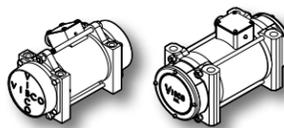




VIBCO INSTRUCTION MANUAL

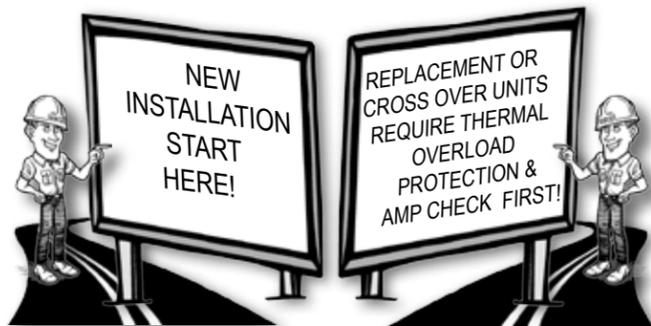


Heavy Duty Electric Vibrators

WARNING: Failure to read and follow these installation instructions and safety precautions could result in personal injury, equipment damage, shortened service life or unsatisfactory equipment performance. All information in this document is vital to the proper installation and operation of the equipment. It is important that all personnel who will be coming in contact with this product thoroughly read and understand this manual.

1 START

THANK YOU FOR CHOOSING A VIBCO VIBRATOR!



2 MOUNTING INSTRUCTIONS CHECKLIST

- Determine vibrator placement on bin.
- Determine length of channel iron and style of mounting plate.
- Select method of **STITCH** welding mounting plate to channel iron.
- STITCH** weld channel iron to bin.
- Attach vibrator to mounting plate. Check the mounting plate for warping & shim if necessary. **DO NOT OVER TIGHTEN THE BOLTS.**
- Install safety chain or cable.
- Connect wiring for vibrator using the NEC Standards.
- Take a voltage reading at vibrator while running. **VOLTS = _____**
- Take an amp reading while vibrator is running. **AMPS = _____**
- Compare readings to standard values.
- FILL OUT WARRANTY CARD AND MAIL TO VIBCO!!!!**

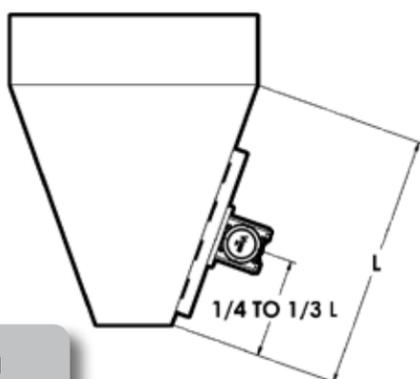


ADDITIONAL DETAILS AVAILABLE ONLINE AT www.vibco.com

3 VIBRATOR PLACEMENT

For coarse materials: mount vibrator 1/3 of the distance from the discharge opening to the top of the sloped portion of the bin.

For fine materials: mount vibrator 1/4 of the distance from the discharge to the top of the sloped portion of the bin.



FOR ALTERNATE MOUNTS refer to full detail instruction manual online at www.vibco.com or call 800-633-0032

4 PLATES & CHANNEL SELECTION

VIBRATOR FORCE in LBS	MNTNG PLATE THICKNESS	CHANNEL IRON SIZE	FACTOR A
101 - 500	1/4" - 3/8"	3" x 4.1 lbs 3" x 5 lbs	2
501 - 1200	1/2"	4" x 5.4 lbs 4" x 7.5 lbs	3
1201 - 3000	5/8"	6" x 8.2 lbs / 6" x 10.5 lbs	4
3001 - 5000	3/4" - 1"	6" x 8.2 lbs / 6" x 10.5 lbs 8" x 8.5 lbs / 8" x 11.5 lbs	5

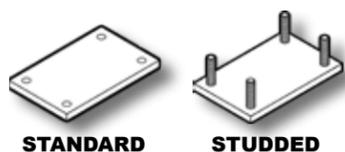
BIN WALL THICKNESS	FACTOR B
1/8" (10 ga.) or less	6
1/8" - 1/4"	5
1/4" - 3/8"	4
3/8" - 1/2"	3
1/2" & up	2

FACTOR A + B	USE CH. IRON LENGTH
11	N/A
10	6 - 8 FT. (80 - 90%)
9	5 - 7 FT. (70 - 80%)
8	4 - 6 FT. (60 - 70%)
7	3 - 5 FT. (50 - 60%)
6	2 - 4 FT. (50 - 60%)
5	1 - 2 FT. (50 - 60%)
4	N/A

NOTE:

- Longer channel iron will not affect vibrator performance, but total channel length should not exceed length of bin wall.
- Percentages shown indicate % of bin wall height your channel iron should be for shorter bins.
- To match your vibrator on chart above, model number suffixes generally correspond to pounds of force generated. For any questions, consult VIBCO.

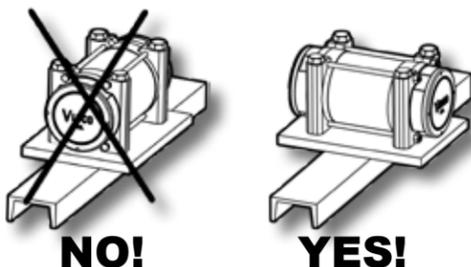
5 MOUNTING HARDWARE



A MOUNTING PLATE MUST BE USED to ensure proper stability for the vibrator.

Always start & stop welds 1 in. from ends to prevent heat concentration. Then weld 2 to 3 inches, skip 1 to 2 inches and repeat until the plate is securely mounted.

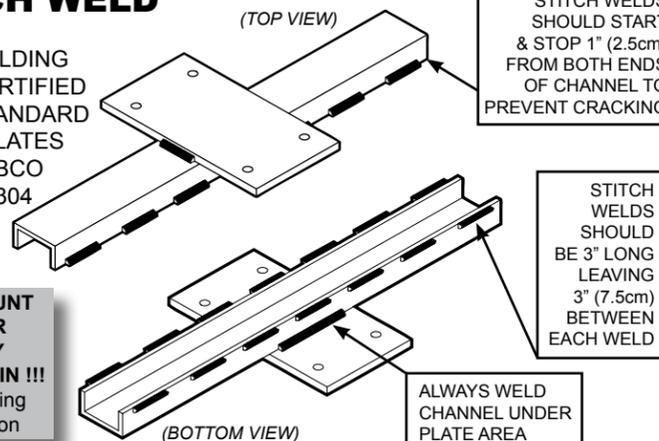
⚠ VIBRATOR & MOUNTING PLATE MUST BE MOUNTED PERPENDICULAR TO CHANNEL IRON, NOT PARALLEL. OTHERWISE, IT WILL CAUSE FLEXING & THE VIBRATOR WILL OVERLOAD & BURN OUT.



6 STITCH WELD

BE SURE ALL WELDING IS DONE BY A CERTIFIED WELDER. ALL STANDARD CHANNEL AND PLATES PROVIDED BY VIBCO ARE A36 STEEL, 304 STAINLESS OR 6061 ALUMINUM.

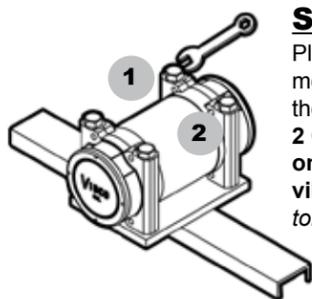
⚠ DO NOT MOUNT VIBRATOR DIRECTLY TO SURFACE OF BIN !!! Always use mounting plate & channel iron



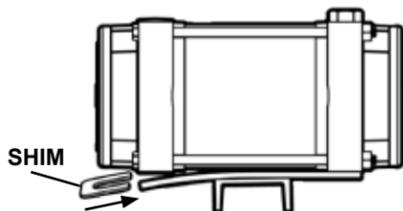
800-633-0032 for Mounting Plates & Brackets, Spare & Replacement Parts and 24/7 Technical Support

7 BOLTING PROCEDURE

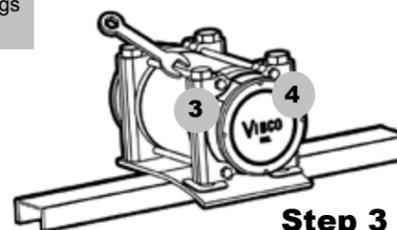
NOTE: Shimming the feet is necessary to avoid strain on the shaft & bearings that can cause high amperage draw & burn out the vibrator.



Step 1
Place vibrator on mounting plate, then insert & tighten **2 Grade 5 bolts on same end of vibrator.** See proper torque values right.



Step 2
Now, look at feet on other end of vibrator. If a gap exists between the mounting plate & feet, welding warped the mounting plate. Shim space under feet.



Step 3
After gap has been filled with shim(s), insert & tighten the other TWO Grade 5 bolts.

Now put vibrator in place. Make sure it is secured tightly. Retighten bolts after first 10 to 15 minutes of operation and check periodically to maintain proper tightness. Damage to both bin and vibrator can occur if vibrator is not mounted securely. **NOTE:** no matter how thick the mounting plate, it can still warp during welding, especially if VIBCO's instructions are not followed.

GRADE 5 BOLT SIZE	MAX TORQUE ft-lbs
1/4"	9
5/16"	18
3/8"	32
1/2"	78
5/8"	160
3/4"	260
1"	580
1-1/4"	1105

For other bolt grades, please consult VIBCO.

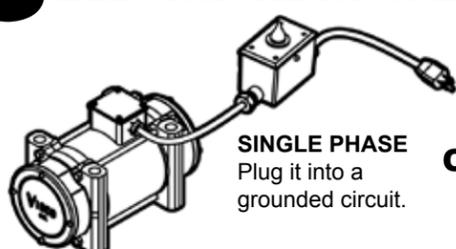
8 RESTRAINT



ALWAYS INSTALL SAFETY CABLE or CHAIN

Mount one end to the vibrator and the other to the hopper or bin **above** the vibrator **NEVER ATTACH TO THE MOUNTING PLATE!**

9 ELECTRICAL INSTALLATION



SINGLE PHASE
Plug it into a grounded circuit.



3 PHASE
Have vibrator installed by a qualified electrician **warranty will be VOID** if vibrator is not connected to proper overload protection. For proper sized overload protection consult a qualified electrician or contact a VIBCO representative.

NOTE: For rewiring for other than 115V on a single phase unit, refer to detailed manual or consult factory.

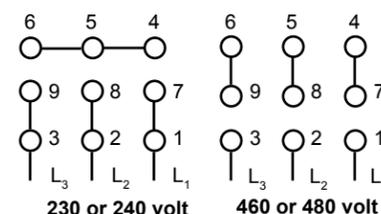


and then . . . TAKE AN AMPERAGE READING WHILE THE VIBRATOR IS RUNNING

Operating amperage should not exceed the value listed on the vibrator label. If it does, it is most likely due to faulty mounting. Check your mounting welds, and re-tighten bolts if necessary. See TROUBLESHOOTING for more info.

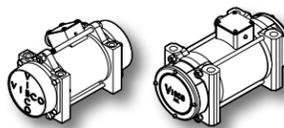
Follow numbers on leads.
NOTE: Some wires may be color-coded as follows:

- 1 - blue
- 2 - white
- 3 - orange
- 4 - yellow
- 5 - dark gray
- 6 - purple
- 7 - pink
- 8 - red
- 9 - light gray





VIBCO INSTRUCTION MANUAL



Heavy Duty Electric Vibrators

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MAXIMUM OPERATING TEMPERATURE
Skin temperature of vibrator should not exceed 180° F (82° C). If it exceeds this, consult VIBCO for alternate solutions.

10 LUBRICATION

HIGH TEMPERATURE UNITS CONSULT FACTORY!

Grease Specifications

Lubriko M21 general purpose grease or equal Sodium Calcium based NLGI grade 2 grease. Minimum temperature range 0° - 225°F. Minimum viscosity 70 - 80 SUS (at 121°F).

Use 2.5 to 3 grams (two pumps with standard manual grease gun). Do not over grease!

MODEL #	INTERMITTENT DUTY	CONTINUOUS DUTY
2P-800, 2P-1700, 2P-2500, 2P-3500, 2P-4500, 2P-5500	Lubricate every 400-500 hours	Lubricate every 2 weeks
4P-1400, 4P-2000, 4P-3000, 4P-5000, 4P-10000	Lubricate every 1000-2000 hours	Lubricate every 4 weeks
6P-1000, 6P-1500, 6P-2500, 6P-5000	Lubricate every 1500-3000 hours	Lubricate every 6 weeks
8P-500, 8P-750, 8P-1250, 8P-2500	Lubricate every 3000-4000 hours	Lubricate every 8 weeks

Models 2P-75, 2P-100, 2P-150, 2P-200, 2P-450, 4P-350, 4P-700, 4P-1000, and 6P-500 are pre-lubricated for life.

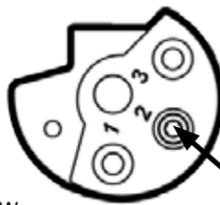
11 CHANGING OUTPUT SETTINGS

MODELS: 2P-75, 100, 150, 200; 4P-350



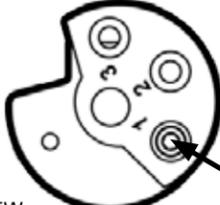
MAXIMUM FORCE

Intermittent Duty Only



FACTORY SETTING

Maximum Setting for Continuous Duty



MINIMUM FORCE

Optimum Setting for Long Life of Vibrator

To change the force:

1. Disconnect from power.
2. Remove both end covers.
3. Remove the cap screw that holds the outer eccentric to the inner eccentric and turn the outer eccentric so that the numbered hole aligns with the threaded hole in the inner eccentric. **NOTE: You must set both ends of the vibrator to the same setting.**
4. Replace the cap screw.
5. Replace both end covers.

NOTE: If you INCREASE force of vibrator, you **MUST** take a new amperage draw reading to ensure vibrator is still operating within specified limits.

NOTE: ONLY RUN INTERMITTENTLY when set to higher than factory set output forces (maximum running time of 30 min in any one hour period).

MODELS: 2P-450, 800, 1700, 2500; 4P-600, 700, 1000, 1400, 2000, 3000, 5000, 10000
6P - ALL MODELS; 8P - ALL MODELS

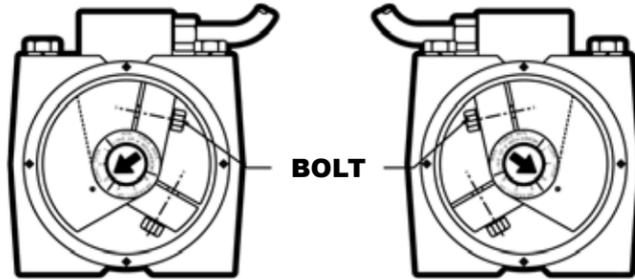
To adjust eccentric settings:

1. Remove both end covers from vibrator.
2. Loosen the bolt that holds the outer, labeled eccentric to the shaft. **NOTE: some models have only one eccentric per side.**
3. Turn the eccentric on the shaft to adjust force output. Align the arrow on the shaft to the desired setting. The higher the number, the greater the force.

NOTE: You must set both ends of the vibrator to the same setting.

4. Tighten eccentric bolts and reinstall end covers.

NOTE: These vibrators are set to Setting #3 (Factory Setting).



LEFT
RIGHT
Settings 1 - 3 are continuous duty rated
Settings 4 - 6 are intermittent duty rated only

For vibrators mounted in tandem (side to side, not end-to-end) to produce linear motion on table & feeder applications:

To produce linear motion you must make sure vibrators rotate opposite from one another. Force output labels should be opposite to one another when viewed from the same side (one increases clockwise, the other counter-clockwise as in picture above). Follow instructions as above, & be sure you set both vibrators & both ends to the same setting. Consult VIBCO for more details.

NOTE: If you INCREASE force of vibrator, you **MUST** take a new amperage draw reading to ensure vibrator is still operating within specified limits.

NOTE: Only run intermittently when set to higher than factory set output forces (maximum running time of 30 min in any one hour period).

12 TROUBLESHOOTING

MY MATERIAL STILL ISN'T MOVING!

1. Did you put your vibrator in the right location? Did you mount your vibrator properly?
2. Do you have the right vibrator for the job? Does it provide enough force? Do you have the vibrator set to the maximum force? (see left) Is it the right frequency? Still not sure? Call VIBCO Technical Support at 800-633-0032.

THE VIBRATOR WON'T START!

1. Check power supply to unit. Are you getting the proper voltage? Has the thermal overload protection tripped?
2. Check stator continuity, if "open" stator winding is burned or has a short, replace stator. If unsure how to check continuity, call VIBCO or consult a licensed electrician.

VIBRATOR STOPS RUNNING!

1. Check power supply to unit.
 2. Has the thermal overload protection tripped? Single phase units are supplied with overload switches. Three phase units must be connected to three phase motor starters with proper overload protection. If overload protection has tripped, wait a minimum of two (2) minutes then reset by switching firmly off and then on again.
 3. Are you running the vibrator in a wet or wash down environment? Consult VIBCO about wash down rated models.
 4. Are you running the vibrator in a high temperature environment? Consult VIBCO about high temp rated models. Refer to full detail instructions for proper mounting in high temp applications.
 5. Are you running the vibrator continuously? All VIBCO heavy duty models are rated for continuous duty but only at certain eccentric settings. See diagrams to left for proper output force settings for continuous duty.
- NOTE: For best performance and vibrator life cycle, it is best to run them intermittently. Consult VIBCO for available timers.**
6. Are you repeatedly stopping and starting the vibrator? This can overload the vibrator. Use the following guidelines for proper timing of starts and stops:

Single phase (2P-75, 100 & 150):

For run times of 10 seconds or less, use 1:7 ratio for run time vs. off time. (example: 5 seconds on to 35 seconds off). For run times longer than 10 seconds, use 1:1 ratio.

Single phase (2P-200, 450, 800; 4P-350, 700, 1000, 1400; 6P-300, 500):

These are capacitor start models and rated for a MAXIMUM of 30 starts per hour.

Three phase:

For run times of 10 seconds or less, use 1:7 ratio for run time vs. off time. (example: 5 seconds on to 35 seconds off). For run times longer than 10 seconds, any cycle is acceptable.

NOTE: Proper force for full hopper can be excessive for empty or near empty hopper.

Warranty

All warranty claims must be submitted to VIBCO for approval prior to any repairs being done. Failure to do so will void any and all warranty coverage. All repairs will be done at the VIBCO factory.

Errors, Shortages & Complaints

Complaints concerning goods received or errors should be made at once. Claims must be made within five days after receipt of goods. Clerical errors are subject to correction. Damage during shipping must be reported to the carrier, not VIBCO.

Returning Parts **

Parts should not be returned to VIBCO without prior authorization. Call VIBCO's customer service department at 800-633-0032 (800-465-9709 in Canada) for a Return Goods Authorization (RGA) number. A return authorization will be emailed or faxed to you. Use this as your packing slip. Return shipping must be prepaid. Material returned may be subject to a 10% restocking fee. All returned shipments should clearly display your name, address and original invoice number to ensure proper credit.

** Orders for custom equipment built to customer's specifications are not returnable.

Product Changes

VIBCO reserves the right to make changes in pattern, design or materials when deemed necessary, without prior notice or obligation to make corresponding changes in previous models. To be sure of exact mounting dimensions, it is recommended that you obtain a certified dimensional drawing from the factory.

Ordering Spare Parts

Parts can be ordered through authorized distributors or from VIBCO's Spare Parts Department. The following data should be provided when placing your spare parts order:

- From label: Model number of unit.
- From spare parts list: Reference number, part number, description & quantity required.
- Shipping instructions: Specify shipping point and method of shipping.

For custom mounting applications or any other questions:

800-633-0032

or

vibrators@vibco.com

