

## INSTRUCTION **MANUAL**







# **Pneumatic Piston 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.







## MOUNTING INSTRUCTIONS CHECKLIST

- ☐ Determine vibrator placement on equipment or bin. Make sure the vibrator classification matches the area's classification.
- ☐ Determine length of channel iron, style of mounting plate and position on the bin (box 3-5).
- □ STITCH weld mounting plate or bracket to channel iron (box 3).
- ☐ STITCH weld channel iron to bin (box 3).
- ☐ Attach vibrator to mounting plate. Check the mounting plate for warping and shim if necessary. Tighten bolts to torque specs (box 6).
- ☐ Install safety chain or cable (box 7).
- □ Connect Pneumatics including lubricator (mandatory), (box 8)
- ☐ FILL OUT WARRANTY CARD AND MAIL TO VIBCO!!!!

## ADDITIONAL DETAILS AVAILABLE ONLINE AT www.vibco.com

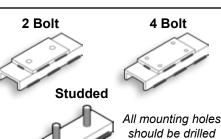
# **PLATE & CHANNEL SELECTION**

**NEVER PLACE VIBRATOR DIRECTLY ON SKIN OF BIN OR HOPPER!** 

**BIN WALL TH** 

CORRECT MOUNTING PLATES			
PISTON DIAMETER	PLATE THICKNESS	CHANNEL IRON WIDTH	
5/8" to 1-1/4"	1/4" plate	3" channel iron	
1-1/2" to 2"	3/8" to 1/2" plate	4" channel iron	
3" to 4"	1/2" plate	6" channel iron	

SUGGESTED CHANNEL LENGTH		
BIN WALL THICKNESS	CHANNEL IRON LENGTH	
bin wall < 3/16" (thin)	18" to 36" on both sides of vibrator	
bin wall = 3/16" to 1/4"	12" to 16" on both sides of vibrator	
bin wall = 3/8" to 1/2"	6" to 8" on both sides of vibrator	



### YOU MUST STITCH WELD MOUNTING PLATE & CHANNEL IRON! **NEVER CONTINUOUSLY WELD.** STOP WELDS 1" FROM ENDS TO PREVENT CRACKING.

# PISTON ANGLE



Piston MUST be mounted at a 15° angle from ground MINIMUM.

Any mount less than 15° requires SPRING(-SP) model. All Model 10, 30, 40, 70, and 80 units come standard with springs, as well as the 1" and 1-1/4" sizes of the 50 & 55 Series.

## VIBRATOR PLACEMENT

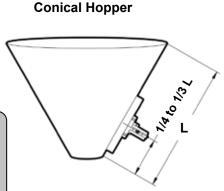
For coarse materials: mount vibrator 1/3 of the distance from the discharge opening to the top of the sloped portion of the bin. For fine materials: mount vibrator 1/4 of the distance from the discharge to the top of the sloped portion of the bin.

For large bins: mount two vibrators one on each sloping wall 180° opposite each other for best flow results.



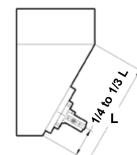


or call 800-633-0032

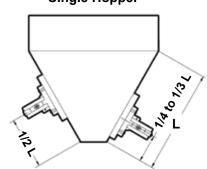


# 1/2 Rectangular Hopper

& taped or use studded plate



**Two Pistons on** Single Hopper



NOTE: NEVER PLACE VIBRATOR DIRECTLY ON SKIN OF BIN OR HOPPER!

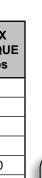
## 800-633-0032 for Mounting Plates & Brackets, Spare & Replacement Parts and 24/7 Technical Support

### **BOLTING PROCEDURE** 6

Be sure mounting surfaces are smooth and free from debris before bolting unit.

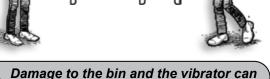
The immediate area around the vibrator should be clear of any other equipment or structural parts and pieces. Unit may fail prematurely if the body rests or rubs against another objects.

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

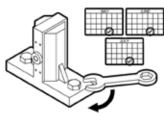








Make sure the vibrator is secured tightly. Retighten after the first 10-15 minutes of operation & be sure to check periodically to maintain proper tightness



# **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!



**lubricator &** piston is 15

Maximum distance between solenoid & piston is 5'

5 Solenoid Air To Lubricator Regulator Valve Vibrator Timer Maximum distance between

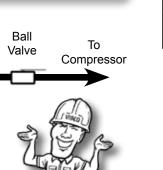
15

Lubricator MUST be mounted at or above the elevation of the piston vibrator

Air

Filter

occur if not mounted securely.



	Nd .
Use SAE-10 or lighter oil at 1 dr	op per minute for
every 10 cubic ft/min of air vib	rator consumes

TO DETERMINE CORRECT AIR HOSE SIZE			
PISTON DIAMETER	MIN AIR HOSE DIA.	MIN FRL* THREAD DIA.	CFM
5/8" to 1"	1/4"	1/4"	4-5
1-1/4" to 1-1/2	3/8"	3/8"	9-11
2" & UP	1/2"	1/2"	15-50

PISTON AIR CONSUMPTION		
PISTON SIZE	CFM @ 80 PSI	
1	5	
1-1/4	9	
1-1/2	11	
2	15	
2L	31	
3	30	
3L	51	



# INSTRUCTION



# Pneumatic Piston Vibrators



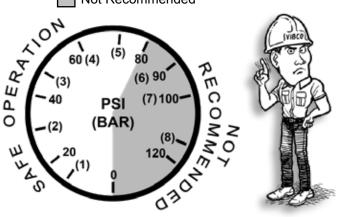
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# **OPERATION**

Safe Operation Not Recommended

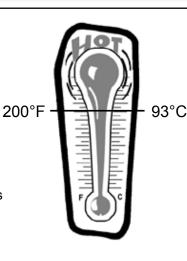
## Maximum **Air Pressure**

Operating pressure should NOT exceed 80 psi unless specially constructed for higher pressure standards by VIBCO.



## **Maximum Operating Temperature**

Operating and ambient temperature should NOT exceed 200°F (93°C). High temperature units are available contact VIBCO for specific part numbers.





## **Required Lubrication**

Lubrication is **REQUIRED** for the operation of pneumatic pistons vibrators. The lubricator should be set to deliver 1 drop for every 10 CFM the vibrator requires. Use SAE-10 oil or lighter.

## **TROUBLESHOOTING**

PROBLEM	CAUSE	SOLUTION
	Dirt causes periodic sticking	Clean thoroughly, install port protectors & air line filters
	Duty cycle too fast for pressure to dissipate	Use 3-way NC solenoid valve
Inconsistent Start	Broken spring	Change spring or change angle of mounting so the piston travels at 30°off horizontal, eliminating the need for spring
	Solenoid valve to far from vibrator	Relocate solenoid valve within 5' of piston
	Vibrator worn	Consult VIBCO
	Insufficient air	Increase air pressure to 40 psi minimum & confirm cfm using the chart in panel 8
	Broken spring	Change spring or change angle of mounting so the piston travels at 30°off horizontal, eliminating the need for spring
	Solenoid valve to far from vibrator	Relocate solenoid valve within 5' of piston
Does Not Start	Obstruction in air line	Test by disconnecting air line at vibrator, turn on air, then replace line
	High ambient heat can expand piston	Consult VIBCO about High Temp Units
	Congealed sludge in piston housing	Put approx. 1 tbsp. Kerosene into inlet port, run vibrator for
	Vibrator worn	Consult VIBCO
	Air pressure is set to low	Check accessories & connections for leaks, increase air pressure, confirm cfm with chart in panel 8
Insufficient Vibration	Vibrator to small	Use larger model or if air cushioned (S model), replace with impacting model
	Vibrator worn	Consult VIBCO
	Air pressure set to high	Reduce to a maximum of 80 psi
Mounting Polt Prockers	Incorrect size & type of bolts	Replace with grade #5 bolt, NF, shank of bolt equal to mounting hole size
Mounting Bolt Breakage	Bolts not tight	Tighten to recommended torque reference chart in section 6
	Irregular mounting surface	Inspect for cracks around the mounting area & repair as needed

## Warrantv

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 e-mailed 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

vibrators@vibco.com

**Use this handy QR Code to get** any of our Product Catalogs









