



Jeffrey Rader Electromagnetic Feeders



EF Electromagnetic Feeder



HP Electromagnetic Feeder

The Industry's Most Recognized Turn-Key
Waste Cuttings Management Solution

Natural Resource Recycling • Product Classification • Dewatering • Fluid Recovery
Waste Management • Material Handling • Liquid/Solid Separation • Crushers • Feeders

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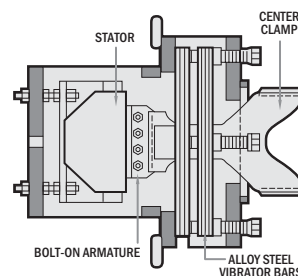
Highest capacity for deck size in bulk material feeding industry.

Operation

Jeffrey Rader EF & HP electromagnetic feeders operate through controlled, high-frequency vibration. This is accomplished with electrical pulses and a machine that is tuned to a mechanical resonant frequency that is higher than the electrical frequency of the power supply (sub-resonant tuning).

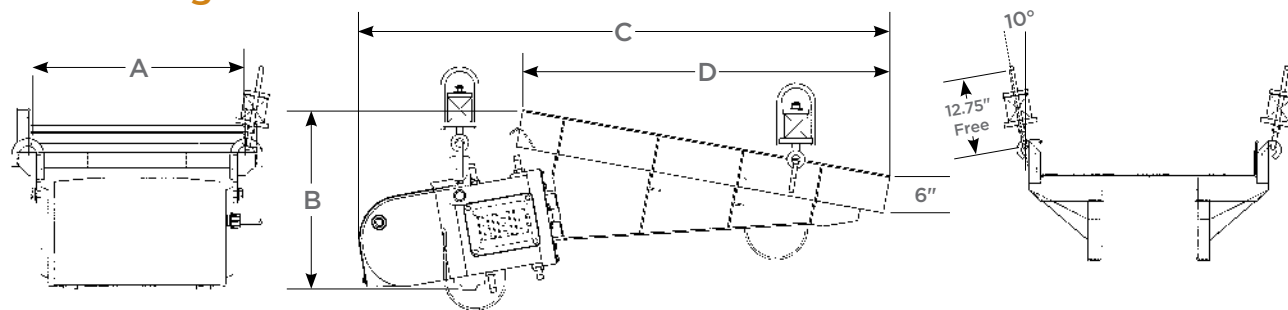
Electrical pulses in the coils create a series of magnetic pulls that attract the armature and the deck. Restoring forces in the bar oppose each pull, causing the armature to spring away from the magnet. At an electrical frequency of 60 cycles per second, the armature and the deck operate at 3,600 times per minute (the vibration rate of the feeder).

Material is moved by a series of “jumps” that correspond to the frequency of the vibrations. The distance the deck moves (stroke) can be changed by varying the voltage to the coils. With this variation in the length of each “jump,” or vibration amplitude, the conveying speed of the material on the feeder deck changes, resulting in a capacity rate that fits your requirements.



Dimensions and Weights

EF Electromagnetic Feeder



Model No:	Deck Sizes WxL in. (mm)	Capacity (stph)	Slope	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	Weight Lbs (mm)
EF3	24" x 60" (610 X 1524)	600	10°	24" (610)	30" (762)	92" (2337)	60" (1524)	2,600 (1180)
	30" x 60" (762 x 1524)			30" (762)	30" (762)	92" (2337)	60" (1524)	2650 (1203)
	36" x 60" (914 x 1524)			36" (914)	30" (762)	90" (2286)	60" (1524)	2700 (1225)
EF4	30" x 84" (762 x 2134)	850	10°	30" (762)	33" (838)	113" (2870)	84" (2134)	3,350 (1520)
	36" x 72" (914 x 1829)			36" (914)	33" (838)	100" (2540)	72" (1829)	3200 (1452)
	42" x 60" (1067 x 1524)			42" (1067)	31" (787)	91" (2311)	60" (1524)	3400 (1543)
EF5	36" x 84" (914 x 2134)	1000	10°	36" (914)	39" (991)	123" (3124)	84" (2134)	4,350 (1974)
	42" x 72" (1067 x 1829)			42" (1067)	37" (940)	112" (2844)	72" (1829)	4700 (2132)
	48" x 72" (1219 x 1829)			48" (1219)	37" (940)	112" (2844)	72" (1829)	4850 (2200)
EF6	42" x 84" (1067 x 2134)	1200	10°	42" (1067)	40" (1016)	121" (3073)	84" (2134)	5,600 (2541)
	48" x 84" (1219 x 2134)			48" (1219)	40" (1016)	124" (3150)	84" (2134)	5650 (2563)
	54" x 72" (1372 x 1829)			54" (1372)	38" (965)	112" (2844)	72" (1829)	5400 (2450)
EF8	60" x 96" (1524 x 2438)	1400	10°	60" (1524)	48" (1219)	138" (3505)	96" (2438)	9,950 (4514)

Efficiency in Motion: Jeffrey Rader Electromagnetic Feeders

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Features/Advantages

EF Model Features:

The EF model maximizes material handling efficiency in tight spaces, with easy-access, rebuildable power units and a removable rear cover for simplified maintenance and reduced ownership costs.

HP Model Features:

The HP model's homogenous core design uses fine-grain, high flux density steel laminations in the wound stator, delivering a more powerful electromagnetic drive with higher stroke and capacity, allowing for a smaller feeder. This results in more tonnage per deck size than the competition.

Electromagnetic Operation:

EF/HP feeders have no moving parts to wear out, ensuring reliable, trouble-free service with proper maintenance.

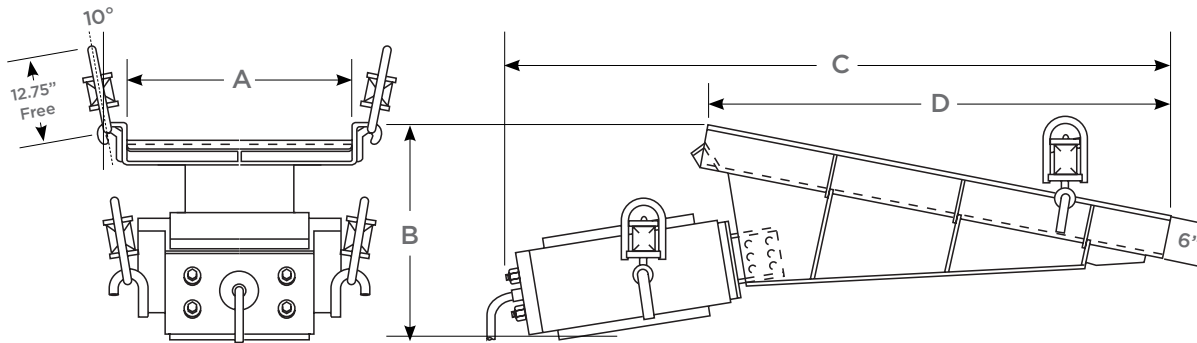
Sub-Resonance Tuning:

As the deck liner wears, sub-resonance tuning assures efficient, continued feeder operation.

Vibration Absorbers:

Each feeder is equipped with vibration-absorbing spring assemblies, designed for either suspension or support mounting, and shipped as part of the package.

HP Electromagnetic Feeder



Model No:	Deck Sizes WxL in. (mm)	Capacity (stph)	Slope	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	Weight Lbs (mm)
HP050	12" x 42" (305 X 1067)	180	10°	12" (305)	21" (533)	62" (1575)	42" (1067)	510 (231)
	12" x 48" (305 x 1219)			12" (305)	22" (559)	69" (1753)	48" (1219)	560 (254)
	18" x 30" (457 x 762)			18" (457)	19" (483)	54" (1372)	30" (762)	510 (231)
	18" x 36" (457 x 914)			18" (457)	19" (483)	60" (1524)	36" (914)	525 (238)
HP100	12" x 60" (305 x 1524)	275	10°	12" (305)	25" (635)	80" (2032)	60" (1524)	985 (447)
	18" x 42" (457 x 1067)			18" (457)	23" (584)	73" (1854)	42" (1067)	872 (395)
	18" x 48" (457 x 1219)			18" (457)	23" (584)	69" (1753)	48" (1219)	925 (420)
	24" x 30" (610 x 762)			24" (610)	21" (533)	62" (1575)	30" (762)	920 (417)
	24" x 42" (610 x 1067)			24" (610)	21" (533)	73" (1854)	42" (1067)	1020 (463)
HP200	12" x 72" (305 x 1829)	345	10°	12" (305)	30" (762)	100" (2540)	72" (1829)	1120 (508)
	18" x 60" (457 x 1524)			18" (457)	24" (610)	85" (2159)	60" (1524)	1122 (509)
	24" x 48" (610 x 1219)			24" (610)	24" (610)	76" (1930)	48" (1219)	1200 (544)
	30" x 42" (762 x 1067)			30" (762)	23" (584)	73" (1854)	42" (1067)	1200 (544)
HP250	18" x 72" (457 x 1829)	415	10°	18" (457)	31" (787)	100" (2540)	72" (1829)	1625 (737)
	24" x 60" (610 x 1524)			24" (610)	29" (737)	85" (2159)	60" (1524)	1655 (751)
	30" x 48" (762 x 1219)			30" (762)	27" (686)	80" (2032)	48" (1219)	1650 (748)
	30" x 54" (762 x 1372)			30" (762)	29" (737)	84" (2134)	54" (1372)	1675 (760)
	36" x 36" (914 x 914)			36" (914)	22" (559)	69" (1753)	36" (914)	1600 (726)

Feeder Control

The electrical controllers are designed around halfwave rectification of AC power. All feeders include a control which accepts a 4-20mA feedback signal. All standard controllers comply with NEMA 12 design standards. A variety of custom controllers are available (consult factory).

The solid state control circuit includes a "soft-start" feature. A regulator, requiring no additional connection to the feeder(s), maintains vibration to within ± 0.002 ", provided the line voltage variations do not exceed +5% and the line frequency is ± 0.5 Hz.

Manual or process variable controllers are available.

Applications:

- Coal (for non-XP environments)
- Aggregates
- Minerals
- Biofuels & Pellets Production
- Power Generation
- Industrial materials
- Agricultural/Food Processing
- Waste Management
- Various blending materials for steel manufacture

Other Features:

- Highest capacity per deck size due to the tuning of the unit
- Outstanding material control
- Ease of maintenance; no bearing to grease
- All components made in North America
-  (CSA) approved controls (available upon request)

General Information:

No moving or rotating parts • Variety of deck sizes & liner materials • 100% Range of Control

Manual or Auto Operation (4-20mA input signal) • Control Enclosure: NEMA 12 (Standard), 4 or 4X (Optional)

Electromagnetic Vibratory Feeder Model Specifications

Model	Maximum Stroke & Speed	Maximum Power	Max Control Amperage	Max Feeder Weight (Less Support Springs)	Main Frame Construction	Center Clamp with Replaceable Armature	Additional Features
HP050	0.070" @ 3,600 cpm	480v: 480 watts	5 amps	465 Lbs	Steel Weldment	Yes	Encapsulated Stator
HP100	0.070" @ 3,600 cpm	480v: 960 watts	10 amps	971 Lbs.	Ductile Iron Casted Frame	Yes	Encapsulated Stator
HP200	0.070" @ 3,600 cpm	480v: 1,440 watts	15 amps	1,140 Lbs.	Ductile Iron Casted Frame	Yes	Encapsulated Stator
HP250	0.070" @ 3,600 cpm	480v: 1,440 watts	15 amps	1,513 Lbs.	Ductile Iron Casted Frame	Yes	Encapsulated Stator
EF3	0.070" @ 3,600 cpm	480v: 2,880 watts	30 amps	2,895 Lbs.	Ductile Iron Casted Frame	Yes	Replaceable Coil, Easy Access Back Cover
EF4	0.070" @ 3,600 cpm	480v: 3,840 watts	40 amps	3,440 Lbs.	Ductile Iron Casted Frame	Yes	Replaceable Coil, Easy Access Back Cover
EF5	0.070" @ 3,600 cpm	480v: 4,800 watts	50 amps	4,710 Lbs.	Ductile Iron Casted Frame	Yes	Replaceable Coil, Easy Access Back Cover
EF6	0.070" @ 3,600 cpm	480v: 5,760 watts	60 amps	5,810 Lbs.	Steel Weldment	Yes	Replaceable Coil, Easy Access Back Cover
EF8	0.055" @ 3,600 cpm	480v: 8,640 watts	90 amps	10,000 Lbs.	Steel Weldment	Yes	Replacable Coil

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