SYNTECHTRON

Vibratory Equipment Specialists

Electromagnetic Bin Vibrators

Syntron® Electromagnetic Vibrators from Syntechtron 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 (degree of protection IP54). Since these vibrators have no rotating or sliding parts, they are virtually maintenance free. Syntron Electromagnetic Vibrators come with the technical expertise of our application staff, who have been providing productive solutions for a wide variety of material handling problems for more than 80 years. Call our Technologies Application Specialists and request a data sheet or download from www.syntechtron.com

Electromagnetic Bin Vibrator Selection.

The primary consideration in bin vibrator selection is the thickness of the bin or chute wall. Once the proper vibrator model has been selected from the Electromagnetic Bin Vibrator Selection Guide, compare the capacity in the tapered portion of the bin with the rated capacity shown in the Selection Guide below. 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 Syntechtron for a copy of our data sheet and assistance with selection of appropriate units in these applications. Alternatively, log onto our website at www.syntechtron.com for a copy of our data sheet.

Electromagnetic Bin Vibrator Selection Guide

Model	Wall Thickness*	Rated Capacity
V2	0.5 mm	0.03 m^3
V4	0.8 mm	0.03 m^3
V9	1.0 mm	0.80 m^3
V20	1.5 mm	0.28 m^3
V41	3.0 mm	0.57 m^3
V50	3.0 mm	4.5 tonne
V51	6.0 mm	0.85 m^3
V75	6.0 mm	18.1 tonne
V85	8.0 mm	18.1 tonne
V86	8.0 mm	4.50 tonne
V180	10.0 mm	45.4 tonne
V181	8.0 mm	27.2 tonne
V500	10.0 mm	90.7 tonne

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

Ph:02 9679 7022 Email:sales@syntechtron.com Fax:02 9679 7033 Website: www.syntechtron.com

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Bin Vibrator Mounting Instructions

The correct location of electromagnetic vibrators is of prime importance in obtaining maximum efficiency from the selected model.

Curved Surfaces

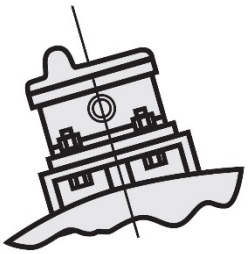

Figure 1

To mount a vibrator to a curved surface, select a bracket made from a channel section or a bent plate. A centre 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 as shown in Figure 1.

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.

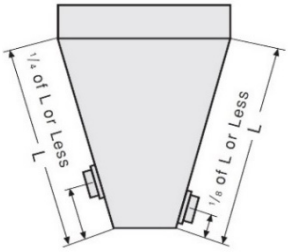

Figure 4

Sloping Discharge Hoppers

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

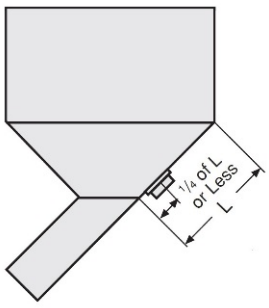

Figure 6

Flat bottom & Centre Discharge Rectangular or Cylindrical Bins

Mount directly to the side of the bin, just below the point where the materials' natural angle of repose intersects the side, as shown in Figure 2.

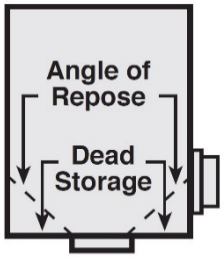

Figure 2

Parabolic Bins or Hoppers

Mount the vibrator within one foot of each discharge opening and in line with centre of opening shown in Figure 3.

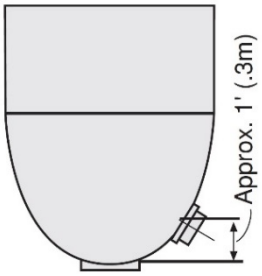

Figure 3

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.

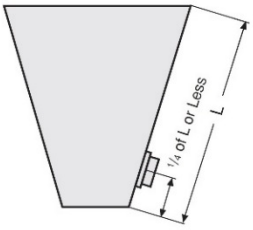

Figure 5

Inclined Chutes

Chutes less than 3 to 3.6 m long are usually equipped with just one vibrator located well below the centre. Allow for the vibrator to be moved about 300 mm in either direction. On chutes requiring more than one vibrator, the first one should be located 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 300 mm in either direction.

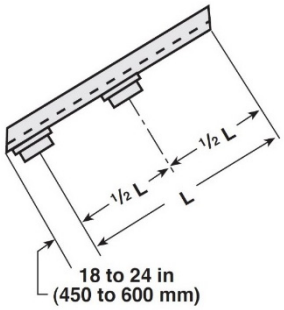

Figure 7

Screw Feeder

Screw conveyors feed from the back of the hopper. 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 operate the vibrator at the discharge end until the back of the bin is empty and the vibrator at the inlet is shut.

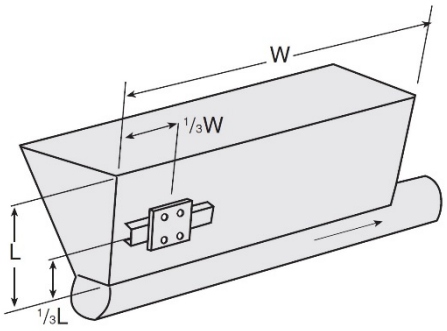

Figure 8

Short Screw Feeder

Place vibrator as close as possible to feeder.

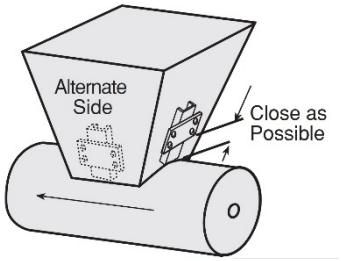

Figure 10

Long Bin

Belt conveyors feed from the front of the hopper. Vibrator should be 1/3 from front. If two vibrators are used, place one on the 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.

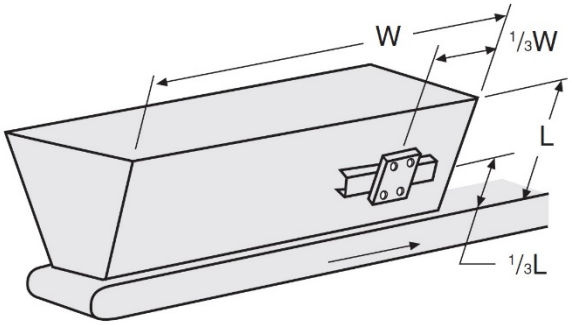

Figure 12

Belt Conveyor & Standard Bin

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

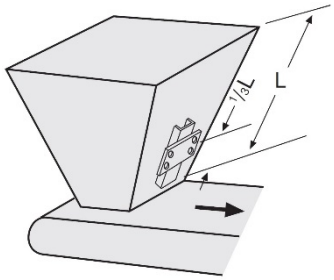

Figure 9

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.

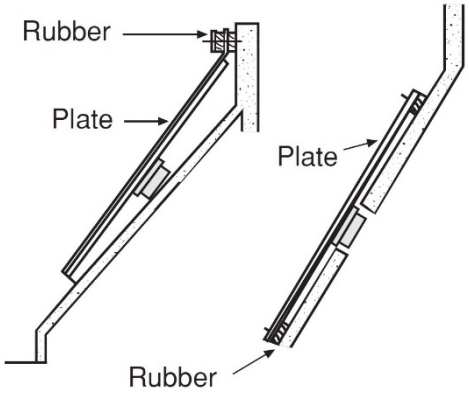

Figure 11

Standard Feeder and Hopper

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

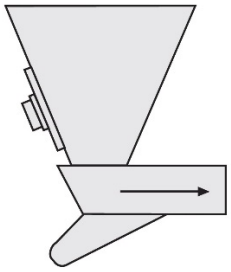

Figure 13

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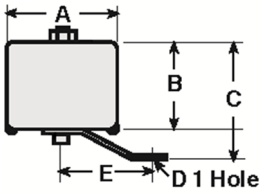
Specifications

V2

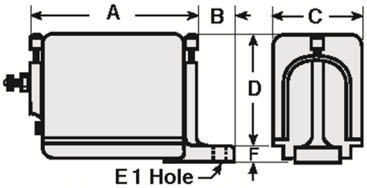


Dimensions				
A	B	C	D	E
73	57	78	10	60

Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps		VPM
					110 V	240 V	50 Hz
1.1	Solid	A	0.5 mm	0.03	0.3 A	0.18 A	6000

The V2 is ideal for small applications it is the most effective and efficient way to excite material. The compact, powerful, lightweight design make it perfect for small tight areas. This simplistic design allows for quick and easy installation and removal. Please contact Syntechtron before purchasing this product.

V4

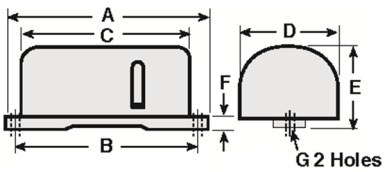


Dimensions					
A	C	B	D	E	F
143	32	76	95	13	13

Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps		VPM
					110 V	240 V	50 Hz
2.0	Solid	A	0.8 mm	0.03	0.90 A	0.45 A	6000

The V4 is a robust, powerful, efficient unit that increases productivity with constant, uninterrupted material flow. The compact size and adjustable rate make this unit the most versatile unit on the market. Its simple compact design with no rotating or sliding parts allows for easy installation and practically maintenance free operation.

V9

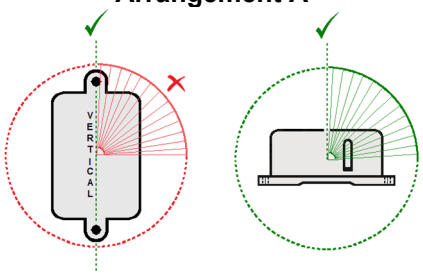


Dimensions						
A	B	C	D	E	F	G
260	235	203	108	103	14	11

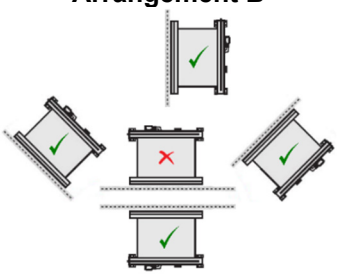
Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps		VPM
					110 V	240 V	50 Hz
4.3	Solid	A	1.0 mm	0.08	1.2 A	0.75 A	3000

The first class performance of the V9 is a result of its powerful and efficient design. The fully enclosed design with no rotating or sliding parts allows for easy installation and practically maintenance free operation. With variable rate operation and full 360^{o} mounting capabilities make the V9 the most versatile machine in its class.

Arrangement A

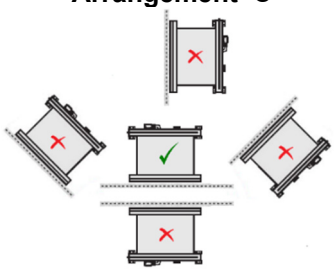


Arrangement B



* Models designated with suffix '-1'.

Arrangement C



Models without suffix '-1'.

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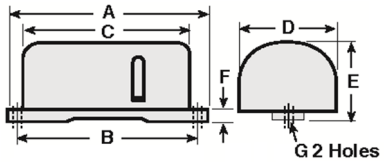
V20

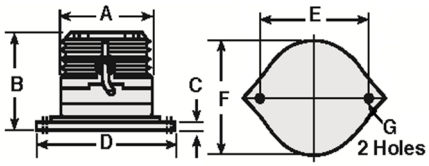


Dimensions						
A	B	C	D	E	F	G
260	235	203	130	110	13	11

Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps		VPM
					110 V	240 V	50 Hz
6.4	Solid	A	1.5 mm	0.28	2.0 A	1.0 A	3000

Similar to the V9 the V20 is the much more powerful model. Variable rate operation in combination with full 360° mounting capabilities make the V20 one of the most reliable, efficient and consistent pieces of equipment used globally. The fully enclosed design with no rotating or sliding parts allows for easy installation and practically maintenance free operation.

V41

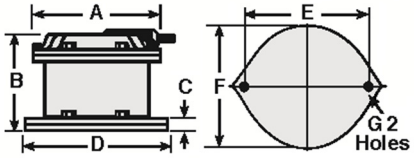


Dimensions						
A	B	C	D	E	F	G
159	165	11	238	210	187	13

Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps			VPM
					110 V	240 V	415 V	50 Hz
11.3	Cushioned	B / C *	3.0 mm	0.57	3.5 A	1.75 A	0.95 A	3000

The size, profile and footprint of the V41 make it ideal for applications where space is limited. The unusual design of the heavy duty casing acts as a natural heat sink. Available to suit a number of mounting angles, with variable rate operation and no rotating or sliding parts the V41 ensures reliable, efficient and consistent operation.

V50 & V51

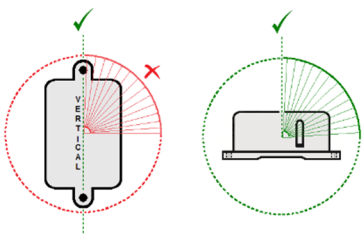


Dimensions						
A	B	C	D	E	F	G
241	184	24	273	235	248	17

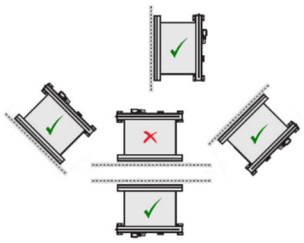
Model	Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps			VPM
						110V	240V	415V	50 Hz
V50	18.1	Solid	B / *C	6.0 mm	2.5	4.5 A	2.3 A	1.35 A	3000
V51		Cushioned	B / *C	3.0mm	10.0				

The V50 and V51 cover an extensive number of applications. The fully enclosed heat dissipating design is suited to practically any environment. Designed without rotating or sliding parts this set and forget design is simple to install and requires little to no maintenance ensuring reliability, consistency and efficiency.

Arrangement A

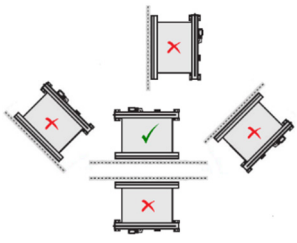


Arrangement B



* Models designated with suffix '-1'.

Arrangement C



Models without suffix '-1'.

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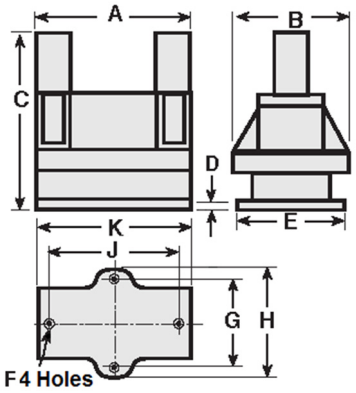
V75



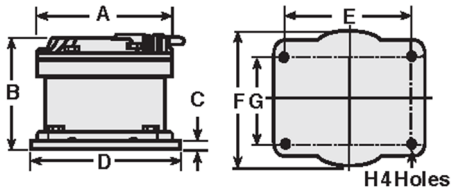
Dimensions						
A	**B**	**C**	**D**	**E**	**F**	**G**
265	254	314	13	203	17	165

H	**J**	**K**
208	292	330

Mass kg	**Impact Style**	**Mount Arrangement**	**Bin Wall Thickness**	**Capacity m³**	**Amps**			**VPM**
					110 V	240 V	415 V	50 Hz
51	Solid	A	8.0 mm	10.0	16.0 A	8.0 A	4.5 A	3000

The robust, dynamic construction of the V75 is suited to a wide range of applications. The durable construction made up of high quality parts that do not wear as a result of rotating or sliding during operation make this vibrator practically maintenance free. The V75 is globally renowned for its high powered effective design with variable rate control which makes for reliable, efficient and consistent operation with uninterrupted material flow.

V85 & V86



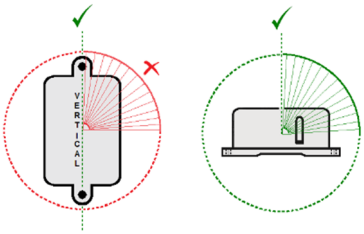
Dimensions						
A	**B**	**C**	**D**	**E**	**F**	**G**
265	222	16	292	254	270	178

H
17

Model	**Mass kg**	**Impact Style**	**Mount Arrangement**	**Bin Wall Thickness**	**Capacity m³**	**Amps**			**VPM**
						110V	240V	415V	50 Hz
V85	36	Solid	B / C *	8.0 mm	10.0	7.0 A	4.0 A	1.95 A	3000
V86		Cushioned	B / C *	6.0 mm	2.5				

The first class performance of the V85 and V86 cover an extensive number of applications. The fully enclosed heat dissipating design is suited to practically any environment. Available to suit a number of mounting angles, with variable rate operation and no rotating or sliding parts the V85 and V86 ensure reliable, efficient and consistent operation with uninterrupted material flow.

Arrangement A



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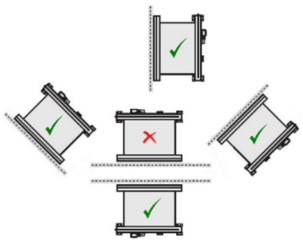
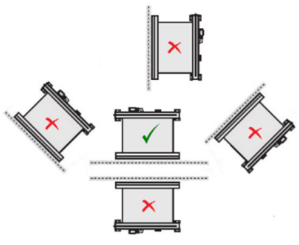


* Models designated with suffix '-1'.
e.g V85-1

Arrangement C



Models without suffix '-1'.
e.g V85

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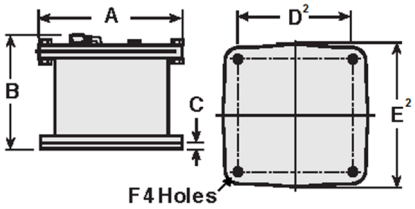
V180 & V181

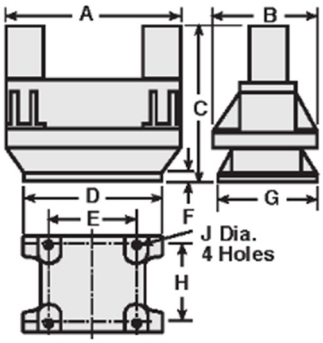


Dimensions					
A	B	C	D	E	F
386	279	17	305	387	21

Model	Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps		VPM
						240 V	415 V	50 Hz
V180	100	Solid	B / C *	10.0 mm	25.0	12.0 A	7.0 A	3000
V181		Cushioned	B / C *	8.0 mm	15.0			

The V180 and V181 cover an extensive number of applications. The fully enclosed design is suited to practically any environment. The V180 and V181 are globally renowned for their high powered effective design with variable rate control which makes for reliable, efficient and consistent operation with uninterrupted material flow. High quality parts and robust construction in conjunction with no sliding or rotating parts make this vibrator practically maintenance free.

V500



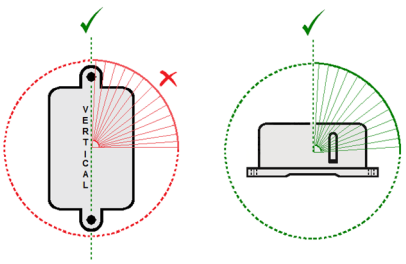
Dimensions						
A	B	C	D	E	F	G
654	368	603	508	330	29	356

H	J
292	40

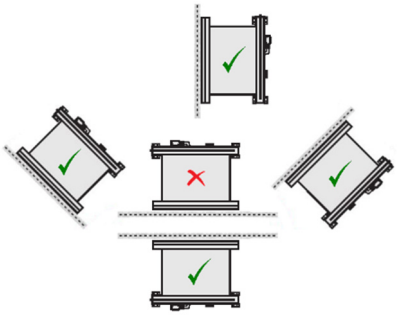
Mass kg	Impact Style	Mount Arrangement	Bin Wall Thickness	Capacity m³	Amps	VPM
					415V	50 Hz
318	Solid	A	25 mm	50.0	21.5 A	3000

The V500 is a tough, powerful, efficient unit that increases productivity with constant, uninterrupted material flow. The size and adjustable rate make this unit one of the most versatile units on the market. Available to suit a number of mounting angles its design with no rotating or sliding parts allows for easy installation and practically maintenance free operation.

Arrangement A

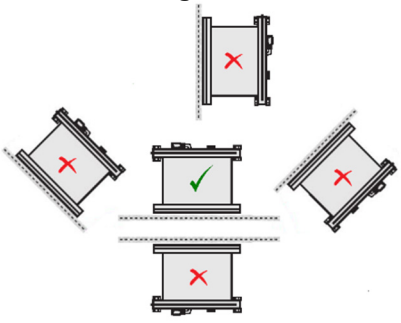


Arrangement B



* Models designated with suffix '-1'.
e.g V181-1

Arrangement C



Models without suffix '-1'.
e.g V181

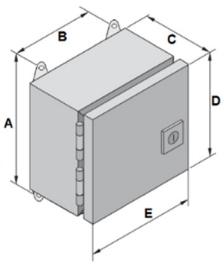
SYNTECHTRON

Vibratory Equipment Specialists

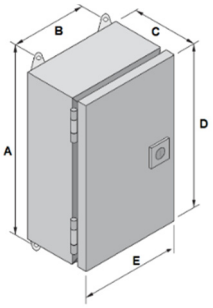
Controller Specifications

Model	TC6B	TC6B	TC8	TC8
Current	6 A	6 A	8 A	8 A
Voltage	110 V	240 V	240 V	415 V
Frequency	50 Hz	50 Hz	50 Hz	50 Hz

Model	TC14	TC14	TC21	TC21
Current	14 A	14 A	21 A	21 A
Voltage	110 V	240 V	110 V	415 V
Frequency	50 Hz	50 Hz	50 Hz	50 Hz



Dimensions	
A	170mm
B	110mm
C	80mm
D	150mm
E	150mm



Dimensions	
A	170mm
B	110mm
C	80mm
D	300mm
E	150mm

Bin Vibrator & Contoller Selection

Model	Current	Voltage	TC6B	TC6PP	TC8	TC14	TC21
V2	0.30 A	110 V	✓	✓			
	0.18 A	240 V	✓	✓			
V4	0.90 A	110 V	✓	✓			
	0.45 A	240 V	✓	✓			
V9	1.20 A	110 V	✓	✓			
	0.75 A	240 V	✓	✓			
V20	2.00 A	110 V	✓	✓			
	1.00 A	240 V	✓	✓			
V41	3.50 A	110 V	✓	✓			
	1.75 A	240 V	✓	✓			
	0.95 A	415 V			✓		
V50 & V51	4.50 A	110 V	✓	✓			
	2.30 A	240 V	✓	✓			
	1.35 A	415 V			✓		
V75	16.0 A	110 V					✓
	8.00 A	240 V			✓		
	4.50 A	415 V			✓		
V85 & V86	7.00 A	110 V			✓		
	4.00 A	240 V	✓	✓			
	1.95 A	415 V			✓		
V180 & V181	12.0 A	240 V				✓	
	7.00 A	415 V			✓		
V500	19.5 A	415 V					✓

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