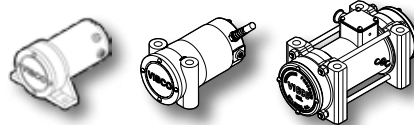




VIBCO INSTRUCTION MANUAL

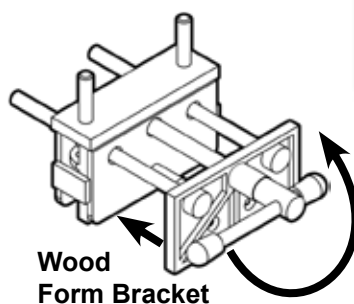
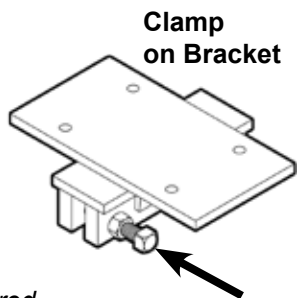
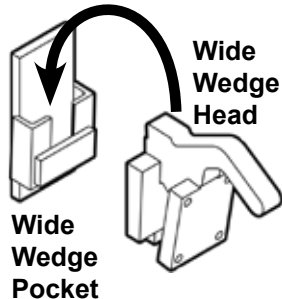
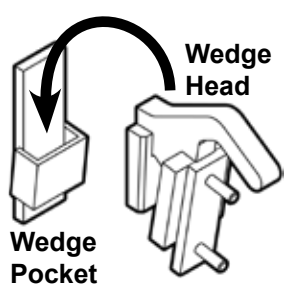


US High Frequency Electric Vibrators

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.

VIBCO MAKES BRACKETS FOR MOUNTING VIBRATORS ON A VARIETY OF CONCRETE FORMS

Most commonly used models shown here. Specialty brackets for most types of forms are available. Consult VIBCO for more information regarding proper bracket models and placement.



For septic tanks, manholes, culverts and other precast forms, ask for VIBCO's *Handbook & Equipment Guide for External Concrete Vibrators.*

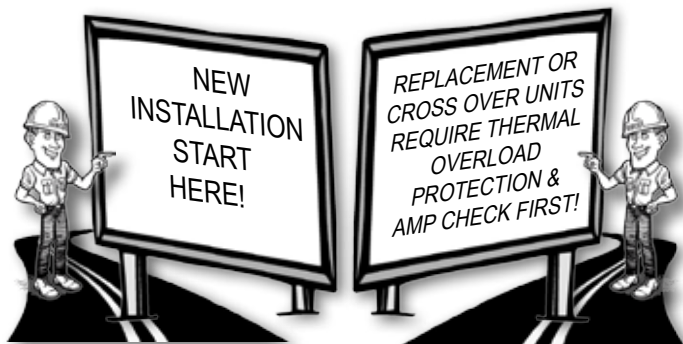
For columns, wall forms, tunnels and other cast-in-place forms, ask for VIBCO's *Handbook & Equipment Guide for External Vibration of Cast-in-Place.*



Bracket model numbers vary with vibrator model ordered

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 or bracket to channel iron.
- STITCH** weld channel iron to bin or form system.
- 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!!!!**

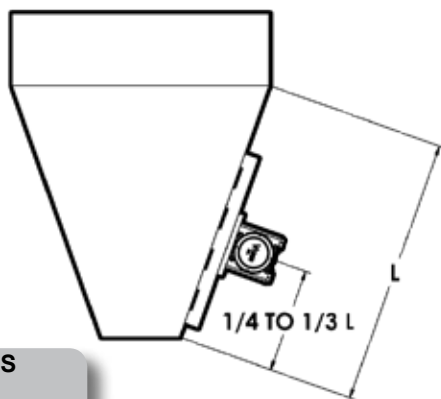


ADDITIONAL DETAILS AVAILABLE ONLINE AT www.vibco.com

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 CONCRETE FORM MOUNTS refer to the Concrete Handbook 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

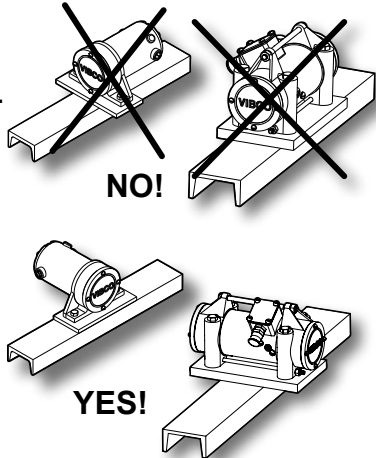
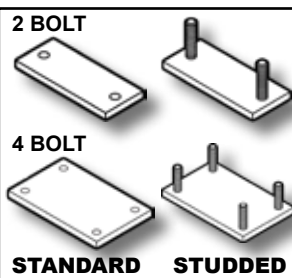
FACTOR A + B	USE CH. IRON LENGTH
11	N/A
10	6 - 8 FT. (80 - 90%)
9	5 - 7 FT. (70 - 80%)
8	4 - 6 FT. (60 - 70%)
7	3 - 5 FT. (50 - 60%)
6	2 - 4 FT. (50 - 60%)
5	1 - 2 FT. (50 - 60%)
4	N/A

- 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.

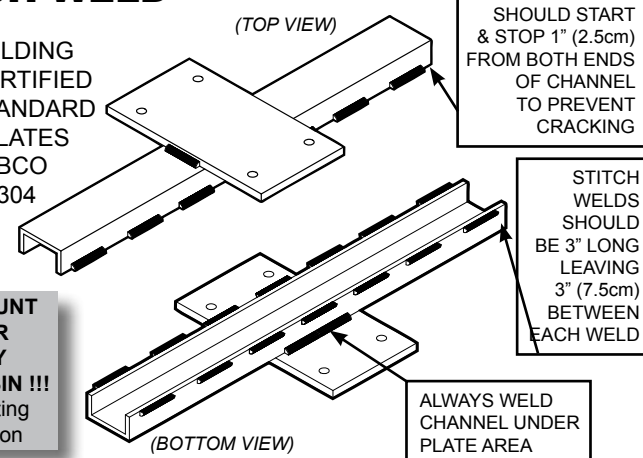


OVERALL LENGTH OF VIBRATORY UNIT SHOULD ALWAYS BE PERPENDICULAR TO LENGTH OF CHANNEL, OTHERWISE IT MAY CAUSE FLEXING & THE VIBRATOR WILL OVERLOAD & BURN OUT.

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.

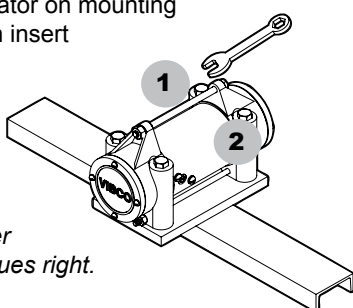
DO NOT MOUNT VIBRATOR DIRECTLY TO SURFACE OF BIN !!! Always use mounting plate & channel iron



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.

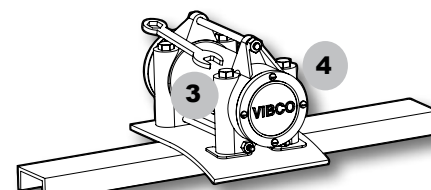
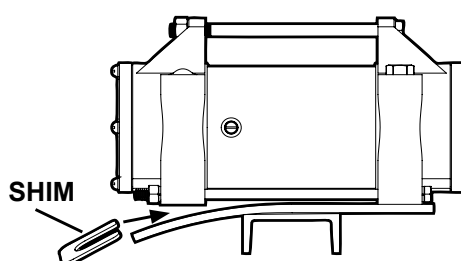


GRADE 5 BOLT SIZE	MAX TORQUE ft-lbs
1/4"	9
5/16"	18
3/8"	32
1/2"	78

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.

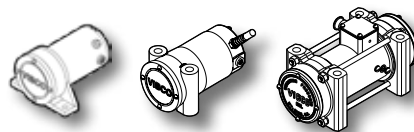


Step 3

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



VIBCO INSTRUCTION MANUAL



US High Frequency 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.

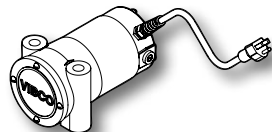
8 RESTRAINT



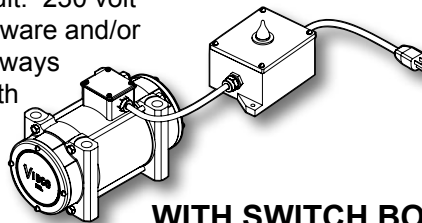
ALWAYS INSTALL SAFETY CABLE or CHAIN
Mount one end to the vibrator and the other to the hopper or bin **above** the vibrator **NEVER ATTACH TO THE MOUNTING PLATE!**

9 ELECTRICAL INSTALLATION

All US Models are single phase, 50/60 Hz. Standard 115 volt units can simply be plugged into a grounded circuit. 230 volt units are shipped without a plug and require hardware and/or plug to connect to your circuitry. Always consult professional electricians with any questions or concerns for electrical installations.



WITHOUT SWITCH BOX



WITH SWITCH BOX



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.

DUTY CYCLE

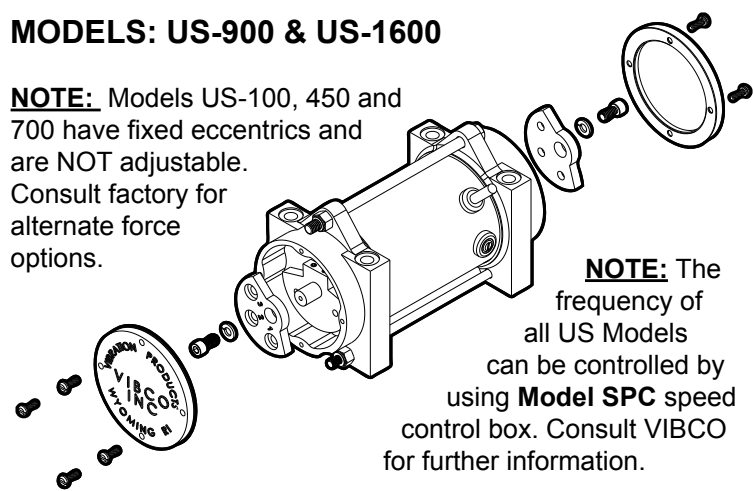
All US Models are rated for **INTERMITTENT DUTY only**.
Use 50% duty cycle where maximum run time = 30 minutes in any one hour period.
For run times of 10 seconds or less, use 1:7 ratio for run time vs. off time. (example: 5 seconds on to 35 seconds off). For run times longer than 10 seconds, any cycle is acceptable.

ADDITIONAL DETAILS AVAILABLE ONLINE AT www.vibco.com

10 CHANGING OUTPUT SETTINGS

MODELS: US-900 & US-1600

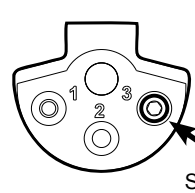
NOTE: Models US-100, 450 and 700 have fixed eccentrics and are NOT adjustable. Consult factory for alternate force options.



NOTE: The frequency of all US Models can be controlled by using **Model SPC** speed control box. Consult VIBCO for further information.

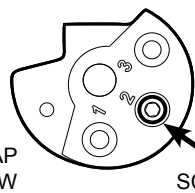
To change the force:

- 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.



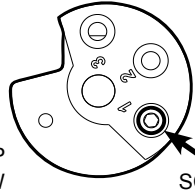
MAXIMUM FORCE

Intermittent Duty Only



FACTORY SETTING

Intermittent Duty Only



MINIMUM FORCE

Intermittent Duty Only
(Optimum Setting for Long Life of Vibrator)

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).

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.



104°F
(40°C)



AMBIENT TEMP

150°F
(66°C)



SKIN TEMP

12 TROUBLESHOOTING

VIBRATOR WON'T EVEN START?

1. Check power supply to unit. Are you getting the proper voltage? Has the thermal overload protection tripped?
2. 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.
3. Check field & armature continuity. If either is burned or has a short, replace. If unsure how to check continuity, call VIBCO or consult a licensed electrician.

DID THE VIBRATOR STOP RUNNING?

1. Check power supply to unit.
2. **FOR Model US-900 & 1600 ONLY** -- Has the thermal overload protection tripped? If overload protection has tripped, wait a minimum of two (2) minutes then reset by switching firmly off and then on again.
3. Is there an unusual sound (banging) coming from the vibrator? This usually means that the vibrator has loosened or the mounting is cracked.

Check the vibrator mounting bolts for tightness.

Check the mounting structure. New installations may be too weak. Reinforce mount area immediately by adding stiffeners like angle iron or channel iron.

In existing installations look for cracks in mounting angle iron or plates. Also look for fatigued or cracked welds. Repair and reinforce immediately.

Check vibrator and bracket connection to the form or mold. If clamps are loose or wedge is not properly inserted, it may cause vibrator to run hot and cause internal damage. Brackets may need to be adjusted or replaced.

4. 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.
5. Are you running the vibrator continuously? All VIBCO high frequency electric models are rated for intermittent duty only.

NOTE: Consult VIBCO for available timers to help run vibrators at proper intervals.

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:

DUTY CYCLE

All US Models are rated for **INTERMITTENT DUTY only**.

Use 50% duty cycle where maximum run time = 30 minutes in any one hour period.

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

For custom mounting applications or any other questions:

800-633-0032

or

vibrators@vibco.com

