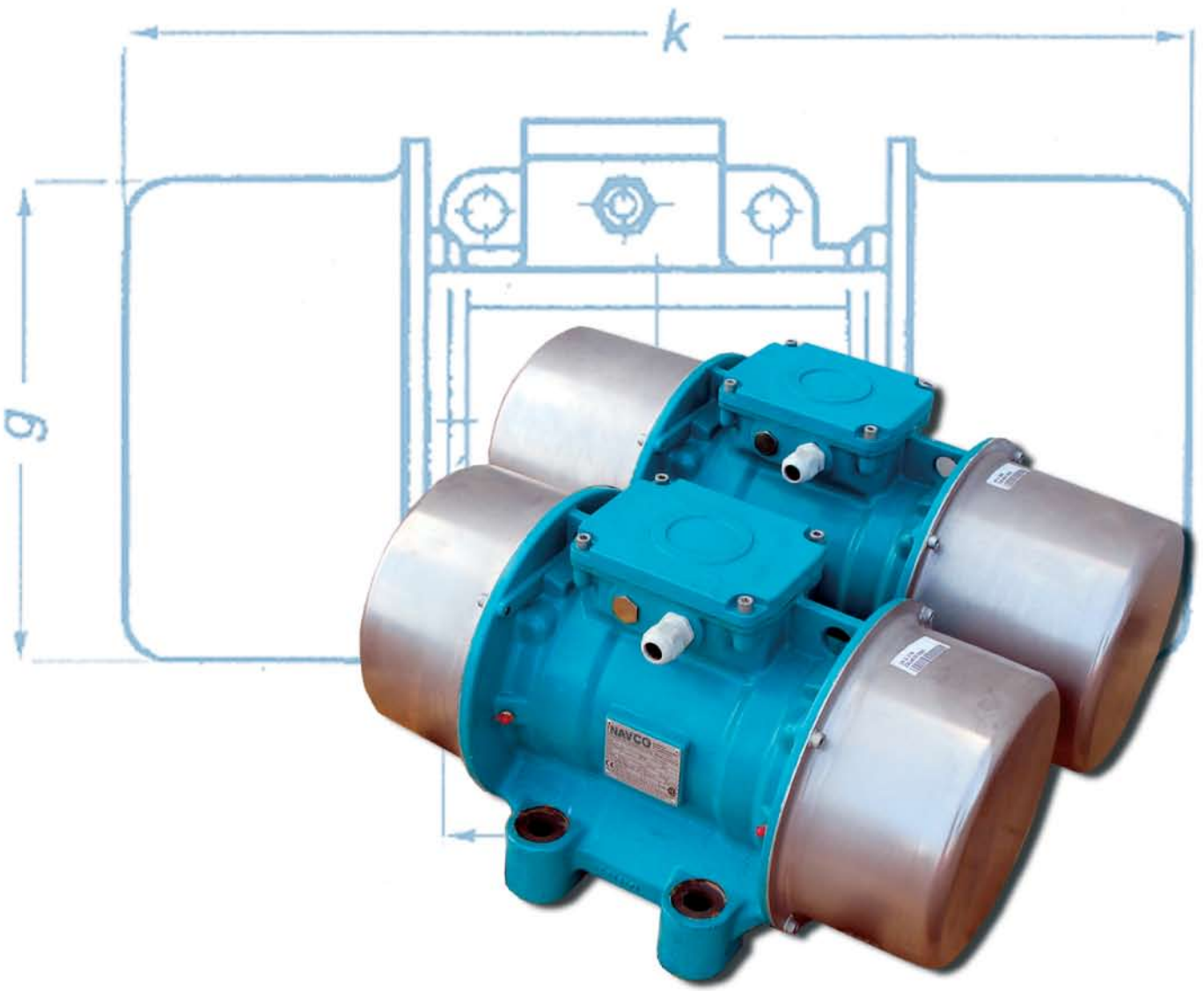
ELECTROMECHANICAL VIBRATORS

For use as a Flow Aid or a Vibratory Drive Mechanism



NAVCO®
NATIONAL AIR VIBRATOR CO.
Houston, TX

Construction

The ***NAVCO***® electromechanical vibrator is designed specifically for use as an eccentric weight vibratory motor. Also called rotary electric vibrators or drives, the design incorporates a heavy winding, a beefed up, oversized shaft, and special heavy-duty roller bearings.

NAVCO® vibratory drives are easy to install and provide reliable, low maintenance service. They are ideal as either a flow aid solution on bins and hoppers or as a drive mechanism for vibratory feeders and screens. The drive does not require retuning and offers reliable feed rates regardless of material load size.

This premium quality drive is built to hold up in the most rugged of applications. It is dust tight, suitable for wash down and designed for continuous duty at 100% of maximum force output.

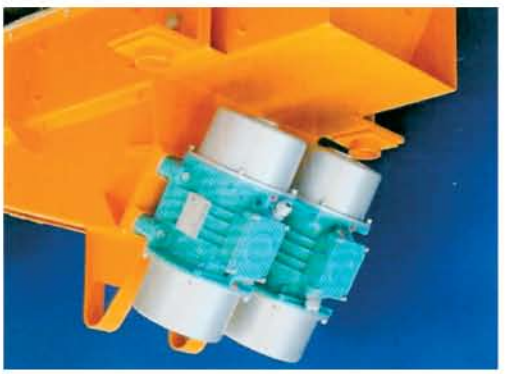
Benefits

Benefits of using ***NAVCO***® Electromechanical drives

- Available in 3600, 1800,1200 & 900 RPM; 50 Hz models also available
- Force output is infinitely adjustable from zero to 100% of rated max
- Oversized but short shaft to prevent deflection
- Water tight, dust tight enclosure standard
- Explosion proof certification available
- Low noise level ratings meet or exceed OSHA standards
- 230/460 Volt, 3 Phase standard, other options are available
- Heavy duty, cylindrical, lubrication packed roller bearings offering easy relubrication

Benefits specific to use as a drive on vibratory equipment

- Can create elliptical, circular or linear motion
- Natural frequency tuning (and retuning) not required
- No exciter springs = low maintenance
- Less sensitive to material characteristics
- Suitable for operation with or without a material load



Single mass vibratory feeders driven by dual electromechanical drives

Bin Discharge & Flow Solutions

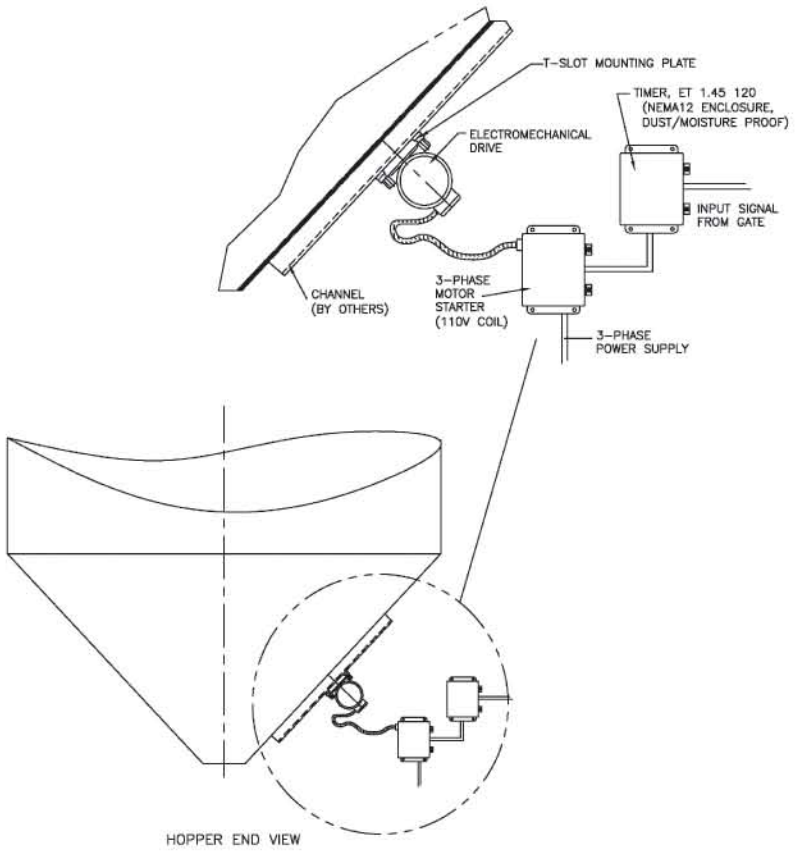
Vibration is applied in different frequencies and amplitudes to solve virtually any flow problem. The wide range of ***NAVCO***® electromechanical drives provides the ability to select the ideal size for proper bin discharge applications.

There are many factors that may affect the selection of a vibrator size for a particular flow aid application. These include bin wall thickness as well as the bulk density of the bulk material. Other characteristics of the material must also be considered.

NAVCO® has experienced engineers on staff to provide assistance in sizing an electromechanical drive for your flow application.

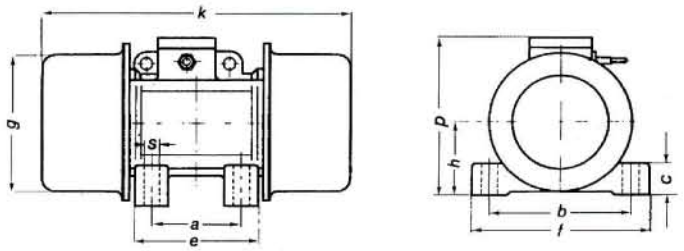
Visit www.navco.org to request a quote easily online.

A Typical Bin Discharge Installation



Other vibratory drives available from *NAVCO*®:

- Electromagnetic - for vibratory feeders
- Dosing Drive - for small vibratory feeders
- Exciter - for vibratory screens
- Pneumatic Piston Drive - for vibratory tables & feeders



For Use As a Drive Mechanism

When used as a drive mechanism, the unbalance weights (Figure 1) on the drive shaft of the ***NAVCO***® electromechanical vibrator produce an oscillating force, which causes the spring-mounted device (i.e., a screen or feeder) to vibrate in a defined direction. Bulk material is then transported by a micro-throw motion created by the vibration of the equipment.

Figure 1
Unbalance weight

Figure 2
Micro-throw motion

3 Types of motion

Elliptical motion drive

A single drive unit mounted away from the center of gravity produces elliptical movement (Figure 3). This motion can be used for compaction or agitation on:

- **Inclined screens**
- **Vibratory tables and packers**
- **Shakeouts**
- **Bin dischargers**

Figure 3
Elliptical motion

Circular motion drive

A single drive unit mounted at the center of gravity produces circular motion (Figure 4). This arrangement can be used to drive:

- **Circular screens**

Figure 4
Circular motion

Linear motion drive

By using two ***NAVCO***® drives, rotating in opposite directions and mounted on a common beam, true linear motion is produced. This type of arrangement is used for:

- **Feeders**
- **Screens**
- **Grizzlies**
- **Conveyors**

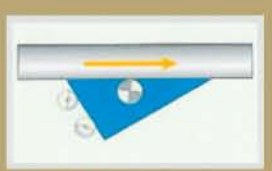


Figure 5
Linear motion

With over 100 sizes to choose from there is a *NAVCO*® drive for almost every application.

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NATIONAL AIR VIBRATOR CO.
Houston, TX

* 115 Volt, Single Phase

Specifications & Dimensions

Model #	Force	Torque	Weight	Rated Current	Power	Dimensions in inches *refer to diagram at right										Fasteners	
3600 RPM	(lbs)	(in-lbs)	(lbs)	(A)	(HP)	a	b	c	e	f	g	h	k	p	s	Size	Number
UVA0,04*	13	0.1	1.9	0.3	0.03	1-1.6	2.9	0.35	2	3.5	2.2	1.2	4.1	2.7	.22	M 5	4
UVA0,6Y	155	0.9	8.4	0.2	0.2	2.5	3.7	0.78	3.4	5	3.8	2.8	7.6	4.7	.47	M 8 (10)	4
UVB1Y	212	1.1	9	0.3	0.2	2.5-2.8	4.2	0.59	4	4.9	3.5	2.2	8.3	5.6	.35	M 8	4
UVB1,9Y	391	2.1	10.1	0.3	0.2	2.5-2.8	4.2	0.94	4	4.9	4.4	2.5	8.7	5.9	.35	M 8	4
UVC3Y	654	3.5	17.2	0.5	0.4	3.5	4.9	1.2	4.6	6	5	2.9	9.6	7.2	.51	M 12	4
UVD5Y	1040	5.6	26.5	0.8	0.7	4.1	5.5	1.1	5.4	6.6	5.8	3.2	10.9	7.8	.51	M 12	4
UVE7,7Y	1660	9.0	35.3	1.0	0.9	4.7	6.7	1.8	6.3	8.1	6.6	3.6	15.1	8.3	.51	M 12	4
UVE11Y	2340	12.7	48.5	1.8	0.9	4.7	6.7	2.1	6.4	8.1	7.4	4.1	14.6	9.2	.51	M 12	4
UVF20Y	4090	2.22	119	2.9	2.7	4.9	8.3	2.6	6.9	10.2	7.9	4.9	19.3	9.7	.67	M 16	4
UVG32Y	7040	38.2	218	5.6	5.4	6.5	10.2	2.6	9	13	10.6	6.3	23.4	13.1	1.02	M 24	4
UVH40Y	9040	49	311	5.6	5.4	11	11.4	2.8	13.6	14	11.7	6.8	26.9	14.3	1.02	M 24	4
UVL62Y	14200	76.7	392	8	7.4	7.9	12.6	3.5	10.6	15.4	13.1	7.4	26.2	15	1.1	M 27	4
UVL88Y	19800	107.4	463	13	12	7.9	12.6	3.9	10.6	15.4	14	7.6	24.9	15.6	1.1	M 27	4
1800 RPM						a	b	c	e	f	g	h	k	p	s	Size	Number
UVB0,3	84	1.8	9.7	0.2	0.1	2.5-2.8	4.1	0.6	4	4.9	3.5	2.2	8.3	5.6	0.35	M 8	4
UVB0,7	172	3.6	11.7	0.2	0.1	2.5-2.8	4.1	0.9	4	4.9	4.4	2.5	8.7	5.9	0.35	M 8	4
UVC1,5	283	6.2	21.8	0.4	0.2	3.5	4.9	1.2	4.6	6	5	2.9	12	7.1	0.5	M 12	4
UVC2,1	472	10.2	23.6	0.4	0.2	3.5	4.9	1.2	4.6	6	5	2.9	12	7.1	0.5	M 12	4
UVD4	906	19.6	37.5	0.6	0.5	4.1	5.5	1.1	5.4	6.6	5.7	3.1	15	7.8	0.5	M 12	4
UVD5,4X	1306	28.2	41.9	0.6	0.5	4.1	5.5	1.1	5.4	6.6	5.7	3.6	15	7.8	0.5	M 12	4
UVE7X	1677	36.2	48.5	1	0.9	4.7	6.7	1.8	6.4	8.1	6.6	4.1	15	8.3	0.5	M 12	4
UVE10X	2165	46.9	68.3	1	0.9	4.7	6.7	2.1	6.4	8.1	7.4	4.9	17	9.2	0.5	M 12	4
UVF18	3867	84	132.3	1.9	1.6	4.9	8.2	2.6	6.9	10	7.9	4.9	19	10	0.67	M 16	4
UVF24X	5395	116.9	169.8	3	2.3	4.9	8.2	2.6	6.9	10	9.1	5.5	21	11	0.67	M 16	4
UVG38X	8250	257.9	257.9	3.9	3.4	6.5	10.2	2.6	9.1	13	11	6.3	23	13	1	M 24	4
UVH49X	10903	352.7	352.7	5	4.6	11	11.4	2.8	14	14	12	6.8	27	14	1	M 24	4
UVL64X	14545	429.9	429.9	9	8.0	7.8	12.6	3.5	11	15	13	7.4	26	15	1.1	M 27	4
UVN83X	19670	668	668	12	11.4	9.8	14.9	1.4	13	18	15	8.5	34	17	1.5	M 36	6
UVP112X	25178	906.1	906.1	15.5	14.1	11	17.3	1.5	15	21	17	9.1	39	18	1.7	M 42	6
1200 RPM						a	b	c	e	f	g	h	k	p	s	Size	Number
UVE3W	746	36.4	50.7	0.7	0.5	4.7	6.7	1.8	6.3	8.1	6.6	3.6	15.1	8.3	0.5	M 12	4
UVE5W	1625	78.8	72.8	0.7	0.5	4.7	6.7	2.1	6.4	8.1	7.4	4.1	17.2	9.2	0.5	M 12	4
UVF11W	2540	123.9	143.3	1.5	1	4.9	8.3	2.6	6.9	10.2	7.9	4.9	22	10	0.7	M 16	4
UVF16W	3417	166.3	185.2	2.2	1.7	4.9	8.3	2.6	6.9	10.2	9.1	5.5	23.7	10.9	0.7	M 16	4
UVG21W	4744	232.1	264.6	3.8	2.8	6.5	10.2	2.6	9.1	13	10.6	6.3	26.1	13.1	1	M 24	4
UVG30W	6835	324.8	286.7	4.3	3.2	6.5	10.2	2.6	9.1	13	10.6	6.3	28	13.1	1	M 24	4
UVH38W	8453	412.3	390.3	5	4	11	11.4	2.8	13.6	14	11.7	6.8	30.5	14.3	1	M 24	4
UVH46W	10342	504.9	419.0	6	4.8	11	11.4	2.8	13.6	14	11.7	6.8	32.8	14.3	1	M 24	4
UVL64W	14388	702.4	516.0	8.1	6.7	7.9	12.6	3.5	10.6	15.4	13.1	7.4	33.1	15	1.1	M 27	4
UVK79W	17626	860	646.1	11.3	10.1	11	15.7	2.6	13.8	18.5	14.1	7.8	34.6	15.9	1.3	M 30	4
UVN95W	20099	981.3	756.3	12.4	10.7	9.8	15	1.4	12.6	18.1	1.4	8.5	34.1	17.2	1.5	M 36	6
UVP119W	26754	1306.9	981.2	15	12.7	11	17.3	1.5	14.6	20.9	1.5	9.1	39.1	17.9	1.7	M 42	6
900 RPM						a	b	c	e	f	g	h	k	p	s	Size	Number
UVF6V	2022	175	161	1.3	0.7	4.9	8.3	2.6	6.9	10.2	7.9	4.9	22	9.7	0.7	M 16	4
UVF9V	2927	253.8	205.1	2.2	1.5	4.9	8.3	2.6	6.9	10.2	9.1	5.5	23.7	10.9	0.7	M 16	4
UVG14V	4647	402.7	286.7	4.2	2.4	6.5	10.2	2.6	9.1	13	10.6	6.3	28	13.1	1	M 24	4
UVH21V	6835	592.4	390.3	5.2	3.1	11	11.4	2.8	13.6	14	11.7	6.8	30.5	14.3	1	M 24	4
UVH26V	8397	728.4	419	6	4	11	11.4	2.8	13.6	14	11.7	6.8	32.8	14.3	1	M 24	4
UVL36V	11660	1011.6	516	7.9	5.8	7.9	12.6	3.5	10.6	15.4	14.1	7.4	33.1	15	1.1	M 27	4
UVK44V	14373	1246.3	646.1	9.5	7.8	11	15.7	2.6	14	18.5	14.1	7.9	34.6	15.9	1.3	M 30	4
UVN76V	21915	1901.1	923.9	12	10	9.8	15	1.4	12.6	18.1	15.2	8.5	39.4	17.2	1.5	M 36	6
UVP85V	24779	2148.8	1146.6	13.5	11.1	11	17.3	1.5	14.6	20.9	16.7	9.1	42.1	17.9	1.7	M 42	6

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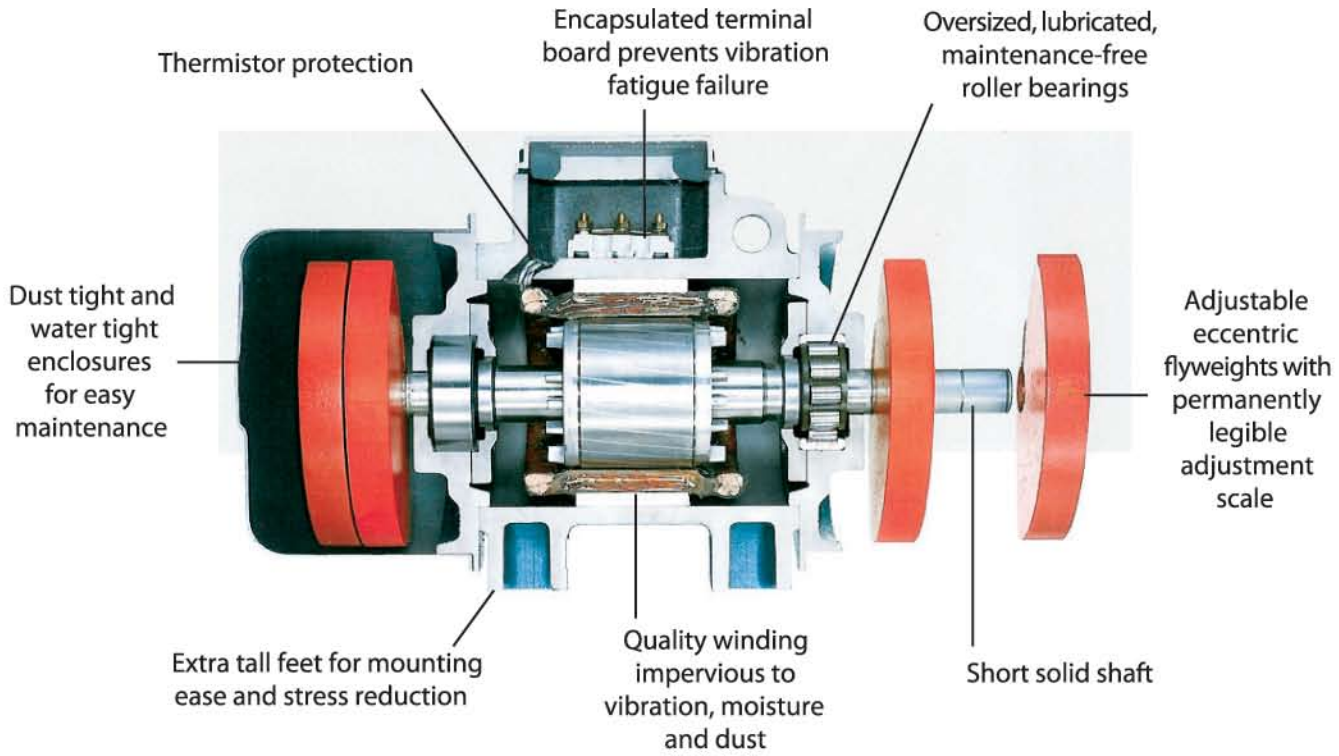
Inside a NAVCO electromechanical drive



NAVCO has been solving material flow problems in industrial applications for over 50 years. The electromechanical vibratory drive has been used by NAVCO customers as a flow aid or a drive mechanism in the following dry bulk material handling industries:

- Power
- Steel
- Plastics
- Chemicals
- Pulp & Paper
- Food Processing
- Concrete & Aggregates
- Pharmaceuticals
- Feed & Grains
- Automotive
- Ceramics
- Foundry
- Textiles
- Mining

...and many more

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