Specifications

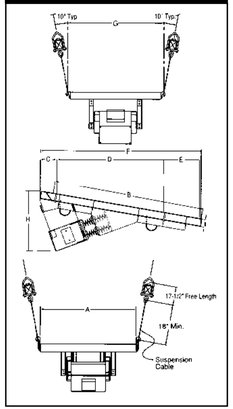
Feeder Capacities & Dimensions

Jeffrey's innovative design features allow for increased capacities.

Smaller, more efficient feeders can be specified with systematic application of throat opening to deck length. Certain conditions make excessive bin loading practical. Under these circumstances, we can advise changes in hopper design for optimum performance.

Precisely engineered combinations of throat opening, deck length, angle of repose, and deck slope applied to a particular application can result in larger capacities with reduced operating costs.

Dimensions



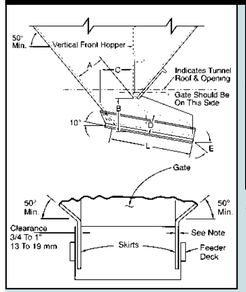
Feeder Model/Rated Capacities

Model	Capacity (in STPH)	Slope (in degrees)	Weight (in lbs)	HP
NF 2405	240	10	1285	1
NF 3005	300	10	1465	2
NF 3606	480	10	1680	2
NF 4207	600	10	2585	2
NF 4807	725	10	2885	3
NF 5408	810	12	3450	3
NF 6008	900	12	3970	3
NF 7208	1200	12	4235	5
NF 8410	1500	15	5950	7.5
NF 9610	1800	15	6965	10
NF 10810	2000	15	8240	15
NF 12010	2400	15	8550	15

Use either stainless steel or polymer bottom liners for maximum capacity. These may increase capacity by as much as 15% over other liner material. Maximum capacities are used in the chart above. Rates will change approximately 3% to 5% per degree of slope change.

Model	A	B	C	D	E	F	G	H	I	J
NF 2405	24	60	25½	47¼	12¼	85¼	30¼	40	6	32¼
NF 3005	30	60	29¼	44½	13¼	87½	36¼	40	6	32¼
NF 3606	36	72	19½	54½	14	88	42¼	42	6	32¼
NF 4207	42	84	27½	60	16	103½	48¼	44½	6	32¼
NF 4807	48	84	27½	60	16	103½	54¼	44½	6	32¼
NF 5408	54	96	14½	70½	25¼	110¼	60¼	45¼	6	32¼
NF 6008	60	96	14½	70½	25¼	110¼	66¼	45¼	6	32¼
NF 6608	66	96	14½	70½	25¼	110¼	72¼	45¼	6	32¼
NF 7210	72	120	2¼	87¼	27¼	117¼	78¼	51	6	32¼
NF 7810	78	120	2¼	87¼	27¼	117¼	84¼	51	6	32¼
NF 9610	96	120	2¼	87¼	27¼	117¼	102¼	51	6	32¼
NF 9612	96	144	24¼	90	38	152¼	102¼	65¼	12	56¼

Recommended Hopper Design/Length (Deck In Relationship To Material Depth)



Throat Opening (in inches)	Average Material (depth in inches)	Deck Length (in inches)	Slope (in degrees)	Average Angle Of Repose (in degrees)
A&B	D	L	S	R
24	16	60	10	37
32	21	72	10	38
36	24	84	10	39
40	27	96	12	39
45	30	108	15	40
45	30	120	15	40

Note:

Width between skirts affects capacity. Thickness of skirts (with or without liners) should be minimal.

Use pivoted gate when required.

Throat openings of hopper are based on 50 lbs/cu ft of material. For other materials, multiply the A and B dimensions by the approximate density factor. If this is impractical due to particle size, consult the factory.

Density Factor	50	60	70	80	90	100
	1.00	0.80	0.70	0.60	0.55	0.50

Additional Value-Added Equipment For Your Operation.

Vibrating Equipment
- Conveyors
- Super-Duty, Twin-Motor, Electromagnetic & Electromechanical Feeders

Crushers/Shredders
- Coalbuster
- Rockbuster
- Reversible Impactors
- Hammermills
- Wood/Bark Hogs
- Top-Fed Shredders
- Horizontal Shredders

Water & Wastewater Treatment Equipment
- Sludge Collector Chain & Components

Solid Waste Shredders
- MSW Shredders
- Top-Fed & Horizontal Shredders
- Type E Shredders
- Top-Fed & Horizontal Pallet Shredders

JEFFREY

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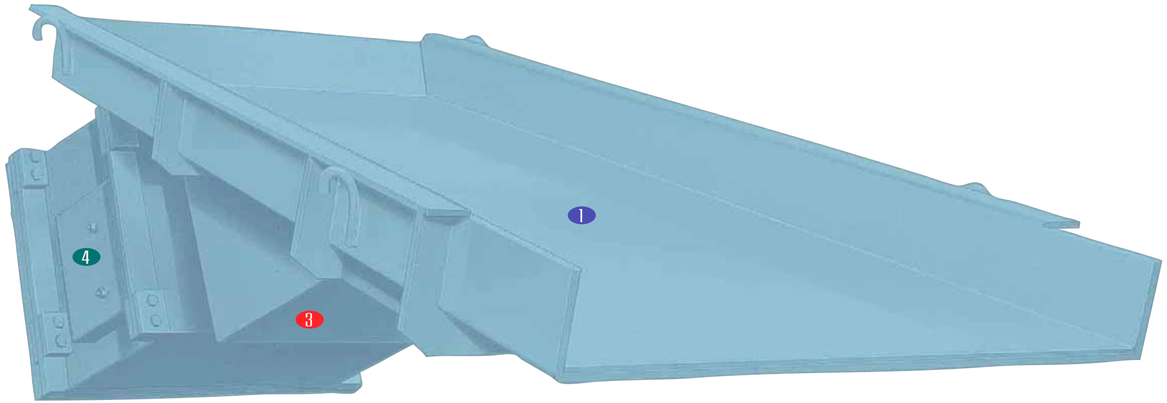
NF ELECTROMECHANICAL VIBRATING FEEDERS

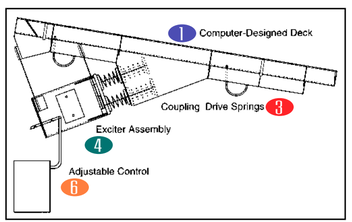
JEFFREY

Positive Drive Components Assure Quiet Operation At Reduced Energy Cost.

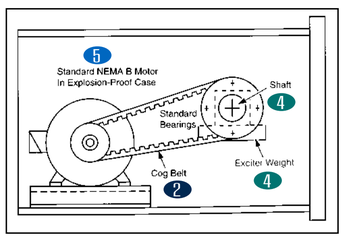
With Jeffrey NF electromechanical vibrating feeders, burden and dampening actually boost feeder performance. That's because our feeders are precision tuned near their own natural frequencies. They are "in tune" with the materials they carry.

These sub-resonant tuning characteristics assure efficient material transference, promote quieter operation, and reduce energy and maintenance costs.





Feeder Components



Positive Drive Components

Frequency controllers provide precise control.

1 Rugged Deck Design

Computer-designed deck with rugged drive structure handles large lumpy materials with greater reliability. Engineered for large deck sizes, its dependability reflects Jeffrey's extensive design expertise from electromagnetic feeders.

2 Positive Drive Cog Belt

Positive drive cog belt offers 98% efficiency. It eliminates high tension-friction and reduces wear commonly associated with V-belt drives. Maintenance costs are reduced because frequent belt adjustments or replacements are not required. Constant belt tension prevents slippage, extending bearing life.

3 Steel-Coil, Coupling Drive Springs

Pre-compressed, coupling drive springs assure constant spring rates for greater operation stability. Steel springs feature low dampening coefficient, as well as consume less power compared with rubber or other type drive springs.

4 Exciter Assembly

Totally enclosed in rugged steel housing, exciter assembly transmits vibrating forces, induces conveying action in materials. It features standard, severe-duty motor, motor-driven shaft with eccentric weight, plus heavy-duty, long-life, standard flange bearings which are externally mounted for ease of maintenance.

5 Standard Motor

Standard, heavy-duty motor reduces downtime, requires less maintenance. Off-the-shelf availability.

6 Frequency Controls

Frequency controllers require less space and feature 10:1 capacity turndown for greater application flexibility.

Remote or local controllers, with automatic manual control circuits, provide for the addition of plant PLC's for batching and inventory control.

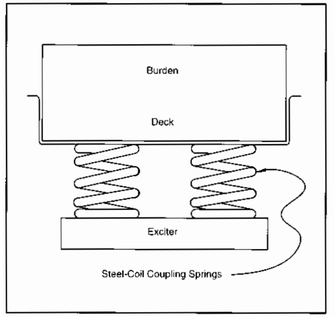
Innovative Technology Results In Larger Loads Driven By Less Energy.

Minimum Drive, Maximum Load

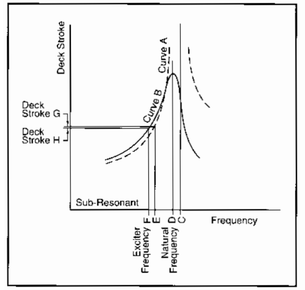
Precision sub-resonant tuning drives large mass with minimal force. As shown at right, the burden is critical to the design, and it can actually improve the performance of the unit. Burden has a mass effect and a dampening effect on the mechanical vibration system of the feeder.

Minimum Stroke Variation

Maximum stability under varying load requirements. This stability is the result of minimal stroke variances between empty and loaded conditions. Jeffrey has achieved this stability by engineering offsetting mass and dampening effect into the system. Adjusting the exciter frequency creates a smooth, effective variation of capacity (conveying speed). A simultaneous increase or decrease of exciter frequency and stroke can be achieved by adjusting motor speed.



Relationship of the burden to the complete feeder is illustrated in the drawing above.



The empty feeder operates along Curve A (dashed line) with its natural frequency at Point C. Stroke is indicated by Point G on the vertical axis, with the exciter frequency occurring at Point E.

The loaded feeder operates along Curve B (solid line). Its natural frequency decreases to Point D because of the weight of the burden's mass. The dampening effect of the burden simultaneously changes the shape of performance Curve B, as illustrated. The exciter frequency also decreases from Point E to F as a result of the additional load on the motor. The stroke is now at Point H on the vertical axis.