

Electromagnetic Vibrators

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TARNOS

Electromagnetic Vibrators

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The TARNOS Electromagnetic Vibrators offer the most effective and economical method of maintaining a constant, uniform flow of materials stored in silos, bins, hoppers and chutes.

models

Many application possibilities are covered by this wide range models.

- The V-2 and v-4 models are the smallest industrial vibrators on the market, and can operate on rectified current or directly on alternating current.
- The V-20 is compact in size yet with thrust enough for a wide range of applications.
- The V-50, V-85 and V-180 models are of the metal block impact type, while the V-41, V-51, V-86 and V-181 use rubber sections as impact block.
- The V-75 and V-500 models are open-type design for heavy-duty applications.

selection

To select the right Electromagnetic Vibrator, the wall thickness of the hopper or chute must be taken into account first of all. Once the proper vibrator model has been selected from the table, the capacity of the bin should be compared with the one shown in the table. When the rated capacity is exceeded, multiple vibrators need to be used, the number depending on the material being handled. The constructive features of the hopper may also affect the selection or location of the vibrator.



	Model	Wall thickns (mm.)	Capacity
selection	V-2	0,8	27 dm ³
	V-4	0,6	27 dm ³
	V-20	1,5	270 dm ³
	V-41	3	540 dm ³
	V-51	3	810 dm ³
	V-50	6	1 for every 5 T
	V-86	6	1 for every 5 T
	V-75	8	1 for every 20 T
	V-85	8	1 for every 20 T
	V-181	8	1 for every 30 T
	V-180	10	1 for every 50 T
	V-500	25	1 for every 100 T

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mounting electromagnetic vibrators

The correct mounting location of Electromagnetic Vibrators is very important for achieving maximum efficiency.

Curved Surfaces:

A channel section bracket is to be chosen for mounting the vibrator on a curved surface. All the vibrators need a central reinforcing guest, while the V-75 and V-500 vibrators need two blocks to increase the area of contact with the curved surface. This arrangement is required to stiffen the mounting and transmit vibrations directly to the hopper contents.

Conical Hoppers:

The vibrator is attached as previously indicated, directly onto the hopper wall at a distance of not more than 300 to 450 mm from the discharge.

Rectangular Hoppers:

The vibrator is mounted directly to the hopper wall the same as on a conical hopper. If a hopper stiffener makes it necessary to mount the vibrator in a different position, mount the vibrator in the middle of the panel next to the stiffener. If another vibrator is required, bolt it to the opposite wall, at a slightly higher elevation.

Hopper with Sloping Discharge:

The vibrator is mounted on the centre line of the hopper, as near to the discharge as possible.

Rectangular or Cylindrical Silos with Flat Bottom:

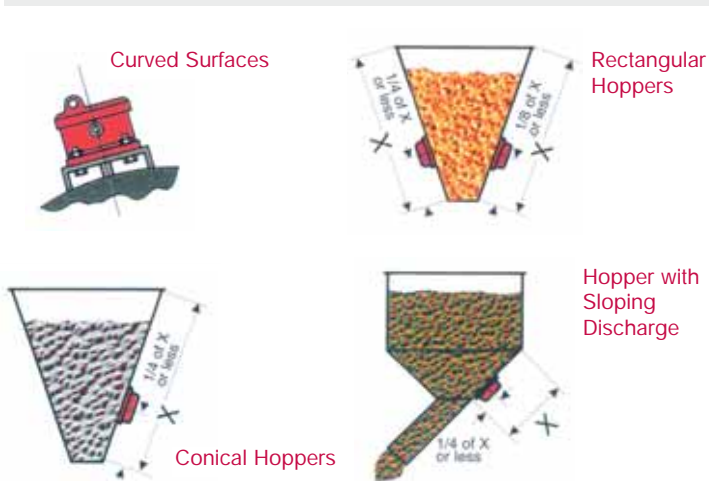
The vibrator is mounted directly to the side of the silo, just above the point where the materials' natural angle of repose intersects the side.

Concrete Hoppers:

If the hopper is made of concrete, a steel plate is to be placed inside the hopper, secured across the top to the centre. Cut an opening in the centre to permit bolting the vibrator to the plate, on the outside.

Inclined Chutes:

Chutes shorter than 3 to 3.7 metres long are usually equipped with a single vibrator located below the centre. Allow for the vibrator to be moved about 30 mm in either direction. For chutes needing more than one vibrator, one should be located 450 to 600 mm from the outlet, and the other should be mounted about half way between the first one and the top of the chute.

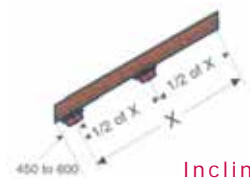


features and advantages

- Wide range (12 models)
- Provide an uniform material flow
- Avoid deterioration of silos, hoppers and chutes
- Smooth operation
- Dust-tight and moisture-tight construction
- Minimal maintenance



Rectangular or Cylindrical Silos with Flat Bottom



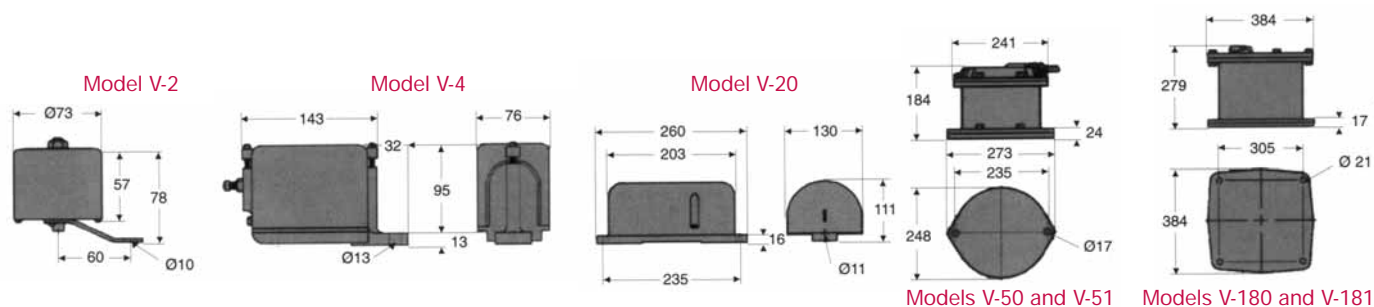
Inclined Chutes



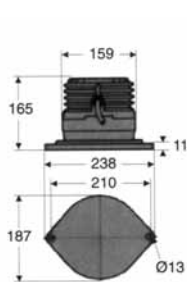
Concrete Hoppers

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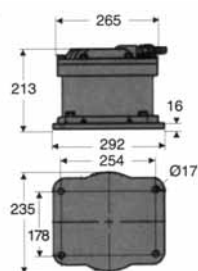
specifications and dimensions (mm.)



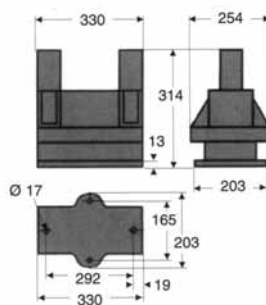
specifications	Model	Vibrations per minute	Power (W.)	Volts (50 Hz)	Current Input (A)	Controller	Weight (Kg.)	
	V-2	AC	6.000	15	220	0,15	-	1,1
		RC	3.000	20				
	V-4	AC	6.000	30	220	0,4	-	2
		RC	3.000					
	V-20	3.000	40	220 380	1 0,6	CSCR1-C RSDC-4B	6,5	
	V-41		3.000	75	220	1,7	CSCR1-C	11
					380	0,8	RSDC-4B	
	V-50 and V-51	3.000	120	220 380	2,25 1	CSCR1-C RSDC-4B	18	
	V-85 and V-86	3.000	180	220 380	3,5 1,8	RSDC-4B	36	
V-180 and V-181	3.000	500	220 380	12 6	RSDC-4B	100		
V-75	3.000	600	220 380	7 4	RSDC-4B	51		
V-500	3.000	2.000	220 380	35 15	RSDC-4B	318		



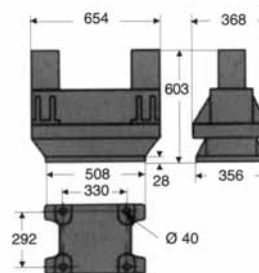
Model V-41



Models V-85 and V-86



Model V-75



Model V-500

WARNING: The vibrator should operate only when the discharge is open to flow, otherwise the material could become compacted.

CAUTION: These units are to be installed, operated and maintained in accordance with accompanying Service Instructions. Failure to follow these instructions may result in harm to people and/or things.

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