mtph	245mtph	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	
	635mtph	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	
	815mtph	410mtph	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
	905mtph	455mtph	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
	1315mtph	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	815mtph	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.

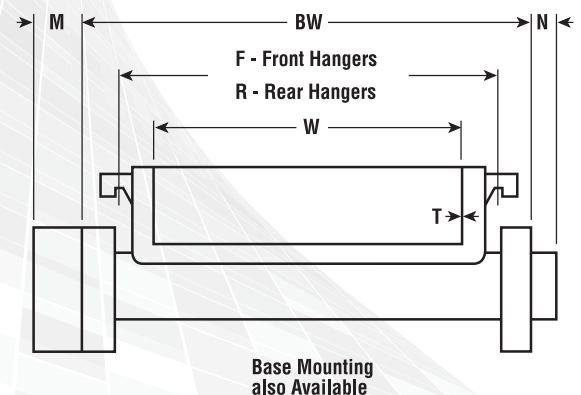
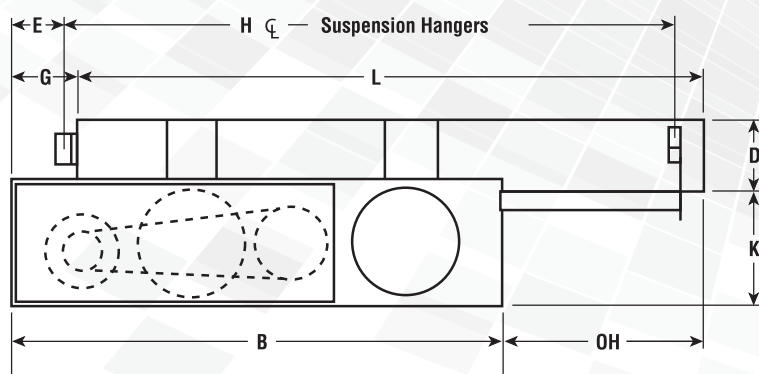
Metric (millimeters, kilograms, kilowatts)

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	330	975	6.4	454	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	2134	229	1676	1753	457	1575	229	1156	406	165	89	610	1575	8	1814	3.73
60	1524	2438	229	1981	1753	572	1880	229	1575	406	165	89	914	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

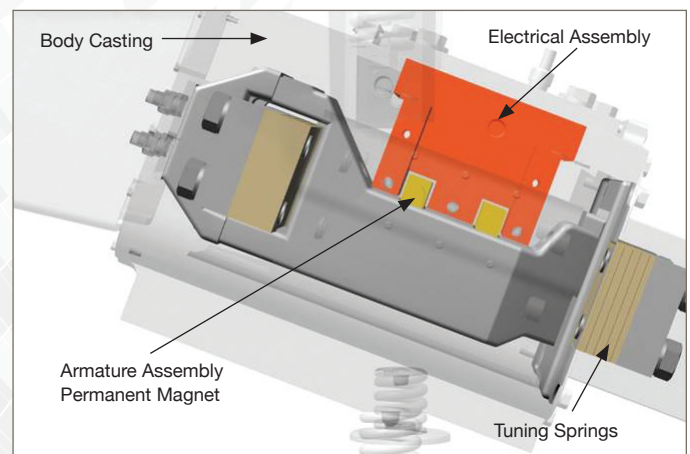
VIBRATORY FEEDERS

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 604 tons (548 MT) per hour*. (*Capacity is based on sand weighing 100 pounds per cubic ft. (1.6 metric tons per cubic meter)

Ask about special trays used with screens and grizzlies. Optional dust covers, abrasive liners and more are offered. Available as an under-mount or overhead drive with either base or suspended mounting.

B Model's Features

- **High efficiency electromagnetic drive**
- **No wear, rotating or sliding parts**
- **Ideal for headload applications below hoppers**
- **Energy efficient AC operation**
- **Standard and custom engineered tray designs for your specific application**
- **High temperature models available up to 300°F (150°C)**
- **Optional abrasion resistant steel or UHMW liners**
- **Solid-State controls offer variable speed precise feed rate control with accelerometer feedback for added protection**



SUPERIOR DRIVE DESIGN

Eriez unique electromagnetic AC drive applies power on both the forward and reverse direction of the feeder tray, giving superior linearity and control compared to the competition's attract-release design.

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

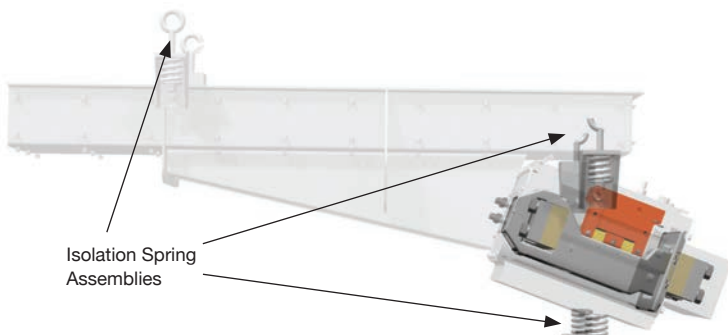
The basic simplicity of Eriez drive powered by alternately opposing and attracting magnetic forces assures low maintenance and accurate feeding.

There are no sliding or rotating parts, power consumption is low and installation is easy.

The enclosed drive assembly is dust and moisture resistant which extends coil life.



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



Model 58B

FEEDS UP TO
85 TONS (77 MT)
PER HOUR*

The lightweight Model 58B, either base mounted or suspended, can easily handle up to 85 tons (77 mt) per hour of any bulk free-flowing material weighing 100 lb/ft³ (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.

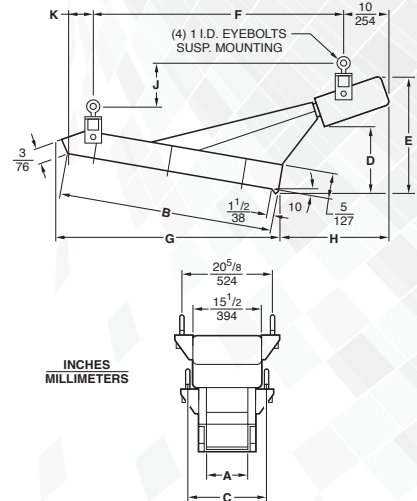


Power Supply	115V, 230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	7 Amp at 115V
Approximate Weight	410 lb. (186 kg)

Dimensions

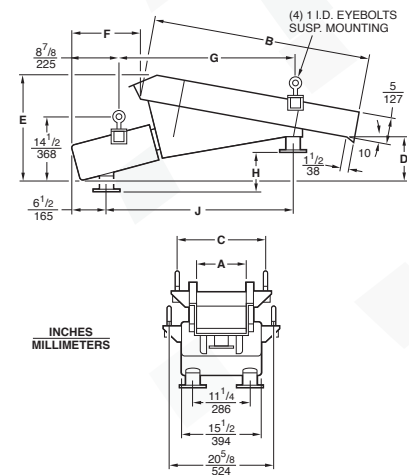
58B OVERHEAD-DRIVE STANDARD TRAYS

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	378	613	1387	1400	584	203	349
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	448	371	670	1413	1254	635	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	264	543	1013	1102	505	178	340
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	1045	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	111	457	156	864	124	918
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	130	451	206	883	127	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	464	265	930	162	895
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	146	416	330	835	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	162	400	406	733	156	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. Feeder operating at 60Hz.

Model 65B

FEEDS UP TO
158 TONS (143 MT)
PER HOUR*



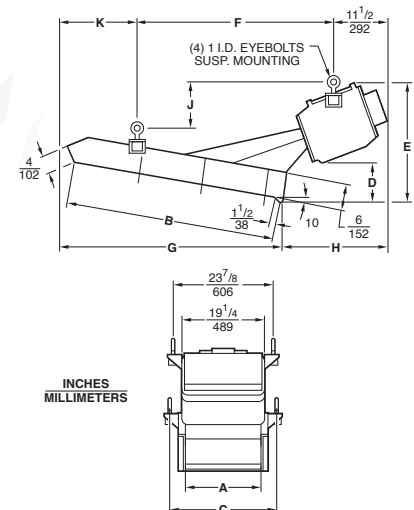
The 65B provides a wide capacity range to feed controlled amounts from a few pounds to 158 tons (143 mt) per hour, for materials weighing 100 lb/ft³ (1.6 g/cu cm), and even more if operated with more downslope and skirtboards. All units are available with either under-drive or overhead-drives. Capacity is based on 24 x 30 inch (610 x 762 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	750 lb. (340 kg)

Dimensions

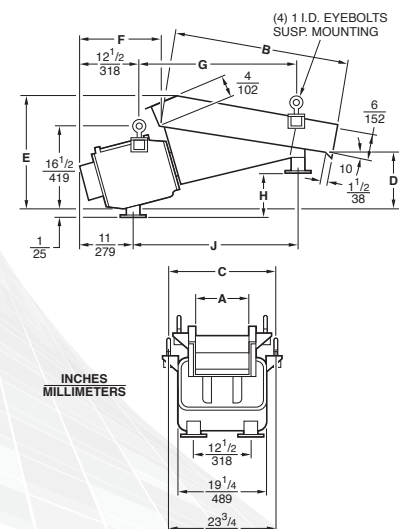
65B OVERHEAD-DRIVE STANDARD TRAYS

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	394	822	1657	1588	879	394	524
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	324	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	1330	1280	645	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	1302	1105	791	279	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	248	657	826	810	581	302	276



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	241	1064	105	1108
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	191	565	346	1064	114	1099
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	200	546	343	899	117	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	225	546	400	821	162	854
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	238	505	487	727	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. Feeder operating at 60Hz.

Model 75B

FEEDS UP TO
320 TONS (290 MT)
PER HOUR*

The popular 75B has a feeding capacity of 320 tons (290 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.

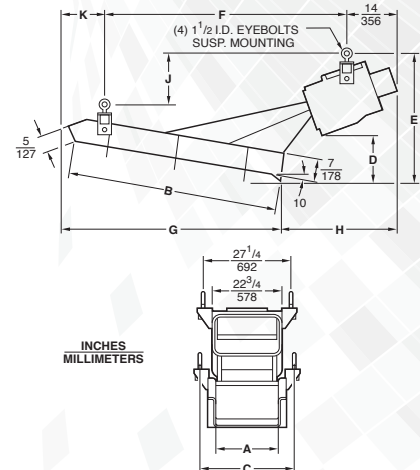


Power Supply	115V, 230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	13.7 Amp at 230V
	7.3 Amp at 460V
Approximate Weight	1575 lb. (714 kg)

Dimensions

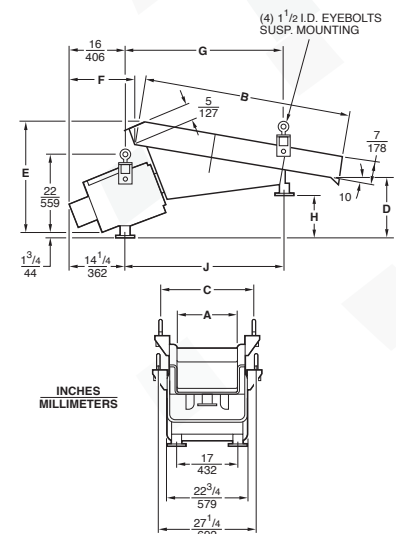
75B OVERHEAD-DRIVE STANDARD TRAYS

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	356	1981	572	511	959	2169	2038	991	413	505
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	1876	1886	775	327	397
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	359	822	1676	1584	902	356	454
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	333	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	1451	1143	924	333	241



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	324	832	244	1378	289	1413
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	264	692	470	1048	206	1095
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	330	705	610	1003	251	1048
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	171	524	664	956	229	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. Feeder operating at 60Hz.

Model 85B

FEEDS UP TO
400 TONS (363 MT)
PER HOUR*

The 85B, with a feed rate of 400 tons (363 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 48 inch (914 x 1219 mm) tray properly installed with skirtboards.

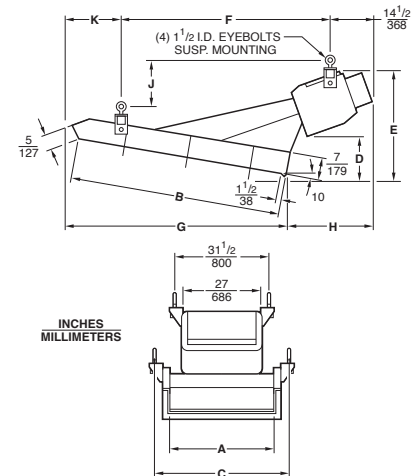


Power Supply	230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	27.5 Amp at 230V
	12.5 Amp at 460V
Approximate Weight	2400 lb. (1090 kg)

Dimensions

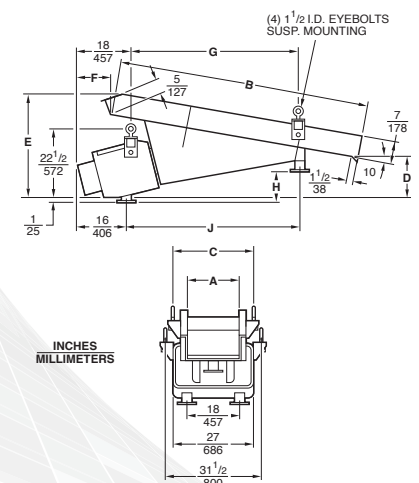
85B OVERHEAD-DRIVE STANDARD TRAYS

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	502	1019	2213	2188	968	445	591
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	313	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	378	883	1826	1591	959	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	1143	324	832	1524	1289	1023	403	432



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	787	441	1597	178	1670
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	318	797	429	1289	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	762	1524	1006	270	695	527	1013	216	1089
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	279	657	616	1000	178	1073



* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m) 40° angle of repose with the trough at a 15° downslope, and skirt boards included on hopper for maximum material depth of flow. Feeder operating at 60Hz.

Model 105B

FEEDS UP TO
506 TONS (459 MT)
PER HOUR*

The 105B has a rated capacity up to 506 tons (459 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.

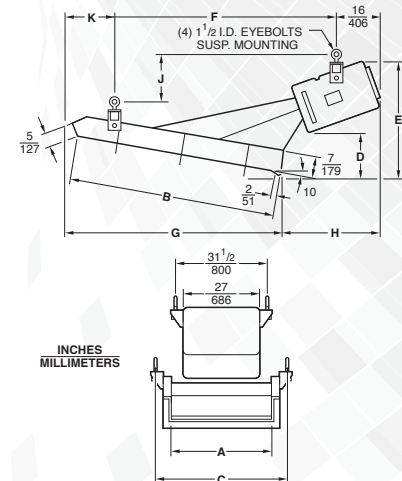


Power Supply	230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	35 Amp at 230V 18.2 Amp at 460V
Approximate Weight	3000 lb. (1361 kg)

Dimensions

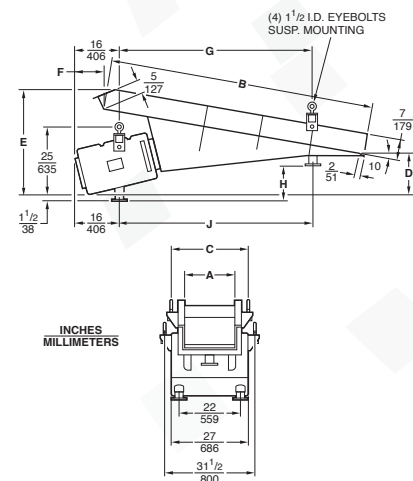
105B OVERHEAD-DRIVE STANDARD TRAYS

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	2578	2489	914	454	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	762	2134	1003	460	1032	2273	2188	911	429	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	378	953	1949	1889	892	400	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	378	933	1854	1589	1045	432	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	1454	368	911	1854	1438	1108	422	305



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	254	835	229	1759	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	2134	1003	276	806	333	1540	210	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	1156	375	791	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	616	657	1451	267	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	333	730	686	1226	308	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 15° downslope, and skirt boards included on hopper for maximum material depth of flow. Feeder operating at 60Hz.

Model 115B FEEDS UP TO 604 TONS (548 MT) PER HOUR*

The 115B facilitates the smooth and dependable transfer of abrasives, slag, coal, ores and grain at up to 604 tons (548 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 (1219 x 1829 mm) tray properly installed with skirt boards.

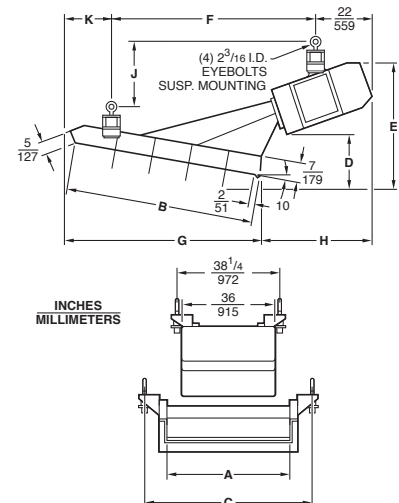


Power Supply	230V, 460V, or 575V 50–60 Cycles, Single Phase
Full Load Power Input	39 Amp at 460V
Approximate Weight	6200 lb. (2812 kg)

Dimensions

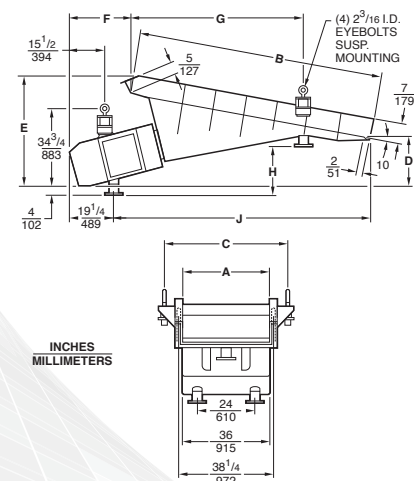
115B OVERHEAD-DRIVE STANDARD TRAYS

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	2743	1156	581	1200	2911	2794	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	2438	1302	572	1181	2804	2499	1314	600	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	518	1124	2565	2162	1337	625	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	514	1105	2223	1892	1359	676	495
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	308	940	1851	1591	1133	559	333



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	959	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	943	797	2070	305	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	365	895	816	1375	359	2461
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	1610	470	845	902	1102	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	289	714	946	1207	203	1988



* Capacities are based on dry sand weighing 100 lb/cu ft (1600 kg/cu m) 40° angle of repose with the trough at a 15° downslope, and skirt boards included on hopper for maximum material depth of flow. Feeder operating at 60Hz.



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 Brute Force feeders can be provided with unique tray designs for your specific application.

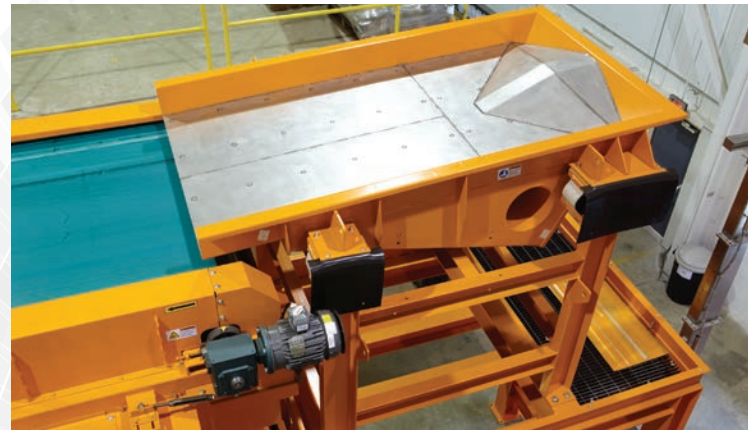
FEATURES

- **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-life 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.



Diverters 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 at least 4 times the particle size. At no time should the throat opening exceed 30% of the tray length, however, or "head-loading" may overpower the ability of the feeder to move the material. In some cases, head load deflector (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

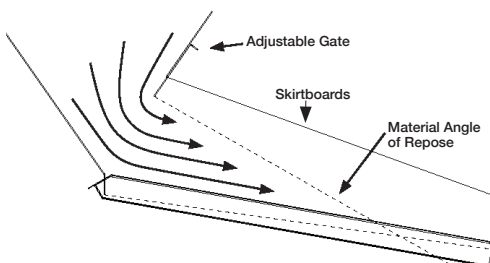


Figure 2. Determining Gate Height

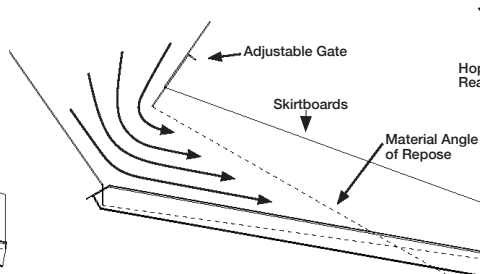
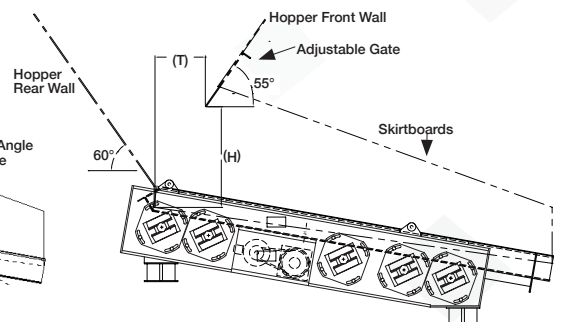


Figure 3. Typical Hopper and Skirtboard Installation



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 an appropriate feeder tray liner is critical.

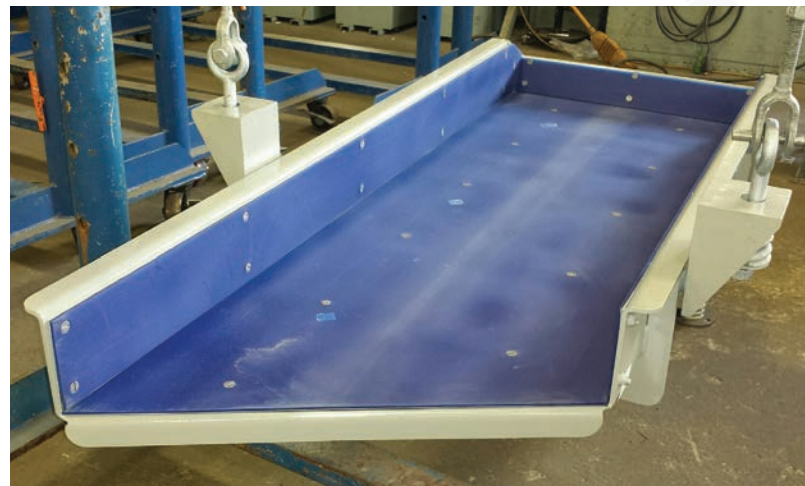
Abrasion Resistant Steel (ARS) liner is well suited for most abrasive material applications such as stone and hard rock.



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.

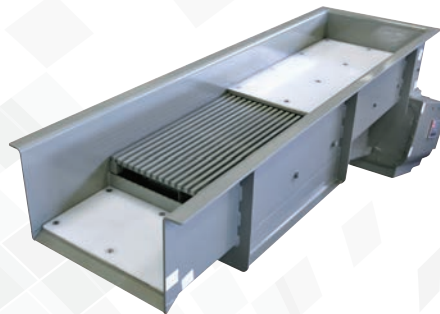
Screeners

& 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.



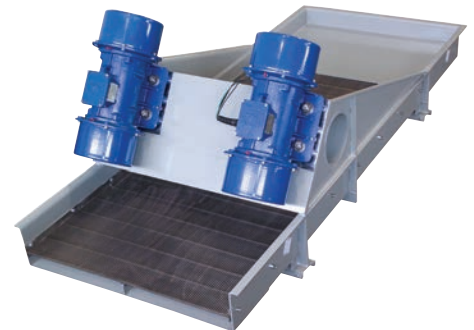
The over-head drive screener design incorporates vanes at the infeed to help spread material across the entire screen width of maximum screening efficiency.



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.



ERIEZ

GLOBAL LEADER IN SEPARATION TECHNOLOGIES

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