

Syntron Material Handling



Syntron[®] Vibrator Flowaids

www.syntronmh.com



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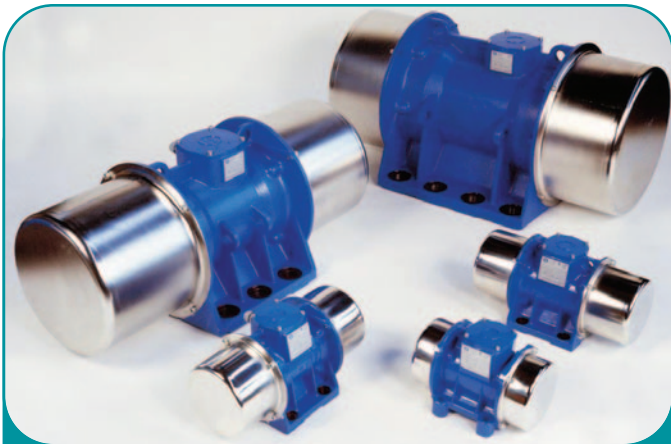
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Syntron® Vibrators

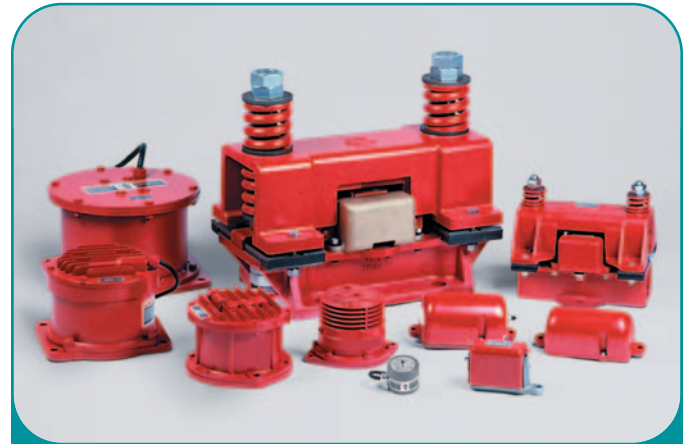
Syntron® Vibrators offer an efficient, cost-effective means to maintain free flow of product from bins, hoppers and chutes, with a direct and positive result on the bottom line. Whether the need is to ensure constant, uninterrupted material flow, or to eliminate the necessity for manual manipulation of a bin, hopper or bulk material, Syntron Vibrators increase productivity and reduce production costs.

Syntron offers 2 types of vibrators – electromagnetic and electric rotary. The vibrators provide product flow solutions for just about any industry, application or environment. Compact yet mighty, Syntron Vibrators are designed for years of high-performance, trouble-free continuous or intermittent operation, with the broadest selection of models and power ranges available.



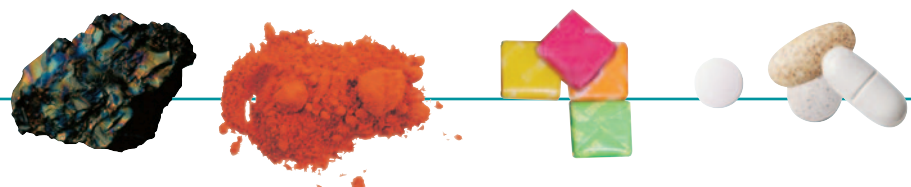
Syntron® Electric Rotary Vibrators

Syntron Electric Rotary Vibrators are motor driven for reduced noise levels. These rugged vibrators are totally enclosed for reliable operation in dusty, dirty or moist environments. Adjustable eccentric weights allow easy adjustment of force to suit varying applications.



Syntron® Electromagnetic Vibrators

Syntron Electromagnetic Vibrators are ideal for continuous or intermittent operation. An easily adjustable control assures optimum and variable material flow. Dependable Syntron Electromagnetic Vibrators are virtually maintenance-free because the electromagnetic design eliminates moving parts. Most models come standard with fully-enclosed dust-tight and watertight construction.



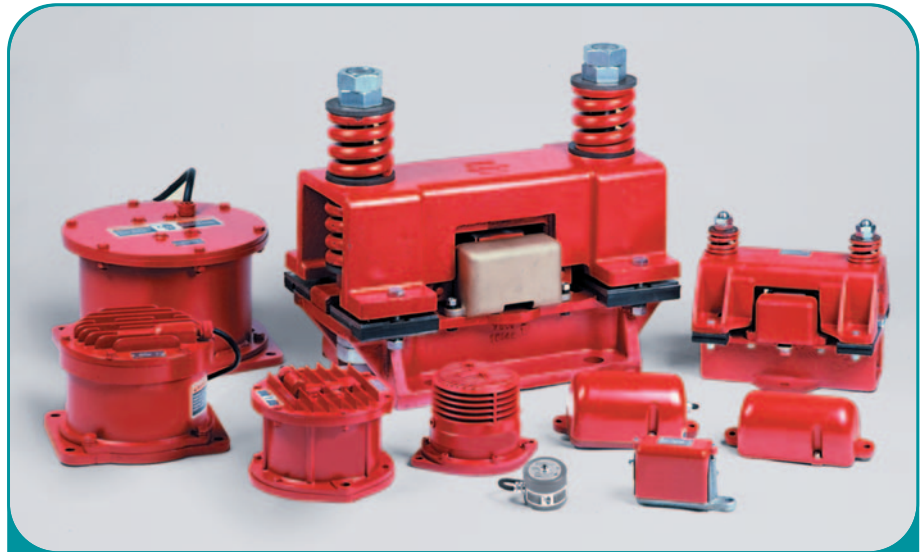
Syntron® Electromagnetic Vibrators

Keep Your Materials Flowing Efficiently and Economically

Syntron® Electromagnetic Vibrators from Syntron Material Handling offer an economical means of maintaining the flow of bulk materials from bins, hoppers and chutes. They come with an easily adjustable control which provides flexibility and assures optimum flow for the type of material being handled. Furthermore, Syntron Electromagnetic Vibrators can be operated continuously or intermittently depending upon the specific requirements.

To assure the highest standard of quality, Syntron Electromagnetic Vibrators are factory tested and adjusted for optimum performance. Most models come standard with totally enclosed, dust-tight and waterproof construction. Since these vibrators have no rotating or sliding parts, they are virtually maintenance-free.

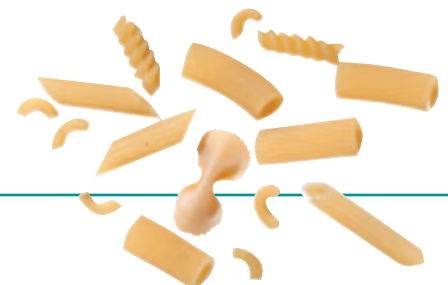
Syntron Electromagnetic Vibrators come with the technical expertise of Syntron Material Handling's application staff, who have been providing productive solutions for a wide variety of material handling problems for more than 80 years. Call Syntron Material Handling Application Specialists and request a data sheet or download one from our website at www.syntronmh.com. Syntron Electromagnetic Vibrators may also be ordered online at www.syntronmh.com.



Syntron® Electromagnetic Vibrators are available in a wide variety of sizes and force ratings.

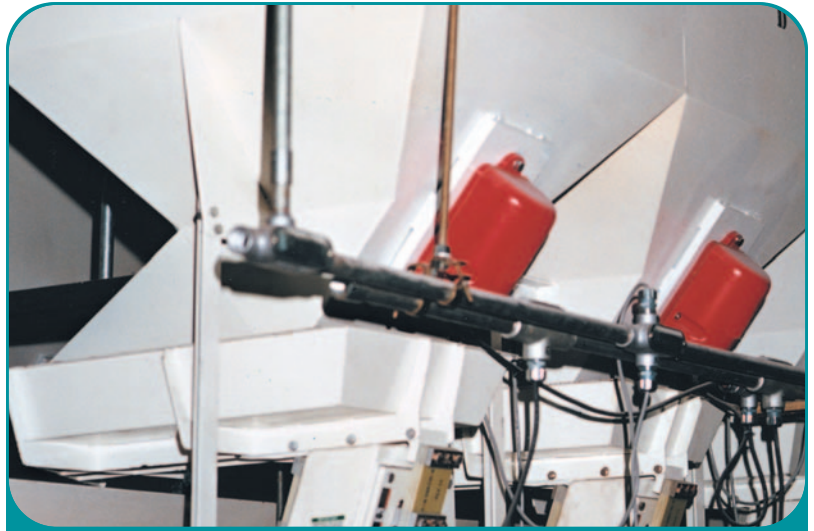
Features and Benefits

- Electromagnetic design
 - No rotating or sliding parts; maintenance-free
 - Ideal for continuous or intermittent operation
- Adjustable control
 - Varies vibration force with simple turn of control knob
- Urethane encapsulated magnet assemblies
 - Provides protection from moisture and other contaminants
 - Prevents wire degradation
- Productivity enhancing performance
 - No need for manual labor to unclog bins or to keep material flowing
- Simple design, durable, rugged construction
 - Safe, reliable performance for years of service
- Wide range of sizes
 - Accommodates your specific application
- Low noise models available
 - Quiet, reliable operation





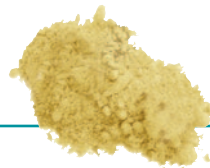
Syntron® model V-41 Electromagnetic Vibrator installed on a stainless steel bin.



Syntron® model V-20 Electromagnetic Vibrators maintain the flow of pasta from bins to packaging lines.



This Syntron® model V-85 Electromagnetic Vibrator is maintaining flow of dust particulates from the collecting hopper of an electrostatic precipitator.



Syntron® Electromagnetic Vibrator Models

Syntron® V-2 and V-4 Electromagnetic Vibrators are two of the smallest industrial vibrators available. These versatile vibrators can be controlled electrically with a separate control. When these vibrators are operated without a control, they can be mechanically controlled by turning an easily accessible adjusting screw. Increased amplitude can be obtained by using rectified AC power. Flexibility and ease of installation are common to both models and the Model V-4 is available with a dust-tight case.

Models V-9 and V-20 are compact in size, but at 3600 vpm, they pack enough vibratory “punch” to excel in a wide range of applications. Each is available with a separate dust-tight case.

Typical applications for the above models include installations on small bins, handling lightweight materials, or in counting, sorting or packaging operations.

Impact and Cushioned Vibrator Compact Models

Models V-50, V-85 and V-180 are “solid” impact vibrators. These units use a metal striking block to produce positive impact.

Models V-41, V-51, V-86 and V-181 are “cushioned” impact vibrators, which utilize a rubber striking block to produce positive impact. Their high power/low noise characteristics make them ideal for use in confined areas with nearby workers. Physical dimensions and electrical specifications are identical to the “solid” impact type vibrators. Dust-tight and waterproof construction are standard for both versions.

Open Models

Models V-75 and V-500 feature a power-packed, solid impact, open-type design. They are used on difficult, heavy-duty applications. The V-500 is one of the largest magnetic vibrators available. Both the V-75 and V-500 are available with a separate dust-tight case.

Self-Contained Models

Models V-9 through V-500 require separate controls unless specifically ordered as self-contained units. Self-contained units include a built-in rectifier and they always operate at full force. Self-contained units are recommended only where no force adjustment is required. Models V-41 and V-500 are not available as self-contained units.



V-2



V-4



V-9, V-20



V-41



V-50
V-51



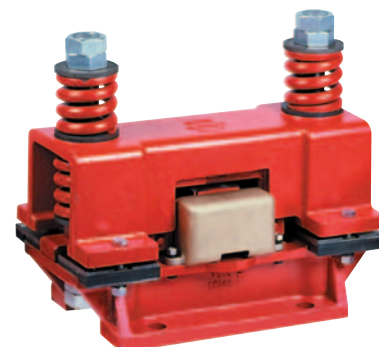
V-75



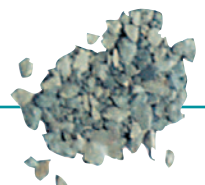
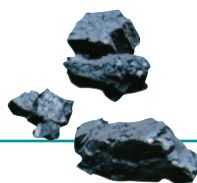
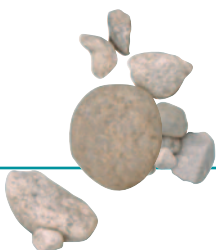
V-85
V-86



V-180
V-181

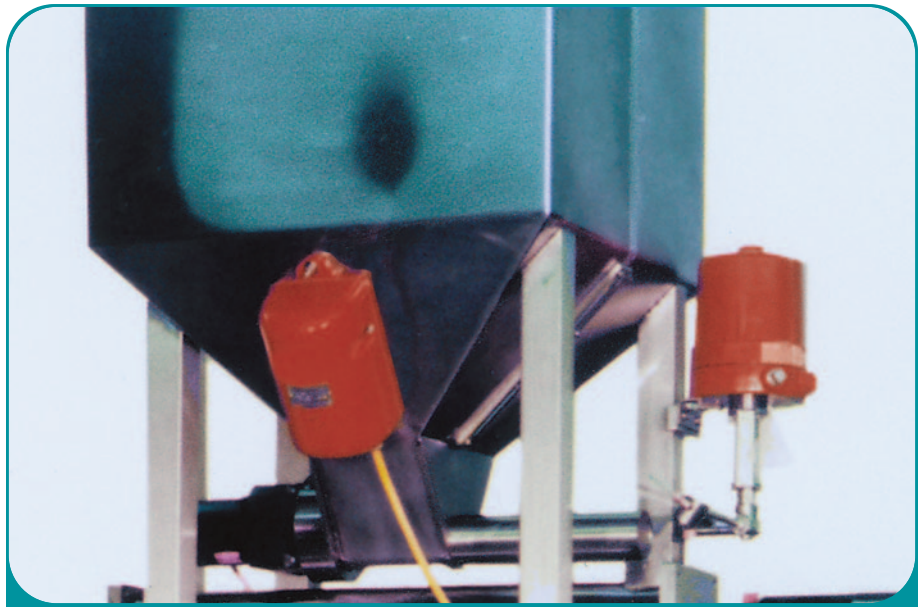


V-500



Selecting the Proper Syntron® Electromagnetic Vibrator

The primary consideration in vibrator selection is the thickness of the bin or chute wall. Once the proper vibrator model has been selected from the Application Tabulation Table, compare the capacity in the tapered portion of the bin with the rated capacity shown in the table. If the rated capacity is exceeded, multiple vibrators may be required, depending on the material being handled. Stiffeners used to reinforce the bin or chute may also affect the selection or preferred location of the vibrator. Please contact Syntron Material Handling for a copy of our data sheet and assistance with selection of appropriate units in these applications.

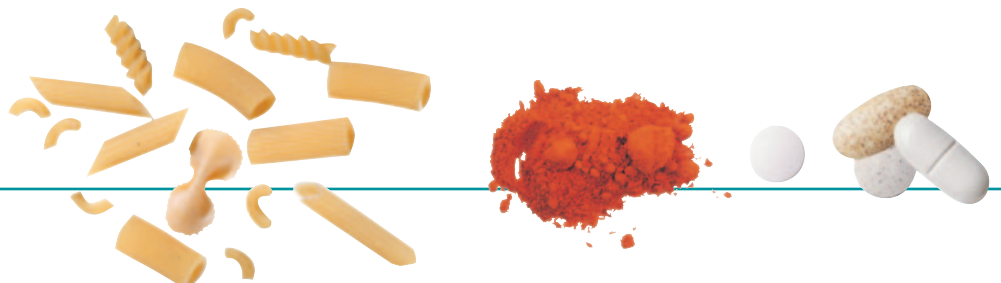


Syntron® model V-20 Electromagnetic Vibrator ensures controlled feed from hopper to extruder.

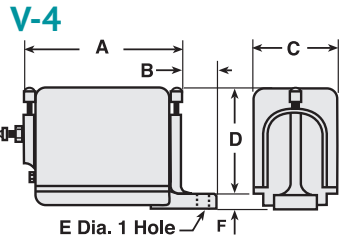
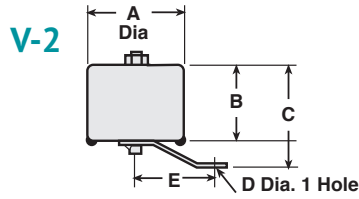
Application Tabulation

Model	Wall Thickness*	No. Vibrators Needed per Capacity in Tapered Portion of Bin/Hopper
V-2	24 ga (0.5 mm)	1 ft ³ (0.03 m ³)
V-4	22 ga (0.8 mm)	1 ft ³ (0.03 m ³)
V-9	20 ga (1 mm)	3 ft ³ (0.08 m ³)
V-20	1/16 in (1.5 mm)	10 ft ³ (0.28 m ³)
V-41	1/8 in (3 mm)	20 ft ³ (0.57 m ³)
V-51	1/8 in (3 mm)	30 ft ³ (0.85 m ³)
V-50	1/4 in (6 mm)	1 per 5-ton (4.5 metric ton)
V-86	1/4 in (6 mm)	1 per 5-ton (4.5 metric ton)
V-75	5/16 in (8 mm)	1 per 20-ton (18.1 metric ton)
V-85	5/16 in (8 mm)	1 per 20-ton (18.1 metric ton)
V-181	5/16 in (8 mm)	1 per 30-ton (27.2 metric ton)
V-180	3/8 in (10 mm)	1 per 50-ton (45.4 metric ton)
V-500	1 in (25 mm)	1 per 100-ton (90.7 metric ton)

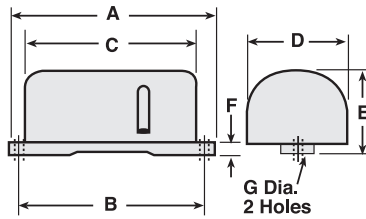
* Wall thickness is critical to proper vibrator selection; if in doubt, call Syntron Material Handling for assistance.



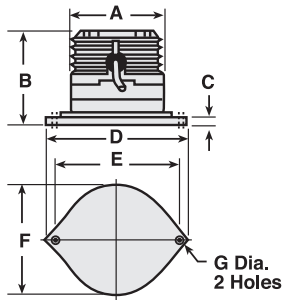
Electromagnetic Vibrator Specifications and Dimensions



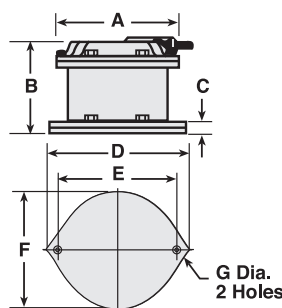
V-9, V-20



V-41



V-50, V-51



Specifications

Model	Weight		Input Amps		Speed (vpm 50 Hz)			Speed (vpm 60 Hz)		
	lb	kg	Input Amps		Without Control	AC Control	RC Control	Without Control	AC Control	RC Control
			115V	230V						
V-2	2 1/2	1.1	0.3	0.18	6,000	6,000	3,000	7,200	7,200	3,600
V-4	4 1/2	2.0	0.9	0.45	6,000	6,000	3,000	7,200	7,200	3,600

Dimensions

Model	A		B		C		D		E		F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-2	2 7/8	73	2 1/4	57	3 1/16	78	1 3/32	10	2 3/8	60	--	--
V-4	5 5/8	143	1 1/4	32	3	76	3 3/4	95	1 7/32	13	1/2	13

Specifications

Model	Weight		Input Amps			Speed	
	lb	kg	115V	230V	460V	(vpm 50 Hz)	(vpm 60 Hz)
V-9	9 1/2	4.3	1.2	0.75	NA	3,000	3,600
V-20	14	6.4	2.0	1.0	0.5	3,000	3,600

Dimensions

Model	A		B		C		D		E		F		G	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-9	10 1/4	260	9 1/4	235	8	203	4 1/4	108	4 1/16	103	9/16	14	7/16	11
V-20	10 1/4	260	9 1/4	235	8	203	5 1/8	130	4 5/16	110	1/2	13	7/16	11

Specifications

Model	Weight		Input Amps			Speed	
	lb	kg	115V	230V	460V	(vpm 50 Hz)	(vpm 60 Hz)
V-41	25	11.3	3.5	1.75	0.88	3,000	3,600

Dimensions

Model	A		B		C		D		E		F		G	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-41	6 1/4	159	6 1/2	165	7/16	11	9 3/8	238	8 1/4	210	7 3/8	187	1 7/32	13

Specifications

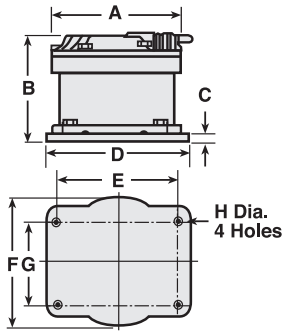
Model	Weight		Input Amps			Speed	
	lb	kg	115V	230V	460V	(vpm 50 Hz)	(vpm 60 Hz)
V-50, V-51	40	18.1	4.5	2.3	1.2	3,000	3,600

Dimensions

Model	A		B		C		D		E		F		G	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-50	9 1/2	241	7 1/4	184	15/16	24	10 3/4	273	9 1/4	235	9 3/4	248	1 1/16	17
V-51	9 1/2	241	7 1/4	184	15/16	24	10 3/4	273	9 1/4	235	9 3/4	248	1 1/16	17

When ordering, specify 50 or 60 Hz operation. Refer to control information, page 10. For other voltage requirements, contact Syntron Material Handling.

V-85, V-86



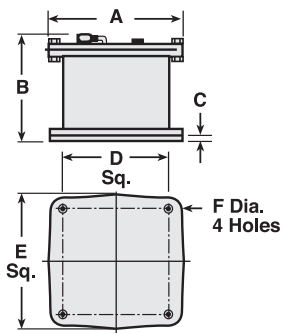
Specifications

Model	Weight		Input Amps			Speed	
	lb	kg	115V	230V	460V	(vpm 50 Hz)	(vpm 60 Hz)
V-85, V-86	79	35.8	7.0	3.5	1.8	3,000	3,600

Dimensions

Model	A		B		C		D		E		F		G		H	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-85	10 ^{7/16}	265	8 ^{3/4}	222	5/8	16	11 ^{1/2}	292	10	254	10 ^{5/8}	270	7	178	11 ^{1/16}	17
V-86	10 ^{7/16}	265	8 ^{3/4}	222	5/8	16	11 ^{1/2}	292	10	254	10 ^{5/8}	270	7	178	11 ^{1/16}	17

V-180



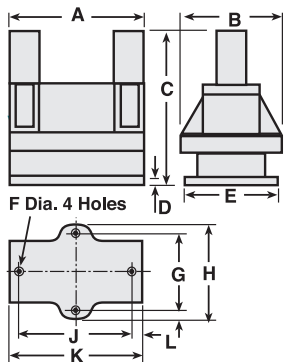
Specifications

Model	Weight		Input Amps		Speed	
	lb	kg	230V	460V	(vpm 50 Hz)	(vpm 60 Hz)
V-180, V-181	220	100	12.0	6.0	3,000	3,600

Dimensions

Model	A		B		C		D		E		F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-180	15 ^{3/16}	386	11	279	11 ^{1/16}	17	12	305	15 ^{1/4}	387	13 ^{1/16}	21
V-181	15 ^{3/16}	386	11	279	11 ^{1/16}	17	12	305	15 ^{1/4}	387	13 ^{1/16}	21

V-75



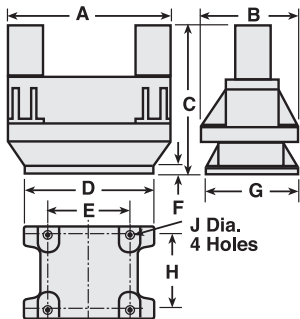
Specifications

Model	Weight		Input Amps			Speed	
	lb	kg	115V	230V	460V	(vpm 50 Hz)	(vpm 60 Hz)
V-75	113	51	16.0	8.0	4.0	3,000	3,600

Dimensions

Model	A		B		C		D		E		F		G		H		J		K		L	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-75	13	265	10	254	12 ^{3/8}	314	1/2	13	8	203	11 ^{1/16}	17	6 ^{1/2}	165	8	208	11 ^{1/2}	292	13	330	3/4	19

V-500



Specifications

Model	Weight		Input Amps		Speed	
	lb	kg	230V	460V	(vpm 50 Hz)	(vpm 60 Hz)
V-500	700	318	35.0	17.5	3,000	3,600

Dimensions

Model	A		B		C		D		E		F		G		H		J	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
V-500	25 ^{3/4}	654	14 ^{1/2}	368	23 ^{3/4}	603	20	508	13	330	1 ^{1/8}	29	14	356	11 ^{1/2}	292	1 ^{9/16}	40

When ordering, specify 50 or 60 Hz operation. Refer to control information, page 10. For other voltage requirements, contact Syntron Material Handling.

Controls

Syntron® Vibrating Feeders are furnished with a standard control to vary the flow of material through the feeder by adjusting the amplitude of the feeder pan. Standard control units include an operating switch, fuse and adjustable control to vary the amplitude.

Controls are available for 115, 230 or 460 volts, 50 or 60 cycle power and are

available for operation at other voltages upon request. Control units for multiple feeder applications are available. For special electrical standards, custom control enclosures can be provided. In addition to the standard controls listed here, Syntron Material Handling can provide control systems built to meet your requirements.

Velocity® RS drives can be provided with a separate, standard RC control (see pages 20-21) and are also available with a self-contained rectifier. Units with a self-contained rectifier operate at full stroke.

Control Model	Volts	Amps	Enclosure	Approvals	Intermittent Contacts	Intensity	Soft Start	Voltage Regulation	RC Output	AC Output
Power Pulse RC WT	115/230	5	Nema 4X	cUL	●	Potentiometer			●	
Power Pulse AC WT	115/230	5	Nema 4X		●	Potentiometer				●
Conductor DC 15	115	15	Nema 4	cUL	●	POT / 4-20mA	●	●	●	●
Conductor DC 28	230	8	Nema 4	cUL	●	POT / 4-20mA	●	●	●	●
Conductor DC 118	115	18	Nema 12	cUL	●	POT / 4-20mA	●	●	●	●
Conductor DC 218	230	18	Nema 12	cUL	●	POT / 4-20mA	●	●	●	●
Conductor 420	340/480	4-20	Nema 4	cUL	●	POT / 4-20mA	●	●	●	
Conductor 518	575	4-18	Nema 4	cUL	●	POT / 4-20mA	●	●	●	
Conductor CH 15	115	15	Open Chassis	cUL	●	POT / 4-20mA	●	●	●	●
Conductor CH 28	230	8	Open Chassis	cUL	●	POT / 4-20mA	●	●	●	●

● Standard in the model listed

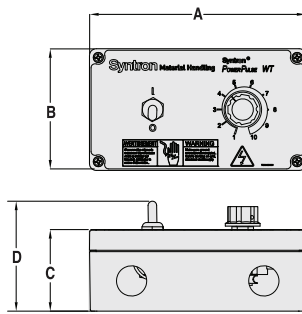
* Conductor controls are also available in open chassis models for ease in mounting in your system controls.

Note: Some open chassis models have reduced amperage capability. Contact Syntron Material Handling for details.

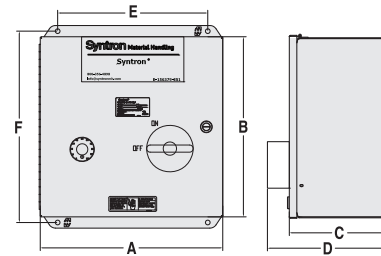
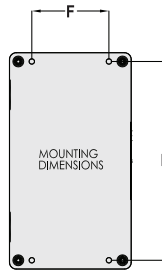


Control Dimensions

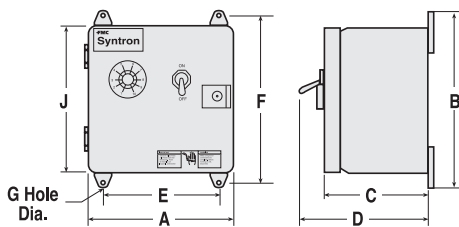
Control	A		B		C		D		E		F		G		H		J		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
Power Pulse WT	6 1/4	160	3 1/2	89	2 1/4	57	3 1/4	82	5 3/4	146	2 1/4	57	-	-	-	-	-	-	1 1/4	5
Conductor Series																				
15 & 28 Enc.	8	203	9 1/2	242	4 3/4	121	5 5/8	143	6 1/4	159	8 5/8	219	5/16	8	-	-	8	203	7	3.18
118 & 218 Enc.	8	203	10	254	4 3/4	121	5 5/8	143	6 1/4	159	8 5/8	219	5/16	8	-	-	8	203	8	3.63
420 & 518 Enc.	12 1/4	310	12 1/4	310	6	152	7 13/16	198	10	254	12 3/4	324	0.3	7.92	-	-	12	303	18.5	8.4
15 & 28 Open Chassis	3 15/16	100	3 13/16	96	3 1/16	78	-	-	3 1/4	82	3 1/4	82	0.18	4.5	-	-	-	-	0.58	0.26



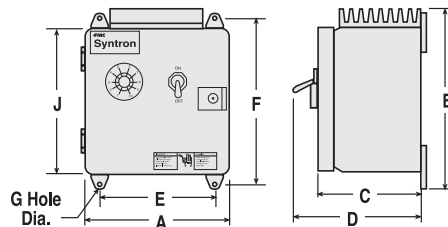
Power Pulse WT



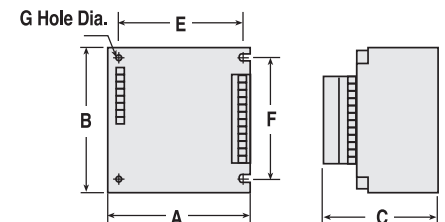
Conductor 420, Conductor 518



Conductor DC 15,
Conductor DC 28



Conductor DC 118,
Conductor DC 218



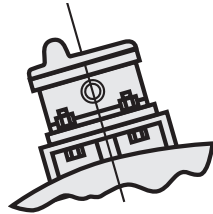
Open Chassis Conductor 15
and Conductor 28

Mounting Syntron® Electromagnetic Vibrators

Correct location of electromagnetic vibrators is of prime importance in obtaining maximum efficiency from the selected model. Note: Operate vibrators on hoppers only when the hopper is open to flow. Otherwise, vibration may pack the hopper contents.

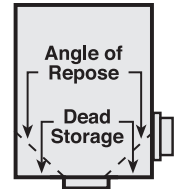
Curved Surfaces

To mount a vibrator to a curved surface, select a bracket made from a channel section or a bent plate. A center gusset is required for all totally enclosed vibrators, and two blocks of sufficient height to contact the curved surface are required for Models V-75 and V-500. The selected gusset or blocks must be securely welded to the underside of the bracket and curved surface. This arrangement is required to stiffen the mounting and transmit vibrations directly to the hopper contents. Mounting bolt heads can be welded to the underside of the bracket.



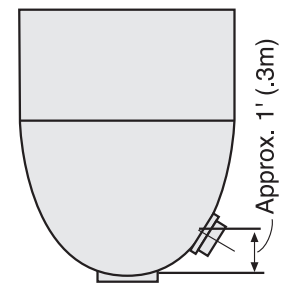
Rectangular or Cylindrical Bins with Flat Bottom and Center Discharge.

Mount directly to the side of the bin, just below the point where the materials' natural angle of repose intersects the side, as shown.



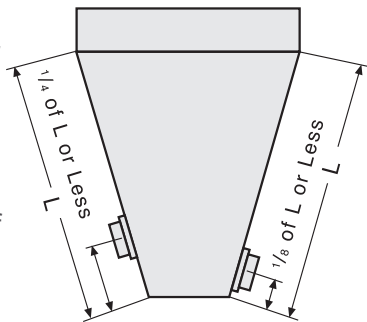
Parabolic Bins or Hoppers

Mount the vibrator within one foot of each discharge opening and in line with center of opening.



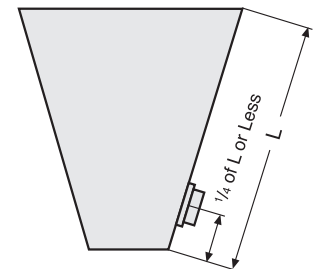
Rectangular Hoppers

Mount vibrator and mounting channel as for a conical hopper or a curved surface. If a stiffener obstructs mounting, mount the vibrator in the middle of the panel next to the stiffener. If required, a second vibrator should be mounted on the opposite face at a slightly higher elevation.



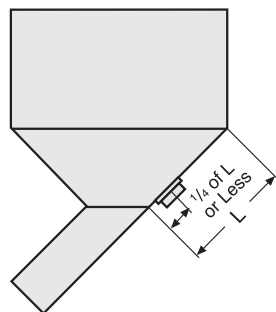
Conical Hoppers

Mount the vibrator to the hopper (as for a curved surface) 12 to 18 inches (300 to 450 mm) or less from the discharge.



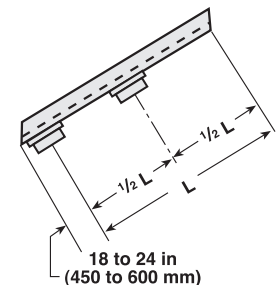
Hopper with Sloping Discharge

Mount the vibrator on the center line of the hopper, as close to the discharge as possible. An additional vibrator may be required on the discharge chute.



Inclined Chutes

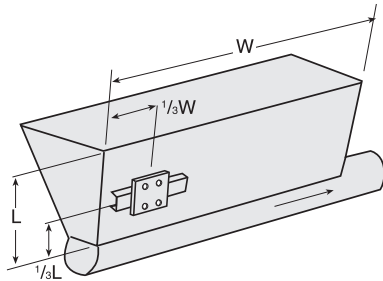
Chutes less than 10 to 12 feet (3 to 3.6 m) long are usually equipped with just one vibrator located well below the center. Allow for the vibrator to be moved about one foot (300 mm) in either direction. On chutes requiring more than one vibrator, the first one should be located 18 to 24 inches (450 to 500 mm) from the outlet. The second unit should be mounted about half-way between the first vibrator and the upper end. Allow for the vibrators to be moved about one foot (300 mm) in either direction.



Note: Drawings illustrate typical installations. Specific installations may require slight variations. For other applications not covered here, please consult factory for recommendations.

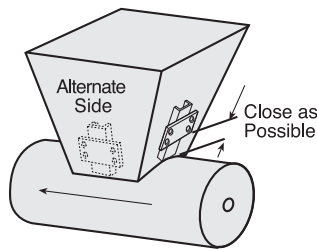
Screw Feeder

Screw conveyors feed from the back of the hopper. Vibrator should be $\frac{1}{3}$ from the inlet. If two vibrators are used, place second vibrator on opposite side, $\frac{1}{3}$ from the discharge. Do not operate the vibrator at the discharge end until the back of the bin is empty and the vibrator at the inlet is shut off.



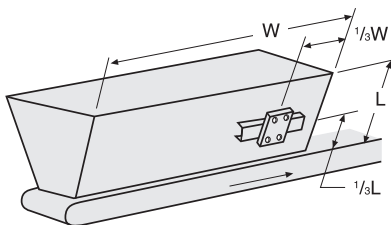
Short Screw Feeder

Place vibrator as close as possible to feeder.



Long Bin

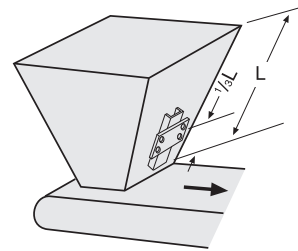
Belt conveyors feed from the front of the hopper. Vibrator should be $\frac{1}{3}$ from front. If two vibrators are used, place one on the opposite side and $\frac{1}{3}$ from back. Do not operate the back vibrator until the front is empty and the front vibrator is shut off.



Note: Drawings illustrate typical installations. Specific installations may require slight variations. For other applications not covered here, please consult factory for recommendations.

Belt Conveyor and Standard Bin

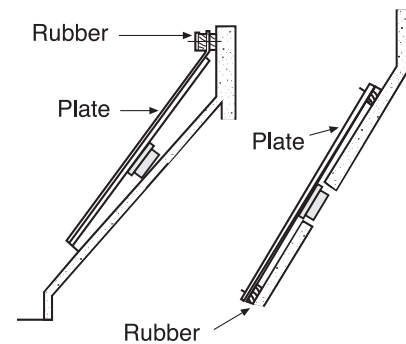
Mount vibrator on the belt discharge side of the hopper. Follow mounting instructions for the appropriate bin type on page 12.



Concrete Hopper or Lined Wooden Hopper

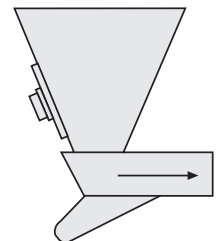
For wooden hoppers lined with thin sheet metal, attach vibrator mounting bolts to the hopper lining.

For concrete hoppers, secure a steel plate across the top inside of the hopper, to the discharge opening along the side to which the vibrator will be mounted. At about one-quarter or less of the distance from the discharge to the vertical side, cut an opening to allow the vibrator to be bolted to the steel plate.



Vibrating Feeder and Standard Bin

Mount vibrator on the feeder infeed side of the hopper. Follow mounting instructions for the appropriate bin type on page 12.



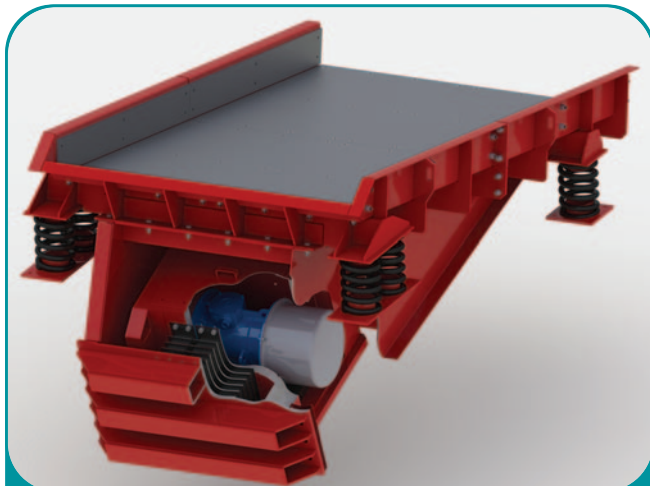
Syntron® Electric Rotary Vibrators

Rugged construction, reliable performance to assure the efficient flow of bulk materials

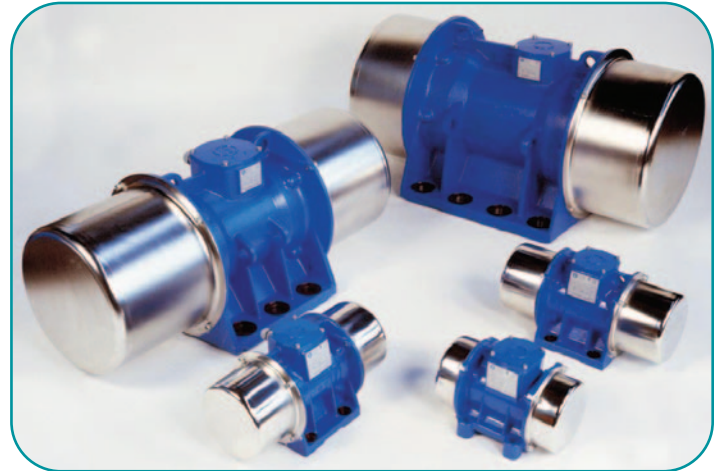
Syntron® Electric Rotary Vibrators from Syntron Material Handling provide a safe, reliable, cost-effective way to maintain the flow of materials. Motor-driven to provide virtually noiseless operation (most models 76 db or less*), these vibrators help facilitate material flow from the smallest bin, hopper or chute to the largest silo, screens, feeders, grizzly feeders, conveyors, fluid beds, shake-outs, helical elevators, etc. Additionally, they are totally enclosed to eliminate concerns over environmental factors such as dust, dirt and rain. Syntron Electric Rotary Vibrators can be used to pack material in drums and bags as well as to consolidate material in pipe and precast industries, in vibrating screen applications and many other industrial environments. High stroke/low frequency models are especially suitable for hard-to-handle materials such as sawdust, cinder or clay content materials.

Syntron Electric Rotary Bin Vibrators also come with the technical expertise of Syntron Material Handling's application staff, who have been providing productive solutions for a wide variety of material handling problems for more than 80 years.

* At 3 feet (1 meter) on A scale



Electric Rotary Vibrators in Primary Feeder Application



Features and Benefits

- Motor driven for reduced noise level
- High force to weight ratio
- Adjustable eccentric weights allow easy change of force to suit varying applications
- Orbital action facilitates material flow in hopper & chute applications
- Terminal box for easy connection and change of voltage (on 3 phase models) or direction of rotation
- Units sealed to IP66 except the AMV which is IP65
- Rugged, durable construction for many years with safe, reliable performance
- Wide range of sizes to accommodate your specific application
- Class F (Inverter Duty) windings are standard
- All units are tropical duty for high humidity applications / locations
- Standard construction suitable for operation in -4 to +104 degree F ambient temperature locations
- Internal thermal detection is standard on larger units
- Each vibrator fully tested after assembly
- All units are designed for heavy and continuous duty at the maximum centrifugal force
- Wide range with centrifugal forces up to 50,000 lbs

Selecting the Proper Syntron® Electric Rotary Vibrator for Rotational and Elliptical Applications

Bins or Hoppers

In order to move material in a bin or hopper, the friction between the material and the bin wall must be broken. Once the friction is broken, the material cannot cling to the sides of the bin and it will flow out through the discharge. For most applications, the vibrator force needed to accomplish this is simply calculated as follows:

- Calculate the weight of the material in the transition or sloping part of the bin. Normally, this is the only place where the friction between the material and the bin side has to be broken. Do not calculate the total weight, only what is in the transition part of the bin.
- For conical bins, calculate as follows:
 $.261 \times \text{dia.}^2 \times \text{height} \times \text{material density in lb/ft}^3 \text{ (kg/m}^3\text{)}$
- For rectangular bins, calculate as follows:
 $\text{Length} \times \text{width} \times \text{height} \times 1/3 \times \text{material density.}$

When the weight (lb) has been calculated, divide the weight by 10 to get the force or impact needed from the vibrator (lbf). For example: The conical part of a 25-ton bin contains 7000 lb Divide 7,000 by 10 to get the force (lbf) or impact needed from the vibrator. Find a suitable vibrator on pages 20 - 29.

Additional considerations when sizing vibrators to bins:

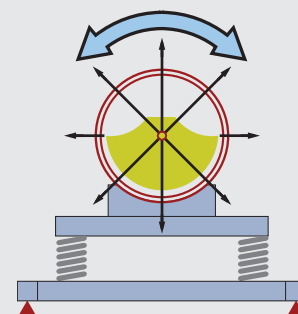
- If the bin side angle is less than 30 degrees, select a larger vibrator.
- If the bin has a vertical section, select a larger vibrator.
- If the bin wall is extra thick select a larger vibrator.
- On very sticky and hard to move materials, it is better to use two small vibrators instead of one large one (size the two smaller ones by dividing the required force in half).

Vibrating Tables for Packing Materials

Dense materials respond best to high-frequency vibration (3600 rpm or more), while light, fluffy or flaky materials respond best to low-frequency vibration (1800 rpm or less).

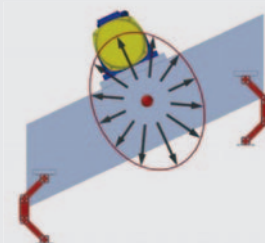
ROTATIONAL

obtained with
1 Electric Vibrator



ELLIPTICAL

obtained with
1 Electric Vibrator
(not in center of gravity)



For packing or settling materials, use a vibrator with an impact force of one-and-a-half to two times larger than the weight of the material plus larger container. Find a suitable vibrator in the tables on pages 20 - 29.

Vibrating Screens

For self-cleaning screen, use a vibrator with a centrifugal force (impact) four times the weight of the material plus the weight of the screen.

Note: Coarse, lumpy, sticky or wet materials respond best to high-frequency vibration; powdery and dry materials to low-frequency vibration.

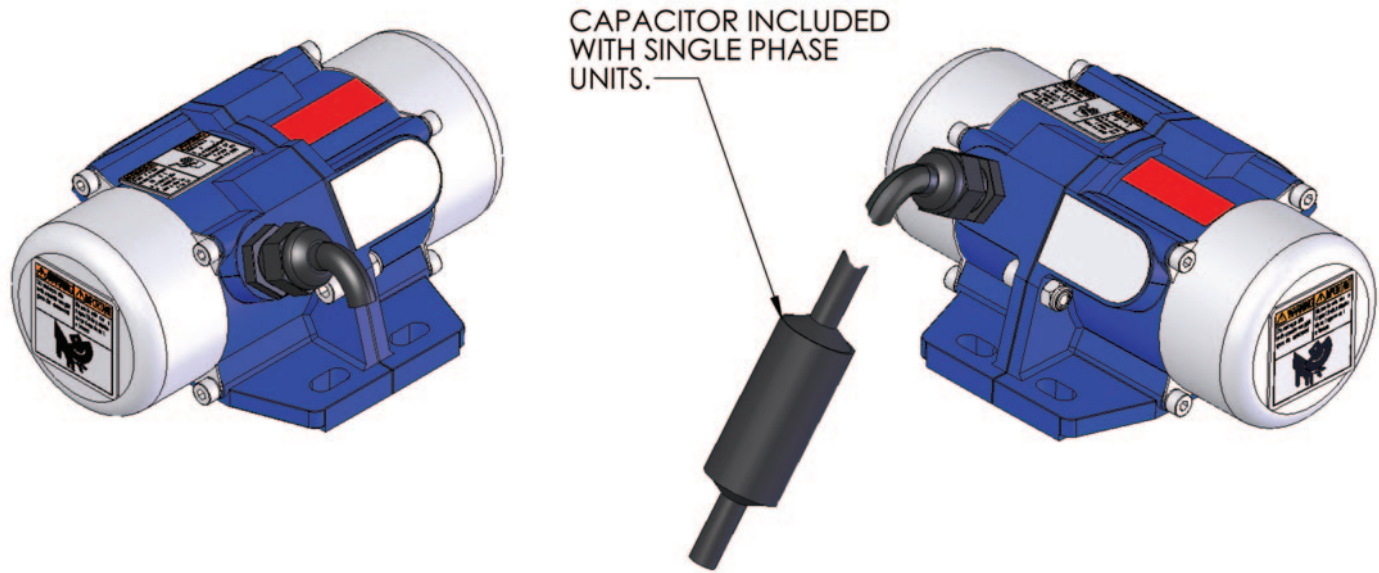
Consolidating Concrete

For three-inch “slump” concrete, use a vibrator with the same force (impact) as the weight of concrete and form. For one- to two-inch slump concrete, an additional 30 to 50 percent impact is needed. For dry mixes (zero slump) increase the impact by 100 to 200 percent.

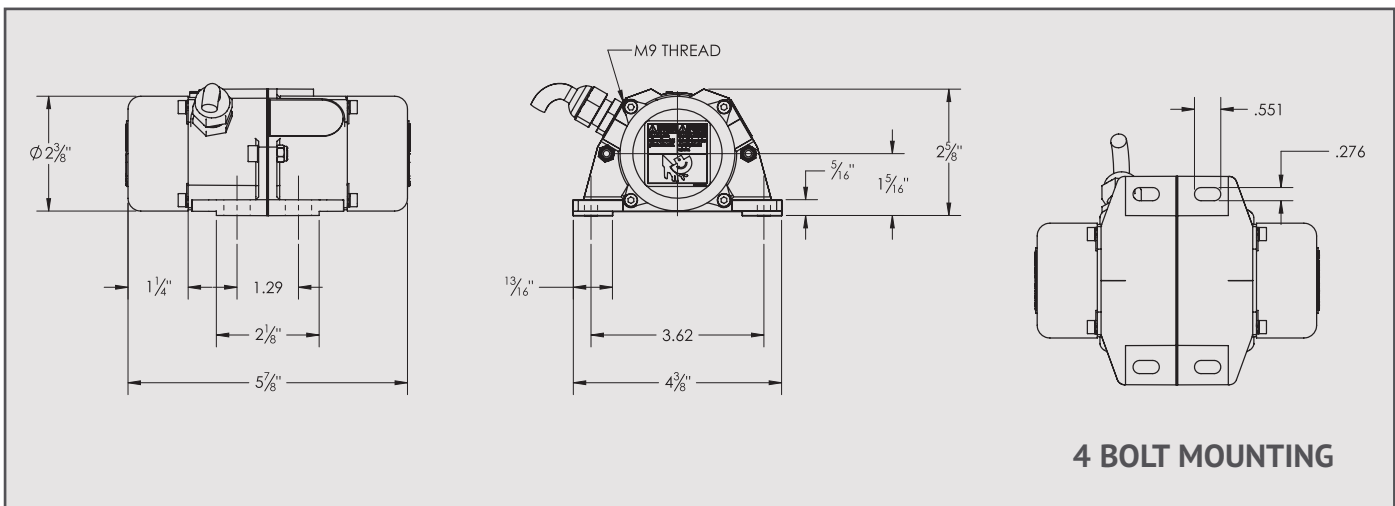
Chutes

The force required of the vibrator is equal to the weight of the chute plus the vibrator plus the maximum material in the chute. See page 30 for more information.

AMV Electric Rotary Vibrator by Visam Specifications and Dimensions



SMH Model	SMH Part Number	Description	Weight (lbs)		Centrifugal Force (lbs)		Static Moment (lb*in)		RPM		Amps	
			50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
4 BOLT												
AMV1-70BN	6515-040-BN	110 - 120V 60hz Single Phase	3 3/4	3 3/4	-	68	0.18	0.18	-	3,600	-	0.26
AMV1-70BM	6515-040-BM	220 - 240V 60hz Single Phase	3 3/4	3 3/4	-	68	0.18	0.18	-	3,600	-	0.13
AMV2-70BO	6515-040-BO	440 - 460V 60hz 3-Phase	3 3/4	3 3/4	-	68	0.18	0.18	-	3,600	-	0.07
AMV1-50AM	6515-040-AM	220 - 240V 50hz Single Phase	3 3/4	3 3/4	47	-	0.18	0.18	3,000	-	0.11	-
AMV2-50AQ	6515-040-AQ	380 - 415V 50hz 3-Phase	3 3/4	3 3/4	47	-	0.18	0.18	3,000	-	0.06	-



Electric Rotary Vibrators

Specifications and Dimensions

3,600 RPM, 60Hz - 115V

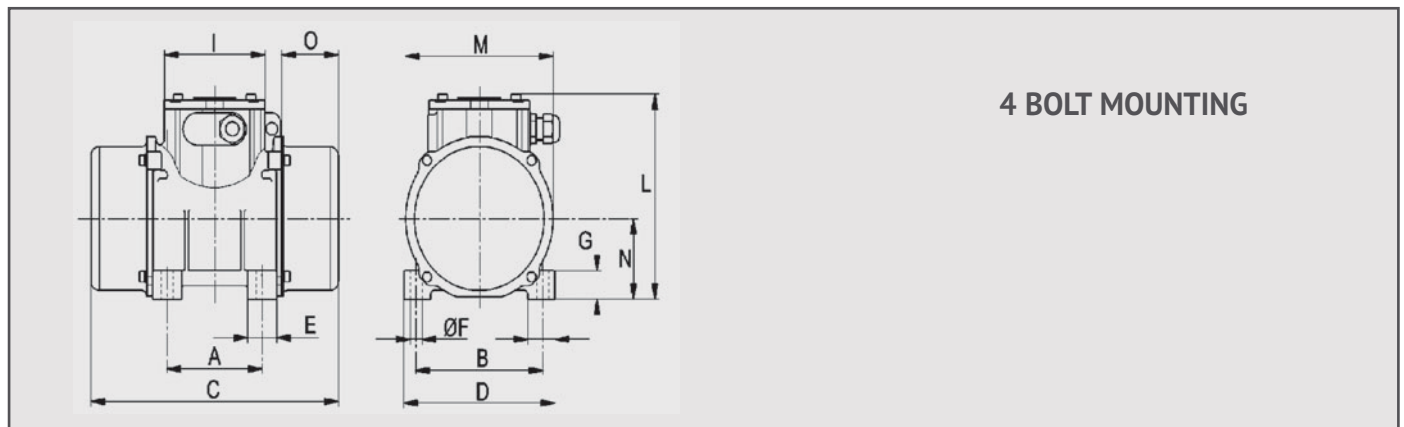
2-Pole (Single Phase)



Specifications

SMH Model	SMH Part Number	Weight (lbs)	Centrifugal Force (lbs)	Static Moment (lb*in)	Max Input Power (kw)	Max Current Amps	Temp Class (°C)
4 BOLT							
VV03N/2	6515-107-030	12.35	385.8	1.04	0.155	1.5	120
VV05N/2	6515-107-050	13.23	471.8	1.3	0.155	1.5	120
VV10N/2	6515-107-100	19.84	683.4	1.82	0.27	2.3	120
VV15N/2	6515-107-115	30.42	1080.3	2.95	0.48	4.2	120
VV25N/2	6515-107-125	43.21	1697.6	4.6	0.7	6.5	120

OVERALL REFERENCE DIMENSIONS (inches)													
SMH Part Number	"A"	"B"	"C"	"D"	"E"	"ØF"	"G"	"H"	"I"	"L"	"M"	"N"	"O"
4 BOLT													
6515-107-030	2.44-2.91	4.17	8.23	4.92	1.201	0.354	0.945	0.906	3.66	5.94	4.84	2.4	1.77
6515-107-050	2.44-2.91	4.17	8.86	4.92	1.201	0.354	0.945	0.906	3.66	5.94	4.84	2.4	2.09
6515-107-100	3.54	4.92	8.86	5.98	1.299	0.512	1.102	1.181	3.66	6.81	5.67	2.87	2.13
6515-107-115	4.13	5.51	11.18	6.57	1.26	0.512	1.181	1.181	4.37	7.99	6.42	3.25	2.48
6515-107-125	4.72	6.69	12.13	8.07	1.496	0.669	1.575	1.299	4.37	8.44	7.52	3.6	2.48



Specifications and Dimensions



3,600 RPM, 60Hz - 460V

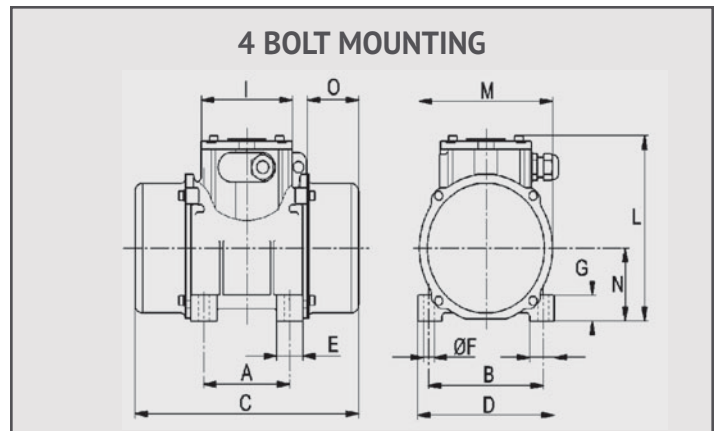
2-Pole (3 Phase)

Specifications

SMH Model	SMH Part Number	Weight (lbs)	Centrifugal Force (lbs)	Static Moment (lb*in)	Max Input Power (kw)	Max Current Amps	Temp Class (°C)
4 BOLT							
VV03N/2	6515-107-003	12.35	385.8	1.04	0.17	0.29	120
VV05N/2	6515-107-005	13.23	471.8	1.3	0.17	0.29	120
VV10N/2	6515-107-010	19.84	683.4	1.82	0.26	0.48	120
VV15N/2	6515-107-015	30.42	1080.3	2.95	0.47	0.71	120
VV22N/2	6515-107-022	32.63	1651.3	4.51	0.47	0.71	120
VV25N/2	6515-107-025	43.21	1697.6	4.6	0.65	0.95	120
VV35N/2	6515-107-035	55.12	2425.1	6.6	1.1	1.6	120
VV38N/2	6515-107-038	76.06	3306.9	9.03	1.9	2.8	200
VV39N/2	6515-107-039	78.26	4144.7	11.28	1.9	2.8	200
VV40N/2	6515-107-040	113.54	4960.4	13.45	2.1	2.9	200
VV45N/2	6515-107-045	222.67	7054.8	19.1	3.8	5.4	135
VV55N/2	6515-107-055	227.08	8377.6	22.65	3.8	5.4	135
VV67N/2	6515-107-067	399.04	14219.8	38.62	5.3	7.7	135
VV71N/2	6515-107-071	465.18	19841.6	53.9	8.8	12.3	135

3,600 RPM, 60Hz - 460V

2-Pole (3 Phase)



OVERALL REFERENCE DIMENSIONS (inches)												
"A"	"B"	"C"	"D"	"E"	"ØF"	"G"	"H"	"I"	"L"	"M"	"N"	"O"
4 BOLT												
2.44-2.91	4.17	8.23	4.92	1.201	0.354	0.945	0.906	3.66	5.94	4.84	2.4	1.77
2.44-2.91	4.17	8.86	4.92	1.201	0.354	0.945	0.906	3.66	5.94	4.84	2.4	2.09
3.54	4.92	8.86	5.98	1.299	0.512	1.102	1.181	3.66	6.81	5.67	2.87	2.13
4.13	5.51	11.18	6.57	1.26	0.512	1.181	1.181	4.37	7.99	6.42	3.25	2.48
4.13	5.51	11.18	6.57	1.26	0.512	1.181	1.181	4.37	7.99	6.42	3.25	2.48
4.72	6.69	12.13	8.07	1.496	0.669	1.575	1.299	4.37	8.44	7.52	3.6	2.48
4.72	6.69	17.17	8.27	2.362	0.669	0.866	1.87	4.37	9.41	8.78	4.55	4.65
5.51	7.48	17.24	9.06	2.835	0.669	0.984	2.067	4.37	10.12	9.49	4.9	4.06
5.51	7.48	17.24	9.06	2.835	0.669	0.984	2.067	4.37	10.12	9.49	4.9	4.06
5.51	7.48	18.03	9.06	3.209	0.669	0.866	1.772	4.37	9.25	8.82	4.09	4
6.1	10.04	23.23	12.2	4.075	0.925	1.181	2.362	6.1	13.19	12.17	6.3	5.51
6.1	10.04	23.23	12.2	4.075	0.925	1.181	2.362	6.1	13.19	12.17	6.3	5.51
7.84	12.6	26.06	15.35	4.37	1.102	1.26	2.953	6.1	15	15.12	7.44	5.94
7.84	12.6	24.57	15.43	4.37	1.102	1.378	2.953	6.1	15.87	15.83	7.85	5.2

Specifications and Dimensions



1,800 RPM, 60Hz - 460V

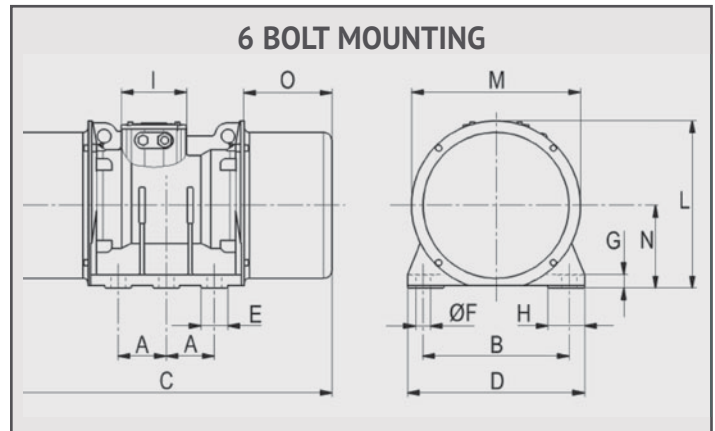
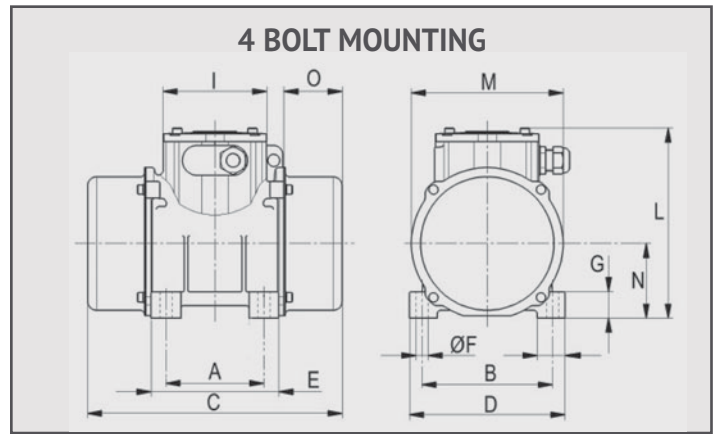
4-Pole (3 Phase)

Specifications

SMH Model	SMH Part Number	Weight (lbs)	Centrifugal Force (lbs)	Static Moment (lb*in)	Max Input Power (kw)	Max Current Amps	Temp Class (°C)	Cable Entry (in)
4 BOLT								
VV03B/4	6515-069-003	12.3	92.6	1	0.09	0.19	120-C	.256-.472
VV05B/4	6515-069-005	13.9	176.3	1.92	0.09	0.19	120-C	.256-.472
VV06B/4	6515-069-006	14.5	264.5	2.87	0.09	0.19	120-C	.256-.472
VV10B/4	6515-069-010	25.4	484.9	5.28	0.16	0.38	120-C	.256-.472
VV20B/4	6515-069-020	39.7	925.7	10.07	0.33	0.57	120-C	.354-.630
VV21B/4	6515-069-021	44.1	1322.4	14.4	0.33	0.57	120-C	.354-.630
VV30B/4	6515-069-030	57.3	1719.1	18.66	0.62	0.93	120-C	.354-.630
VV35B/4	6515-069-035	90.4	2204	23.95	0.64	0.9	120-C	.354-.630
VV38B/4	6515-069-038	114.6	3085.6	33.58	1	1.43	120-C	.354-.630
VV40B/4	6515-069-040	125.6	3857	41.91	1.2	1.83	150-C	.354-.630
VV41B/4	6515-069-041	154.3	4518.2	49.11	1.4	2.2	170-C	.354-.630
VV50B/4	6515-069-050	174.1	5510	59.96	1.6	2.9	150-C	.354-.630
VV53B/4	6515-069-053	202.8	6942.6	75.49	1.9	3.3	135-C	.354-.630
VV55B/4	6515-069-055	249.1	8375.2	91.11	2.4	3.7	135-C	.354-.630
VV57B/4	6515-069-057	264.5	9477.2	103.08	2.7	4.4	135-C	.354-.630
VV60B/4	6515-069-060	365.9	10909.8	118.62	3.2	4.8	135-C	.512-.787
VV67B/4	6515-069-067	440.8	14546.4	158.18	5.7	8.6	135-C	.512-.787
VV71B/4	6515-069-071	469.5	18072.8	191.77	7.6	10.9	135-C	.512-.787
6 BOLT								
VV81B/4	6515-069-081	672.2	19836	215.71	8	11.3	135-C	.512-.787

1,800 RPM, 60Hz - 460V

4-Pole (3 Phase)



OVERALL REFERENCE DIMENSIONS (inches)												
"A"	"B"	"C"	"D"	"E"	"ØF"	"G"	"H"	"I"	"L"	"M"	"N"	"O"
4 BOLT												
2.44-2.91	4.17	8.23	4.92	1.2	0.35	0.94	0.91	3.66	5.94	4.84	2.4	1.77
2.44-2.91	4.17	8.86	4.92	1.2	0.35	0.94	0.91	3.66	5.94	4.84	2.4	2.09
2.44-2.90	4.17	8.86	4.92	1.2	0.35	0.94	0.91	3.66	5.94	4.84	2.4	2.09
3.54	4.92	11.6	5.98	1.3	0.51	1.1	1.18	3.66	6.81	5.67	2.87	2.91
4.13	5.51	13.4	6.57	1.25	0.51	1.18	1.18	4.37	7.99	6.42	3.25	3.78
4.13	5.51	15	6.57	1.25	0.51	1.18	1.18	4.37	7.99	6.42	3.25	4.37
4.72	6.69	14.8	8.07	1.5	0.67	1.57	1.3	4.37	8.44	7.52	3.6	3.82
4.72	6.69	17.1	8.27	2.36	0.67	0.86	1.87	4.37	9.57	8.78	4.55	4.64
5.51	7.48	17.2	9.06	2.83	0.67	0.98	1.77	4.37	10.1	9.49	4.9	4.06
5.51	7.48	19.1	9.06	2.83	0.67	0.98	1.77	4.37	10.1	9.49	4.9	5
5.51	7.48	21.9	9.06	2.83	0.67	0.98	1.77	4.37	10.1	9.49	4.9	6.4
6.1	8.86	20.6	10.8	3.13	0.87	1.1	2.17	4.37	11.1	10.7	5.51	5.1
6.1	8.86	23.6	10.8	3.13	0.87	1.1	2.17	4.37	11.1	10.7	5.51	6.63
6.1	8.86	23.2	12.2	4.07	0.93	1.18	2.36	6.1	13.2	12.2	6.3	5.51
6.1	8.86	25.9	12.2	4.07	0.93	1.18	2.36	6.1	13.2	12.2	6.3	6.85
7.09	11	25.1	13.4	4.17	1.02	1.18	2.56	6.1	14.5	13.2	6.81	6.06
7.87	12.6	26.1	15.3	4.37	1.1	1.26	2.95	6.1	15	15.1	7.44	5.94
7.87	12.6	24.6	15.4	4.37	1.1	1.38	2.95	6.1	15.9	15.8	7.85	5.2
6 BOLT												
4.92	12.6	33.9	18.1	2.76	1.54	1.38	3.74	6.7	17.1	17.3	8.46	9.06

Specifications and Dimensions



1,200 RPM, 60Hz - 460V

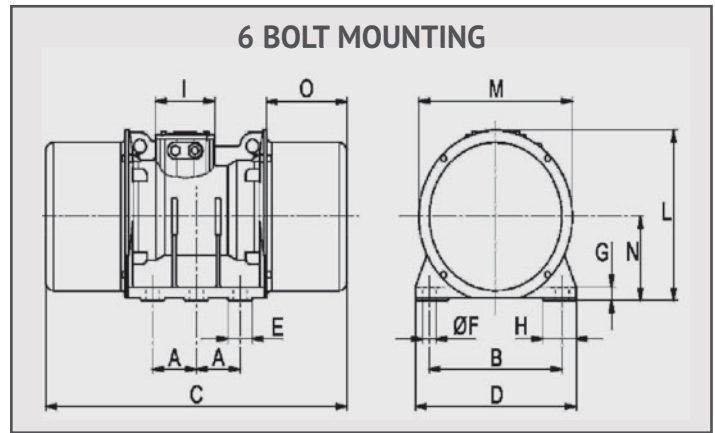
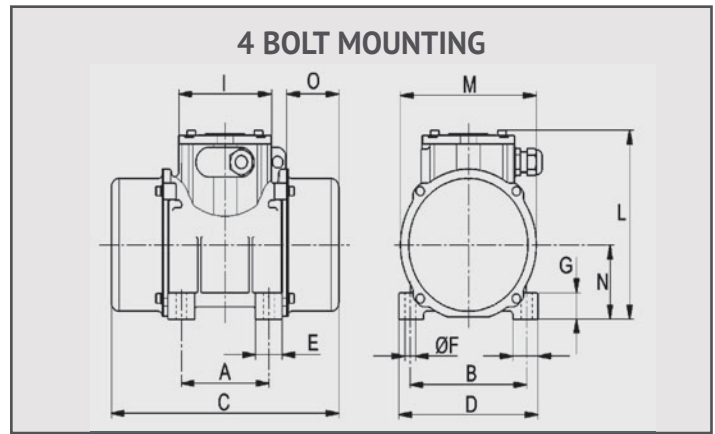
6-Pole (3 Phase)

Specifications

SMH Model	SMH Part Number	Weight (lbs)	Centrifugal Force (lbs)	Static Moment (lb*in)	Max Input Power (kw)	Max Current Amps	Temp Class (°C)	Cable Entry (in)
4 BOLT								
VV10B/6	6515-065-010	21.15	110.2	2.69	0.13	0.29	120	0.564 - 1.041
VV11B/6	6515-065-011	27.1	308.5	7.54	0.31	0.29	120	0.564 - 1.041
VV20B/6	6515-065-020	41.87	634.7	15.53	0.2	0.48	120	0.781 - 1.388
VV30B/6	6515-065-030	46.28	661.2	16.14	0.36	0.65	120	0.781 - 1.388
VV35B/6	6515-065-035	103.58	1582.4	38.7	0.36	0.65	120	0.781 - 1.388
VV38B/6	6515-065-038	121.22	1983.6	48.5	0.72	1.3	135	0.781 - 1.388
VV40B/6	6515-065-040	134.44	2534.6	61.95	0.71	1.3	135	0.781 - 1.388
VV41B/6	6515-065-041	163.09	3306	81.3	0.95	1.9	170	0.781 - 1.388
VV50B/6	6515-065-050	187.34	3519.7	86.07	1.3	2.1	135	0.781 - 1.388
VV53B/6	6515-065-053	211.58	4848.8	119.31	1.6	2.7	200	0.781 - 1.388
VV55B/6	6515-065-055	264.48	55730.4	140.13	2	3.6	135	0.781 - 1.388
VV57B/6	6515-065-057	293.13	7052.8	173.54	2.3	4.1	135	0.781 - 1.388
VV60B/6	6515-065-060	396.72	8595.6	210.16	2.8	4.7	135	1.128 - 1.735
VV62B/6	6515-065-062	431.98	10358.8	254.84	3.5	5.8	135	1.128 - 1.735
VV65B/6	6515-065-065	484.88	11681.2	285.65	3.8	6.2	135	1.128 - 1.735
VV67B/6	6515-065-067	526.75	14105.6	344.91	4.7	7.6	135	1.128 - 1.735
VV71B/6	6515-065-071	628.14	17852.4	436.54	7.1	10.7	135	1.128 - 1.735
VV75B/6	6515-065-075	643.56	19174.8	468.91	7.7	12.1	135	1.128 - 1.735
6 BOLT								
VV81B/6	6515-065-081	755.97	21599.2	528.17	7.5	11.6	135	1.128 - 1.735
VV110B/6	6515-065-110	800.05	24244	592.65	9.6	15.4	135	1.128 - 1.735
VV130B/6	6515-065-130	848.54	26448	646.7	9.6	15.4	135	1.128 - 1.735

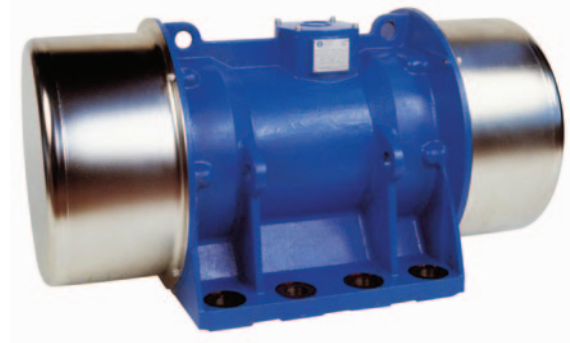
1,200 RPM, 60Hz - 460V

6-Pole (3 Phase)



OVERALL REFERENCE DIMENSIONS (inches)												
"A"	"B"	"C"	"D"	"E"	"ØF"	"G"	"H"	"I"	"L"	"M"	"N"	"O"
4 BOLT												
3.54	4.92	10.03	5.98	1.29	0.512	1.102	1.18	3.66	6.81	5.66	2.87	2.12
3.54	4.92	7.67	5.98	1.29	0.512	1.102	1.18	3.66	6.81	5.66	2.87	2.91
4.13	5.51	13.38	6.57	1.26	0.512	1.181	1.18	4.37	7.99	6.41	3.24	3.58
4.72	6.69	14.8	8.07	1.49	0.669	1.575	1.29	4.37	8.44	7.52	3.6	3.81
4.72	6.69	17.16	8.26	2.36	0.669	0.866	1.87	4.37	9.56	8.78	4.54	4.64
5.51	7.48	17.24	9.05	2.83	0.669	0.984	1.77	4.37	10.11	9.48	4.9	4.05
5.51	7.48	19.13	9.05	2.83	0.669	0.984	1.77	4.37	10.11	9.48	4.9	5
5.51	7.48	21.92	9.05	2.83	0.669	0.984	1.77	4.37	10.11	9.48	4.9	6.39
6.1	8.85	20.55	10.82	3.13	0.866	1.102	2.16	4.37	11.14	10.66	5.51	5.09
6.1	8.85	20.55	10.82	3.13	0.866	1.102	2.16	4.37	11.14	10.66	5.51	5.09
6.1	10.03	25.9	12.2	4.07	0.925	1.181	2.36	6.1	13.18	12.16	6.29	6.85
7.08	10.03	27.48	12.2	4.07	0.925	1.181	2.36	6.1	13.18	12.16	6.29	7.63
7.08	11.02	28.74	13.38	4.17	1.024	1.181	2.55	6.1	14.52	13.22	6.81	7.87
7.87	11.02	31.1	13.38	4.14	1.024	1.181	2.55	6.1	14.52	13.22	6.81	9.05
7.87	12.59	28.97	15.35	4.37	1.102	1.26	2.95	6.1	15	15.11	7.44	7.4
7.87	12.59	32.91	15.35	4.37	1.102	1.26	2.95	6.1	15	15.11	7.44	9.37
7.87	12.59	33.62	15.43	4.37	1.102	1.378	2.95	6.1	15.86	15.82	7.85	9.72
4.92	12.59	33.62	15.43	4.37	1.102	1.378	2.95	6.1	15.86	15.82	7.85	9.72
6 BOLT												
4.92	14.96	33.93	18.11	2.75	1.535	1.378	3.74	6.69	17.1	17.28	8.46	9.05
4.92	14.96	39.44	18.11	2.75	1.535	1.378	3.74	6.69	17.1	17.28	8.46	11.81
4.92	14.961	39.44	18.11	2.75	1.535	1.378	3.74	6.69	17.1	17.28	8.46	11.81

Specifications and Dimensions



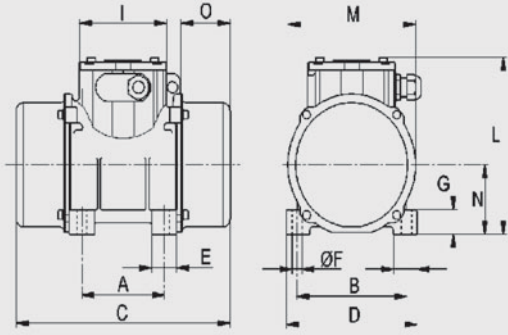
900 RPM, 60Hz - 460V

8-Pole (3 Phase)

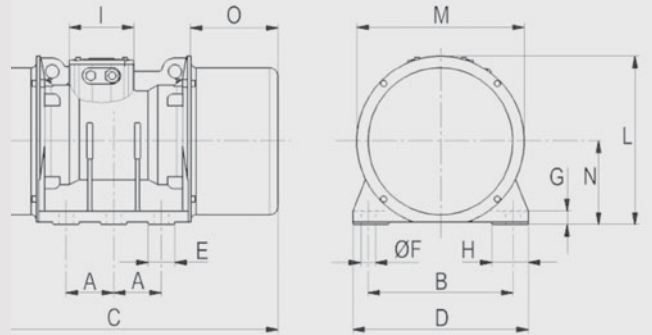
Specifications

SMH Model	SMH Part Number	Weight (lbs)	Centrifugal Force (lbs)	Static Moment (lb*in)	Max Input Power (kw)	Max Current Amps	Temp Class (-C)	Cable Entry (in)
4 BOLT								
VV20B/8	6515-095-020	42	359	14	0.23	0.71	120	.354-630
VV30B/8	6515-095-030	60	597	26	0.36	1	120	.354-630
VV35B/8	6515-095-035	79	1080	39	0.28	0.55	120	.354-630
VV38B/8	6515-095-038	101	1433	62	0.42	1.1	120	.354-630
VV40B/8	6515-095-040	126	1970	85	0.47	1.2	150	.354-630
VV50B/8	6515-095-050	181	3044	132	1	2.1	150	.354-630
VV53B/8	6515-095-053	205	3883	168	1.25	2.5	135	.354-630
VV55B/8	6515-095-055	293	4655	201	1.7	3.7	135	.354-630
VV60B/8	6515-095-060	443	6980	302	2.2	5	135	.512-787
VV62B/8	6515-095-062	478	8596	372	2.8	5.8	135	.512-787
VV65B/8	6515-095-065	533	9490	411	3.2	6.2	135	.512-787
VV67B/8	6515-095-067	577	11461	496	4.1	7.4	135	.512-787
VV71B/8	6515-095-071	705	14505	628	5.5	9	135	.512-787
6 BOLT								
VV81B/8	6515-095-081	930	22040	954	7	11.3	135	.512-787
8 BOLT								
VV141B/8	6515-095-141	1490	30856	1335	9.1	18.5	135	-
VV171B/8	6515-095-171	1567	38129	1650	10.5	18.9	135	-
VV221B/8	6515-095-221	2149	49590	2145	15.9	27.2	135	-

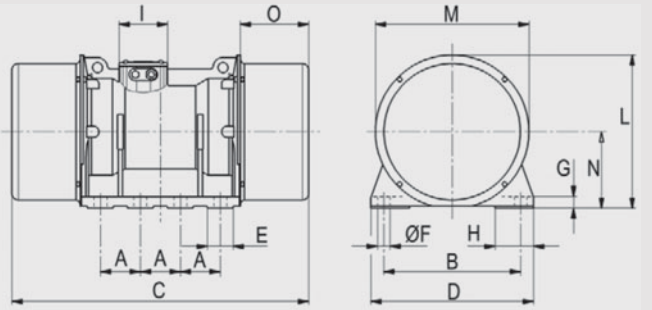
4 BOLT MOUNTING



6 BOLT MOUNTING



8 BOLT MOUNTING



900 RPM, 60Hz - 460V

8-Pole (3 Phase)

CONSULT WITH OUR FACTORY FOR 8 HOLE PDF

OVERALL REFERENCE DIMENSIONS (inches)												
"A"	"B"	"C"	"D"	"E"	"ØF"	"G"	"H"	"I"	"L"	"M"	"N"	"O"
4 BOLT												
4.13	5.51	13.39	6.57	1.26	0.51	1.18	1.18	4.37	7.99	6.42	3.25	3.58
4.72	6.69	14.8	8.07	1.5	0.67	1.57	1.3	4.37	8.44	7.52	3.6	3.82
4.72	6.69	17.17	8.27	2.36	0.67	0.87	1.87	4.37	9.41	8.78	4.55	4.65
5.51	7.48	19.29	9.06	2.83	0.67	0.98	2.07	4.37	10.12	9.49	4.9	5.08
5.51	7.48	22.05	9.06	2.83	0.67	0.98	2.07	4.37	10.12	9.49	4.9	6.46
6.1	8.86	23.62	10.83	3.13	0.87	1.1	2.46	4.37	11.14	10.67	5.51	6.63
6.1	8.86	25.79	10.83	3.13	0.87	1.1	2.46	4.37	11.14	10.67	5.51	7.72
6.1	10.04	25.91	12.2	4.07	0.93	1.18	2.36	6.1	13.19	12.17	6.3	6.85
7.09	11.02	28.74	13.39	4.17	1.02	1.18	2.56	6.1	14.53	13.23	6.81	7.87
7.09	11.02	31.1	13.39	4.17	1.02	1.18	2.56	6.1	14.53	13.23	6.81	9.06
7.87	12.6	28.98	15.35	4.37	1.1	1.26	2.95	6.1	15	15.12	7.44	7.4
7.87	12.6	32.91	15.35	4.37	1.1	1.26	2.95	6.1	15	15.12	7.44	9.37
7.87	12.6	33.62	15.43	4.37	1.1	1.38	2.95	6.1	15.87	15.83	7.85	9.72
6 BOLT												
4.92	14.96	39.45	18.11	2.76	1.54	1.38	3.74	6.69	17.11	17.28	8.46	11.81
8 BOLT												
5.51	18.9	40.94	22.44	3.54	1.77	1.61	5.31	6.69	21.14	21.18	10.55	9.45
5.51	18.9	44.09	22.44	3.54	1.77	1.61	5.31	6.69	21.14	21.18	10.55	11.02
5.51	20.47	45.28	24.02	3.54	1.77	1.5	5.71	9.84 x 8.27	24.09	23.39	11.69	11.73

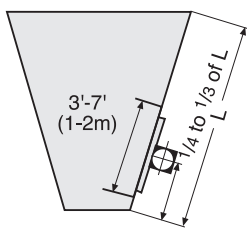
Mounting Syntron® Electric Rotary Vibrators

Vibrator selection and installation is based upon individual application requirements. For vibration distribution, each electric rotary bin vibrator should be mounted midway, on a length of channel, welded with its legs against the side of the bin. All electric rotary bin vibrator models can be mounted with the shaft in any position from horizontal to near vertical. For maximum effectiveness, chutes requiring vibrators

should be independently isolated. In addition, the vibrator should be mounted midway on a channel located underneath the length of the chute.

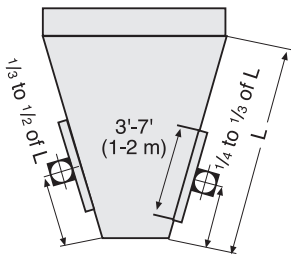
Note: For free-flowing bulk material installations, vibrators on hoppers should operate only when the hopper is open to flow. Otherwise, packing of material can result.

Conical Hoppers



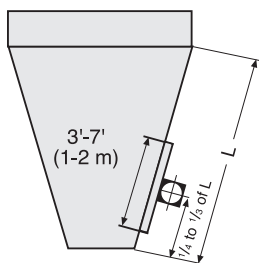
Mount vibrator by channel-iron stiffener 3 to 7 feet long (1-2 m) to hopper wall, one-fourth to one-third the distance from the discharge to the top. A second vibrator (if necessary) should be mounted diametrically opposite and approximately halfway up the bin wall.

Rectangular Hoppers



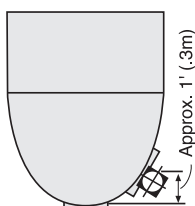
Mount as for conical hoppers on the centerline of one side. A second vibrator may be required if complete cleaning of all corners and sides is desired. To mount, follow instructions for conical hoppers.

Rectangular Bins with Hopper Bottoms



Usually requires larger force vibrators than conical or rectangular hoppers because of additional head load. Locate vibrator one-fourth to one-third the distance up sloping section of bin wall, and follow mounting instructions for conical hoppers.

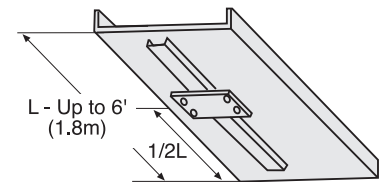
Parabolic Bins or Hoppers



Mount vibrator within one foot of each discharge opening and in line with center of opening.

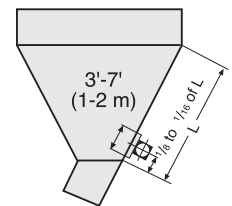
Chutes

To move the material in a chute, the chute should be inclined to no less than half the "angle of repose" of the material (at least 10 degrees). On chutes from six to 10 feet (1.8 - 3 m) long, two vibrators are needed; one should be placed 18 - 24 inches (457 - 610 mm) from the discharge and the other approximately in the middle. Since chutes are very sensitive to vibration, a provision should be made to move the lower vibrator six inches (152 mm) in either direction. This could mean the difference between moving the material or not moving it. Vibrator shaft (eccentric weight) should be rotating in the direction of material flow.



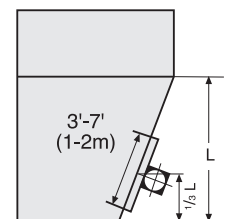
Bins with Sloping Discharge

Mount the vibrator one-sixteenth to one-eighth the distance up bin wall that is contiguous with the underside of chute. This lower mounting position puts vibrator close to bin discharge throat and assures vibration transference into chute.



Bin or Hopper with Vertical Side

Mount vibrator on wall with the least slope. Follow mounting instructions for rectangular bins with hopper bottoms.

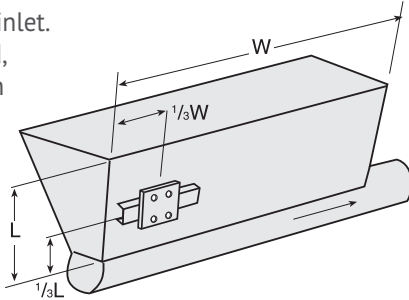


Note: Drawings illustrate typical installations. Specific installations may require slight variations. For other applications not covered here, please consult factory for recommendations.

Mounting Syntron® Electric Rotary Vibrators, cont'd.

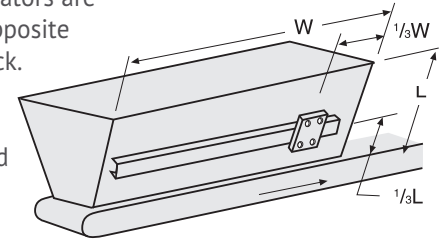
Screw Feeder

Feeds from the back. Vibrator should be $1/3$ from the inlet. If two vibrators are used, place second vibrator on opposite side, $1/3$ from the discharge. Do not run the vibrator at the discharge until the back of the bin is empty and the vibrator at the inlet is shut off.



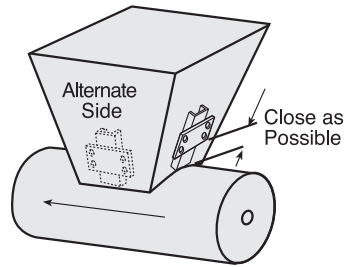
Long Bin

Belt conveyor feeds from front. Vibrator should be $1/3$ from front. If two vibrators are used, place one on opposite side and $1/3$ from back. Do not operate the back vibrator until the front is empty and the front vibrator is shut off.



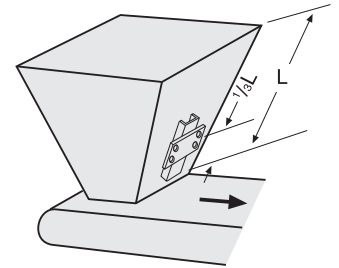
Short Screw Feeder

Place vibrator as close as possible to feeder.



Belt Conveyor and Standard Bin

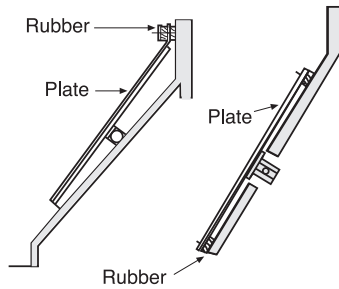
Mount vibrator on the belt discharge side of the hopper. Follow mounting instructions for the appropriate bin type on page 30.



Concrete Hopper or Lined Wooden Hopper

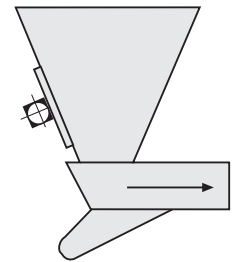
For wooden hoppers lined with thin sheet metal, attach vibrator mounting bolts to the hopper lining.

For concrete hoppers, secure a steel plate across the top inside of the hopper to the discharge opening along the side to which the vibrator will be mounted. At about $1/4$ or less of the distance from the discharge to the vertical side, cut an opening to allow the vibrator to be bolted to the steel plate.



Vibrating Feeder and Standard Bin

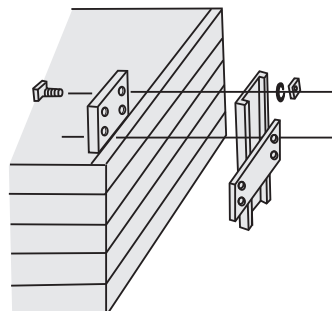
Mount vibrator on the feeder infeed side of the hopper. Follow mounting instructions for the appropriate bin type on page 30.



Note: Drawings illustrate typical installations. Specific installations may require slight variations. For other applications not covered here, please consult factory for recommendations.

Wood Bin

Use steel plate on inside and bolt to outside mounting plate.



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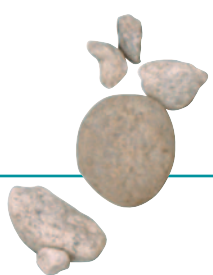
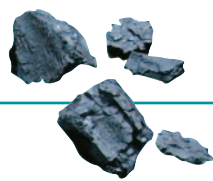
Syntron Material Handling is committed to complete customer satisfaction, with fast, efficient solutions for most bulk handling applications. From state-of-the-art electronic data capabilities, to expert sales and engineering support specialists, we're focused on ensuring a smooth design, production and installation process—from start to finish. Once you're up and running, our customer service and field service teams are on call for technical service and support.

Syntron®

Vibrators

The first name in vibration technology. Rugged and built to last, Syntron® bulk material handling equipment has a proven track record for reliable, low-maintenance performance for a wide range of industries and applications.





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