



# **AMV 0.3 MINI ELECTRIC VIBRATOR**

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## **Installation & Operation Manual**





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Thank you for your purchase of an AMV Series Mini Electric Vibrator. We would like to take this opportunity to thank you for choosing Houston Vibrator. We are proud to supply you with the finest vibration equipment in the world today.

In this manual, you will find information regarding the installation and operation of this equipment, as well as safety precautions. Please read all instructions and precautions carefully before beginning your installation. Be sure to follow all instructions and precautions. Failure to do so could compromise your warranty, the service life of the vibrator, and / or your safety.

If you need clarification or further information about any of the topics in this manual, please contact your dealer or Houston Vibrator for assistance.

Thank you.

# **1 GENERAL INFORMATION**

## **1.1 GENERAL NOTES**

The AMV Mini Electric Vibrator is composed of an asynchronous three phase or single phase motor, counter weights located at the two ends of the rotor shaft, and weight covers. Once started, the electric vibrator generates a vibration, which is transmitted to the machine or structure onto which it has been mounted.

## **1.2 WARRANTY**

HVI offers a full one-year warranty on the electric vibrator. This warranty extends for a period of 12 (twelve) months past the date of delivery, as specified on shipping documents received with the goods.

The warranty covers free repair or replacement of only those parts which HVI deems defective. The warranty does not cover controller or electrical parts other than the vibrator, or those mechanical parts which will incur wear with normal use.

The warranty becomes void if improper installation, incorrect wiring, or improper use of the vibrator causes damage to the vibrator.

## **1.3 WARRANTY RECOGNITION**

The warranty can only be recognized by HVI. Freight must be prepaid on all items returned for repair, including those items under warranty.

## **1.4 RECEIVING AND INSPECTION**

Inspect the vibrator upon receipt to insure that no damage occurred during shipment. If you discover any damage to the vibrator from shipping, contact the freight carrier immediately. Be sure to retain the original packaging for freight inspectors.

Check the information on your packing slip against the vibrator nameplate to verify that you have received the correct item(s). Should you discover any discrepancies, contact HVI immediately.

## 2 SAFETY PRECAUTIONS

**DO NOT** start the electric vibrator before it is properly installed and fastened securely to the main structure. **DAMAGE TO VIBRATOR WILL OCCUR!!!**

**DO NOT** start the electric vibrator without weight covers in place.

**DO NOT** perform maintenance or weight adjustments unless the power cord has been disconnected from the main power source, and the vibrator has been allowed to cool down to 95°F (35°C) or less.

**DO NOT** jar or shock the vibrator during handling. **DAMAGE TO VIBRATOR WILL OCCUR!!!**

The vibrator must operate in its original condition, with the exception of weight adjustments performed in accordance with the instructions in section 4.2.

The vibrator controls must be located and secured in such a manner that the vibrator cannot be started accidentally or by unauthorized personnel.

All persons responsible for the installation and operation of this vibrator must carefully read and understand all information in this manual. All instructions and precautions must be strictly observed. Keep this manual accessible to the operator for consultation before beginning installation, and before routine adjustments are performed.

## 3 INSTALLATION

### 3.1 PREPARATION

Make sure that the mounting surface is flat (within  $\pm 1/32$ " ), clean, and free of any paint, dirt, or welding slag.

Skip weld an extended channel (available from HVI) to the mounting surface, using 2-3" welds and 3" skips. Stop the weld at least 1" from the end of the channel.

Skip weld the vibrator mounting plate (available from HVI) to the extended channel. The mounting plate should be at a 90° angle to the channel, so that the length of the vibrator will be parallel to the ground once mounted.

## **3 INSTALLATION – CONT'D**

### **3.2 ATTACHING THE VIBRATOR**

Attach the vibrator to the mounting plate using grade 5 bolts. Use a torque wrench set at 16 foot-pounds to tighten the mounting bolts securely.

#### **WARNING**

DO NOT LEAVE ANY OF THE MOUNTING HOLES UNUSED. DAMAGE TO VIBRATOR WILL OCCUR.

#### **WARNING**

IF MOUNTING BOLTS ARE NOT PROPERLY TIGHTENED, VIBRATOR CAN BE DESTROYED, AND BODILY INJURY COULD RESULT.

### **3.3 VIBRATOR WIRING**

The vibrator is supplied with a power cable from the factory. A plug may be attached to the power cable, or the vibrator can be wired to an on/off switch.

The vibrator must be installed with overload protection to safeguard the motor from excessive amp draw.

#### **WARNING**

DO NOT RUN VIBRATOR WITHOUT OVERLOAD PROTECTION. VIBRATOR CAN BE DESTROYED.

#### **WARNING**

INSTALLATION AND OPERATION OF VIBRATOR WITHOUT OVERLOAD PROTECTION WILL CAUSE WARRANTY TO BE VOIDED.

## 4 OPERATION

### 4.1 INITIAL OPERATION

Check the current to be sure that amp draw is no higher than that given on the vibrator nameplate. While in operation, the current is not to exceed this value. If current is higher than allowed, proceed as follows:

- Test voltage and frequency of power source
- Check tightness of mounting bolts
- Check centrifugal force adjustment
- Check rigidity of mounting structure

Check the tightness of the mounting bolts after the first hour of operation, and periodically thereafter.

### 4.2 WEIGHT ADJUSTMENTS

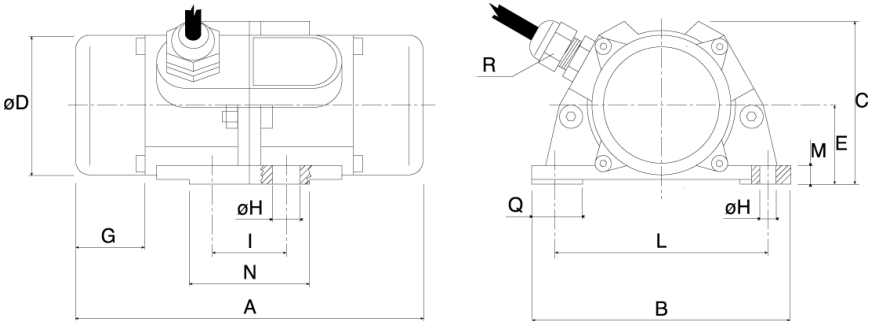
The force of the vibrator can be adjusted by reducing the number of laminated weights on each end of the rotating shaft. To adjust the force of the vibrator, proceed as follows:

- Remove the end covers and the O-ring from both ends of the vibrator. Be careful not to damage the O-ring.
- Unscrew the nuts from the ends of the shaft.
- Remove the appropriate number of weights to achieve the desired force. See Chart below for weight settings.
- Replace each weight removed with a washer so that the nut will tighten fully when replaced.
- Replace the nuts, O-rings, and end covers.

# Wts each end	Centrifugal Force			
	Pounds		Kilograms	
	50 Hz	60 Hz	50 Hz	60 Hz
1	7.7	11.5	3.64	5.20
2	16.1	23.0	7.00	10.00
3	23.8	34.0	10.50	15.00
4	32.2	46.0	14.70	21.00
5	39.9	57.0	18.20	26.00
6	48.0	68.0	21.00	30.00

## 5 TECHNICAL INFORMATION

### 5.1 DIMENSIONAL INFORMATION



OVERALL DIMENSIONS						MOUNTING DIMENSIONS								WT	
[in]						[in]								[PG]	[LB]
A	B	C	D	E	G	No.xH	I	L	M	N	P	Q	R		
5.75	4.40	2.50	2.35	1.40	1.25	4x0.28	1.3	3.6	0.4	2.2	1.1	0.9	9	3.8	

### 5.2 MECHANICAL & ELECTRICAL INFORMATION

AMV 0.3		MECH. FEATURES		ELEC. FEATURES		
CONFIGURATION		Stat. Moment	Cent. Force	Max Power	Max Current	Is/In
VOLTS	HERTZ	[lb in]	[lb]	[Watts]	[Amps]	
115	60	0.182	68	32	0.25	2.7
220	50	0.182	46	27	0.18	2.7
400	50	0.182	46	35	0.24	2.8
460	60	0.182	68	42	0.26	2.8