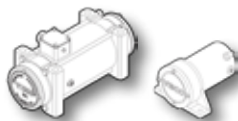




VIBCO INSTRUCTION MANUAL

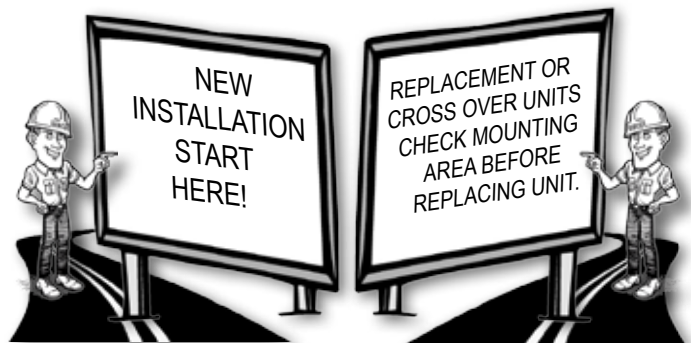


SCR Adjustable Speed & Force Electric Vibrators

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 equipment.
- Determine length of channel iron and style of mounting plate.
- STITCH** weld mounting plate to channel iron.
- STITCH** weld channel iron to bin or equipment.
- 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 while vibrator is running.
- Take an amperage reading while vibrator is running.
- FILL OUT WARRANTY CARD AND MAIL TO VIBCO!!!!**

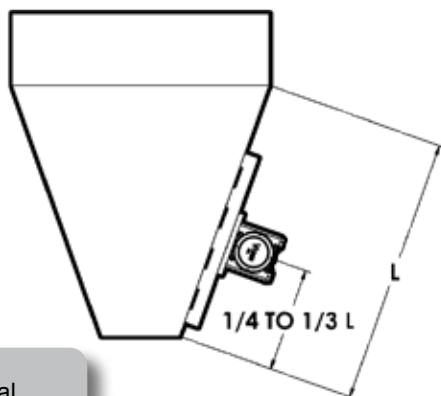


ADDITIONAL DETAILS AVAILABLE ONLINE AT www.vibco.com

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

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

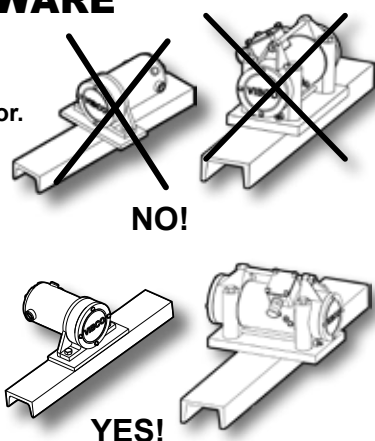
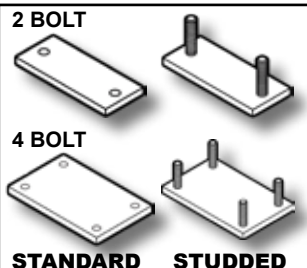
FACTOR A + B	USE CH. IRON LENGTH
11	N/A
10	6 - 8 FT. (80 - 90%)
9	5 - 7 FT. (70 - 80%)
8	4 - 6 FT. (60 - 70%)
7	3 - 5 FT. (50 - 60%)
6	2 - 4 FT. (50 - 60%)
5	1 - 2 FT. (50 - 60%)
4	N/A

- 1) Longer channel iron will not affect vibrator performance, total channel length should not exceed length of bin wall.
- 2) Percentages shown indicate % of bin wall height your channel iron should be for shorter bins.
- 3) 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.

Orientation of the mounting plate depends on number of mounting holes of the vibrator. Determine number of mounting holes and orient as shown here.

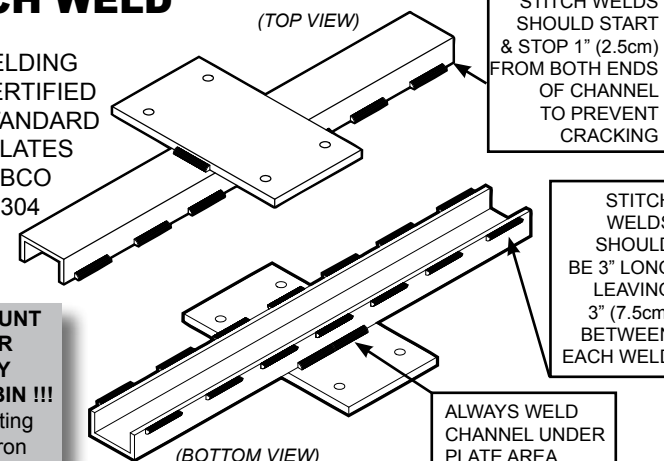


OVERALL LENGTH OF VIBRATORY UNIT SHOULD ALWAYS BE PERPENDICULAR TO LENGTH OF CHANNEL, OTHERWISE IT MAY CAUSE FLEXING & THE VIBRATOR WILL OVERLOAD & BURN OUT.

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

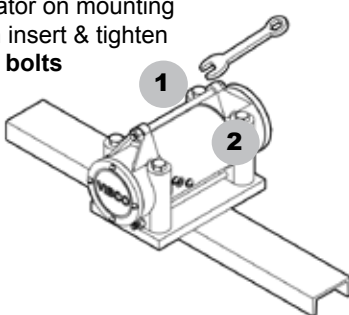


800-633-0032 for Mounting Plates & Brackets, Spare & Replacement Parts and 24/7 Technical Support

7 BOLTING PROCEDURE

Step 1

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

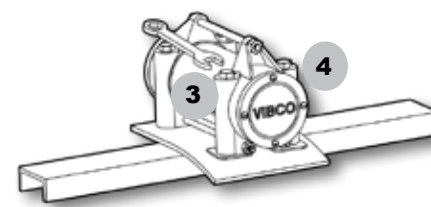
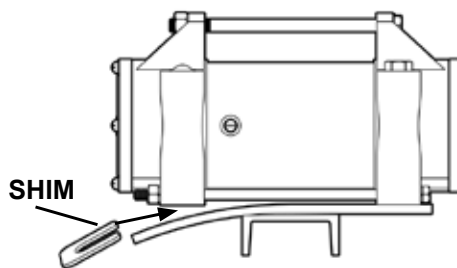


GRADE 5 BOLT SIZE	MAX TORQUE ft-lbs
1/4"	9
5/16"	18
3/8"	32
1/2"	78

For other bolt grades, please consult VIBCO.

Step 2

Now, look at feet on other end of vibrator. If a gap exists between the mounting plate & foot, 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.



NOTE: SHIMMING THE FEET IS NECESSARY TO AVOID STRAIN ON THE SHAFT & BEARINGS THAT CAN CAUSE HIGH AMPERAGE DRAW & BURN OUT THE VIBRATOR.

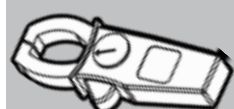
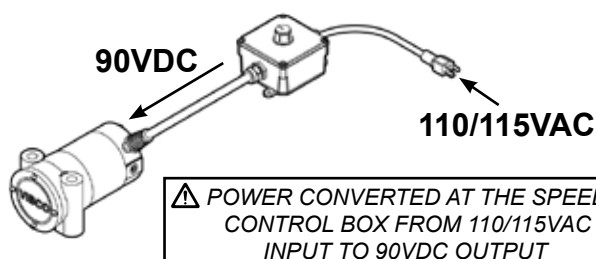
8 RESTRAINT



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



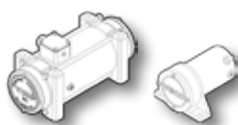
and then . . . TAKE AN AMPERAGE READING WHILE THE VIBRATOR IS RUNNING

All SCR Models come equipped with a variable speed control and are single phase, 50/60 Hz. Standard 115 volt units can simply be plugged into a grounded circuit. 230 volt units are shipped with a control box but not a plug. You must hard wire the unit or connect your own plug to your circuitry. Always consult professional electricians with any questions or concerns for electrical installations.

DUTY CYCLE

All SCR Models are rated for **CONTINUOUS DUTY** at frequency settings between 950 - 2500 vibrations per minute (VPM) -- which is approx. 25 to 60 on speed control dial. For frequencies below 950 or above 2500 VPM, rating is **INTERMITTENT DUTY**. Use 50% duty cycle where maximum run time = 30 minutes in any one hour period.

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.



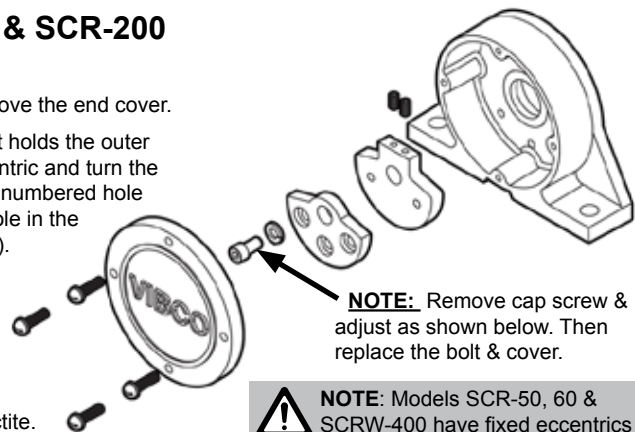
WARNING: Failure to read and follow these installation instructions and safety precautions could result in personal injury, equipment damage, shortened service life or unsatisfactory equipment performance. All information in this document is vital to the proper installation and operation of the equipment.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

10 CHANGING OUTPUT SETTINGS

MODELS: SCR-100 & SCR-200

To change the force:

- 1) Disconnect power and remove the end cover.
- 2) 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 (see below).
- 3) Apply Loctite 242 (or equivalent). Replace the cap screw.
- 4) Replace end cover. End cover bolts have a locking patch and do not need Loctite.



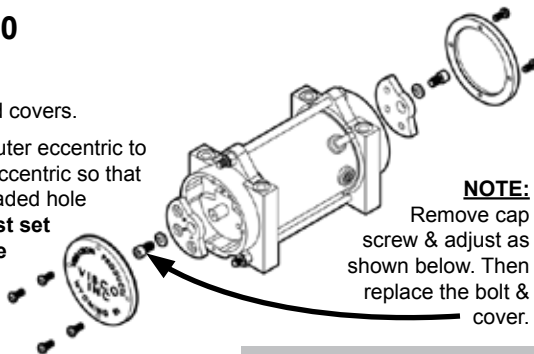
NOTE: Remove cap screw & adjust as shown below. Then replace the bolt & cover.

NOTE: Models SCR-50, 60 & SCRW-400 have fixed eccentrics and are NOT field adjustable.

MODELS: SCR-300, 400, 500

To change the force:

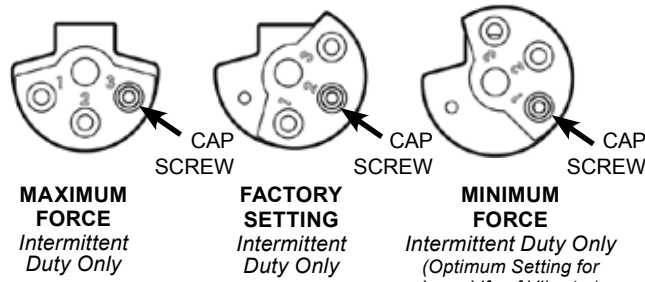
- 1) Disconnect power and remove both end covers.
- 2) Remove the cap screw that holds the outer eccentric to the inner eccentric and turn the outer eccentric so that the numbered hole aligns with the threaded hole in the inner eccentric. **NOTE: You must set both ends of the vibrator to the same setting.**
- 3) Apply Loctite 242 (or equivalent). Replace the cap screw.
- 4) Replace both end covers. End cover bolts have a locking patch and do not need Loctite.



NOTE: Remove cap screw & adjust as shown below. Then replace the bolt & cover.

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

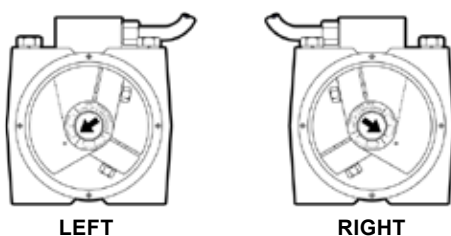
NOTE: Only run intermittently (maximum running time of 30 min in any one hour period. (See DUTY CYCLE section in Trouble Shooting section right).



MODEL: SCR-1000

MODEL SCR-1000 to change the force:

- 1) Disconnect power and 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.
- Settings 1 - 3 are continuous duty rated**
Settings 4 - 6 are intermittent duty rated only
NOTE: You must set both ends of the vibrator to the same setting.
- 4) Tighten eccentric bolts and reinstall end covers.



For vibrators mounted in tandem (side to side, not end-to-end) to produce linear motion on tables & feeders:

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.

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.

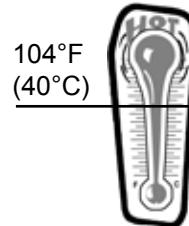
Ordering Spare Parts

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:

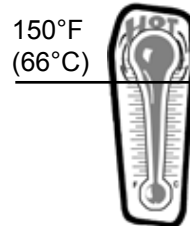
- From label: Model number of unit.
- From spare parts list: Reference number, part number, description & quantity required.
- Shipping instructions: Specify shipping point and method of shipping.

11 OPERATING TEMPERATURE

! If the ambient temperature of the area exceeds 104°F (40°C) OR if the skin temperature of the application exceeds 150°F (66°C), consult VIBCO for alternate solutions.



AMBIENT TEMP



SKIN TEMP

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? Is it the right frequency? Is it set to the maximum force? See eccentric setting info to left. Still not sure? Call VIBCO Technical Support at 800-633-0032.

THE VIBRATOR WON'T START!

1. Check for blown fuses in vibrator. Replace with time-delayed 250V type. **NOTE: For SCR Models 50, 60, 100, 200, 300 & 400 fuse is located INSIDE control box. For SCR Models 500 & 1000, fuse is located on lid of control box in holder marked FUSE.**
2. Check power supply to unit. Are you getting the proper voltage? **NOTE: Remember that SCR units are built with a 90VDC motor powered by 115VAC power, converted at the speed control box.**
3. Check field continuity, if "open" field winding is burned or has a short, replace field. If unsure how to check continuity, call VIBCO or consult a licensed electrician.
4. Check control potentiometer. If shorted, replace.
5. Check vibrator brushes for wear. Each unit has two brushes. Refer to full detail manual at www.vibco.com for correct brush lengths. Replace if worn below minimum length.

VIBRATOR STOPS RUNNING!

1. Check for blown fuses in vibrator. Replace with time-delayed 250V type. **NOTE: For SCR Models 50, 60, 100, 200, 300 & 400 fuse is located INSIDE control box. For SCR Models 500 & 1000, fuse is located on lid of control box in holder marked FUSE.**
2. Check power supply to unit.
3. Check vibrator brushes for wear. Each unit has two brushes. Refer to full detail manual at www.vibco.com for correct brush lengths. Replace if worn below minimum length.
4. Are you running the vibrator in a wet or washdown environment? Consult VIBCO about washdown rated models.
5. 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.
6. 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.**
7. Are you repeatedly stopping and starting the vibrator? This can overload the vibrator. Use the following guidelines for proper timing of starts and stops:

DUTY CYCLE

All SCR Models are rated for **CONTINUOUS DUTY** at frequency settings between 950 - 2500 vibrations per minute (VPM) -- which is approx. 25 to 60 on speed control dial.

For frequencies below 950 or above 2500 VPM, rating is **INTERMITTENT DUTY**. Use 50% duty cycle where maximum run time = 30 minutes in any one hour period.

NOTE: Duty cycle can be increased by adding additional ventilation. Consult VIBCO for details.

For custom mounting applications or any other questions:

800-633-0032

or

vibrators@vibco.com

