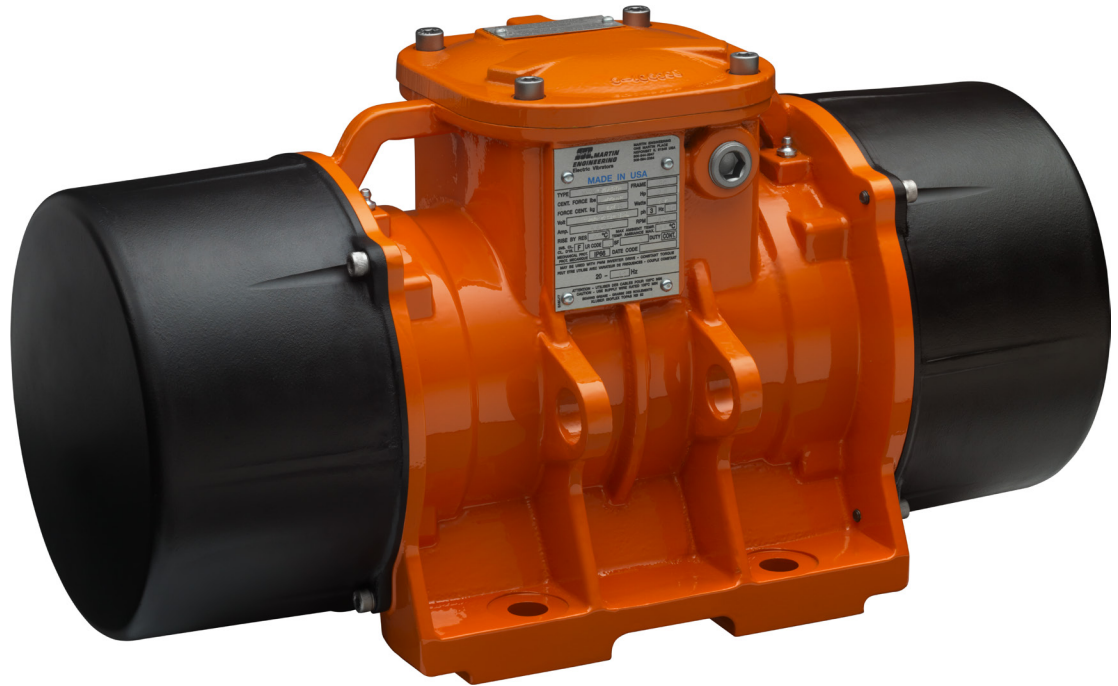




Martin[®] MMX, MIX, & MVX Electric Vibrators

[Go to Martin[®] MMX, MIX, & MVX Electric Vibrators web page](#)



**Operator's Manual
M3882**

Important

MARTIN ENGINEERING HEREBY DISCLAIMS ANY LIABILITY FOR: DAMAGE DUE TO CONTAMINATION OF THE MATERIAL; USER'S FAILURE TO INSPECT, MAINTAIN AND TAKE REASONABLE CARE OF THE EQUIPMENT; INJURIES OR DAMAGE RESULTING FROM USE OR APPLICATION OF THIS PRODUCT CONTRARY TO INSTRUCTIONS AND SPECIFICATIONS CONTAINED HEREIN. MARTIN ENGINEERING'S LIABILITY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF EQUIPMENT SHOWN TO BE DEFECTIVE.

Observe all safety rules given herein along with owner and Government standards and regulations. Know and understand lockout/tagout procedures as defined by American National Standards Institute (ANSI) z244.1-1982, *American National Standard for Personnel Protection - Lockout/Tagout of Energy Sources - Minimum Safety Requirements* and Occupational Safety and Health Administration (OSHA) Federal Register, Part IV, 29 CFR Part 1910, *Control of Hazardous Energy Source (Lockout/Tagout); Final Rule*.

The following symbols may be used in this manual:



Danger: Immediate hazards that will result in severe personal injury or death.



Warning: Hazards or unsafe practices that could result in personal injury.



Caution: Hazards or unsafe practices that could result in product or property damages.



Important: Instructions that must be followed to ensure proper installation/operation of equipment.



Note: General statements to assist the reader.

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Introduction

General

Martin[®] Explosion-Proof Electric Vibrators, Models MMX, MIX and MVX, are designed and manufactured to ensure the best performance and reliability in severe-duty applications. These vibrators have an ambient temperature rating including mounting surface temperature of -13 to 131°F (-25 to 55°C). If operating the vibrator in environments beyond these temperatures, call Martin Engineering, as the vibrator may require rating reduction, more frequent lubrication, or lubrication substitution. Contact Martin Engineering for explosion-proof joint detail.

Safety

All safety rules defined in the above documents and all owner/employer safety rules must be strictly followed when working on the vibrator.

References

The following documents are referenced in this manual:

- *The National Electrical Code (NEC)*, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy MA 02269-9101.
- American National Standards Institute (ANSI) z244.1-1982, *American National Standard for Personnel Protection - Lockout/Tagout of Energy Sources - Minimum Safety Requirements*, American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.
- Code of Federal Regulation (CFR) 29, Part 1910, *Control of Hazardous Energy Source (Lockout/Tagout); Final Rule*, Department of Labor, Occupational Safety and Health Administration (OSHA), 32nd Floor, Room 3244, 230 South Dearborn Street, Chicago, IL 60604.
- CFR 29, Part 1910.15, *Occupational Noise Exposure*, Department of Labor, OSHA, 32nd Floor, Room 3244, 230 South Dearborn Street, Chicago, IL 60604.

Storage

Store vibrator in an ambient temperature not less than 41°F (5°C) with a relative humidity not more than 60%. If the vibrator has been stored for 2 or more years, remove bearings, wash them, and repack them with new grease (see “Lubricating Vibrator”).

Before Installing Vibrator

IMPORTANT

The delivery service is responsible for damage occurring in transit. Martin Engineering CANNOT enter claims for damages. Contact your transportation agent for more information.

1. Inspect shipping container for damage. If damage has occurred, report damage to delivery service and fill out delivery service's claim form.
2. Remove vibrator from shipping container.
3. If anything is missing, contact Martin Engineering or a representative.



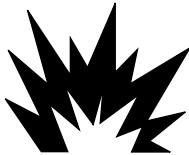
WARNING

Turn off and lock out/tag out all energy sources.

4. Before installing vibrator, turn off and lock out/tag out all energy sources to mounting structure according to ANSI standards (see "References").

WARNING

Gas level or dust content must be tested before using a cutting torch or welding. Using a cutting torch or welding in an area with gas or dust may cause an explosion.



5. If using a cutting torch or welding, test atmosphere for gas level or dust content.
6. Make sure mounting surface is strong and flat, 0.010 in. (0.25 mm) across vibrator feet. (This will minimize internal stress to vibrator casting when tightening mount bolts. Welding in the area of the mounting surface could affect flatness.)
7. Make sure mounting surface and vibrator are clean and free of debris, paint, and oxidation.

Installing Vibrator

Mounting vibrator onto screen frame

IMPORTANT

Read entire section before beginning work. See Appendix for overall dimensions and mounting dimensions.

CAUTION

If installation instructions are not followed, structure and vibrator can be damaged. Abusing or dropping vibrator will accelerate wear and cause bearing damage.

Never weld structure with vibrator mounted and wired. Welding may cause damage to screen vibrator windings and bearings.

Use only new Grade 5 or 8 bolts, nuts, and compression washers. Old fasteners can break and cause damage to vibrator or structure.

Do not use split lock washers to install vibrator onto mount. Damage to vibrator could result.

Tighten mounting bolts in sequence shown in Figure 1. If not tightened in order, vibrator casting could be damaged.

1. Position vibrator mounting holes over mounting holes on screen frame. Use bolts to hold unit in place. Tighten bolts in order given in Figure 1 to avoid damaging vibrator casting.
2. Position vibrators so bolts are free in holes. (There should be no side load on bolts.) While holding unit in position, torque bolts per torque specifications in Table I or contact fastener manufacturer.

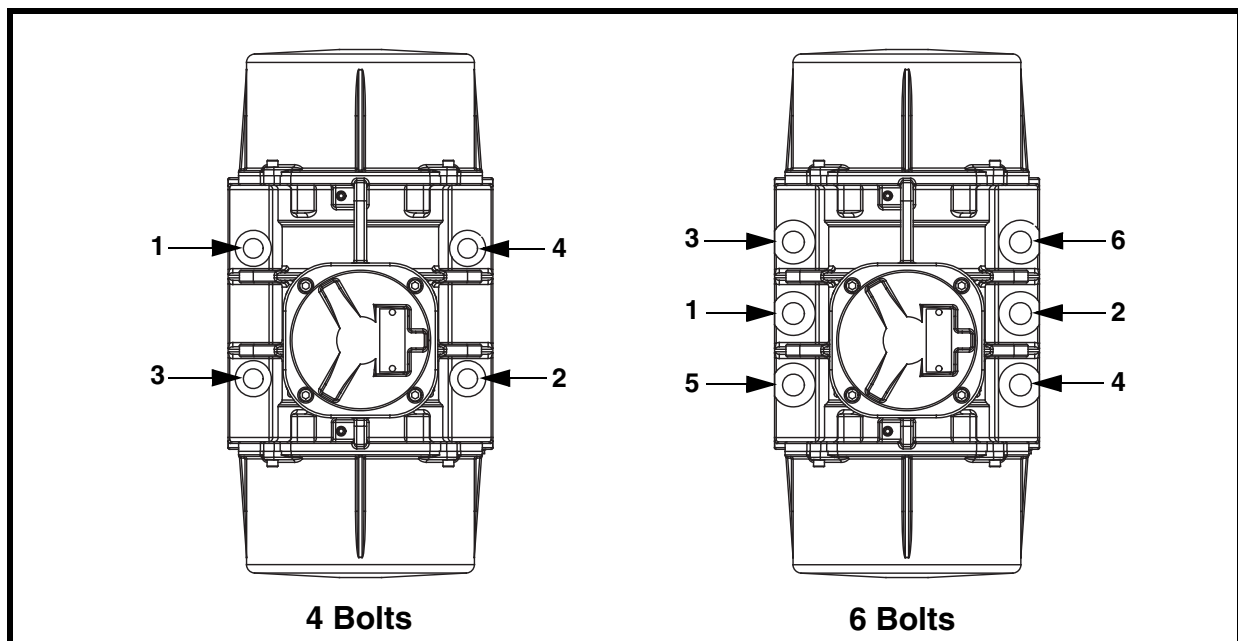


Figure 1. Mounting Bolt Tightening Sequence

3. After the vibrator has been operated for 10 to 20 minutes, check bolt torque. Tighten if necessary.

Table I. Mounting Bolts and Torque Requirements*

Vibrator Type	Frame Size*	English		Metric	
		Bolt Size (gr 5)	Dry Torque (ft-lb)	Bolt Size	Dry Torque (kgm)
MMX	65	3/4 in. -10NC	288	M20	38
	75	7/8 in. -9NC	430	M22	56
MIX	65	5/8 in. -11NC	137	M16	19
	75	1 in. -8NC	644	M25	89
MVX	65, 75	3/4 in. -10NC	288	M20	38

*Torque specifications are for reference only. Contact fastener manufacturer for specific information regarding bolt torque.

Nut and cap screw torque

After removing any nuts or cap screws from vibrator assembly, re-install to the torque values specified in Table II.




Table II. Vibrator Nut and Cap Screw Torque Requirements

Cap Screws	ft/lb (kgm)
M6	7 (1)
M8	16.5 (2.3)
M10	35 (4.8)
M12	58 (8)
M14	94 (13)
M16	137 (19)
M18	195 (27)
M20	275 (38)

Terminal Block Nuts	ft/lb (kgm)
M4	0.87 (0.12)
M5	1.45 (0.20)
M6	2.17 (0.30)
M8	4.70 (0.65)
M10	9.80 (1.35)

Markings on vibrators

The following nameplates are attached to the vibrators:




 0575  II 2 G Ex d IIB 160°C Gb
 ITS12 ATEX 17502X CONFORMS TO UL STD 1004-1, UL STD 674;
 IECEX ETL 12.0010X CERTIFIED TO CSA STD C222 NO. 100, 145,
 60079-0 AND 60079-1  Intertek
 4003940

MANUFACTURED BY MARTIN ENGINEERING
 www.martin-eng.com
 ELECTRIC INDUSTRIAL VIBRATOR
 FOR HAZARDOUS LOCATIONS

NO.
 CLASS GROUP

OPER. TEMP. T2C $-25^{\circ}\text{C} \leq T_{amb} \leq 55^{\circ}\text{C}$
 CLASS I ZONE 1 GROUP II B

Stainless Nameplate P/N 820002




 0575  II 2 G Ex d IIB T4 Gb
 ITS12 ATEX 17502X CONFORMS TO UL STD 1004-1, 1004-3 UL STD 674;
 IECEX ETL 12.0010X CERTIFIED TO CSA STD C222 NO. 77, 100, 145,
 THERMOSTAT: KLUXON 9700K06-146  Intertek
 4003940

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 ELECTRIC INDUSTRIAL VIBRATOR
 FOR HAZARDOUS LOCATIONS

NO.
 CLASS GROUP

OPER. TEMP. T4 $-25^{\circ}\text{C} \leq T_{amb} \leq 55^{\circ}\text{C}$
 CLASS I ZONE 1 GROUP II B

Stainless Nameplate P/N 820009


 0575  II 2 G Ex d IIB 135°C Gb
 ITS12 ATEX 17502X CONFORMS TO UL STD 1004-1, UL STD 674;
 IECEX ETL 12.0010X CERTIFIED TO CSA STD C222 NO. 100, 145,
 60079-0 AND 60079-1  Intertek
 4003940

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 FOR HAZARDOUS LOCATIONS

NO.
 CLASS GROUP

OPER. TEMP. T2A $-25^{\circ}\text{C} \leq T_{amb} \leq 55^{\circ}\text{C}$
 CLASS I ZONE 1 GROUP II B

Stainless Nameplate P/N 820010



MARTIN ENGINEERING
 ONE MARTIN PLACE
 NEPONSET, IL 61345-9766 USA
 (309) 852-2384
 WWW.MARTIN-ENG.COM

MANUFACTURED BY MARTIN ENGINEERING

TYPE <input type="text"/>	FRAME <input type="text"/>
CENT. FORCE lbs <input type="text"/>	Hp <input type="text"/>
FORCE CENT. kg <input type="text"/>	Watts <input type="text"/>
Volt <input type="text"/>	ph <input type="text" value="3"/> Hz <input type="text"/>
Amp. <input type="text"/>	RPM <input type="text"/>
RISE BY RES <input type="text"/> °C	MAX AMBIENT TEMP. <input type="text"/> °C
INS. CL. <input type="text"/>	TEMP. AMBIANCE MAX. <input type="text"/>
CL.D'IS: <input type="text" value="F"/> LR CODE <input type="text"/>	SF <input type="text"/> DUTY <input type="text" value="CONT."/>
MECHANICAL PROT. <input type="text" value="IP66"/>	DATE CODE <input type="text"/>
MAY BE USED WITH PWM INVERTER DRIVE - CONSTANT TORQUE PEUT ETRE UTILISE AVEC VARIATEUR DE FREQUENCES - COUPLE CONSTANT	
20 - <input type="text"/> Hz	

ATTENTION - UTILISER DES CABLES POUR 105°C MIN
 CAUTION - USE SUPPLY WIRE RATED 105°C MIN
 BEARING GREASE - GRAISSE DES ROULEMENTS
 KLUBER ISOFLEX TOPAS NB 52

Stainless Nameplate P/N 820001

Figure 2. Vibrator Nameplates

Connecting power to vibrator

⚠ WARNING

Wire vibrator in accordance with National Electrical Code (Articles 430, 500, 501 and 502, as appropriate) and all applicable local codes. Have wiring installed by a qualified electrician only.

Wire vibrators according to wiring diagrams in Figure 3.

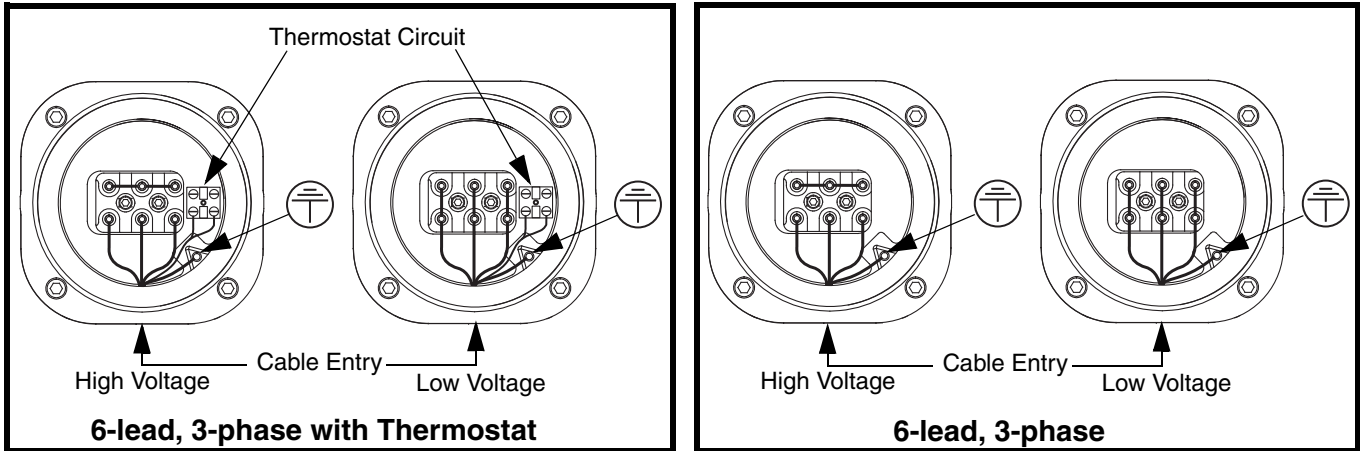


Figure 3. Wiring Diagrams

IMPORTANT

When utilizing the optional elbow adapter (Manufacturer CMP, P/N 787-D-T-2-T-2-5, Approved for ATEX & IECEx) supplied by Martin Engineering, it must be tightened to a torque value of at least 66 ft-lb (90 Nm), and a minimum of 5 threads must be engaged. Torque and thread engagement must be achieved regardless of alignment needs for cable in final installation.

⚠ CAUTION

Before running cord to vibrator, make sure cord voltage rating equals or exceeds the voltage at which you will be operating the vibrator. It must have a minimum temperature rating of 222°F (105°C).

1. Remove wiring cover, O-ring, and rubber compression block. Install elbow or conduit fitting as appropriate. Install cord so that cord jacket extends into wiring compartment approximately 1 inch. Complete installation of wiring kit in accordance with their installation instructions.

IMPORTANT

When wiring vibrator, leave slack in electrical cable so that cable does not become taut during vibration cycle and cause stress on wire connections. On applications where moisture is present, leave enough slack in power cable to prevent moisture from running down cable into vibrator.

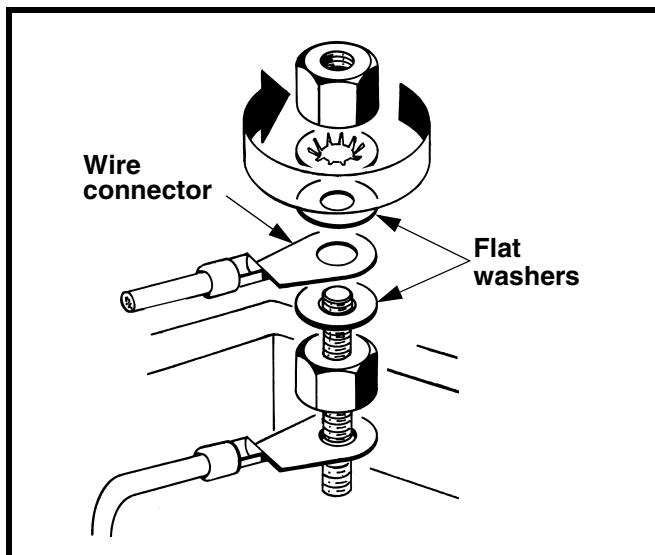


Figure 4. Installing Wire Connector

2. Trim conductors and strip insulation approximately 1/4 inch. Wire vibrator according to wiring diagram inside terminal box or see Figure 3. **Use closed-loop wire connectors only.**
3. Install wire connector between the two flat washers. See Figure 4.

⚠ WARNING

Vibrator must be grounded using the power supply ground wire (or other if specified in the NEC). Failure to properly ground vibrator can cause severe injury or death.

4. Connect power supply ground wire (or other if specified in the NEC) to ground terminal. Use closed loop wire connector only.

⚠ WARNING

All cable entry devices and blanking elements shall be certified in type of explosion protection flame-proof enclosure ‘d’ and ‘tD’, suitable for the conditions of use and correctly installed.

Unusual apertures shall be closed with suitable blanking elements.

Thermostats

⚠ WARNING

Thermostats are intended for vibrator winding protection or to limit external vibrator surface temperatures. They do not replace overload protection.

NOTE

The thermostat terminals are identified as P1 and P2. The thermostat circuit is rated 600 Vac maximum and 720 VA. A manual momentary start switch must be used.

1. For MXX Vibrators, wire thermostats to control circuit. See Figure 5.
2. Reassemble wiring cover, o-ring, and rubber compression block, taking care not to pinch the o-ring.

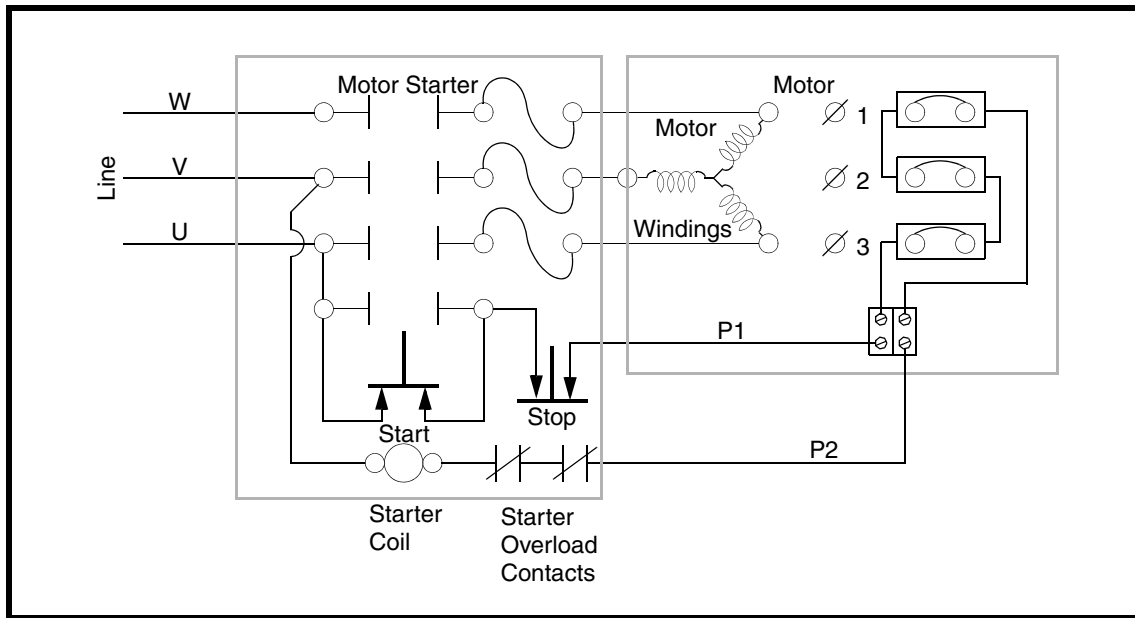


Figure 5. Manual Reset Connections

⚠ CAUTION

Install overload protection for vibrator. If vibrator is not protected from overload, vibrator can be damaged and warranty will be void. Determine size of overload protection according to NEC Article 430, and have it installed by a qualified electrician only.

Installing overload, short-circuit, and ground-fault protection

1. Determine overload, short-circuit, and ground-fault protection according to NEC Article 430.
2. Have qualified electrician install overload, short-circuit, and ground-fault protection.
3. If overload trips during operation, fix problem before resetting.

⚠ CAUTION

For vibratory equipment using two vibrators (such as feeders, screens, and bin dischargers), the two vibrators must be electrically interlocked. If using a single contactor, each vibrator must be provided with separate overload protection. The vibrator control circuit must be arranged so that if one vibrator becomes de-energized, the other vibrator will automatically and immediately become de-energized. Failure to properly interlock vibrators could result in damage to equipment if one vibrator fails.

4. If using two vibrators, interlock the two vibrators and install separate overload protection for each.

After Installing Vibrator

IMPORTANT

Read entire section before beginning work.

Checking shaft rotation

1. Remove one weight cover.

WARNING

Before checking shaft rotation, make sure area is known to be non-hazardous.

CAUTION

DO NOT run vibrator with eccentric weights removed. Running vibrator with eccentric weights removed will damage bearings.

WARNING

When checking shaft rotation with weight cover removed, keep hands away from swinging weights. Weights can crush fingers.

2. Start vibrator(s) only for a few seconds, then stop.
3. Observe direction of vibrator rotation. If vibrator is not rotating in correct direction, lock out/tag out energy source and reverse rotation. To reverse rotation of three-phase vibrator, reverse any two of the three power supply wires.
4. Replace weight cover, taking care not to pinch O-ring.

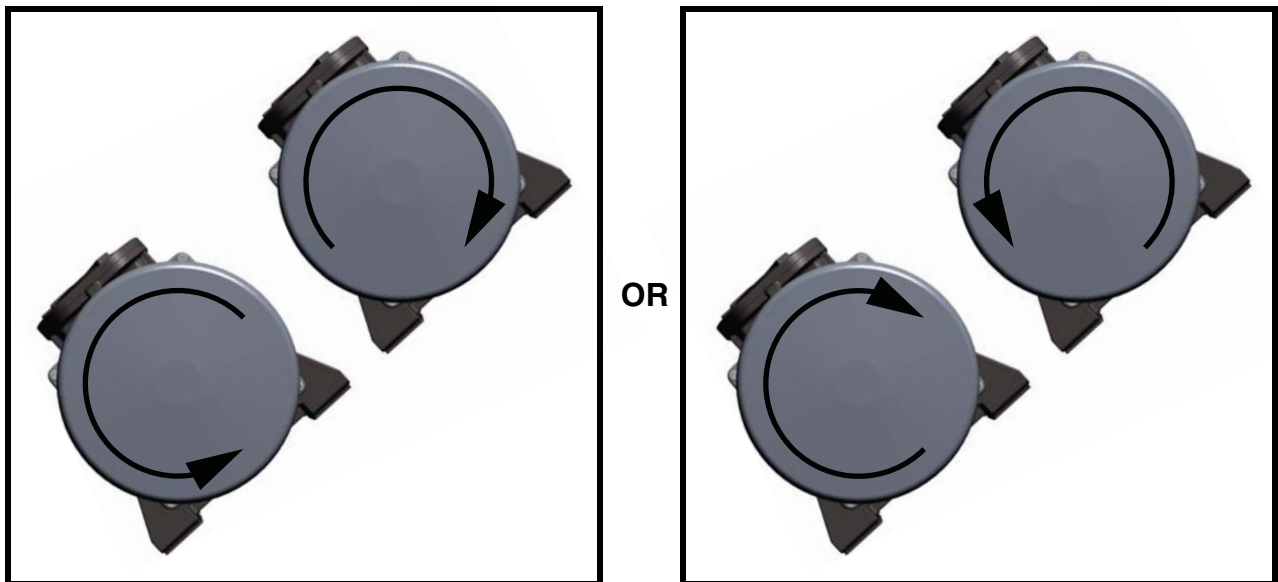
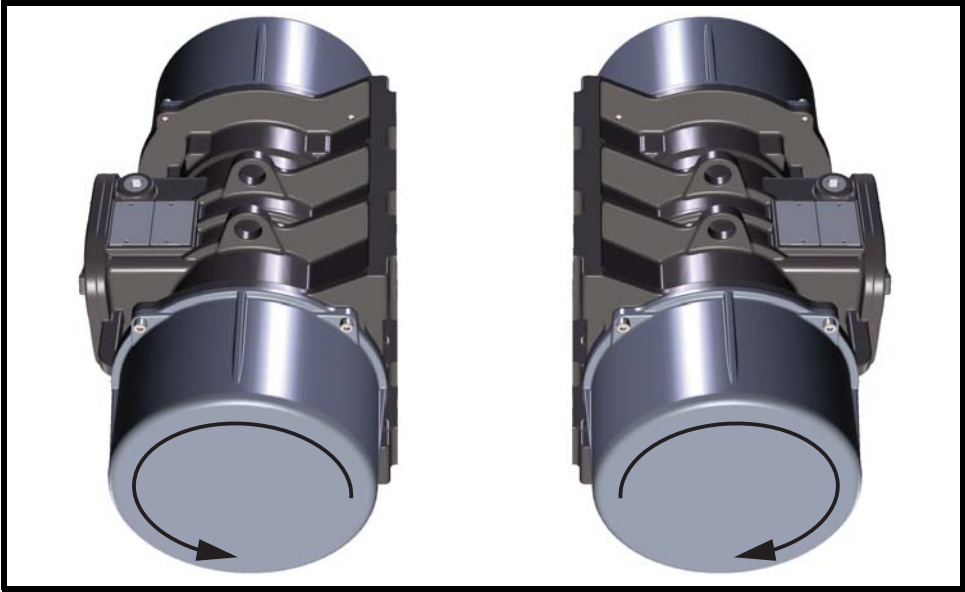


Figure 6. Top-Mounted Shaker



OR

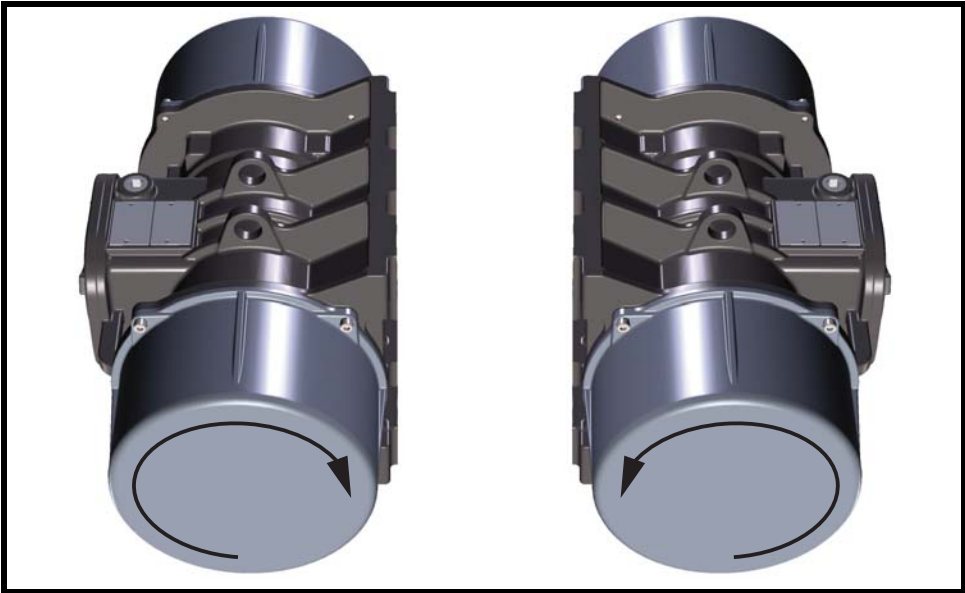


Figure 7. Side-Mounted Shaker

Adjusting eccentric weights

NOTE

All vibrators have one set of eccentric weights on each end of shaft. Eccentric weights are set at 80% at factory. The percentage increments on the weight adjustment disks are percentages of the total force pounds listed on the nameplate. For example, if the nameplate shows 8340 lb, setting the weights to 50% would produce 4170 pounds of force.

IMPORTANT

For the most efficient operation, vibrator eccentric weights should be adjusted to the lowest force setting required to move the material. This will increase vibrator life and reduce energy costs.

WARNING

Before adjusting eccentric weights, turn off and lock out/tag out energy source to vibrator.

1. Turn off and lock out/tag out energy source to vibrator according to ANSI standards (see “References”).
2. Remove weight cover.
3. Loosen nut or screw (A, Figure 8) so adjustable weight (B) will rotate around shaft (C).

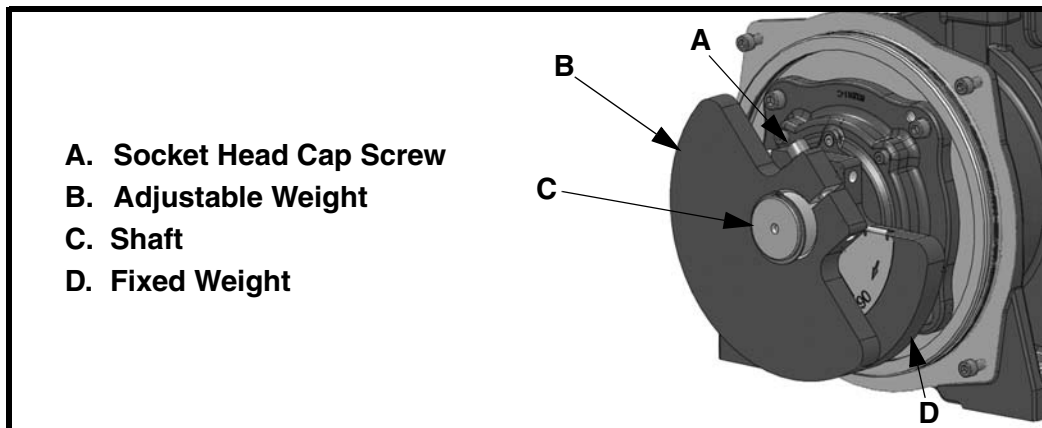


Figure 8. Adjusting Eccentric Weights

NOTE

The fixed weight is attached to the shaft. The adjustable weight rotates around the shaft.

4. See Figure 8. Rotate adjustable eccentric weight to proper setting. To produce more force, move weight to higher setting (i.e., higher number). When set, tighten cap screw or nut according to Table II.

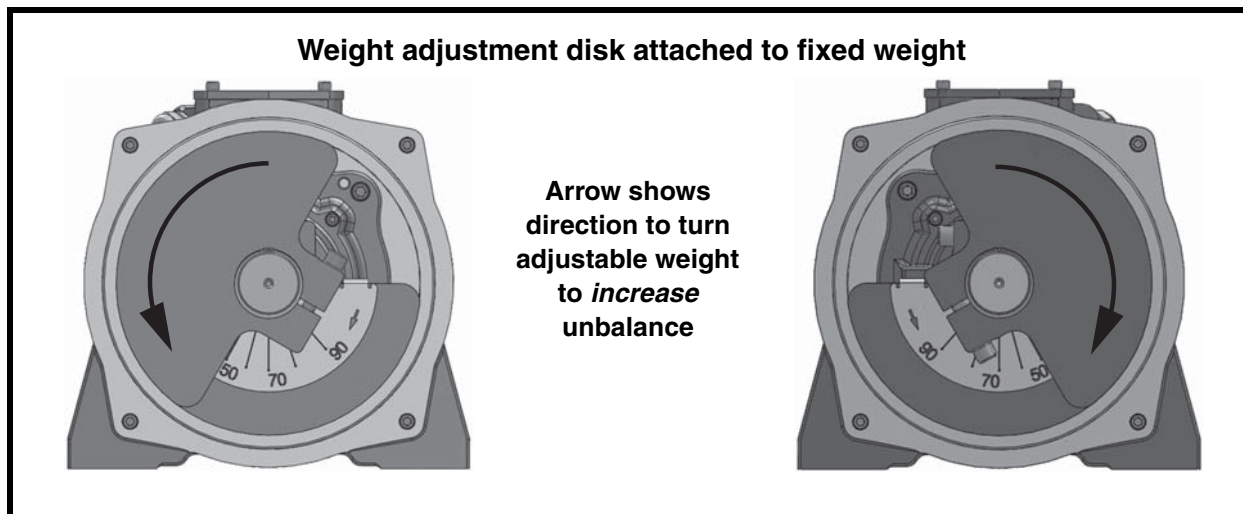


Figure 9. Adjustable Weights Set at 80% (fixed weight shaded)

5. Check O-rings for damage. Replace if damaged.

⚠ CAUTION

Do not operate vibrator with weight covers removed. Dust accumulating around vibrator shaft could cause unit to fail.

6. Replace weight covers.

⚠ CAUTION

Adjust both sets of eccentric weights to same setting number (mirror images), or force output will be uneven and damage vibrator.

7. Repeat steps 2 through 5 for second set of weights. Set both sets of weights to same setting number so they are mirror images, as shown in Figure 10.

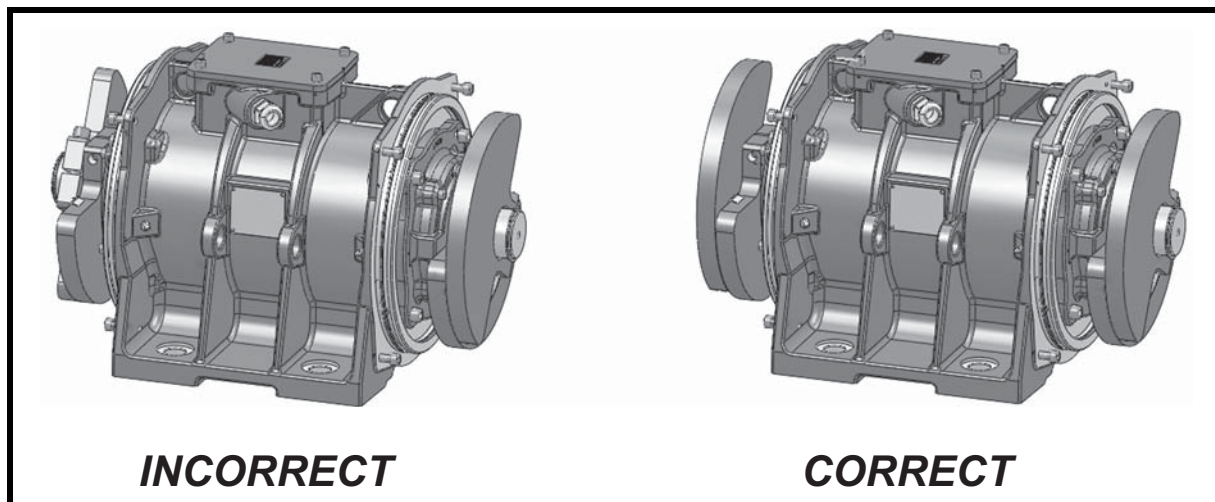


Figure 10. Setting Sets of Eccentric Weights to Mirror Images

***Initial start-up/
checking line
current***

1. Close power supply disconnect switch and allow vibrator(s) to operate.
2. If vibrator makes unusual or excessive noise, make sure mounting bolts are tight and mount welds are not damaged.

⚠ WARNING

Vibrator may produce loud noise during operation when mounted on structure. See OSHA 1910.95 for guidelines. If required, wear ear protection to avoid impairment or loss of hearing.

3. Check decibel level of vibrator noise during operation. See OSHA 1910.95 to determine whether noise exceeds safe limits. If required, wear ear protection to avoid impairment or loss of hearing.

⚠ CAUTION

If vibrator is operated continuously with line current above nameplate rating, vibrator can be damaged.

4. After a few hours of operation, check each line current. If reading is higher than nameplate rating, check for correct phase voltage ensuring that it is correct and balanced. If phase voltages are correct ($\pm 10\%$ of nameplate rating) and balanced, recheck wiring, ensure that mounting bolts are correctly installed, or contact Martin Engineering for assistance. After making adjustments, check line current again to ensure line current does not exceed nameplate rating.
5. After first 8 hours of use and periodically thereafter, check mounting bolt torque and tighten if necessary.

⚠ CAUTION

All vibrators can be supplied with a pulse-width modulated variable frequency inverter. NEVER operate the vibrator at a frequency higher than that specified on the nameplate. Damage to vibrator can result.

***Variable
frequency inverter***

Do not operate vibrator at frequency higher than specified on nameplate. Throughout frequency range, verify that each line current does not exceed current rating on nameplate. If reading is higher than nameplate, consult inverter manual. If necessary, adjust inverter. After making adjustment, check line current again to ensure line current does not exceed nameplate rating.

Maintenance

Lubricating vibrator

IMPORTANT

Read entire section before beginning work. Allow vibrator to cool to ambient temperature before working on it.

NOTE

All vibrators are lubricated at the factory.

CAUTION

Use only prescribed grease in vibrator. If a different grease is used, vibrator can be damaged and warranty will be void.

Use only prescribed amount of grease to lubricate vibrator. Too much grease will cause bearings to overheat and result in premature bearing failure.

1. Lubricate the vibrator with Klüber ISOFLEX TOPAS NB 52 grease from Klüber Lubrication according to Table III.

Table III. Lubrication

Frame Size	Quantity grams per bearing	Frequency hrs.
65	30	2000
75	40	2000

CAUTION

For 3600 rpm machines operating continuously or for long periods of time, reduce lubrication time and amount as described in step 2. Failure to do so could result in premature bearing failure.

2. If vibrator housing temperatures exceed 194°F (90°C), cut lubrication time and amount in half for every 18°F (10°C) increment that meets or exceeds 194°F (90°C).

NOTE

Klüber grease may be purchased from Martin Engineering by calling 800-544-2947 or from Klüber Lubrication by calling 888-455-8237.

3. Lubricate with Klüber ISOFLEX TOPAS NB 52 grease only. Lubricate as follows:
 - a. Clean vibrator at each pipe plug in housing to remove dirt and debris. Remove pipe plug. Insert 1/8 in. NPT grease fitting. Add grease. Remove grease fittings; tightly replace pipe plugs. (Use anti-seize compound on threads.)

Repairing vibrator and replacing bearings



Repairing vibrator yourself during the warranty period may void the warranty. Contact Martin Engineering if motor needs repair.

If vibrator needs repair or if bearings need to be replaced, call your local representative or Martin Engineering at **800-544-2947** for instructions.

Inspecting vibrator

At least quarterly, inspect cable and connections as follows:



Before inspecting vibrator, turn off and lock out/tag out energy source to vibrator.

1. Turn off and lock out/tag out energy source to vibrator according to ANSI standards (see “References”).
2. Inspect cable for damage including cuts and abrasions. Replace if damaged.
3. Inspect ground connection. Make sure resistance from ground connection to vibrator enclosure does not exceed 0.1 ohm. Ensure screw on ground terminal is tightened to proper torque (see Table II).
4. Make sure all nuts on connections on terminal block are tightened to proper torque. Do not overtighten (see Table II).
5. Check mounting bolt torque (see Table I).

Part Numbers

This section provides part numbers for the MMX Series Electric Vibrators. Please reference part numbers when ordering parts.

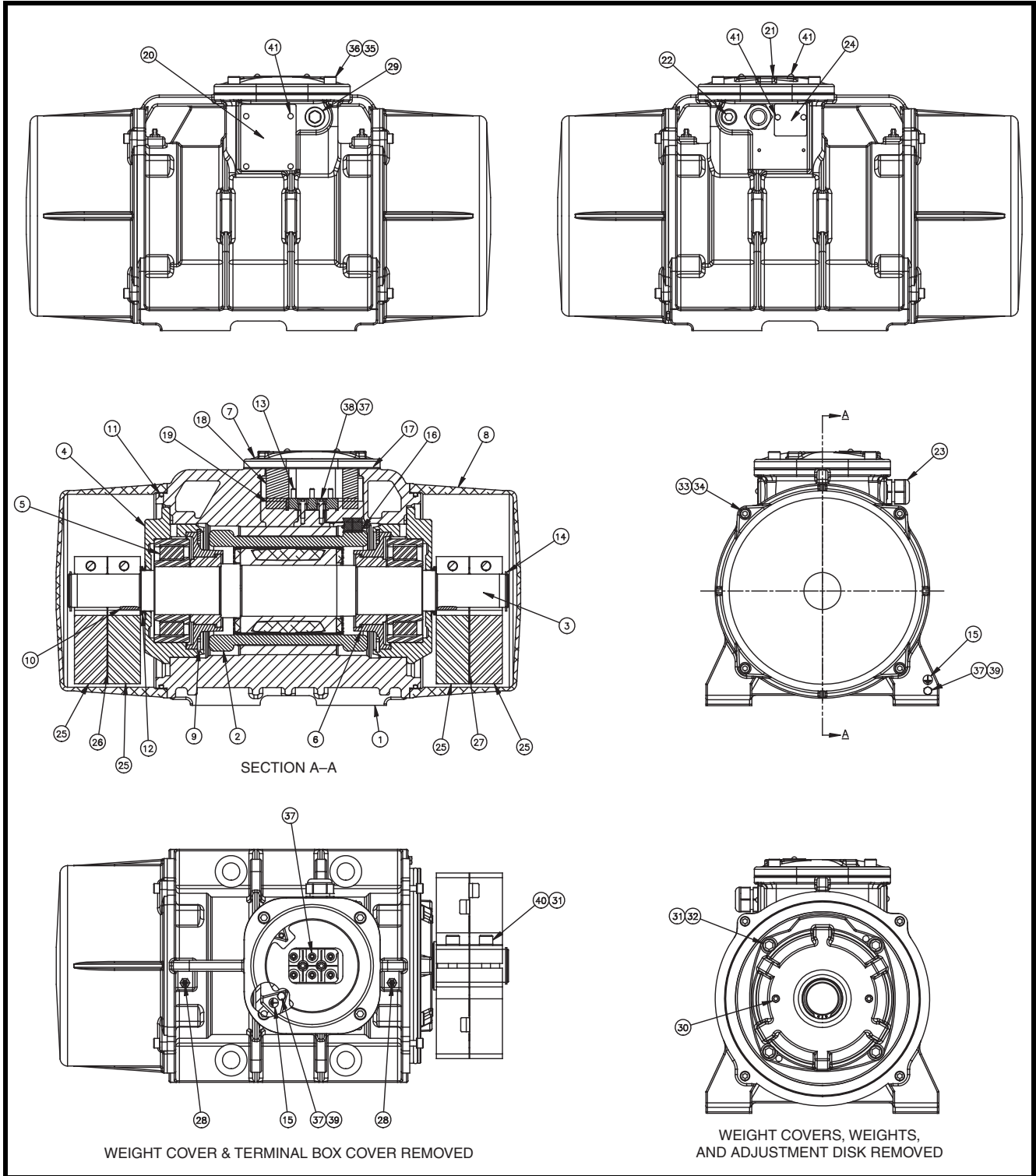


Figure 11. Martin® Electric Vibrator, P/N MXX70X06

Item	Description	Part No.	Qty
1	Case Casting	Table IV	1
2	Stator	Table IV	1
3	Shaft Assembly	803005	1
4	Flange Bearing	802004	2
5	Bearing Cylindrical Roller NJ2313ECP	506551	2
6	Bearing Cover	804004	2
7	Terminal Box Cover	806001	1
8	Weight Cover	805005-AL	2
9	Retaining Ring Internal 6.25	816002	2
10	Key 14 x 9 x 25 mm	809001	2
11	O-ring #377 10.00 ID x .210 CS	818003	2
12	V-ring Shaft Seal 55mm	502043	2
13	Terminal Block	812001	1
14	Snap Ring External A45	500063	2
15	Sticker Ground Symbol	821001	2
16	Cable Protection Sheath	814001	1
17	O-ring #259 6.25 ID x .139 CS	818002	1
18	Rubber Block	813001	1
19	Rubber Block Small	813002	1
20	Nameplate	820001	1
21	Nameplate Caution Disconnect	518147	1
22	Plug 1/2 NPT Internal Hex	39268	1
23	Nylon Cord Grip 3/4 NPT Range .51/.71	823001	1
24	Nameplate SS Warning Conduit Seal	820008	1
25	Weight Eccentric Fixed	807004-50F	4
26	Weight Adjustment Disk	808001-B	1
27	Weight Adjustment Disk	808001-A	1
28	Fitting Grease 1/8 NPT ZP	11814	2
29	Plug Hex Socket 3/4 NPT SS Dryseal	514520	1
30	Plug M10 x 10 mm Socket Head	509008	4
31	Washer Schnorr D12 VS Series ZPY	513006	12
32	Screw SHC M12 x 1.75 x 30 CL 12.9 BO	822002	8
33	Washer Schnorr D8 VS Series ZPY	513004	8
34	Screw SHC M8 x 1.25 x 20 CL 12.9 BO	515507	8
35	Washer Schnorr D10 VS Series ZPY	513005	4
36	Screw SHC M10 x 1.5 x 25 CL 12.9 ZP	515513	4

Item	Description	Part No.	Qty
37	Washer Schnorr D6 VS Series ZPY	513003	10
38	Screw SHC M6 x 1.0 x 20 CL 12.9 BO	515504	2
39	Screw HHC M6 x 1.0 x 12 ZP Green	516555	2
40	Screw SHC M12 x 1.75 x 55 CL 12.9 BO	515588	4
41	Screw Drive No. 7 x 3/16 LG ZP	32873	8
42	Wiring Diagram	518372	1
43	Operator's Manual	M3882	1

Table IV. Martin® Electric Vibrator MXX70X06 Part Numbers

Part Number	P/N Item 1
MIX70X06	801004-MI
MMX70X06	801004-MM
MVX70X06	801004-MV

Part Number	P/N Item 2
MXX70C06	810004-06
MXX70F06	810004-06F

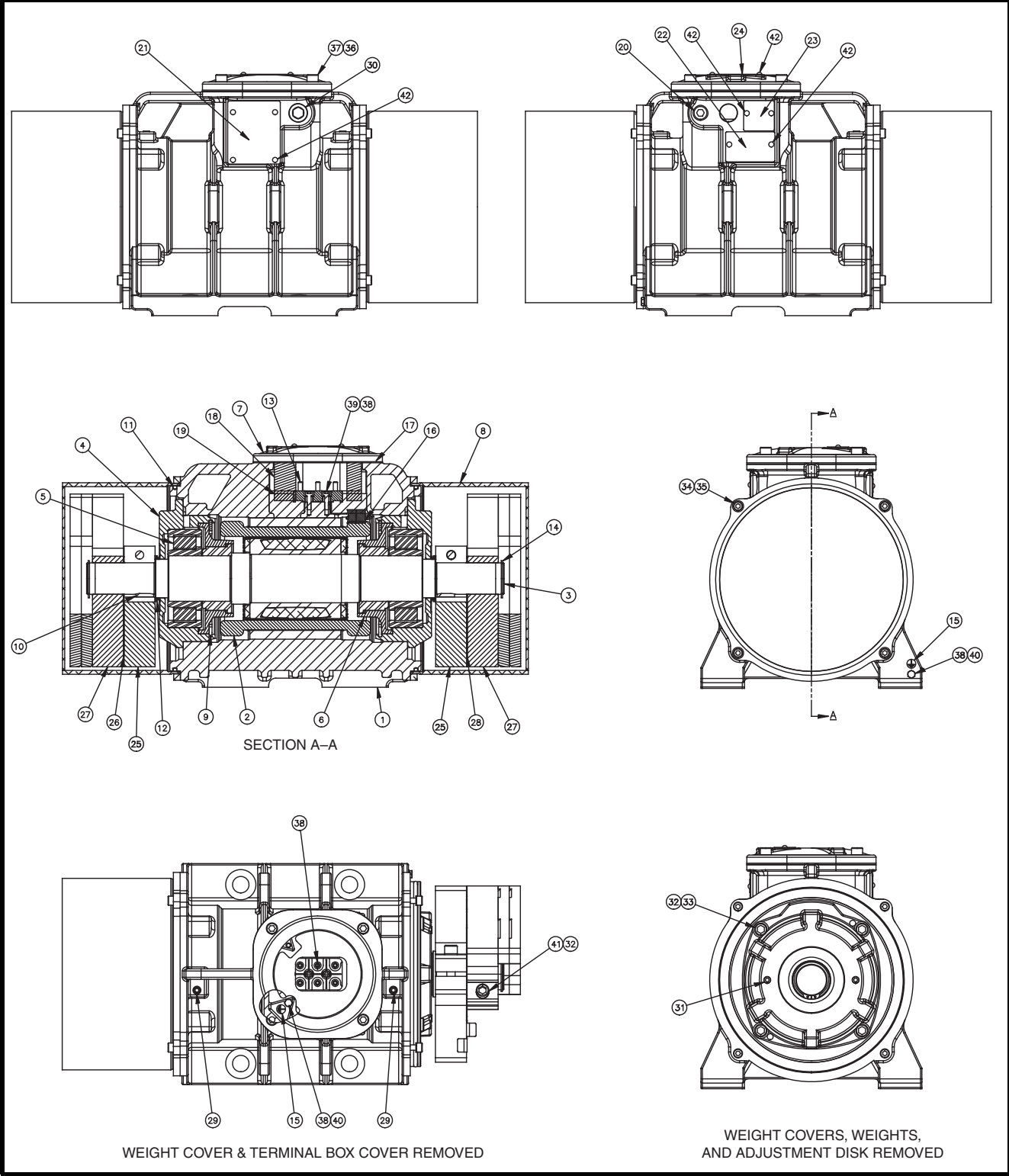


Figure 12. Martin® Electric Vibrator, P/N MXX75X06

Part Numbers

Item	Description	Part No.	Qty
1	Case Casting	Table V	1
2	Stator	Table V	1
3	Shaft Assembly	803005	1
4	Flange Bearing	802004	2
5	Bearing Cylindrical Roller NJ2313ECP	506551	2
6	Bearing Cover	804004	2
7	Terminal Box Cover	806001	1
8	Weight Cover	SP12675-WC	2
9	Retaining Ring Internal 6.25	816002	2
10	Key 14 x 9 x 25 mm	809001	2
11	O-ring #377 10.00 ID x .210 CS	818003	2
12	V-ring Shaft Seal 55mm	502043	2
13	Terminal Block	812001	1
14	Snap Ring External A45	500063	2
15	Sticker Ground Symbol	821001	2
16	Cable Protection Sheath	814001	1
17	O-ring #259 6.25 ID x .139 CS	818002	1
18	Rubber Block	813001	1
19	Rubber Block Small	813002	1
20	Plug 1/2 NPT Internal Hex	39268	1
21	Nameplate	820001	1
22	Nameplate ETL Class I	820002	1
23	Nameplate SS Warning Conduit Seal	820008	1
24	Nameplate Caution Disconnect	518147	1
25	Weight Eccentric Fixed	807004-50F	2
26	Weight Adjustment Disk	808004-06B	1
27	Weight Adjustment Weldment	SP12675-AW	2
28	Weight Adjustment Disk	808004-06A	1
29	Plug 1/8-27NPTF Dryseal	509059	2
30	Plug Hex Socket 3/4 NPT SS Dryseal	514520	1
31	Plug M10 x 10 mm Socket Head	509008	4
32	Washer Schnorr D12 VS Series ZPY	513006	12
33	Screw SHC M12 x 1.75 x 30 CL 12.9 BO	822002	8
34	Washer Schnorr D8 VS Series ZPY	513004	8
35	Screw SHC M8 x 1.25 x 20 CL 12.9 BO	515507	8
36	Washer Schnorr D10 VS Series ZPY	513005	4

Item	Description	Part No.	Qty
37	Screw SHC M10 x 1.5 x 25 CL 12.9 ZP	515513	4
38	Washer Schnorr D6 VS Series ZPY	513003	10
39	Screw SHC M6 x 1.0 x 20 CL 12.9 BO	515504	2
40	Screw HHC M6 x 1.0 x 12 ZP Green	516555	2
41	Screw SHC M12 x 1.75 x 55 CL 12.9 BO	515588	4
42	Screw Drive No. 7 x 3/16 LG ZP	32873	10
43	Wiring Diagram	518372	1
44	Operator's Manual	M3882	1

Table V. Martin® Electric Vibrator MXX75X06 Part Numbers

Part Number	P/N Item 1
MIX75X06	801004-MI
MMX75X06	801004-MM
MVX75X06	801004-MV

Part Number	P/N Item 2
MXX75C06	810004-06
MXX75F06	810004-06F

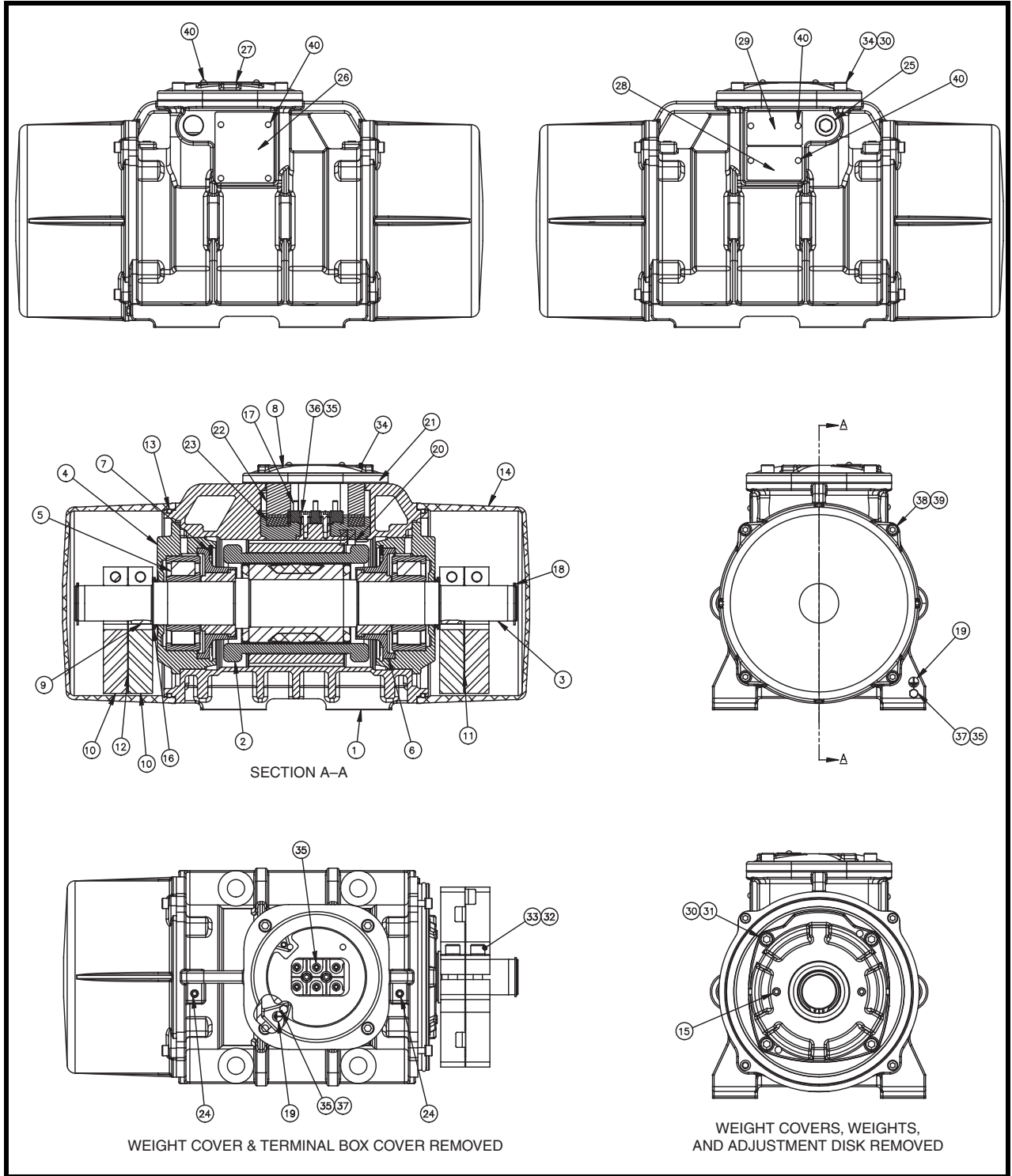


Figure 13. Martin® Electric Vibrator, P/N MXX165X04

Item	Description	Part No.	Qty
1	Case Casting	Table VI	1
2	Stator	Table VI	1
3	Shaft Assembly with Rotor and Bushing	803001	1
4	Flange Bearing	802001	2
5	Bearing Cylindrical Roller NJ2311ECP	506536	2
6	Bearing Cover	804001	2
7	Retaining Ring Internal 5.50 Flange	816001	2
8	Terminal Box Cover	806001	1
9	Key 14 x 9 x 25 mm	809001	2
10	Weight Eccentric Fixed	Table VI	4
11	Weight Adjustment Disk	808001-A	1
12	Weight Adjustment Disk	808001-B	1
13	O-ring #373 9.00 I.D. x .210 CS	818001	2
14	Weight Cover	805001-AL	2
15	Plug M10 x 10mm Socket Head	509008	4
16	V-ring shaft seal 55mm	502043	2
17	Terminal Block	812001	1
18	Snap Ring External A45	500063	2
19	Sticker Ground Symbol	821001	2
20	Cable Protection Sheath	814001	1
21	O-ring #259 6.25 I.D. x .139 CS	818002	1
22	Neoprene Foam Block	813001	1
23	Neoprene Foam Block Small	813002	1
24	Plug 1/8-27NPTF Dryseal	509059	2
25	Plug Hex Socket 3/4-NPT SS Dryseal	514520	1
26	Nameplate	820001	1
27	Nameplate Caution Disconnect	518147	1
28	Nameplate SS Warning Conduit Seal	518334	1
29	Nameplate ETL Class 1	820002	1
30	Washer Schnorr D10 VS Series ZPY	513005	12
31	Screw SHC M10 x 1.50 x 30 CL 12.9 DC	515538	8
32	Washer Schnorr D12 VS Series ZPY	513006	4
33	Screw SHC M12 x 1.75 x 55 CL 12.9 BO	515588	4
34	Screw SHC M10 x 1.5 x 25 CL 12.9 ZP	515513	4
35	Washer Schnorr D6 VS Series ZPY	513003	10
36	Screw SHC M6 x 1.0 x 20 CL 12.9 BO	515504	2

Item	Description	Part No.	Qty
37	Screw HHC M6 x 1.0 x 12 ZP Green	516555	2
38	Washer Schnorr D8 VS Series ZPY	513004	8
39	Screw SHC M8 x 1.25 x 20 CL 12.9 ZP	515507	8
40	Screw Drive No. 7 x 3/16 LG ZP	32873	10
41	Wiring Diagram	518372	1
42	Operator's Manual	M3882	1

Table VI. Martin® Electric Vibrator MXX165X04 Part Numbers

Part Number	P/N Item 1
MILX165A04	801001-MIL
MIX165C04	801001-MI
MMX165F04	801001-MM
MVX165X04	801001-MV

Part Number	P/N Item 2	P/N Item 10
MMX165A04	810002-04	807001-50F
MMX165C04	810002-04	807001-60F
MMX165F04	810002-04F	807001-60F

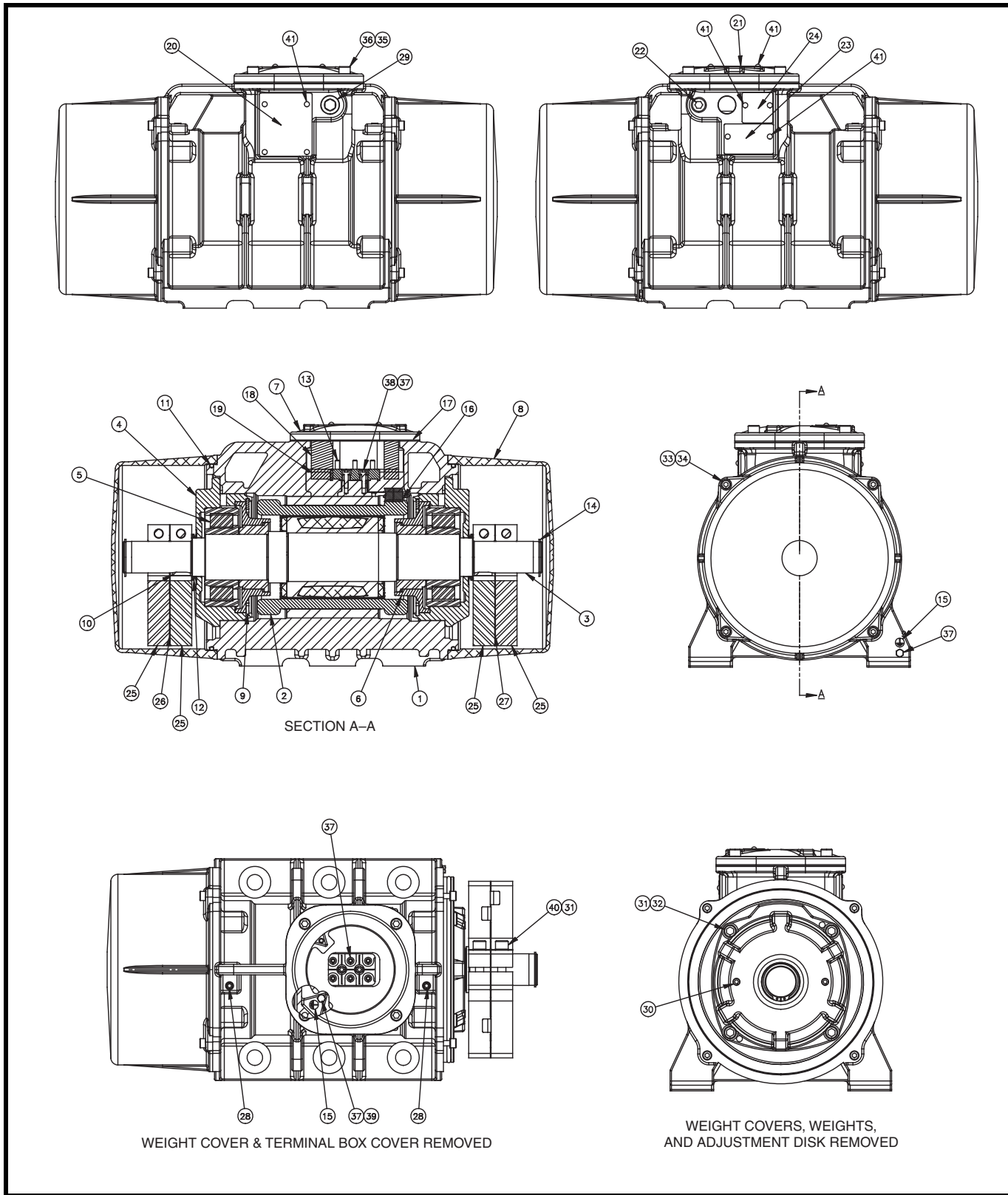


Figure 14. Martin® Electric Vibrator, P/N MXX175X04

Part Numbers

Item	Description	Part No.	Qty
1	Case Casting	Table VII	1
2	Stator 4 Pole	Table VII	1
3	Shaft Assembly	803005	1
4	Flange Bearing	802004	2
5	Bearing Cylindrical Roller NJ2313ECP	506551	2
6	Bearing Cover	804004	2
7	Terminal Box Cover	806001	1
8	Weight Cover Aluminum	805005-AL	2
9	Retaining Ring Internal 6.25	816002	2
10	Key 14 x 9 x 25 mm	809001	2
11	O-ring #377 10.00 I.D. x .210 CS	818003	2
12	V-ring shaft seal 55mm	502043	2
13	Terminal Block	812001	1
14	Snap Ring External A45	500063	2
15	Sticker Ground Symbol	821001	2
16	Cable Protection Sheath	814001	1
17	O-ring #259 6.25 I.D. x .139 CS	818002	1
18	Neoprene Foam Block	813001	1
19	Neoprene Foam Block Small	813002	1
20	Nameplate	820001	1
21	Nameplate Caution Disconnect	518147	1
22	Plug 1/2 NPT Internal Hex Plain Finish	39268	1
23	Nameplate ETL Class 1	820002	1
24	Nameplate SS Warning Conduit Seal	820008	1
25	Weight Eccentric Fixed	Table VII	4
26	Weight Adjustment Disk	808001-B	1
27	Weight Adjustment Disk	808001-A	1
28	Plug 1/8-27NPTF Dryseal	509059	2
29	Plug Hex Socket 3/4-NPT SS Dryseal	514520	1
30	Plug M10 x 10mm Socket Head	509008	4
31	Washer Schnorr D12 VS Series ZPY	513006	12
32	Screw SHC M12 x 1.75 x 30 CL 12.9 BO	822002	8
33	Washer Schnorr D8 VS Series ZPY	513004	8
34	Screw SHC M8 x 1.25 x 20 CL 12.9 ZP	515507	8
35	Washer Schnorr D10 VS Series ZPY	513005	4
36	Screw SHC M10 x 1.5 x 25 CL 12.9 ZP	515513	4

Item	Description	Part No.	Qty
37	Washer Schnorr D6 VS Series ZPY	513003	10
38	Screw SHC M6 x 1.0 x 20 CL 12.9 BO	515504	2
39	Screw HHC M6 x 1.0 x 12 ZP Green	516555	2
40	Screw SHC M12 x 1.75 x 55 CL 12.9 BO	515588	4
41	Screw Drive No. 7 x 3/16 LG ZP	32873	10
42	Wiring Diagram	518372	1
43	Operator's Manual	M3882	1

Table VII. Martin® Electric Vibrator MXX175X04 Part Numbers

Part Number	P/N Item 1
MIX175X04	801004-MI
MMX175X04	801004-MM
MVX175X04	801004-MV

Part Number	P/N Item 2	P/N Item 25
MVX175A04	810004-04	807004-50F
MVX175C04	810004-04	807004-60F
MVX175F04	810004-04F	807004-60F
MVX175Q04	810004-04Q	807004-50F

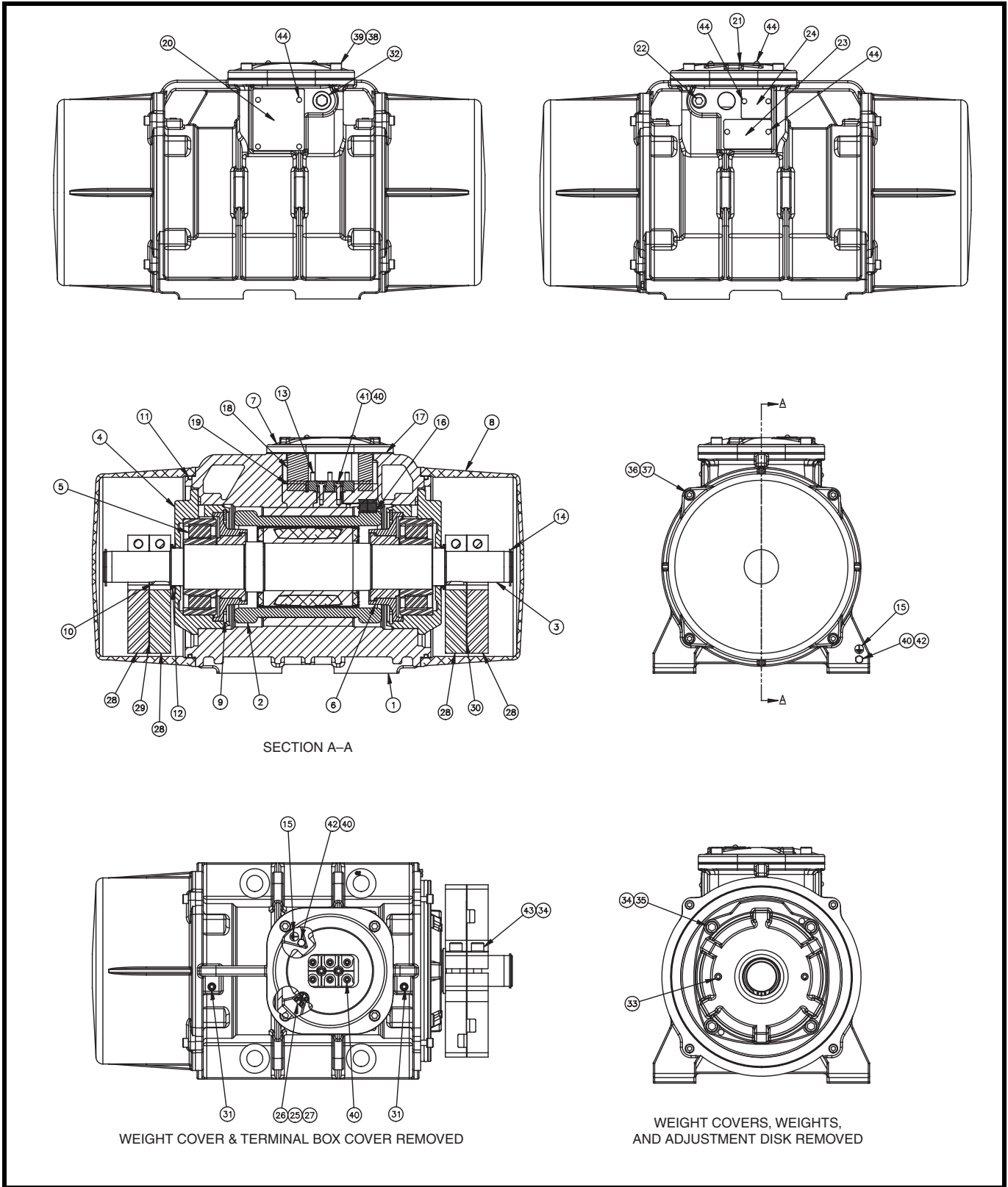


Figure 15. Martin® Electric Vibrator, P/N MXX175X04-T4

Item	Description	Part No.	Qty
1	Case Casting	801004-MX	1
2	Stator with Thermostat 4 Pole	Table VIII	1
3	Shaft Assembly	803005	1
4	Flange Bearing	802004	2
5	Bearing Cylindrical Roller NJ2313ECP	506551	2
6	Bearing Cover	804004	2
7	Terminal Box Cover	806001	1
8	Weight Cover Aluminum	805005-AL	2
9	Retaining Ring Internal 6.25	816002	2
10	Key 14 x 9 x 25 mm	809001	2
11	O-ring #377 10.00 I.D. x .210 CS	818003	2
12	V-ring shaft seal 55mm	502043	2
13	Terminal Block	812001	1
14	Snap Ring External A45	500063	2
15	Sticker Ground Symbol	821001	2
16	Cable Protection Sheath	814001	1
17	O-ring #259 6.25 I.D. x .139 CS	818002	1
18	Neoprene Foam Block	813001	1
19	Neoprene Foam Block Small	813002	1
20	Nameplate	820001	1
21	Nameplate Caution Disconnect	518147	1
22	Plug 1/2 NPT Internal Hex Plain Finish	39268	1
23	Nameplate ETL for MXX Class 1 T4 Vibrator	820009	1
24	Nameplate SS Warning Conduit Seal	820008	1
25	Adapter Thread Locking Slotted Insert	509056	1
26	Terminal Block 2 Position	510510	1
27	Screw Slotted PHMS M3.5 x 0.6 x 15 CL 4.8 ZP	515609	1
28	Weight Eccentric Fixed	Table VIII	4
29	Weight Adjustment Disk	808001-B	1
30	Weight Adjustment Disk	808001-A	1
31	Plug 1/8-27NPTF Dryseal	509059	2
32	Plug Hex Socket 3/4-NPT SS Dryseal	514520	1
33	Plug M10 x 10mm Socket Head	509008	4
34	Washer Schnorr D12 VS Series ZPY	513006	12
35	Screw SHC M12 x 1.75 x 30 CL 12.9 BO	822002	8
36	Washer Schnorr D8 VS Series ZPY	513004	8

Item	Description	Part No.	Qty
37	Screw SHC M8 x 1.25 x 20 CL 12.9 ZP	515507	8
38	Washer Schnorr D10 VS Series ZPY	513005	4
39	Screw SHC M10 x 1.5 x 25 CL 12.9 ZP	515513	4
40	Washer Schnorr D6 VS Series ZPY	513003	10
41	Screw SHC M6 x 1.0 x 20 CL 12.9 BO	515504	2
42	Screw HHC M6 x 1.0 x 12 ZP Green	516555	2
43	Screw SHC M12 x 1.75 x 55 CL 12.9 BO	515588	4
44	Screw Drive No. 7 x 3/16 LG ZP	32873	10
45	Wiring Diagram	518372	1
46	Operator's Manual	M3882	1

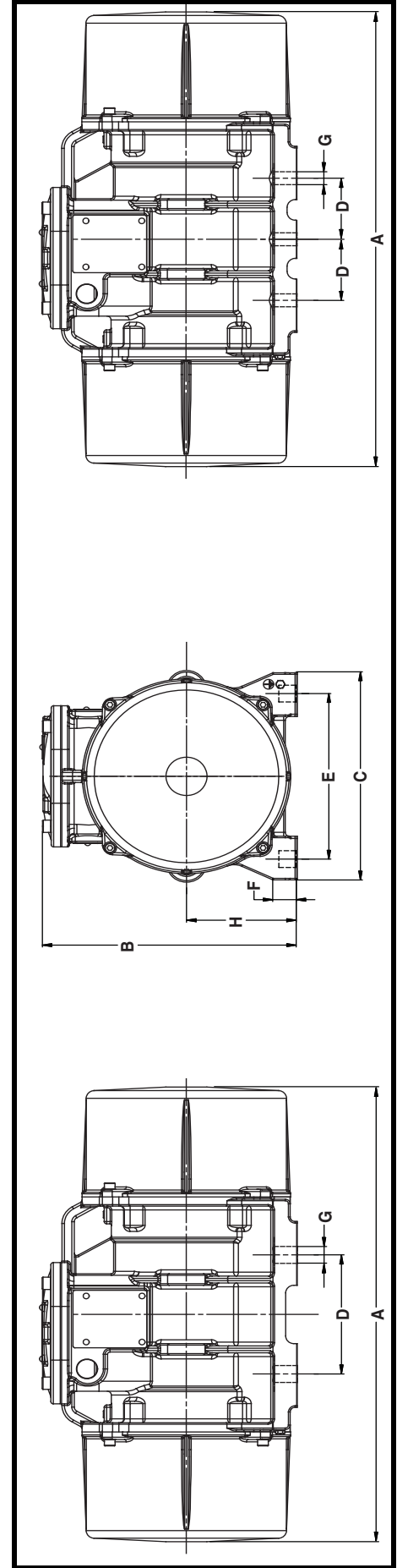
Table VIII. Martin® Electric Vibrator MXX175X04-T4 Part Numbers

Part Number	P/N Item 2	P/N Item 28
MXX175A04-T4	801004--04-T	807004-50F
MXX175C04-T4	801004-04-T	807004-60F
MXX175F04-T4	801004-04F-T	807004-60F
MXX175Q04-T4	801004-04Q-T	807004-50F

Appendix
Martin® Electric Vibrator Dimensions

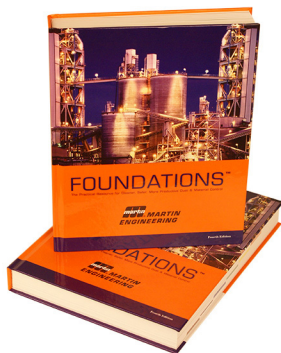
Martin® Electric Vibrator Dimensions (in. [mm])

P/N	A	B	C	D	E	F	Foot Holes		H
							ØG	No.	
MMX70X06	24.72 (628)	13.50 (343)	12.40 (315)	6.10 (155)	10.04 (255)	1.14 (29)	.93 (23.50)	4	6.10 (155)
MIX70X06	24.72 (628)	13.50 (343)	12.40 (315)	3.35 (85)	10.63 (270)	1.14 (29)	1.02 (26)	6	6.10 (155)
VMX70X06	24.72 (628)	13.50 (343)	12.40 (315)	4.13 (105)	9.76 (248)	1.14 (29)	.87 (22)	6	6.10 (155)
MMX75X06	26.14 (664)	13.50 (343)	12.40 (315)	6.10 (155)	10.04 (255)	1.14 (29)	.93 (23.50)	4	6.10 (155)
MIX75X06	26.14 (664)	13.50 (343)	12.40 (315)	3.35 (85)	10.63 (270)	1.14 (29)	1.02 (26)	6	6.10 (155)
VMX75X06	26.14 (664)	13.50 (343)	12.40 (315)	4.13 (105)	9.76 (248)	1.14 (29)	.87 (22)	6	6.10 (155)
MMX165X04	23.31 (592)	12.20 (310)	10.63 (270)	6.10 (155)	8.86 (225)	1.17 (29.6)	.87 (22)	4	5.31 (135)
MIX165X04	23.31 (592)	12.20 (310)	10.63 (270)	3.15 (80)	8.27 (210)	1.17 (29.6)	.67 (17)	6	5.31 (135)
MILX165X04	23.31 (592)	12.20 (310)	10.63 (270)	3.15 (80)	8.27 (210)	1.17 (29.6)	.78 (19.80)	6	5.31 (135)
VMX165X04	23.31 (592)	12.20 (310)	10.63 (270)	3.27 (83)	9.02 (229)	1.17 (29.6)	.87 (22)	6	5.31 (135)
MMX175X04	24.72 (628)	13.50 (343)	12.40 (315)	6.10 (155)	10.04 (255)	1.14 (29)	.93 (23.50)	4	6.10 (155)
MIX175X04	24.72 (628)	13.50 (343)	12.40 (315)	3.35 (85)	10.63 (270)	1.14 (29)	1.02 (26)	6	6.10 (155)
VMX175X04	24.72 (628)	13.50 (343)	12.40 (315)	4.13 (105)	9.76 (248)	1.14 (29)	.87 (22)	6	6.10 (155)
MMX175X04	24.72 (628)	13.50 (343)	12.40 (315)	6.10 (155)	10.04 (255)	1.14 (29)	.93 (23.50)	4	6.10 (155)
MIX175X04	24.72 (628)	13.50 (343)	12.40 (315)	3.35 (85)	10.63 (270)	1.14 (29)	1.02 (26)	6	6.10 (155)
VMX175X04	24.72 (628)	13.50 (343)	12.40 (315)	4.13 (105)	9.76 (248)	1.14 (29)	.87 (22)	6	6.10 (155)



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